THE CITY OF

PRINEVILLE

OREGON

Transportation System Plan

W&H PACIFIC

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City of Prineville Transportation System Plan

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CHAPTER 1 INTRODUCTION

In 1994, the City of Prineville developed a transportation system plan *(TSP)* to serve as a guide for the management of existing transportation facilities and the design and implementation of future facilities. After its adoption by the City Council, the plan also constituted the transportation element of the Comprehensive Plan. To complete the 1994 TSP, the City retained the services of David Evans and Associates, Inc. (DEA). DEA worked closely with city Staff and the community to develop a plan which managed the existing transportation system and provided for future growth. Since adoption of the Prineville TSP in 1994, a number of significant issues have been raised and discussed, including:

- Expansion of the Prineville Urban Growth Boundary (UGB) to include the airport area and other residential lands.
- New and updated forecasts for population and employment growth in the Prineville urban area, and their consistency with Crook County and State of Oregon projections.
- Consensus, or lack thereof, concerning the City's major transportation system improvements - particularly regarding the need, type and timing of Highway 126 corridor improvements in downtown Prineville.
- Need for a systems development charge (SDC) to help pay for local transportation capacity improvements and keep pace with growth.

Give these issues, and the fact that Prineville's TSP is almost five years old, the Oregon Department of Transportation (ODOT) agreed to assist the City of Prineville in revising and updating their transportation plan.

This revised TSP represents a significant update of the 1994 TSP. When adopted by the City Council, this revised TSP will supersede the existing 1994 TSP as the Transportation Element of the Comprehensive Plan and will serve as the new guide for providing transportation facilities within the City of Prineville. The revised TSP includes the following chapters:

Chapter 2 **TSP Requirements** - Describes Goal 12 and the purpose of the Transportation Planning Rule and also defines the requirements specific to the City of Prineville. This chapter also describes other plans, such as the Oregon Transportation Plan, which include elements that require consistency with the Prineville TSP.

Chapter 3 **The Planning Process** - Describes the planning process, and how the transportation system plan was developed and updated.

Chapter 4 **Goals and Objectives** - Defines the goals and objectives for the transportation planning process.

Chapter 5 **Current Transportation Conditions** - Identifies the current transportation system including existing traffic volumes, levels of services and capacity deficiencies.

Chapter 6 **Short-Term Improvements** - Describes and recommends a series of short-term transportation improvements which should be implemented within the next five years.

Chapter 7 **Travel Forecasts** - Forecasts future 2018 traffic volumes, levels of service and transportation system deficiencies.

Chapter 8 **Alternatives Street System Analysis** - Analyzes key street system improvement alternatives.

Chapter 9 **The Transportation System Plan** - Represents the transportation system plan itself, including elements for all travel modes. This Chapter will replace the Transportation Element of the Prineville Comprehensive Plan.

Chapter 10 **Construction Cost Estimates** - Provides planning level construction cost estimates for key transportation system improvements.

Chapter 11 **Funding Options and Financial Plan** - Describes available options and a financial plan, including local funding sources to pay for future transportation improvements.

Appendix **A - Summary of Existing Plans and Policies**

B - TPR Compliance Table
Provides a table which summarizes (item-by-item) how the revised TSP complies with the requirements of the Transportation Planning Rule.

C - Major Street Inventory

D - Traffic Forecast Refinement

E - 1994 TSP Modeling Methodology

F - Transportation Systems Funding Sources

G - TSP Newsletters and Meeting Agenda

H - Draft TSP Review Comments

I - Recommended Changes to Comprehensive Plan and Land Development Ordinance to Implement the Transportation System Plan

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CHAPTER 2 TRANSPORTATION SYSTEM PLAN REQUIREMENTS

The revised Prineville TSP must meet the requirements of Statewide Planning Goal 12 and its implementing division, the Transportation Planning Rule (OAR Chapter 660, Division 12). Goal 12 affects all levels of government, and requires that transportation plans be coordinated among all jurisdictions.

Statewide Planning Goal 12 - Transportation

In the mid-1970s, Oregon adopted 19 Statewide Planning Goals to be implemented in comprehensive plans. The aim of Goal 12, Transportation is "to provide and encourage a safe, convenient and economic transportation system".

Each community, region, and metropolitan area has developed the transportation element of their comprehensive plans according to the following guidelines set forth in Goal 12.

> "A transportation plan shall (1) consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian; (2) be based upon an inventory of local, regional and state transportation needs; (3) consider the differences in social consequences that would result from utilizing differing combinations of transportation modes; (4) avoid principal reliance upon any one mode of transportation; (5) minimize adverse social, economic and environmental impacts and costs; (6) conserve energy; (7) meet the needs of the transportation disadvantaged by improving transportation services; (8) facilitate the flow of goods and services so as to strengthen the local and regional economy; and (9) conform with local and regional comprehensive land use plans.

To date, the City of Prineville has addressed transportation planning issues through a number of planning documents including the following *(these documents are reviewed in more detail in Appendix A - Review of Existing Plans and Policies)*:

- The existing City of Prineville Transportation System Plan (TSP) prepared by David Evans and Associates in 1994;
- The City of Prineville Downtown Enhancement Plan prepared by David Evans and Associates in 1997;
- The updated City of Prineville Comprehensive Plan is scheduled for adoption in 1999; and
- The City of Prineville Land Development Ordinance No. 1057 adopted in March, 1998.

The Transportation Planning Rule

The Transportation Planning Rule *(TPR)* was developed by the Oregon Land Conservation and Development Commission *(LCDC)* and the Oregon Department of Transportation *(ODOT)*, and adopted in April 1991. The TPR implements Goal 12, and applies to all levels of government.

Overview

Essentially, the TPR requires that cities, counties, Metropolitan Planning Organizations *(MPOs)*, and state agencies prepare and adopt TSPs. A TSP is "a plan for one or more transportation facilities that are planned, developed, operated, and maintained in a coordinated manner to supply continuity of movement between modes, and within and between geographic and jurisdictional areas."

The ultimate aim of the TPR is to encourage a multi-modal transportation network throughout the state that will reduce our reliance on the automobile and ensure that local, state, and regional transportation systems "support a pattern of travel and land use in urban areas which will avoid the air pollution, traffic and livability problems faced by other areas of the country."

The TPR affects all jurisdictions, with requirements that vary based on population size and the geographic location of each jurisdiction. It also sets forth a schedule for compliance. The MPOs were to have completed their regional transportation system plans by May 1995. Cities and counties within MPOs were to have completed their local plans within a year of the MPO plan adoption. Jurisdictions outside of MPOs, such as Prineville, were to have completed their plans by May 1996.

Transportation Planning Rule Requirements for Prineville

The City of Prineville falls into the jurisdictional category of cities with a population between 2,500 and 25,000 that are located outside of a major urban area. In preparing its local transportation system plan, Prineville must "establish a system of transportation facilities and services adequate to meet identified local transportation needs and shall be consistent with regional TSPs and adopted elements of the state TSP". The specific requirements of the TPR, as well as an analysis of the City of Prineville's current levels of compliance, are outlined in Appendix B - TPR Compliance Table.

Oregon Transportation Plan

The Oregon Transportation Plan *(OTP)* was completed and adopted by the Oregon Transportation Commission in September 1992. Several alternative approaches to developing the transportation plan were evaluated as part of the OTP planning process. The preferred plan presented in the OTP followed the Livability Approach, which "depends heavily on the concept of minimum levels of service within each transportation mode to assure appropriate transportation alternatives to all areas of the state".

Inventory

In its inventory of existing facilities, the OTP identifies several transportation facilities of significance in Prineville.

The Ochoco Highway (Highways 126 west of Prineville and 26 through and east of Prineville) is a highway of statewide significance. As defined in the Oregon Highway Plan, the function of a statewide highway is "to provide connections and links to larger urban areas, ports and major recreation areas that are not directly served by interstate highways."

Prineville currently has intercity bus service provided by Greyhound Bus Lines. Travel is possible along both east-west and north-south corridors. Limited service for the elderly and disabled is provided by the mini-bus service of the Soroptomist International of Prineville.

A truck/rail intermodal freight facility is also identified in Prineville. The City of Prineville Railway owns this facility; however, it has not been operated for several years since all truck/rail transfer operations were moved to Portland.

Minimum Levels of Service by 2012

The minimum levels of service expected to be in place by 2012 set standards for performance for each mode of travel and for all jurisdictions. The following levels of service apply to Prineville.

- *Local public transit services and elderly and disadvantaged service providers should regularly connect with intercity passenger services.* Prineville has demand responsive minibus service which will pick up and carry senior citizens to any destination within a five-mile radius of downtown. Connections to the intercity bus are easily possible with this service.

- *Intercity passenger service should be available for an incorporated city or groups of cities within five miles of one another having a combined population of over 2,500, and located 20 miles or more from the nearest Oregon city with a larger population and economy. Services should allow a round trip to be made within a day.* Greyhound Bus Lines provides Prineville with daily service to Portland and connections to and from other cities in either Bend, Madras, or Biggs Junction (I-84). Limited service by Soroptomist mini-buses; expansion proposed.

- *Local transit and elderly and disadvantaged services should be coordinated with intercity bus services.* Prineville's demand responsive minibus service will pick up and deliver senior citizens to the intercity bus services at their convenience.

- *Highway freight accessing intermodal truck/rail terminals or moving within Oregon should experience level of service C or better on Oregon highways during off-peak periods.* The Ochoco Highway, a highway of statewide importance, will operate at level of service C or better throughout the day with the street system improvements outlined in the chapter of this report titled "The Transportation System Plan".

- *Branch rail lines within Oregon should be maintained to allow a minimum speed of operation of 25 miles per hour whenever upgrading can be achieved with a favorable benefit-cost ratio.* The City of Prineville Railway is classified as a line-haul carrier and is therefore limited to rail yard operating speeds of 20 mph.

- *Minimum levels of service and minimum tolerable conditions for state highways are included in the Oregon Highway Plan.* The improvements outlined in the chapter of this report titled "The Transportation System Plan" would allow all of the highways in Prineville to meet the minimum tolerable conditions specified in the Oregon Highway Plan (OHP). [The 1998 OHP, when adopted, will revise these LOS standards. See Appendix A].

- *Bicycle and pedestrian networks should be developed and promoted in all urban areas to provide safe, direct and convenient access to all major employment, shopping, educational and recreational destinations in a manner that would double person trips by bicycle and walking.* The bicycle plan presented in the chapter of this report titled "The Transportation System Plan" specifies that bicycle lanes be present on all collector and arterial roadways. In general, the trigger point for adding bike lanes to existing roadways would be daily traffic volumes exceeding 2,500-3,000 vehicles. Roadways which provide direct access to schools would be high priority.

- *Secure and convenient bicycle storage available to the public should be provided at all major employment and shopping centers, park and ride lots, passenger terminals and recreation destinations.* The policies and ordinances necessary to support this requirement will be prepared separately from this report.

The 1998 Oregon Highway Plan (Draft Update)

The 1998 Oregon Highway Plan defines policies and investment strategies for Oregon's state highway system 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 is reviewed in greater detail in Appendix A - Review of Existing Plans and Policies.

TEA-21

The Transportation Equity Act for the 21st Century (June 1998), better known as TEA-21, authorizes a six-year federal funding program to include highway, highway safety, transit and other surface transportation programs. TEA-21 builds on the initiatives established in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 by continuing and improving current programs, and adding new initiatives to meet the nation's challenges to improve safety, protect and enhance communities and the natural environment, and advance economic growth through efficient and flexible transportation.

Crook County

Crook County - Prineville Area Comprehensive Plan

The Crook County - Prineville Area Comprehensive Plan was prepared in response to Goal 12, and enacted in 1978. Since that time the City of Prineville has prepared its own Comprehensive Plan and expects to adopt it in 1999.

Crook County Transportation System Plan (1997)

The TPR requires coordination amongst county and city transportation system plans. The Crook County Transportation System Plan was prepared for Crook County by David Evans and Associates in 1997. The planning area does not include the City of Prineville, which is incorporated and has its own TSP. A summary of the transportation section of the comprehensive plan and the Crook County TSP are included in Appendix A -Review of Existing Plans and Policies.

The Existing City of Prineville TSP

In 1994, the City of Prineville prepared and adopted a TSP to meet the requirements of the TPR. The 1994 TSP includes the following plan elements which are required in order to satisfy the TPR.

1. A street system plan for a network of arterial and collector roadways;
2. A public transportation plan;
3. A bicycle and pedestrian plan;

4. An air, rail, water, and pipeline plan;
5. Policies and land use regulations for implementing the TSP; and
6. A transportation financing program.

In the 1994 TSP, items 1 through 4 were addressed in the chapter of this report titled "The Transportation System Plan". The transportation financing program, Item 6, was presented in the chapter titled "Funding Options and Financial Plan". TPR compliance issues specific to the 1994 TSP are also addressed in Appendix B - TPR Compliance Table.

The policies and land use regulations, Item 5, was prepared separately and included land use and subdivision ordinance amendments to protect transportation facilities for their identified functions. In particular, these amendments included street standards and access control measures. Land use and subdivision ordinance amendments to require bicycle parking facilities and facilities for safe, convenient, and direct pedestrian and bicycle access within and between residential, commercial, employment, and institutional areas were also addressed.

Revisions to the City of Prineville Transportation System Plan

The City of Prineville has completed a substantial amount of planning to date, including preparation of the 1994 Transportation System Plan. In revising its 1994 TSP, the City will accomplish the following:

- Address changes to the City's Urban Growth Boundary (UGB) which have occurred since the adoption of the TSP;
- Update population and traffic projections;
- Review and update projects to assure that the projects proposed and prioritized in the TSP accurately reflect the growth forecasts, and goals and objectives of the community;
- Address and reconcile adopted City street design, access management and other transportation standards with both Crook County transportation policies and standards and Draft Oregon Highway Plan Access Management and LOS standards;
- Re-assess funding options and revise the Financial Plan to include full evaluation of the system development charge (SDC) option; and
- Address any remaining TPR compliance issues.

CHAPTER 3 THE PLANNING PROCESS

The revised Prineville TSP was developed through a series of technical analyses combined with systematic input and review by the City, the Transportation Advisory Committee, Planning Commission and City Council, and the public. The planning process is described on the following pages and the planning area is described at the end of this chapter.

Developing a Transportation System Plan

Key elements of the process include:

- Involving the community in the planning process
- Reviewing existing plans and transportation conditions
- Defining goals and objectives
- Developing population, employment and travel forecasts
- Developing and evaluating transportation system alternatives
- Developing the transportation system plan
- Developing a funding plan and capital improvement program

Community Involvement

The existing 1994 TSP provided a foundation for the development of the revised TSP. Community involvement was an important part of the development of both documents. For the 1994 TSP, community interaction was achieved in two ways: holding open community meetings and forming a Transportation Advisory Committee. A Transportation Advisory Committee *(TAC)* was formed to provide guidance to the consultant, to review work products, and to aid the City in making decisions regarding the plan. Additionally, two open community meetings were held during the planning process. The first was held at the beginning of the process in a workshop format to solicit public input on issues and problems to be addressed. The results of this meeting formed the basis for the transportation goals and objectives. A second meeting was held at the end of the process for community review and comments upon completion of the draft TSP.

For the preparation of the revised TSP, the TAC was reconvened and met four times. The TAC revisited and discussed a wide range of transportation issues with an emphasis on the alternatives for downtown circulation, airport area access, Crooked River crossings, and north/south connections. The reconvened TAC included representatives from the business community, trucking interests, seniors and others.

In addition to the TAC, a Joint Planning Commission/City Council was formed and met four times to aid in the development of the revised TSP. A Public Open House meeting was also held prior to each of the Joint Planning Commission/City Council meetings to provide the general public with an opportunity to discuss transportation planning in the City of Prineville. Each round of public meetings was preceded by the preparation and release of a newsletter, which announced the upcoming meeting schedule and identified key issues (copies of the Newsletters are included in Chapter 13).

Finally, a Management Team, consisting of ODOT, DLCD, and City staff, met with the consultant on a regular basis over the course of the revised plan development to provide guidance and input into all phases of the process.

Capital Improvement Program and Funding Analysis

The capital improvement program was developed from the short-term improvements and the recommended street system plan, while the funding analysis examined methods for financing these improvements. These elements are described in the chapters titled "Construction Cost Estimates" and "Funding Options and Financial Plan".

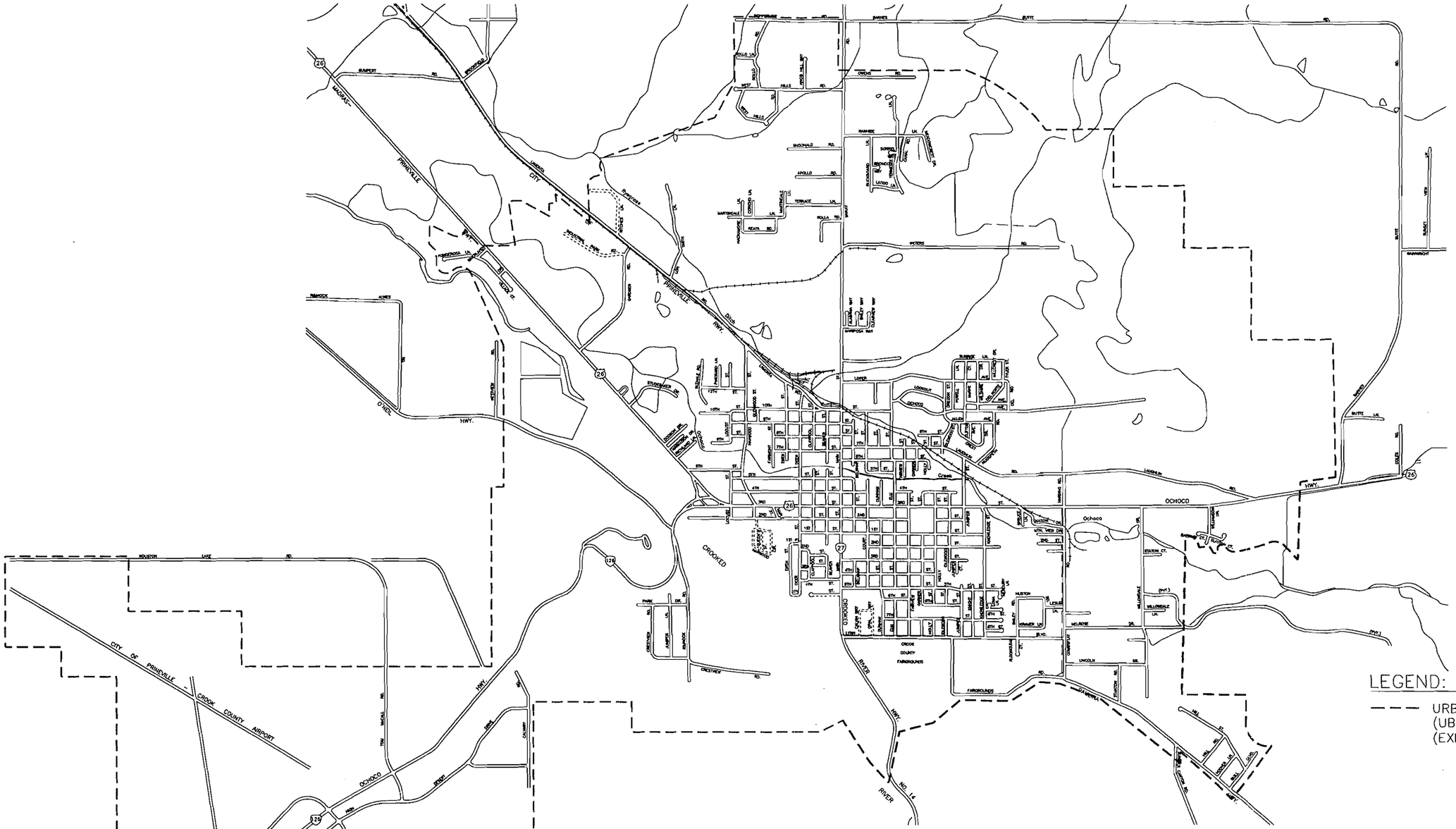
THE PLANNING AREA

Prineville is the county seat and the largest city in Crook County. Located about 50 miles east of the Cascade Mountain Range, the city is situated in the geographic center of the state. The planning area, shown on **Figure 3-1**, is bounded by the city's urban growth boundary. The roadway system in the existing Comprehensive Plan consists of five state highways and a system of arterial, collector, and local roads.

Highways 26 and 126 are the two most important highways in Prineville. The Ochoco Highway is a highway of statewide significance. It consists of Highway 126 to the west of Prineville, providing a route through the Cascades to the Willamette Valley, and Highway 26 through and to the east of Prineville, providing access to the eastern half of Oregon and to Idaho. To the west, Highway 26, also known as the Madras-Prineville Highway, provides a direct northwesterly route through the Cascades to Portland, about 150 miles away. Between Madras and Prineville, Highway 26 is designated a highway of regional significance. Both Highway 26 and Highway 126 connect with Highway 97 about 20 miles east of the city for north/south access.

In addition to Highways 26 and 126, three other highways originate or terminate in Prineville. Highway 27, also known as the Crooked River Highway, runs southward to the Prineville Reservoir and beyond. The O'Neil Highway runs westerly from Prineville and terminates about 20 miles away at Highway 97, just north of Redmond. The Paulina Highway also provides access to the Prineville Reservoir before continuing eastward to Paulina and into Grant County.

A land use zoning map of Prineville and the area within the Urban Growth Boundary is shown in **Figure 3-2**. The commercial zones are focused around Third Street (Highway 26) and Main Street. Residential zoning surrounds the commercial core. The manufacturing and industrial uses are primarily in the northwest quadrant of the city with some smaller pockets in other areas.



SOURCE: ODOT BASE MAP/DEA LAYER DATA

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	**STUDY AREA**	**FIGURE 3-1**	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

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CHAPTER 4 GOALS AND OBJECTIVES

The following goals and policies were initially developed as part of the 1994 TSP planning process and were validated by the Transportation Advisory Committee (TAC), Joint Planning Commission/City Council Committee and Management Team as part of the TSP update process. These goals and policies are intended to guide the development of the revised Transportation System Plan. Throughout the planning process, each element of the plan was evaluated against these parameters. Chapter 9, which is the Transportation System Plan itself and will be adopted as the Transportation Element of the Comprehensive Plan, includes those policies which are intended to guide transportation system planning and development into the future.

Overall Transportation Goal:

Develop an urban area transportation system which enhances the livability of Prineville and accommodates growth and development through careful management of existing and future transportation facilities.

GOAL: **Reduce congestion, improve circulation, and provide safe side-street access along Highway 126, Third Street, and Main Street.**

Objectives:

A. Develop a safe and efficient arterial and collector system which maintains the integrity of the downtown business district and minimizes the impact on street-side parking.

B. Improve intersection operations by adding left-turn phases, installing additional traffic signals, actuating and coordinating traffic signals, and/or increasing sight distance as needed.

C. Provide signage directing vehicles to business, industrial, and recreational centers.

GOAL: **Provide additional north/south arterial and collector streets.**

Objectives:

A. Provide additional crossings over Ochoco Creek to improve traffic circulation and reduce congestion on Main Street.

GOAL: **Improve truck circulation through and around the city.**

Objectives:

A. Reduce the impact of truck traffic on Third Street and on Main Street.

B. Develop an alternative truck route system with signage to destinations and highways.

GOAL: **Increase the use of alternative travel modes through improved safety and service.**

Objectives:

A. Provide additional sidewalks and improve existing sidewalk pavement for pedestrian safety and access.

B. Provide additional bicycle routes and plan regular maintenance of existing routes for bicyclist safety and access.

C. Provide pedestrian and bicycle access between subdivisions and neighborhoods, especially when direct motor vehicle access is not possible.

D. Expand existing transit service to include the entire community if economically feasible.

GOAL: **Preserve the function, capacity, level of service and safety of the transportation system.**

Objectives:

A. Adopt access management standards, level of service policies and street design standards (including new standards for "local" streets) which balance the need for access with the need for automobile, pedestrian and bicycle safety and with the need for efficient movement of through traffic and which are consistent and compatible with those standards adopted by ODOT and Crook County.

B. Work with ODOT to support airport facility improvements (including access to/from t he airport and industrial areas) identified in the current airport master plan for Prineville Municipal Airport. *(Note: from the Interim Corridor Strategy for Highway 126)*

C. Work with ODOT to maintain and upgrade the City of Prineville Railway tracks to allow a minimum speed of 25 mph wherever upgrading can be achieved with a favorable benefit cost ratio. *(Note: from the Interim Corridor Strategy for Highway 126)*

CHAPTER 5 CURRENT TRANSPORTATION CONDITIONS

As part of the planning process, an inventory of the existing transportation system in Prineville was conducted. This inventory, which covered the street system as well as the pedestrian system, bikeways, public transportation, rail, air, water, and pipelines, has been updated and revised by W&H Pacific as part of the TSP update process. In addition to these transportation modes, transportation demand management measures were also reviewed. Lastly, census data was examined to determine travel mode distributions.

Transportation System Inventory

The transportation system inventory examined all modes of transportation in Prineville for people and goods. This section describes each mode and, when possible, the approximate usage of that mode.

Roadways

As part of the 1994 TSP, the current transportation conditions on the existing roadways were measured and examined during the spring of 1992. Data collection included a physical inventory of the City's arterial and collector roads and a traffic count program that measured volumes at 45 street or intersection locations. The results of the inventory were used to define existing roadway capacities and short term improvements, and the PM peak hour traffic counts were used as a base for developing the traffic forecasting model. Additional traffic counts were taken on 3rd Street since the 1994 TSP was prepared. These data are summarized in later sections of this chapter.

Physical Inventory

The existing street system inventory was conducted for all highways, arterial roadways, and collector roadways within Prineville as well as those in Crook County which interact with city streets. Inventory elements include:

- street classification and jurisdiction
- street width and right-of-way
- number of travel lanes
- presence of on-street parking, sidewalks, or bikeways
- speed limit
- general pavement conditions

Figure 5-1 shows the roadway functional classification and jurisdiction as well as the location of traffic signals. Appendix C lists the complete inventory.

Highways. Prineville is served by five state highways: Ochoco Highway, Madras-Prineville Highway, Crooked River Highway, O'Neil Highway, and Paulina Highway. These roadways are managed and maintained by ODOT. The *1991 Oregon Highway Plan (OHP)* classified the state highway system into four levels of importance *(LOI)*: Interstate, Statewide, Regional, and District. ODOT has established primary and secondary functions for each type of highway and

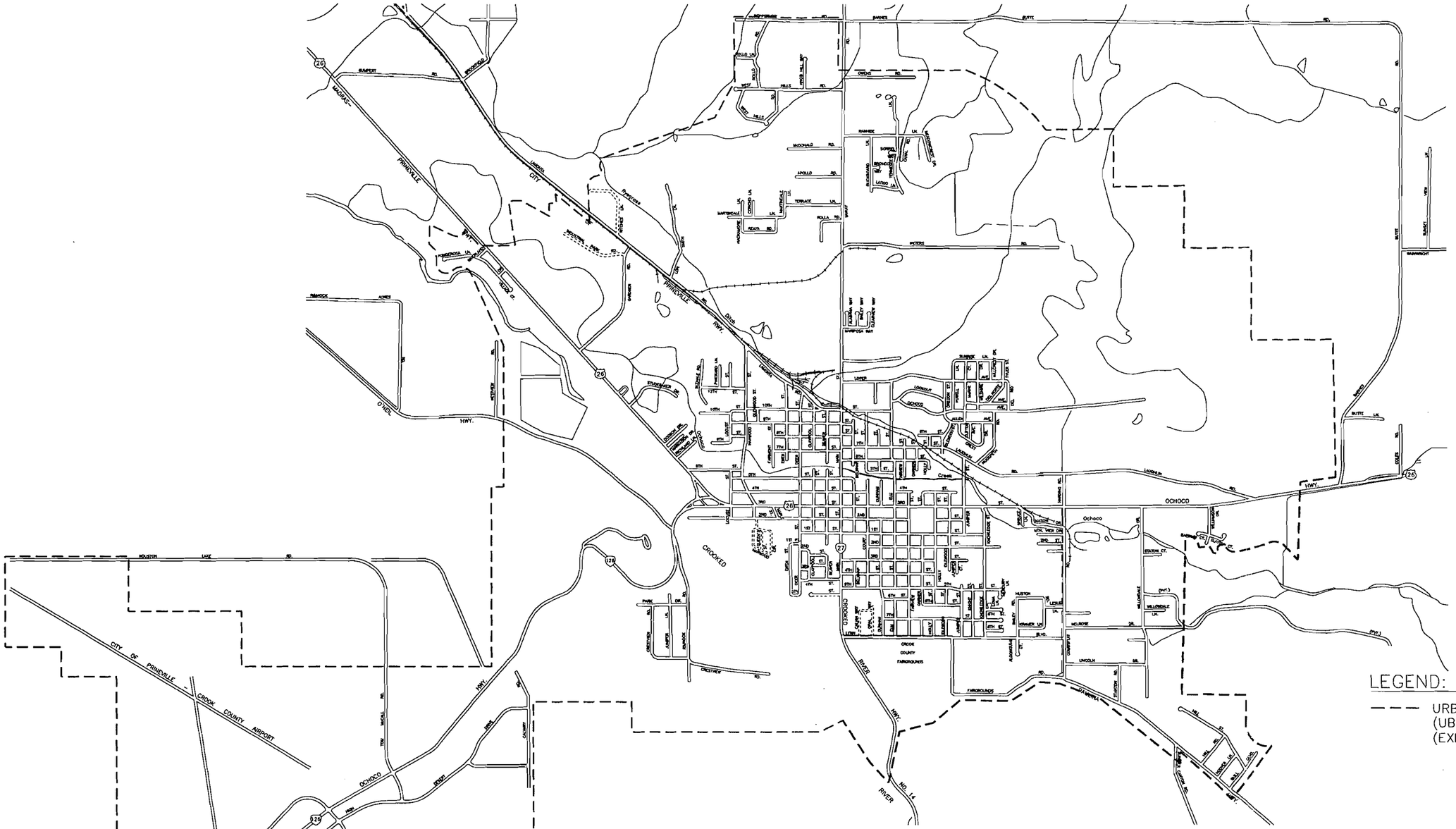
objectives for managing the operations for each one. Prineville has no Interstate Highways but it does have all of the others.

The *Draft 1998 Oregon Highway Plan* state highway classification system consists of six categories of roadway including the three National Highway System (NHS) classifications: Interstate, Statewide, and Intermodal Connector. In addition, the system retains the Regional and District categories used in the Levels of Importance (LOI) classification system adopted in the 1991 Oregon Highway Plan and adds a new category -- Local Interest Roads. The state highway classification system provides a basis for definition of the system. Supplementing this base are four additional special purpose designations: land use, statewide freight routes, scenic byways, and lifeline routes. Each of these special designations provides additional information, allowing the system to incorporate significant concerns previously left out of the process. The system classification and special purpose designations are intended to guide investment and management decisions. As shown in **Table 5-1**, there are no changes proposed to the classification of Prineville's highways.

Table 5-1
State Highway Classification

Highway - Description	1991 Adopted OHP	1998 Draft OHP
Ochoco Highway - Highway 126 to the west of Prineville and Highway 26 through and east of Prineville. It is the focus of the downtown commercial development and carries the greatest amount of traffic in the city.	Statewide	Statewide
Madras Highway - Highway 26 west of Prineville. Between Madras and Prineville, Highway 26 has a regional classification. (It is classified with statewide importance on all other segments but this one.) This route is the most direct route from Prineville to Portland, about 150 miles northwest.	Regional	Regional
Crooked River Highway - (Highway 27) extends south from Highway 26 (Third Street) providing access to the Prineville Reservoir and beyond.	District	District
O'Neil Highway - runs parallel to Highway 126 between Prineville and Redmond. It serves primarily as access for the adjacent land uses.	District	District
Paulina Highway - located in the southeast quadrant of Prineville, providing access to the Prineville Reservoir and Grant County.	District	District

Arterial Roadways. Arterial streets form the primary roadway network within and through a region. They provide a continuous road system which distributes traffic between neighborhoods and districts. Generally, arterial streets are high capacity roadways which carry high traffic volumes with minimal localized activity. Major arterial streets tend to be higher volume, larger capacity roadways than minor arterial streets.



SOURCE: ODOT BASE MAP/DEA LAYER DATA

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	**STUDY AREA**	**FIGURE 3-1**	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

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In Prineville, the arterial network consists of state, county, and city streets. Highways 26 and 126 merge on the west side of the City to form a single roadway bisecting Prineville from east to west. Named Third Street within city limits, Highway 26 is the primary corridor of commercial development, and is designated a major arterial street. Main Street is the north-south major arterial. Other major arterial streets include county roads: Lynn Boulevard and Combs Flat Road. Minor arterial streets include: Lamonta Road, Laughlin Road, Tenth Street, First Street, Harwood Street, Fairview Street, and Juniper Street.

Collector Roadways. Collector streets connect local neighborhoods or districts to the arterial network. Generally, they do not connect together to form a continuous network because they are not designed to provide alternative routes to the arterial street system.

Both Prineville and Crook County have designated collector roads. Within city limits, collector streets include Deer Street and Elm Street, which are the remaining north-south roads crossing Ochoco Creek; roads such as Fifth Street and Court Street, which collect traffic in residential neighborhoods; as well as roads serving schools, industrial districts, and other areas. Outside of the city limits, state roads such as Paulina Highway and O'Neil Highway and county roads such as Juniper Canyon Road, McKay Road, Lamonta Road and Barnes Butte Road collect traffic destined for the City from more remote areas.

Street Layout

Most Prineville roadways are laid out in a grid pattern. Block sizes are typically 330 feet by 330 feet. Several natural features interrupt the grid system, causing discontinuities and odd-shaped blocks. These features include the steep rimrock walls on the west side of the city, Crooked River, Ochoco Creek, and the hills in the northeast quadrant which form Ochoco Heights. Manmade features such as large school lots and the railway also divide up the city.

One of the major circulation barriers is Ochoco Creek and the surrounding park. Ochoco Creek runs east/west through town north of Fourth Street. There are six creek crossings spaced an average of four to five blocks apart (about one quarter of a mile). Four of these crossing are located downtown: Harwood Street (minor arterial), Deer Street (collector), Main Street (major arterial), and Elm Street (collector). Two others are located east of the commercial core: Juniper Street (minor arterial) and Combs Flat Road (major arterial). Main Street is the most frequently used crossing.

1998 Traffic

Traffic volumes on the major streets in Prineville were originally measured during the spring of 1992. These data were adjusted to 1998 conditions based on growth rates derived from ODOT's annual traffic volume data (see Appendix D for a description of the methodology). Twenty-four hour, two-way volumes are shown on **Figure 5-2**. The widest bandwidth illustrates that the highest volumes occur on Third Street, with about 16,730 vehicles entering and emerging from the "Y" intersection of Highways 26 and 126.

Peak Hour Volumes. Directional AM and PM peak hour volumes are shown on **Figures 5-3** and **5-4**. A comparison of the morning and evening traffic indicates a build-up of traffic throughout the day. For example, PM peak hour volumes on Third Street are more than twice as high as those in the AM peak hour in some locations. Because the highest hourly

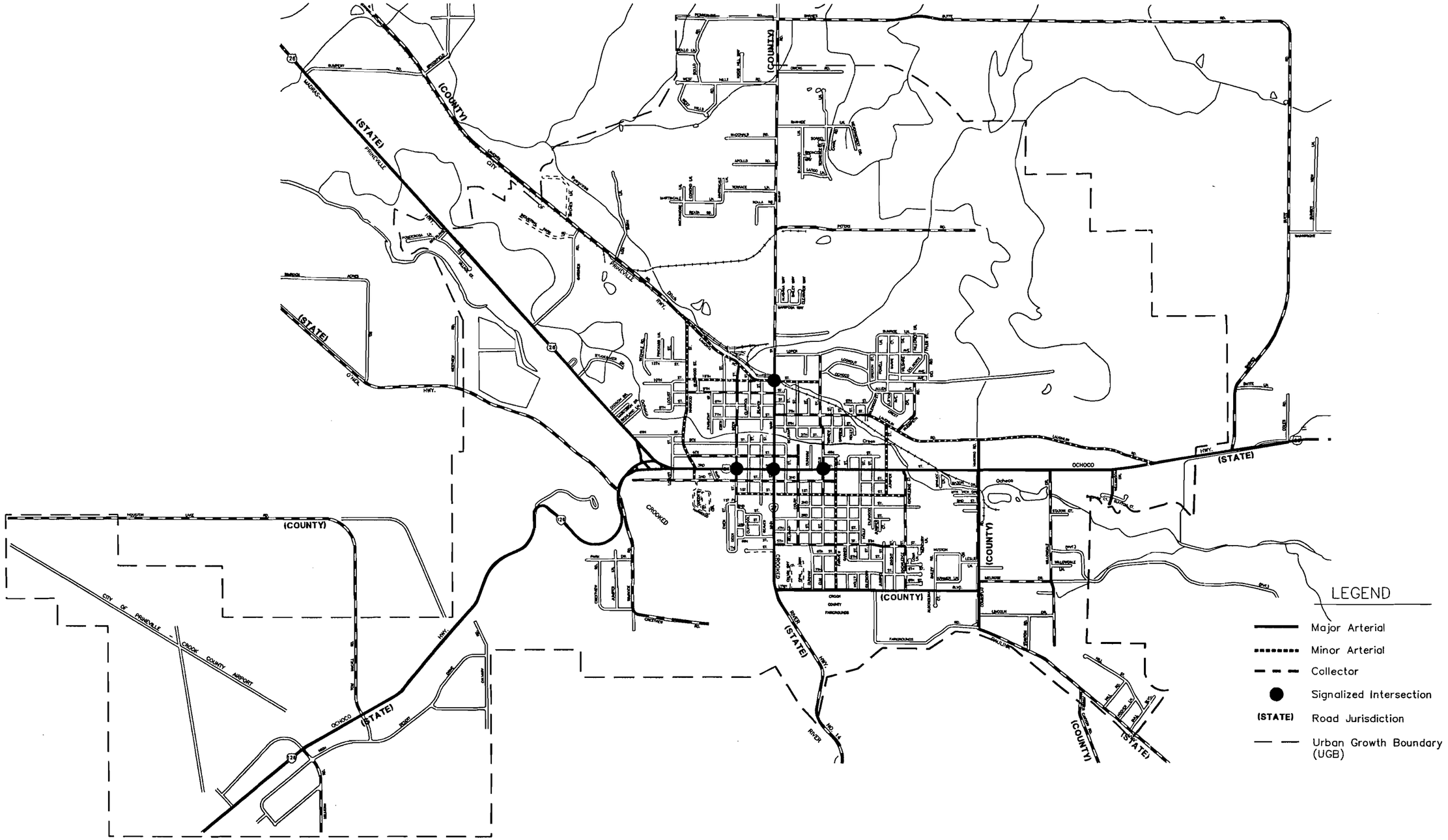
volumes occur in the afternoon/evening period, future testing and evaluation of the street system was accomplished by forecasting the PM peak hour volumes.

Hourly Traffic Patterns. Hourly traffic patterns at three locations in Prineville are shown in **Figure 5-5.** These patterns are based on the 24-hour traffic volumes measured by ODOT 1997. The locations shown in this figure were selected because they are all fairly high activity spots where improvements may be needed in the future.

The first location, Third Street west of Harwood Street, is the point where Highways 26 and 126 merge and enter the city. The peak period is clearly the hour between 3:00 p.m. and 5:00 p.m., with over 650 vehicles hourly westbound and over 575 vehicles hourly eastbound. From 11:00 a.m. to 6:00 p.m., traffic volumes are steady, with a small peak during the lunch hour, varying between 400 and 500 vehicles per hour in either direction (excluding the peak hour). Traffic volumes grow gradually prior to that period and decrease rapidly afterwards.

The second location, Third Street west of Knowledge Street, is on the opposite side of the city and east of the commercial core. This location has a less pronounced peak hour. Volumes generally vary from 400 to 500 vehicles per hour in each direction for the seven hour period between 11:00 a.m. and 6:00 p.m. with the peak hour for westbound traffic occuring between 3:00 and 4:00 p.m. and the peak hour for eastbound traffic an hour later between 4:00 and 5:00 p.m.. As with the Harwood Street location, traffic volumes grow gradually up to that period and decrease quickly afterwards.

Main Street north of Third Street is the location of the third traffic pattern shown **in Figure 5-5**. Traffic volumes are considerably lower at this location than the Third Street locations. This location shows two peaks in traffic volume: one during lunch time (between 11:00 a.m. and 1:00 p.m.) and a second more pronounced peak in later in the afternoon between 4:00 and 5:00 p.m..



SOURCE: ODOT BASE MAP/DEA LAYER DATA

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	1998 STREET CLASSIFICATION, SIGNALS AND JURISDICTION	FIGURE 5-1	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

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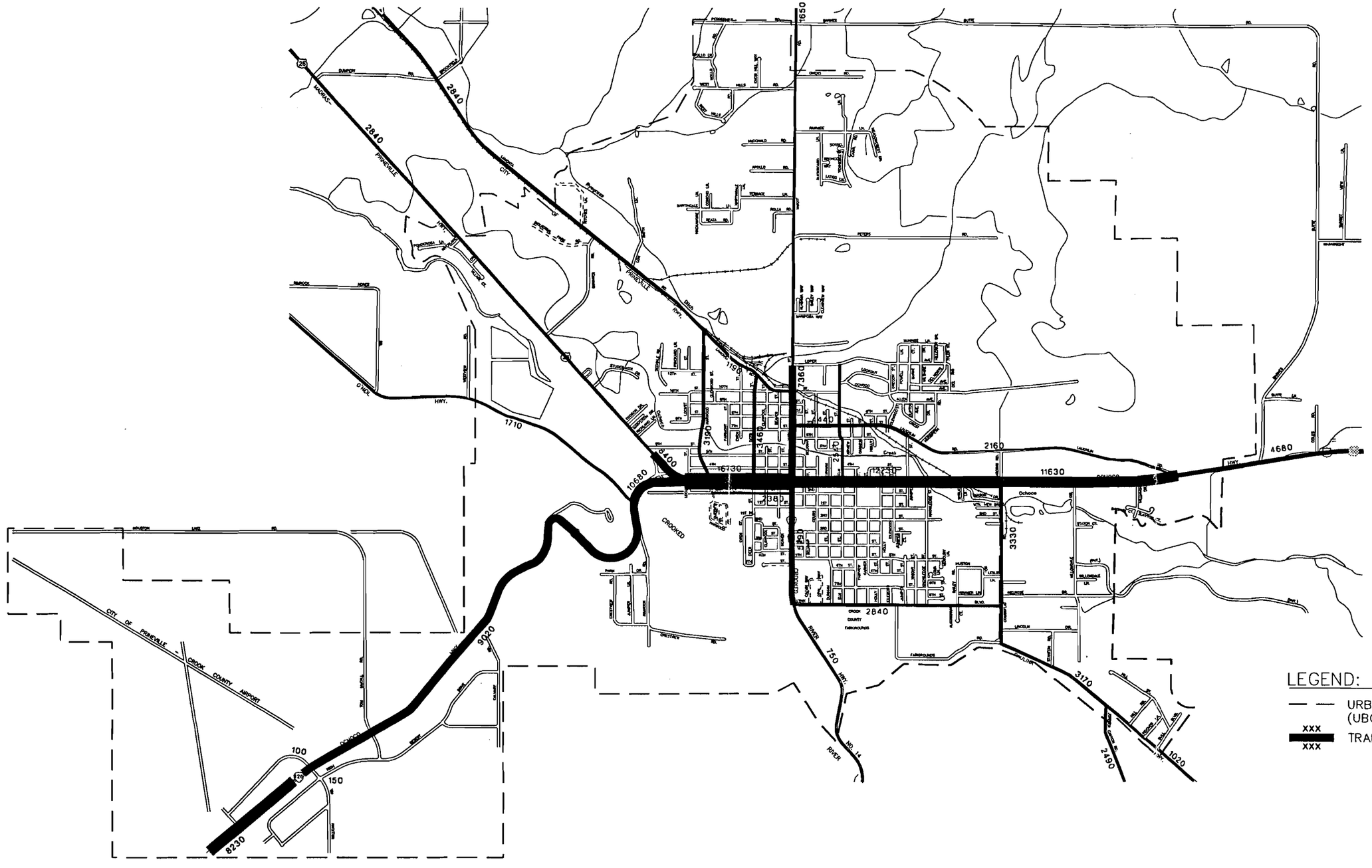

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN

1998 WEEKDAY 24 HOUR TWO-WAY TRAFFIC VOLUMES

FIGURE 5-2

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

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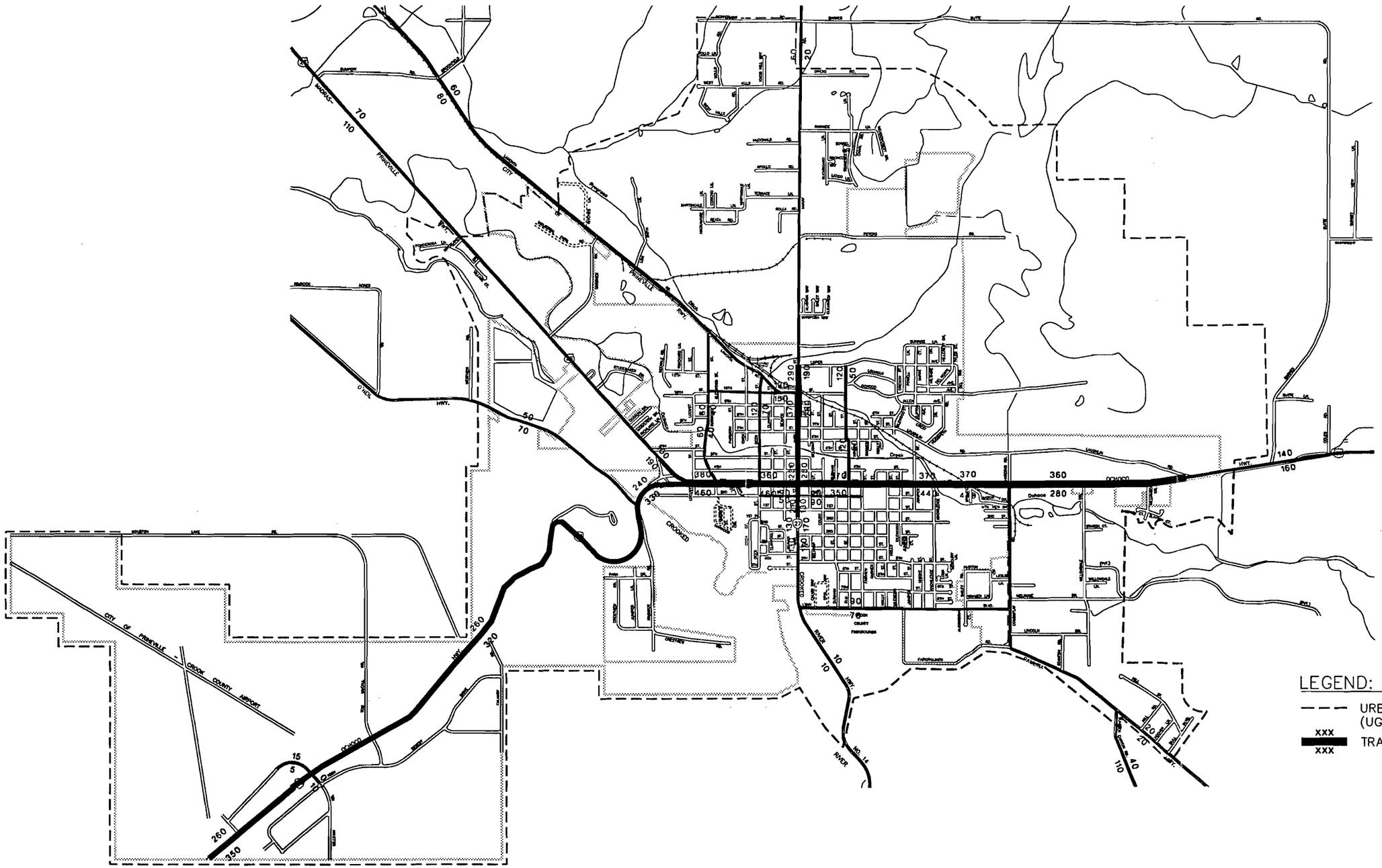


CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN

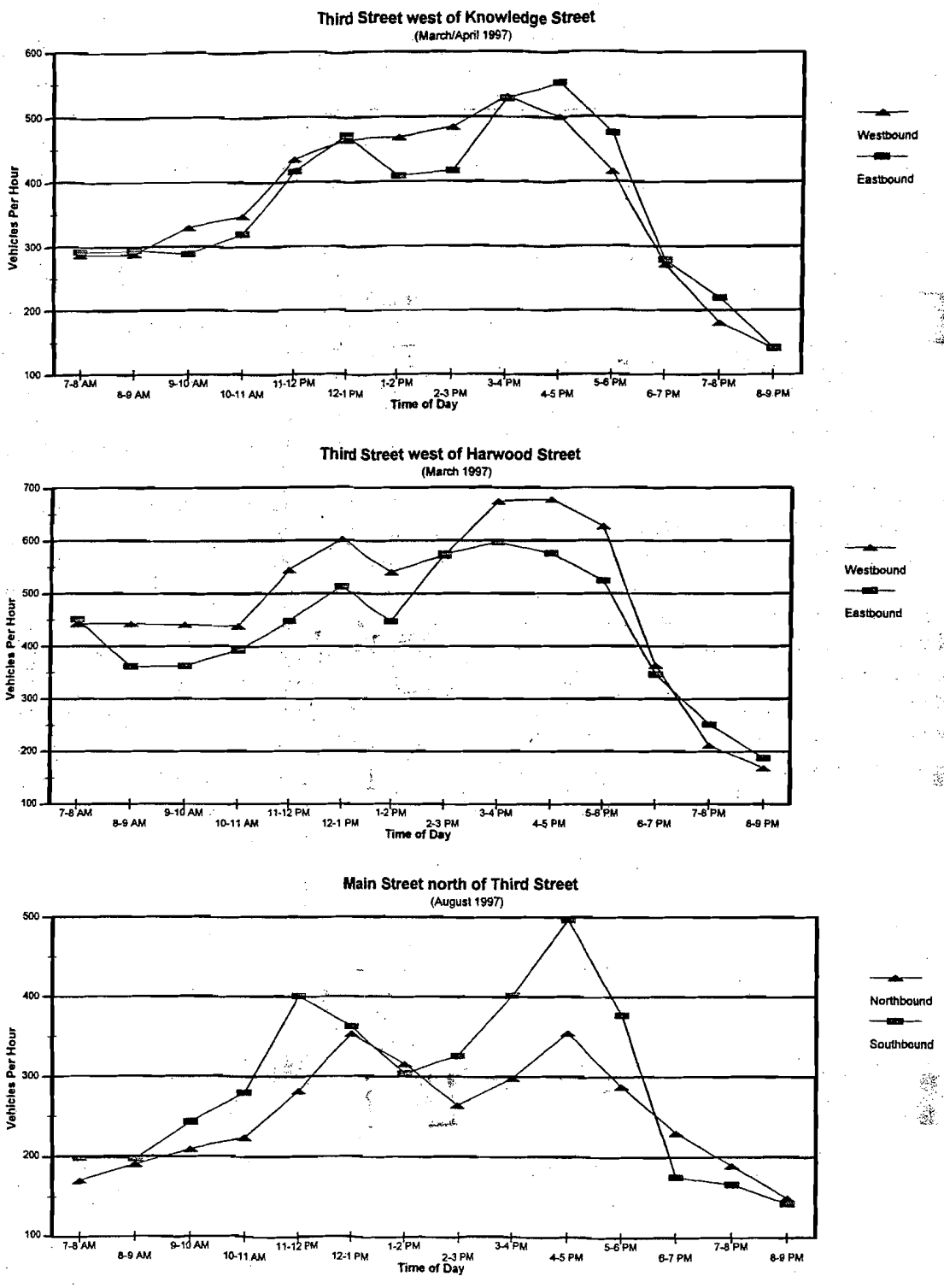
1998 WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES

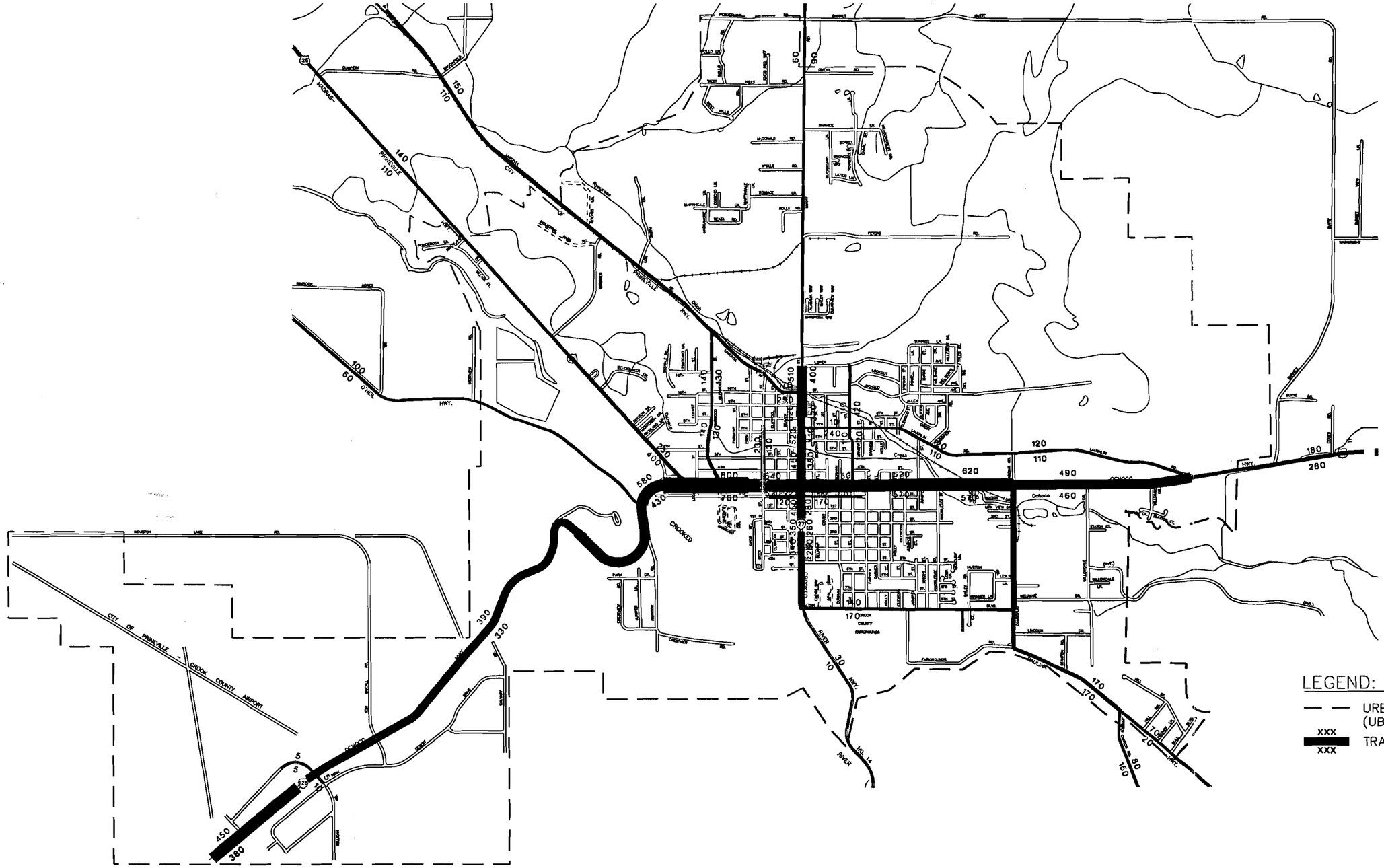
FIGURE 5-3

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

04.2658.7701 REV: 04/01/99 PRN17F06.DWG

Figure 5-5 - Hourly Traffic Patterns





CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN

1998 WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES

FIGURE 5-4

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

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1998 Street Capacity

Transportation engineers have established various standards for measuring traffic capacity of roadways or intersections.[1] Each standard is associated with a particular level of service (*LOS*) one wishes to provide. The LOS concept requires consideration of factors which include travel speed, delay, frequency of interruptions in traffic flow, relative freedom for traffic maneuvers, driving comfort and convenience and operating cost. Six standards have been established ranging from Level A where traffic flow is relatively free to Level F where the street system is totally saturated or jammed with traffic. **Table 5-2** presents the level of service criteria for signalized intersections.

The 1991 OHP establishes operating level of service standards for the state highway system[2]. For highways of statewide importance, such as the Ochoco Highway, roadways in urban areas and urbanizing areas should operate at LOS C or better (i.e. stable traffic flow with average speeds between 20 and 25 mph). Highways of regional importance, such as the Madras Highway, should operate at LOS D in urban areas and LOS C in urbanizing areas. The higher standard for urbanizing areas is set to allow for future growth in those areas. For highways of district importance, such as O'Neil Highway, Paulina Highway, and the Crooked River Highway, roadways should operate at LOS D in both urban and urbanizing areas.

The 1998 Draft OHP also addresses operating level of service standards for the state highway system, generally maintaining standards which are similar to, or somewhat less stringent than, those established in the 1991 OHP (e.g., within urban areas, highways of statewide importance, such as the Ochoco Highway, should operate at LOS C/D). Special Transportation Areas (STAs) are also addressed in the 1998 Draft OHP. STAs are designated existing or future compact districts located within an urban growth boundary in which land use considerations outweigh the considerations underlying the highway level-of-service policy (e.g., central business districts). Designation of an STA would require a collaborative planning process by ODOT and the City of Prineville with mutual adoption including a public participation process. Pursuant to the 1998 Draft OHP, LOS E would be the minimum acceptable level of service on all Prineville highways within an adopted STA, although, alternative LOS standards may be adopted in a STA as part of a detailed plan.

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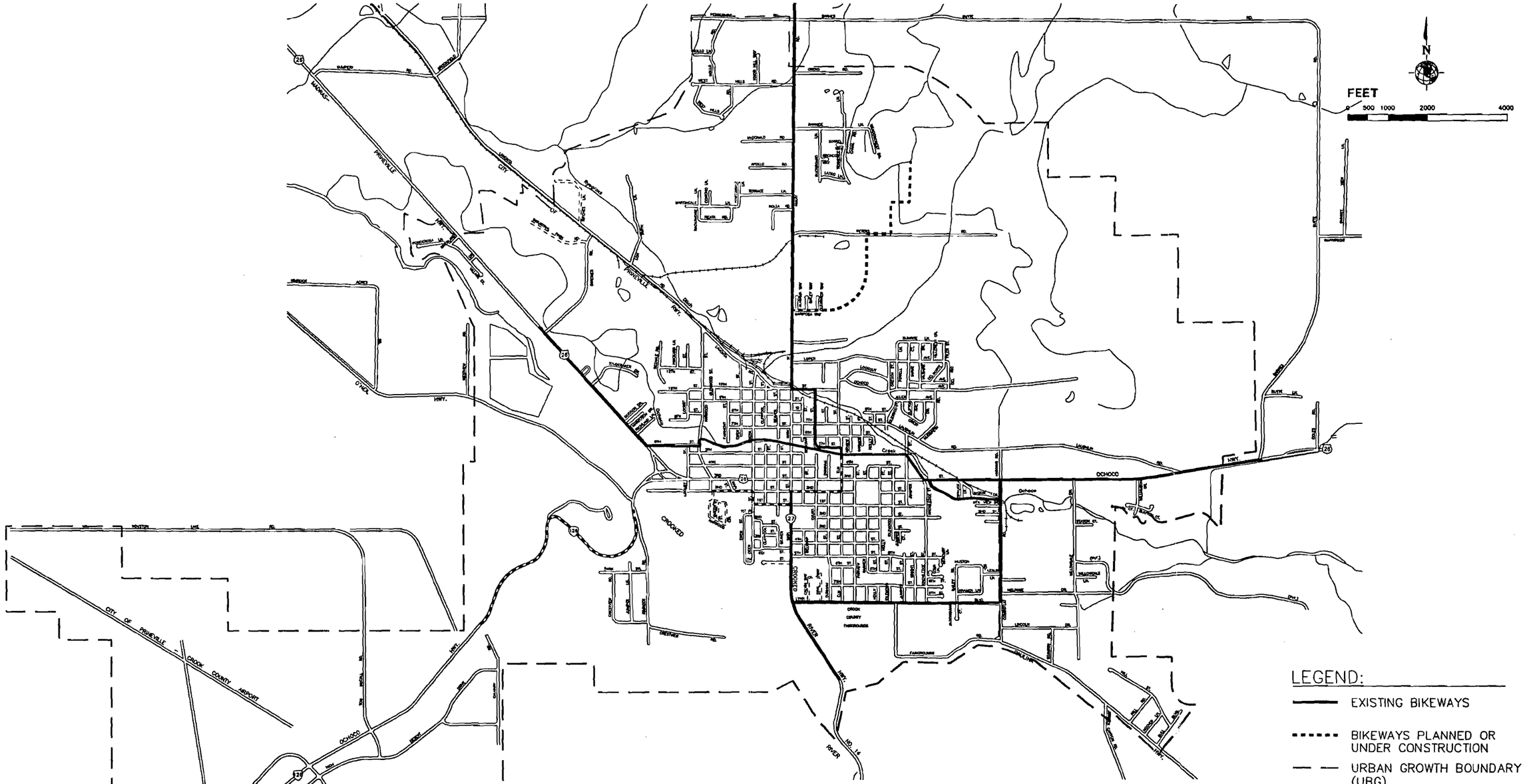
1 Transportation Research Board, *Highway Capacity Manual*, Special Report 209. National Research Council, 1985.

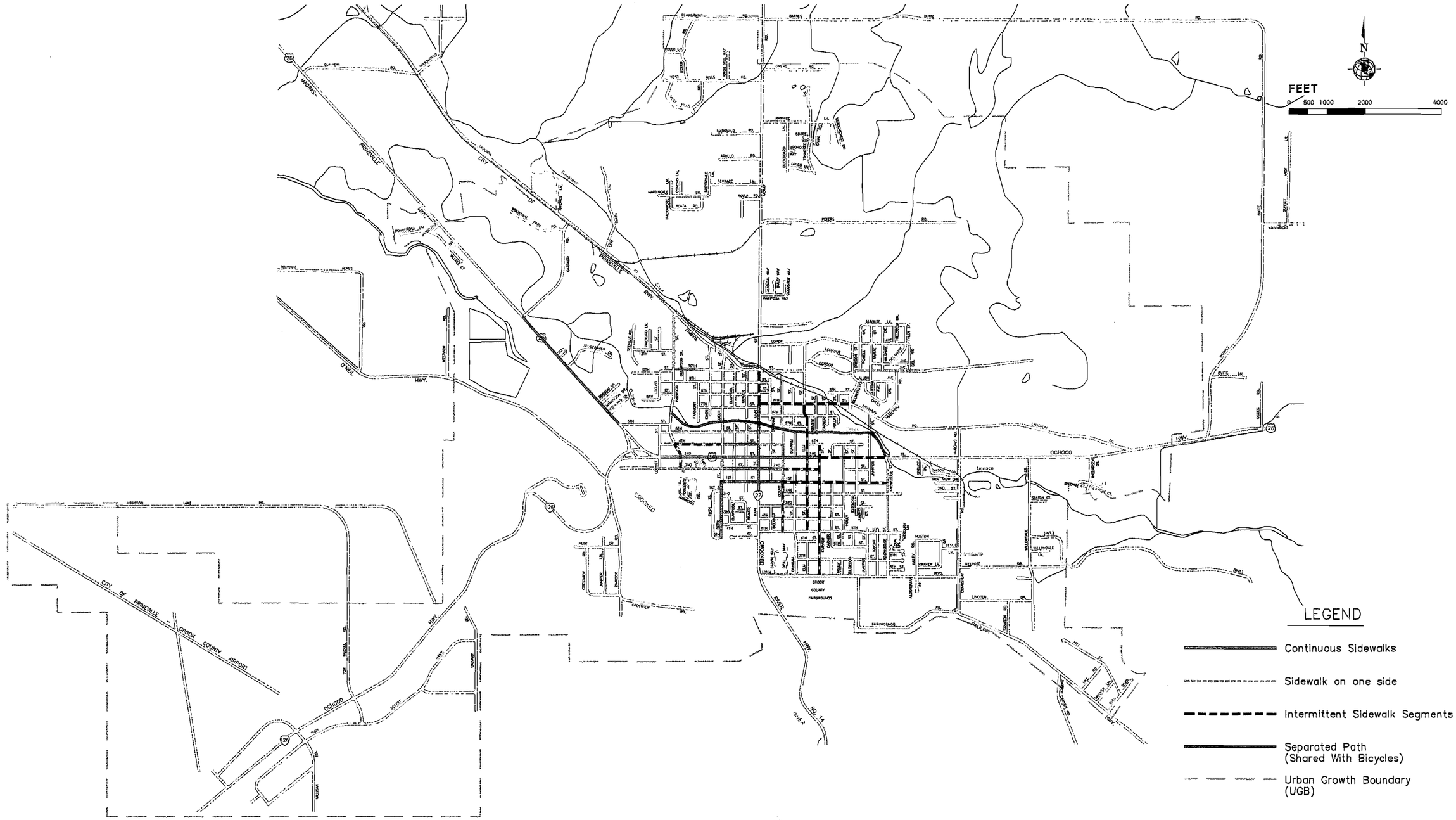
2 1991 Oregon Highway Plan, Appendix A, Table 1, *Operating Level of Service Standards for the State Highway System.*



SOURCE: ODOT BASE MAP/DEA LAYER DATA

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	EXISTING BIKEWAY	FIGURE 5-6	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

04.2658.77C REV: 04/01/99 PRN17F09.DWG



SOURCE: ODOT BASE MAP/DEA LAYER DATA

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CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN

EXISTING SIDEWALKS

FIGURE 5-7

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

Table 5-2
Level of Service Designation for Signalized Intersections

Level of Service	Traffic Flow	Comments	Maneuverability
A Desirable	Free	Traffic flows freely with no delays.	Drivers can maneuver easily and find freedom in operation.
B Desirable	Stable	Traffic still flows smoothly with few delays.	Some drivers feel somewhat restricted within groups of vehicles.
C Desirable	Stable	Traffic generally flows smoothly but occasionally vehicles may be delayed through one cycle. Desired urban area design level.	Backups may develop behind turning vehicles. Most drivers feel somewhat restricted.
D Acceptable	Approaching Unstable	Traffic delays may be more than one cycle during peak hours but excessive back-ups do not occur. Considered acceptable urban area design level.	Maneuverability is limited during short peak periods due to temporary back-ups.
E Unsatisfactory	Unstable	Delay may be great and up to several signal cycles. Short periods of this level may be tolerated during peak hours in lieu of the cost and disruption attributed to providing a higher level of service.	There are typically long queues of vehicles waiting upstream of the intersections.
F Unsatisfactory	Forced	Excessive delay causes reduced capacity. Always considered unsatisfactory. May be tolerated in recreational areas where occurrences are rare.	Traffic backed up from other locations and may restrict or prevent movement of vehicles at the intersection.

As shown in **Table 5-3**, the capacity of each of the major two-lane highways serving the City of Prineville was calculated in a generalized way using standards from the *Highway Capacity Manual* (Special Report #209. Transportation Research Board, 1994). The level of service calculation considers existing uphill climbing lane and current shoulder improvements.

Table 5-3
Two-Lane Highway
1998 PM Peak Hour Level of Service (LOS)

Highway Section	1998
Ochoco Highway	
Crooked River to Wayside Rd	B
Wayside Rd to crest [1]	C
Houston Lake Rd to Airport Access	D
Paulina Highway	B
O'Neil Highway	B
Prineville Highway	B
Madras-Prineville Highway	C

The recent traffic counts collected at major intersections along 3rd Street were used to calculate current LOS and traffic signal warrants. The 1998 p.m. peak hour LOS is summarized separately for signalized and unsignalized intersections on 3rd Street in **Table 5-4.** Both the Deer Street and Elm Street signalized intersections on 3rd Street are operating at good LOS "B." The 3rd Street/Main Street intersection (which was recently fitted with turn-lane and traffic signal turn phase improvements) operates at higher levels of congestion, as indicated by the poorer LOS "D-E."

The major unsignalized intersections on 3rd Street at Harwood and Knowledge are all operating at acceptable LOS ("D" or better). While there are signs of growing side-street delay at each of these intersections, the mainline traffic continues to operate well. A supplemental analysis of traffic signal warrants was conducted at each intersection. Based on 1998 traffic conditions, traffic signal warrants are met on 3rd Street at Harwood, Knowledge and Combs Flat Road. These indicators are used in Chapter 6 to identify and prioritize short-term improvement needs.

Table 5-4
Signalized Intersections
1998 PM Peak Hour Level of Service (LOS)

Intersection	V/C	Intersection Average VehicleDelay (sec)	LOS
3rd Street / Harwood	N/A	1.9	D
3rd Street / Deer	0.60		B
3rd Street / Main	0.88		D-E
3rd Street / Elm	0.54		B
3rd Street / Knowledge	N/A	1.4	C

For two-lane local streets, which comprise most of Prineville's local street system, capacity was estimated at about 700 vehicles per hour in each direction. **Table 5-5** compares the general capacity estimate for local streets with the 1998 traffic volumes (shown in **Figure 5-4**) Most of the local street segments in Prineville are operating at LOS C or better, indicating little or no congestion even during the PM peak hour.

Table 5-5
1998 Forecast Volume-to-Capacity Ratio
on Selected Two-Lane Local Streets

Two-Lane Local Street	Capacity/ Hour	1998 Vol.	1998 PM Peak Hour V/C
Harwood St. (S)	700	141	0.20
Harwood St. (N)	700	130	0.19
Deer St. (S)	700	227	0.32
Deer St. (N)	700	130	0.19
Elm St. (S)	700	108	0.15
Elm St. (N)	700	119	0.17
2nd (W. of Main) (W)	700	217	0.31
2nd (W. of Main) (E)	700	119	0.17
2nd (E. of Main) (W)	700	108	0.15
2nd (E. of Main) (E)	700	173	0.25
Lynn Blvd (W)	700	136	0.19
Lynn Blvd (E)	700	170	0.24

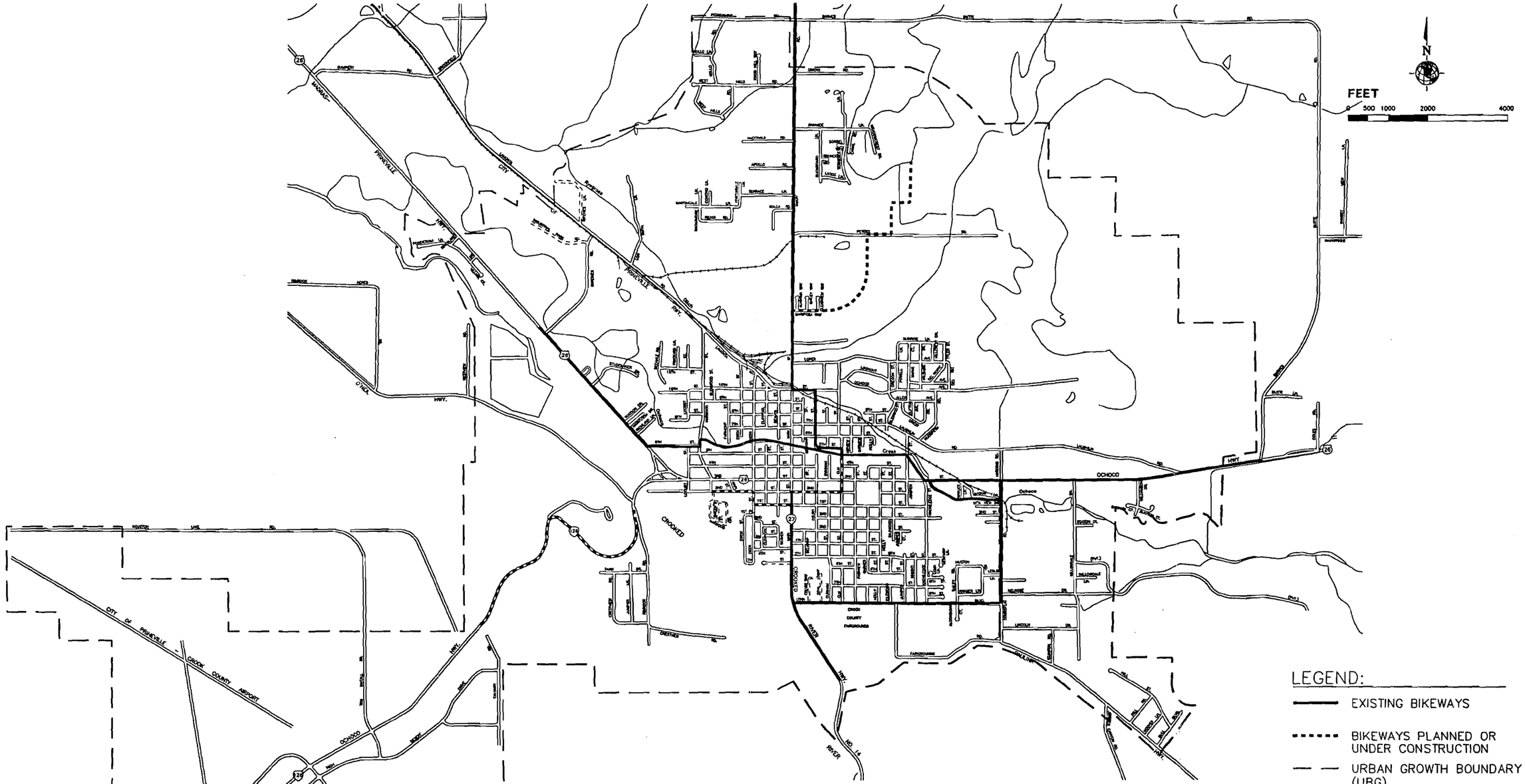
Bikeways

Prineville has three designated bike routes through town, as shown in **Figure 5-6.** One existing route runs east-west along Highway 26 within the Urban Growth Boundary while the other runs north-south on North Main Street from Ochoco Creek to the Urban Growth Boundary. The third bike route runs north-south on Highway 27 at 3rd Street, connecting with the playing fields south of town.

The east-west bike route is a separate bike path for most of its length. It is begins as a 10-foot wide bike path on the north side of Highway 26, and extends about 1.25 miles. Within the City, the bike lane leaves the highway at West Sixth Street to become a bike path along Ochoco Creek. When the creek crosses Third Street, the bikeway returns to the roadway. From this point eastward, it runs along the shoulder of the roadway.

The existing north-south route starts at the Ochoco Creek bike path and zig-zags along Elm Street, Fifth Street, and Court Street, sharing the roadway with vehicles before it turns west onto Tenth Street becoming a bike lane, and finally turns north again onto Main Street. It continues northward along Main Street and McKay Road to the Urban Growth Boundary at Barnes Butte Road as bike lanes.

The Highway 27 bike route includes bike lanes that continue southward from 3rd Street. At First Street, it will turn westward, and then it will turn southward again along Main Street, providing bicycle access to the playing fields opposite the fairgrounds.



SOURCE: ODOT BASE MAP/DEA LAYER DATA

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	**EXISTING BIKEWAY**	**FIGURE 5-6**	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

04.2658.77L REV. 04/01/99 PRN17F09.DWG

Pedestrian System

Most of Prineville's arterial and collector roadways, with the exception of the downtown core, do not have any sidewalks for pedestrians, as shown in **Figure 5-7**. Many of the roads which do have sidewalks do not have continuous paved paths on both sides of the road. Some have sidewalks on one side only, while others have pieces of sidewalks along certain parcels but not along others. Often, the paved section switches from one side of the street to the other, forcing the pedestrians to cross back and forth or to walk in the street. Although Prineville does have very wide streets, offering some space between pedestrians and motorized vehicles, a curb and sidewalk provide a visual barrier that is far more comforting to pedestrians.

Some new residential development has been including sidewalks as part of the street. The TSP chapter will address the need for including sidewalks as part of the street standards.

In addition to sidewalks in some parts on Prineville, the two separated bike paths can also be used by pedestrians. The Ochoco Creek path is protected from traffic and provides fairly direct access to the Crook County Middle and Elementary Schools on Knowledge Street.

Public Transportation

Public transportation in Prineville consists of minibus, van shuttle, and bus line service. The city has no local fixed route transit service at this time.

For elderly and disabled residents, the Soroptomists Club sponsors a minibus service. This service operates between 9:00 a.m. and 4:00 p.m. six days a week (Monday through Saturday) and on special occasions. It currently has two mini-vans with volunteer drivers and a two-way radio system. The service is available in areas within five miles of downtown and was established to provide transport to necessary services such as shopping and doctor visits as well as the senior center. It is funded by donations from clients, with no set price for the service. Approximately 65 to 70 people use the minibuses each day. Limited Minibus service is provided TO Redmond and Bend. The Soroptomists Club is planning to expand the service depending on that availability of funding assistance.

One of the options available for out-of-town travel is the People Mover. The People Mover is a shuttle van operating three times a week (MWF) from Prairie City which provides service to Redmond and Bend. Two stops are scheduled in the morning and evening each day in Prineville. The westbound minivan stops around 10:00 a.m. at the Greyhound Bus station (The Towne Pump) on Madras Highway and the Senior Center on North Belknap Street. The eastbound minivan stops around 4:30 p.m. at the Greyhound Bus station and Myrmo's on North Harwood Street. In addition to the connection with Greyhound in Prineville, the People Mover also connects with Greyhound in Redmond and Bend, and the airport in Redmond.

The People Mover shuttle van is a 15-person Dodge Van outfitted with a wheelchair lift. Total ridership from all communities along the route averages 5 to 10 people per trip.

Greyhound Bus Lines provides daily service to Portland. Westbound buses stop at the Towne Pump on Madras Highway at 10:40 a.m. while eastbound buses stop at 7:45 p.m.. Riders can make connections to and from any other city in either Bend, Madras, or Biggs. About 3 to 5 passengers on weekdays typically take the bus on weekdays with slightly higher usage on weekends.

In addition to public transportation, the Crook County School District operates a school bus system. There are 25 buses (routes), 22 of which serve schools in Prineville as follows:

- All 22 buses access the Middle School on Knowledge Street and High Schol on Lynn Boulevard.
- 11 of those buses access both the Cecil Sly School and the Middle School on Second Street.
- 4 buses serve the Crooked River School at First and Fairview Streets.
- 6 buses serve the Ochoco Grade School at Highway 26 and Fourth Street.
- A special needs bus may serve all schools on any given day.

All 25 buses leave and return to the bus garage located near the intersection of Lamonta and Lon Smith Roads. The buses are out-bound from the garage between 6:00 a.m. and 6:30 a.m.. They are in town distributing students between 7:45 a.m. and 8:00 a.m.. The buses return to the bus garage between 7:55 a.m. and 8:10 a.m.. The buses leave the garage again around 2:30 p.m. and are distributing students to their homes between 3:20 and 3:40 p.m.. The majority of buses return to the garage around 5:00 p.m. with some returning as late as 6:30 p.m..

Rail Service

The City of Prineville Railway provides transport primarily for the timber products industry in Prineville and Crook County. It was established in 1918, and is city-owned and operated. The tracks extend westward from Prineville, connecting with Burlington Northern/Santa Fe Railroad and Union Pacific Railroad lines near Redmond. This connection allows customers to ship goods to domestic and international destinations.

The railway is classified as an originating/terminating carrier or a line-haul carrier and operates under "Yard Limit" which limits the operating speed to 20 mph. "Yard limits" mean that the railway is operated from a switch list rather than train orders or block signals and can enter any track any time.

Intermodal truck to rail connections are possible for the railway; however, they are not currently in use. The facilities still exist but all intermodal operations were relocated to Portland.

At this time, the railroad provides no commercial passenger service. However, the Crooked River Dinner Train, based in Redmond, uses the tracks for various rail tours through the Crooked River Valley.

At-grade railroad crossings are located throughout the city. Some of these crossings cause occasional commuter delays; however, accidents involving passenger vehicles and railroad cars are very infrequent. The crossings at North Main Street, Lamonta Road and on East Third Street (Hwy 126/26) are all equipped with a "pedestrian flange crossing" or "omni rubber crossing". This enables pedestrians and bicyclists to cross the rails easily by providing a surface level with the top of the rails.

Air Service

In 1995, the City of Prineville annexed the "City-County Airport Area" (Resolution No. 794), thus including the Prineville Municipal Airport within the city limits. The Prineville Municipal Airport, located west of the city, is used by most of the large local business, commercial, and heavy industrial firms as well as the United States Forest Service. It is served by one fixed-base operator. It is a general aviation airport and is included in the National Plan of Integrated Airports (NPIAS). The approach category allows speeds of 91 knots or more but less than 121 knots and airplanes with wingspans up to but not including 49 feet. It has two runways: 10/28 (5000' x 60') and 15/33 (4000' x 40'), both are paved. The Oregon Continuous Aviation System Plan (ODOT, 1997) recommends that Runway 10/28 be increased to 5730' x 75'. There were approximately 30 general aviation aircraft based at the airport in 1994, of these 25 were single engine, 2 were multi-engine, 2 were turbo jets and 1 was "other". There were an estimated 4,500 operations at the airport in 1994, which utilized approximately 4% of the airport's capacity.[3]

For commercial passenger service, the Redmond Airport is located about 20 miles west in Deschutes County.

Water Service

Prineville has no waterborne services.

Pipeline Service

Prineville is served by a major natural gas distribution line. This distribution line extends eastward from the main line, which parallels Highway 97 through the north-south central Oregon corridor, and is operated by Cascade Natural Gas.

Transportation Demand Management Measures

In addition to inventorying the transportation facilities in Prineville, the 1994 TSP also reviewed transportation demand management measures that are currently in place.

Alternative Work Schedules

Five major employers account for more than 50 percent of the jobs in Prineville. The employer, number of employees, and shift schedules are shown in **Table 5-6.** Most of these employers already stagger the departure times of their workers which reduces the peak traffic and congestion. The departure times from employer to employer are also staggered, further spreading traffic volumes over a longer period of time.

[3] Source: *Oregon Continuous Aviation System Plan, Vol. I-III,* Oregon Department of Transportation, Aeronautics Section, March 1997.

Table 5-6

Shift Schedules of Major Employers

Employer	Number of Employees	Shift Schedules
Les Schwab Tire Company	700	Staggered departure between 1:00 p.m. and 2:30 p.m.
Clear Pine Moldings	580	Staggered departure shifts at 2:30 p.m., 3:00 p.m., and 3:30 p.m.
American Molding and Millwork Company	390	About 300 employees depart at 4:00 p.m., about 30 depart at 5:00 p.m., and about 100 arrive at 4:30 p.m.
Crook County School District	285	Teachers are allowed to depart at 3:30 p.m. but many stay later. Office employees depart at 5:00 p.m.
Ochoco National Forest	200	Departure at 4:30 p.m.
Five-Employer Total	2,055	
Total Employees in Prineville	3960	
Percent	52	

Note: The number of employees is based on Chamber of Commerce data from 1992. The shift schedules are based on phone conversations in 1992 and 1993.

Carpooling

The Central Oregon Rideshare provides ride-matching services to encourage carpooling. The program was developed by the Oregon Department of Energy, ODOT, OSU Extension Service, Central Oregon Community College, and Central Oregon Environmental Center to promote more livable communities.

The Rideshare program began in mid-September of 1993 and has established a database of about 100 people. Interested drivers call a toll-free number, provide information about their trip, and are supplied with a list of others in their general area.

Travel Mode Distribution

Although automobile is the primary mode of travel for most residents in the Prineville area, some alternative modes are used as well. Modal split data is not available for all types of trips; however, the 1980 and 1990 census data do include statistics for journey to work trips as shown in **Table 5-7.**

Table 5-7
Journey to Work Trips

	1980 Census		1990 Census	
Trip Type	**Trips**	**Percent**	**Trips**	**Percent**
Private Vehicle	1645	85.8	1958	90.4
Drove Alone	*1330*	*69.4*	*1633*	*75.4*
Carpooled	315	16.4	325	*15.0*
Public Transportation	0	0.0	0	0.0
Bicycle	NA	0.0	10	0.5
Walk	174	9.1	120	5.5
Other	67	3.5	7	0.3
Work at Home	31	1.6	71	3.3
Total	1,917	100.0	2,166	100.0

NA = Not Available from census statistics

Source: *U.S. Bureau of the Census*

In general, the journey to work trip characteristics are similar between 1980 and 1990. About 3 percent of the population worked at home in 1990, a slight increase over 1980's 2 percent. The remaining 97 to 98 percent use some form of transportation to travel to work. In 1990, more than 90 percent of the workers traveled by private motorized vehicle (i.e. auto, van, truck, or motorcycle) while the remaining 6 percent traveled by either bicycle, walking, or other modes. In 1980, nearly 86 percent of the workers traveled by private motorized vehicle, with 13 percent traveling by other non-motorized vehicle modes.

Most Prineville residents travel to work via automobile. The percentage of automobile users has actually increased by more than 4 percent in the last 10 years from nearly 86 percent to more than 90 percent. The number of single-occupancy vehicles is also increasing. In 1980, about 69 percent of the Prineville residents drove to work alone. In 1990, about 75 percent drove alone, a 6 percent increase over the 10-year period. At the same time, carpooling rates have decreased more than 1 percent from about 16 percent in 1980 to 15 percent in 1990.

Bicycle usage is fairly low (less than 1 percent) at the present time, but there are currently few roadways with dedicated bicycle lanes on them. In addition to bicycle lanes, bicycle parking, showers, and locker facilities can help to encourage bicycle commuting to work.

Pedestrian activity is at a moderate level but walking is decreasing as a mode of travel to work. Many citizens expressed concern about the high traffic volumes, especially on Third Street. They find the traffic volumes intimidating when walking downtown.

Though they are not alternative modes, transportation demand management measures such as carpooling, flexible work hours, and telecommuting also contribute to a reduction in peak hour, single occupancy vehicle activity.

Although these trends indicate an increasing dependence on the automobile, the growing population and employment opportunities, relatively short travel distances, level terrain, and clear weather conditions are favorable for other modes of transportation. The state-wide emphasis on providing pedestrian and bicycle facilities along with roadways encourages the use of these modes.

CHAPTER 6 SHORT-TERM IMPROVEMENTS

A field survey of the existing traffic conditions and meetings with the advisory committees were conducted in Prineville to identify current system capacity and circulation deficiencies. A summary of the recommended immediate traffic improvements at these locations is shown in **Figure 6-1.** Projects that address current operational, capacity, circulation and safety needs are defined as "short-term" projects and should generally be completed within the next five years. As an update to the original TSP, the required short-term improvements were identified based on additional field observations, more recent traffic volume measurements, and updated capacity analyses. A description of the recommended short-term improvements, along with an identification of the improvement type, is summarized in **Table 6-1** below. **Tables 6-2 (A-C)** summarize the level of service improvements that could be realized by implementing the short-term projects. The estimated total costs for the short-term improvements listed below are summarized in **Table 6-3.**

Table 6-1
Short-Term Transportation Improvement Projects

Map No.	Description	Improvement Type
1	Install 3rd Street signal at Combs Flat Road.	New Traffic Signal
2	Install 3rd Street signal at Knowledge and at Harwood Streets.	New Traffic Signal
3	Extend 4th Street from Court Street to Elm Street.	Parallel Street Capacity
4	Install Signal System Interconnect from Harwood Street to Elm Street.	Signal System Coordination
5	Extend Laughlin Road to Main Street; re-align 10th Street, replace Main/10th Street signal.	Parallel Street Capacity
6	Extend 9th Street from Locust Street to Highway 26; re-align 9th/10th/Lamonta Road intersection. Install Highway 26 signal at 9th Street.	Parallel Street Capacity
7	Add Main Street left turn phase at the 3rd Street signal.	Signal System Coordination
8	Construct new sidewalks on Harwood Street and 4th Streets.	Pedestrian Circulation and Access Improvement
9	Remove on-street parking on the west side of Main Street between 3rd and 4th Streets, and re-stripe for separate right-turn lane	Intersection capacity
10	Implement Downtown Enhancement Plan	Alternative Modes and Traffic Circulation and Access

[6] EXTEND 3th STREET FROM LOCUST TO HWY 26. RE-ALIGN 9TH/10TH/LAMONTA ROAD INTERSECTION. INSTALL HWY. 26 SIGNAL AT 9th STREET.

[8] CONSTRUCT NEW SIDEWALKS ON HARWOOD AND 4th STREETS.

[2] INSTALL 3rd STREET SIGNAL AT HARWOOD AND IMPROVE PEDESTRIAN CROSSINGS.

[9] REMOVE ON-STREET PARKING AND RESTRIPE WEST SIDE OF MAIN STREET WITH A SEPARATE RIGHT TURN LANE BETWEEN 3RD AND 4TH STREETS.

[7] ADD NORTH AND SOUTH LEFT TURN PHASE TO 3rd STREET/MAIN STREET SIGNAL.

[4] INSTALL SIGNAL SYSTEM INTERCONNECT FROM

[5] EXTEND LAUGHLIN ROAD TO TO MAIN STREET; RE-ALIGN 10th STREET. REPLACE MAIN/10th STREET SIGNAL.

[3] EXTEND 4th STREET FROM COURT TO ELM.

[2] INSTALL 3rd STREET SIGNAL AT KNOWLEDGE.

[1] INSTALL 3rd STREET SIGNAL AT COMBS FLAT.

N

FEET
0 200 400 800 1600

LEGEND:

- URBAN GROWTH BOUNDARY (UBG)
- [#] PROJECT NUMBER

INTERSECTIONS

- EXISTING SIGNAL
- NEW SIGNAL
- SIGNAL COORDINATION
- MODIFIED TRAFFIC CONTROL
- _____ SIGNAL PHASE

STREETS

- NEW STREET
- STREET REMOVAL
- NEW SIDEWALKS

J4/01/99 PRN17F61.DWG

04.2658.7701

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN

SHORT-TERM IMPROVEMENTS

FIGURE 6-1

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

New Traffic Signals

Among the problems observed and/or reported in the original Prineville TSP were delays at driveways and unsignalized side street approaches to Third Street. Vehicles turning onto or crossing Third Street experience long delays waiting for gaps in east-west traffic. This is especially true for vehicles turning left or trying to cross Third Street. It was also noted that vehicles turning left from Third Street into a driveway or onto one of the side streets often experience longer delays as well.

These delays can be reduced by installing several additional traffic signals at critical intersections with Third Street. Traffic volumes at the intersections of Third Street and Combs Flat Road, Knowledge Street and Harwood Street all indicate that traffic signals are warranted according to the standards in the MUTCD[1].

A series of 3- and 4-way stop (intersection) traffic control improvements should be installed on Deer Street and Main Street at Second Street and Fourth Street. These improvements will provide needed relief and coordination with traffic operations on and across Third Street.

Combs Flat Road and Third Street (Map No. 1)

Combs Flat Road intersects with Third Street on the east side of the city. The Ochoco Shopping Plaza is located on the northwest corner of this intersection, and generates high vehicle activity in the area. Combs Flat Road is a county road which carries traffic, including a very high percentage of heavy vehicles, from areas south of Prineville to Highway 26.

By installing a traffic signal at the intersection of Combs Flat Road and Third Street, the high vehicle activity at this intersection could be controlled. The traffic signal would provide adequate time for trucks to turn to and from Combs Flat Road. It would also allow vehicles to exit the Ochoco Shopping Plaza onto Third Street at a signalized intersection.

Recent ODOT analysis confirms signal warrants are met at this intersection. This signal is already programmed into the STIP for construction in the year 2000.

Knowledge and Third Street (Map No. 2)

Knowledge Street intersects with Third Street on the east end of the city. It experiences a high level of activity because of the location of the Crook County Middle School. Installing a traffic signal at the intersection of Knowledge Street and Third Street would serve to control the activity at the Knowledge Street intersection and provide a signalized route for traffic from the schools. The signalized intersection would also provide a protected crossing for bicyclists and pedestrians. A review of traffic volumes during the peak hour indicates that this intersection would meet two of the MUTCD traffic signal warrants including Warrant 2, interruption of continuous traffic and Warrant 11, peak hour volume.

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1 Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, Federal Highway Administration, 1988.

Harwood Street and Third Street (Map No. 2)

Harwood Street intersects with Third Street just east of the "Y" intersection between Highways 26 and 126. There is a high level of activity at this intersection, which serves as the entrance to the city from the west, and vehicles are often traveling quickly to and from the highways. The slightly higher speeds and the high level of commercial activity make it difficult for east-west vehicles to turn left onto Harwood Street and for north-south vehicles to turn from Harwood Street onto Third Street.

Installing a traffic signal at the intersection of Harwood Street and Third Street would reduce both the speeds and the turning movement delays at this intersection. A review of traffic volumes during the peak hour indicates that this intersection would meet several of the MUTCD traffic signal warrants including Warrant 2, interruption of continuous traffic and Warrant 11, peak hour volume.

A supplementary reason for installing a traffic signal at this intersection is its proximity to the Ochoco Elementary School on Highway 26. Many of the students attending this school live south of Third Street, requiring them to cross the highway to travel to and from the school. Although a Locust Avenue crossing would be closer to the school, it intersects with the Third Street at the point where Highways 126 and 26 merge. The complicated intersection and the low traffic volumes on Locust Avenue make it a difficult location to install new traffic control equipment that improves pedestrian safety. A traffic signal at Harwood and Third Street would provide nearby protection for students crossing Third Street at a location which has the side street volumes to warrant a signal.

The City should coordinate with Ochoco School officials to ensure the placement of crossing guards at the 3rd Street/Harwood Street intersection during peak student arrival and departure periods. Initially, the City and school may also want to place crossing guards at the intersection of Locust Avenue and Third Street in order to discourage students from crossing at that location and encourage use of the new signal and crosswalk at Harwood.

Signal System Coordination

Signal System Interconnect from Harwood Street to Elm Street (Map No. 4)

In areas of higher volume through-traffic like downtown Prineville, a computerized system that coordinates the operation of traffic signals (existing and new) could yield as much as a three to ten percent improvement in efficiency at an individual intersection. Initial review of traffic signal operations and the local street system in Prineville indicates the best signal system on Third Street should include, at a minimum, the Harwood, Deer, Main and Elm Street traffic signals. A more detailed traffic engineering analysis should be conducted by ODOT and the City of Prineville to ascertain specific signal system program and operations.

Add Main Street left turn phase at the Third Street signal (Map No. 7)

The intersection of Main Street and Third Street was originally controlled by a two-phase, pre-timed traffic signal. During the afternoon, both field observations and capacity analysis indicated that this intersection became highly congested in the east-west direction. Both the eastbound and westbound through traffic movements were using about 85 percent 90 percent of their capacity with the original

signal timing. This high utilization of capacity made it difficult for vehicles to make left turns. As a result, vehicles occasionally had to wait more than one cycle to make the left turn.

At the recommendation of the 1994 Prineville TSP, some of the previously existing congestion was eliminated by re-timing the existing traffic signal. The east-west traffic demand is much greater than the north-south traffic demand; therefore green time should not be equal for both phases. Instead, the green time for the north-south movement was reduced, while the green time for the east-west movement was increased. This re-timing provided adequate capacity for all of the traffic movements including the left turns.

ODOT retained permitted left-turn phasing for Main Street. If a protected left-turn phase is added to the traffic signal, this movement can be better accommodated without substantially delaying Main Street through-traffic.

Parallel Street Capacity

Traffic volume growth on Third Street over the past four years has led to increased congestion within the City of Prineville. While the TSP also identifies long-term growth and transportation system improvements, a few potential projects might relieve Third Street. The following projects might be defined as short-term solutions in the final draft of the Prineville TSP following the more detailed cost and alternatives analysis in Chapter 8 (Alternatives Analysis).

4th Street Extension (Court Street to Elm Street) (Map No. 3)

The two block extension of 4th Street between Court Street and Elm Street would improve connectivity and access by further completing the downtown street system grid; thus, providing an additional direct and parallel route connection for the local traffic currently using Main and 3rd Street. The 4th Street extension provides immediate relief to Third Street, and can help postpone the need for extensive State highway capacity improvements as an integral part of the Downtown Enhancement Project.

Laughlin Road Extension; 9th/10th Street re-alignment; Main/10th Street signal (Map No. 5)

The extension of Laughlin Road to Main Street paralleling the Prineville RR could result in significant added relief to local traffic congestion on Third Street and Main Street. This project would have significant impact to neighboring land use, but could be constructed in lieu of the West Seventh/Eight/Ninth Street Connector defined in the current TSP. Together with the extension of Ninth Street to Highway 26, the Laughlin Road extension provides alternative circulation and access for local auto and truck traffic. The Laughlin Road extension also provides immediate relief to Third Street and Main Street, and can help postpone the need for extensive State highway capacity improvements and provide access to industrial lands (job growth).

9th Street Extension (Locust Street to Highway 26); 9th/10th/Lamonta Road intersection re-alignment; Highway 26 signal at 9th Street (Map No. 6)

The extension of 9th Street from Locust Street to Highway 26, together with the re-alignment of the 9th/10th /Lamonta Road intersection and a new signal on Highway 26 at Lamonta, will provide

significant access and circulation benefits for traffic in northern Prineville. Currently traffic which is passing through Prineville on Highway 126 toward Highway 26 must work its way through the existing city street grid, where tight turning radii, traffic congestion and pedestrian activity make driving difficult, particularly for large trucks. These improvements would provide an alternate route to through traffic; thus, easing congestion on Third Street and Main Street. Together with the Laughlin Road extension, the 9th Street extension provides immediate relief to Third Street and Main Street, and can help postpone the need or extensive State highway capacity improvements and provide access to industrial lands (job growth).

Pedestrian Circulation and Access Improvement

New Sidewalks on Harwood Street and 4th Streets (Map No. 8)

New sidewalks on Harwood and 4th Streets are necessary to connect the Ochoco School on Locust Street with neighbors south of 3rd Street via the proposed new signal at 3rd and Harwood (Project No. 2). By providing appropriate sidewalks which support the crossing at Harwood Street, pedestrians safety will be enhanced, particularly for school children. These sidewalks will also enhance pedestrian access between Ochoco School and downtown Prineville.

Summary

Table 6-2 (A) estimates the existing and projected (1998-2003) volume-to-capacity ratio (V/C) and level of service (LOS) that would be expected at five key intersections on Third Street if no system improvements are made. As this table shows, within the next one-two years the intersection of Third and Main will exceed acceptable LOS, with very high volume-to-capacity ratios and difficult left-turn movements.

Table 6-2 (B) summarizes the LOS improvements on Third Street that may result from implementation of the projects described in this chapter. The improvements were evaluated based on their impact on five key intersections on Third Street in terms of the Volume/Capacity ratio (V/C) and LOS. The existing conditions data shown in this table reflects the fact that there are currently no traffic signals on Third Street at Harwood and Knowledge Streets. The improvement options shown in this table include:

a) Existing Conditions - 1998

b) New Signals at Third and Knowledge and Third and Harwood Streets (Map No. 2),

c) A Signal System Interconnect on Third Street for new (Knowledge and Harwood) and existing signals (Map No. 2 and 4),

d) The 4th Street extension (Map No. 3),

e) The 4th Street extension in combination with protected northbound and southbound, separate left-turn phases at the intersection of Third and Main Streets (Map No. 3 and 7),

f) The same 4th Street extension described in (d) but in combination with protected/permissive northbound and southbound, separate left-turn phases at the intersection of Third and Main Streets (Map No. 3 and 7),

g) The same Laughlin Road extension; 9th/10th Street re-alignment/Main Street signal together with the 9th Street extension/Lamonta Road intersection re-alignment/Highway 26 signal described in (f) but with a protected left-turn phase at Third and Main Streets (Map No. 3, 5 and 6)

h) The Laughlin Road extension; 9th/10th Street re-alignment/Main Street signal together with the 9th Street extension/Lamonta Road intersection re-alignment/Highway 26 signal and a protected/permissive left-turn phase at Third and Main Streets (Map No. 3, 5 and 6)

I) All short-term system improvements plus added separate, southbound right-turn lane on Main Street between Third and Fourth Streets (Map No. 9). This project is accomplished by removing on-street parking on the west side of Main Street and re-striping Main Street with a separate right-turn lane.

As shown in this table, existing intersection LOS on Third Street is poorest at its intersection with Main Street, and even with all of the short-term improvements implemented that intersection is expected to continue to be the "lowest common denominator" in terms of traffic flow on Third Street. Because of its critical nature, the effect of the improvements on the intersection of Third and Main were further analyzed, with additional information provided on the westbound left-turn and southbound through movements.

Table 6-2 (C) estimates the future (1998-2018) volume-to-capacity ratio (V/C) and LOS that would be expected at five key intersections on Third Street if all of the short-term improvements described in **Table 6-2 (B)** were implemented (including the permitted/permissive signal at Third and Main Streets). Under this scenario, LOS D could potentially be maintained at the intersection of Third and Main Streets until 2008. However, despite the short-term improvements, by 2018 the LOS at the intersection of Third and Main Streets is expected to deteriorate to LOS E.

The cumulative impact of the short-term street and TSM improvements help preserve the functional integrity of Highway 126 (Third Street) and the surrounding local street system for the next 15-20 years.

Table 6-3 summarizes the cost and implementation schedule of the short-term projects. As shown in this table, because these projects are all "short-term", they are scheduled for completion within the next five years. In terms of benefit, all of these projects are expected to produce some operations, capacity and circulation improvement. Most of the projects listed are expected to result in either a direct or indirect benefit to the state highway system. On those projects which do benefit the state highway system, it is suggested that the City seek a funding partnership with the State.

Table 6-4 summarizes each of the priority factors defined by TEA-21 (Transportation Equity Act for the 21st Century) as they relate to short-term improvements in Prineville. Many of the short-term improvements address several of the TEA-21 priority factors such as improving safety, protecting the environment, "rebuilding America", and promoting economic growth and trade. As such, these projects are ideally suited for federal and state funding support.

Table 6-2 (A-C)
Existing and Future Level of Service (LOS) With and Without Short-Term Improvements

Table 6-2(A)
Existing Conditions

	Intersection											
	Harwood			Deer		Main		Elm		Knowledge		
Year	V/C	AD	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	AD	LOS
1998	-	1.9	D	0.60	B	0.88	D-E	0.51	B	-	1.4	C
1999	-	2.0	D	0.61	B	0.90	E	0.52	B	-	1.4	C
2000	-	2.1	D	0.62	B	0.90	E	0.52	B	-	1.5	C
2001	-	2.1	D	0.63	C	0.91	E	0.53	B	-	1.5	C
2002	-	2.2	E	0.63	C	0.92	E	0.53	B	-	1.6	C
2003	-	2.3	E	0.64	C	0.93	E	0.53	B	-	1.6	D
2004	-	2.4	E	0.65	C	0.94	E	0.54	B	-	1.7	D
2005	-	2.5	E	0.65	C	0.95	E	0.54	B	-	1.7	D

Table 6-2(B)
Impact of Short-Term Improvements on 1998 LOS

	Intersection											
	Harwood			Deer		Main		Elm			Knowledge		
Project	V/C	AD	LOS	V/C	LOS	V/C	LOS	V/C	AD	LOS	V/C	AD	LOS
a. Existing Conditions - 1998	-	1.9	D	0.60	B	0.88	D-E	0.54		B	-	1.4	C
b. New Signals @ Harwood & Knowledge	0.65		C								0.55		B
c. Signal Interconnect	0.57		B	0.61	B	0.78	D	0.43		A	0.55		B
d. 4th St. Extension	0.57		B	0.56	B	0.77	D	0.45		A	0.55		B
e. 4th St. Extension & Protected Lt on Main						0.86	D-E						
f. 4th St. Extension & P/P Lt on Main						0.86	D-E						
g. 9th St. Extension & Protected Lt on Main						0.84	D						
h. 9th Extension & P/P Lt on Main						0.84	D						
i. Separate Sbnd Rt Lane on Main	**0.57**		**B**	**0.55**	**B**	**0.77**	**D**	**0.44**		**A**	**0.55**		**B**

Table 6-2(C)
Cumulative Impact of Implementing Short-Term Improvements on Future LOS (New Signals, Signal Interconnect, 4th St. Extension, 9th St. Extension, and Protected/Permissive Light at 3rd

	Intersection								
	Harwood		Deer		Main		Elm		Knowledge	
Year	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
1998	0.57	B	0.55	B	0.77	D	0.44	A	0.55	B
2003	0.58	B	0.58	B	0.81	D	0.47	A	0.57	B
2008	0.61	B	0.61	B	0.85	D-E	0.49	A	0.59	B
2013	0.64	C	0.66	C	0.88	D-E	0.52	B	0.62	C
2018	0.68	C	0.69	C	0.92	E	0.55	B	0.65	C

Table 6-3
Summary of Short-Term Project Costs and Schedule

Project		Program Schedule Years					Benefit				Cost	Partnership			
No.	Description	0-5	6-10	11-15	16-20	20+	Safety	Ops./ Cap./ Circ.*	Alt. Modes	Freight Mobility	(millions)	State	County	City	Private
	Short-Term Projects														
1	Install 3rd St. signal at Combs Flat Road	■					◆	◆	◆		**	◆			
2	Install 3rd St. signal at Knowledge & at Harwood St	■					◆	◆	◆		$0.30	◆		◆	
3	Extend 4th St. from Court Street to Elm St	■						◆	◆		$0.24			◆	
4	Install Signal System Interconnect	■						◆		◆	$0.10	◆			
5	Extend Laughlin Rd; re-align 10th Street, replace Main/10th St. signal	■						◆	◆	◆	$3.55	◆	◆	◆	
6	Extend 9th; 9th/10th/Lamonta intersection; install Hwy 26/ 9th signal	■						◆	◆	◆	$1.54	◆		◆	
7	Add Main Street left turn phase at 3rd Street signal	■					◆	◆		◆	$0.02	◆			
8	Construct new sidewalks on Harwood St. and 4th St	■					◆	◆	◆		$0.15			◆	

* Operations / Capacity / Circulation

** Already programmed in ODOT's STIP for construction in the year 2000.

CHAPTER 7 TRAVEL FORECASTS

Travel forecasts for the City were based on the Prineville Travel Model, with adjusted planning horizon year estimates utilizing a linear projection of the data developed in the 1994 TSP. The growth rate for traffic volumes in the City was derived from data provided by ODOT's Transportation Systems Monitoring program. The methodology and data sources are discussed in greater detail below.

The 1994 TSP utilized land use and roadway designations contained in the existing Crook County Comprehensive plan. Using the computer modeling program, TMODEL2, future traffic (2015) was estimated for the PM peak hour of a typical weekday to reflect the critical time period of traffic operations. The modeling that was done as part of the 1994 TSP involved a five step process: 1) study area definition; 2) land use projection; 3) trip generation; 4) trip distribution; and 5) trip assignment. The computer model is calibrated as closely as possible to an existing condition and then used to forecast future conditions. Calibration is achieved when simulated traffic volumes on the roadway system are within ten percent of the actual measured traffic. Appendix E defines these terms, describes the modeling process, and outlines the key assumptions used to develop the transportation model for the City of Prineville's 1994 TSP.

Population and Employment Forecasts

Table 7-1, on the following page, includes the Crook County population forecast from the State Office of Economic Analysis (OEA). The OEA forecast, together with the assumptions listed below, provides the foundation for forecasts of the Prineville Urban Growth Boundary (UGB), the number of dwelling units (both single family residential and multi-family residential), and employment.

Assumptions used in **Table 7-1** Forecasts:

- The UGB will represent 58.4% of Crook County's population throughout the planning period.
- There will be 2.25 persons per household (average).
- Single Family Residential (SFR) will continue to represent approximately 85% of the dwelling units.
- 55% of the population is employed. (NOTE: In 1990, Crook County had 5,968 in total employment, the estimated 4,400 total 1990 Employment shown in **Table 7-1** represents approximately 74% of the County's employment).
- The City of Prineville's population and employment will grow approximately 40% over the next 20 years.

Table 7-1
Forecast of Population and Employment

	Population		Dwelling Units in UGB		
Year	County (OEA)	UGB	SFR	MFR	Employment
1990	14,214	8,000	3,022	533	4,400
1998*	16,567	9,675	3,655	645	5,321
2000	17,168	10,033	3,790	669	5,518
2005	18,662	10,906	4,120	727	5,998
2010	20,215	11,814	4,463	788	6,498
2015	21,892	12,794	4,833	853	7,037
2018*	22,945	13,400	5,062	893	7,370

* Estimated (based on a straight line interpolation of OEA's numbers).
Current (1998) UGB population documented to be 10,400.

Employment by Type

Table 7-2 estimates the distribution of employment by type based on the total forecast employment by year as identified in **Table 7-1.** The percentage of employment by type was derived from data presented in the 1994 TSP. The 1994 TSP estimated the amount of employment by type based on site visits, Prineville Chamber of Commerce information, conversations with staff at the Crook County/Prineville Planning Department, use of the local yellow pages, and conversations with specific employers. These data indicate that the employment base within the UGB is dominated by industry, with approximately 47% of the jobs directly related to wood products processing and manufacturing. Agricultural-related employment was not included in the employment estimates because most agriculture occurs outside the UGB. **Table 7-2** assumes that the distribution of employment by type will remain stable throughout the planning period

Table 7-2
Distribution of Employment by Type

Employment Type	Percent based on 1994 TSP	1990	1998	2000	2005	2010	2015	2018
Retail/Commercial	17.06%	751	908	941	1,023	1,109	1,201	1,257
Industrial	59.98%	2,639	3,192	3,310	3,598	3,898	4,221	4,421
Hospital	4.34%	191	231	239	260	282	305	320
Government Office	10.65%	469	567	588	639	692	749	785
Office	2.17%	95	115	120	130	141	153	160
School	5.79%	255	308	319	347	376	407	427
TOTAL	100.00%	4,400	5,321	5,518	5,998	6,498	7,037	7,370

Trip Generation

Table 7-3 summarizes the total number of trips expected to be generated by the 2018 forecasts of dwelling units and employment by type from **Tables 7-1** and **7-2** based on the trip generation rates identified in Appendix E. Appendix E identifies the PM Peak Hour Vehicle Trip Generation Rates used in the Prineville Transportation Planning Model (1994 TSP). **Table 7-3** identifies the number of trips (origin/destination) typically generated by the various types of dwelling units and employment as derived from the ITE Trip Generation Report, Fifth Edition, 1991.

Table 7-3
Estimated Prineville UGB PM Peak Hour Vehicle Trips, 1998 and 2018

Type of Generator	Forecasts		Trip Generation Rates		1998 Estimated Trips		2018 Estimated Trips	
	1998	2018	Origin	Dest.	Origin	Dest.	Origin	Dest.
Single Family (Trips/DU)	3,655	5,062	0.36	0.74	1,316	2,705	1,822	3,746
Multi-Family (Trips/DU)	645	893	0.25	0.52	161	335	223	464
Retail Commercial (Trips/Empl.)	908	1,257	1.61	1.55	1,462	1,407	2,024	1,948
Industrial (Trips/Empl.)	3,192	4,421	0.45	0.10	1,436	319	1,989	442
Hospital (Trips/Empl.)	231	320	0.21	0.09	49	21	67	29
Government Office (Trips/Empl.)	567	785	0.84	0.16	476	91	659	126
Office (Trips/Empl.)	115	160	0.58	0.12	67	14	93	19
School (Trips/Empl.)	308	427	1.05	0.45	323	139	448	192
TOTAL TRIPS					5,290	5,031	7,327	6,966

Traffic Forecasts

The existing traffic conditions reported in the 1994 Prineville TSP were based on traffic count data gathered in 1992. Forecasts were then prepared based on a traffic model. The methodology described in Appendix D, Traffic Forecast Refinement, was used to update both base year (1998) and future year (2018) traffic volumes.

Table 7-4 summarizes traffic volume data from ODOT's Transportation Systems Monitoring program for the five highways that serve the City of Prineville:

- *Crooked River Highway*
- *Ochoco Highway – This Highway is shown in three section West, Downtown, and East.*
- *Madras-Prineville Highway*
- *O'Neil Highway*
- *Paulina Highway*

Available data for selected mileposts were projected forward to 2018 (21 years) using a linear projection model based on annual traffic volume data from 1975 to 1997 (includes recession period from1980-1985 when population and traffic volumes were stable or decreasing). A compounded growth rate formula was then applied to the results of the linear projection to determine the projected average annual compounded growth rate between 1997 and 2018. With the exception of the Ochoco Highway (Highway 41), all available data points for each highway were averaged. The Ochoco Highway was divided into three separate sections (West, Downtown, and East), with an average prepared for each section. The average compounded growth rate developed for each highway or section of highway was then used to "grow" the 1992 traffic volumes developed by DEA for the 1994 Prineville TSP. Growth rates for local roads were based on adjacent highway growth rates. For example, the growth rate for Ochoco Highway – Downtown was used for all local roads in the downtown core area.

Table 7-4
Highway Traffic Volumes and Growth Rates, 1997 - 2018

Highway	Mile Post	Location	1997	2018	Growth Rate
Crooked River	0	.01 MI S OF OCHOCO HIGHWAY	6100	8300	1.48%
Crooked River	0.14	.01 MI S OF 2ND ST.	5600	8100	0.84%
Crooked River	0.58	.01 MI N OF LYNN BLVD.	2900	7100	1.31%
		Average - Crooked River	4867	7800	1.18%
Ochoco	16.5	.01 MI W OF HOUSTON LAKE	6000	10300	2.53%
Ochoco	17.9	.01 MI W OF HWY 370	8000	13400	3.36%
Ochoco	17.9	.01 MI E OF HWY 370	9800	16400	2.79%
		Ave - W Ochoco	7933	13367	2.90%
Ochoco Insert	18.7	.01 MI W OF HWY 14	13000	16100	0.67%
Ochoco/3rd	19.4	OCHOCO CREEK BRIDGE	9900	16500	2.08%
		Ave - Downtown Ochoco/3rd	11450	16300	1.33%
Ochoco	19.7	.01 MI W OF HWY 380	7700	11300	1.72%
Ochoco	20.7	.24 MI W OF BARNES BUTTE RD	5100	8600	3.02%
		Ave - E Ochoco	6400	9900	2.21%
Madras-Prineville	25.9	.01 MI NW OF DODSON DR.	4500	6700	2.13%
		Ave - Madras-Prineville	4500	6700	2.13%
O'Neil	16.7	.01 MI W OF WESTVIEW RD.	1400	2200	2.18%
		Ave -O'Neil	1400	2200	2.18%
Paulina	0.01	.01 MI S OF HWY 41	3900	6100	2.28%
Paulina	0.71	.01 MI S OF LINCOLN DR.	3200	5100	2.09%
Paulina	1.36	.01 MI SE OF JUNIPER CANYON	750	900	1.14%
		Ave - Paulina	2617	4000	2.07%

Figure 7-1 identifies the projected 2018 weekday p.m. peak hour traffic volumes based on the average annual growth rates identified in **Table 7-4.** As shown, weekday p.m. peak hour traffic volumes are expected to be highest (1,040) on Third Street near the intersection with Harwood Street.

The 2018 p.m. peak hour traffic constitutes the "No-Action" alternative from which all other alternatives (see Chapter 8) are compared. The No-Action alternative assumes no major long-term street or intersection improvements, or major revisions to the Prineville Comprehensive Plan. The transportation system impacts of the No-Action alternative are discussed in the following section.

Future (2018) LOS

As discussed in Chapter 5, Current Transportation Conditions, transportation engineers have established various standards for measuring traffic capacity of roadways or intersections.[1] Each standard is associated with a particular level of service (*LOS*) one wishes to provide. The LOS concept requires consideration of factors which include travel speed, delay, frequency of interruptions in traffic flow, relative freedom for traffic maneuvers, driving comfort and convenience and operating cost. Six standards have been established ranging from Level A where traffic flow is relatively free to Level F where the street system is totally saturated or jammed with traffic. **Table 5-2** in Chapter 5 presents the level of service criteria for major streets and intersections. Of critical importance to long-range planning of the Prineville TSP is the measure of volume-to-capacity (V/C) ratio.

The analysis of future traffic conditions in the Prineville TSP focused on the critical intersections in downtown Prineville and the major highways near the UGB. These major intersections and highways serve as the best indicators of overall system performance. The 2018 capacity of each of the major local streets in Prineville was calculated in a generalized way to compare with the PM peak hour traffic volumes to determine locations of capacity deficiencies.

The future traffic forecasts summarized in Chapter 7 generally reflect the short-term transportation improvements identified in Chapter 6. Further evaluation of these forecast conditions is provided in Chapter 8, Alternative Street System Analysis.

Major Intersections

Table 7-5 compares these general capacity estimates with the future 2018 traffic volumes shown in **Figure 7-1** and shows that most of the major road segments in Prineville would continue to operate at LOS C or better, indicating little or no congestion. However, during the PM peak hour, traffic volumes at the intersection of Third and Main Streets would be at about 1.07 percent of capacity and LOS E. This indicates that Prineville will have significant congestion at key locations along this corridor, and that vehicles turning to and from some side streets and driveways will be experiencing longer delays.

Major Highways

Table 7-6 summarizes the analysis of future 2018 pm peak hour traffic conditions on the major highway sections at the edge of the Prineville UGB, including the Highway 126 grade. The analysis of the Highway 126 assumed completion of both the existing uphill climbing lanes (2) and shoulder widening improvements (which are scheduled for completion in 1998).

Local Streets

Traffic volumes were forecast for local streets based on the methodology described in Appendix D. As shown on **Figure 7-1**, traffic volumes are forecast to remain relatively low on most local streets. As shown in **Table 7-7**, based on an estimated capacity of 700 vehicles per hour in each direction, the analysis of future 2018 peak hour traffic conditions on local streets indicates that, other than at the key intersections described above, volume-to-capacity ratios and levels of service will remain very good.

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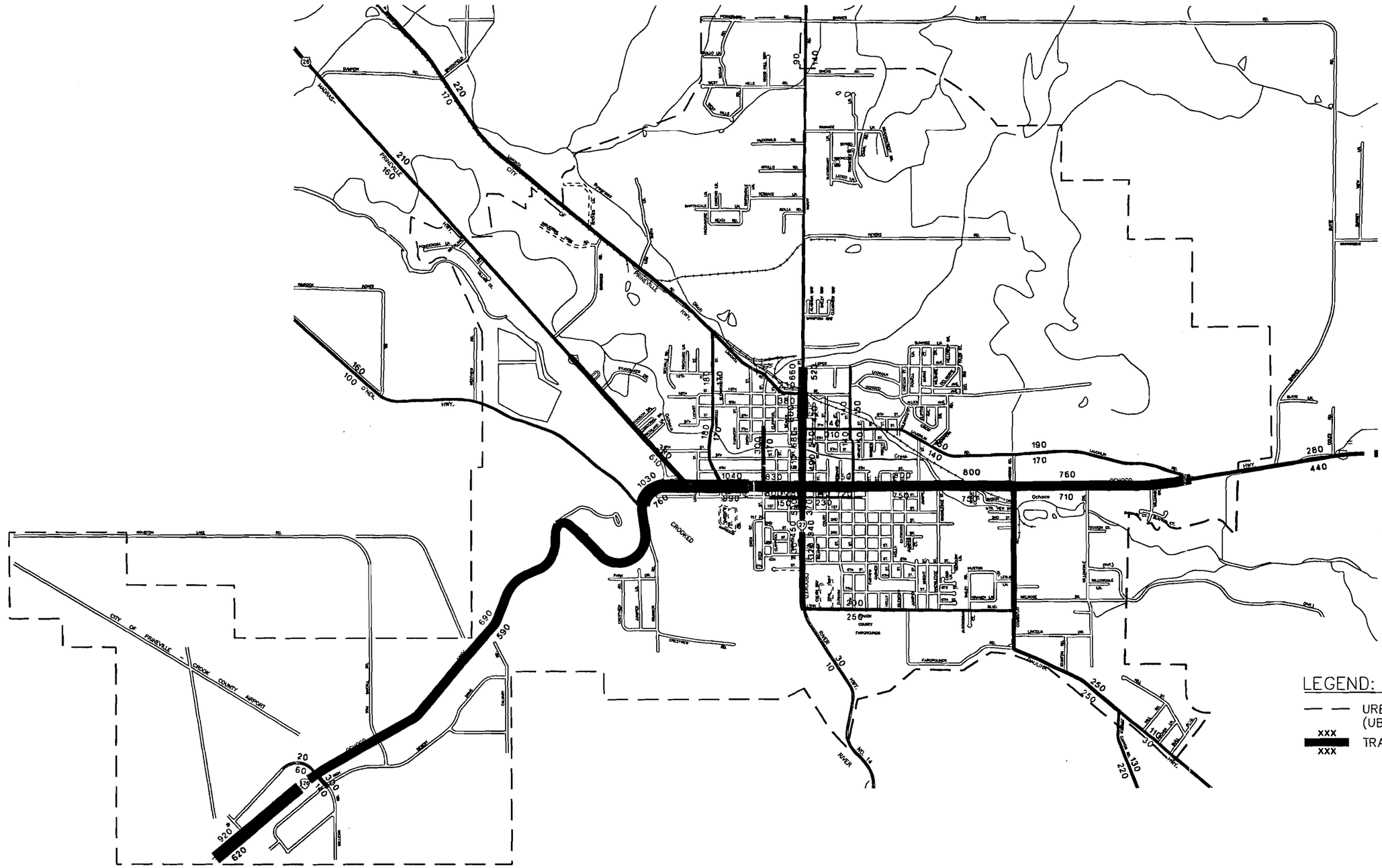
[1] Transportation Research Board, *Highway Capacity Manual*, Special Report 209. National Research Council, 1985.



* INCLUDES POWELL BUTTE DEVELOPMENT

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	2018 WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES	FIGURE 7-1	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

04.2658.7701 04/01/99 PRN17F73.DWG

Table 7-5

2018 P.M. Peak Hour Level of Service (LOS)

	Signalized Intersection	
Intersection	**V/C**	**LOS**
3rd Street / Harwood	0.68	C
3rd Street / Deer	0.69	C
3rd Street / Main	0.92	E
3rd Street / Elm	0.55	B
3rd Street / Knowledge	0.65	C

Table 7-6

Two-Lane Highway

PM Peak Hour Level of Service *

Highway Section	1998	2018
Ochoco Highway		
Crooked River to Wayside Rd	B	D
Wayside Rd to crest [1]	C	C
Houston Lake Rd to Airport Access	D	E
Paulina Highway	B	C
O'Neil Highway	B	B
Prineville Highway	B	C
Madras-Prineville Highway	C	C

* Highway Capacity Manual - Special Report #209. Transportation Research Board, 1994.

[1] LOS calculation considers existing uphill climbing lane and current shoulder improvements.

Table 7-7

2018 Forecast Volume-to-Capacity Ratio

on Selected Two-Lane Local Streets

Two-Lane Local Street	Capacity/ Hour	2018 PM Peak Hour Volume	V/C
Harwood St. (S)	700	183	0.26
Harwood St. (N)	700	169	0.24
Deer St. (S)	700	296	0.42
Deer St. (N)	700	169	0.24
Elm St. (S)	700	141	0.20
Elm St. (N)	700	155	0.22
2nd (W. of Main) (W)	700	282	0.40
2nd (W. of Main) (E)	700	155	0.22
2nd (E. of Main) (W)	700	141	0.20
2nd (E. of Main) (E)	700	226	0.32
Lynn Blvd (W)	700	204	0.29
Lynn Blvd (E)	700	255	0.36

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CHAPTER 8 ALTERNATIVE STREET SYSTEM ANALYSIS

A "No Build," transportation demand management (TDM) and Build alternatives were developed, analyzed, and compared as part of the future street system analysis. Rather than re-evaluate all eight roadway system alternatives defined in the original Prineville TSP, the TSP Refinement focuses on the Build alternative with detailed assessment of a number of street access, circulation and capacity enhancements within four major subareas. The 2018 travel patterns and roadway requirements and costs were analyzed and compared for the alternatives. and the results of the analysis were presented to the TAC and Planning Commission/City Council. The TAC and Planning Commission/City Council then selected the system of improvements to be incorporated and prioritized into the Prineville TSP.

Each of the alternatives was developed with a number of options to address specific street system deficiencies and/or safety concerns. The list below briefly describes the alternatives.

No Build Alternative - Assumes that, other than the short-term improvements identified in Chapter 6, there will be no changes to the existing street system.

Transportation Demand Management (TDM) - Assumes one or a number of policy programs to reduce travel demand in lieu of building new street system improvements to allay poor circulation, access and capacity conditions.

Build Alternative - Evaluates a number of street system options to provide needed circulation, access, safety and capacity improvements based on focused analysis within four major subareas. The subareas include:

Subarea 1 - Improvements to downtown traffic circulation along the Third Street corridor (safety, circulation, capacity, access, alternative modes).

Subarea 2 - Improvements to Highway 126 access in the Prineville Airport and industrial area (safety, access, capacity).

Subarea 3 - Improvements to crossing the Crooked River (safety and access).

Subarea 4 - Improvements to Prineville's North/South collector street system including extensions of Court Street (across Ochoco Creek) and Knowledge Street (to Laughlin Road) (access, circulation, capacity, alternative modes).

For each of the subareas, a number of transportation system improvement options were considered and evaluated.

Evaluation Criteria

The evaluation of the subarea options was based on an analysis of traffic projections; a qualitative review of safety, environmental, socioeconomic, and land use impacts; and cost.

Rough cost estimates were determined as part of comparing and evaluating the improvement options. More detailed planning level cost estimates are determined as part of the financial analysis of the Preferred Alternative following review by the TAC.

The traffic analysis considered several factors, including operation of major signalized intersections, signal warrants, and roadway capacity deficiencies. Four factors were evaluated qualitatively. Some of the improvements were recommended to address safety; therefore, the safety benefits of each improvement option are provided. Environmental factors such as air quality, noise, and water impacts were evaluated qualitatively as well. Some of the improvement options would have socioeconomic effects. The direction of travel on the one-way couplet options and the impact on local businesses was the principal factor considered. Land use impacts were also evaluated. Right-of-way requirements and impacts on adjacent lands were two factors considered. The final factor in the evaluation was cost. Rough costs were estimated in 1998 dollars.

Alternatives Evaluation

No Build Alternative

The No Build Alternative assumes that, other than the short-term improvements outlined in Chapter 6, no changes will be made to the existing street system for the next 20 years. However, traffic volumes will increase in Prineville as population and employment continue to grow. By comparing the future traffic demand with the unchanged street system, one can determine where future traffic problems are likely to occur.

Chapter 7 described in detail how the travel forecasting model was developed and the population and employment data used to project 2018 PM peak hour traffic volumes. The results of the No Build traffic forecast are shown in Figure 7-1. As described in Chapter 7, traffic volumes throughout the system are projected to increase by approximately 20 to 30 percent. For example, near the intersection of Third Street and Harwood, westbound PM peak hour volumes are projected to increase from 800 vehicles in 1998 to 1,040 vehicles in 2018. However, despite the increase in traffic volumes, levels of service are forecast to remain within acceptable levels through the year 2018 on most local roads and state highways with the exception of the following locations: Ochoco Highway between Crooked River and Wayside Road (LOS D), the Ochoco Highway between Houston Lake Road to Airport Access (LOS E), and the intersection of Third and Main Streets (LOS E).

The Third Street corridor is the principal area where unacceptable levels of congestion would occur. Without the transportation system management improvements and additional traffic signals described in the chapter titled "Short-term Improvements", many of the intersections in this corridor would fail.

Increased congestion and delay in the No Build Alternative would have both environmental and socio-economic impacts. Air quality and noise levels would worsen along Third Street due to the increase in congestion. The environmental impacts would also affect the livability of Prineville, which might encourage new residents and businesses to locate elsewhere.

Transportation Demand Management (TDM)

Through transportation demand management *(TDM)*, the peak travel demands can be reduced or spread to different time periods to provide more efficiency in the transportation system, rather than building new or wider roadways.

The analysis of the original 1994 Prineville TSP was conducted to determine if these measures, either individually or collectively, would reduce the need for any increases in roadway capacity. The major effect of these programs would be on the home to work and return trips. This analysis, therefore, focussed on those trips, looking at the reasonable upper limit that could be achieved by diverting trips through carpooling, mode shifts, and other TDM measures.

Table 8-1 compares the journey to work census data for 1980 and 1990 and the results of this analysis on vehicle trip reduction. The effect could be a maximum reduction of 525 to 675 vehicle trips during the PM peak hour of a total 10,300 vehicle trips by the year 2015. This amounts to a reduction of 5.1 to 6.6 percent of the peak hour trips. This reduction is spread throughout the community and would not eliminate the need for any new roadways or widening. However, a successful program could delay the need for a physical modification.

Therefore, the No Build and Build alternatives were evaluated based on future traffic conditions without the effect of TDM to determine the maximum new requirements. The effects of TDM should be monitored to determine if priorities in the future should be shifted.

Table 8-1
Potential Effect of Transportation Demand Management
Reduction of Peak Hour Vehicle Trips

Trip Type	Percent of Work Force			PM Peak Hour Vehicle Trip Reductions
	1980	1990	2015	
Drove Alone	69.4	75.4	64.5	**
Carpooled	16.4	15.0	20.0	175 - 200
Bicycle	0.0	0.5	1.0	0 - 25
Walk	9.1	5.5	7.3	50 - 75
Other	3.5	0.3	0.6	0 - 25
Work at Home	1.6	3.3	6.6	125 - 150
Alternative Work Schedules				175 - 200
Total	100.0	100.0	100.0	525 - 675

** Reduction included with effect of carpool

Build Alternative

Subarea 1: Downtown Traffic Circulation-Third Street Corridor

As noted earlier, the Third Street corridor is the principal area where unacceptable levels of congestion are forecast to occur. As shown in Figure 8-1, four major options to improve downtown circulation were evaluated. Each of the options were evaluated inclusive of the recommended street scape and pedestrian improvements identified in the Downtown Prineville Enhancement Plan (1997). The options include:

Option 1:	Retain Current Two-Way Traffic
Option 2a:	One-Way Couplet using 2nd and 4th Streets **with** new bridge over the Crooked River
Option 2b:	One-Way Couplet using 2nd and 4th Streets **without** new bridge over the Crooked River
Option 3:	One-Way Couplet using 3rd and 4th Streets
Option 4a:	One-Way Couplet using 2nd and 3rd Streets **with** new bridge over the Crooked River
Option 4b:	One-Way Couplet using 2nd and 3rd Streets **without** new bridge over the Crooked River

Option 1

Other than the streetscape improvements identified in the Prineville Downtown Enhancement Plan and short-term intersection and street improvements (see Chapter 6), this option would generally maintain the existing traffic pattern. Congestion on Third Street would remain a significant issue. This option would not improve air quality and noise levels, nor would it provide any safety benefits because of the reduction in left-turn movements across opposing traffic. This option would not have the potential for water impacts because it would not involve any new creek crossings. There would also be no impacts to public park facilities.

By maintaining the status quo, there would be minimal socio-economic impacts associated with this option. Merchants retain visibility by maintaining both eastbound and westbound traffic on Third Street which would address the concern centered around the through traffic. However, as congestion in downtown worsens, there may be incremental socio-economic impacts associated with poor circulation and difficult access.

Option 2 (a/b)

Option 2 would create a one-way couplet on Second and Fourth Streets to provide an alternate route to Third Street, which would remain two-way. The concept of this route would be to provide an alternate route for local users to bypass Third Street in order to avoid delay, while through traffic not familiar with the city would continue along Third Street. The elements of this option would include:

- *Second Street:* Provide a connection from Highway 126 to W. Second Street and convert W. Second Street to eastbound traffic only. Between Elm Street and Fairview Street, connect E. Second Street with E. Third Street.

- *Fourth Street:* Between Fairview Street and Elm Street, connect E. Third Street with E. Fourth Street. Convert all of Fourth Street to westbound traffic only and extend it out to Highway 26 at the "Y" intersection.

Future (year 2018) traffic conditions along the Second/Fourth one-way couplet will likely operate well under capacity conditions - similar to those conditions estimated for Option #3 (see Table 8-2). Traffic conditions on Third Street would also likely operate below capacity.

Other benefits to the community would be minimal. The decrease in volumes on Third Street would result in some reduction in congestion and delay; however, only minor improvements in air quality and noise levels would result from this reduction. Minor safety benefits are achieved with Option 2 due to the reduction in left-turn movements across opposing traffic.

Option 2A would have some potential water impacts. The Second Street bridge across the Crooked River could increase roadway run-off into the river.

Option 3

Option 3 would create a one-way couplet along Third Street and Fourth Street between the "Y" intersection and about Holly Street. The couplet would allow eastbound traffic along Third Street and westbound traffic along Fourth Street. The elements of this option include:

- *Third Street:* Convert traffic on Third Street to eastbound only from the "Y" intersection to about Fairview Street, where westbound traffic would split off onto Fourth Street.

- *Fourth Street:* Upgrade Fourth Street to one-way major arterial standards. Provide a new connection from Third Street between Garner Street and Fairview Street. And, extend Fourth Street from Locust Street to Highway 26.

The couplet configuration would significantly reduce congestion and delay by spreading the highway volumes over two roadways. This reduction would have a positive effect on air quality and noise levels. The couplet configuration would also have some safety benefits because of the reduction in left-turn movements across opposing traffic.

The major socio-economic factor associated with selecting roadways for the couplet was the direction on travel on Third Street. Merchants felt it was imperative to keep eastbound traffic on Third Street, letting westbound traffic use Fourth Street. The concern centered around the through traffic. Much of the through traffic is coming from the west, traveling eastbound on the departure trip traveling and westbound on the return trip. For the first half of the trip, merchants wanted the through traffic to see denser commercial development along Third Street. Eventually the development will balance out between the two couplet roadways, but initially it will favor Third Street.

Option 3 would reduce congestion and delays thereby improving air quality and noise levels. It would also reduce the number of left-turn conflicts in downtown.

Option 4 (a/b)

Option 4 would create a one-way couplet along Second Street and Third Street between the "Y" intersection and about Fairview Street. The couplet would allow eastbound traffic along Second Street and westbound traffic along Third Street. The elements of this option include:

- *Second Street:* Upgrade Second Street to one-way major arterial standards. Provide a new connection from Third Street between Fairview Street and Elm Street. Extend Second Street from Locust Street to Highway 26.

- *Third Street:* Convert traffic on Third Street to westbound only from the "Y" intersection to about Fairview Street, where eastbound traffic would split off onto Second Street.

Option 4 would not keep eastbound traffic on Third Street, a concern established by the downtown Merchants in development of the original TSP. Future (year 2018) traffic conditions along the Second/Third Street one-way couplet will likely operate well under capacity conditions - similar to those conditions estimated for Option #3 (see Table 8-2).

Option 4 would reduce congestion and delays thereby improving air quality and noise levels. It would also reduce the number of left-turn conflicts downtown. Option 4A would have some potential water impacts. The Second Street bridge across the Crooked River could increase roadway run-off into the river. However, Option 4b would not have the potential for water impacts because it would not involve any new creek crossings.

As shown in Table 8-2, the one-way couplet options defuse congestion on 3rd Street and could improve the level of service at key intersections downtown. Options 2, 3 and 4 would both significantly reduce traffic congestion by providing additional capacity, and air quality and noise levels would be improved as a result; however, all of these options would have some socio-economic impacts. The re-direction of traffic would impact the downtown businesses and shoppers could be forced to travel out-of-direction in order to negotiate the one-way couplet. Table 8-3 provides a cost analysis of the four main options and their suboptions in 1998 dollars.

Table 8-2
Downtown Street Circulation Options
Levels of Service at Key Intersections

Option	Third Street Intersections (and Fourth Street for One-Way Couplet Options)							
	Harwood		Deer		Main		Elm	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
Option 1 [1]	.68	C	.69	C	.92	E	.55	B
Option 2								
4th St	*<similar LOS to Option 2>*							
2nd St								
Option 3								
4th St	.50	A	.56	B	.65	C	.46	A
3rd St	.49	A	.52	B	.58	B	.44	A
Option 4								
3rd St	*<similar LOS to Option 2>*							
2nd St								

[1] Includes downtown short-term intersection and street improvements identified in Chapter 6.

Table 8-3
Downtown Street Circulation Options - Cost Analysis
in 1998 Dollars (millions)

	Streets					
Option	**Traffic Signals**	**ROW**	**Road**	**Sign/Stripe**	**Bridge**	**Total**
Option 1		$0.60	$0.33			$0.93
Option 2a	$1.20	$0.60	$1.63	$0.20	$5.00	$8.63
Option 2b	$1.20	$0.60	$1.33	$0.20		$3.33
Option 3	$0.80	$0.30	$0.70	$0.20		$2.00
Option 4a	$0.80	$0.70	$0.90	$0.20	$5.00	$7.60
Option 4b	$0.80	$0.40	$0.70	$0.20		$2.60

Subarea 2: Improve Highway 126 Access in the Prineville Airport Industrial Area

The airport industrial area was recently annexed into the City and is developing rapidly as an employment center. As shown in Figure 8-2 or listed below, six major options to improve Highway 126 access and circulation were evaluated:

Option 1:	Tom McCall Road Overcrossing
Option 2:	Millican Road Undercrossing
Option 3:	Tom McCall Road Undercrossing
Option 4:	Millican / Tom McCall Split-Diamond
Option 5:	Off-Set Loop Ramps
Option 6:	Traffic signals at Millican and McCall Roads

Analysis of future (2018) peak hour traffic conditions on Highway 126 in the airport area reveal that volumes at local traffic at both Millican Road and Tom McCall Road are sufficiently high enough to warrant traffic signals (see Table 8-4).

Table 8-4
Highway 126 - Airport Area
Traffic Signal Warrant Analysis Summary

Highway 126 Intersection	MUTCD Warrants Met? #1	#2	#11
Millican Road	Yes	Yes	Yes
Tom McCall Road	Yes	Yes	Yes

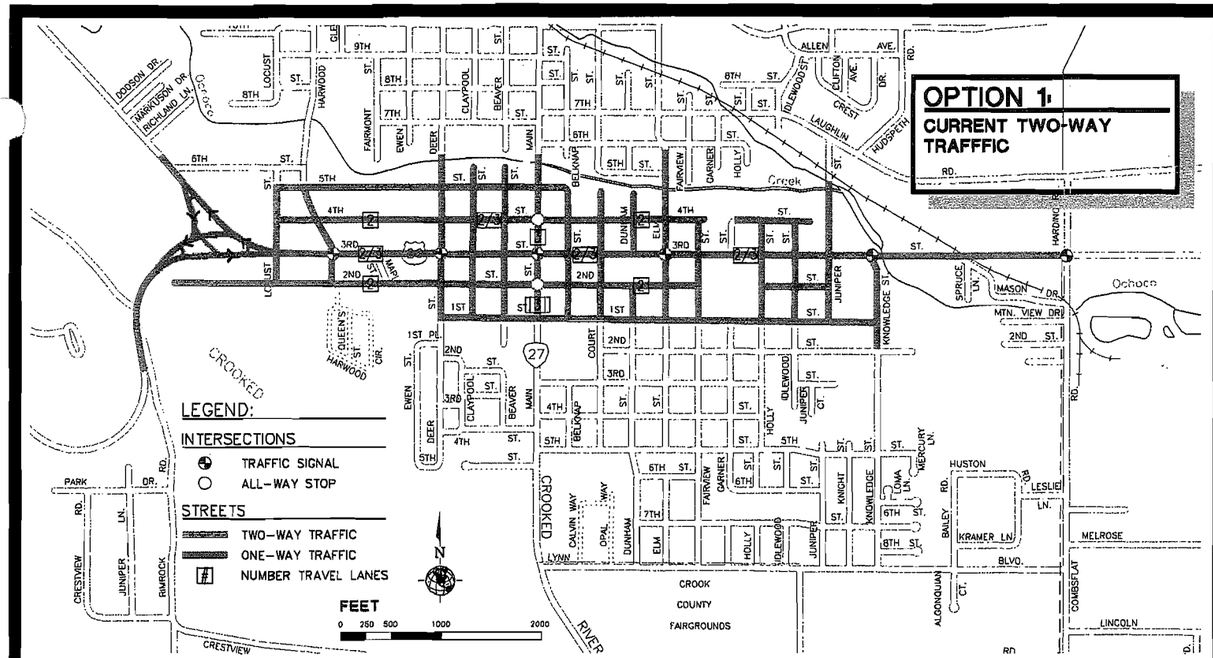
As shown in Table 8-5, the installation of traffic signals on Highway 126 at either Millican Road, Tom McCall or both would result in acceptable levels of service at the intersection. However, as the analysis of future traffic conditions showed in Chapter 7 (Table 7-6), the mainline traffic on Highway 126 is expected to exceed practical and acceptable LOS in the airport area by year 2018. Installation of new traffic signals, particularly at the edge of Prineville's UGB, will likely result in significant delay to state highway traffic; and may even introduce undesirable safety conditions in the area. Any of the interchange options would significantly reduce traffic conflicts by providing improved access management. Table 8-6 provides a planning-level cost analysis of the six options in 1998 dollars.

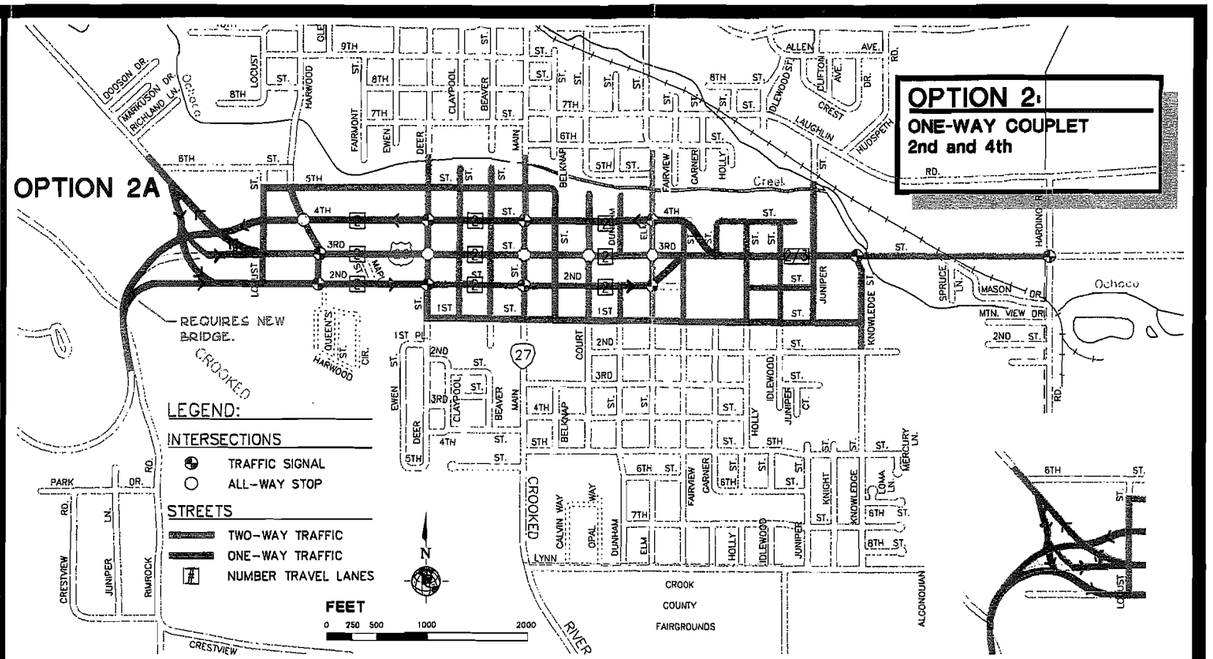
Table 8-5
Future Levels of Service on Highway 126 at Millican-McCall

Highway 126 Intersection Option	V/C	LOS
Millican/McCall Road	.68	C

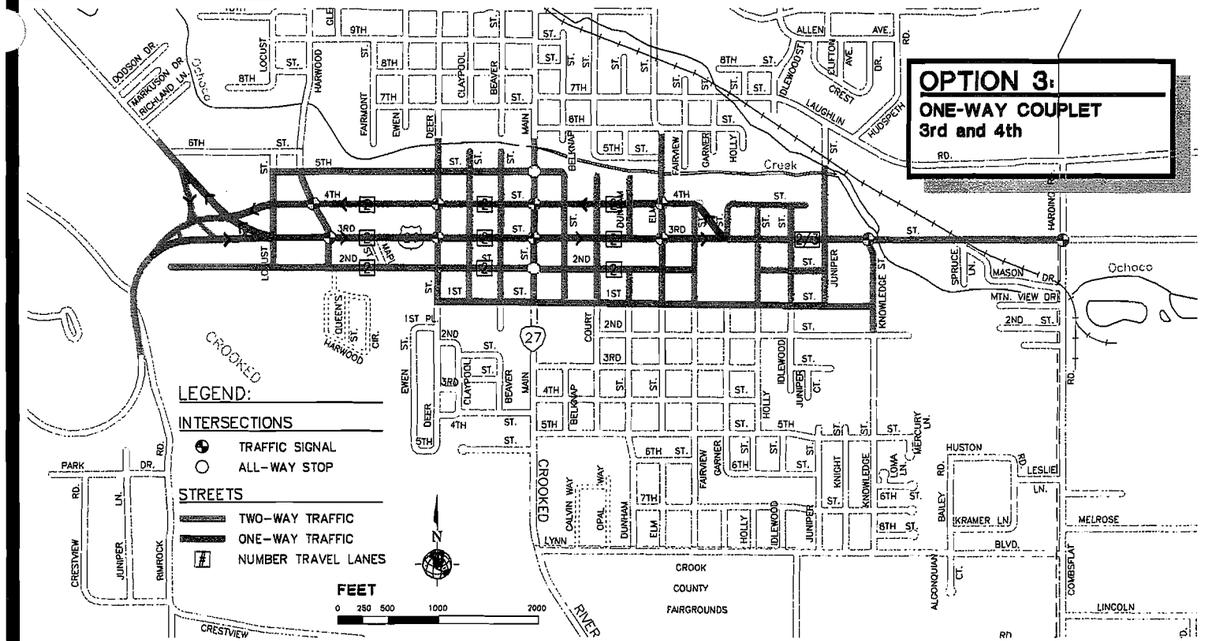
Table 8-6
Highway 126 - Airport Area Access Improvement Options: Cost Analysis in 1998 Dollars (millions)

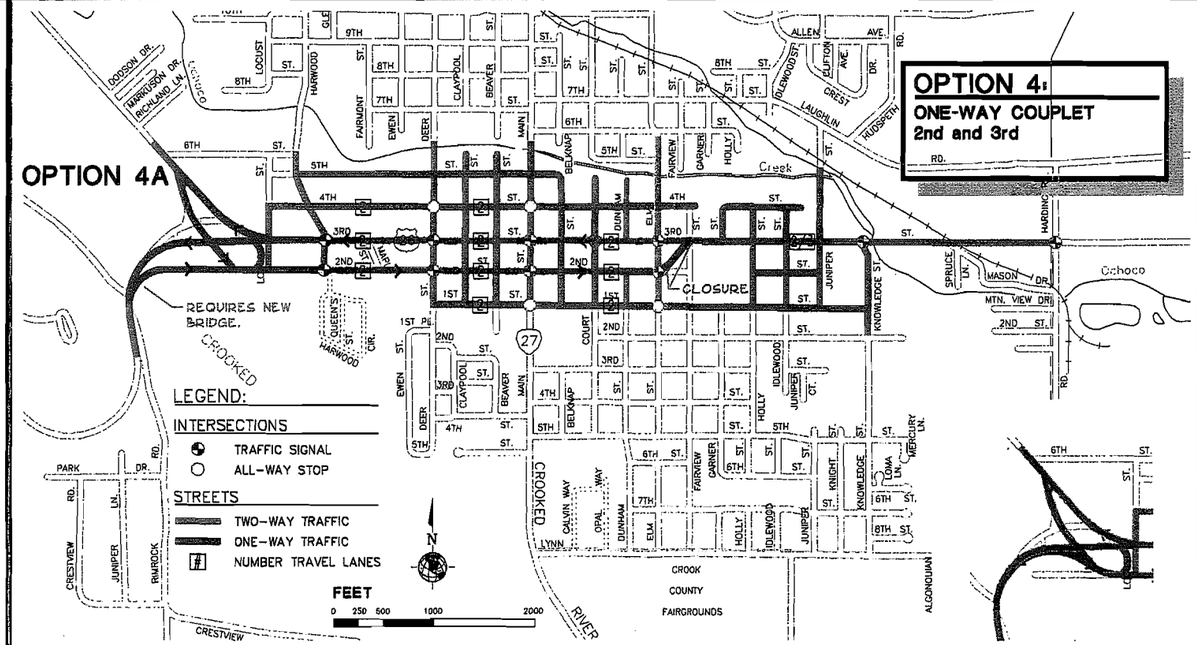
	Streets					
Option	Traffic Signal	Approach Lanes	Highway Widening	Ramps	Bridge	Total
Option 1		$0.85	$0.65	$2.00	$1.5-$3.5	$4.95-$6.95
Option 2		$1.35	$0.60	$2.00	$1.5-$3.5	$5.45-$7.45
Option 3		$0.30	$0.60	$2.00	$1.5-$3.5	$5.15-$7.15
Option 4		$0.40	$0.60	$2.00	$1.5-$3.5	$6.0-$8.0
Option 5						$2.0-$3.0
Option 6	$0.25		$1.00			$1.25





OPTION 2B





OPTION 4B

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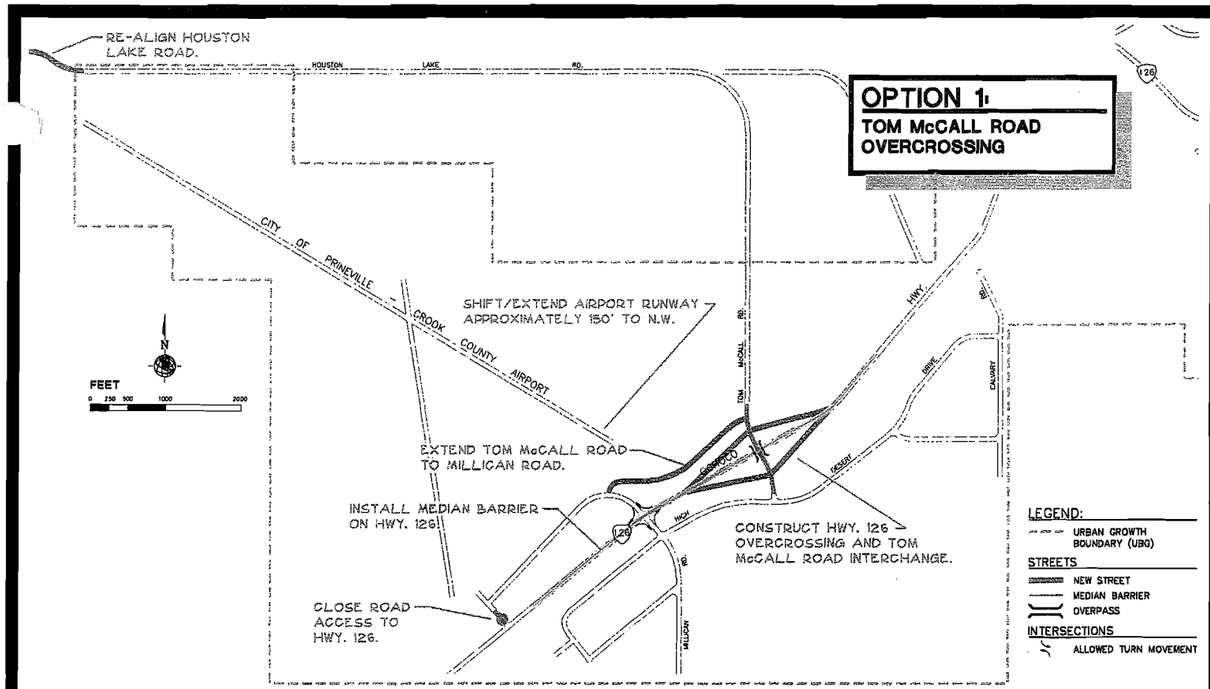
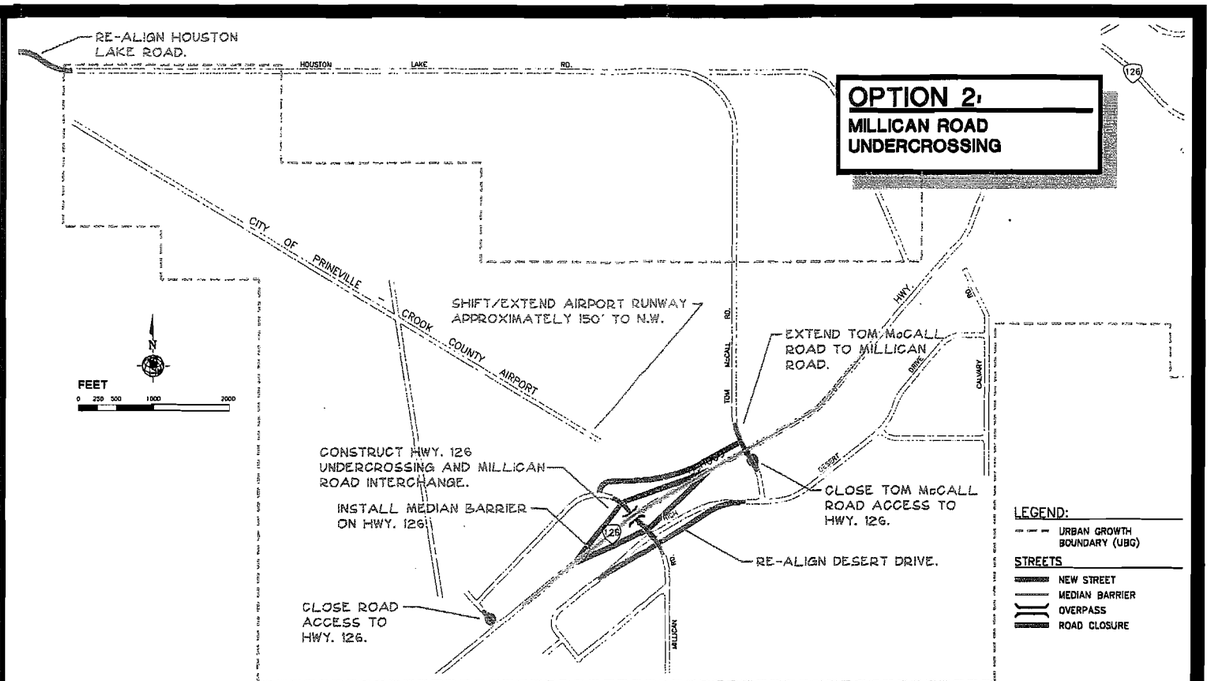
CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN

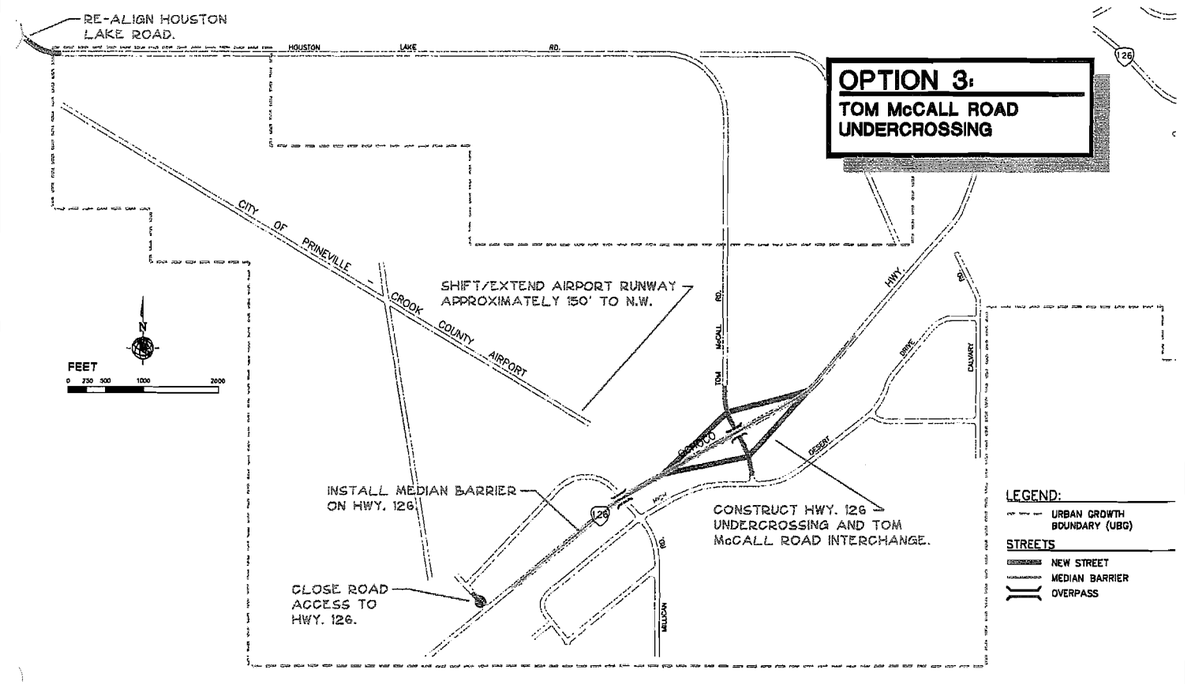
DOWNTOWN TRAFFIC CIRCULATION CONCEPTUAL IMPROVEMENT OPTIONS

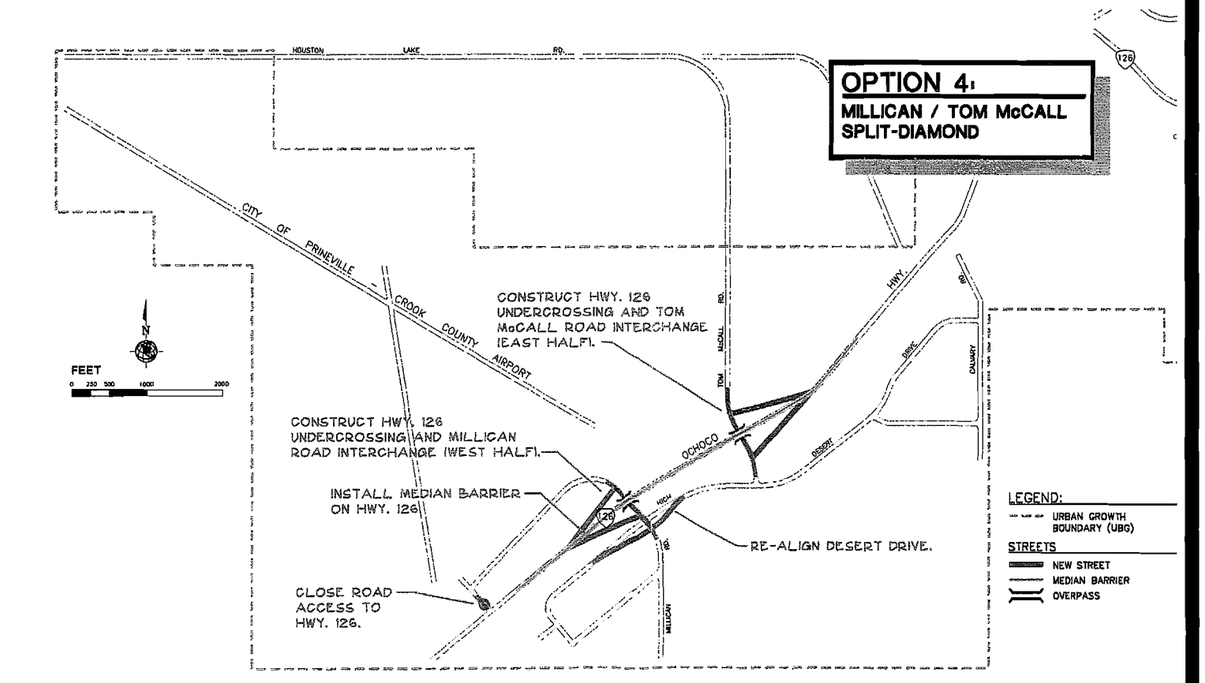
FIGURE 8-1

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455









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CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN

AIRPORT AREA / HIGHWAY 126 ACCESS CONCEPTUAL IMPROVEMENT OPTIONS

FIGURE 8-2

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

Subarea 3: Improve Crooked River Crossing Opportunities

There are a number of opportunities to improve access across Crooked River and serve the Crestview area, and help solve two existing problems. First, Rimrock Road, the current access road, connects with Highway 126 at an intersection with very poor sight visibility and an awkward angle of approach. ODOT is due to complete (1998) minor roadway re-alignment to Rim Rock Road that will help improve safety conditions on Highway 126. Second, because Rimrock Road is the only access to the area, there is concern that emergency vehicles might be blocked from the area should anything happen to the Crooked River Bridge crossing.

As shown in Figure 8-3, three major options to improve opportunities to cross Crooked River were evaluated:

Option 1: Rimrock Road Approach Improvement or Closure

Suboptions:
- a) Re-Align Rimrock Road
- b) Extend Crestview Road
- c) Close Rimrock Road
- d) Restrict traffic flow direction

Option 2: New 2nd Street Bridge

Suboptions:
- a) New Bridge/2nd Street Extension
- b) Extend Crestview Road
- c) Construct Highway 126 Connection

Option 3: Rimrock Road Re-Alignment

Suboptions:
- a) Re-Align Rimrock Road
- b) Extend Crestview Road

Option 1 (a/b)

Option 1 would have no significant environmental or socioeconomic impacts.

The re-alignment of Rimrock Road is currently under construction as part of ODOT's grade improvements on Highway 126 west of the Crooked River. These minor alignment improvements should help improve access and safety at the intersection.

The extension of Crestview Road east to the Crooked River Highway (Suboption B) may possibly conflict with some park land near the Crooked River Highway; however, conflicts with the park land would not be determined until a more detailed alignment is studied.

This option assumes that the Rimrock Road intersection with Highway 126 would eventually be closed (an unacceptable condition to the City of Prineville). This option would not have the advantage of dual access points to the area, but it would eliminate the hazards of the existing intersection.

Option 2 (a/b/c)

Option 2 would have some potential water impacts. The Second Street bridge across the Crooked River could increase roadway run-off into the river. The extension of Crestview Road east to the Crooked River Highway (Suboption B) may possibly conflict with some park land near the Crooked River Highway; however, conflicts with the park land would not be determined until a more detailed alignment is studied.

A new bridge over the Crooked River at Second Street could improve the level of service and safety on Highway 126 at the Rimrock Road intersection. By closing the Rimrock Road access to Highway 126, the projected traffic volumes would increase on Main Street south of Third Street. At the same time, volumes would be slightly reduced on Highway 126 as it enters the city and merges with Third Street. Any of these options would significantly reduce traffic conflicts by providing improved access management. Table 8-7 provides a cost analysis of the three main options and their suboptions in 1998 dollars.

Option 3 (a/b)

Option 3 would have no significant environmental or socioeconomic impacts.

The current Rimrock Road access to Highway 126 could be eliminated by extending Rimrock Road under Highway 126 with a new connection to O'Neil Highway, and retain full access to the Crestview neighborhood via Highway 126. This improvement may result in overall traffic safety improvements on Highway 126 just west of the Crooked River Bridge without new bridge capacity improvements. However, the structural (Crooked River Bridge height and width), right-of-way (Golf Course), and alignment (flood plain) restrictions may be severe, limiting the feasibility of this improvement option.

The extension of Crestview Road east to the Crooked River Highway (Suboption B) may possibly conflict with some park land near the Crooked River Highway; however, conflicts with the park land would not be determined until a more detailed alignment is studied. Suboption B would eliminate the hazards of the existing intersection while retaining dual access points.

Figure 8-3 (black and white)

Table 8-7
Crooked River Crossing Options: Cost Analysis
in 1998 Dollars (millions)

Option	Street ROW	Road	Bridge	Total
Option 1 - Crestview Extension and Close Rimrock Road		$0.75	$3.0-$6.0	$3.75-$6.75
Option 2 - Crestview Extension and New 2nd Street Bridge	$0.10	$1.05	$6.0-$12.0	$7.15-$13.15
Option 3 - Crestview Extension and Rimrock Road Extension*	$0.20	$0.70	$3.0-$6.0	$3.90-$6.90

* Costs do not include estimate to widen or lengthen the existing Crooked River Bridge.

Subarea 4: Improve City North/South Collector Street System

Options to improve Prineville's North/South collector street system include extensions of Court Street and Knowledge Street across Ochoco Creek, with connections north of Laughlin to serve the developing north side.

Court Street Extension

The Court Street Extension option would extend N. Court Street over the Ochoco Creek to provide another north-south route. Although none of the current north-south routes are projected to be capacity deficient in the No Build Alternative, the purpose of this alternate route would be to reduce traffic volumes at the Main Street and Elm Street intersections with Third Street and provide improved circulation for vehicles, bicyclists, and pedestrians. It would also shorten trips which currently travel out of a direct path because of the lack of creek crossings.

Construction costs in 1998 dollars were estimated at about $ 1.1 million, including a new bridge, and street section to City collector standards. This option would not require any substantial right-of-way costs, but it would add another roadway through the park along Ochoco Creek.

A review of traffic volumes along Main Street and Elm Street indicates that the N. Court Street connection would provide substantial reduction in local neighborhood traffic on those roadways. The impacts of this option would result from the Ochoco Park and Ochoco Creek crossings. The creek crossing could have potential water impacts from roadway run-off. Park users, particularly walkers, runners, and bicyclists, would have one additional roadway crossing as a result of this option.

Knowledge Street Extension

The Knowledge Street Extension would provide the most direct street, pedestrian and bicycle access between the developing residential areas in North Prineville, with the Prineville Schools located south of Highway 126. This improvement would eliminate the current dog-leg collector connection across Highway 126 via Juniper Street and Knowledge Street, with a single highway crossing controlled by a traffic signal (see Chapter 5 - Short-Term Improvements).

The extension of Knowledge Street north of Highway 126 to Laughlin Road and Hudspeth Road would require a new bridge across Ochoco Creek. New public right-of-way would need to be acquired as part of this project, and additional traffic control equipment (signal pole and signal heads) would need to be added to the planned signal improvement at Highway 126/Knowledge Street.

The Knowledge Street Extension would have significant impact to future traffic by relieving north/south traffic demand on both Main Street and Elm Street. Construction costs in 1998 dollars were estimated at about $ 1.58 million, including a new bridge, and street section to City collector standards.

Summary and Recommendations

All of the street system improvement options were evaluated based on their estimated costs, traffic safety and circulation benefits, and socio-economic and environmental impacts. All options were presented and discussed with the TAC, Planning Commission/City Council and public. After considering the advantages and disadvantages of each option and suboption, the recommendations for the Preferred Alternative are as follows:

1) Downtown Traffic Circulation (Subarea 1)

Recommendation: Option 1 (retain current two-way traffic) was selected because it retains the current traffic circulation, makes best use of the recommended Short-Term street improvements (Chapter 6), minimizes the cost of extensive street capacity improvements in the downtown area, and is least disruptive and best supports the existing land development pattern. As regular update to the Prineville TSP, the City of Prineville and ODOT should continue to track and monitor traffic flows on Third Street to determine the appropriate timing when a one-way couplet should be re-evaluated and perhaps constructed. Until then, retention of the current two-way traffic system and implementation of the Short-Term street improvements and recommended street scape and pedestrian enhancements identified in the Downtown Prineville Enhancement Plan should be completed. The package of short- and long-term street system improvements will provide sufficient capacity, circulation/access and safety measures to accommodate growth in Prineville over the next 20 years.

The other street circulation options were eliminated for the following reasons: 1) costly to implement; 2) requires re-focus and re-vision to downtown land use planning; and 3) lack of public consensus.

2) Highway 126 Access in the Prineville Airport Industrial Area (Subarea 2)

The analysis of future traffic conditions and consideration of appropriate design standards indicate that while installation of a traffic signal on Highway 126 at Millican Road may be the most cost-effective solution, it is not an appropriate design solution for either Highway 126 safety conditions, nor is it the most desirable solution for local truck access and safety.

Recommendation: It appears that the best long-term capacity, local trucking access and highway safety solution is best accommodated by Option 2 (Millican Road Undercrossing). This option is estimated as one of the most expensive, and will likely require significant private investment given the current financial conditions of the City and ODOT for funding major capacity improvements. More precise cost estimates and a financial partnership plan can be determined following more detailed engineering of the recommended solution.

3) Improve Crooked River Crossing Opportunities (Subarea 3)

Recommendation: The recommendations for improving opportunities to cross the Crooked River and improving safety on Highway 126 include:

a. Complete re-alignment of Rimrock Road and Install intersection lighting on Highway 126 at Rimrock Road and O'Neil Highway to improve safety.

b. Extend Crestview Road to the Crooked River Highway to add second river crossing.

c. Further evaluate feasibility of extending Rimrock Road under Highway 126 to O'Neil Highway before closing Rimrock Road at Highway 126.

4) Improve City North/South Collector Street System (Subarea 4)

Recommendation: The extension of both Court Street and Knowledge Street across Ochoco Creek with result in improved collector street capacity in relief to congestion on Main and Elm Streets. Knowledge Street provides the most direct street, pedestrian and bicycle connection between North Prineville area development and the Prineville schools.

CHAPTER 9 THE TRANSPORTATION SYSTEM PLAN

Vision

The City's adoption of the Downtown Enhancement Plan is supported by the findings of the Prineville TSP Alternatives Analysis and recommendations. By indefinitely postponing the reconfiguration of the downtown circulation pattern towards a one-way couplet, the City of Prineville, with the collective support of the State and County, is making a conscious decision to invest in a strong, vibrant and more livable downtown area. In some cases, as the analysis of future traffic operations indicated (see Chapter 8), this investment comes at a "cost" of higher peak hour traffic congestion in the future on Third Street (particularly at Main Street). In part, this trade-off is being made with the expectation that alternative routes will be available for those who choose to avoid Third Street during the peak hours. These alternatives, together with the Laughlin Road local truck route and the enhanced Second and Fourth Street projects, are justified on the basis of this community choice.

Prineville's choice for a livable downtown area constitutes the vision from which many of the project and policy elements of the TSP are defined and integrated. The Prineville TSP includes plans for all modes of transportation and will be adopted as the Transportation Element of the City of Prineville Comprehensive Plan. Components of the street system plan include street classification and street width standards, access management standards, and street improvements. Suggested transportation demand measures are also included. Lastly, an implementation plan is presented.

Transportation Planning Policies

As the transportation Element of the Prineville Comprehensive Plan, the TSP will provide a policy foundation to guide City transportation-related decisions with a firm policy background in such areas as: overall system design, growth management, regional mobility, connectivity, circulation, efficiency, safety, accessibility, economic development, neighborhood livability, aesthetics, and citizen involvement.

A. General Transportation Plan Policies:

Prineville Transportation System Plan

1. The Prineville Transportation System Plan should contain goals, objectives, policies, plan maps, and project lists that will guide the provision of transportation facilities and services for the Prineville Urban Area. The Prineville Transportation System Plan will serve as the Transportation Element of the Prineville Comprehensive Plan. The Prineville Transportation System Plan should contain the following plan elements:

Street and Highways	Public Transportation
Transportation System Management	Rail, Air, Water and Pipeline Service
Freight Mobility	Transportation Demand Management
Bikeway Plan	Financial Plan
Pedestrian System	Implementation Plan

The *Prineville Airport Plan* is adopted as a separate planning document.

2. The *Prineville Transportation System Plan* should be updated, as necessary, to remain consistent with other regional and statewide plans.

Regional Mobility

3. A balanced system of transportation facilities and services should be designed to meet the regional travel patterns and mobility needs of residents, businesses, and industries.

Multi-modal Transportation System

4. The transportation system for Prineville should consist of an integrated network of facilities and services for a variety of motorized and non-motorized travel modes.

Connectivity and Circulation

5. The vehicle, bicycle, and pedestrian circulation systems should be designed to connect population and employment centers in Prineville, as well as provides access to local neighborhood residential, shopping, schools, and other activity centers.

Supportive of Land Use Plan Designations and Development Patterns

6. The provision of transportation facilities and services should reflect and support land use designations and development patterns as identified in the Prineville Comprehensive Plan. The design and implementation of transportation facilities and services should be based on serving current and future travel demand, residential densities, retail, and employment centers.

Growth Management

7. The construction of transportation facilities should be timed to coincide with community needs, and implemented in such a way as to minimize impacts on existing development.

8. 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.

9. To mitigate traffic impacts placed on area-wide transportation facilities by new development, Transportation System Development Charges, as defined by Oregon Revised Statutes and local government ordinances, may be collected.

System Efficiency

10. The Prineville Transportation System Plan should identify methods that citizens can use to commute to work and decrease overall traffic demand on the transportation system. Such methods include telecommuting, carpooling, vanpooling, flexible work schedules, walking, and bicycling.

Transportation Safety

11. Local governments should make as a high priority the design, construction, and operation of a safe transportation system for all modes of travel.

Public Safety

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

Accessibility for People with Disabilities

13. The transportation system should be designed with consideration of the needs of people with disabilities by meeting the requirements set forth in the Americans With Disabilities Act.

Economic Development

14. Supportive of the mobility needs of businesses and industries, the transportation system should consist of the infrastructure necessary for the safe and efficient movement of goods, services, and people throughout the Prineville area. The Prineville Transportation System Plan should include consideration of the area's rail, aviation, pipeline, and truck movement network.

Neighborhood Livability

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

Aesthetics and Landscaping

16. Aesthetics and landscaping should be considered in the design of the transportation system. Within the physical and financial constraints of the project, landscaping should be included in the design of the transportation facility. Various landscaping designs, suitable plants, and materials should be utilized by local governments, private entities or individuals to enhance the livability of the area.

Intergovernmental Coordination and Consistency

17. The City of Prineville should coordinate their transportation planning and construction efforts with those of the Crook County, the State of Oregon Department of Transportation, and other affected agencies as appropriate. Local transportation plans will be consistent with those developed at the regional and state level.

Airport Compatibility

18. Land Uses around the Prineville Airport should be required to provide an environment compatible with the airport and its operation, and which will not be adversely affected by noise and safety problems.

19. Because of the potential hazards to airborne aircraft, land uses beneath designated approach surfaces within 10,000 feet of the end of Prineville Airport runways should not create water impoundments accessible by waterfowl.

20. Commercial uses and other uses that result in concentrations of people should be prohibited within the clear zones of the runways at Prineville Airport, to avoid danger to the public safety by potential aircraft accidents.

B. Street System Policies:

Classification System and Basic Design Guidelines

1. The City should classify streets and highways within the Prineville urban area based on how they are to ultimately function within the overall system (see Street Functional Classification section), and should reserve right-of-way corridors for planned arterial and collector streets.

Multi-modal Street Design

2. The City of Prineville should design its streets to safely accommodate pedestrian, bicycle, and motor vehicle travel.

Multi-modal Intersection Design

3. Arterial and collector street intersections should be designed to promote safe and accessible crossings for pedestrians and bicyclists. Intersection design should incorporate measures to make pedestrian crossings convenient and less of a barrier to pedestrian mobility.

Arterial and Collector Street Intersections

4. Left-turn pockets should be incorporated into the design of all intersections of arterial streets with other arterial and collector streets, as well as collector streets with other arterial and collector streets.

Street Design Standards

5. The City of Prineville Design Standards should be the basis for all street design within the Prineville Urban Area.

Capacity Efficient Design and Level of Service Standards

6. The City of Prineville should apply the street design standard that most safely and efficiently provides motor vehicle capacity respective to the functional classification of the street.

Streetscape Design and Aesthetics

7. Wherever possible the City of Prineville should incorporate safely designed, aesthetic features into the streetscape of its public rights-of-way. These features may include: planting of street trees, shrubs, and grasses; incorporation of planting strips; and, in some instances, the installation of street furniture, planters, special lighting or non-standard paving materials.

Physical Improvements to Existing City Streets

8. Existing streets that are to be widened or reconstructed should 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. Whenever possible, the design of the street should be sensitive to the livability of the surrounding neighborhood.

Access Management

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 should be controlled. (See Access Management Standards)

10. In order to recognize existing land use patterns, access management standards should be applied to new approaches only.

11. On State facilities, new direct access points should be minimized to the extent feasible. Alternatives to direct access including, but not limited to, shared driveways, frontage roads, side street or alley access, should be utilized where possible.

Removal of Vision Hazards on Private Property

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

Project Identification

13. The City should select City-funded, street improvement projects from those listed in the Prineville 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.

Citizen Involvement in Project Design

14. The City should involve representatives of affected neighborhood associations and citizens in an advisory role in the design of street improvement projects. The purpose of citizen involvement in project design is to be a resource to project staff in the design process. The need for, and purpose of, the project are to be determined as part of the earlier planning process undertaken when including the project in the Prineville Transportation System Plan.

Traffic Impact Analysis Requirements

15. The City should 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.

Exactions Required of Development

16. The City should require new development to make site-related, right-of-way dedication and street system improvements that are identified through the Traffic Impact Analysis process and other code requirements, and for planned arterial and collector streets..

Street Improvements Funded Through System Development Charges

17. The City should require new development to pay charges towards the mitigation of system-wide transportation impacts created by new growth in the community. These funds can be used towards improvements to the street system.

C. Transportation System Management Policies:

Improve the Efficiency of the Signal System

1. The City should work with ODOT and continue to modernize the signal system and improve its coordination and efficiency by ultimately connecting all of its signals to a centralized traffic control center. The City and ODOT should employ traffic signal timing plans that maximize the efficiency of the system given the particular travel demand during different months and time periods throughout the typical weekday and weekend day.

Maintain Clear and Effective Signs and Pavement Markings

2. The City and ODOT should regularly maintain all of the traffic control devices (signs and markings) within their respective inventory so as to minimize congestion and driver delay due to confusion. While priority should always be given to regulatory and warning signs, informational (street name and directional) signs should also be given proper maintenance.

On-Street Parking Management

3. Where on-street parking is permitted on a congested arterial street, the City should give first priority to removing on-street parking as a means of enhancing the capacity of the facility. 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.

Development and Adoption of Access Management Standards

4. The City should develop and adopt specific access management standards based on the following principles:

   a.) Properties with frontage along two streets should take primary access from the street with the lower classification.

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

   c.) Access to the arterial street system should be primarily limited to one point provided adequate street frontage is available. Additional access may be permitted, provided adequate frontage and access spacing is available.

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

   e.) Shared, mutual access easements should be designed and provided along arterial street frontage for both existing and future development.

   f.) The spacing of access points should be determined based on street classification (see **Table 9-2**). Generally, access spacing includes accesses along the same side of the street or on the opposite side of the street. Access points should be located directly across from existing or future access, provided adequate spacing results.

   g.) All access to the public right-of-way should be located, designed, and constructed to the approval of the Public Works Director, or his designee. Likewise, variances to access management standards should

be granted at the discretion of the Public Works Director, or his designees.

D. Local Street Connectivity Policies:

Connectivity to the Street System

1. Applicants submitting preliminary subdivision plans should provide for local street connections toward existing or planned streets and neighborhood activity centers, located within one-half-mile of the development.

Connectivity of New Developments to Adjoining Undeveloped Land

2. Applicants submitting preliminary subdivision plans should provide for extension of local streets to adjoining undeveloped properties and eventual connection with the existing street system.

Sidewalks

3. All development should include sidewalk and walkway construction, as required by the *City of Prineville Land Development Ordinance.* All new road construction or reconstruction projects shall include sidewalks as specified in the Pedestrian Element of the *Prineville Transportation System Plan.*

Public Accessways

4. The City may require pedestrian and bicycle accessways to connect to cul-de-sac streets, to pass through long blocks, and to provide for networks of public paths creating non-motorized access to neighborhoods.

Street Width

5. In order to facilitate pedestrian crossing, discourage through traffic, and reduce speeds, local streets should not be excessive in width. However, public local streets must have sufficient width to allow for emergency access and provide parking on, at least, one side.

Discouraging Cut-through Traffic

6. Local streets shall be designed to minimize cut-through traffic. Limiting street length, width, and the installation of traffic calming measures may be used to discourage through-traffic from using local streets.

Purpose of Cul-De-Sac Streets

7. The purpose of cul-de-sac streets should be to increase density by accessing land not otherwise accessible through a connected street pattern, due to topography or other constraints. Construction of cul-de-sac streets should be minimized to the extent practicable.

Cul-de-Sac Street Length

8. Cul-de-sac streets should not exceed 600 feet in length. However, no portion of the cul-de-sac street should be more than 400 feet from an intersecting street or public accessway unless physical constraints make it impracticable.

Alleys

Alleys provide secondary access to residential properties where street frontages are narrow; where the street is designed with narrow width to provide limited on-street parking; or where alley access development is desired to increase residential densities. Alleys can provide several advantages over direct access from the street:

- Alleys allow orientation of the residence, rather than the garage, to the street.
- Use of alleys can reduce the number of driveway entrances onto the street, thereby improving the pedestrian environment.
- Alleys provide greater flexibility in platting small lot subdivisions.
- Alleys provide an alternative location for siting utilities and garbage collection services.

9. Alleys should be paved surfaces, ranging in widths from 12 (one-way) to 16 feet (two-way). Alley shoulders should include graveled surfaces (minimum 2 feet), and fencing should be set back by a minimum of 2 feet behind the property line.

E. Bicycle System Policies:

1. The City of Prineville should recognize bicycle transportation as a necessary and viable component of the transportation system as an important transportation mode.

2. The City of Prineville should utilize where feasible opportunities to add bike lanes in conjunction with road reconstruction and re-striping projects on collector and arterial streets.

3. The City of Prineville should assure that, where appropriate, 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.

4. The City of Prineville should actively work with ODOT to improve bicycling on State Highways within Prineville.

5. The City of Prineville should encourage bicycle recreation.

6. The City of Prineville should actively support and 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 by encouraging and support efforts by Prineville schools to develop and use a bicycle safety curriculum.

F. Pedestrian System Policies:

Inventory Existing System and Identify Future Needs

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

Establish Sidewalk Construction Program

2. To complete the pedestrian facility network, the City should consider establishing a Sidewalk Construction Program. Through this program, property owners would be required to build sidewalks on all lots abutting curbed City streets within the City limits, within a prescribed time period.

Ensuring Future Sidewalk Connections

3. All future development shall include sidewalk and walkway construction as required by the adopted *Street Design Standards.* All road construction or renovation projects, shall include sidewalks, if appropriate.

Complete Connections with Crosswalks

4. All signalized intersections shall have marked crosswalks. Crosswalks at controlled intersections should be provided near schools, commercial areas, and other high volume pedestrian locations.

Compliance with ADA Standards

5. The City shall comply with the requirements set forth in the Americans with Disabilities Act regarding the location and design of new sidewalks.

Maintaining and Assuring the Quality of Facilities

6. The City should establish standards for the maintenance and safety of pedestrian facilities. These standards should include the removal of hazards and obstacles to pedestrian travel, as well as maintenance of benches and landscaping.

Education of Pedestrian Safety Needs

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

G. Freight Movement Element

Access to Streets and Highways

1. The City of Prineville shall create a street and highway system that provides direct and efficient access to, and between, Prineville Urban Area industrial and commercial centers and statewide transport corridors.

Accessibility to Railroads

2. The City should encourage the availability of railroad freight services to those industrial and commercial areas where utilization is economically viable.

Accessibility to Air Freight Services

3. The City should promote the utilization of air freight services by continuing to provide and maintain facilities at Prineville Airport that enable the operation of private air freight providers.

Regional Pipeline Systems

4. The City should promote accessibility to, protection of, and the appropriate location of, regional pipeline systems that service the Prineville Urban Area.

Adequate Street Design Standards for Trucks

5. The City shall develop adequate design standards that meet the weight and dimensional needs of trucks, particularly for those streets that serve industrial and commercial areas.

Transportation of Hazardous Materials

6. The City shall encourage responsible federal and state agencies to develop and enforce appropriate regulations regarding the safe transport of hazardous materials through the Prineville Urban Area.

H. Transportation Finance Element

General Obligation Bonds

1. The City should investigate the feasibility and public support for the sale of general obligation bonds to finance capital improvements to the transportation system. Projects shall be selected and authorized by a vote of the citizens of Prineville.

Transportation System Development Charges

2. As defined by Oregon Revised Statutes and City ordinances, transportation system development charges may be collected by the City to mitigate impacts

placed on area-wide transportation facilities. The City should establish an SDC as an important and equitable funding source to pay for transportation capacity improvements.

Development Exactions

3. The City should require those responsible for new development to mitigate their development's impacts to the transportation system, as authorized in the *Oregon Revised Statutes*, concurrent with the development of the property.

Federal and State Funding Sources

4. The City shall seek federal and state funding for capital improvements through participation in the designated distribution process, as provided in currently-authorized federal and state transportation legislation.

Pursuing Federal and State Grants

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

I. Plan Implementation

Policy Foundation for Decision-Making

1. The *Prineville Transportation System Plan* shall be used as the legal basis and policy foundation for all City decision-makers, advisory bodies, and citizens in issues related to transportation. The goals, objectives, policies, principles, maps, and recommended projects shall be considered in all decision-making processes that impact, or are impacted by, the transportation system.

Land Use Actions and Development Review

2. The goals, objectives, policies, standards, and maps contained in *Prineville Transportation System Plan* shall be considered and applied towards the review and approval of land use actions and development applications. Applications need to contain findings that show how the proposed land use action or development is in conformity with the adopted tenets of the Prineville Transportation System Plan.

Streets and Highways Element

Street Functional Classification

The Prineville Street Functional Classification system map and policies determine the intended use of each street in the City's street system. A street's functional classification determines what type of traffic should use the street —regional, intra-city, or neighborhood. The type of traffic, combined with expected traffic volumes, determine whether a street is an arterial, collector, or local street. Local topography may also be a factor in assigning a classification to a street. It is important to note that traffic volumes alone do not determine the functional classification of a street. All of the characteristics listed play a role in the determination. Once the street's function is determined, design characteristics are assigned —the number of travel lanes, access controls, on-street parking, bicycle lanes, and right-of-way width, consistent with its classification. While the right-of-way requirement is constant, the ultimate number of lanes and access controls may be phased-in over time, depending on the existing and projected travel demand on the facility.

The importance of the Street Functional Classification system cannot be overstated. The City of Prineville uses the Street Functional Classification system to reserve future rights-of-way, determine street design, and develop future street improvement projects. This system provides the "blueprint" of how the City wants its street system to develop and function over the next 20 years and beyond. The recommended street functional classifications within the Prineville UGB are described below:

As part of the Prineville TSP update, careful consideration of the City's "Local Residential" street standard (as currently adopted) was conducted due to the levels of ambiguity concerning local street standards experience by communities across the state. The Prineville TSP Update includes recommendations for splitting the "Local Residential" standard into two standards - "Local Route" and "Neighborhood Street."

Arterial — Arterial streets form the primary roadway network within and through a region. They provide a continuous roadway system which distributes traffic between different neighborhoods and districts. They generally include State Highways and roadways over 10,000 vehicles per day.

Collector — Collector streets are primarily intended to serve abutting lands and local access needs of neighborhoods. They are intended to carry from 3,000 to 10,000 vehicles per day, including some through traffic. The collector could serve either residential, commercial, industrial, or mixed land uses.

Local Route — Local routes could serve residential, commercial, industrial, or mixed land uses. They are intended to carry between 1,200 and 3,000 vehicles per day. While through traffic connectivity is not a typical function, they may carry limited amounts.

Neighborhood Street — Neighborhood streets are intended to serve the adjacent land without carrying through traffic. These streets are designed to carry less than 1,200 vehicles per day. To maintain low volumes, local residential streets should be designed to

encourage low speed travel. Narrower streets generally improve the neighborhood aesthetics, and discourage speeding as well. They also reduce right-of-way needs, construction cost, storm water run-off, and vegetation clearance. If the forecast volume exceeds 1,200 vehicles per day, as determined in the design stage, the street system configuration should either be changed to reduce the forecast volume or the street shall be designed as a local route.

Cul-de-sac streets are a type of neighborhood street. They are intended to serve only the adjacent land in residential neighborhoods. These streets shall be short, serving a maximum of 20 single family houses. Because the streets are short and the traffic volumes relatively low, the street width can be narrow, allowing for the passage of two lanes of traffic when no vehicles are parked at the curb or one lane of traffic when vehicles are parked at the curb. To encourage local street circulation capability, the use of cul-de-sac streets shall be discouraged, and shall not be permitted if future connections to other streets are likely. Sidewalk connections from a new cul-de-sac shall be provided to other nearby streets and sidewalks.

Alley streets provide secondary access to residential properties where street frontages are narrow; where the street is designed with a narrow width to provide limited on-street parking; or where alley access development is desired to increase residential densities. Alleys are intended to provide rear access to individual properties and may provide alternative areas for utility placement.

The existing street functional classification system is shown in Chapter 5, **Figure 5-1.** The existing Minimum Right of Way and Roadway Widths for the existing classification system are contained in the City of Prineville's Land Development Ordinance and are summarized in Appendix A, Summary of Existing Plans and Policies. **Figure 9-1** identifies the recommended functional street classification and probable location of new neighborhood streets.

Table 9-1 describes the different characteristics that comprise each of the recommended street classifications in the Prineville Urban Area. The following attributes have been identified for each of the recommended classifications:

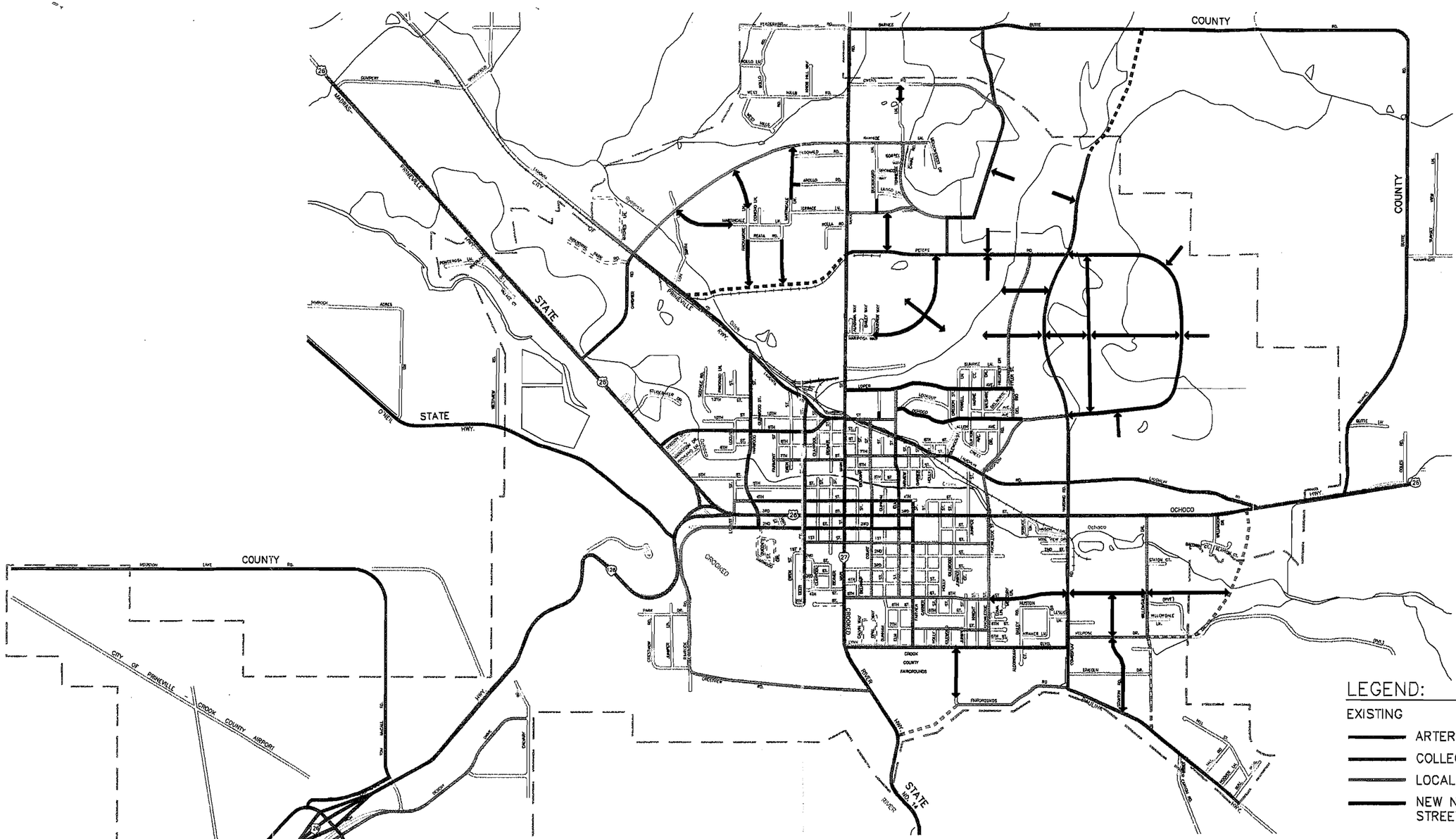
- an assigned function or purpose;
- an ADT (average daily traffic) design range of volumes;
- an ultimate traffic design in number and configuration of lanes;
- a bicycle and pedestrian facilities design;
- allowance, or not, for on-street parking; guidelines for access control; and,
- required widths.

These classifications are used to guide the development of new roads as they are brought into the system, as well as determining the types of improvements needed for existing streets.

Once a classification has been assigned to an individual street it needs to be designed in a manner that allows it to perform its function. Each street classification has a typical, or ideal, cross-section design. This design determines how a "typical" street of that classification should be built. For a variety of reasons, not every street with a given classification can be ultimately built to the ideal standard.

Figure 9-1 Recommended Functional Street Classification and New Signal Location

Figure 9-1



SOURCE: ODOT BASE MAP

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN

RECOMMENDED STREET FUNCTIONAL CLASSIFICATION

FIGURE 9-1

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

04.2658.7701 2/07/98 PRN17F91.DWG

Topography, historic landmarks, business and residential districts, are just a few limiting factors. The typical cross-section design gives City staff the basis for requiring rights-of-way as part of development reviews, and the proper standards for how an existing street should be brought-up to urban standards.

Figure 9-2 (a) illustrates the typical cross-section design for each street classification. **Figure 9-2 (b)** illustrates the typical streetscape improvements and sidewalk amenities for 3rd, 4th and 2nd Streets as recommended in the Prineville Downtown Enhancement Plan. **Table 9-2** summarizes the street design guidelines, consistent with the street functional classification, including access management standards as discussed in the following section.

Transportation System Management Element

Transportation systems management (TSM) is a term used to describe a wide range of measures and techniques that help increase the efficiency, safety, capacity and level of service of the existing street system. TSM measures are typically low cost and easier to implement than new or reconstruction projects.

TSM measures provide for better traffic movement and increased safety by *managing* the existing street system. TSM measures will generally not require mid-block widening of the roadway system. Because they typically are low-cost and low-impact (to surrounding land uses and neighborhoods) improvements, TSM measures are a significant resource to the City of Prineville. This is particularly true when existing traffic congestion requires street improvements in highly developed areas of the community, or when finances dictate the need for an intermediate improvement (in lieu of major capital expenditures).

While the spectrum of TSM measures is wide, the measures that are applicable to Prineville will generally fall into one of four categories listed below:

- Traffic Management and Channelization;
- Intersection Modification and Widening;
- Access Management; and
- Improved Traffic Control Devices.

Intersection channelization and traffic control device improvements are recommended in a number of locations as part of the Prineville TSP. Traffic signal system enhancements are also recommended. All of these improvements have been included within the Street and Highways element of the Prineville TSP.

Access Management

Access management is an important key to balanced urban growth. As evidence, the lack of a prudent access management plan has led to miles of strip commercial development along the arterial streets of many urban areas. Business activities along arterial streets lead to increased traffic demands and the provision of roadway improvements to accommodate the increasing traffic demand. Roadway improvements stimulate more business activity and traffic demands. This often continues in a cyclical fashion, and requires extensive capital investments for roadway improvements and relocation. However, with the tightening of budgets by federal, state, and local governments, the financial resources to pay for such solutions are becoming increasingly scarce.

Reducing capital expenditures is not the only argument for access management. Additional driveways along arterial streets lead to an increased number of potential conflict points between vehicles entering and exiting the driveway, and through vehicles on the arterial streets. This not only leads to increased vehicle delay and a deterioration in the level of service on the arterial, but also leads to a reduction in safety. Thus, it is essential that all levels of government try to maintain the efficiency of existing arterial streets through better access management.

Traffic operations improvements and access provision are both important transportation objectives. However, the two are inversely related, and one can be achieved only by compromising on the other. Past research has shown a direct correlation between the number of access points and the accident rate for a specific class of roadway. Hence, it is important to strike a balance between traffic operations and access control through a prudent access management plan.

Access Management Techniques

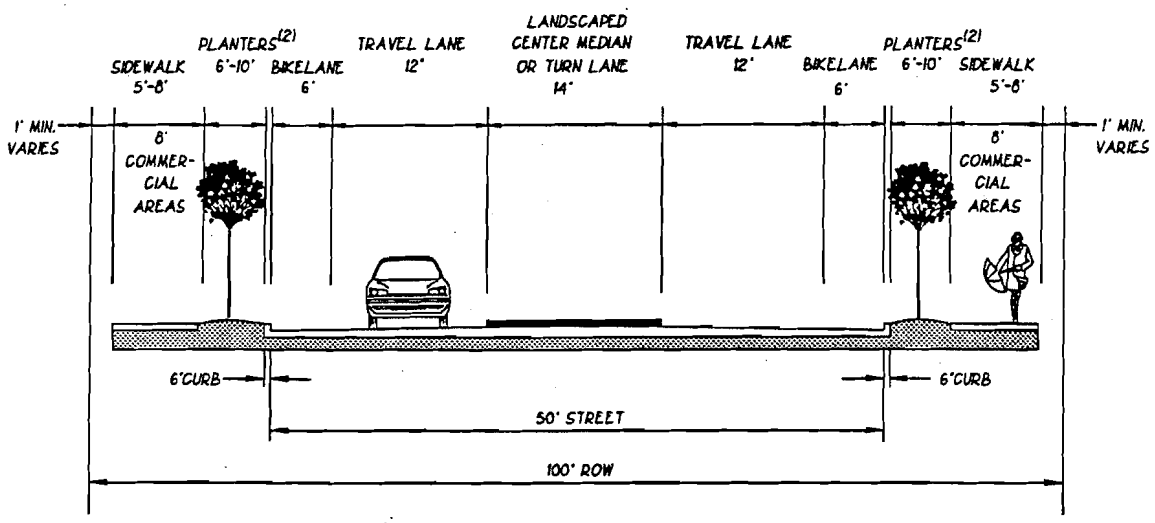
The number of access points to an arterial can be restricted through the following techniques:

- Restricting spacing between access points based on the type of development and the speed along the arterial
- Sharing of access points between adjacent properties
- Providing access via collector or local streets where possible
- Constructing frontage roads to separate local traffic from through traffic
- Providing service drives to prevent spill-over of vehicle queues onto the adjoining roadways

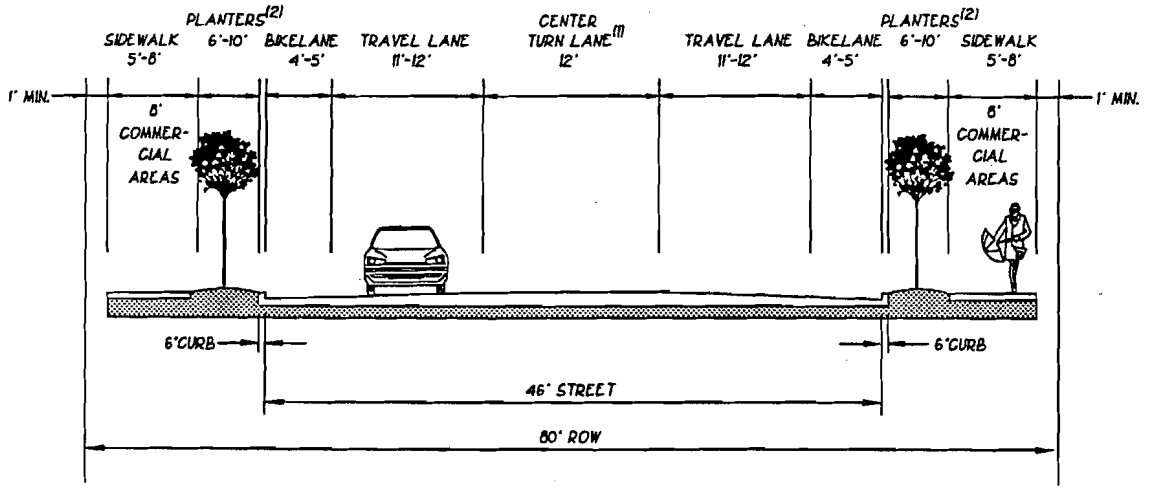
Traffic and facility improvements for access management include:

- Providing of acceleration, deceleration, and right turn only lanes
- Offsetting driveways to produce T-intersections to minimize the number of conflict points between traffic using the driveways and through traffic
- Installing median barriers to control conflicts associated with left turn movements
- Installing side barriers to the property along the arterial to restrict access width to a minimum

ARTERIAL



COLLECTOR



NOTE:

(1) AT ALL MAJOR INTERSECTIONS
(2) OPTIONAL IN COMMERCIAL AREAS

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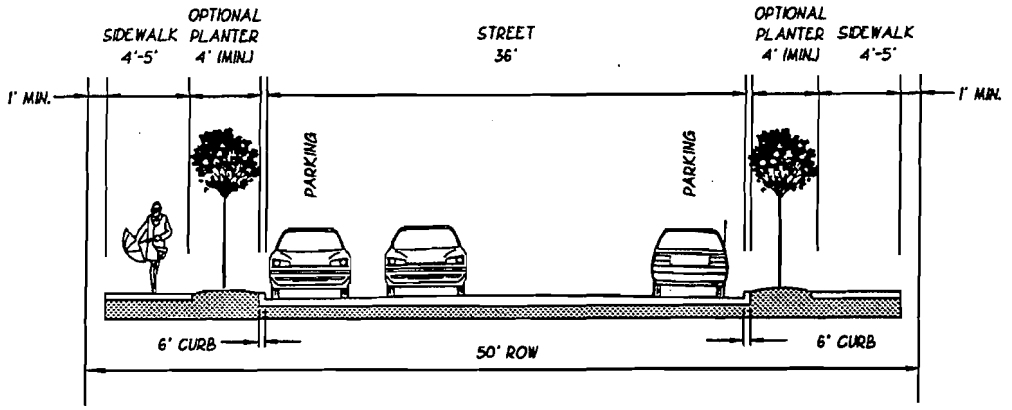
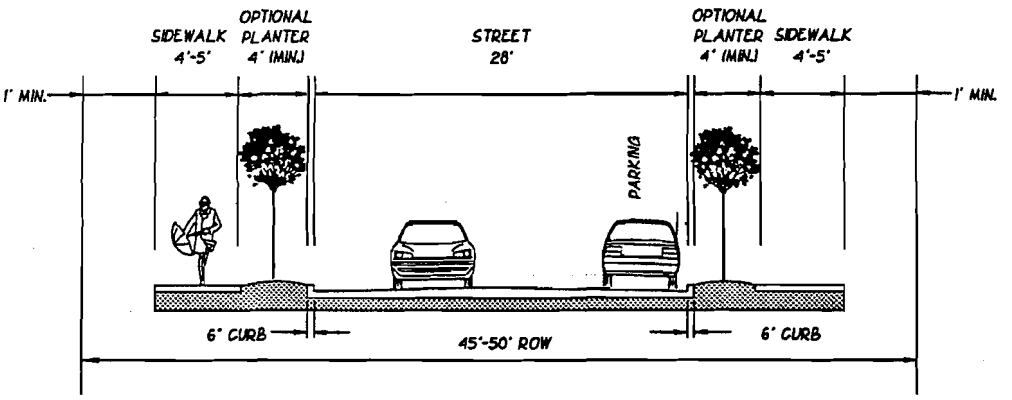
CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	TYPICAL STREET CROSS SECTIONS	FIG. 9-2 (1 OF 3)	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

RESIDENTIAL STREETS

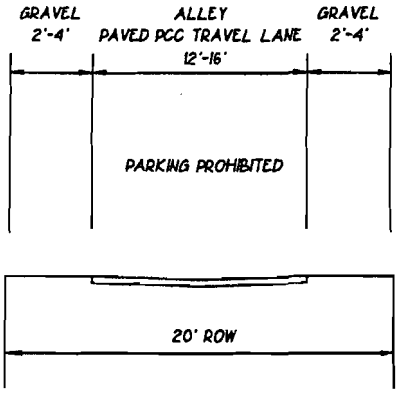
LOCAL ROUTE



NEIGHBORHOOD STREET



ALLEY



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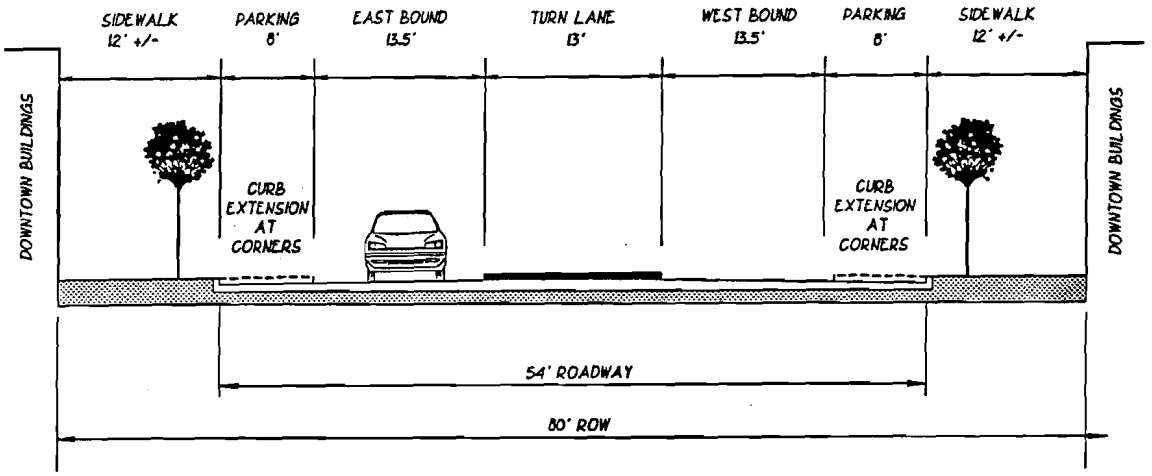
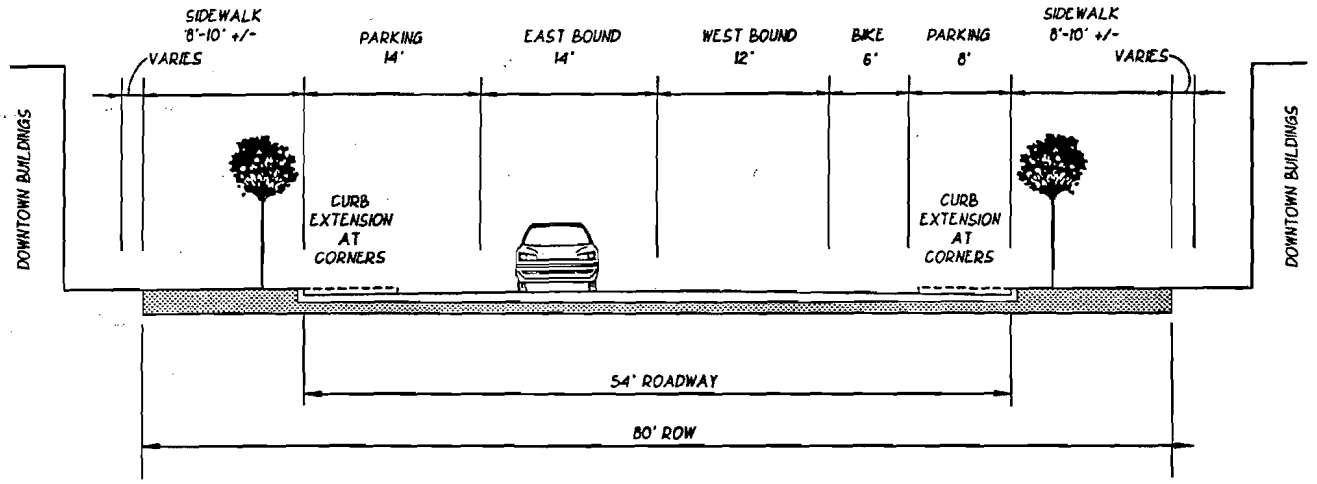
CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	TYPICAL STREET CROSS SECTIONS	FIG. 9-2 (2 OF 3)	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

DOWNTOWN STREETS

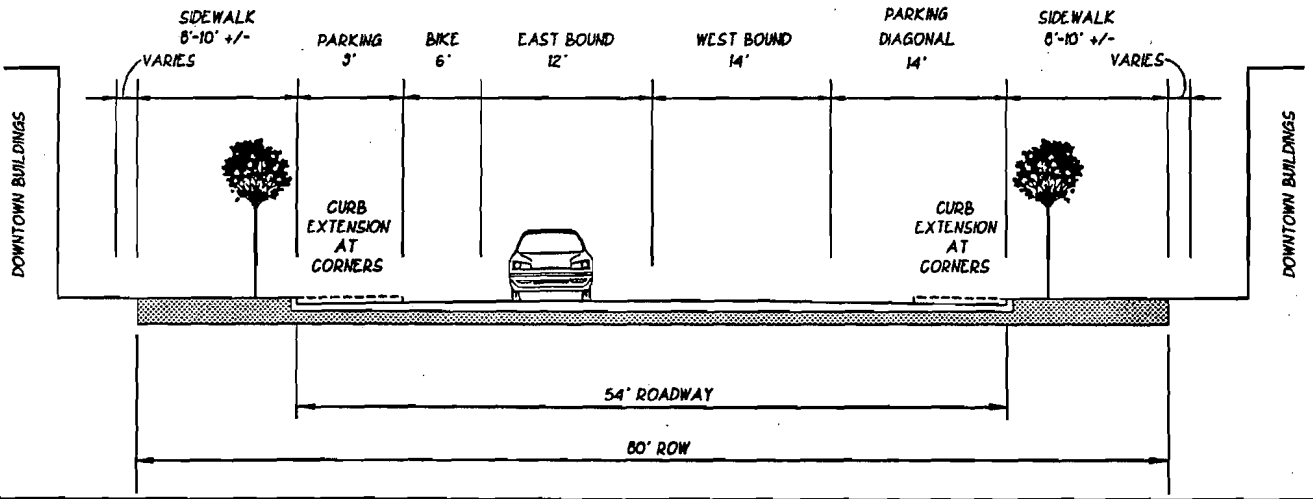
3RD STREET / US 26



4TH STREET



2ND STREET



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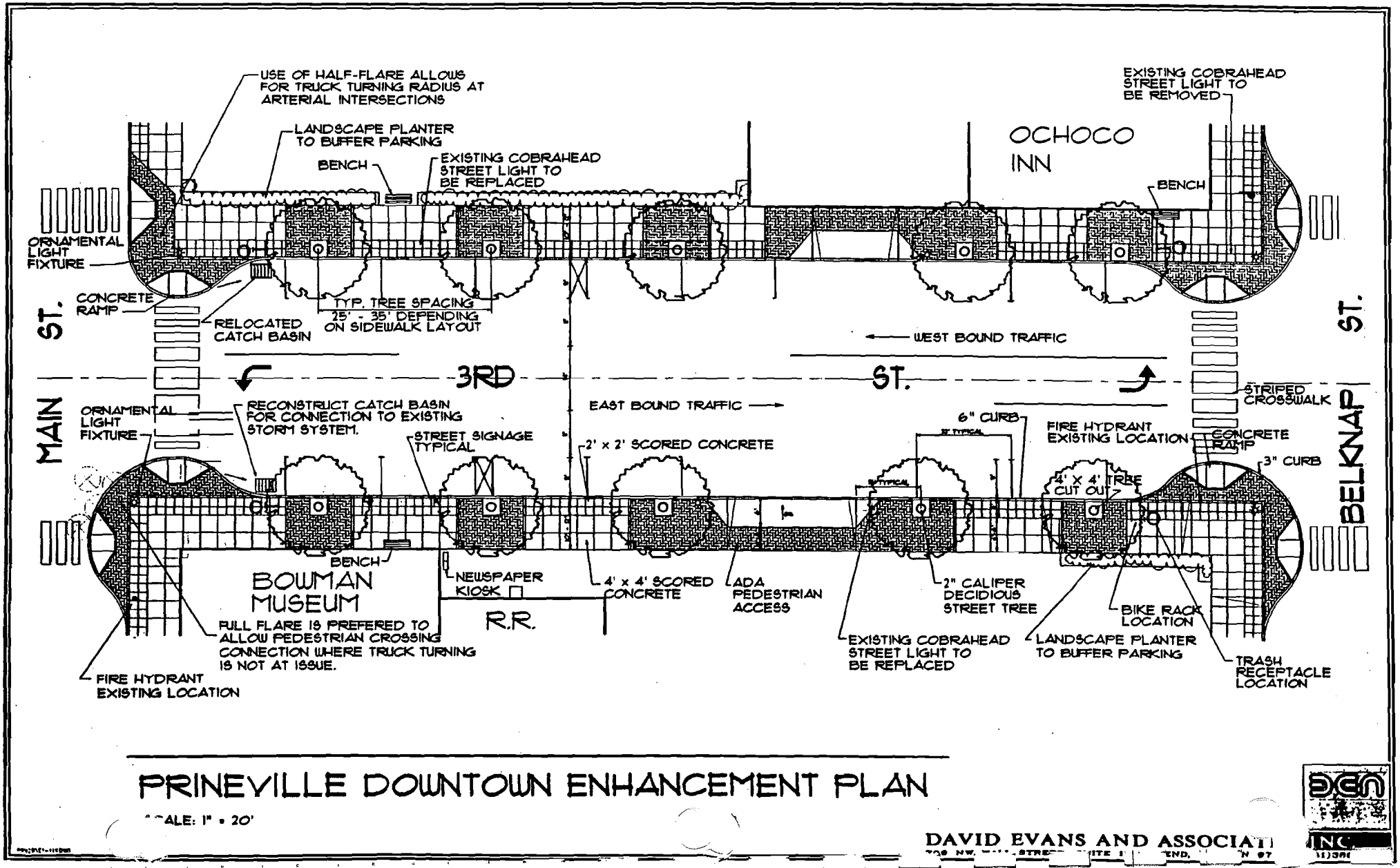
CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	TYPICAL STREET CROSS SECTIONS	FIG. 9-2 (3 OF 3)	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

Figure 9-2 (b)
Typical Streetscape and Sidewalk Amenities - Prineville Downtown Enhancement Plan



PRINEVILLE DOWNTOWN ENHANCEMENT PLAN

SCALE: 1" = 20'

DAVID EVANS AND ASSOCIATES

Table 9-1
Proposed Street Functional Classification System

	Arterial	Collector	Local Route	Neighborhood Street	Alley
Auto amenities (lane widths)[1]	2 lanes (12 ft.)	2 lanes (11-12 ft.)	2 Lanes (11 ft)	2 Lanes (10-11 ft)	12-16 ft.
Bike amenities[2]	2 lanes (6 ft.)	2 lanes (4-5 ft.)	Shared Surface	Shared Surface	None
Pedestrian (sidewalks) amenities[3]	2 (5-8 ft.)	2 (5-8 ft.)	2 (4-5 ft.)	2 (4-5 ft.)	None
Managed speed[4]	35-55 mph	25-35 mph	25 mph	15-25 mph	10 mph
Ultimate Design ADT	10,000+	3 - 10,000	1,200 - 3,000	1,200 max	500 max
Curb-to-curb width[5] (two way)	50 ft.	46 ft.	36 ft.	28 ft.	Not Apply
Parking	No	No	Yes	Yes	No
Traffic calming	Not typical[6]	Permissible/ not typical	Permissible/ not typical	Typical	Not Typical
Preferred adjacent land use	High intensity	Med to high intensity	Med to low intensity	Low intensity	Low intensity
Access control **(See Table 7-2)**	Yes	Some	No	No	No
Through-traffic connectivity	Primary function	Typical function	Not typical function	Not permissible	Not permissive
Maximum grade	7%	7%	7%	10%	10%

1 Lane widths shown are the preferred construction standards that apply to existing routes adjacent to areas of new development, and to newly constructed routes. On arterial and collector roadways, an absolute minimum for safety concerns is 10 ft. Such minimums are expected to occur only in locations where existing development along an established sub-standard route or other severe physical constraints preclude construction of the preferred facility width.

2 An absolute minimum width for safety concerns is 5 ft. on arterial and 4 ft. on collectors, local routes and neighborhood streetss, which is expected to occur only in locations where existing development along an established sub-standard route or other severe physical constraints preclude construction of the preferred facility width. Parallel multi-use paths in lieu of bike lanes are not appropriate along the arterial-collector system due to the multiple conflicts created for bicycles at driveway and sidewalk intersections. In rare instances, separated (but not adjacent) facilities may provide a proper function.

3 Sidewalks eight-feet in width are required in commercial areas unless otherwise provided for in the Prineville Land Development Ordinance. The *City of Prineville Downtown Enhancement Plan* (1997) recommends wider sidewalks in downtown Prineville in order to accommodate street trees and street furniture without compromising ADA requirements or business access.

4 Arterial speeds in the central business or other commercial districts in urban areas may be 20-25 mph. Traffic calming techniques, signal timing, and other efforts will be used to keep traffic within the desired managed speed ranges for each Functional Class. Design of a corridor's vertical and horizontal alignment will focus on providing an enhanced degree of safety for the managed speed.

5 Street design for each development shall provide for emergency and fire vehicle access. Neighborhood street widths of less than 28 feet shall be applied as a development condition through the subdivision and/or planned development process. The condition may require the developer to make the choice between improving the street to the 28 ft. standard or constructing the narrower streets with parking bays placed intermittently along the street length. The condition may require fire-suppressive sprinkler systems for any dwelling unit more than 150 feet from a secondary access point.

6 Pursuant to the *City of Prineville Downtown Enhancement Plan* (1997) pedestrian flares (extensions) or half-flares are proposed at downtown intersections of arterial or collectors.

Table 9-2
Suggested Street Design Standards

Functional Classification	System Spacing	Design / Managed Speed (MPH)	Horizontal Alignment	Vertical Alignment	Traffic Control	Street Lighting	Access Management			
							Min. Spacing	Residential Use	Commercial Uses	Industrial Uses
Arterial	1 mi.	35-55\ 45-55	Minimum centerline radius: 650 ft	Maximum grade: 7% Minimum sight distance: 450 ft	1. Placement/ design of traffic control devices as warranted by MUTCD 2. Minimum signal spacing: 1/4 mile	1. Mounting height: 35-40 ft	300 ft	No direct access	1. Shared access driveways are encouraged 2. Left-hand turn lanes determined through review	1. Shared access driveways are encouraged 2. Left-hand turn lanes determined through review
Collector	1/4 mi.	35\ 25-35	Minimum centerline radius: 560 ft	Maximum grade: 7% Minimum sight distance: 300 ft	Placement/design of traffic control devices as warranted by MUTCD	1. Mounting height: 30-35 ft	100 ft	1. Shared access driveways are encouraged	1. Shared access driveways are encouraged 2. Left-hand turn lanes determined through review	1. Shared access driveways are encouraged 2. Left-hand turn lanes determined through review
Local Route	1/8 mi.	25\ 25	Minimum centerline radius: 300 ft	Maximum grade: 7% Minimum sight distance: 250 ft	Placement/design of traffic control devices as warranted by MUTCD	1. Mounting height: 25-30 ft	50 ft	1. Shared access driveways are encouraged	1. Shared access driveways are encouraged 2. Left-hand turn lanes determined through review	1. Shared access driveways are encouraged 2. Left-hand turn lanes determined through review
Neighborhood Street	Min. 400 ft. Max. 600 ft.	25\ 15-25	Minimum centerline radius: 150 ft	Maximum grade: 10% Minimum sight distance: 150 ft	Placement/design of traffic control devices as warranted by MUTCD	1. Mounting height: 20 ft	None	Curb cut minimum 45 ft. to curb return.	Curb cut minimum 50 ft. to curb return.	No direct access.

Access management is hierarchical, ranging from complete access control on freeways to increasing use of streets for access purposes, parking and loading at the local and collector level. **Table 9-2** describes recommended general access management guidelines by roadway functional classification and appropriate adjacent land use type.

These access management restrictions are not intended to eliminate existing intersections or driveways. Rather, they shall be applied as new development occurs. Over time, as land is developed and redeveloped, the access to roadways will meet these guidelines.

To summarize, access management strategies consist of managing the number of access points and/or providing traffic and facility improvements. The solution is a balanced, comprehensive program which provides reasonable access while maintaining the safety and efficiency of traffic movement.

Special Access Management Areas

Special access management areas apply to several roadways in Prineville. These include the downtown commercial core and the state highways. Since the downtown commercial core runs along two state highway facilities, these special areas will be discussed together.

The state highways form an integral part of the Prineville transportation system and access management is important to promoting safe and efficient travel for both local and long distance users. The *1991 Oregon Highway Plan* specifies an access management classification system for state facilities. Although the City of Prineville and Crook County may designate state highways as arterial or collector roadways within their transportation systems, the access management categories for these facilities shall generally follow the guidelines of the OHP.

This section of the TSP describes the state highway access categories and specific roadway segments where special access areas may apply. **Table 9-3** summarizes these access management guidelines.

Ochoco Highway/Third Street

The Ochoco Highway (Highway 126 and Highway 26 east of Prineville) is a roadway facility of statewide significance. Within the Prineville urban area, OHP Category 4, "Limited Control" applies. This classification permits at-grade intersections or interchanges at a minimum spacing of one-quarter mile. Private driveways shall have a minimum spacing of 500 feet from each other and from intersections, with both left and right turns permitted in and out of the driveways. Traffic signals are permitted at a minimum of one-half mile spacing. These requirements are similar to the general access management guidelines specified for major arterial roadways.

However, while these access management guidelines can be applied to some portions of the Ochoco Highway, the commercial core already has a grid system with intersections spaced at approximately 300 foot intervals. Clearly, neither the general access category for major arterial roadways nor the OHP Category 4 classification can be met on this section of the roadway.

To address this conflict, the Ochoco Highway shall be divided into four specific segments.

- The first segment will be Highway 126 from the west UGB to the bridge over Crooked River.
- The second segment will be Third Street from the bridge to Harwood Street.
- The third segment will be from Harwood Street to Fairview Street.
- The fourth segment will extend from Fairview Street to the east UGB.

The first segment, which includes the airport area and the grade, operates as a limited access facility and is proposed for an interchange. Special access management standards would prohibit new intersections and existing at-grade intersections in the airport area would be re-directed to the new interchange.

The second segment, which includes the Highway 26/126 "Y", while urban in nature, is less densely developed than the downtown core. The existing circulation pattern is already quite complex, with drivers required to make numerous decisions. Special access management standards in this area are intended to minimize additional complexity, while recognizing existing land use and access patterns.

The third segment, which encompasses the downtown core, is part of the grid system with intersection spacing at approximately 300 foot intervals. Although many of the blocks through the downtown core have no private driveway access, some of them do, especially where residential development is present. Overall, the existing intersection pattern is closer to the general access management category for collector roadways. However, driveway spacing shall not be permitted with the same frequency as a collector roadways. Private driveways shall be encouraged to access side streets rather than Third Street/Fourth Street. Driveway spacing shall be limited to a minimum of 150 feet, allowing a maximum of one driveway per block.

The fourth segment is more sparsely developed and has fewer intersections. These segments shall be managed with the access control specified for major arterial roadways and OHP Category 4.

Madras-Prineville Highway

The Madras-Prineville Highway (Highway 26 west of Prineville) is a state facility of regional significance. Within the Prineville urban area, OHP Category 5, "Partial Control" applies. This classification permits at-grade intersections at a minimum spacing of one-quarter mile. Private driveways shall have a minimum spacing of 300 feet from each other and from intersections, with both left and right turns permitted in and out of the driveways. Traffic signals are permitted at one quarter mile spacing.

The OHP Category 5 access controls shall be applied to the Madras-Prineville Highway from the west UGB to its junction with Highway 126.

Paulina Highway

Paulina Highway is a state roadway facility of district significance. Within the Prineville urban area, OHP Category 6, "Partial Control" applies. This classification permits at-grade intersections at a minimum spacing of 500 feet. Private driveways shall have a minimum spacing of 150 feet from each other and from intersections, with both left and right turns permitted in and out of the driveways. Traffic signals are permitted at one quarter mile spacing.

The OHP Category 6 access controls shall be applied to Paulina Highway from the southeast UGB to Combs Flat Road.

O'Neil Highway

O'Neil Highway is a state roadway facility of district significance. Within the Prineville urban area, OHP Category 6, "Partial Control" applies as described for Paulina Highway. These access controls shall be applied to O'Neil Highway from the west UGB to Highway 126.

McKay Road/Main Street/Crooked River Highway

The major north-south route through Prineville is partly state highway, partly city street, and partly county street. Like the Ochoco Highway, this roadway has some sections where intersections are densely spaced, such as the commercial core, and others where access is more sparse.

TABLE 9-3

Special Access Management Guidelines

Roadway	Minimum Posted Speed	Minimum Spacing between Driveways and/or Streets [1]	Minimum Spacing between Intersections	Area of Application
Ochoco Highway - Segment 1	35-50 mph	none	none	Highway 126 from West UGB to Crooked River Bridge
Ochoco Highway - Segment 2	25-35 mph	300 feet	300 feet	Highway 126/Third Street from Crooked River Bridge to Harwood Street
Ochoco Highway - Segment 3 (downtown core)	25 mph	150 feet	300 feet	Third Street/Fourth Street from Harwood Street to Fairfield Street
Ochoco Highway - Segment 4 [2]	35-50 mph	500 feet	1/4 mile	Highway 26 from Fairfield Street to East UGB
Madras-Prineville Highway [2/3]	25-50 mph	500 feet	1/4 mile	Highway 26 from West UGB to Gardner
Madras-Prineville Highway [2/3]	25-50 mph	300 feet	1/4 mile	Highway 26 from Gardner to junction with Highway 126
Paulina Highway [4]	25-50 mph	150 feet	500 feet	Paulina Highway from Southeast UGB to Combs Flat Road
O'Neil Highway [2]	25-50 mph	500 feet	500 feet	O'Neil Highway from West UGB to Highway 126
McKay Road	25-50 mph	150 feet	500 feet	McKay Road from North UGB to Tenth Street
Main Street/Crooked River Highway - Segment 1	25 mph	150 feet	300 feet	Main Street from Tenth Street to Lynn Boulevard
Crooked River Highway - Segment 2 [4]	25-50 mph	150 feet	500 feet	Highway 27 from Lynn Boulevard to UGB

[1] Desirable design spacing (existing spacing will vary).
[2] *1991 Oregon Highway Plan* Access Management Classification System - Category 4, Urban
[3] *1991 Oregon Highway Plan* Access Management Classification System - Category 5, Urban
[4] *1991 Oregon Highway Plan* Access Management Classification System - Category 6, Urban

To address these variations, the roadway shall be broken down into three specific segments. The first segment will be McKay Road from the north UGB to Tenth Street. The second segment will be Main Street from Tenth Street to Lynn Boulevard. The third segment will be from Lynn Boulevard to the south UGB.

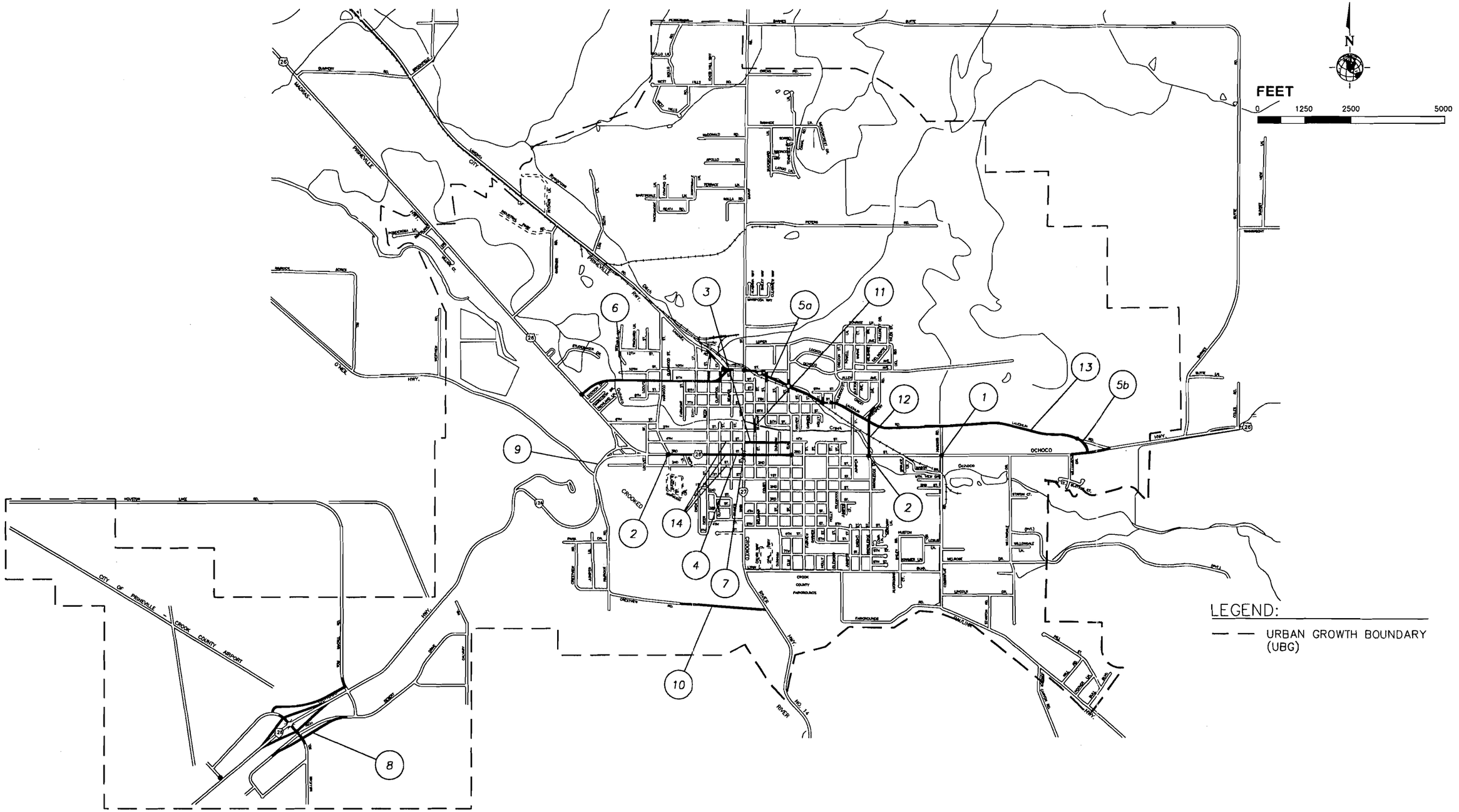
Although the first segment is city/county owned and the third segment is state owned, both are more sparsely developed and have fewer intersections. Both these areas also provide access to the downtown core from primarily residential areas, although the first segment also serves some industrial development. Because of their similarities, similar access management categories are logical. These segments shall be managed with the access control specified for OHP Category 6, Urban, as described for the Paulina Highway.

The second segment is part of the grid system and downtown core with intersection spacing at approximately 300 foot intervals. Although some of the blocks through the downtown core have no private driveway access, many of them do, especially some of the commercial development to the north and residential development to the south.

As with the Ochoco Highway, the existing intersection pattern for this segment is closer to the general access management category for collector roadways. However, driveway spacing shall not be permitted with the same frequency as a collector roadways. Private driveways shall be encouraged to access side streets rather than Main Street. Driveway spacing shall be limited to a minimum of 150 feet.

Street System Plan

The Street System Plan was developed by applying recommended street classification standards to year 2018 traffic forecasts for the recommended street system. The Street System Plan addresses a twenty year planning horizon and assumes the Prineville urban growth boundary remains unchanged. In **Figure 9-2**, functional street classifications and the probable location of traffic signals are identified for the improved street system. Recommended projects are described in the following section and summarized on **Figure 9-3**.



SOURCE: ODOT BASE MAP

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	RECOMMENDED STREET PROJECTS MAP	FIGURE 9-3	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

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Street Improvements

The following improvements to the arterial and collector street system were included in the street system plan. The Implementation Plan summarized in **Table 9-5** provides a prioritized list of these improvements. Each are defined below as either "immediate," "short-term" or "long-term" needs.

Map No. Recommended Improvement

[1] *3rd and Combs Flat:* Install 3rd Street signal at Combs Flat Road *[immediate] (from Chapter 6).*

[2] *3rd Street Signals:* Install new traffic signals on 3rd Street at Knowledge and Harwood Streets *[immediate] (from Chapter 6, Short-Term Improvements).*

[3] *4th Street:* Extend 4th Street from Court Street to Elm Street to provide parallel street capacity for 3rd Street *[immediate] (from Chapter 6, Short-Term Improvements).*

[4] *3rd Street:* Install Signal System Interconnect from Harwood Street to Elm Street *[immediate] (from Chapter 6, Short-Term Improvements).*

[5.a.] *Laughlin/10th:* Extend Laughlin Road to Main Street; re-align 10th Street, replace Main/10th Street signal to provide parallel street capacity to 3rd Street *[immediate] (see Chapter 6).*

[5.b.] *Highway 126/Laughlin Road:* Reconstruct intersection approaches to standard, including partial re-alignment of Laughlin Road and new bike lanes and sidewalks *[immediate] (see Chapter 8).*

[6] *9th/10th/Lamonta:* Extend 9th Street from Locust Street to Highway 26; re-align 9th/10th/Lamonta Road intersection. Install Highway 26 signal at 9th Street to provide parallel street capacity for 3rd Street *[immediate] (from Chapter 6, Short-Term Improvements).*

[7] *Third/Main Street:* Add left turn phase on Main Street at the 3rd Street signal, and re-stripe north leg of Main Street with a separate right-turn lane *[immediate] (see Chapter 6).*

[8] *Millican Road Interchange Improvement*: Construct Millican Road interchange at Highway 126 to improve access in the Prineville Airport Industrial Area. *[long-term] (see Chapter 8).*

[9] *Intersection Lighting on Highway 126 at Rimrock Road and O'Neil Highway:* Install intersection lighting on Highway 126 at Rimrock Road and O'Neil Highway to improve Crooked River crossing safety *[short-term] (see analysis in Chapter 8).*

[10] *Crestview Road Extension:* Extend Crestview Road east to the Crooked River Highway to provide a second access (collector street) route to the development in that area *[long-term] (see analysis in Chapter 8).*

[11] *Court Street Extension:* Improve City North/South Collector Street System by extending Court Street across Ochoco Creek and extending Knowledge Street to Laughlin Road *[short-term] (see analysis in Chapter 8).*

[12] *Knowledge Street:* Improve City North/South collector street system by extending Knowledge Street to Laughlin Road *[short-term] (see analysis in Chapter 8).*

[13] *Laughlin Road:* Reconstruct Laughlin Road to City standards from Highway 126 to Idlewood *[long-term] (see analysis in Chapter 8).*

[14] *Downtown Enhancement Plan:* Improve streetscape in Downtown Prineville, particularly on 2nd, 3rd and 4th Streets - between Deer and Fairview Streets. Includes pavement resurfacing, sidewalk improvements, pedestrian flares, landscaping and trees, street furniture and street lighting *[short-term] (see Downtown Enhancement Plan and* ***Figure 9-2 (b)****).*

These street improvements address specific capacity deficiencies or safety needs. New development, particularly in the northeast, will result in a need for new roadways. The projections for this plan indicate that the existing system with the improvements specified previously can accommodate this growth. However, new developments will need to connect to the existing collector and arterial system.

To serve this new growth and make these connections, some potential new collector and arterial roadways have been identified. The location of these roadways was selected to tie into existing collector and arterial roadways, and they reflect some of the limits imposed by topography. These potential roadways are also identified in **Figure 9-1**. However, the actual roads constructed will be dependent on the way the land develops. In general, these roads shall extend the existing grid of arterial and collector roadways.

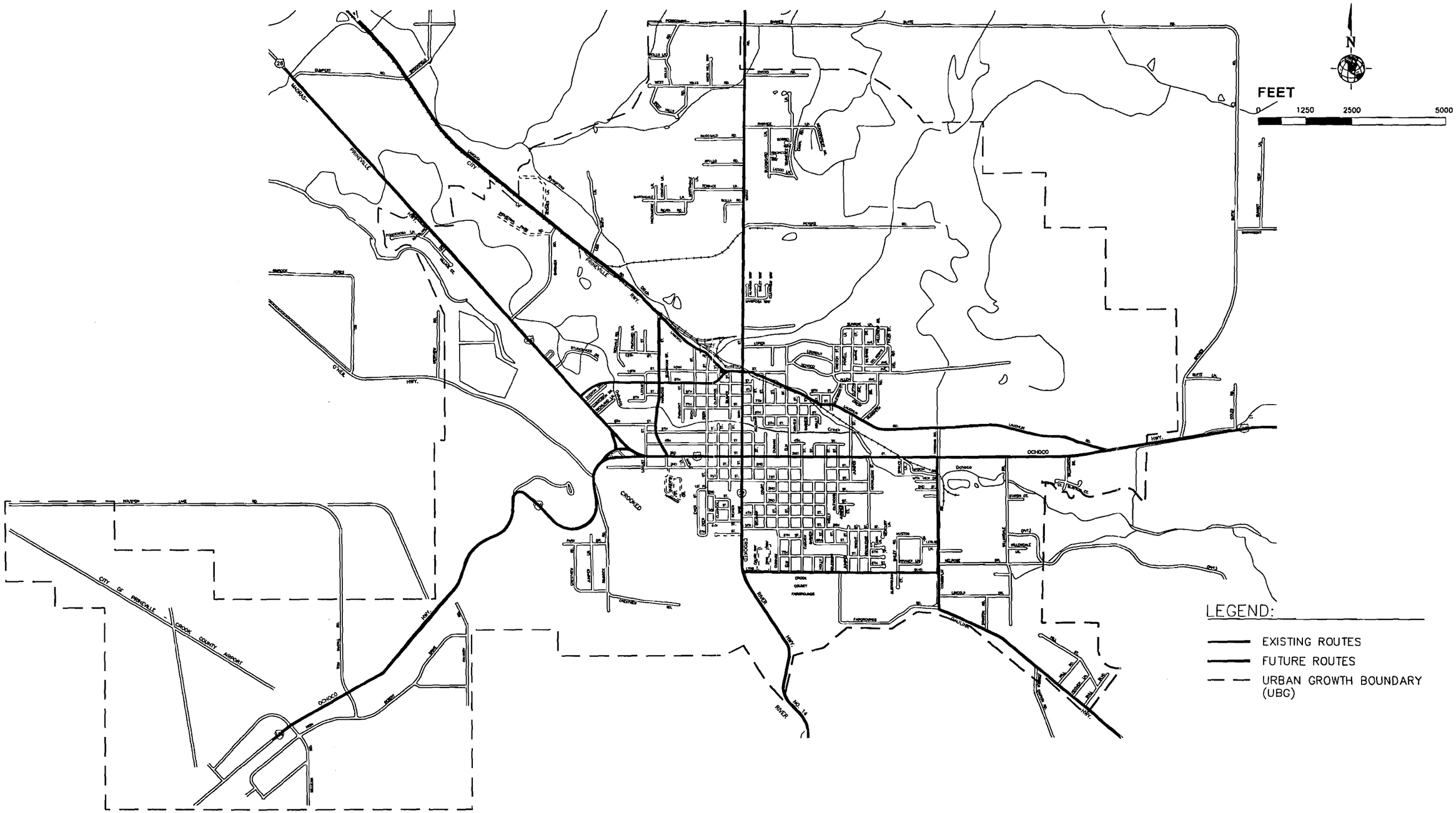
Because these roadways are purely a function of new development, they shall be constructed as that development occurs. Funding for their construction will be provided by the developers. They have not been included in the capital improvement program.

Periodic reviews of this plan and population growth shall be used to track the future need for these potential arterial, collector and local route streets.

Freight Mobility Element

The state highway system provides the major freight link for the City of Prineville. The truck route plan is shown in **Figure 9-4**. With this plan, trucks have several alternate routes to Third Street and Main Street, which are currently the most frequently used routes. Some of these routes, such as the connection to Highway 26 via Laughlin and 9th Street, are dependent on the implementation of the street system improvements.

Currently traffic which is passing through Prineville on Highway 126 toward Highway 26 must work its way through the existing city street grid, where tight turning radii, traffic congestion and pedestrian activity make driving difficult, particularly for large trucks. The extension of Laughlin Road to Main Street paralleling the Prineville RR could result in significant added relief to local traffic congestion on Third Street and Main Street. Together with the extension of Ninth Street to Highway 26, the Laughlin Road extension provides alternative circulation and access for local auto and truck traffic. The Laughlin Road extension also provides immediate relief to Third Street and Main Street, and can help postpone the need or extensive State highway capacity improvements and provide access to industrial lands (job growth).



SOURCE: ODOT BASE MAP

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	TRUCK ROUTING PLAN	FIGURE 9-4	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

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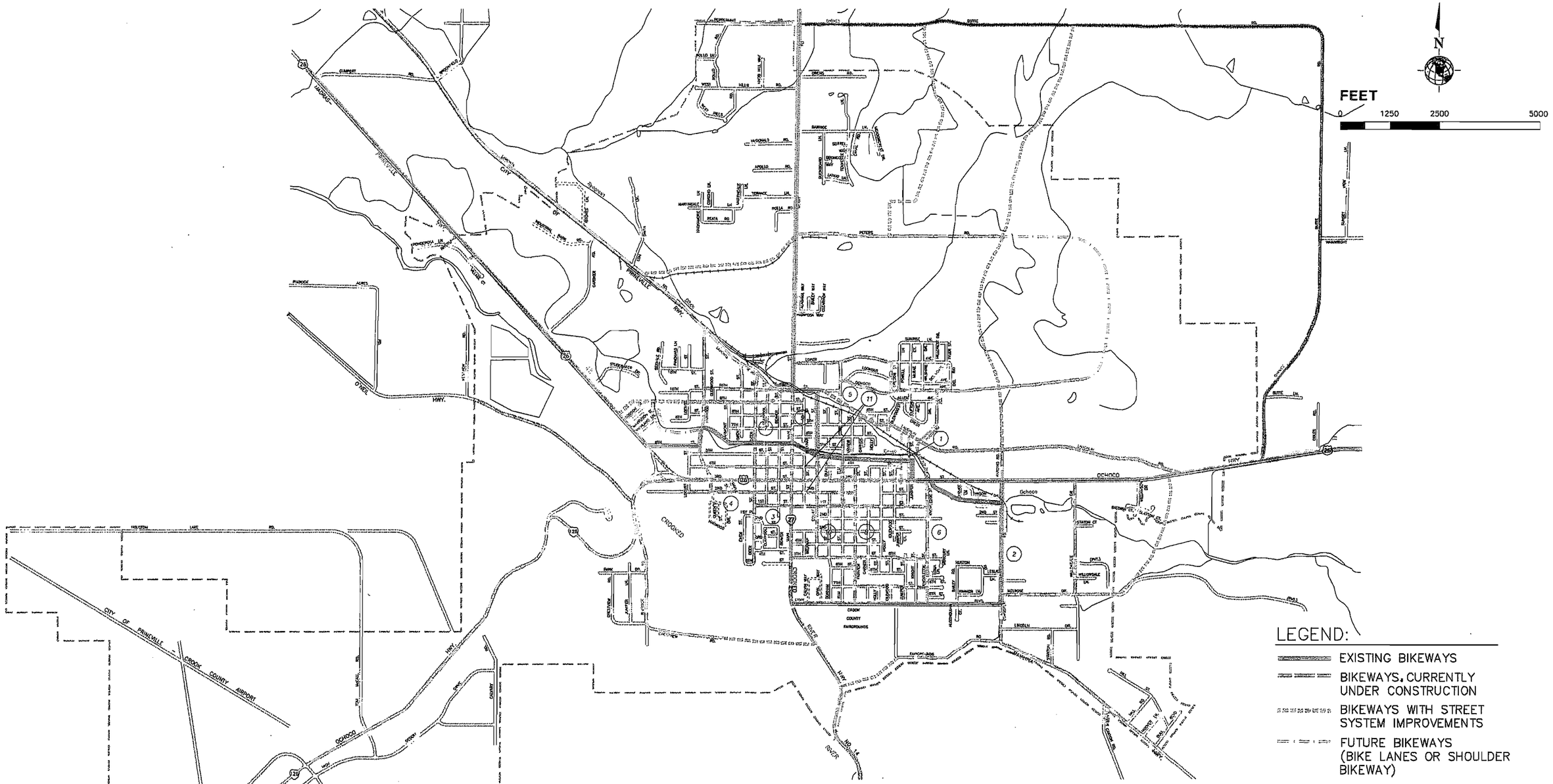

SOURCE: ODOT BASE MAP

CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN

BIKEWAY PLAN

FIGURE 9-5

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
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Bikeway Plan Element

Providing a safe and complete system of bicycle facilities encourages people to use alternative modes of travel and contributes to a small-town environment. From the standpoint of safety, bicycle facilities are most critical in areas of high traffic volume and in areas used by children. Bicycle paths can also provide alternative routes for cyclists, allowing them to simultaneously avoid conflict with automobiles and take advantage of recreational opportunities. The City of Prineville bikeway plan is shown on **Figure 9-5.** The map shows the existing bikeway system, bikeways currently under construction, future bikeways planned by Crook County, future bikeways associated with the street system improvements, and the future city bikeways designated on all arterial and collector streets.

In cases where a bikeway is proposed within the street right-of-way, the roadway pavement (*between curbs*) shall be widened to provide a five-foot bikeway (collector streets) or a six-foot bikeway (arterial streets) on each side of the street as described in **Table 9-1** and shown on the cross sections in **Figure 9-1**. Optional five-foot bikeways are also suggested for local routes. The striping of bike lanes shall be done in conformance with the *Manual on Uniform Traffic Control Devices*. In cases where curb parking will exist with a bike lane, the bike lane will be located between the parking and travel lanes. In some situations, curb parking may have to be removed to permit a bike lane.

The bikeways on new streets or streets to be improved as part of the street system plan shall be added when the improvements are made. The Implementation Plan (see **Table 9-5**) program identifies an approximate schedule for these improvements.

In general, on arterial and collector streets which are not scheduled to be improved as part of the street system plan, improvements shall be implemented based on traffic volumes. When forecast traffic volumes exceed 2,500 to 3,000 vehicles per day, bike lanes shall be added to the existing roadway. The striping of bike lanes on streets which lead directly to schools shall be high priority. For Prineville, where most of the collector and arterial streets are 54 to 57 feet wide, adding bike lanes will not require widening streets or removing parking.

Bikeways on local routes and residential streets will only be signed as a route because the vehicular traffic volume is low on these streets and exclusive bike lanes are not necessary.

Bicycles are legally classified as vehicles which may be ridden on most public roadways in Oregon. Because of this, bicycle facilities shall be designed to allow bicyclists to emulate motor vehicle drivers. Shared roadway facilities are common on city street systems. On a shared roadway facility, bicyclists share the normal vehicle lanes with motorists. Where bicycle travel is significant, these roadways shall be signed as bicycle routes.

However, the striping of bike lanes on streets which lead directly to schools and parks shall be high priority. Therefore, a list of specific bikeway projects shall be included in the capital improvement program. These improvements are listed below and estimated to cost $120,000:

1. *Juniper Street:* Until the completion of the Knowledge Street extension, add bike lanes on Juniper Street from Laughlin Road to 1st Street. These lanes will connect neighborhoods to both the north and south with Ochoco Creek and the existing bike trail. The addition of bike lanes will require removing street parking on at least one side of Juniper Street between Laughlin Road and Ochoco Creek, where the paved surface is only 40 feet wide.

2. *Combs Flat Road:* Add bike lanes on Combs Flat Road (part of Crook County road widening project) from Third Street to Lynn Boulevard. This project will provide safe bicycle access to the Crook County Middle School. *[project completed]*

3. *First Street:* Add bike lanes on First Street from Deer Street to Knowledge Street. These bike lanes will connect the residential neighborhoods in southeast Prineville with the Crook County High School on Knowledge Street.

4. *Second Street:* Add bike lanes on Second Street from Harwood Street to Fairview Street. These lanes will also connect residential neighborhoods with the Crooked River Elementary School and the park on the corner of Elm Street and Third Street.

5. *Elm Street:* Add bike lanes to Elm Street from Loper Street to First Street. These lanes will provide a valuable north-south route which will provide access to the hospital, the Ochoco Creek bike trail, and the elementary school, as well as connecting with other east-west bikeways. There is a 40-foot section from Tenth Street to Fourth Street which will require prohibiting parking on at least one side of the street to allow for bike lanes.

6. *Knowledge Street:* Add bike lanes to Knowledge Street from Third Street to South Second Street. These bike lanes will provide direct access to the high school on Knowledge Street. The extension of Knowledge Street to Laughlin Road will also include bike lanes on both sides of the street.

7. *Deer Street:* Add bike lanes to Deer Street from Tenth Street to First Street. These bike lanes will help connect residential areas to the south with the Ochoco Elementary School on Highway 26 and with the industrial areas to the north.

8. *Fairview Street:* Add bike lanes on Fairview Street from Fourth Street to Lynn Boulevard. These bike lanes will provide a connection between the residential neighborhoods to the south and Ochoco Creek Park.

9. *Main Street:* Add bike lanes on Main Street from Tenth Street to Second Street. These bike lanes will provide a direct connection between the bike lanes on McKay Road to the north and the bike lanes that are under construction south of Second Street. These improvements may require prohibiting parking on at least one side of the street.

10. *Court Street:* Add bike lanes to Court Street from Fifth Street to South Fifth Street. These lanes will provide another north-south connection for bicyclists.

11. *4th and 2nd Streets*: Add bike lanes as recommended by the Prineville Downtown Enhancement Plan.

Pedestrian System Element

Walking is our most basic transportation mode. Given the compact size of downtown Prineville, walking can provide a viable transportation alternative for many trips. Providing a safe, pedestrian-friendly environment is critical to retaining a vibrant and successful, small-town environment. Pedestrian safety on Third Street has been a concern in Prineville and pedestrian improvements within the downtown are addressed in detail in the *City of Prineville Downtown Enhancement Plan* (summarized in Appendix A).

Currently, the City of Prineville Land Development Ordinance (Ord. No. 1057, 1998) requires that sidewalks be provided unless alternative pedestrian routes are provided or residential densities are less than two dwelling units per acre. The City should continue to implement development of a complete pedestrian system as shown on **Figure 9-6**. Every paved street should have sidewalks on both sides of the roadway as described in **Table 9-1** and shown on the cross sections in **Figure 9-1**. Pedestrian access on walkways shall be provided between all buildings including shopping centers and abutting streets and adjacent neighborhoods.

Most of the existing roadways in Prineville do not have sidewalks except for the downtown core roadways. Even downtown, many of the streets either do not have sidewalks on both sides or are segmented and not continuous. Sidewalks should be added or improved as the improvements to the street system are made. The implementation program identifies an approximate schedule for these improvements.

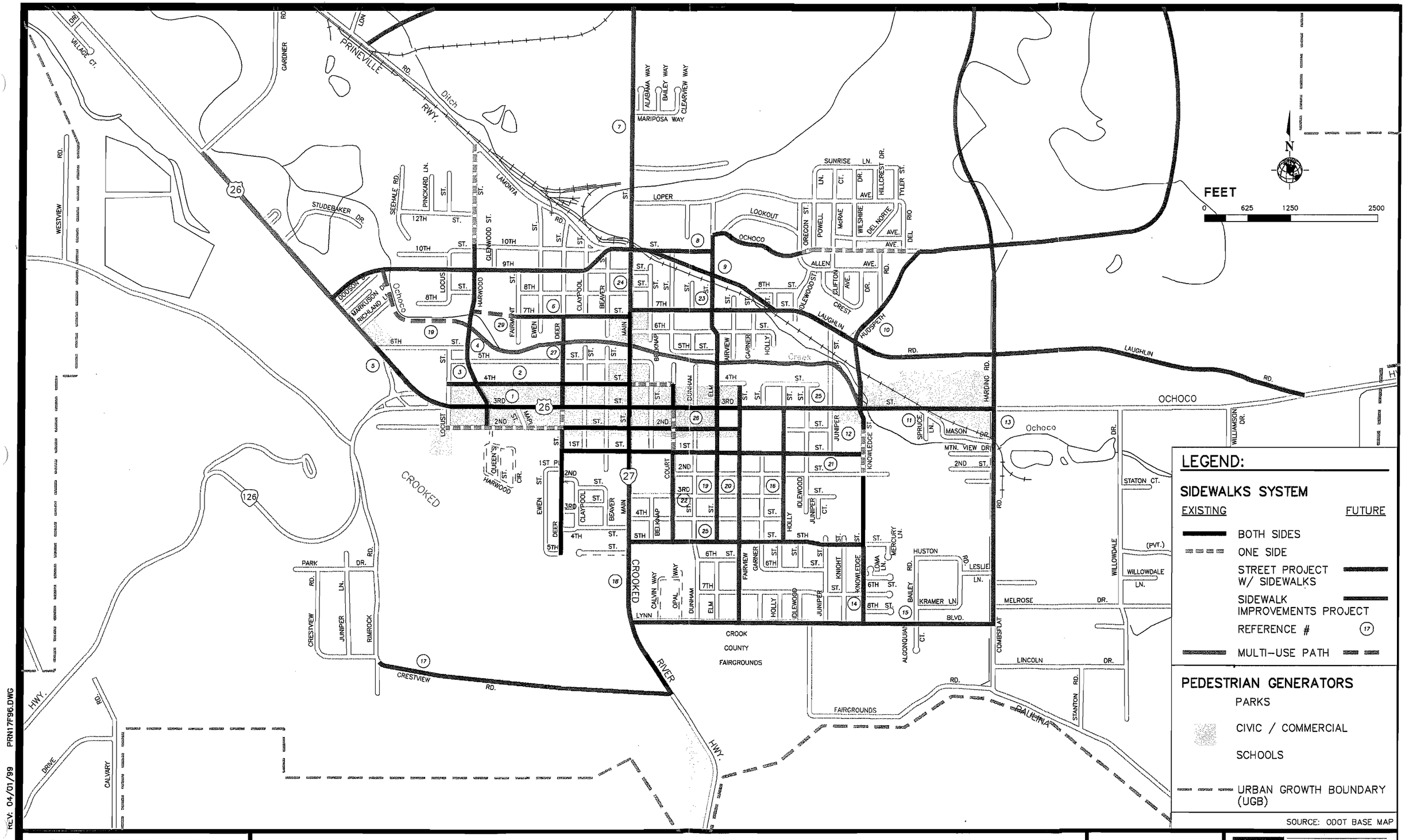
Over time, sidewalks shall be added to streets which currently lack them and are not programmed for improvements. The priority streets shall be collector and arterial roadways where pedestrians feel most uncomfortable because of the higher traffic volumes these roadways carry. Streets such as First Street, Knowledge Street, Combs Flat Road, and Fairview Street are all arterial or collector roadways which lead to schools. Adding sidewalks to these streets and others which lead to schools and parks shall be the highest priority when evaluating sidewalk projects. Local Routes and Residential Streets shall also have sidewalks; however, because they are lower volume streets, they shall be lower priority for adding sidewalks.

To address some of these high priority locations, a list of specific sidewalk improvements shall be included in the capital improvement program. These improvements include:

- *Harwood Street*: Construct new sidewalks on Harwood Street to improve pedestrian circulation and access *(from Chapter 6, Short-Term Improvements).*

- *4th Street:* Construct new sidewalks on 4th Streets to improve pedestrian circulation and access *(from Chapter 6, Short-Term Improvements).*

- *Knowledge Street:* Add sidewalks to Knowledge Street from Third Street to South Second Street. Although there are some existing sidewalk segments along the roadway, they are intermittent and only on one side of the road. Since this roadway provides direct access to the Crook County High School, good pedestrian access is vital.



CITY OF PRINEVILLE TRANSPORTATION SYSTEM PLAN	PEDESTRIAN SYSTEM PLAN	**FIGURE 9-6**	W&H PACIFIC 8405 SW NIMBUS AVE. BEAVERTON, OR 97008 (503) 626-0455

04.2658.7701 REV: 04/01/99 PRN17F96.DWG

- *Combs Flat Road:* Add sidewalks to Combs Flat Road from Third Street to Lynn Boulevard. This roadway is currently only 24 feet wide with neither sidewalks nor bike lanes. Crook County is in the process of acquiring funding to widen the roadway and add bike lanes; however, it is also important to have sidewalks. These sidewalks will provide direct access to the Crook County Middle School.

- *First Street:* Add sidewalks to First Street from Court Street to Knowledge Street. This stretch of First Street currently has intermittent sidewalk segments. These segments need to be connected to provide good east-west access between residential neighborhoods and the High School.

- *Second Street:* Add sidewalks to Second Street from Court Street to Fairview Street. This stretch of Second Street currently has intermittent sidewalk segments. These segments need to be connected to provide good access between residential neighborhoods and the park on Elm Street and the Crooked River Elementary School on Fairview Street.

- *Elm Street:* Add sidewalks to Elm Street from Loper Avenue to First Street. Elm Street is an important north-south connector which passes the hospital and two parks as well as connecting residential neighborhoods.

- *Fairview Street:* Add sidewalks to Fairview Street from Fourth Street to Lynn Boulevard. Fairview Street is also an important north-south connector which passes the Crooked River Elementary School and Ochoco Creek Park as well as connecting residential neighborhoods.

Costs for adding sidewalks are relatively low if the addition is within the existing right-of-way. A 5-foot wide sidewalk with no curb, would cost about $9 per linear foot. Adding a curb as well as a 5-foot wide sidewalk would cost about $15 per linear foot. In commercial areas, an 8-foot wide sidewalk with a curb would cost about $20 per linear foot.

Applying these costs to a typical block in Prineville would require about 300 linear feet of sidewalk. For a 5-foot wide sidewalk with curbs, the cost would be approximately $4,500. Without curbs, the cost would be approximately $2,700.

Table 9-4 summarizes the needed sidewalk improvements on Prineville's major collector/arterial street system, including costs and priority over the next twenty years.. The total cost of all sidewalk improvements (excluding those sidewalks constructed as part of a street improvement) is almost $1.15 million.

Public Transportation Element

Public transportation in Prineville consists of minibus for local trips, van shuttle for trips to Redmond and Bend, and bus line service for long distance trips. No specific expansions of any of these services is currently planned by any of the transit providers; however, increases usage of these services shall be encouraged.

For elderly and disabled residents, the Soroptomists Club and the Neat Repeat Store sponsor a minibus service. This service operates between 9:00 a.m. and 4:00 p.m. six days a week (Monday through Saturday) and on special occasions. Approximately 65 to 70 people currently use the minibuses each day. If the service usage increases proportionately to the population (40 percent), by the year 2018, an additional 26 to 28 people will be added. This increase may require an additional minibus to respond to all of the service demands.

One of the options available for out-of-town travel is the People Mover. The People Mover is a shuttle van operating three times a week (MWF) from Prairie City which provides service to Redmond and Bend. Currently, total ridership from all the communities along the route (Prairie City, John Day, Mt. Vernon, Dayville, Mitchell, Prineville, Redmond, and Bend) averages 5 to 10 people per trip. If the average growth in these communities is 40 percent over the next 20 years, by the year 2018, an additional 2 to 4 riders would use the service each time. With this increase, it appears that a single 15-person van would still be adequate to meet the demand.

Greyhound Bus Lines provides daily service to Portland. Riders can also make connections to and from any other city in either Bend, Madras, or Biggs. About 3 to 5 passengers on weekdays typically take the bus on weekdays with slightly higher usage on weekends. Based on population growth, an additional 1 to 2 passengers may be using the service in Prineville by the year 2018.

The existing public transportation services already meet the requirements of the Oregon Transportation Plan. Connections are possible and convenient between all the services provided, and the service frequency meets the required daily trip to a larger city specified for communities the size of Prineville.

Rail Service Element

The City of Prineville Railway provides vital transport for the timber products industry. At present, the rail service is sufficient. However, every effort shall be made to maintain this service or even expand should growth exceed the projections assumed in the travel forecasting process.

The truck/rail intermodal freight terminal in Prineville is not currently in use although the facilities still exist. All intermodal operations were relocated to Portland several years ago. If policies change, the intermodal freight terminal could become active again.

Table 9-4
Sidewalk Improvement Project Costs and Timing

Map No.	Location	From	To	Length (ft)	Existing Features (Percent Existing) Curb	Sidewalks	Cost Estimate	Priority
1	Harwood St	2nd St	4th St	650	100%	0%	$11,700	H
2	4th St	Harwood	Deer	1,250	100%	90%	$2,250	H
3	4th St	Locust	Harwood	375	100%	0%	$6,750	M
4	Harwood St	4th St	10th St	2,125	30%	0%	$56,100	M
5	Hwy 26	Locust	6th St	1,450	0%	0%	$43,500	H
6	7th St	Fairmont	Main St	1,625	100%	0%	$29,250	M
7	Main St	10th St	Peters Rd	3,750	0%	0%	$112,500	L
8	Ochoco Ave/Elm/10th	Truck Rte.	Oregon St	2,625	100%	0%	$47,250	M
9	Elm St	7th St	Ochoco Ave	1,125	100%	0%	$20,250	M
10	Hudspeth Rd	N. of Laughlin		350	0%	0%	$10,500	M
11	Hwy 126	Knowledge	Combs Flat	2,000	0%	0%	$60,000	M
12	Knowledge St	2nd St	Hwy 126	300	100%	0%	$5,400	H
13	Combs Flat	Lynn Blvd	Hwy 126	3,125	0%	0%	$93,750	H
14	Knowledge St	Lynn Blvd	5th St	1,125	100%	0%	$20,250	H
15	Lynn Blvd	Hwy 27	Combs Flat	5,250	0%	0%	$157,500	M
16	Holly St	5th St	Hwy 126	1,875	100%	0%	$33,750	M
17	Crestview Rd	Crooked River	Crossing	1,875	0%	0%	$56,250	L
18	Main St.	3rd St (S)	Crestview	3,250	0%	0%	$97,500	L
19	Elm St	5th St (S)	7th St	3,375	100%	30%	$42,525	M
20	Fairview St	Lynn Blvd	4th St	3,375	30%	30%	$70,875	M
21	1st St (S)	Court	Knowledge	2,750	100%	90%	$4,950	M
22	Court St	5th St (S)	1st St (S)	1,250	100%	30%	$15,750	M
23	7th St	Main St	Idlewood	2,375	100%	30%	$29,925	M
24	Main St	7th St	10th St	875	100%	90%	$1,575	H
25	Hwy 126	Fairview	Knowledge	1,750	60%	30%	$30,450	H
26	2nd St	Court	Fairview	875	100%	30%	$11,025	L
27	Deer St	1st St	7th St	1,875	100%	0%	$33,750	M
28	Ochoco Cr. Path	Harwood	9th St	1,625	NA	0%	$29,250	L
29	Multi-use Path	Harwood	Fairmont	625	NA	0%	$11,250	L
	TOTAL			**54,875**			**$1,145,775**	

Priority Rating:

H = High Provides direct connection/linkage to major pedestrian trip generators via arterial/collector system AND provides pedestrian safety enhancements.
M = Medium Provides direct connection/linkage to major pedestrian trip generators via arterial/collector system OR provides pedestrian safety enhancements.
L = Low Provides direct connection/linkage to minor pedestrian trip generators via arterial/collector system; and completes pedestrian system linkages.

Air Service Element

The Prineville Airport is part of the Oregon Aviation System Plan (OASP). It is owned and operated by Crook County and the City of Prineville to serve the aviation-related needs of the residents of the City of Prineville and Crook County. The Prineville Airport Layout Plan and Airport Layout Plan Report were prepared by Morrison Maierle, Inc. to update the 1986 Airport Layout Plan and the 1979 Master Plan. The following concerns were addressed in the study: locating agricultural applicator aircraft operations; protection of Runway Protection Zones; encroachment of commercial enterprises onto airport environs; location of airport access road; location of terminal and FBO building; utilization of terminal and airport industrial area; location of additional aircraft hangar area; future location and type of aviation fuel storage facility; and, utilization of triangular area inside runways and taxiways.

Policy 1 at the beginning of this Chapter states that the *Prineville Airport Layout Plan and Airport Layout Plan Report* are adopted as separate planning documents.

Water Service

Prineville has no waterborne transportation.

Pipeline Service

Prineville is currently served by a major natural gas distribution line operated by Cascade Natural Gas. This distribution line extends eastward from the main line paralleling Highway 97.

Transportation Demand Management

Through transportation demand management, the peak travel demands could be reduced or spread to more efficiently use the transportation system, rather than building new or wider roadways. Techniques which have been successful and could be initiated to help alleviate some traffic congestion include carpooling and vanpooling, alternative work schedules, bicycle and pedestrian facilities, and programs focused on high density employment areas.

Alternative Work Schedules

Alternative work schedules (*such as flex-time or staggered work hours*), especially with large employers, can help spread the peak period traffic volumes over a longer time period, thus providing greater service out of a fixed capacity roadway. The five largest employers in Prineville, employing more than 50 percent of the population, already have staggered work schedules. Each employer has staggered shifts for its employees, and these shifts differ from employer to employer. Staggered work schedules shall continue to be encouraged with new industries, and be coordinated to eliminate high surges of traffic. For example, if 5 percent of the employees which travel to or from work during the peak hour shift to another time period, 175 to 200 fewer vehicle trips would occur during the PM peak hour.

Carpooling and Vanpooling

A ridesharing program was established in Central Oregon in 1993 to encourage carpooling. The service allows interested drivers to call a toll-free number, provide information about their trip, and receive a list of others in their general area.

The City can work with large employers, to establish a carpool and vanpool program. These programs, especially oriented to workers living in other neighboring cities, will help to reduce the travel and parking requirements, and to reduce air pollution. Employers can encourage ridesharing by providing matching services subsidizing vanpools, establishing preferential car and vanpool parking and convenient drop-off sites, and through other promotional incentives.

A very aggressive carpooling program could reduce result in a reduction of 175 to 200 peak vehicle trips. To achieve this reduction, current carpooling rates for journey to work trips would have to increase from 15 percent to 20 percent of the total trips.

Bicycle/Pedestrian Facilities

Bicycle/pedestrian use can be encouraged by implementing strategies discussed earlier in this plan. Providing bicycle parking, showers and locker facilities helps to encourage bicycle commuting and walking to work. An estimated reduction of 50 to 100 trips could be converted from motorized vehicles to other modes if these measure are implemented.

Telecommuting

The ability for people to work at home with the telecommuting technology is likely to continue to grow during the next two decades. During the past ten years, the percent of people working at home has more than doubled. If this trend continues, an additional 3 percent of the work force could stay home and work, thus reducing trips by 125 to 150 during the peak hour.

High Density Employment Areas

Transportation Demand Management programs work best in areas of high density employment and are most successful when applied to firms with more than 50 employees. Potential target areas for transportation demand management programs in the Prineville area include the central business district,

The City can work toward implementation of transportation demand management strategies through coordination with major employers, the Prineville Chamber of Commerce, employees and citizens. Successful implementation includes public support, industry involvement, quantifiable goals, and employer/employee incentives.

Implementation

The Prineville TSP implementation program is provided in the following time frames/priorities:

- 0 - 5 years (Short-Term)
- 6 - 10 years
- 11 - 15 years
- 16 - 20 years
- 20+ years
- With Adjacent Development/When Warranted

These priorities are based on current need, the relationship between transportation service needs, and the expected growth of the City. However, some projects may not be needed until adjacent land develops, or for example, when traffic signal warrants are satisfied.

The implementation phasing also takes into account the time required for all the steps leading up to construction. These may include preparing a Corridor Environmental Impact Statement (EIS) pursuant to the requirements of the National Environmental Policy Act of 1969, as well as preliminary and final design.

Another consideration in developing the implementation program was funding. None of the projects which involve state facilities are currently included in the current 1995 to 1998 State Transportation Improvement Program. Although lobbying for these improvements should begin as soon as possible, the projects themselves may not be implemented until later years.

Assignments of 2018 PM peak hour traffic volumes and current transportation facility inadequacies were used to aid in setting priorities. The schedule, shown in **Table 9-5**, indicates priorities and should be modified to reflect changes in the availability of finances or the actual growth in population and employment.

20 Year Performance Analysis

Table 9-6 (A-C) estimates the future (1998-2018) volume-to-capacity ratio (V/C) and level of service (LOS) that would be expected at five key intersections on Third Street if all of the improvements shown in **Figure 9-3** were implemented. Under this scenario, LOS C would be maintained at all critical intersections on Third Street except Main Street. A LOS D-E is estimated at the Third Street/Main Street intersection.

> ***Based on the analysis of future traffic conditions and evaluation of improvement alternatives, the cumulative impact of the recommended improvements embodied in the Prineville TSP Update will accommodate the type and level of development identified in Prineville's Comprehensive Plan within acceptable standards.***

Issues for Further Study

Rimrock Road

The City of Prineville and ODOT should investigate the feasibility of extending Rimrock Road under Highway 126 with a new connection to O'Neil Highway. The analysis should include detailed engineering estimates for bridge structure capacity and constraints, right-of-way requirements, and traffic impacts - including future traffic operations of Highway 126 / O'Neil Highway intersection.

Highway 126 / Millican Road Interchange

More detailed engineering analysis of the proposed Highway 126 / Millican Road interchange is required prior to defining more precise cost estimates and a financial plan to pay for needed improvements.

Table 9-5
Implementation Plan

Project		Program Schedule Years					Benefit				Cost	Partnership				Estimated Cost Share (millions) [1]			
No.	Description	0-5	6-10	11-15	16-20	20+	Safety	Operations /Capacity/ Circulation	Alt. Modes	Freight Mobility	millions	State	City	County	Private	State	City	County	Private
1	Signal @ 3rd/ Combs Flat						◆	◆	◆		**	100%				**			
2	Signals @ 3rd St/Knowledge & 3rd/Harwood						◆	◆	◆		$0.30	90%	10%			$0.27	$0.03		
3	4th St Extension							◆	◆		$0.24		100%				$0.24		
4	3rd St Interconnect							◆		◆	$0.10	100%				$0.10			
5a	Laughlin/10th Extension [2]							◆	◆	◆	$3.55	33%	34%	33%		$1.17	$1.21	$1.17	
5b	Highway 126/Laughlin Intersection						◆	◆	◆	◆	$0.67	100%				$0.67			
6	9th/10th/Lamonta [2]							◆	◆	◆	$1.54	33%	34%	33%		$0.51	$0.52	$0.51	
7	Main St L-Turn Phase/R-Turn Lane						◆	◆		◆	$0.02	100%				$0.02			
8	Millican Interchange						◆	◆		◆	$7.15	50%	17%	17%	17%	$3.58	$1.19	$1.19	$1.19
9	Highway 126 Lighting						◆				$0.05	100%				$0.05			
10	Crestview Extension							◆	◆		$6.75		80%		20%		$5.40		$1.35
11	Court Extension							◆	◆		$1.10		100%				$1.10		
12	Knowledge Extension						◆	◆	◆		$1.58		100%				$1.58		
13	Laughlin Road Upgrade						◆		◆	◆	$1.87		25%	50%	25%		$0.47	$0.94	$0.47
14	Downtown Enhancement Plan						◆		◆		$1.93		50%		50%		$0.97		$0.97
	Sidewalk Projects						◆	◆	◆		$1.15	10%	50%		40%	$0.12	$0.58		$0.46
	Bicycle Projects						◆	◆	◆		$0.12	0.1%	27%	72%		$0.0001	$0.03	$0.09	
	TOTAL										$26.85					$6.36	$12.70	$3.81	$3.97

** Already programmed in ODOT's STIP for construction in the year 2000.
[1] Forecasted potential involvement, subject to refinement upon completion of further planning and engineering analysis.
[2] "State" partnership in funding estimated to come from Governor's Initiative Program (see Chapter 11) and other possible TEA-21 sources.

Table (A-C)
20 Year Performance With and Without Recommended Improvements

Table 9-6(A)
Existing Conditions in Downtown Prineville

	Intersection											
	Harwood			Deer		Main		Elm		Knowledge		
Year	V/C	AD	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	AD	LOS
1998	-	1.9	D	0.60	B	0.88	D-E	0.51	B	-	1.4	C
1999	-	2.0	D	0.61	B	0.90	E	0.52	B	-	1.4	C
2000	-	2.1	D	0.62	B	0.90	E	0.52	B	-	1.5	C
2001	-	2.1	D	0.63	C	0.91	E	0.53	B	-	1.5	C
2002	-	2.2	E	0.63	C	0.92	E	0.53	B	-	1.6	C
2003	-	2.3	E	0.64	C	0.93	E	0.53	B	-	1.6	D
2004	-	2.4	E	0.65	C	0.94	E	0.54	B	-	1.7	D
2005	-	2.5	E	0.65	C	0.95	E	0.54	B	-	1.7	D

Table 9-6(B)
Impact of Recommended Improvements on 1998 LOS in Downtown Prineville

	Intersection											
	Harwood			Deer		Main		Elm		Knowledge		
Project	V/C	AD	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	AD	LOS
Existing Conditions - 1998	-	1.9	D	0.64	B	0.88	D-E	0.54	B	-	1.4	C
New Signals @ Harwood & Knowledge (Map No. 2)	0.65		C							0.55		B
Signal Interconnect (Map No. 4)	0.57		B	0.61	B	0.78	D	0.43	A	0.55		B
4th St. Extension (Map No. 3)	0.57		B	0.56	B	0.77	D	0.45	A	0.55		B
9th St. Extension & P/P Lt on Main (Map No. 5, 6 and 7)	0.57		B	0.55	B	0.84	D	0.44	A	0.55		B

Note: Project No. 1 included as an existing condition because it is already scheduled for construction. Projects 8 and 9, while important, do not affect the LOS downtown.

Table 9-6(C)
Cumulative Impact of Implementing Recommended TSP Short-Term Improvements on Future LOS

	Intersection								
	Harwood		Deer		Main		Elm		Knowledge	
Year	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
1998	0.57	B	0.55	B	0.77	D	0.44	A	0.55	B
2003	0.58	B	0.58	B	0.81	D	0.47	A	0.57	B
2008	0.61	B	0.61	B	0.85	D-E	0.49	A	0.59	B
2013	0.64	C	0.66	C	0.88	D-E	0.52	B	0.62	C
2018	0.68	C	0.68	C	0.87	D-E	0.58	B	0.67	C

Note: Year 2018 LOS reflects cumulative impacts of short- and long-term TSP improvement projects, including Crestview, Court and Knowledge street extensions.

CHAPTER 10 CONSTRUCTION COST ESTIMATES

The implementation plan described in Chapter 9 is carried forward in a long-range capital improvement plan (CIP) for the City of Prineville. The purpose of the CIP is to guide growth and the timing by which needed transportation improvement projects are funded and scheduled. The Prineville CIP should be coordinated and integrated with regular updates of ODOT's STIP, and Crook County's CIP. Coordinated capital improvement plans are essential since many of the recommended projects in the CIP include multiple jurisdiction investment.

As illustrated in **Table 10-1** , the Prineville CIP is categorized in 5-year increments over the 20-year TSP time frame. Project prioritization is based on current needs, and needed improvements to serve expected growth. The prioritization and schedule of projects generally reflects the planned availability of state and local revenues (see Funding Options, Chapter 11). Planning costs listed in **Table 10-1** are shown in 1998 dollars by jurisdiction. These preliminary planning level estimates costs include estimates for right-of-way, design, construction and contingencies. The cost estimates are preliminary by roadway segment and do not include water or sewer facilities, or more detailed intersection design.

This capital improvement program is estimated to cost approximately $ 12.70 million for Prineville to implement. A detailed analysis of funding options and a recommended financial plan is discussed in the following chapter.

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Table 10-1
City of Prineville Long-Range Capital Improvement Plan

Project		Program Schedule Years					Cost	Partnership				Estimated Cost Share (millions) [1]			
No.	Description	0-5	6-10	11-15	16-20	20+	millions	State	City	County	Private	State	City	County	Private
1	Signal @ 3rd/ Combs Flat						**	100%				**			
2	Signals @ 3rd St/Knowledge & 3rd/Harwood						$0.30	90%	10%			$0.27	$0.03		
3	4th St Extension						$0.24		100%				$0.24		
4	3rd St Interconnect						$0.10	100%				$0.10			
5a	Laughlin/10th Extension [2]						$3.55	33%	34%	33%		$1.17	$1.21	$1.17	
5b	Highway 126/Laughlin Intersection						$0.67	100%				$0.67			
6	9th/10th/Lamonta [2]						$1.54	33%	34%	33%		$0.51	$0.52	$0.51	
7	Main St L-Turn Phase/R-Turn Lane						$0.02	100%				$0.02			
8	Millican Interchange						$7.15	50%	17%	17%	17%	$3.58	$1.19	$1.19	$1.19
9	Highway 126 Lighting						$0.05	100%				$0.05			
10	Crestview Extension						$6.75		80%		20%		$5.40		$1.35
11	Court Extension						$1.10		100%				$1.10		
12	Knowledge Extension						$1.58		100%				$1.58		
13	Laughlin Road Upgrade						$1.87		25%	50%	25%		$0.47	$0.94	$0.47
14	Downtown Enhancement Plan						$1.93		50%		50%		$0.97		$0.97
	Sidewalk Projects						$1.15	10%	50%		40%	$0.12	$0.58		$0.46
	Bicycle Projects						$0.12	0.1%	27%	72%		$0.0001	$0.03	$0.09	
	TOTAL						$26.85					$6.36	$12.70	$3.81	$3.97

** Already programmed in ODOT's STIP for construction in the year 2000.
[1] Forecasted potential involvement, subject to refinement upon completion of further planning and engineering analysis.
[2] "State" partnership in funding estimated to come from Governor's Initiative Program (see Chapter 11) and other possible TEA-21 sources.

CHAPTER 11 FUNDING OPTIONS AND FINANCIAL PLAN

Overview

The Prineville TSP financial plan includes a transportation financing program that includes:

- an analysis of historic street improvement funding sources;
  a list of planned transportation facilities and major improvements;
- a general estimate of the timing for planned transportation facilities and major improvements;
- determination of planning level cost estimates for the transportation facilities and major investments identified in the TSP (intended to provide an estimate of the fiscal requirements to support the land uses in the acknowledged comprehensive plan(s) and allow jurisdictions to assess the adequacy of existing and possible alternative funding mechanisms); and,
- a discussion of existing and potential financing sources to fund the development of each transportation facility and major improvement (which can be described in terms of general guidelines or local policies).

The timing and financing provisions in the transportation financing program are not considered a land use decision as defined by the TPR and ORS 197.712(2)(e) and, therefore, cannot be the basis of appeal under State law. In addition, the transportation financing program is to implement the comprehensive plan policies which provide for phasing of major improvements to encourage infill and redevelopment of urban lands prior to facilities which would cause premature development of urbanizable areas or conversion of rural lands to urban uses.

This chapter summarizes the financing program defined for the Prineville TSP as required by the TPR. It summarizes the transportation improvement projects, identifies general timing and rough cost estimates of transportation system improvements, and summarizes the existing and potential future financial resources to pay for these improvements, as a general policy guideline.

Summary

The City of Prineville, like other cities in Oregon, is faced with the need to improve and expand its transportation system in order to alleviate existing safety and roadway capacity problems and to accommodate projected growth in the region. The Transportation System Plan identifies over $26 million (1998 dollars) in proposed transportation improvements over the next twenty years and beyond. While funding for a portion of the proposed improvements is expected to come from the Oregon Department of Transportation (ODOT), it is likely that residents of Prineville will be faced with the need to provide funding for the remaining share. Table 11-1 indicates that state sources may provide funding for approximately $ 6.36 million of the proposed transportation improvements. An additional $3.81 million may be funded through Crook County. This leaves the City with a local funding share of $12.7 million, or 47 percent of the total improvement costs.

Table 11-1
Prineville TSP Financial Plan

Project		Benefit				Cost	Partnership				Estimated Cost Share (millions) [1]			
No.	Description	Safety	Operations/ Capacity/C irculation	Alt. Modes	Freight Mobility	millions	State	City	County	Private	State	City	County	Private
1	Signal @ 3rd/ Combs Flat	◆	◆	◆		**	100%				**			
2	Signals @ 3rd St/Knowledge & 3rd/Harwood	◆	◆	◆		$0.30	90%	10%			$0.27	$0.03		
3	4th St Extension		◆	◆		$0.24		100%				$0.24		
4	3rd St Interconnect		◆		◆	$0.10	100%				$0.10			
5a	Laughlin/10th Extension [2]		◆	◆	◆	$3.55	33%	34%	33%		$1.17	$1.21	$1.17	
5b	Highway 126/Laughlin Intersection	◆	◆	◆	◆	$0.67	100%				$0.67			
6	9th/10th/Lamonta [2]		◆	◆	◆	$1.54	33%	34%	33%		$0.51	$0.52	$0.51	
7	Main St L-Turn Phase/R-Turn Lane	◆	◆		◆	$0.02	100%				$0.02			
8	Millican Interchange	◆	◆		◆	$7.15	50%	17%	17%	17%	$3.58	$1.19	$1.19	$1.19
9	Highway 126 Lighting	◆				$0.05	100%				$0.05			
10	Crestview Extension		◆	◆		$6.75		80%		20%		$5.40		$1.35
11	Court Extension		◆	◆		$1.10		100%				$1.10		
12	Knowledge Extension	◆	◆	◆		$1.58		100%				$1.58		
13	Laughlin Road Upgrade	◆		◆	◆	$1.87		25%	50%	25%		$0.47	$0.94	$0.47
14	Downtown Enhancement Plan	◆		◆		$1.93		50%		50%		$0.97		$0.97
	Sidewalk Projects	◆	◆	◆		$1.15	10%	50%		40%	$0.12	$0.58		$0.46
	Bicycle Projects	◆	◆	◆		$0.12	0.1%	27%	72%		$0.0001	$0.03	$0.09	
	TOTAL					**$26.85**					**$6.36**	**$12.70**	**$3.81**	**$3.97**

** Already programmed in ODOT's STIP for construction in the year 2000.

[1] Forecasted potential involvement, subject to refinement upon completion of furth anning and engineering analysis.
"State" partnership in funding estimated to come from Governor's Initiative Prog nd other possible TEA-21 sources..

State and Federal Transportation Funding

Federal Highway and Transit Funding

The Transportation Equity Act for the 21st Century (TEA-21) re-authorizes the federal transportation funding program begun in 1991. Approved in June 1998, TEA-21 authorizes highway, highway safety, transit and other transportation programs for the next six years. TEA-21 extends many of the original Federal funding programs, and combines a number of new initiatives to improve safety, and protect and enhance communities and the natural environment. Most of the funding in TEA-21 is tied to the Highway Trust Fund. Of the total Highway Trust Fund revenues over the next six years, estimated at about $218 billion, over $198 billion are guaranteed. TEA-21 also provide financial support to local communities to leverage Federal funding sources including direct Federal credit and matching programs.

While ODOT's statewide program to allocate TEA-21 funding remains unclear, a number of Prineville transportation system improvements are certainly eligible for federal funding. Federal Aid Highway street, and local (Prineville) bridges projects are both eligible for federal funding through the Surface Transportation Program (STP). Other TEA-21 programs include funding for bicycle and pedestrian system improvements. Significant increases in federal funding have been identified for both rural and urban public transportation improvements.

State Road-Related Funding

In 1992, Oregon received $704 million, or 67 percent of its highway revenues, from the collection of user taxes and fees. The second largest category is almost entirely comprised of the sale of timber logged from National Forests. In 1992, these timber receipts raised roughly $115 million. The remaining revenue sources - road and crossing tolls, general fund appropriations, property taxes, miscellaneous receipts and bond receipts - accounted for $223.5 million or roughly 21 percent of total transportation revenues.

The most significant portion of Oregon's highway user taxes and fees come from federal fuel and vehicle taxes, state taxes, and general motor vehicle fees. These categories account for 32 percent, 34 percent, and 25 percent, respectively, of all highway user taxes and fees collected in the state. During the 1980's, Oregon's transportation budget was bolstered by a series of two-cent annual gas tax increases. At the same time, the Federal Government was increasing investment in highways and public transportation. The situation is different today. The last two Legislatures failed to increase the gas tax and federal budget cuts are reducing transportation funding available to Oregon. The State Highway Fund is further losing buying power because the gas tax is not indexed to inflation, and increased fuel efficiency of vehicles reduces overall consumption.

Oregon Highway Trust Fund

Oregon Highway Trust Fund revenues are distributed among state (60.22 percent), County (24.38 percent) and City (15.40 percent) governments to fund their priority road needs. In 1995-96, the state

estimated it would collect $575 million in state highway funds. Counties and cities would then receive about $140 and $90 million, respectively.

Oregon law allows local government, in addition to receiving state highway trust fund revenues, to levy local fuel taxes for roadway related improvements. Multnomah and Washington Counties, and some small cities (Tillamook, The Dalles, Woodburn) have used this authorization. Several attempts have been made by other jurisdictions but have not been supported by the electorate. As few local governments have implemented this option, non-user road revenues tend to be relied upon, to supplement the funds received from state and federal user revenues. Other local funding sources have included property tax levies, local improvement district assessments, bonds, traffic impact fees and system development charges, road user taxes, general fund transfers, receipts from other local governments, and other miscellaneous sources.

Oregon's basic vehicle registration fee is $15 per year regardless of the vehicle being registered. Oregon law permits local governments (counties) and governmental entities to impose local option vehicle registration fees. To date, no county has implemented this tax.

Cities have relied more than counties on transfers from their general funds to support roadway improvements. Ballot Measure 5, however, approved by the voters in 1990, reduced the range of funding and financing options available to both cities and counties. Measure 5 limited the property tax rate for purposes other than for payment of certain general obligation indebtedness to $15 per $1000 of assessed value. The measure further divided the $15 per $1000 property tax authority into two components: $5 per thousand dedicated to the public schools; the remaining $10 dedicated to other local government units, including cities, counties, special service districts, and other non-school entities. The tax rate limitation for cities and counties went into effect in 1992. The school portion of the measure is being phased in over a five-year period beginning in FY 1992. In 1996, voters again approved a property tax limitation measure, Ballot Measure 47/50, which will further impact the ability of cities and counties to pay for needed infrastructure through historic or traditional means.

At the same time that increased growth and increased transportation demands are occurring, cities and counties have lost another traditional source of revenue for infrastructure construction and upgrade - timber harvest receipts. Under a 1993 negotiated mitigation plan, federal forest receipts to support county roads are decreasing 3 percent per year. In 1996, counties will receive 74 percent of their 1986-90 average receipts, and by 2003 they will receive 55 percent of the late 1980s revenues.

A part of transportation funding will be identification of relationships and responsibilities relative to delivery of projects and services. In Oregon, the primary state role has been to construct and maintain the state highway system and to assist local government with funding of other modes. The state also has a role in intercity passenger services and airports. This has historically been minor, but would grow significantly if serious efforts were put into intercity rail improvements. Local governments, in addition to providing local road and bridge construction, maintenance and preservation, provide local transit and airport support. TEA-21 continues the ISTEA policy of

moving decision-making for federal programs to states and this program and other state policies incorporated in the Oregon Transportation Plan (OTP) encourage reassessment of responsibilities and obligations for funding.

These changing relationships have resulted in two significant issues for state and local governments. First, there is no clear definition of state responsibility. At one time, the state operated on an informal consensus that it should provide one-half the match on federally funded local and other projects that served statewide needs. No similar consensus seems to exist today. The state's responsibility for transit, airports and other local transportation infrastructure and services is not clear. The question of regional equity is raised in considering especially high-cost project needs, such as the Bend Parkway or the Portland area light rail program. Regional equity will probably require consideration of all modes together, because different regions may have different modal needs and financial arrangements.

Given this dynamic transportation funding environment, it is clear that local governments need to reassess traditional methods of funding projects and look creatively at ways to meet public expectations of high quality transportation services.

Oregon Governor's Initiatives

Given this funding environment, current funding levels and sources are not adequate to meet the transportation needs of the State, cities and counties for the next 20 years. In response to this gap between needs and funding, Governor Kitzhaber organized the Oregon Transportation Initiative to look at statewide transportation needs and to develop a program to address how these needs will be met. Through a public process led by business and civic leaders across the state, findings and recommendations on the state of transportation needs and methods to address those needs was submitted to the Governor in July 1996. A result of these recommendations was appointment of a committee to develop a legislative proposal to the 1997 Legislature regarding transportation funding. Part of that proposal identified a "base" transportation system, with a priority of maintenance, preservation and operation of a system of transportation facilities and services that ensures every Oregonian a basic level of mobility within and between communities. It is expected that other components will include efficiencies resulting from better intergovernmental cooperation (shared resources and equipment, better communication on project needs and definition), and elimination of legislative barriers to more efficient and cost-effective methods of providing transportation services. However, the 1997 Legislature failed to pass either the Governor's measures or their own.

Governor Kitzhaber has recently prepared a new initiative relating to growth management and transportation infrastructure planning. The initiative is a two-pronged investment strategy that aims to help restore the economic health of rural distressed communities and to better manage rapid growth in fast-growing communities. It will, for example, contain some incentives for affordable housing in fast-growing communities. It will use "existing funds" -- lottery dollars,

for example. Early reports of the initiative indicate a targeted funding level of $30 million to fund the unspecified growth management initiatives in the governor's budget proposal.

State Transit Funding

Transit service in Oregon has evolved from private development and reliance on user fees for operating revenue to public ownership with public subsidy for operations. No clear philosophy of the state role in providing transit services is evident and the state is continuing its discussion on how the state should raise revenue in support of transit. The state has used general funds, lottery funds, stripper well funds, cigarette tax revenue and other funds at various times to support transit service. These efforts have largely been targeted towards supplying half the required match to federal capital improvement grants. Other than the elderly and disabled program, the state has provided no operating funds for transit. The state role has been one of granting authority to local governments to raise locally-generated operating revenue.

Federal Transit Administration (FTA) grants account for 69 percent of Oregon's funding for transit capital construction, which includes purchase of buses and other equipment. Federal funding for transit was increased through the flexibility provided by ISTEA. This federal legislation expired September 30, 1997 and, while new legislation is still pending, there is strong indication that current flexibility will be retained, although it will be dependent on Congressional approval to continue current programs. The largest source of transit operating revenues, $87 million, are local funds, which provide 64 percent of revenues needed for transit operations. Passenger fares cover 22 percent of Oregon's transit system operating costs. Transportation for the elderly and disabled is funded through dedication of two cents of the state cigarette tax and through federal programs.

State Airport Funding

Federal grants from the Federal Aviation Administration (FAA) Airport Improvement Program (AIP) are used to support general airport infrastructure improvements, with 90 percent Federal funding and a 10 percent local match. Given the ability to adjust user charges to address inflation, revenues will likely remain stable for operation and maintenance of the airport, particularly in relation to funding issues faced by other transportation modes. and advertising space in the terminal, and a variety of user fees - fuel flowage fees, aircraft landing fees, terminal rent fees for airlines, rental cars and the restaurant.

Local Transportation Funding

The City of Prineville accounts for street and transportation-related revenues and expenditures in two separate funds: the Street Fund and the Street Equipment Reserve Fund. The Street Fund is used for the operation, maintenance and improvement of city streets and roads. The Street

Equipment Reserve Fund is used to acquire property and equipment. Summaries of the revenues and expenditures associated with these two funds over the past ten years are shown in Tables 11-2 and 11-3. The primary revenue source of the Street Fund is state gas tax revenues. In fiscal year *(FY)* 1991-92, state gas tax revenues totaled $ 221,643, accounting for 32 percent of annual Street Fund revenues. As shown in Table 11-2, the 1991 Oregon State Legislature approval of a 2 cent per gallon increase in the state gas tax effective July 1, 1991, and an additional 2 cent per gallon increase effective July 1, 1992 resulted in increased revenues for Prineville. However, the 1993 Oregon State Legislature failed to approve a proposal to increase the gas tax by 3 cents per gallon in 1994 and another 3 cents in 1995. As a result, the City has not seen the increases state gas tax revenues continuing. In 1992 the City issued $150,000 of revenue bonds. The proceeds were used to finance street improvements within the City. The debt service will be repaid with future state gas tax allocations to the City.

Table 11-2
City of Prineville Street Fund
Statement of Revenue and Expenditures

	1987-88	1988-89	1989-90	1990-91	1991-92
REVENUES:					
Local					
Taxes	$61,440	$61,223	$57,108	$61,769	$61,189
Interest	$14,599	$10,279	$11,109	$15,046	$17,007
Collection on Assessments	---	---	---	---	$32,724
Fees	$225	$160	$235	---	$445
Other	$858	$4,832	$2,047	$1,948	$3,462
Intergovernmental Sources					
State Gas Tax	$139,603	$166,277	$194,673	$220,781	$221,643
Other State	---	---	---	---	$6,489
County	$201,900	$203,200	$205,000	$205,000	$205,000
Bond Sale Proceeds	---	---	---	---	$147,000
Total Revenues	$418,625	$445,971	$470,172	$504,544	$694,959
Beginning Fund Balance	$120,247	$126,159	$82,775	$113,161	$133,673
Total Available	$538,872	$572,130	$552,947	$617,705	$828,632
EXPENDITURES:					
Personal Services	$105,826	$100,978	$108,275	$111,647	$121,723
Materials and Services	$226,807	$272,579	$243,018	$250,453	$309,762
Capital Outlay	$3,171	$860	$681	$544	$7,000
Transfers to Other Funds					
General Fund	$59,281	$103,220	$70,950	$74,200	$78,500
Bicycle Path Reserve Fund	$1,375	$1,718	$1,862	$2,188	$2,216
Street Equipment Reserve Fund	$13,253	$10,000	$15,000	$45,000	$35,500
Total Expenditures	$412,713	$489,355	$439,786	$484,032	$554,701
UNAPPROPRIATED ENDING FUND BALANCE:	$126,159	$82,775	$113,161	$133,673	$273,931

Table 11-3
City of Prineville Street Equipment Reserve Fund
Statement of Revenues and Expenditures

	1987-88	1988-89	1989-90	1990-91	1991-92
REVENUES:					
Interest	$719	$843	$622	$1,330	$6,100
State Transfer	---	---	---	$18,020	$99,048
Transfer from Street Fund	$13,253	$10,000	$15,000	$45,000	$35,500
Beginning Fund Balance	$26,848	$17,139	$11,412	$7,835	$44,602
Total Available	$40,820	$27,982	$27,034	$72,185	$185,250
EXPENDITURES:					
Capital Outlay	$23,681	$16,570	$19,199	$27,583	$68,665
Materials and Services	---	---	---	---	$26,400
Total Expenditures	$23,681	$16,570	$19,199	$27,583	$95,065
UNAPPROPRIATED ENDING FUND BALANCE:	$17,139	$11,412	$7,835	$44,602	$90,185

The principal revenues of the Street Equipment Reserve Fund are transfers from the Street Fund and intergovernmental transfers from the State.

Potential Future Transportation Funding Sources

There are a variety of methods to generate revenue for transportation projects. Funding for transportation improvement projects are derived from three sources: federal, state and local governments. Appendix F provides a summary of federal, state and local highway, bridge, sidewalk, bicycle and transit funding programs that have typically been used in the past. Although property tax is listed as a possible revenue source, the impacts of Ballot Measure 47/50 are likely significant, but still vague.

Most Federal funding is passed through ODOT to the local jurisdictions. *A good working relationship with ODOT Region 4 planners and the Region Manager is important to have major transportation improvements included as part of the STIP when it is updated every two years.* ODOT maintains interstate and state highways - in Prineville this includes the Ochoco, the Madras-Prineville, Crooked River, O'Neil and Paulina Highways. State and federal funds administered through ODOT are the primary sources of funding for improvements to this facility.

ODOT's contribution towards transportation improvements in Prineville are needed within the next 10 years. Two significant projects include partnering with Prineville to improve traffic control on Third Street, and assistance to the City and County to construct the 9th Street and Laughlin Road Extensions.

As noted earlier, the 1997 Oregon Legislature failed to pass enhancements to transportation infrastructure investment. In lieu of statewide funding enhancements, Prineville must look to local measures to fund future capacity projects. Potential funding sources are typically judged based on a number of criteria, including:

- legal authority
- financial capacity
- stability
- administrative feasibility
- equity
- political acceptability

The Prineville TSP includes a more focused evaluation of the following measures which could be used to fund Prineville's share of needed transportation system improvements:

- Local vehicle registration fees
- Local gasoline taxes
- Road improvement bonds
- System Development Charges (SDC)

Each of these measures was investigated to ascertain the level of revenue generated (assuming a revenue distribution based on future, year 2018 population).

Local Vehicle Registration Fee

Statewide vehicle registration fees are lowest in Oregon ($15/year) when compared to neighboring states, as shown in Table 11-4. As only counties can implement local vehicle registration fees in Oregon, Prineville would have to work with Crook County to initiate this measure. A summary of annual and 20-year revenues from a local vehicle registration fee in Prineville is provided in Table 11-5. Local revenues are listed with options for both a $10 and $20 local fee in addition to the current $15/year statewide fee. County-wide (including incorporated cities) revenues from a $10-$20 local vehicle registration fee ranges from $5.4 to $10.8 million over 20 years. Revenues allocated to Prineville are estimated at $3.2 million over 20 years based on a $10 per year local vehicle registration fee. Regardless of the option chosen, a local vehicle registration fee would require local voter approval.

Table 11-4
Comparison of Automobile-Related Taxes
(as of March 1997)

Tax	Oregon	Washington	California	Idaho	Nevada
Gas Tax	$.24/gal*	$.23/gal	$.25/gal*	$.25/gal	$.28/gal*
Registration Fee	$15/year	$36/year	$29/year	$28/year	$33/year
Ad Valorem Tax	$0	$172/year	$148/year	$0	$78/year
Auto Sales Tax**	$0	$191/year	$191/year	$123/year	$172/year

Source: ODOT, Policy Section.
* California includes sales tax, Oregon and Nevada include local option tax.
** Prorated over eight years.

Table 11-5
Local Vehicle Registration Fee Option

Jurisdiction	2018 Future Population	Distribution	1998 ANNUAL REVENUE Local Vehicle Registration Options $10/yr	1998 ANNUAL REVENUE Local Vehicle Registration Options $20/yr	20-YEAR REVENUE Local Vehicle Registration Options $10/yr	20-YEAR REVENUE Local Vehicle Registration Options $20/yr
Prineville	13,400	58%	$126,600	$253,200	$3,169,900	$6,339,700
Unincorporated Co.	9,545	42%	$90,100	$180,300	$2,257,900	$4,515,800
TOTAL	**22,945**	**100%**	**$216,700**	**$433,500**	**$5,427,800**	**$10,855,500**

Local Gasoline Tax

The State of Oregon collects gas taxes, vehicle registration fees, overweight/over height fines and weight/mile taxes and returns a portion of the revenue to cities and counties through an allocation formula. As of January 1, 1992, cities receive approximately 15.57 percent of the net revenues of the state highway fund; counties receive 24.38 percent and the state keeps 60.05 percent. The revenue share allocated to cities is then divided among all incorporated cities based upon population.

State gas tax revenues received by cities are dedicated to road construction and maintenance. As previously mentioned, the City currently uses these funds primarily for ongoing maintenance and street support services. Prineville is one of only a few cities in Oregon that have chosen to issue revenue bonds secured by future gas tax receipts for specific road projects.

In addition to the state gas tax, some local governments (city of Woodburn and Washington and Multnomah counties) currently levy additional local gas taxes with such revenues being used to fund street-related improvements throughout the jurisdiction. A preliminary analysis of the revenue that could be generated from a one cent gas tax levied throughout the City of Prineville is shown in Table

11-6. Based on an approximation of gasoline sales in Crook County, a one cent per gallon local gas tax could produce revenues of about $35,000 per year. This revenue projection should be considered a very rough approximation only and should be explored in greater depth if the City views a local gas tax as an attractive option for funding its transportation need.

Table 11-6
Estimate of Revenue Generated from Hypothetical Crook County Gas Tax

Registered vehicles statewide	29,410,008
Registered vehicles Crook County	19,101
Crook County as a % of State	0.65%
Total Apportionment to counties	$108,101,496
Crook County apportionment	$690,171
Crook County as a % of State	0.64%
Estimate of Crook County Share of State total	0.64%
Estimated gallons sold statewide	1,447,400,000
Estimated gallons sold in Crook County	9,320,665
Estimated County revenues from 1 cent gas tax	$93,207
Crook County population	14,600
Prineville population	5,515
Prineville as a % of Crook County	37.8%
Prineville share of Crook County gas tax	
1 cent	$35,208
2 cent	$70,416
3 cent	$105,624

Road Bond Measure

Local property taxes could be used to fund transportation improvements. Roadway capital improvements are typically funded by a serial levy that implements property taxes for a set period of time, often for a specific set or list of projects. Voter approval is required for serial levies. Since passage of Measures 5 and 47/50, property tax levies are primarily used to support General

Obligation bonds that finance transportation improvements, because levies for bonded indebtedness are exempt from property tax limitations.

Table 11-7 summarizes a range of road bond options based on the rate of added bond indebtedness ranging from $.25 to $.60 per $1,000 assessed property value. The estimated 20-year revenues from city-wide bond measure options ranges from $1.1 to $2.7 million.

Table 11-7
Road Bond Option

Prineville Total Assessed Valuation (1997)	20-Year Revenues (in Millions) Rate per $1,000 Assessed Value							
	$.25	$.30	$.35	$.40	$.45	$.50	$.55	$.60
$222,600,000	$1.1	$1.3	$1.6	$1.7	$2.0	$2.2	$2.4	$2.7

System Development Charges

An increasingly common source of transportation funding is the collection of system development charges *(SDCs)* from new development. These charges are generally based on a measurement of the demand that a new development places on the street system and the capital cost of meeting that demand. These are one time fees collected as the development comes on line. Prineville does not currently impose a street system development charge. This measure is outlined in greater detail in the SDC Methodology Report prepared for the City by W&H Pacific.

Assessments

Local improvement districts *(LIDs)* may be formed under Oregon Statutes to construct public improvements such as streets, sidewalks and other improvements. Formation of an LID can be initiated by property owners or by the City, subject to remonstrance. Local improvement districts are appropriate for those kinds of improvements that provide primarily local benefits. When improvements are made within the district, the cost of the improvement is generally distributed according to benefit among the properties within the district. The cost becomes an assessment against the property which is a lien equivalent to a tax lien. The property owner may pay the assessment in cash or apply for assessment financing according to terms offered by the City.

General Revenues of the City (General Fund)

The City has a variety of revenues such as license fees, business taxes and the like that go into the general fund of the City. These general funds are available for any purpose the City chooses.

Sale of Assets

To the extent that the City owns surplus properties, these properties could be sold to produce a one time revenue source.

Oregon Department of Transportation

The Oregon Department of Transportation has available an Immediate Opportunity Grant Program designed to assist local and regional economic development efforts. In certain circumstances, localities can utilize this potential funding source in making transportation-related capital improvements. The program is funded to a level of approximately $5 million per year through state gas tax revenues. ODOT officials state eligibility criteria are somewhat flexible but that the following are primary factors used in determining eligible projects:

1. Must be used to improve public roads.
2. Must be for an economic development-related project of regional significance.
3. The underlying project must create primary employment, such as manufacturing.
4. ODOT prefers that the grantee provide an equal local match (although lesser matches will be considered).

The maximum amount of any grant under the program is $500,000. Local governments which have received grants under the program include Washington County, Multnomah County, City of Hermiston, Douglas County, Port of St. Helens, and the City of Newport.

Oregon Special Public Works Fund

The Special Works Fund *(SPWF)* Program was created by the 1985 Legislature as one of several programs for the distribution of funds from the Oregon Lottery to economic development projects in communities throughout the state. The program provides grant and loan assistance to eligible municipalities primarily for the construction of public infrastructure which supports private projects that result in permanent job creation or job retention. To be awarded funds, each infrastructure project must support businesses wishing to locate, expand, or remain in Oregon.

While SPWF program assistance is provided in the form of both loans and grants, the program emphasizes loans in order to assure that funds will return to the state over time for reinvestment in local economic development infrastructure projects. The maximum loan amount per project is $11 million and the term of the loan cannot exceed the useful life of the project or 25 years, whichever is less. Interest rates for loans funded with State of Oregon Revenue Bonds are based on the rate that the state may borrow through the Oregon Economic Development Department Bond Bank. The Department may also make loans directly from the SPWF (not from revenue bond proceeds) and the term and rate on direct loans can be structured to meet project needs. The maximum grant per project is $500,000 but may not exceed 85% of the total project cost.

Private Contributions

Projects are sometimes paid for by private contributions. Some private contributions are the result of a development right swap of some sort. It is not uncommon to require a developer to build a road, to city standards, and then to deed the road to the City as a condition of development. This practice is used widely throughout the state and may have applicability to the City of Prineville for specific projects.

Financing Tools

Using the potential revenue sources available to the City, the next stop is to identify that ways these revenues can be used to finance transportation projects. A number of debt financing alternatives are available to the City. The use of debt to finance capital improvements must be balanced with the ability of the City to support the debt and the impacts that debt issuance may have on the City's overall credit quality and capacity to fund other needed public projects. Debt issuance should be viewed as one of several funding alternatives available to the City and should be incorporated into an overall financing plan which may include "pay-as-you-go" funding methods which utilize currently available revenues to meet a portion of the City's transportation needs.

Ballot Measure 5

The approval of Ballot Measure 5 by the voters in November 1990 impacts the range of funding and financing options available to the City to pay the costs of street system improvements. Components of the Measure that may impact the City's street funding strategies include: tax rate limitation, financing of local improvement districts and the implementation of system development charges.

Tax Rate Limitation

Ballot Measure 5 limits the property tax rate for purposes other than for payment of certain voter-approved general obligation indebtedness to $15.00 per $1,000 of assessed value. The Measure further divides the $15.00 per $1,000 into two components: $5.00 being dedicated to the public school system and the remaining $10.00 dedicated to all other governmental units, including cities, counties, special districts and other non-school entities. The tax rate limitation is being implemented over a five-year period as shown in Table 11-8.

Table 11-8

Ballot Measure 5 Tax Rate Limitation

Fiscal Year	Public Schools	All Other	Total
1991-92	$15.00	$10.00	$25.00
1992-93	$12.50	$10.00	$22.50
1993-94	$10.00	$10.00	$20.00
1994-95	$ 7.50	$10.00	$17.50
1995-96	$ 5.00	$10.00	$15.00

Tax base, special levies and serial levies are subject to the tax rate limitation. Debt service levies used to retire voter-approved general obligation bonds are excluded from the limitation. In the event that the combined non-debt tax rate for a given area exceeds the maximum allowable rate, the Measure provides that the rates of all taxing districts be reduced proportionately.

Measure 5 Impact on General Obligation Bonds
Measure 5 exempts from the tax rate limitation those taxes levied to pay principal and interest on bonded indebtedness provided:

- the bonds are for purposes of *capital construction or improvements*; and
- the bonds are offered as general obligations of the issuer and provided further that the bonds are either issued prior to November 1990, or the question of the issuance of the specific bonds *has been approved by the voters of the issuing entity.*

The 1991 Oregon State Legislature adopted a statutory definition of capital construction that includes the range of costs elements that have traditionally been funded through general obligation bonds, including land acquisition, hard construction costs, existing building acquisition, equipment and machinery as well as planning, design and financing costs associated with capital construction.

The Measure does not exclude from the rate limitation taxes levied to pay indebtedness on non-voter approved general obligation bonds, including G.O. improvement (Bancroft) bonds or advance refunding bonds. As a result, the financing of local improvement district projects is likely to be done either through the issuance of "true" special assessment bonds or through limited tax improvement bonds. Special assessment bonds are backed solely by assessment contracts and do not carry any additional pledge of city resources. Limited tax improvement bonds carry a pledge of available resources of the City's general fund as well as the authority to levy taxes up to, but not in excess of the $10.00 per $1,000 general government limitation. Since enactment of Measure 5, most local governments have chosen to finance local improvement districts through the issuance of limited tax improvement bonds rather than special assessment bonds due to lower interest cost associated with the former.

General Obligation Bonds

General obligation bonds are usually voter-approved bond issues. They are the least expensive borrowing mechanism available to municipalities. G.O. bonds generally are supported by a separate property tax levy specifically approved for the purposes of retiring the debt. When the bond issue is paid off completely, the levy is finished. The property tax levy is distributed equally according to assessed value over the entire assessed value of the voting district. They are generally used to make public improvements benefitting the entire populace.

Oregon Revised Statutes provide that the total outstanding general obligation indebtedness of a city not exceed three percent of the City's true cash value. Bonds issued for water, sewer and other utility purposes are excluded from this limitation. Thus, based on the City's Fiscal Year 1992-93 true cash value of $159 million, the City's debt limitation is currently $4,770,000 As of June 30, 1992 the City had $275,000 in outstanding general obligation debt that is subject to the statute, leaving a debt margin of $4,495,000 available for transportation and other capital needs of the City.

As discussed above, taxes levied to pay indebtedness on voter-approved general obligation bonds issued for the capital construction or improvements, are not subject to the tax rate limitations of Ballot Measure 5.

Local Improvement District (Bancroft) Bonds

Local improvement districts may be formed to construct such local improvements as street repairs, sidewalks, and various types of utility improvements. They are formed either through petition by the benefitted property owners who seek a set of public improvements or through the legislative process of the council. Both processes involve notification and hearings regarding the formation of the district. After the district is formed, public improvements may be made and the costs of those improvements distributed among the properties within the local improvement district according to their benefit from the improvements. The benefit is set by formula by the City Council. Once the benefit and cost have been set, an assessment is levied against the benefitting properties. They may pay in cash or apply for assessment financing. In Oregon this means the City will issue bonds and allow the property owners to pay their assessments over time. Oregon statutes allow the City to pledge its general obligation to the Bancroft bonds thus making the bonds general obligations of the City but paid by assessment payments. This lowers the borrowing cost of the benefitted property owners. However, because general obligation improvement (Bancroft) bonds are not specifically voter-approved, taxes levied to pay debt service on such bonds are subject to the limitations of Ballot Measure 5. As a result, local governments may not issue unlimited tax general obligation bonds without a vote of the electorate. Such limited tax improvement bonds are backed by available revenues of the City, including the ability to levy a tax, provided however, that such tax levy combined with all other general governmental tax levies do not exceed the $10.00 per $1,000 tax rate limitation.

Though most local governments have funded local improvements through limited tax bonds, special assessment financing has been used with greater regularity of late. Special assessment bonds, backed solely by the assessment payments from benefitted properties, are the norm throughout the country and may present a viable means of financing many projects that have historically been financed through Bancroft Bonds, albeit at a higher interest cost.

Because the security of special assessment bonds lies solely with the assessment payments, potential investors and rating agencies apply much more rigorous credit evaluation criteria than they have historically applied to Bancroft issues. As a result, it may be very difficult or impossible to sell special assessment bonds at reasonable rates for projects that are of marginal credit quality. For example, improvements to undeveloped land, low income property, or other property where the assessment will create a relatively high assessment to property value ratio, will be significantly more difficult under a special assessment financing program. Creation of a reserve fund, bond insurance, letters of credit or other forms of credit enhancement may be necessary in order to successfully market special assessment bonds for certain projects.

Urban Renewal Bonds/Tax Increment Financing

Urban Renewal Districts have the authority to issue tax increment bonds for the purpose of urban renewal and redevelopment. Tax increment financing uses property tax revenues generated from increases in assessed value within an urban renewal area to pay the cost of the public improvements which generated those increases. This special allocation (the "Tax Increment") is used for the payment of debt service on urban renewal bonds. In order to determine the amount of the Tax Increment allocation, the total taxable assessed value in the Project Area is set at the time of adoption of the Plan and is referred to as the frozen base value (the "Base Value"). Each year the County Assessor segregates the assessed value within the Project Area into two parts: (a) the Base Value; and (b) the difference between the total taxable value and the Base Value (the "Incremental Value"). Revenues derived from the application of the tax rate to the amount of the Incremental Value are deposited in the Debt Service Fund. This revenue (the "Tax Increment Collections"), along with the interest earned are used to repay debt incurred to finance projects within the Project Area.

Ballot Measure 5 impacts the collection of tax increment revenues. The tax rate limitation contained in the Measure limits property tax collections when overlapping taxing jurisdiction's rates on a particular property exceed the maximum permitted rates. The tax limitation therefore causes the urban renewal collection to compete with other taxes when the overlapping rates exceed $10 per thousand.

In summary, the revisions to the urban renewal statutes (ORS 457), enacted in response to the Tax rate limitation, have brought four basic changes to tax increment financing in the State of Oregon. First, jurisdictions with urban renewal agencies may now choose to collect only the amount of tax increment revenue required for Bonded Indebtedness, thereby avoiding competing between Tax Increment and other general tax collections as levies are reduced by the limits. Second, collections for urban renewal bonds are now itemized on property tax bills. Third, the new property value created in urban renewal areas by the urban renewal efforts will become immediately available for the benefit of taxing jurisdictions, creating additional revenue before the retirement of the urban renewal debt. Last, the law now requires that urban renewal plans contain a clause describing either a date after which no more indebtedness will be incurred, or a maximum amount of indebtedness to be incurred.

Special Tax Revenue Bonds

Cities may issue revenue bonds based on the expected receipt of special taxes. Examples of such revenues are gas taxes, hotel-motel taxes, or systems development charges. Generally speaking, the more predictable the revenue source, the more "bondable" it is. These types of bonds are more complicated to issue and usually restrict the other uses of the dedicated revenues so that the bond holders can be assured of timely payment.

The use of gas taxes or other special transportation revenues to secure a revenue bond issue is a relatively new form of financing in Oregon. Prineville is one of only a few cities who have issued gas tax revenue bonds. In many cases, local governments have become accustomed to using state gas tax revenues solely for maintenance needs. Using gas tax revenues to pay debt service on revenue bonds instead of funding maintenance, would require that the City either reduce the maintenance budget or provide some other source of funding for maintenance needs.

Certificates of Participation

Certificates of participation *(COPs)* are a form of lease financing that could conceivably be used for street improvements. In lease financing, the municipality enters into a long term capital lease agreement to use and/or construct a facility. At the end of the lease, anywhere from 1 to 20 years, the title to the facility is turned over to the municipality. In most instances these leases are subject to annual appropriation in the municipality's budget process and are therefore a less secure (higher interest rate) method of borrowing.

One possible structure of a transportation-related COP issue would have the City pledge gas tax, SDC or other specific revenues to the payment of the COPs and in addition, would allow the appropriate General Fund revenues to cover any shortfall in revenues available to pay debt service. To the extent that General Fund revenues were required to pay debt service, these revenue would not be available for other city programs and services typically funded from the General Fund. To the extent that Measure 5 limits the ability of the City to levy property taxes through its tax base, the competition amongst city programs for available General Fund revenues will likely limit the attractiveness of pledging the General Fund for payment of debt service on a COP.

Recommended Local Funding Sources

The range of alternative transportation funding mechanisms was reviewed to determine the most feasible methods available to meet the identified funding needs. A funding package combining State, County and City Road Funds, system development charges as well as general obligation bond financing and local vehicle registration fees appears to represent the most feasible funding strategy available to the City to meet expected capital and maintenance funding needs.

This funding plan was developed after carefully reviewing the feasibility of the other financing options. The effectiveness of the City adopting a local gas tax was considered; however, although this may produce significant revenues, the political feasibility of this option is questionable unless it is imposed by the three counties in the region. For example, if the three counties, Deschutes, Crook and Jefferson all decided to increase gas taxes by the same amount, the cities close to the borders of each county would not have to worry about losing business to the other counties. If the City wanted to pursue this funding option, the City would have to coordinate with all the other jurisdictions in the region.

A modest county-wide vehicle registration fee ($10 per year) would yield an estimated $5.43 million county-wide over the next 20 years. In lieu of statewide funding measures a local vehicle registration might be supported in Crook County for use on local transportation projects.

The possibility of creating an urban renewal district was also explored. However, none of the areas where there are needed road improvements are considered blighted areas and therefore would be unlikely to be eligible to become an urban renewal district. In addition, the City of Prineville has no existing assets which it is able to sell in order to generate revenue for roads. The Prineville TSP Financial Plan, summarized previously in Table 11-1, includes the proposed local revenue sources utilizing the recommended funding measures identified in Table 11-9.

Table 11-9
Recommended Funding Sources

Funding Source/Rate	ADDITIONAL REVENUE
Transportation SDC	*$1.6 (estimate)*[1]
City-Wide Street Bond - 20 Years	*$2.2 million*
$0.50 per $1,000 assessed value	
Local Vehicle Registration Fee	*$3.17 million for Prineville UGB*
$10 per vehicle per year	

For the purposes of illustrating the impact of these new funding measures a simplified summary is provided based on a typical[2] household (dwelling) in Prineville. Table 11-10 summarizes the added expenses for a "typical" dwelling to pay for needed transportation system improvements in the unincorporated areas of Prineville through these measures. Beginning in 1999, each typical dwelling would pay $20 per year in added vehicle registration fees. The Road Bond would add $2.2 million in local property tax over 20 years, totaling $60 in annual expense to the typical dwelling.

Table 11-10
Added Cost of New Transportation Funding Measures

New, City-Wide Transportation Revenue Measures	Added Annual Expense (1998 dollars) for Typical Dwelling: in 1998
Local Vehicle Registration Fee ($10/year)	$20
Road Bond ($.50 per $1,000 assessed value)	$60
TOTAL	$80

Additional evaluation of the economic impact of any new tax and bonding measures, particularly a local gasoline tax should be completed before a public vote and eventual implementation (assuming voter approval). Furthermore, the introduction of new local funding measures will require significant public support. Those measures adopted by the County will require definition of local programs to administer the fee and/or tax collection programs

[1] Estimated for transportation capacity improvements based on an average rate from neighboring Central Oregon communities - See Prineville Transportation SDC Methodology Draft - 1998.
[2] Single-family dwelling assessed at $120,000, with 2 automobiles.

Summary

Like other cities in the state and nation, Prineville faces challenges in providing a local transportation system able to meet the needs of its citizens. Having identified a total of over $26 million in needed transportation system improvements, the City must develop a strategy for funding its share of the need. The potential participation of the Oregon Department of Transportation in funding of $ 6.36 million in state highway and possibly off-system improvements in the City is a significant step in meeting the overall need.

The City of Prineville should coordinate with ODOT and the Governor's office to enhance the State's investment levels for Highway 126 and off-system City street improvements. Further State investment on these Prineville projects are consistent with the Governor's Growth Management Initiative to maintain and enhance downtown areas a direct and effective growth management and livability policy.

A combined funding package including general obligation debt , local vehicle registration fees and system development charges represents the preferred funding strategy. The City of Prineville should consider immediate adoption of enabling and methodology ordinance to implement a transportation SDC based on a minimum fee rate approximating the average of neighboring Central Oregon Communities. The actual transportation SDC fee rate will likely require consideration of a number of issues, including:

- Project cost and SDC fee rates for other infrastructure needs (water, sewer, parks, etc.); and,
- Economic competitiveness of SDC fee rates in other Central Oregon communities (both Bend and Redmond are considering increases in their current SDC rates).

And finally, depending on the nature of individual transportation improvement projects, it may be possible to further diversify the Prineville funding base through access to other revenue sources such as local improvements districts, the State Special Public Works Fund, ODOT's Immediate Opportunity Grants, and developer contributions.

APPENDIX A
SUMMARY OF EXISTING PLANS AND POLICIES

The following plans and reports are summarized in this appendix:

STATE OF OREGON

I. Interim Corridor Strategy for the Sisters to Ontario Corridor (OR Highway 126/US Highway 26) (1997)

II. 1998 Oregon Highway Plan (Draft Update)

CROOK COUNTY

III. The Crook County - Prineville Area Comprehensive Plan (1978)

IV. Crook County Transportation System Plan (1997)

CITY OF PRINEVILLE

V. Airport Master Plan (1995)

VI. City of Prineville Downtown Enhancement Plan (1997)

VII. City of Prineville Draft Comprehensive Plan (1997)

VIII. City of Prineville Land Development Ordinance No. 1057 (1998)

STATE OF OREGON

I. Interim Corridor Strategy for the Sisters to Ontario Corridor (OR Highway 126/US Highway 26) (November 1997)

This document proposes an interim strategy and objectives for the operation, preservation and enhancement of transportation facilities within the Sisters to Ontario Corridor. The interim corridor strategy covers a 20 year planning horizon, building upon federal, state and local transportation and land use policies and plans, together with limited technical analysis and comprehensive consultation with stakeholders in the corridor.

Background - Prineville issues

The City of Prineville Railway is described as a Class III short line that connects Prineville with the Bend Branch of the Burlington Northern Railroad, 18 miles north of Redmond. This rail line follows the Crooked River Valley rather than the route followed by OR Highway 126. Traffic density on the line is less than one million gross tons per year and the track is maintained to Federal Rail Road Administration's Class 2 standards which will permit speeds up to 25 mph with no dimensional restrictions. The maximum load limit is 263,000 pounds. The existence of the railroad keeps the equivalent of almost 9,000 trucks a year off the highways in the Prineville area. There is a truck to rail intermodal facility in Prineville.

The Prineville Airport is described as being located southwest of Prineville on the north side of OR Highway 126. The airport is located on a 400-acre site with access provided directly off of OR Highway 126. A courtesy car is provided at the airport for incoming pilots and passengers to make the short 2-mile trip into Prineville for food and other business.

The airport has two active runways that can accommodate small and some large general aviation aircraft. The primary runway, is oriented in an east-west direction, and is defined as Runway 10/28. Runway 10/28 measures 5,000 feet long and is 60 feet wide with no parallel taxiway. The secondary runway, Runway 15/33 is oriented north-south and measures 4,000 feet long and 40 feet wide. Both runways are equipped with runway lighting. The airport provides local access and supports economic development. In 1993 there were 4,082 take off and landings at the Prineville Municipal Airport.

The Corridor Strategy addresses public transportation well, noting that Greyhound Bus Lines and the intercity bus service, The People Mover, both provide service to Prineville. It is also noted that in Crook County, the Soroptomists International of Prineville provides dial-a-ride service within a 5-mile radius of Prineville.

The following Corridor Objectives are of particular relevance to the City of Prineville:

Objective RC 3 - Rail Service

- Work with the City of Prineville Railway and Oregon Eastern Railway to maintain and upgrade track to allow a minimum speed of 25 mph whenever upgrading can be achieved with a favorable benefit cost ratio.

Objective RC 6 - Air Service

- Support airport facility improvements identified in the current airport master plans for Prineville Municipal, John Day State, and Ontario Municipal Airports.

Objective HC 1 - Capacity Improvements

At the present rates of growth with no improvements, the moderate congested areas will become more congested with high congestions and stop-and-go traffic expected at the intersections of OR Highway 126 and US 97 in Redmond, *OR Highway 126 and US 26 in Prineville* and OR Highway 201 and US 30 in Ontario by the year 2016.

- Evaluate the need, technical feasibility and public acceptance of a one-way couplet through downtown Prineville to alleviate traffic congestion in the update of the Prineville Transportation System Plan.

- Determine the cost-benefit of operational improvements at the intersections of OR Highway 126 and US 26 in Prineville....

- Work with local governments to develop and adopt land use ordinances to preserve the capacity and level of service of state highways.

Objective S 1 - Facilities and Access Management

- Develop access management categories and strategies for urban highway segments. Adopt the most restrictive access management category for each urban highway segment, consistent with existing and planned adjacent land uses, as a component of local Transportation System Plans.

Objective S - 4

OR Highway 126 provides the main access acres the Crooked River, limiting emergency response to and from the City of Prineville.

- Explore alternative emergency access to the city of Prineville in the development of the Crook County Transportation System Plan.

Objective SL 1 - Transportation Planning

- In cooperation with local jurisdictions develop and implement Transportation System Plans (TSPs) for the cities of Sisters, Redmond, Prineville, Ontario and Deschutes and Malheur Counties.

Objective SL 2 - Airport Land Use Compatibility

- In response to state directives develop and implement land use ordinances to protect the safety and operation of airports in the corridor.

Objective EG 1 - Energy Consumption

- Work with major employers in the corridor to examine methods to reduce energy consumption through the use of such techniques as carpooling, increased use of public transit and intercity bus and reduction in trips such as telecommuting and compressed work weeks.

- Explore opportunities to enhance telecommunication services though out the corridor.

ED 1 - Rail Road Preservation

The City of Prineville Railway keeps an equivalent of 9,000 trucks, that transport all types of cargo, a year off of the highway. With growth and development in and around the Bend area, comes an increased need to transport garbage to regional disposal facilities.

- Work with local governments and the City of Prineville Railway to upgrade trackage and reload facility to transport garbage and to continue to transport wood products and other local commodities.

II. 1998 Oregon Highway Plan (Draft Update)

The Draft 1998 Oregon Highway Plan defines policies and investment strategies for Oregon's state highway system for the next 20 years. The Draft Plan is expected to be adopted in 1998. It further refines the goals and policies of the Oregon Transportation Plan and is part of Oregon's Statewide Transportation Plan. The Draft Plan has four main elements:

- The **Vision** presents a vision for the future of the highway system, describes economic and demographic trends in Oregon and future transportation technologies, and summarizes the policy and legal context of the Highway Plan.

- The **Description of the Highway System** contains information on the current highway system and a preliminary highway needs analysis.

- The **Policy Element** comprises five policy areas: system definition, system management, access management, travel alternatives, and environmental and scenic resources.

- The **System Element** (to be developed) will contain an evaluation of various ways to carry out the Policy Element, a description of the preferred investment strategy, and an implementation strategy.

Goal 1: System Definition

To maintain and improve the safe and efficient movement of people and goods and contribute to the health of Oregon's local, regional, and statewide economies and livability of its communities.

Policy 1A: State Highway Classification System

It is the policy of the State of Oregon to develop and apply the state highway classification system to guide ODOT priorities for system investment and management.

Policy 1B: Special Purpose Highway Designations

It is the policy of the State of Oregon to make special land use, freight route, Scenic Byway, and lifeline route designations part of the highway classification system to define unique financing, management, and design needs and appropriate strategies.

Policy 1C: Land Use and Transportation

It is the policy of the State of Oregon to favor local accessibility in designated Special Transportation Areas (STAs) and to maintain or improve through transportation functions on highway system outside of STAs.

Policy 1D: State Highway Freight System

It is the policy of the State of Oregon to balance the need for movement of goods with other uses of the highway system, and to recognize the importance of maintaining efficient through movement on major truck freight routes. On designated state freight routes other than within a Special Transportation Area, performance standards appropriate to the movement of freight by truck shall prevail.

Policy 1E Scenic Byways

It is the policy of the State of Oregon to preserve and enhance designated Scenic Byways, and to consider aesthetic and design elements along with safety and performance considerations on designated Byways.

Policy 1F: Lifeline routes

It is the policy of the State of Oregon to provide a secure lifeline network of streets, highways and bridges to facilitate emergency services response and to support rapid economic recovery after a disaster. The lifeline network will focus on serving those communities which are particularly susceptible to isolation by virtue of their limited highway access.

Policy 1G: Level of Service (LOS) Standards

It is the policy of the State of Oregon to establish LOS standards whose purpose is to maintain acceptable and reliable levels of intercity mobility on the state highway system. ODOT will use these LOS standards to guide the Department's transportation planning, design and operations decisions. These standards shall also be used for evaluating the impacts on state highways of amendments to functional plans, acknowledged comprehensive plans and land use regulations pursuant to the Transportation Planning rule (OAR 660-12-060).

ODOT's objective is to maintain LOS at or above the standards contained in Tables 1G.1 and 1G.2 over a 20-year time horizon. The listed LOS standards are accompanied by minimum volume to capacity ratios which must be met in order to comply with the LOS standards in the tables. Table 1G.1 contains the standards for all state highway sections located outside of the Portland metropolitan area urban growth boundary (UGB). Table 1G.2 contains the standards for highway sections located within the Portland metropolitan area UGB. ODOT will consider adopting alternative LOS standards for other MPOs that adopt enforceable plans which meet state objectives for multi modal transportation vehicle travel reductions, air quality and compact urban development.

Table 1G.1:
LOS Standards and Equivalent Volume to Capacity Ratios
for Design Hour Operating Conditions Through a 20-Year Horizon for State Highway Sections
Located Outside of the Portland Metropolitan Area UGB

Highway Category	**Land Use Area**					
	STA	MPO Urban	Other Urban	Urbanizable	Rural Community	Other Rural
Interstate	n/a	D (.80)	C (.70)	C (.70)	C (.60)	B (.50)
NHS Freight	D (.80)	D (.80)	C (.70)	C (.70)	C (.65)	B (.50)
NHS Other	E (.95)	D-E (.85)	C-D (.75)	C-D (.75)	D (.70)	B (.55)
Intermodal Connector	E (.95)	D-E (.85)	D (.80)	D (.80)	D (.70)	B (.55)
Regional	E (.95)	D-E (.85)	D-E (.85)	D (.80)	D (.70)	C (.75)
District/Local	E (.95)	E (.90)	D-E (.85)	D-E (.85)	D (.85)	C (.75)

Policy 1H: Major Improvements

It is the policy of the State of Oregon to maintain highway performance and improve safety by improving system efficiency and management before adding capacity ODOT will work in partnership with regional and local governments to address these highway performance and safety needs.

Goal 2: System Management

To work with local jurisdictions and federal agencies to create an increasingly seamless transportation system with respect to the development, operation and maintenance of the highway and road system that:

- Safeguards the state highway system by maintaining functionality and integrity;

- Ensures that local mobility and accessibility needs are met; and
- Enhances system efficiency and safety.

Policy 2A: Interjurisdictional Partnerships

It is the policy of the State of Oregon to establish cooperative interjurisdictional partnerships to make more efficient and effective use of the limited resources to develop, operate, and maintain the highway and road system. These partnerships are two-way relationships that enable federal agencies, cities and counties to assist with the development, operation and maintenance of the local road system.

Policy 2B: Off-system Improvements

It is the policy of the State of Oregon to consider providing state financial assistance to the local jurisdictions to develop, enhance, and maintain off-system improvement when:

- *There is a positive cost-benefit ratio, the off-system costs are less than on-system costs, and/or the benefits to the state system are equal to or greater than those achieved by investing in on-system improvements;*
- *Local jurisdictions adopt land use, access management and other policies and ordinances to assure the continued benefit of the off-system improvement to the state highway system;*
- *Local jurisdictions agree to provide advance notice at ODOT of any land use decision that may impact the off-system improvement in such a way as to adversely impact the state highway system; and*
- *Local jurisdictions agree to a minimum maintenance level for the off-system improvement that will assure the continued benefit of the off-system improvement to the state highway system.*

Policy 2C: Interjurisdictional Transfers

It is the policy of the State of Oregon to consider, under appropriate conditions, interjurisdictional transfers that:

- *Rationalize and simplify the management responsibilities along a particular roadway segment or corridor;*
- *Reflect the appropriate functional classification of a particular roadway segment or corridor;*

- *Lead to increased efficiencies in the operation and maintenance of a particular roadway segment or corridor.*

Policy 2D: Public Involvement

It is the policy of the State of Oregon to ensure citizens, businesses, regional and local governments, state agencies, and tribal governments have opportunities to be involved in decisions regarding proposed policies, plans, programs, and improvement projects that affect the state highway system.

Policy 2E: Intelligent Transportation Systems

It is the policy of the State of Oregon to consider a broad range of ITS services to improve system efficiency and safety in a cost-effective manner. Deployment of ITS shall reflect the user service priorities established in the Oregon Intelligent Transportation Systems Strategic Plan. Specifically:

- Incident Management
- En-route Driver Information
- Traffic Control (Arterials and Freeways)
- Route Guidance
- Commercial Vehicle Electronic Clearance
- Pre-trip Travel Information
- Public Transportation Management

Policy 2F: Traffic Safety

It is the policy of the State of Oregon to continually improve safety on the highway system using solutions involving engineering, education, enforcement and emergency medical services.

Policy 2G: Rail and Highway Compatibility

It is the policy of the State of Oregon to increase safety and transportation efficiency through the reduction and prevention of conflicts between railroad and highway users.

Goal 3: Access Management

To employ access management strategies to ensure safe and efficient highways consistent with their determined function, ensure the statewide movement of goods and services, enhance community livability and support planned development patterns, while recognizing the needs of motor vehicles, transit, pedestrians and bicyclists.

Policy 3A: Classification and Spacing Standards

It is the policy of the State of Oregon to manage the location, spacing and type of street intersections, approach roads, median openings and traffic signals on state highways.

Policy 3B: Medians

It is the policy of the State of Oregon to manage the placement of medians and the location of median openings on state highways to enhance the efficiency and safety of the highways, and influence and support land use development patterns that are consistent with approved Transportation System Plans.

Policy 3C: Interchange Access Management Areas

It is the policy of the State of Oregon to manage grade-separated interchange areas to ensure safe and efficient operation between connecting highways.

Policy 3D: Variance Policy and Procedures

It is the policy of the State of Oregon to manage requests for minor and major deviations from adopted access management standards and policies through an application and appeals process to ensure statewide consistency.

Goal 4: Travel alternatives

To optimize the overall efficiency and utility of the state highway system through the use of alternative modes and travel demand management strategies.

Policy 4A: Efficiency of Freight Movement

It is the policy of the State of Oregon to maintain and improve the efficiency of freight movement on the State's highway system and access to intermodal connections. The State shall seek to balance the needs of long distance and through freight movements with local transportation needs on highway facilities that serve both local and long distance trips.

Policy 4B: Alternative Passenger Modes

It is the policy of the State of Oregon to advance and support alternative passenger transportation systems where travel demand, land use, and other factors indicate the potential for successful and effective development of alternative passenger modes.

Policy 4C: High Occupancy Vehicle (HOV) Facilities

It is the policy of the State of Oregon to utilize HOV facilities to improve the efficiency of the highway system in locations where travel demand, land use, transit, and other factors are favorable to their effectiveness. A systems planning approach shall be taken, in which

individual HOV facilities complement one another and the other elements of the multimodal transportation system.

Policy 4D: Transportation Demand Management

It is the policy of the State of Oregon to support the efficient use of the state transportation system through investment in transportation demand management (TDM) strategies.

Policy 4E: Park and Ride Facilities

It is the policy of the State of Oregon to encourage the efficient use of the existing transportation system and to seek cost-effective expansion of the highway system's passenger capacity through development and use of park-and-ride facilities.

Goal 5: Environmental and Scenic Resources

To protect and enhance the natural and built environment throughout the process of constructing, operating, and maintaining the state highway system.

Policy 5A: Environmental Resources

It is the policy of the State of Oregon that the design, construction operation, and maintenance of the state roadway system should maintain or improve the natural and built environment including air quality, fish passage and habitat, wildlife habitat and migration routes, sensitive habitats (i.e., wetlands, designated critical habitat, etc.), vegetation, and water resources where affected by ODOT facilities.

Policy 5B: Scenic Resources

It is the policy of the State of Oregon that scenic resources management is an integral part of the process of creating and maintaining the highway system. The State of Oregon will use best practices to protect and enhance scenic resources in all phases of highway project planning, development, construction, and maintenance.

Draft OHP Appendix B: Access Management Policy

Background and Purpose

Oregon's state highway system is an essential component of this state's transportation system and represents a significant investment by its citizens. With limited highway capacity and limited finances, the potential for highway expansion also is limited. Therefore, the State must maximize the use of existing facilities. Managing access to the state highway system is an essential strategy to protect the safety, efficiency and investment of Oregon's existing and planned highways.

Access Management Goal

To employ access management strategies to ensure safe and efficient highways consistent with their determined function, ensure the statewide movement of goods and services, enhance community livability and support planned development patterns, while recognizing the needs of motor vehicles, transit, pedestrians and bicyclists.

Classification and Spacing Standards

It is the policy of the State of Oregon to manage the location, spacing and type of street intersections, approach roads, median openings and traffic signals on state highways.

Access Management Spacing Standards and Guidelines

The criteria and methods for determining spacing of signalized intersections, median treatments, driveways and street approaches and deviations thereof, are addressed in separate background papers, policies and standards. The values for the most frequently used access management standards are shown in Tables B1 and B2,

Table B1

Access Management Classification Standards for Freeways and Limited Access Highways

The Access Management Technical Committee is reviewing the spacing standards. (TBA) indicates that the standard has not yet been determined.

Access Management Classification *	Area *	Signal Spacing **	Median control *	Interchange Spacing *	Intersection Spacing*
FREEWAYS					
Interstate (NHS)	Urban Dev. Urban Rural	Not Used Not Used Not Used	Nontraversible Nontraversible Nontraversible	(TBA) 5 km (3 mi.) 10 km (6 mi.)	Not used Not used Not used
Non-Interstate (NHS)	Urban Dev. Urban Rural	Not used Not used Not used	Nontraversible Nontraversible Nontraversible	(TBA) 5 km (3 mi.) 10 km (6 mi.)	Not used Not used Not used
LIMITED ACCESS HIGHWAYS (NHS)	Urban Dev. Urban Rural	(TBA) None or 800 m (2640 ft.) Not used	Nontraversible/ Traversible Nontraversible/ Traversible Nontraversible/ Traversible	(TBA) 3 km (1.9) mi.) 5 km (3 mi.)	(TBA) 800 m (2640 ft.) *** 1.6 km (1 mi.) ***

NOTES: * Refer to the section of this document where the topic is discussed in detail.
** Signals are not permitted on Freeways, but may be allowed on Urban Limited Access Highways.
*** these may be full-movement, at-grade intersections.

Table B2: Access Management Spacing Standards for Statewide, Regional and District Highways
The Access Management Technical Committee is reviewing the spacing standards. (TBA) indicates that the standard has not yet been determined.

Access Mgt Classification	Lanes	Area *	Signal Spacing **	Median Control *	Median Openings		Approaches	
					Type	Spacing	Type	Spacing
STATEWIDE	Multi-	Urban	(TBA)	(TBA)	(TBA)	(TBA)	(TBA)	(TBA)
		Urban	800 m (2640 ft)	Nontraversible	Directional	400 m (1320 ft.)	Right	300 m (990 ft.)
		Rural	Not used	Nontraversible	(TBA)	800 m (2640 ft.)	Right	400 m (1320
	Two	Urban	(TBA)	Nontraversible	(TBA)	(TBA)	(TBA)	(TBA)
		Urban	0.8 km (0.5 mi.)	None/traversibl	NA/CTWLT	NA	L/R turns	300 m (990 ft.)
		Rural	Not used	Traversible	(TBA)	NA	L/R turns	400 m (1320
REGIONAL	Multi-	Urban	(TBA)	(TBA)	(TBA)	(TBA)	(TBA)	(TBA)
		Urban	800 m (2640 ft.) 800 m (2640 ft.)	Traversible Nontraversible	(TBA)/full	NA/100m (330	L/R turns	200 m (660 ft.)
		Rural	Not used Not used	Traversible Nontraversible	(TBA) full	NA/200m (600	L/R turns	300 m (990 ft.)
	Two lane	Urban	(TBA)	(TBA)	(TBA)	(TBA)	(TBA)	(TBA)
		Urban	800 m (2640 ft.)	None/traversibl	NA/CTWLT	NA	L/R turns	200 m (660 ft.)
		Rural	Not used	None	NA	NA	L/R turns	300 m (990 ft.)
DISTRICT	Multi-	Urban	(TBA)	(TBA)	(TBA)	(TBA)	(TBA)	(TBA)
		Urban	NA/(TBA)	None/traversibl /Nontraversible	NA/(TBA)	None	L/R turns	100 m (330 ft.)
		Rural	800 m (2640 ft.)	None	NA	None	L/R turns	200 m (660 ft.)
	Two lane	Urban	(TBA)	(TBA)	(TBA)	(TBA)	(TBA)	(TBA)
		Urban	400 m (1320 ft.)	None	None	None	L/R turns	100 m (330 ft.)
		Rural	800 m (2640 ft.)	None	None	None	L/R turns	200 m (660 ft.)

NOTES: * Refer to the section of this document where the topic is discussed in detail.
** Signals are not permitted on Freeways, but may be allowed on Urban Limited Access Highways.

CROOK COUNTY

III. The Crook County - Prineville Area Comprehensive Plan (1978)

While the comprehensive plan addresses many issues, we reviewed only those sections pertaining to transportation planning. The comprehensive plan provides population projections for Prineville through the year 2000. Its transportation section of the report identifies traffic problems and recommends a series of improvements to be implemented. It also addresses other transportation facilities.

Traffic Problems and Recommend Solutions

The traffic problems identified in the comprehensive plan are located in the residential areas, in downtown core, and the "Y" intersection of Us 26, US126, and Third Street. Recommended improvements are designed to address some of these problems.

Problems identified in the downtown core include:

- Third Street congestion;
- School, residential areas, and Ochoco Creek which dead-end many streets;
- No left turn facilities;
- Insufficient loading facilities;
- Parking;
- Narrow lanes; and
- Heavy vehicle through traffic.

Problems identified in residential areas include:

- Wide streets which encourage high speeds;
- High maintenance costs of wide streets; and
- Traffic bypassing downtown congestion.

Problems identified at the "Y" intersection include:

- Hazardous design;
- Dangerous merge; and
- Narrow lanes.

The comprehensive plan provides a list of recommended improvements but does not provide any details about them. Many of these improvements do not address the problems described previously; however, they are all designed to improve traffic circulation within the city of Prineville. They include:

a. Extend NW Ninth Street to Madras Highway as a minor arterial.
b. Improve Laughlin Road to a minor arterial level.
c. Purchase right-of-ways for the extension of Lynn Boulevard to the "Y" intersection.
d. Construct a minor arterial from Laughlin Road to Tenth Street.
e. Improve the Lamonta Road/Main Street intersection
f. Improve Tenth street fro Main Street to Ninth Street at Locust Street

g. Designate and sign Laughlin road/Tenth Street as a truck route.
h. Bridge Court Street and Beaver Street across Ochoco Creek.
i. Improve McKay Road to Barnes Butte Road to principal arterial.
j. Improve Harwood Street to minor arterial.
k. Improve Lamonta Road to minor arterial.

Some of the arterial improvements were completed as part of the 10-year roadway resurfacing program began in 1983/1984. None of the extensions have been constructed.

Other Transportation Facilities

The plan also addresses other transportation facilities including the railroad, transit, pedestrian, and bicycle. It provides goals and guidelines rather than recommending specific improvements to these services.

The railroad service is an important part of Prineville industry. The goals of the City were to improve the safety of railroad crossings and to reduce time delays at crossings. It would also promote the advantages of rail service to potential new industry.

The Prineville transit service consists of taxis, out-of-town bus service, and a dial-a-ride senior citizen bus service. The City goals were to encourage transit usage and to encourage private efforts to supply additional shuttle services.

In 1978, pedestrian facilities were extremely limited outside of the downtown core and bicycle facilities were almost non-existent. Goals included preserving space on existing roadways for at least one bicycle/pedestrian path and insuring that activity centers have bicycle/pedestrian access. In the future, the City was supposed to require all subdivisions to provide pedestrian and bicycle access.

These goals cannot be easily evaluated for implementation. Railroad service continues to be an important part of the commercial transportation. Transit service has probably not changed considerably since the comprehensive plan was enacted. Some improvements may have been made to bicycle and pedestrian access. Main Street has a designated bike path and a second path runs along Ochoco Creek.

IV. Crook County Transportation System Plan (July 1997)

The Crook County Transportation System Plan (TSP) was prepared to consider the County transportation planning needs for the next 20 years. The planning area does not include the Prineville urban area. The TSP found that the County's most heavily traveled roads are the State highways and that, with the exception of Highway 126, the highways are well below capacity and will continue to be below capacity by the year 2016. The highest growth is expected to occur on Highway 126 with traffic increases between 85 and 100%.

Several state highway and county road improvements were identified in the County TSP which are adjacent to or near the City of Prineville's UGB:

- **Ochoco Highway and Barnes Butte Road:** Construct a left turn refuge lane on the Ochoco Highway near its intersection with Barnes Butte Road.

- **Paulina Highway and Juniper Canyon Road**: Reconfigure the intersection to provide adequate capacity for all movements. Options include:

  1. Juniper Canyon becomes the through road onto Paulina Highway and existing Paulina Highway be swung into a "T" intersection at the curve with the stop sign. This suggestion is made anticipating that Paulina Highway has less traffic than Juniper Canyon Road.

  2. Swing Paulina Highway to the north as it heads northwest toward the city of Prineville and provide a left turn merge lane from Juniper Canyon Road onto the Paulina Highway.

  3. A combined solution is recommended that would provide an all-way stop with an eastbound slip lane for the right turn onto Juniper Canyon Road and an outside through lane for westbound traffic on Paulina Highway.

- **Millican Road from Highway 126 to Highway 20:** This road was proposed as an alternate truck route by the TAC. Portions of the road have been paved through past County projects. The TAC identified this project as important to the economic development of Crook County.

- **Add Shoulders to Five Rural Roads:** Adding 2 to 6 foot shoulders to the listed rural roads to provide facilities for pedestrians and bicyclists and increase the safety and longevity of the roadway system: Alfalfa Road, Barnes Butte Road, Houston Lake Road, Juniper Canyon Road to Prineville Reservoir, and McKay Road (Prineville UGB to Gerke Market Road).

The County TSP also recommended street standards which were narrower than the previously adopted County standards as well as the currently adopted City standards.

Crook County TSP Recommended Rural Road Standards

Street Classification	Pavement Width	Right-of-Way
Local	24'-28'	50'
Collector	30'-40'	60'
Arterial	36'-40'	70'

CITY OF PRINEVILLE

V. Prineville Airport Layout Plan and Airport Layout Plan Report (1995)

The Prineville Airport is part of the Oregon Aviation System Plan (OASP). It is owned and operated by Crook County and the City of Prineville to serve the aviation-related needs of the residents of the City of

Prineville and Crook County. This Plan was prepared by Morrison Maierle, Inc. to update the 1986 Airport Layout Plan and the 1979 Master Plan. The following concerns were addressed in the study: locating agricultural applicator aircraft operations; protection of Runway Protection Zones; encroachment of commercial enterprises onto airport environs; location of airport access road; location of terminal and FBO building; utilization of terminal and airport industrial area; location of additional aircraft hangar area; future location and type of aviation fuel storage facility; and, utilization of triangular area inside runways and taxiways.

VI. City of Prineville Downtown Enhancement Plan (1997)

The object of this Plan is to reinforce the downtown as an attractive center for community life, offering a diverse mix of shopping, business, entertainment, and recreation in an environment that is accessible for both residents and visitors. The Enhancement Plan focuses on Prineville's central business district: 3rd Street from Deer Street to Fairview Street. The study area encompasses 44 blocks with the boundaries extending from Deer Street to Fairview Street, and South 2nd Street north to Ochoco Creek. The Enhancement Plan includes an inventory and assessment of condition of existing sidewalks and bike lanes in the downtown.

The emphasis of the Enhancement Plan is on streetscape improvements. Including the following recommendations:

- Street and sidewalk improvements should include using a combination of several materials and forms with specific characteristics deemed important to the success of downtown streetscapes. The proposed sidewalk width of 10 to 12 feet allows the inclusion of trees and other street furniture without compromising ADA requirements or business access.
- Pedestrian flares (extensions) or half-flares are proposed at intersections of major arterials or collectors.
- Driveways should be designed to preserve sidewalk continuity.
- If a one-way couplet is developed, diagonal parking should be limited to the left side of the street, with parallel parking and a bike lane on the right side.
- On side streets that are collectors or local streets, it is recommended that improvements be made to clarify the marking and sizing of parking spaces.
- The City may wish to consider the restriction of the three parking lots it owns or leases to permit parking for downtown employees and other long-term users, freeing on-street parking for short-term (two hour) users.

The Enhancement Plan includes the following roadway dimensions as part of the conceptual alternative roadway improvements suggested for 2nd, 3rd, and 4th Streets.

Prineville Downtown Enhancement Plan
Conceptual Alternative Roadway Improvements

Street	Lanes/Description	Pavement Width	Right-of-Way
2nd St.	9' parallel parking, 6' bike lane, 12' eastbound lane, 13' westbound lane, 14' diagonal parking	54'	80'
3rd St.	9' parallel parking, 11' eastbound lane, 14' turn lane, 11' westbound lane, 9' parallel parking	54'	80'
4th St.	14' diagonal parking, 13' eastbound lane, 12' westbound lane, 6' bike lane, 10' parallel parking	54'	80'

VII. City of Prineville Comprehensive Plan (1997)

The City of Prineville's Comprehensive Plan addresses a wide range of planning issues; this summary focuses on those related to transportation system planning. The Comprehensive Plan applies to the 6832.63 acres within the existing urban growth boundary (UGB), of which 71.5% is developed. Of the remaining vacant land, the net vacant buildable lands within the current UGB are as follows: Residential = 418.43 acres, Commercial = 38.17 acres, and Industrial = 211.69 acres (includes 157.47 acres of FAA Lease Only Lands).

The Comprehensive Plan estimates the County's 1996 population to be approximately 17,500 (PSU estimate = 15,900) with an estimated 1996 Prineville UGB population of 9,500, an incorporated population of 6,300 and an overall density of 1.94 persons per acre. Based on a projected annual growth rate of 2.5%, the UGB population is expected to increase to 15,957 by the year 2017.

Part XII of the Comprehensive Plan is the Transportation Element and includes the following Goal and Objectives. It is the Goal of this Plan Element "To provide for and encourage a safe, convenient and economic transportation system, both to and from the area, and within the UGB area." Relative thereto, the Objectives of this Plan Element are as follows:

1. *To establish a coordinated network of transportation facilities adequate to serve state, regional and local transportation needs;*

2. *To plan for, develop, and maintain a transportation system that is coordinated in such a manner as to supply continuity of movement between modes, and with and between the subject UGB area and other areas of the county, state and region;*

3. *To identify and provide for the transportation needs of the transportation disadvantaged;*

4. *To facilitate the flow of goods and services so as to strengthen the local and regional economy;*

5. *To avoid or minimize the reliance upon any one mode of transportation, and, more particularly to reduce the reliance upon automobile transportation with the UGB area;*

6. *To classify local streets and roads according to the functions served or intended; and*

7. *To minimize adverse economic, social, environmental and energy consequences associated with the transportation and systems therefore.*

Section 4 of the Transportation Element addresses the status of area transportation system plans, noting that the City's TSP has been completed, adopted and reviewed by ODOT and DLCD *(although DLCD has not provided written response and comment)* and found to generally be in compliance with the statewide planning requirements. Section 4 also states that although the City's TSP is scheduled for an update, it is adopted by reference and should be considered a guideline to future transportation decisions within the UGB. It further states that the Transportation Element of the Plan has been developed primarily by incorporating specific elements of the TSP.

Sections 5 through 8 of the Transportation Element address the Oregon Transportation Plan, the transportation planning area in general, the transportation system inventory and functional classifications, and transportation demand management. Section 9 includes guidelines for access management, including Special Access Management Areas. Guidelines for these Special Access Management Areas are summarized in the following table.

Special Access Management Guidelines
(from the City of Prineville Comprehensive Plan)

Roadway	Min. Posted Speed (mph)	Min. Spacings between Driveways and/or Streets[1]	Min. Spacing between Intersections	Area of Application
Ochoco Hwy - Seg. 1[2]	30-50	500 ft	1/4 mi	Hwy 126 from W. UGB to junction w/ Hwy 26
Ochoco Hwy - Seg. 2	25	150 ft	300 ft	3rd/4th St. from junction of Hwys 126 & 26 to Knowledge St.
Ochoco Hwy - Seg. 1[2]	30-50	500 ft	1/4 mi	Hwy 26 from Knowledge St. to E. UGB
Madras-Prineville Hwy[3]	25-50	300 ft	1/4 mi	Hwy 26 from W. UGB to junction w/ Hwy 126
Paulina Hwy	25-50	150 ft	500 ft.	Paulina Hwy from SE UGB to Combs Flat Rd.
O'Neil Hwy[4]	25-50	150 ft.	500	O'Neil Hwy from W. UgB to Hwy 126

Roadway	Min. Posted Speed (mph)	Min. Spacings between Driveways and/or Streets	Min. Spacing between Intersections	Area of Application
McKay Rd./N. Main St.	25-50	150 ft.	500	McKay Rd. From N. UGB to 10th St.
Main St./Crooked R. Hwy. - Seg. 1	25	150 ft.	300	Main St. from 10th to Lynn Blvd.
Main St./Crooked R. Hwy. - Seg. 2[4]	25-50	150 ft.	500	Hwy 27 from Lynn Blvd. To UGB

Notes:
[1] Desirable design spacing (existing spacing will vary)
[2] 1991 OHP Access Management Classification System - Category 4, Urban
[3] 1991 OHP Access Management Classification System - Category 5, Urban
[4] 1991 OHP Access Management Classification System - Category 6, Urban

Section 10 includes the Goals and Objectives from the City's TSP. Section 11 addresses Short-Term Improvements. Section 12 includes major portions of the Street System Plan from the TSP, including recommended improvements. Sections 13, 14, 15 and 16 include portions of the Bikeway Plan, Pedestrian System, Air Service and Other Transportation Modes, respectively. Section 17 includes an implementation program and priority improvements listing. Priority improvements are identified in the following list.

- Install a traffic signal at Third Street and Combs Flat Road.
- Extend Rimrock Road over the Crooked River to connect with Second Street and close the existing Rimrock Road intersection with Highway 126.
- Extend West Ninth Street from Locust Street to Highway 26.
- Add sidewalks to Knowledge Street from Third Street to South Second Street.
- Add sidewalks to Combs Flat Road from Third Street to Lynn Boulevard.
- Construct the West Seventh/Eighth/Ninth Street connector.
- Add sidewalks to First Street from Court Street to Knowledge Street.
- Add sidewalks to Second Street from Court Street to Fairview Street.
- Add sidewalks to Juniper Street from Laughlin Road to First Street.
- Extend Crestview Road eastward to the Crooked River Highway.
- Extend Court Street over the Ochoco Creek to provide another north-south connector.
- Add sidewalks to Elm Street from Loper Avenue to First Street.
- Add sidewalks to Fairview Street from Fourth Street to Lynn Boulevard.
- Construct Baldwin Military Road arterial to south UGB area.
- Construct Highway 27 - Juniper Canyon Road collector.

Section 18, Construction Cost Estimates, states that the capital improvements program (in total) is estimated to cost approximately $20-$25 million (in 1992 dollars). Section 19, Funding Options, includes a

recommended transportation funding strategy which proposes a combined funding package including State and County Road Fund money in the short term and general obligation debt and system development charges in the longer term.

Section 20, Travel Forecasts, describes the methodology and estimates for 2015 traffic. Section 21, Transportation System Classification Standards, references the current (1978) street right-of-way and roadway surfacing standards [These have since been superseded by the 1998 Land Development Ordinance (reviewed below)], as well as the Draft Small Jurisdiction Model Ordinance to Implement the Transportation Planning Rule (ODOT, 1995). Section 22 lists planning guidelines and support documents. Section 23 identifies policies that are intended to guide development and manage growth in the City.

VIII. City of Prineville Land Development Ordinance No. 1057 (1998)

The Land Development Ordinance addresses a wide range of issues, this summary will focus on those specific to transportation only. Section 1.020 includes the following purpose statement, *"To lessen congestion by providing adequate transportation facilities for all modes of travel".*

All of the residential, commercial and industrial Zones (except M-2) identified in the Ordinance permit the following transportation-related uses outright:

- Maintenance and repair of an existing transportation facility, including reconstruction, surfacing, minor widening or realignment of an existing road within an existing right-of-way, including the addition of turn refuges at existing street intersections, but not including the addition of "through" travel lanes.
- Replacement of bridges and other stream or canal crossing facilities.
- Bikeways, footpaths, and recreation trails.
- Construction of new streets and roads, that are included within locally adopted Transportation Systems Plans (as may be amended), the State Highway Transportation Improvement Plan, or as has been identified in a specific development review and approval process.

Other transportation-related uses are permitted conditionally in all residential, commercial and industrial Zones (unless specified otherwise).

- The addition of "through" travel lanes to an existing street within the existing right-of-way, and/or the extension of an existing street not previously planned. (Type I Conditional Use - except in C-1, C-2, C-3, C-4, C-5, M-1, M-2)
- Construction of a new street not set forth within a locally adopted Transportation System Plan, State Highway Transportation Improvement Plan, or previously approved development plan. (Type II Conditional Use - except in C-4, C-5, M-1, M-2)

Within the Airport Zones (AA, AO, AD, AC, AM), the following transportation uses are permitted outright with some variations in the specific Code language, except that within the A-R zone, transportation uses are permitted similarly to other residential uses described above.

- Uses of a public works, public service or public utility nature, including the maintenance or improvement of such, and including runway, taxiway, street or road construction or maintenance activities.

Within the Open Space-Park Reserve Zone (PR), the following transportation uses are permitted outright:

- Normal maintenance, replacement and improvement activities for existing parks, recreation, streets and roads, and other public works facilities.
- The development of parks, recreation areas and facilities, streets, roads, and other public works facilities that were adopted as part of a Plan element and/or a separate Plan document directly related thereto prior to the effective date of this Ordinance, or such development approved as part of an overall development plan in compliance with this Ordinance.

Other transportation-related uses are permitted conditionally in the Open Space-Park Preserve Zone.

- Bridge crossings and support structures therefore. (Type II Conditional Use)
- Public or private utility or public works facilities, including but not limited to, water systems, sewer systems, streets, roads, substations, pumping stations, sewer lift stations, etc. (Type II Conditional Use)

Within the Significant Resource Combining (SR) Zone, if uses permitted outright in the underlying zone are identified as "conflicting" they are become Type I Conditional Uses. The following Conflicting Uses and Activities relate specifically to transportation activities.

Wetlands, and within 100 feet of a "significant wetland"
- Fill for any purpose, usually but not necessarily in conjunction with building, road and roadway construction and siting.

Archaeological Resources
- Any activity requiring excavation.
- Construction activities.
- Activities resulting in permanent coverage of an identified resource or site.

Scenic Resources
- Any permanent use screening, inhibiting or detracting from public view of the subject resource
- Any activity directly altering the scenic value of the resource.
- Alteration of the scenic resource site.

Unique Resources
- Any use identified as having an adverse impact on such designated uses and the identified value(s) thereof.

Historic Resources
- Demolition or alteration

Mineral and Aggregate Resources
- Any permanent use which reasonably precludes the development and use of such resource for the use designated or intended.
- Wildlife habitat area or scenic waterway or highway

Fish and Wildlife Habitat
- Removal of habitat except when associated with habitat improvement.

Groundwater Resources
- Development in areas when the aquifer may be depleted.
- Development that may pollute groundwater.
- Development in areas of high groundwater tables.

Natural Areas
- Utility facilities, including overhead power lines and transmission towers, substations, etc.

Section 4.080 includes design and improvement standards for off-street parking and loading facilities, and other requirements relative to off-street parking and loading facilities. Minimum off-street parking space requirements are identified by use.

Section 4.100, Riparian Habitat, applies in addition to the standards of the SR Zone to areas within 25 feet of the ordinary highwater line or identified stream channel of Ochoco Creek, and 50 feet from the ordinary high water line or identified stream channel of the Crooked River. Within these designated Riparian areas, the following standards are applied to transportation-related uses.

Roadways and Structures shall not be located within said identified riparian areas unless:
- For an approved bridge or other stream crossing; or
- Roadway access is required for an otherwise approved use.

All trees, and at least 50 percent of the understory vegetation shall be retained within identified riparian habitat areas, with the following exceptions:
- Vegetation removal necessary to provide direct access for a water-dependent use, or for new bridge construction, or for routine repair, operation, or maintenance of bridges and highways, or for the necessary construction of a street or highway improvement within an existing right-of-way, or an otherwise approved use.
- Vegetation removal necessary for maintenance of clear vision areas and the removal of roadside hazards.

Section 5.090, Exception for Public Street and Highway Improvements, allows exceptions for some transportation-related projects pursuant to the following language:

Excepting for those activities specifically regulated by this Ordinance, the following public street and highway improvement activities are permitted outright in all zones and are exempt from the permit requirements of this Ordinance.

(1) Installation of additional and/or passing lanes, including pedestrian and/or bike ways, within a street or highway right-of-way as of the effective date of this Ordinance, unless such adversely impacts on-street parking capacities and patterns.

(2) Reconstruction or modification of public roads and highways, not including the addition of travel lanes, where no removal or displacement of buildings would occur, and/or no new land parcels result.

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

(4) Minor betterment of existing public roads and highway related facilities such as maintenance yards, weight stations and rest areas, within a right-of-way existing as of the effective date of this Ordinance and contiguous public-owned property utilized to support the operation and maintenance of public roads and highways provided such is not located within a duly designated Residential Zone, or adjacent to or across the street from a lot or parcel within such a Zone, or in an Open Space-Park Reserve Zone or a Significant Resource Combining Zone.

(5) The construction, reconstruction or modification of a public street or highway that is identified as a priority project in a Transportation System Plan (TSP) or State Transportation Improvement Plan (STIP) that was duly adopted on or before the effective date of this Ordinance.

Section 5.100, Exception for Public Facilities Improvement or Reconstruction, allows additional exceptions for some transportation-related projects pursuant to the following language:

Minor betterment, improvements, replacement or reconstruction of existing public facilities such as sewer and water lines, storm-water drainage facilities, bikeways, and similar public facilities, sidewalks and other pedestrian ways or facilities, bikeways, and similar public facilities within rights-of-ways and easements for said purposes existing on or before the effective date of this Ordinance, or on contiguous publicly-owned property designated, intended or utilized to support such facilities, or such facilities that are set forth within an adopted Public Facilities Plan or other capital improvements plan duly adopted on or before the effective date of this Ordinance, are exempt from the permit requirements of this Ordinance unless specifically set forth otherwise.

Article 6, Conditional Uses, establishes General Criteria for determining whether or not a Conditional Use shall be approved or denied and General Conditions which may be found to be necessary to avoid a detrimental impact. The following general criteria and conditions could be of particular significance to transportation-related projects:

General Criteria

- The proposal is compatible with the City Comprehensive Plan and applicable Policies set forth thereby.
- That no approval be granted for any use which is or expected to be found to exceed resource or public facility carrying capacity.

General Conditions

- Increasing street width and/or requiring improvements to public streets and other public facilities serving the proposed use, even including those off-site but necessary to serve the subject proposal.
- Designating the size, number, improvements, location and nature of vehicle access points and routes, and requiring pedestrian and/or bicycle ways.

Article 7, Subdivisions and Partitionings, establishes minimum standards governing the approval of land divisions. A statement setting forth proposed types of housing and other uses to be accommodated, and a projection of traffic generation and population is required in a Outline Development Plan. Requirements for approval include the following transportation-related standards:

- The subdivision will not create an excessive demand on public facilities and services required to serve the proposed development, or that the developer has proposed adequate and equitable improvements and expansions to such facilities with corresponding approved financing therefore to bring such facilities and services up to an acceptable capacity level; and (GOAL 11)
- The streets and roads are laid out so as to conform to an adopted Transportation System Plan for the area, and to the plats of subdivisions and maps of major partitions already approved for adjoining property as to width, general direction and in all other respects unless the City determines it is in the public interest to modify the street or road pattern; and
- Streets and roads for public use are to be dedicated to the public without any reservation or restrictions; and Street and roads for private use are approved by the City as a variance to public access requirements.

Section 9.050, Streets and Other Public Facilities, establishes street design and improvement standards and requirements for new development. The proposed street location and pattern is required to be shown on the development plan, and the arrangement of streets must either: (a) provide for the continuation or appropriate projection of existing principal streets in surrounding areas; or (b) conform to a plan for the general area of the development approved by the Planning Commission to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical; and (c) conform to the adopted urban area Transportation System Plan as may be amended.

Section 9.050 also establishes minimum right-of-way and roadway widths for development plans as follows.

Minimum Right of Way and Roadway Widths
from the City of Prineville Land Development Ordinance

Street Classification	Min. ROW Width (feet)	Min. Roadway Width (feet)
One-Way Major Arterial (2 lanes w/parking & bike lanes)	70	46
Two-Way Major Arterial (5 lanes w/bike lanes)	80-100	74
Minor Arterial (3-5 lanes w/bike lanes)	80-100	50-74
Collector (2 lanes w/bike lanes)	60-70	40-50

Local Residential	40-50	32-40
Cul-de-sacs	50	45
Radius for cul-de-sac Turn-Around	40-50	40
Alleys	16	16
Sidewalks	6-12	4-12
Bikeways	4-8	4-8

Section 9.060, Access Management, sets standards for new development for access points to Arterials and Collectors and establishes both general access management guidelines and special access management guidelines (for selected streets) as follows.

General Access Management Guidelines (Desirable design spacing - existing spacing will vary)

Minimum spacing between driveways and/or streets:

Major Arterial	500 feet
Minor Arterial	300 feet
Collector	50 feet
Local Streets	Access to each lot

Minimum spacing between street intersections:

Major Arterial	1/4 mile
Minor Arterial	600 feet
Collector	300 feet
Local Streets	300 feet

The Special Access Management Guidelines are the same as those included in the Comprehensive Plan (see above).

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APPENDIX B
TPR COMPLIANCE TABLE

The following TPR Compliance Table was intended to begin dialogue between the City of Prineville, ODOT and DLCD regarding the status of Prineville's current TPR Compliance, and then make decisions about how to proceed with the TSP Update work program.

Background

The TPR was written with a great deal of ambiguity which can lead to confusion, particularly with the many cross-references between sections. The following table re-organizes and summarizes the TPR by packaging like requirements into a more easily understood summary with the following major sections:

I. **TSP Elements** (what needs to go into a TSP)
I. **TSP Preparation** (how a TSP should be prepared)
II. **Protection of Transportation Street Facilities** (policies and regulations needed to protect land use/transportation systems)
III. **Coordination of Land Use Reviews and Decisions/Land Use Amendments** (policies and regulations)
IV. **Determination of Transportation Needs**
V. **Evaluation and Selection of Transportation System Alternatives**

In addition to the TPR summary, the Table summarizes the following: 1) whether and how Prineville's current Comprehensive Plan, Land Development Code and TSP addresses the TPR requirements; and, 2) a summary and recommendation for policy change(s) or actions need to be taken to achieve TPR compliance.

■ TSP Elements

TPR Requirements	Current Code/Policy Compliance (Yes, No, N/A or Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change or Action
OAR 660-12-020 (2) (b) TSP shall include a road plan including a functional classification consistent with state, regional and local/county TSPs.	Update	Code and TSP define functional classification and basic design elements.	The Prineville TSP includes a functional classification policy and map. ***For roadways within the UGB, modifications may be necessary. This should be done in coordination with the County and County TSP to ensure consistency.***
Road standards for local streets to: 1) Address extensions of existing streets; 2) Connections to existing/planned arterials and collectors; 3) Connections to neighborhood destinations.	1) Yes/Update 2)Yes/Update 3)Yes/Update	1) Code and TSP discuss street extension requirements. 2) Code requires new streets to either provide for the continuation of existing principal streets, conform to a plan for the general area or conform to the TSP. 3) Code and TSP discuss general access requirements.	1) Prineville's local street network planning is referenced in TSP. ***Update maps and text as needed.*** 2) Prineville's local street network planning is referenced in TSP. ***Update maps and text as needed.*** 3) Prineville's local street network planning is referenced in TSP. ***Update maps and text as needed..***
OAR 660-12-020 (2) (C) TSP shall include a description of public transportation services for the disadvantaged including: 1) Identification of inadequacies; 2) Description of intercity bus and passenger rail system; 3) Identification of both existing and planned trunk routes, major transit stops and park-and-ride locations.	1) Yes 2) Yes 3) Yes	1) Identified in the TSP. 2) Bus routes are described in the TSP. Rail is described in the Comp Plan and TSP 3) The Comp Plan and TSP address existing public transportation facilities and existing and projected demand.	1) None 2) None 3) None

■ TSP Elements

TPR Requirements	Current Code/Policy Compliance (Yes, No, N/A, Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change or Action
OAR 660-12-020 (2) (d) The TSP shall include a bicycle and pedestrian plan.	Yes/Update	Comp Plan and TSP include objectives for accommodation of cyclists and pedestrians. Code has requirements for construction of bike facilities and sidewalks.	Prineville TSP includes a Bikeway Plan and a Pedestrian Plan. ***The City of Prineville has not received written comments from DLCD on the adequacy of their existing TSP.***
OAR 660-12-045(6) Bicycle and pedestrian plans must include improvements that connect neighborhood activity centers (schools, shopping).	Yes/Update	General policies and requirements for connectivity are contained within the Comp Plan, TSP and Code.	Prineville TSP includes a Bikeway Plan and a Pedestrian Plan. ***These may need to be updated to reflect more specific projects..***
OAR 660-12-020 (2) (e) The TSP shall include air, rail, water and pipeline transportation plans...For airports, the planning area shall include all areas within airport imaginary surfaces and other areas covered by state or federal regulations.	Yes/Update	Both the Comp Plan and TSP address the provision of air, rail and water. The Code includes airport zoning.	Prineville TSP addresses air, rail, water and pipeline transportation modes. ***Need to confirm airport planning area coverage and consistency with Comp Plan.***
OAR 660-12-020 (2) (f) The TSP shall include a plan for transportation system management (TSM) and demand management (TDM).	NA/Yes	Components of TSM and TDM strategies are contained within the Comp Plan, TSP and Code; however, these are not required by the TPR for urban areas less than 25,000 persons.	The TSP includes Transportation Demand Management Measures.
OAR 660-12-020 (2) (g) The TSP shall include a parking plan.	NA	Not required for non-MPO areas.	None.
OAR 660-12-020 (2) (l) The TSP shall include a transportation financing plan.	Update	The TSP contains a transportation financing plan for identified projects.	***The financing plan needs to be updated with new projects revised project costs and assumptions about funding availability.***

■ TSP Elements

TPR Requirements	Current Code/Policy Compliance (Yes, No, N/A or Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change or Action
OAR 660-12-020 (3)			
1) An inventory of existing and committed transportation facilities and services	1) Update	The TSP includes an inventory of existing and committed transportation facilities and services.	***The inventory will be updated.***
2) A system of planned transportation facilities, services and major transportation improvements including location, capacity and level of service.	2) Update	This is included in the TSP.	***This should be updated to identify new transportation projects, changes to the UGB and forecasts.***

■ TSP Preparation

TPR Requirements	Current Code Compliance (Yes/No/NA/ Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change or Action
OAR 660-12-015 (2) MPOs are required to prepare regional TSPs consistent with state plans.	NA	The City of Prineville is not within an MPO	None.
OAR 660-12-015 (3) Cities are required to prepare local TSPs consistent with state plans.	Yes/Update	The TSP is generally consistent with state plans.	***Some revisions to the TSP may be necessary for consistency with OHP and Crook County TSP.***
OAR 660-12-015 (4) The TSP prepared by the City must be adopted as part of the Comprehensive Plan.	Yes/Update	The City adopted the TSP as part of its Comp Plan.	***The revised TSP will have to be adopted as part of the Comp Plan, superseding the existing TSP, and other policies must be reviewed for consistency.***
OAR 660-12-015 (5) Preparation of the TSP will be coordinated with state and federal agencies and other jurisdictions.	Yes/Update	The existing TSP was developed in coordination with state and federal agencies and other jurisdictions.	***Revisions to the TSP will include coordination with local, state and federal agencies, particularly ODOT and Crook County.***
OAR 660-12-015 (6) Transportation airport and port districts must participate in preparation of the TSP and adopt plans for the transportation facilities they maintain consistent with the TSP.	Yes	See response to 660-12-015 (5), above.	See response to 660-12-015 (5), above.
OAR 660-12-015 (7) Conflicts between regional TSPs and local plans may be resolved by changing draft TSPs, amending local plans or petitioning of DLCD.	Update	The regional (Crook County) TSP has been prepared; however, it may need to be revised due to changes in the Prineville UGB and the Prineville TSP update.	Any conflicts with the Crook County TSP will be resolved through the approved courses of action. ***Revisions will be identified in a separate memo from City to County staff.***

■ Protection of Transportation Street Facilities/Improvements

TPR Requirements	Current Code Compliance (Yes/No/NA/ Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change or Action
OAR 660-12-045(2) Local governments shall adopt regulations/policies to protect transportation facilities for the following topics:			
1) Access management standards;	1) Yes/Update	1) TSP and Comp Plan include access management policies. Code includes access management guidelines.	1) ***Spacing standards in the Code should be revisited in light of recommended changes to the Draft Oregon Highway Plan.***
2) Future operation of roads and transit corridors;	2) Yes/Update	2)General policies and requirements for future operations are contained within the Comp Plan, TSP and Code.	2) TSP addresses Level of Service (LOS). ***LOS calculation should be revisited in light of population increases and UGB changes. Consider adopting more specific LOS standards and guidelines for preparation of traffic impact analyses.***
3) Control of land use around airports;	3) Yes	3) Prineville has an Airport Overlay Zone.	3) See response to OAR 660-12-020 (2) (e).
4) Coordinated review of transportation facility projects, including notice to ODOT of certain actions;	4) No	4) Prineville currently notifies County and ODOT as appropriate, but Code does not require this.	4) ***Change Code to require County and ODOT notification on pertinent land use applications and work with the County to include similar language in their Code.***
5) Process to apply conditions to development proposals to protect transportation facilities, corridors or sites;	5) Yes/Update	5) Current review process provides opportunity for conditioning of development proposals.	5) ***Consider Codes changes to identify more specific standards for new development, including LOS standards and consistent traffic impact analyses.***
6) Amendments to Land use, density shall be consistent with road classifications in TSP.	6) No	6) Street classification and land use/density are not specifically coordinated.	6) ***Change Comp Plan and Code to require review of LOS and TSP when land use designations are requested.***

■ Protection of Transportation Street Facilities/Improvements

TPR Requirements	Current Code Compliance (Yes/No/NA/ Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change or Action
OAR 660-12-045(3) Local governments must amend land use or subdivision regulations in accordance with the following directions:			
1) Provide bike parking in new retail, office and institutional developments, transit facilities and multi-family developments 4 units or more;	1) No	1) TSP and Code do not address bicycle parking.	1) ***Include bicycle parking policy in TSP and implementing standards in Code.***
2) Provision of pedestrian and bicycle connections from new subdivisions/multi-family development to neighborhood activity centers;	2) Yes	2) Provided by Code requirements for sidewalks, direct pedestrian connections and bike lanes.	2) None.
3) Off-site road improvements must accommodate bicycle and pedestrian facilities on arterials and major collectors;	3) Yes	3) Provided for in both the Code and Comp Plan.	3) None.
4) Provision of internal pedestrian circulation within new office parks and commercial developments.	4) Yes	4) Provided within pedestrian connection requirements in Code	4) None.

TPR Requirements	Current Code Compliance (Yes/No/NA/ Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of recommended Policy Change or Action
OAR 660-12-045 (4) To support transit in urban areas containing a population greater than 25,000 with public transit, local governments shall adopt land use and subdivision regulations which require/allow:			
1) Provision of facilities designed to support transit use;	1) NA	Prineville's urban area is less than 25,000 persons.	None.
2) Building placement and clustering with direct, lighted pedestrian connections between building entrances and site circulation systems to transit facilities;	2) NA		
3) Implementation of access to transit facilities may be accommodated through adoption of pedestrian districts;	3) NA		
4) Employee parking in new developments shall provide designated carpool and vanpool parking;	4) NA		
5) Existing parking areas to be redeveloped for transit oriented uses;	5) NA		
6) Road systems for new development to provide direct accessways to transit facilities;	6) NA		
7) Designation of types and densities of land uses along transit routes which will support transit.	7) NA		

■ Protection of Transportation Street Facilities/Improvements

TPR Requirements	Current Code Compliance (Yes/No/NA/ Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change or Action
OAR 660-12-045 (5) In MPO areas, all governments shall adopt land use and subdivision regulations to reduce reliance on the automobile by: 1) Allowing transit oriented development (TOD) on lands along transit routes; 2) Implementing a TDM program; 3) Implementation of a parking plan which reduces parking spaces per capita by 10% in the MPO area, allows for redevelopment of existing parking spaces and sets minimum and maximum parking requirements; 4) If required by the local transit agency, condition all major industrial, institutional, retail and office developments to provide a transit stop on site (or direct connection thereto) along transit trunk routes.	1) NA 2) NA 3) NA 4) NA	Prineville is not within a MPO.	None.
OAR 660-12-045 (7) Local governments shall provide street standards that minimize right-of-way widths and pavement width.	No/Update	Street standards are included in the TSP and Code, however current standards do not allow flexibility for narrower local street widths under certain situations.	Street standards vary in width. ***Through the TSP revision process the City will provide flexible standards for narrower street widths..***

■ Coordination of Land Use Reviews and Decisions/Plans and Land Use Amendments

TPR Requirements	Current Code Compliance (Yes/No/NA/ Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change or Action
OAR 660-12-060 Amendments to comprehensive plans that significantly affect a transportation facility shall assure that allowed land uses are consistent with identified function, capacity and level of service on that road.	No	The Code requires that zoning changes be consistent with Comp Plan goals, objectives and policies, however, transportation function is not specifically identified	***Change Code language as needed to specifically addresses comp plan and zone change amendments that will affect street system level of service.***
OAR 660-12-025 Findings of compliance with applicable statewide planning goals and acknowledged comprehensive plan policies shall be developed with the adoption of the TSP.	Update	Findings of compliance with applicable statewide planning goals and acknowledged comprehensive plan policies were developed for the adoption of the TSP	***Create appropriate findings when adopting revised TSP.***
OAR 660-12-045 (1) Local governments must amend their land use regulations to recognize a hierarchy of transportation facilities, services and improvements in order to efficiently implement the TSP:			
1) low impact - permitted outright; 2) moderate impact - reviewed against established standards;	1)Update 2)Update	1 & 2) The Code allows as outright uses maintenance and repair of existing transportation facilities, bikeways, footpaths, recreation trails, and the construction of new streets and roads, including the extension of existing streets and roads, that are included within locally adopted Transportation Systems Plans (as may be amended), the State Highway Transportation Improvement Plan, or as has been identified in a specific development review and approval process.	***The City may wish to clarify the status of non-street transportation improvements. Review projects proposed to in TSP and State Highway Transportation Improvement Plan to assure that implementation without further City review and permitting would be acceptable.***
3) significant impact - provide a review process consistent with 660-12-050 (see below).	3)Update	3) Review process exists within the City's Land Development Code	Transportation improvements not allowed outright are addressed by the Code's Conditional Use process. ***The City may wish to establish more specific standards of approval which address impacts to LOS and other issues.***

■ Coordination of Land Use Reviews and Decisions\Plans and Land Use Amendments

TPR Requirements	Current Code Compliance (Yes/No/NA/ Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change or Action
OAR 660-12-050 (2) For projects of significant impact, the regional TSP shall provide the framework for coordinated project development. Such process shall include: 1) Designation of a lead agency; 2) Citizen involvement, including public notice and hearing; 3) Development and adoption of findings of compliance with applicable statewide planning goals, comp plans and development codes, including any necessary comp plan amendments.	NA	The City of Prineville is not preparing a regional TSP	None.
OAR 660-12-050 (4) Environmental Impact Statements to address local comp plans and development codes.	Yes	An EIS submitted to the City would require conformance with city plans and policies.	None.
OAR 660-12-050 (5) Local governments to amend TSPs if adopted projects are to be canceled.	Yes/Update	The TSP is adopted as part of the Comprehensive Plan, and thus would be amended via the Comp Plan amendment process	None necessary. ***However, the City may wish to clarify the process by addressing it within the TSP.***
OAR 660-12-050 (6) Ability of transportation project development to occur concurrent with TSP preparation.	Yes	Nothing prevents transportation project development from occurring during TSP preparation.	None.
OAR 660-12-045 (2)(f) Development of regulations to provide public notice to agencies providing transportation facilities for: 1) Land use applications which require public hearings; 2) Subdivision and partition applications; 3) Other applications which affect private access to roads; 4) Applications which affect airports.	1) No 2) No 3) No 4) No	Code language exists which assures public notification, however there is no specific language regarding agency notification.	See 660-12-045(2)

■ Determination of Transportation Needs

TPR Requirements	Current Code Compliance (Yes/No/NA/ Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change
OAR 660-12-030(1) The TSP should identify the following transportation needs: 1) State, regional and local;	1) Yes/Update	1) Comp Plan addresses Prineville's role as a regional center within the state, and the transportation needs which accompany such role.	1) ***The revised TSP will further refine all listed transportation needs.***
2) Needs of the transportation disadvantaged;	2) Yes/Update	2) The Building Code requires ADA compliance for structures, parking and facilities.	2) ***The revised TSP will further refine all listed transportation needs.***
3) Freight movement for industrial and commercial uses.	3) Yes/Update	3) The TSP addresses freight mobility.	3) ***The revised TSP will further refine all listed transportation needs.***
OAR 660-12-030(2) and (3) City TSPs shall use the state TSP for information on state needs and the county TSP for information on county needs.	Update	The TSP addresses state and county TSPs	Revised TSP development will access completed state and county TSPs for all relevant and needed information.
Within UGBs, local transportation needs are based on population and employment forecasts for 20 years.	Update	The Comp Plan and TSP include population/ employment forecasts	The revised TSP will include updated population and employment forecasts. ***It will be necessary to meet with the State and reach an agreement regarding population projections prior to preparing the revised TSP.***
OAR 660-12-030(4) In MPO areas, calculation of local transportation needs to be based on reduction of Vehicle Miles Traveled (VMT) per 660-12-035 (4), see below.	NA	The City of Prineville is not in an MPO.	None.

■ Evaluation and Selection of Transportation System Alternatives

TPR Requirements	Current Code Compliance (Yes/No/NA/ Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change
OAR 660-12-035(1) The following alternatives shall be analyzed in the TSP: 1) Improvements to existing facilities; 2) New facilities; 3) System management; 4) Demand management measures; 5) No-build alternative.	1-5) Update	1-5) The TSP includes the required alternatives.	1-5) ***The alternatives analysis will be updated to reflect new projects.***
OAR 660-12-035(3) As standards for evaluation, the transportation system shall: 1) Support urban and rural development by providing transportation system that will serve the land uses identified in the comprehensive plan; 2) Be consistent with state and federal protection of air, land and water quality measures; 3) Minimize adverse economic, social, environmental and energy consequences; 4) Minimize conflicts between modes; 5) Avoid reliance on one mode of travel and reduce reliance on the automobile.	1-5) Update	1-5) The TSP evaluated Prineville's transportation system based on these criteria.	1-5) ***New projects developed as part of the revised TSP will be evaluated against these criteria.***
OAR 660-12-035(4) Reduce VMT per capita for the MPO area with: 1). No increase within 10 years of TSP adoption; 2) A 10% reduction within 20 years of adoption; 3) A 20% reduction within 30 years of adoption.	1-3) NA	The City of Prineville is not within an MPO.	None.

■ Evaluation and Selection of Transportation System Alternatives

TPR Requirements	Current Code Compliance (Yes/No/NA/ Update)	Summary of Current Policies/Situation (Comp Plan = 1997 Comprehensive Plan) (Code = 1998 Land Development Code) (TSP = 1994 TSP)	Summary of Recommended Policy Change
OAR 660-12-035(6) Include interim benchmarks to assure progress toward meeting VMT reduction. MPOs and local governments to evaluate at five-year intervals	NA	The City of Prineville is not within an MPO	None.
OAR 660-12-035(7) DLCD to evaluate VMT reduction, including requirements for parking plans and reductions in parking spaces per capita, at five-year intervals	NA	VMT reduction not required for non-MPO areas	None.
OAR 660-12-035(8) Where existing and committed transportation facilities can adequately serve land uses in the acknowledged comprehensive plan, local governments are not required to evaluate alternatives as provided in this section (035).	Update	The TSP evaluates which sections of the City's transportation system adequately address transportation and land use needs.	***Update to address revised UGB and population projections and new projects needs and alternatives analysis.***

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APPENDIX C
1998 MAJOR STREETS INVENTORY
Prineville Transportation Master Plan

Street Segment	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway (1)	Pavement Condition
10th Street											
Harwood Street to Fairmont Street	City	Arterial	25	80	56	2	Yes	Yes	Yes	Shared	Good
Fairmont Street to Lamonta Road	City	Arterial	25	80	48	2	No	Yes	No	Shared	Poor
Lamonta Road to Main Street	City	Arterial	25	80	24	2	No	No	No	Shared	Poor
Main Street to Court Street	City	Arterial	25	60	40	2	Yes	No	No	Lane	Good
Court Street to Elm Street	City	Arterial	25	60	40	2	Yes	Yes	No	Shared	Good
1st Street											
Deer Street to Knowledge Street	City	Arterial	25	80	54	2	Yes	Yes	Yes	Shared	Fair
2nd Street											
West of Locust Street	City	Collector	25	80	40	2	No	Yes	No	Shared	Poor
Locust Street to Deer Street	City	Collector	25	80	53	2	Yes	Yes	Yes - N	Shared	Good
Deer Street to Main Street	City	Collector	25	80	55	2	Diagonal	Yes	Yes	Shared	Good
Main Street to Fairview Street	City	Collector	25	80	53	4	Yes	Yes	Intermittent	Shared	Good
3rd Street (Highway 26)											
Locust Street to Juniper Street	State	Arterial	30	80	55	3	Yes	Yes	Intermittent	Shared	Fair
Juniper Street to Combs Flat Road	State	Arterial	30 - 45	80	48	3	No	No	No	Shoulder	Fair
Combs Flat Road to Laughlin Road	State	Arterial	30-45	80	36	2	No	No	No	Shoulder	Fair
East of Laughlin Road	State	Arterial	55	80	36	2	No	No	No	Shoulder	Fair
4th Street											
Harwood Street to Deer Street	City	Collector	25	80	56	2	Yes	Yes	Yes	Shared	Fair
Deer Street to Main Street	City	Collector	25	80	56	2	Yes	Yes (S-Diag)	Yes	Shared	Fair
Main Street to Court Street	City	Collector	25	80	58	2	Yes	Yes (N-Diag)	Yes - N	Shared	Fair

APPENDIX C
1998 MAJOR STREETS INVENTORY
Prineville Transportation Master Plan

Street Segment	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway (1)	Pavement Condition
7th Street											
Fairmont Street to Main Street	City	Local	25	80	56	2	Yes	Yes	No	Shared	Good
Main Street to Belknap Street	City	Collector	25	60	35	2	Yes	Yes	Intermittent	Shared	Good
Belknap Street to Laughlin Road	City	Collector	25	60	40	2	Yes	Yes	Intermittent	Shared	Good
9th Street											
Harwood Street to Main Street	City	Collector	25	80	54	2	Yes	Yes	No	Shared	Good
Barnes Butte Road											
McKay Road to Highway 26	County	Collector									
Combs Flat Road											
E 3rd Street To Paulina Highway	County	Arterial	45	60	24	2	No	No	No	Shared	Fair
Court Street											
Dead End to 4th Street	City	Collector	25	80	55	2	No	Yes	No	Shared	Poor
4th Street to 3rd Street	City	Collector	25	80	55	2	Yes	Yes (W-Diag)	Yes	Shared	Fair
3rd Street to 2nd Street	City	Collector	25	80	55	2	Yes	Yes (E-Diag)	Yes - E	Shared	Good
2nd Street to 1st Street	City	Collector	25	80	55	2	Yes	Yes (W-Diag)	Yes - W	Shared	Good
1st Street to S 2nd Street	City	Collector	25	80	55	2	Yes	Yes (W-Diag)	Yes	Shared	Good
S 2nd Street to S 3rd Street	City	Collector	25	80	55	2	Yes	Yes (W-Diag)	No	Shared	Good
S 3rd Street to S 4th Street	City	Collector	25	80	55	2	Yes	Yes	Yes - W	Shared	Good
S 4th street to S 5th Street	City	Collector	25	80	55	2	Yes	Yes	No	Shared	Good
Crestview Road											
Rimrock Road to End	County	Collector	25	50	24	2	No	No	No	Shared	Fair

APPENDIX C
1998 MAJOR STREETS INVENTORY
Prineville Transportation Master Plan

Street Segment	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway (1)	Pavement Condition
Crooked River Highway (Highway 27)											
South of Lynn Boulevard	State	Arterial	55	60	24	2	No	No	No	Shared	Fair
Deer Street											
W 10th Street to W 5th Street	City	Collector	25	80	56	2	Yes	Yes	No	Shared	Good
W 5th Street to W 2nd Street	City	Collector	25	80	56	4	Yes	Yes	No	Shared	Good
W 2nd Street to SW 1st Street	City	Collector	25	80	56	2	Yes	Yes	No	Shared	Good
Elm Street											
Loper Avenue to E 10th Street	City	Collector	25	60	56	2	Yes	Yes (W-Diag)	No	Shared	Good
E 10th Street to E 7th Street	City	Collector	25	60	40	2	Yes	Yes	No	Shared	Good
E 7th Street to E 6th Street	City	Collector	25	60	40	2	Yes	Yes	Intermittent	Shared	Good
E 6th Street to E 4th Street	City	Collector	25	80	40	2	Yes	Yes	Intermittent	Shared	Good
E 5th Street to SE 2nd Street	City	Collector	25	80	56	4	Yes	Yes	Intermittent	Shared	Good
SE 2nd Street to SE 5th Street	City	Local	25	80	56	2	Yes	Yes	Intermittent	Shared	Good
Fairview Street											
E 4th Street to SE 5th Street	City	Arterial	25	80	53	2	Yes	Yes	Intermittent	Shared	Good
SE 5th Street to Lynn Boulevard	City	Arterial	25	80	53	2	No	Yes	Intermittent	Shared	Good
Harding Road											
Laughlin Road to E 3rd St	City	Arterial	25	60	24	2	No	No	No	Shared	Fair
Harwood Street											
Lamonta Road to W 10th Street	City	Arterial	25	80	42	2	Yes	No	Yes - E	Shared	Fair
W 10th Street to W 6th Street	City	Arterial	25	80	24	2	No	No	No	Shared	Fair

APPENDIX C
1998 MAJOR STREETS INVENTORY
Prineville Transportation Master Plan

Street Segment	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway (1)	Pavement Condition
W 6th Street to W 2nd Street	City	Arterial	25	80	54	2	Yes	Yes	No	Shared	Fair
Hudspeth Road											
Laughling Road to Ochoco Avenue	City	Collector	25	60	20	2	No	No	No	Shared	Good
Juniper Canyon Road											
South of Paulina Highway	County	Collector	25	60	24	2	No	No	No	Shared	Fair
Juniper Street											
Laughlin Road to Ochoco Creek	City	Arterial	25	80	40	2	No	Yes	No	Shared	Good
Ochoco Creek to E 1st Street	City	Arterial	25	80	56	2	Yes	Yes	No	Shared	Good
Knowledge Street											
3rd Street to 1st Street	City	Collector	20	80	54	2	Yes	Yes	No	Shared	Fair
1st Street to S 2nd Street	City	Collector	25	80	54	2	Yes	Yes	Yes - E	Shared	Fair
5th Street to Lynn Boulevard	City	Collector	25	80	54	2	Yes	Yes	No	Shared	Good
Lamonta Road											
10th Street to Northwest City Limit	City	Arterial	25-35	60	24	2	No	No	No	Shared	Poor
Northwest of City Limit	County	Arterial	40-55	60	30	2	No	No	No	Shared	Fair
Laughlin road											
US 26 to Harding Road	City	Arterial	25	60	24	2	No	No	No	Shared	Poor
Harding Road to E 7th Street	City	Arterial	35	70	24	2	No	No	No	Shared	Poor
Loper Avenue											
Main Street to Oregon Street	City	Collector	25	60	24	2	No	No	No	Shared	Good

APPENDIX C
1998 MAJOR STREETS INVENTORY
Prineville Transportation Master Plan

Street Segment	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway (1)	Pavement Condition
Oregon Street to Powell Lane	City	Collector	25	60	48	2	No	Yes	No	Shared	Good
Powell Lane to Del Rio	City	Collector	25	60	30	2	Yes - N	Yes	No	Shared	Good
Lynn Boulevard											
Main Street to Bailey Road	County	Arterial	40	50	36	2	No	No	No	Lane	Fair
Bailey Road to Combs Flat Road	County	Arterial	40	70	36	2	No	No	No	Shared	Fair
Madras-Prineville Highway (Highway 26)											
West of Highway 126	State	Arterial	30-55	100	28	2	No	No	No	Shoulder	Fair
Main Street											
North City Limit to 10th Street	City	Arterial	30-45	80	52	4	No	No	No	Lane	Good
10th Streeet to 3rd Street	City	Arterial	30	80	56	4	Yes	Yes	Yes	Shared	Fair
3rd Street to 1st Street	State	Arterial	30	80	56	3	Yes	Yes	Yes	Shared	Fair
1st Street to S 3rd Street	State	Arterial	30	70	56	3	Yes	Yes	Intermittent	Shared	Fair
S 3rd Street to Lynn Boulevard	State	Arterial	30	70	24	2	No	No	No	Shared	Poor
McKay Road											
North of City Limit	County	Collector	45	80	32	2	No	No	No	Lane	Fair
Melrose Drive											
Combs Flat Road to Willowdale Drive	County	Collector	25	60	24	2	No	No	No	Shared	Fair
O'Neil Highway											
West of Highway 126	County	Collector	55	60	24	2	No	No	No	Shared	Poor
Ochoco Avenue											
Elm Street to Oregon Street	City	Collector	25	80	30	2	Yes	Yes	No	Shared	Good

APPENDIX C
1998 MAJOR STREETS INVENTORY
Prineville Transportation Master Plan

Street Segment	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway (1)	Pavement Condition
Oregon Street to Wilshire Drive	City	Collector	25	80	24	2	Yes	Yes	Yes - N	Shared	Good
Wilshire Drive to Del Rio	City	Collector	25	80	56	2	Yes	Yes	Yes - N	Shared	Good
Ochoco Highway (Highway 126)											
West of Highway 26	State	Arterial	55	100	36	3/2	No	No	No	Shared	Good
Paulina Highway											
Southeast of Combs Flat Road	County	Collector	55	60	24	2	No	No	No	Shared	Poor
Peters Road											
McKay Road to End	County	Collector	25	60	20	2	No	No	No	Shared	Good
Rawhide Lane											
McKay Road to End	County	Collector	25	60	25	2	No	No	No	Shared	Good
Rimrock Road											
Highway 126 to Crestview Road	County	Collector	25	50	24	2	No	No	No	Shared	Fair
S 7th Street											
Fairview Street to Knowledge Street	City	Collector	25	80	54	2	Yes	Yes	No	Shared	Good
S 5th Street											
Main Street to Fairview Street	City	Collector	25	80	38	2	No	Yes	No	Shared	Good
Fairview Street to Knowledge Street	City	Collector	25	80	55	2	Yes	Yes	No	Shared	Good
Williamson Drive											
3rd Street to End	City	Collector	25	60	32	2	Yes - W	Yes	No	Shared	Good

APPENDIX C
1998 MAJOR STREETS INVENTORY
Prineville Transportation Master Plan

Street Segment	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway (1)	Pavement Condition
Willowdale Drive											
3rd Street to End	County	Collector	25	60	20-24	2	No	No	No	Shared	Good

(1) Lane = A portion of a roadway that has been designated by striping, signing and pavement markings for the preferential or exclusive use by bicyclists.

Shared = A type of bikeway where bicyclists and motor vehicles share the same roadway.

Shoulder = A portion of a highway contiguous to the roadway that is primarily for use by pedestrians and bicyclists as well as vehicles stopped for emergency.

APPENDIX D
TRAFFIC FORECAST REFINEMENT

BACKGROUND

The existing traffic conditions reported in the 1994 Prineville TSP were based on traffic count data gathered in 1992. Forecasts were then prepared based on the Tmodel2 model, with specific adjustments to reflect modifications in Prineville's Comprehensive Plan - consistent with Statewide projections for population and employment. The following methodology was used to update both base year (1998) and future year (2018) traffic volumes.

GROWTH FORECASTS

Table D-1 summarizes traffic volume data from ODOT's Transportation Systems Monitoring program for the five highways that serve the City of Prineville:

14	*Crooked River Highway*
41	*Ochoco Highway – This Highway is shown in three section West, Downtown, and East.*
360	*Madras-Prineville Highway*
370	*O'Neil Highway*
380	*Paulina Highway*

Available data for selected mileposts were projected forward to 2018 (21 years) using a linear projection model based on annual traffic volume data from 1975 to 1997. A compounded growth rate formula was then applied to the results of the linear projection to determine the projected average annual compounded growth rate between 1997 and 2018. With the exception of the Ochoco Highway (Highway 41), all available data points for each highway were averaged. The Ochoco Highway was divided into three separate sections (West, Downtown, and East), with an average prepared for each section. The average compounded growth rate developed for each highway or section of highway was then used to "grow" the 1992 traffic volumes developed by DEA for the 1994 Prineville TSP. The results are shown in the attached 1998 and 2018 maps. Growth rates for local roads were based on adjacent highway growth rates. For example, the growth rate for Ochoco Highway – Downtown was used for all local roads in the downtown core area.

Table D-1
ODOT Highway Traffic Volumes for Ochoco Highway (Third Street in Prineville)

HWY	MP	Location	1997	2018	Comp. Growth Rate	Pearson's Correlation Coefficient
14	0.01	.01 MI S OF OCHOCO HIGHWAY	6100	8300	1.48%	0.6584
14	0.14	.01 MI S OF 2ND ST.	5600	8100	0.84%	0.7357
14	0.58	.01 MI N OF LYNN BLVD.	2900	7100	1.31%	0.8297
		Average - Crooked River	4867	7800	1.18%	0.8268
41	16.50	.01 MI W OF HOUSTON LAKE	6000	10300	2.53%	0.9350
41	17.91	.01 MI W OF HWY 370	8000	13400	3.36%	0.8518
41	17.93	.01 MI E OF HWY 370	9800	16400	2.79%	0.8074
		Ave - W Ochoco	7933	13367	2.90%	0.8889
41	18.74	.01 MI W OF HWY 14	13000	16100	0.67%	0.5239
41	19.40	OCHOCO CREEK BRIDGE	9900	16500	2.08%	0.6080
		Ave - Downtown Ochoco	11450	16300	1.33%	0.6140
41	19.74	.01 MI W OF HWY 380	7700	11300	1.72%	0.8623
41	20.75	.24 MI W OF BARNES BUTTE RD	5100	8600	3.02%	0.7520
41		Ave - E Ochoco	6400	9900	2.21%	0.8474
360	25.91	.01 MI NW OF DODSON DR.	4500	6700	2.13%	0.7427
		Ave - Madras-Prineville	4500	6700	2.13%	0.7427
370	16.71	.01 MI W OF WESTVIEW RD.	1400	2200	2.18%	0.9133
		Ave -O'Neil	1400	2200	2.18%	0.9133
380	0.01	.01 MI S OF HWY 41	3900	6100	2.28%	0.7736
380	0.71	.01 MI S OF LINCOLN DR.	3200	5100	2.09%	0.8716
380	1.36	.01 MI SE OF JUNIPER CANYON	750	900	1.14%	0.0841
		Ave - Paulina	2617	4000	0.0207	0.8441

Seasonality

Monthly traffic volumes are available from the Automatic Traffic Recorder (ATR) located east of the city limits on the Ochoco Highway. However, volumes are significantly lower outside of downtown and likely fluctuate more than in-town volumes due to seasonal shifts. For example, at the ATR, average daily trips (ADT) for the month of July are 129% of the annual average daily trip (AADT). Seasonal adjustment factors for in-town traffic volumes, which fluctuate approximately 15% throughout the year (e.g., March increase 4%; August decrease 9%), were used to normalize raw data.

Checking the Results

In 1997, ODOT conducted intersection traffic counts at the following five intersections on the Ochoco

Highway: Harwood, Deer, Main, Elm, and Knowledge streets. As shown in Tables 7-2 and 7-3, these intersection counts provide us an opportunity to spot check the results of our forecasts against an independent data source, with the caveat that the intersection counts represent only a snapshot of the level of activity on the road. In order to make an accurate comparison the gross 1997 intersection count volumes were multiplied by the average annual growth rate to estimate 1998 volumes and by a seasonal adjustment factor (see discussion of Seasonality above). As these tables show, in general the methodology used to update the numbers in the TSP appears to be valid.

Table 7-2
24 Hour Traffic Volumes

Location (Date of Count)	Forecast 1998 Volumes	Gross Intersection Count Volumes	Seasonal Adjustment Factor	Adjusted Intersection Count Volumes	Forecast Less Adjusted	Adjusted / Forecast
Just W. of Harwood (3/10,11/97)	16,735	15645	94.00	16,828	(93)	101%
Just E. of Elm (8/13,14/97)	12,232	13435	109.00	12,504	(272)	102%

Table 7-3
PM Peak Hour Traffic Volumes

Location (Date of Count)	Forecast 1998 Volumes	Gross Intersection Count Volumes	Seasonal Adjustment Factor	Adjusted Intersection Count Volumes	Forecast Less Adjusted	Adjusted / Forecast
Entering 3rd/Harwood from the E. (3/10,11/97)	801	702	96.00	741	60	92%
Entering 3rd/Harwood from the E. (3/10,11/97)	758	614	96.00	648	110	85%
Departing 3rd/Main to the W. (8/26,27/97)	639	662	109.00	616	23	96%
Departing 3rd/Main to the W. (8/26,27/97)	617	651	109.00	606	11	98%
Departing 3rd/Elm to the W.(8/13,14/97)	650	566	109.00	527	123	81%
Departing 3rd/Elm to the W.(8/13,14/97)	552	485	109.00	451	101	82%
Entering 3rd/Know. from the E. (3/31,4/4/98)	574	505	96.00	533	41	93%
Entering 3rd/Know. from the E. (3/31,4/4/98)	490	531	96.00	565	(74)	115%

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APPENDIX E
1994 TSP MODELING METHODOLOGY

STUDY AREA DEFINITION

The first step in modeling requires defining the study area. For this definition, a roadway network and traffic analysis zone scheme which accurately represent the road system and density of land use activity in the study area were developed.

Roadway System Network

The limits of the roadway system network for the City were defined by the Urban Growth Boundary (*UGB*). Within this boundary, a network composed of arterial and collector roads was selected. This network includes all of the state highways, most of the county roads, and city streets which are vital to the circulation of traffic in Prineville.

Each roadway in the network has specific distance, speed, and capacity characteristics which are important factors in the traffic forecasting process. These factors help determine the route that a driver takes when traveling between two locations.

Traffic Analysis Zones

In addition to defining the study area network, a traffic analysis zone (*TAZ*) scheme was also developed. The TAZ scheme divides the study area into smaller analysis units which are used to tie land use activity and trip generation to physical locations within the network.

Within the study area boundaries, 60 TAZ's were defined. Physical barriers, land use, and roadway characteristics were factors used to determine the TAZ structure. Whenever possible, the TAZ's were developed to have homogeneous land use characteristics because this scheme results in the most accurate traffic assignment.

Each TAZ is then connected to the network by one or more representative roadways. Since the traffic network does not include every road that exists within the study area, one connector may represent many local roads which are loading onto a collector or arterial street.

Outside of the study area, 9 zones load traffic from external locations, generally traffic from other cities. These zones produce three types of trips. The first type is through trips which begin in one external zone and end in another external zone but will pass through the city. For example, a vehicle traveling from Portland to John Day might take Highway 26 through Prineville. The second type is a trip which begins in the city and ends at another location. An example would be a Prineville resident who works in Redmond. The last type is a trip which begins at another location and ends in the City; such as someone who lives far out on Juniper Canyon Road and works in Prineville. In the modeling process, the trips traveling to and from these external zones are associated with the actual roads leading into

Prineville.

EXISTING AND FUTURE LAND USE

Once the traffic analysis zone scheme was defined, both existing and future (2015) land use forecasts were developed. The existing land use was used in the model calibration process. The future land use was the basis for the future travel forecasts.

The land use characteristics which define growth in the city are population and employment. For the travel forecasting model, population was represented by the number of single-family and multi-family dwelling units in each traffic analysis zone. Employment was broken down by type of land use (i.e. retail/commercial, office, industrial, etc.). Tables E-1 through E-3 provide a complete forecast by TAZ. Table E-4 contains a summary of existing and future housing and employment by land use category.

Existing Population

The existing (1992) population of the City and the surrounding area within the UGB is about 8,700, with about 5,500 within the city limits. This was established using 1990 U.S. Census information provided by the Center for Population Research at Portland State University (PSU). Because all data indicate that there has been very little population growth in the Prineville area between 1990 and 1992, no adjustments to the 1990 data were necessary.

As shown in Table E-4, existing housing within the UGB totals about 3,740 dwelling units. Approximately 85 percent of these are single family homes (about 60 percent of them located within the city limits). The remaining 15 percent consist of multi-family houses, condominiums, and apartments (about 95 percent of them located within the city limits).

TABLE C-1
PRINEVILLE POPULATION FORECAST

TAZ	1992			2015		
	SFDU	MFDU	POPULATION	SFDU	MFDU	POPULATION
1	226	0	556	226	0	556
2	137	0	362	137	0	362
3	10	0	19	60	0	134
4	3	0	10	3	0	10
5	23	0	45	23	0	45
6	26	0	78	101	0	251
7	3	0	6	3	0	6
8	40	0	92	40	0	92
9	4	0	15	4	0	15
10	41	0	93	41	0	93
11	41	0	112	41	0	112
12	18	0	60	18	0	60
13	21	24	107	21	24	107
14	0	0	0	0	0	0
15	20	5	57	20	5	57
16	271	23	734	301	23	803
17	0	0	0	0	0	0
18	0	0	0	0	0	0
19	67	5	175	67	5	175
20	4	0	9	4	0	9
21	25	2	57	25	2	57
22	45	2	108	45	2	108
23	72	53	249	72	53	249
24	21	6	46	21	6	46
25	21	7	64	21	7	64
26	25	0	56	25	0	56
27	46	2	108	46	2	108
28	58	29	157	58	29	157
29	82	29	212	82	29	212
30	46	15	134	46	15	134
31	53	24	201	53	64	293
32	114	8	245	114	8	245
33	30	0	96	28	0	91
34	22	0	45	47	0	103
35	17	0	45	17	0	45
36	18	0	40	18	0	40
37	30	0	98	30	0	98
38	44	10	112	44	10	112
39	55	48	194	55	48	194
40	8	3	16	8	3	16
41	21	7	64	21	7	64
42	39	62	171	39	62	171
43	22	0	58	22	0	58

TABLE C-1
PRINEVILLE POPULATION FORECAST

TAZ	1992 SFDU	1992 MFDU	1992 POPULATION	2015 SFDU	2015 MFDU	2015 POPULATION
44	36	8	114	36	8	114
45	110	8	253	110	8	253
46	37	5	72	37	5	72
47	35	8	83	35	8	83
48	190	0	502	190	0	502
49	18	0	40	150	0	344
50	96	3	257	96	3	257
51	24	1	63	98	1	233
52	48	1	118	48	1	118
53	139	6	427	139	6	427
54	13	0	30	13	0	30
55	142	47	428	142	47	428
56	115	18	296	115	18	296
57	127	60	354	127	60	354
58	125	13	300	170	33	450
59	11	0	34	57	20	186
60	67	0	204	67	0	204
61	0	0	0	0	0	0
62	0	0	0	0	0	0
63	0	0	0	0	0	0
64	0	0	0	0	0	0
65	0	0	0	170	0	391
66	0	0	0	0	0	0
67	0	0	0	0	0	0
68	0	0	0	172	0	396
69	0	0	0	100	0	230
Within City	1950	503	5509	2099	563	5990
Within UGB	1252	39	3172	1578	59	3969
Outside UGB	0	0	0	442	0	1017
TOTAL	**3202**	**542**	**8681**	**4119**	**622**	**10976**

TABLE C-2
PRINEVILLE EMPLOYMENT ESTIMATES
1992

TAZ	Commercial	Office	Industrial	Warehouse	Medical	Fire	Government	School
1	0	0	0	0	0	0	0	0
2	0	0	20	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	25	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	390	0	0	0	22	0
9	0	0	580	0	0	0	0	0
10	0	0	0	0	0	0	0	0
11	5	0	120	0	0	0	0	0
12	0	0	120	0	0	0	0	0
13	10	0	24	0	0	0	0	0
14	1	0	200	0	0	0	0	0
15	6	0	0	0	144	0	0	0
16	0	0	0	0	0	0	0	0
17	0	0	90	0	0	0	0	0
18	0	0	0	0	0	0	0	0
19	2	0	0	0	0	0	30	0
20	150	0	0	0	0	0	0	0
21	4	0	40	0	0	0	5	0
22	0	0	0	0	0	0	0	0
23	14	0	0	0	6	0	0	0
24	36	7	0	0	2	5	66	0
25	56	20	0	0	8	0	0	0
26	72	0	0	0	0	0	0	0
27	2	0	0	0	0	0	0	0
28	3	0	0	0	0	0	0	0
29	56	10	0	0	0	0	0	0
30	10	2	0	0	0	0	0	54
31	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0
38	0	0	600	0	0	0	0	0
39	32	21	0	0	0	0	0	0
40	50	4	0	0	0	0	0	0
41	20	3	0	0	12	0	128	0
42	7	0	0	0	0	0	0	53
43	6	0	0	0	0	0	0	62

TABLE C-2
PRINEVILLE EMPLOYMENT ESTIMATES
1992

TAZ	Commercial	Office	Industrial	Warehouse	Medical	Fire	Government	School
44	0	0	0	0	0	0	0	53
45	2	0	160	0	0	0	0	0
46	0	0	0	0	0	0	200	0
47	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0
49	8	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	2	0
55	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0
57	0	0	0	0	2	0	0	0
58	0	0	0	0	0	0	0	0
59	2	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0
64	0	0	105	0	0	0	0	0
65	0	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0	0
67	0	0	0	0	0	0	11	0
68	0	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0	0
Within City	538	66	1109	0	174	5	240	195
Within UGB	16	1	1235	0	0	0	238	27
Outside UGB	0	0	105	0	0	0	11	0
TOTAL	554	67	2449	0	174	5	489	222

TOTAL EMPLOYMENT = 3960

TABLE C-3
PRINEVILLE EMPLOYMENT ESTIMATES
2015

TAZ	Commercial	Office	Industrial	Warehouse	Medical	Fire	Government	School
1	0	0	0	0	0	0	0	0
2	0	0	20	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	25	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	515	0	0	0	22	0
9	0	0	700	0	0	0	0	0
10	0	0	0	0	0	0	0	0
11	5	0	172	0	0	0	0	0
12	0	0	171	0	0	0	0	0
13	10	0	44	0	0	0	0	0
14	1	0	254	0	0	0	0	0
15	6	0	0	0	179	0	0	0
16	0	0	0	0	0	0	0	0
17	0	0	90	0	0	0	0	0
18	0	0	0	0	0	0	0	0
19	52	0	0	0	0	0	30	0
20	220	10	0	0	0	0	0	0
21	19	0	40	0	0	0	5	0
22	15	0	0	0	0	0	0	0
23	29	0	0	0	6	0	0	0
24	51	12	0	0	2	8	66	0
25	71	25	0	0	8	0	0	0
26	87	0	0	0	0	0	0	0
27	2	0	0	0	0	0	0	0
28	3	0	0	0	0	0	0	0
29	71	10	0	0	0	0	0	0
30	10	2	0	0	0	0	0	69
31	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0
38	0	0	600	0	0	0	0	0
39	47	26	0	0	0	0	0	0
40	65	9	0	0	0	0	0	0
41	35	8	0	0	12	0	148	0
42	7	5	0	0	0	0	0	68
43	6	0	0	0	0	0	0	77

TABLE C-3
PRINEVILLE EMPLOYMENT ESTIMATES
2015

TAZ	Commercial	Office	Industrial	Warehouse	Medical	Fire	Government	School
44	0	0	0	0	0	0	0	68
45	2	0	160	0	0	0	0	0
46	0	0	0	0	0	0	200	0
47	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0
49	10	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	2	0
55	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0
57	0	0	0	0	2	0	0	0
58	0	0	0	0	0	0	0	0
59	2	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0
64	0	0	133	0	0	0	0	0
65	0	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0	0
67	0	0	0	0	0	0	11	0
68	0	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0	0
Within City	808	106	1323	0	209	8	260	248
Within UGB	18	1	1443	0	0	0	238	35
Outside UGB	0	0	133	0	0	0	11	0
TOTAL	**826**	**107**	**2899**	**0**	**209**	**8**	**509**	**282**

TOTAL EMPLOYMENT = 4840

TABLE E-4
Population and Employment Forecasts

Land Use	1992 Within City Limits	1992 Within UGB	1992 Out of UGB	1992 Total	2015 Within City Limits	2015 Within UGB	2015 Out of UGB	2015 Total
Single Family Dwelling Units	1,950	1,250	0	3,200	2,100	1,575	445	4,120
Multi-Family Dwelling Units	505	35	0	540	565	55	0	620
Retail/Commercial Employment	540	15	0	555	810	15	0	825
Industrial Employment	1,110	1,235	105	2,450	1,325	1,440	135	2,900
Hospital Employment	175	0	0	175	210	0	0	210
Government Office Employment	245	240	10	495	265	240	10	515
Office Employment	65	0	0	65	105	0	0	105
School Employment	195	25	0	220	245	35	0	280
Total Population	5,510	3,170	0	8,680	5,995	3,965	1,015	10,975
Total Dwelling Units	2,455	1,285	0	3,740	2,665	1,630	445	4,740
Total Employment	2,330	1,515	115	3,960	2,960	1,730	145	4,835

Note: The land use category "Within UGB" indicates dwelling units or employment within the UGB but outside of the City Limits.

The land use category "Out of UGB" indicates dwelling units or employment outside of the UGB but within the study area because they will influence traffic in Prineville.

Year 2015 Population

Population within the UGB is estimated at about 11,000 for the year 2015 (55 percent within the city limits, 35 percent outside of the city limits but within the UGB, and 10 percent outside of the UGB). This population represents an increase of about 2,300 over the present population, equating to a 25 percent overall increase in population, or an annual growth rate of 1.025 percent.

To estimate the 2015 population, historical growth rates were examined. Since 1975, the incorporated city of Prineville has grown at an annual rate of 0.18 percent while areas outside of the city limits but within

and adjacent to Prineville's UGB exhibit a higher annual growth rate of 1.04 percent. While the overall growth rate is expected to be 1.025 percent per year, most of Prineville's growth will continue to occur outside of the existing city limits.

The projected increase of about 2,300 new residents within the study area will create a demand for about 1,000 additional dwelling units by the year 2015 (see Table E-4). Approximately 210 of the dwelling units necessary to meet the 2015 housing demand will be satisfied by current development proposals. An additional 345 dwelling units are most likely to develop within the UGB, adjacent to existing residential development, and on vacant or under-utilized land with the proper zone classification. The remaining 445 dwelling units are expected to develop on rural residential land outside of the UGB.

Existing Employment

Existing employment within the study area totals about 4,000 (60 percent within the city limits, 38 percent outside of the city limits but within the UGB, and 3 percent outside of the UGB). Major employers were identified and located on the TAZ map through site visits, Prineville Chamber of Commerce information, conversations with staff at the Crook County/Prineville Planning Department, use of the local yellow pages, and conversations with specific employers.

As indicated in Table E-4, the employment base within the study area is dominated by the industrial category. Approximately 1,850 of the 4,000 jobs (47 percent) in the study area are directly related to the wood products processing and manufacturing industry. Retail/commercial (550 jobs) and government service (500 jobs) are a distant second and third to wood products-related employment in the study area. Agricultural-related employment was not included in the employment estimates because most agriculture occurs outside of the study area and does not significantly impact traffic flow through the city.

Year 2015 Employment

The population to employment ratio of the study area is expected to remain roughly 2.3:1, resulting in an additional 800 to 900 jobs for the community. The wood products industry in Prineville is expected to remain healthy and continue to dominate the employment base for the study area. Although employment related to the primary wood products industry (e.g. sawmills) have declined due to technological improvement requiring less labor input per board foot of production, secondary wood products industry employment continues to grow. As a result of the continued health of the Prineville wood products industry, other sectors of the economy will continue to grow.

TRIP GENERATION

Vehicle trip generation, the next step in the modeling process, is a method of estimating the number and type of trips a specific land use will produce or attract based on historic data and surveys of similar developments. The trip generation estimates were made for each traffic analysis zone in the planning area on the basis of the type and quantity of households and employees. Trip generation rates applied to these land uses were derived from the Institute of Transportation Engineers report, *Trip Generation (Fifth Edition, 1991)*. These rates were modified to reflect generalized land use categories for planning purposes on the basis of experience in other similar size cities in Oregon and through the travel model calibration process. These trip rates also reflect the existing level of transit service and use of alternative

modes. An increase in transit ridership or use of other modes is not expected to be large enough to have a significant effect on traffic demand and street requirements. These rates are summarized on Table E-5.

Each trip is defined by the land use from which it originates, the land use for which it is destined, and the purpose of the trip. Trip generation rates were refined for each origin and destination for four purposes:

- *Home-based work* - Trips between home and a place of employment.
- *Home-based shopping* - Trips between home and a retail center for the purpose of shopping.
- *Home-based other* - Trips between home and another land use for a purpose other than employment or shopping (e.g. school trips).
- *Non-home based* - Trips between two non-residential land uses.

The amount of traffic generated for each TAZ was estimated for the PM peak hour by multiplying the number of households or employees by the appropriate origin and destination trip generation rate by trip purpose.

Trip origins and destinations were also calculated for the nine external roadways leading into Prineville. These trip calculations are based on historic growth along the roadways and potential increases in population and/or employment outside of the Urban Growth Boundary.

TABLE E-5
PM Peak Hour Vehicle Trip Generation Rates
Prineville Transportation Planning Model

Land Use:		Single Family	Multi-Family	Retail/ Commercial	Industrial	Hospital	Government Office	Office	School
		Trips/D.U.	Trips/D.U.	Trips/ Employee	Trips/ Employee	Trips/ Employee	Trips/ Employee	Trips/ Employee	Trips/ Employee
Home-Based Work	Origin	0.03	0.02	0.10	0.40	0.10	0.68	0.49	0.68
	Destination	0.39	0.27	0.00	0.05	0.00	0.00	0.00	0.00
Home-Based Shopping	Origin	0.10	0.07	0.93	0.00	0.00	0.00	0.00	0.00
	Destination	0.19	0.13	0.58	0.00	0.00	0.00	0.00	0.00
Home-Based Other	Origin	0.16	0.11	0.00	0.00	0.09	0.00	0.00	0.21
	Destination	0.08	0.06	0.18	0.00	0.03	0.00	0.00	0.10
Non-Home-Based	Origin	0.07	0.05	0.58	0.05	0.02	0.16	0.09	0.16
	Destination	0.08	0.06	0.79	0.05	0.06	0.16	0.12	0.35
Total Rates	Origin	0.36	0.25	1.61	0.45	0.21	0.84	0.58	1.05
	Destination	0.74	0.52	1.55	0.10	0.09	0.16	0.12	0.45

Source: Derived from the ITE Trip Generation Report, Fifth Edition, 1991.

TRIP DISTRIBUTION

Vehicle trip distribution, the fourth step in the modeling process, is a method of determining the origin and destination of trips within the study area. For each TAZ, trip origins were distributed to all of the trip destinations within the planning area and to the roads leading out of the study area. (Trip origins were also calculated for the roads leading into the area.)

A standard gravity model was used for trip distribution. The basic premise of the gravity model is that the number of trips between two areas is directly related to the size of the attractions or destinations in each zone and inversely related to the travel time between zones. For example, if two destination zones of equal size were located 10 and 15 minutes from the origin zone, more of the trips from the origin zone would be distributed to the closer destination zone. Likewise, if two destination zones of different sizes were located equal driving times from the origin zone, more trips would be distributed to the larger destination zone. This procedure was followed for trips originating in all 60 internal zones and the roads leading into the study area.

To aid in developing the trip distribution model, a telephone survey of 200 residents in the City was made to determine where people generally work and shop. Sample data from this survey include:

- 86 percent of the resident labor force work in Prineville
- 14 percent of the resident labor force work in other cities
- 87 percent of all convenience shopping by residents is done in Prineville
- 32 percent of the comparison shopping by residents is done in Prineville

The estimated sampling error of this survey is less than ten percent with a confidence level of 95 percent. In other words, we can be 95 percent certain that the survey results are within 90 percent of the results if every household in the City was surveyed.

The results of this survey were used to develop a relationship between activity within the study area and activity outside of the study area (represented by the roads leading in/out of the area). For example, 14 percent of the work trips originating from within Prineville are traveling to employment centers outside of the study area (many in other cities) on a road leading out of the city.

VEHICLE TRIP ASSIGNMENT

Trip assignment, the final step in the modeling process, is a method of assigning trips distributed between origin zones and destination zones to specific paths on the street system. The forecasting model used a capacity-constrained assignment methodology which assigns traffic in percentage increments to the street system based on travel time. For the first increment, each trip is assigned to

the shortest route between its origin and destination based on travel time. The travel time on each route is then adjusted to account for congestion and delay which may result from the first incremental assignment. As the fastest route becomes congested, its travel time increases, possibly making a previously slower route the faster of the two. For the second increment of traffic, each trip follows the same guidelines and is assigned to the shortest route, and then travel times are readjusted to account for the new level of congestion. This process continues until all the increments have been assigned. Using this procedure, the traffic between a single origin/destination pair could be assigned to several routes depending on the congestion of each route, thereby simulating "real world" motorists' choices on a travel route.

MODEL CALIBRATION

Prior to assigning 2015 traffic, this entire process of estimating trip generation, distribution, and assignment was completed for 1992 conditions and compared with actual measurements on the roadway system. The theory behind calibration reasons that if the modeling process forecasts current conditions reasonably well, the same process should then provide a reasonably good estimate of future conditions.

To calibrate the model, the trip generation, distribution, and assignment process was repeatedly modified until the assigned volumes were within approximately ten percent of the actual counts. The data collected from the phone surveys were used in the calibration procedure to adjust the trip distribution process. Roadway speed was the key factor used to adjust the trip assignment process.

Data on through traffic were also used to calibrate the model. Through traffic was measured in the spring of 1992 by matching the license numbers of all vehicles entering and leaving the City. The survey found that 15 to 20 percent of all trips on external roads which enter the City during the PM peak hour are through trips. The most common PM peak hour through trip passes westbound along Third Street/Ochoco Highway from Highway 26 to the east to Highway 126. The reverse path was the second most common through trip.

FUTURE ASSIGNMENTS

For the future traffic analysis, 2015 traffic was first assigned to the existing major street system to determine which portions of the system would be deficient within the next twenty years. The model was then used to evaluate the affects of alternative roadway configurations on traffic assignment.

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APPENDIX F
TRANSPORTATION SYSTEMS FUNDING SOURCES

Table 1
Transportation Systems Plan
Summary of Road-Related Transportation Funding Programs: Federal Sources

Program Name	Description
Intermodal Surface Transportation Efficiency Act (ISTEA)	ISTEA is designed to provide flexibility in federal funding of transportation projects. ISTEA established several funding programs including the 1) National Highway System; 2) Interstate Program; 3) Surface Transportation Program; 4) Congestion Management and Air Quality Improvements Program; and 5) National Scenic Byways Program.
Surface Transportation Program (STP) (Bridge Program)	The Surface Transportation Program was authorized by Title I of the ISTEA. The STP funds are allocated to the State and suballocated to cities and counties on a formula basis by the Oregon Transportation Commission. STP funds may be used for any road that is not functionally classified as a local or rural minor collector and must be included in the Transportation Improvement Program to receive STP funds.
Transportation Enhancement Program (Part of STP)	The ISTEA includes provisions that require the State to set aside a portion of its Surface Transportation Program (STP) funds for projects that will enhance the cultural and environmental value of the State's transportation system. Eligible transportation enhancement projects must be directly related to the intermodal transportation system. This program funds enhancements including pedestrian and bicycle facilities; preservation of abandoned railway corridors; landscaping and other scenic beautification; control and removal of outdoor advertising; acquisition of scenic easements and scenic or historic sites; scenic or historic highway programs; historic preservation; rehabilitation and operation of historic transportation buildings, structures or facilities; archaeological planning and research; and mitigation of water pollution due to highway runoff.
Highway Enhancement System (HES)	The FHWA Highway Enhancement System Program provides funding for safety improvement projects on public roads. Safety improvement projects may occur on any public road and must be sponsored by a county or city. To be eligible for Federal aid, a project should be part of either the annual element of a Regional Transportation Plan or the annual listing of rural projects by ODOT, although they do not have to be part of the approved State Highway Improvement Program to receive HES funding.
Timber Receipts (USFS)	The United States Forest Service shares 25 percent of national forest receipts with counties. By Oregon law (ORS 294.060), the County then allocates 75 percent of the national forest receipts to the road fund and 25 percent to local school districts.
Community Development Block Grants (CDBG)	Community Development Block Grants (CDBG) are administered by the Department of Housing and Urban Development (HUD) and could potentially be used for transportation improvements in eligible areas.
Forest Highway Program	Support all public lands (including BLM), not just forest

Table 2
Transportation Systems Plan
Summary of Road-Related Transportation Funding Programs: State Level

Program Name	Description
State Highway Fund	The State Highway Fund composed of gas taxes, vehicle registration fees, and weight-mile taxes assessed on freight carrier. In 1994, the state gas tax was $0.24 per gallon. Vehicle registration fees were $15 annually. Revenues are divided as follows: 15.57 percent to cities, 24.38 percent to counties, and 60.05 percent to ODOT. The County share of the State Highway Fund is allocated based on population and vehicle registration. ORS 366.514 requires at least one percent of the State Highway Fund received by ODOT, counties and cities be expended for the development of footpaths and bikeways. ODOT administers the bicycle funds, handles bikeway planning, design, engineering and construction, and provides technical assistance and advice to local governments concerning bikeways.
Special Public Works Fund (SPWF)	The State of Oregon allocates a portion of revenues from the state lottery for economic development. The Oregon Economic Development Department provides grants and loans through the SPWF program to construct, improve and repair infrastructure to support local economic development and create new jobs. The SPWF provides a maximum grant of $500,000 for projects that will help create a minimum of 50 jobs.
Transportation Access Charges	The most familiar form of a transportation access charge is a bridge or highway toll. Transportation access charges are most appropriate for high-speed, limited access corridors; service in high-demand corridors; and bypass facilities to avoid congested areas. Congestion pricing, where drivers are charged electronically for the trips they make based on location and time of day, is the most efficient policy for dealing with urban congestion. It not only generates revenue for maintenance and improvements; but also decreases congestion and the need for capital improvements by increasing the cost of trips during peak periods. The Oregon Revised Statutes allow ODOT to construct toll bridges to connect state highways and improve safety and capacity. The Statues also allow private development of toll bridges. Recent actions by the Oregon legislature provide authority for developing toll roads. State authority for congestion pricing does not exist; new legislation would be required.
Immediate Opportunity Fund (IOF)	Financed at a level of $5 million per year to a maximum of $40 million through FY96. The fund is to support specific economic developments in Oregon through the construction and improvement of roads and is restricted for use in situations that require a quick response and commitment of funds. It is anticipated that the maximum amount available for a single project is $500,000 or 10 percent of the annual program level. This fund may be used only when other sources of financial support are unavailable or insufficient and are not a replacement or substitute for other funding sources.

OR Transportation Infrastructure Bank	As a pilot program for the USDOT, the Oregon Transportation Commission has made $10 million available from projects that will not be contracted in FY 1996. The OTIB will make loans for transportation projects and will offer a variety of credit enhancements. Initial loans must be for improvements on federal aid highways, repayments go into an account that will be made available for any mode. Ability to repay will be a key factor in all loans.
Traffic Control Projects	The State maintains a policy of sharing installation, maintenance, and operational costs for traffic signals and luminaire units at intersections between State highway and city streets (or county roads). Intersections involving a State highway and a city street (or county road) which are included on the state-wide priority list are eligible to participate in the cost sharing policy. ODOT establishes a statewide priority list for traffic signal installations on the State Highway System. The priority system is based on warrants outlined in the Manual for Uniform Traffic Control Devices. Local agencies are responsible for coordinating the statewide signal priority list with local road requirements.

Table 3
Transportation Systems Plan
Summary of Road-Related Transportation Funding Programs: Local Sources

Program Name	Description
Special Assessments/Local Improvements Districts	Special assessments are charges levied on property owners for neighborhood public facilities and services, with each property assessed a portion of total project cost. They are commonly used for such public works projects as street paving, drainage, parking facilities and sewer lines. The justification for such levies is that many of these public works activities provide services to or directly enhance the value of nearby land, thereby providing direct and/or financial benefit to its owners. Local Improvement Districts (LIDs) are legal entities established by the City to levy special assessments designed to fund improvements that have local benefits. Through a local improvement district (LID), streets or other transportation improvements are constructed and a fee is assessed to adjacent property owners.
Systems Development Charges (Impact Fees)	Systems Development Charges (SDCs) are fees paid by land developers intended to reflect the increased capital costs incurred by a municipality or utility as a result of a development. Development charges are calculated to include the costs of impacts on adjacent areas or services, such as increased school enrollment, parks and recreation use, or traffic congestion. Numerous Oregon cities and counties presently use SDCs to fund transportation capacity improvements. SDCs are authorized and limited by ORS 223.297 - 223.314.
Local Gas Tax	A local gas tax is assessed at the pump and added to existing state and federal taxes. Tillamook, The Dalles and Woodburn are Oregon cities that have a local gas tax. Multnomah and Washington Counties also have gas taxes.
Local Parking Fees	Parking fees are a common means of generating revenue for public parking maintenance and development. Most cities have some public parking and many charge nominal fees for use of public parking. Cities also generate revenues from parking citations. These fees are generally used for parking-related maintenance and improvements.

Program Name	Description
Street Utility Fee	Most city residents pay water and sewer utility fees. Street user fees apply the same concept to city streets. A fee would be assessed to all businesses and households in the city for use of streets based on the amount of use typically generated by a particular use. For example, a single-family residence might, on average, generate 10 vehicle trips per day compared to 130 trips per 1,000 square feet of floor area for retail uses. Therefore, the retail use would be assessed a higher fee based on higher use. Street services fees differ from water and sewer fees because usage cannot be easily monitored. Street user fees are typically used to pay for maintenance more than for capital projects.
Vehicle Registration Fees	Counties can implement a local vehicle registration fee. The fee would operate similar to the state vehicle registration fee. A portion of the County fee would be allocated to the City.
Property Taxes	Local property taxes could be used to fund transportation, although this is limited by Ballot Measure 5 and 47.
Revenue Bonds	Revenue Bonds are bonds whose debt service is financed by user charges, such as service charges, tolls, admissions fees, and rents. If revenues from user charges are not sufficient to meet the debt service payments, the issuer generally is not legally obligated to levy taxes to avoid default, unless they are also based by the full faith and credit of the insuring governmental unit. In that case, they are called indirect general obligation bonds. Revenue bonds could be secured by a local gas tax, street utility fee, or other transportation-related stable revenue stream.

Table 4
Currently Used Revenue Sources For Cities (millions of 1995 dollars)

Facility	Revenue Source	Importance (not 100%)	3-Year Trend	Dedication	Rate
Streets/Bridges/ Sidewalks/ Bike Lanes	Oregon Highway Trust Fund	51% of total road or $89.	Growing about 1.75% per year.	Constitutionally limited to funding activities that benefit autos & trucks.	24¢/gal. for gas; $30/biennium registration fee.
	General Fund Transfers	9% or $15.	Varies but assume growth @ 3%/yr. But not used by all cities.	May be used for any purpose.	Varies widely.
	Special Property Tax Levies	5% or $7.	Increasing, only used by about 18 cities.	May be used for purpose described in election.	Varies widely.
	Improvement District Assessments	7% or $12.5.	Varies but increases when local development increases.	May be used for construction of adjacent streets-sidewalks.	Varies with construction cost & local ordinances.
	Systems Development Charges/Traffic Impact Fees	4% or $7.	Varies but increases when local development increases, only used by about 2 dozen cities.	May be used for construction of new streets.	Varies with construction cost & local ordinances. Rates generally higher in Portland Metro area.
	Utility Franchise Fees	3% or $4.	Grows roughly w/population and inflation.	Is a general revenue used by some cities for streets.	Statutory limit of 5% of utility gross receipts.
	Interest Earnings	4% or $6.	Varies w/current interest rates.	Have same Constitutional limits as Highway Fund.	Used as general street revenue.
	Local Gas Tax	0.44% or $0.7	Unchanged.	Have same Constitutional limits as Highway Fund.	Used by Tillamook, The Dalles, and Woodburn.
	Private Contributions	3% or $4.3	Varies widely.	Usually contributions are related to specific development street impacts.	Negotiated individually.
	Misc. - permit fees, finds, fines, parking, Motel Tax, other	8% or $14.5.	Gradual growth.	General revenues used for streets.	Varies widely by City.
	Federal - FHWA+HUD	3% or $5.6.	Relatively stable	Used mainly for new construction w/some rehab.	Based on federal allocation to Oregon.

	Misc. State Revenues - mainly Lottery funds.	2% or $3.	Varies, no trend.	Used mainly for economic development capital improvements.	Specific grants to individual cities each year.
Off-street Bike Paths	Misc. general funds & ISTEA	??	Varies from year to year.	ISTEA & General Funds used for construction, General Funds used for maintenance & repair.	Varies from year to year.

Table 5
Transportation System Plan
Summary of Transit Funding Programs

Program Name	Description
FEDERAL SOURCES	All funds from the Federal Transit Administration (FTA) pay 80 percent of capital costs and require a 20 percent local match.
FTA Section 18	Section 18 is a federally sponsored program for small urban and rural areas (under 50,000 population) to support both capital and operating needs. These funds are dispersed through ODOT and distributed on a population basis.
FTA Section 16	These funds are distributed through ODOT to support the capital needs of nonprofit social service transportation providers. Funding of paratransit vehicles for public agencies is done through FTA Section 16.
FTA Section 9	If an urban area reaches a population of 50,000, it will no longer be eligible for Section 18 funds but will be eligible for Section 9 funds for urban populations greater than 50,000. Operating assistance is available to a predetermined regional cap based on the size and productivity of the operation. Capital assistance is available with a limit of 80 percent of a capital project. FTA funds are allocated to transit agencies based on a complex formula which includes population, population density, and the number of revenue service hours operated within a year.
FTA Section 3	FTA Section 3 funds are limited to capital purchases and fall into three categories: 1) bus/bus facilities, 2) new rail starts, and 3) rail upgrade. As with other FTA grants, the Section 3 Discretionary funds provide 80 percent funding with a 20 percent required local match.
Congestion Management/Air Quality Program (CMAQ)	This program was included in ISTEA for non-attainment areas as defined in the Federal Clean Air Act. ISTEA funds are administered by ODOT and are generally focused on air quality improvements.
STATE SOURCES	
Oregon Public Transit Assistance (In-Lieu Payroll Tax)	This fund source is a local payroll tax disbursed by the state to support transit services. To be eligible for these funds, a transit district must be formed and it must be generating local revenues (i.e., property tax). The amount is determined based on the number of State and Federal employees within the Transit District and is the reimbursement of payroll taxes collected from those employees. There is a restriction on the funds specifying that the amount of money received cannot exceed the amount of funding generated locally through the property tax. These funds can be used to support operations or as local match for federal capital grants.

Developer Impact Fees	An impact fee is a charge imposed on new development to compensate for its impact on the local transportation infrastructure. A fee is typically assessed on square footage of planned development. Impact fees can be implemented by local ordinance with specific criteria for establishing an impact fee and can be imposed in downtown urban areas or in outlying growth areas. An impact fee is a controversial measure and, like other developer fees, must show a connection between the development and the service provided.
Parking Taxes and Fees	A parking tax or fee could be levied by a city and all or a portion of it dedicated to transit uses. Many downtown areas levy parking fees and as the city grows, the levy can be used as a strategy to encourage transit use for trips to the downtown area.

Table 6
Transportation System Plan
Currently Used Transit Revenue Sources in Oregon

Transit Service Type/Function	Funding Source	Status
Urban Public Transportation (Portland & Eugene) (operating & capital)	1. Local Payroll Tax - operating 2. Federal grants - capital 3. Federal grants - operating 4. Fares & advertising	1. Major Source - $100 million/yr. Growing - Sensitive to Economic Conditions 2. Major source - $10 million/yr - Stable 3. Minor source - $5 million/yr - Declining 4. Minor source - Growing w/ridership
Urban Public Transportation (Salem, Corvallis, Medford, K-Falls)	1. Property tax (typically a taxbase or stand-alone levy w/in $10 cap for local gov't services) 2. Federal grants - capital 3. Federal grant - operating 4. Fares & advertising	1. Major Source - Growing Slowly 2. Major Source - $2 million/yr. - Stable 3. Major Source - $2 million/yr. - Declining 4. Minor Source - Growing w/ridership
Small City & Rural (Astoria, Union County, etc.) (operating & capital)	1. Federal grants - capital & operating 2. Local Property Tax (typically w/in city or county operating levy) 3. Fares, donations & advertising	1. Major Source - Declining 2. Major Source - Stable 3. Minor Source - Stable

Mobility for Seniors & People with Disabilities - (operating & capital)	1. Special Transportation Fund (2¢ state cigarette tax) - operating & capital 2. Social Service Agency grants / contracts - operating 3. Local Property Tax (typically w/in city or county operating levy) 4. Federal grants - capital & operating 5. Fares, donations advertising	1. Major Source - $5 million/yr. - Declining 2. Major Source - Declining 3. Minor Source - Stable 4. Major Source - Declining 5. Minor - Stable
Intercity Bus (operating & capital)	1. Major Interstate Routes: Fares 2. Branch & feeder routes: Private capital, Fares	1. Sole Source - Declining 2. Private

Appendix G

Newsletters and Meeting Agenda

Prineville
Transportation System Plan (TSP)

Staff Meeting # 1
Agenda

Date: April 27, 1998

Time: 1:00-3:00 pm

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Dick Brown**, City of Prineville
- ❑ **Dennis Evans,** Prineville Street Superintendent
- ❑ **Norm Thompson**, Crook County Road Master
- ❑ **John Boynton**, Prineville EMS Director
- ❑ **Lane Allen**, School Bus Services Supervisor
- ❑ **Jim Bryant**, ODOT Region #4
- ❑ **Jerry Baggett**, ODOT District Office
- ❑ **Bob Schnoor**, Prineville Fire Chief
- ❑ **Jim Soules**, Prineville Police Chief
- ❑ **Laren Wooley,** DLCD
- ❑ **Gary Ward,** Parks and Recreation
- ❑ **Gary Timmerman,** Mngr., Crook County Fairgrounds
- ❑ **Rodd Clark,** Sherriff, Crook County Sherriff
- ❑ **Carol Garside,** US Postal Service
- ❑ **Jerry Price,** Manager, Prineville Railroad

Consultant Staff Support

- ❑ **Andy Mortensen, Ron Kleinschmid, Cathy Corliss, Chris Eaton,** and **Barry Johnson** - W&H Pacific

Agenda:

1. Introductions (5 min)
2. Prineville TSP Update Work Program, Schedule and Public Involvement Process (5 min)
3. Prineville Policy/Plan Summary - TPR Compliance Status Report (45 min)
4. Socio-Economic Forecasts (45 min)
5. Draft Prineville Transportation Systems Development Charge (15)
6. Misc / Next Steps (5 min)

Attachments:

Transmittal under separate cover to include TPR Compliance Status Report, Socio-Economic Forecasts and Draft Prineville Transportation SDC report.

Prineville
Transportation System Plan (TSP)

Staff Meeting # 2
Agenda

Date: May 5, 1998

Time: 10:00 am -12:00 noon

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Dick Brown**, City of Prineville
- ❑ **Dennis Evans**, Prineville Street Superintendent
- ❑ **Norm Thompson**, Crook County Road Master
- ❑ **John Boynton**, Prineville EMS Director
- ❑ **Lane Allen**, School Bus Services Supervisor
- ❑ **Jim Bryant**, ODOT Region #4
- ❑ **Jerry Baggett**, ODOT District Office
- ❑ **Bob Schnoor**, Prineville Fire Chief
- ❑ **Jim Soules**, Prineville Police Chief
- ❑ **Laren Wooley**, DLCD
- ❑ **Gary Ward**, Parks and Recreation
- ❑ **Gary Timmerman**, Mngr., Crook County Fairgrounds
- ❑ **Rodd Clark**, Sherriff, Crook County Sherriff
- ❑ **Carol Garside**, US Postal Service
- ❑ **Jerry Price**, Manager, Prineville Railroad

Consultant Staff Support

- ❑ **Andy Mortensen**, **Ron Kleinschmid**, **Cathy Corliss**, **Chris Eaton**, and **Barry Johnson** - W&H Pacific

Agenda:

1. Introductions (2 min)
2. TSP Update - Current Conditions – Chapter 5 (30 min)
3. TSP Update – Short-Term Improvements (30 min)
4. Socio-Economic Forecasts (10 min)
5. Draft Prineville Transportation Systems Development Charge (30 min)
6. Misc / Next Steps (5 min)

Attachments:

TSP Chapter #5, Draft Transportation SDC Methodology.
TSP Chapter #6, Short-Term Improvements delivered by hand at the May 5th

Prineville
Transportation System Plan (TSP)

Staff Meeting # 3
Agenda

Date: June 3, 1998

Time: 1:00 pm -3:00 pm

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Dick Brown**, City of Prineville
- ❑ **Dennis Evans,** Prineville Street Superintendent
- ❑ **Norm Thompson**, Crook County Road Master
- ❑ **John Boynton**, Prineville EMS Director
- ❑ **Lane Allen**, School Bus Services Supervisor
- ❑ **Jim Bryant**, ODOT Region #4
- ❑ **Jerry Baggett**, ODOT District Office
- ❑ **Bob Schnoor**, Prineville Fire Chief
- ❑ **Jim Soules**, Prineville Police Chief
- ❑ **Laren Wooley,** DLCD
- ❑ **Gary Ward,** Parks and Recreation
- ❑ **Gary Timmerman,** Mngr., Crook County Fairgrounds
- ❑ **Rodd Clark,** Sherriff, Crook County Sherriff
- ❑ **Carol Garside,** US Postal Service
- ❑ **Jerry Price,** Manager, Prineville Railroad

Consultant Staff Support

- ❑ **Andy Mortensen**, **Ron Kleinschmid, Cathy Corliss, Chris Eaton**, and **Barry Johnson** - W&H Pacific

Agenda:

1. Introductions (2 min)
2. TSP Update – Follow up on Current Conditions – Chapter 5 (10 min)
3. TSP Update – Follow up on Short-Term Improvements – Chapter 6 (15 min)
4. TSP Update – Travel Forecasts – Chapter 7 (20 min)
5. TSP Update – Alternative Street System Analysis – Chapter 8 (40 min)
6. Misc / Next Steps (5 min)

Attachments:

TSP Chapter #7, Draft Travel Forecasts – to be sent under separate cover.
TSP Chapter #8, Alternative Street System Analysis – to be sent under separate cover.

Prineville Transportation System Plan (TSP)

Staff Meeting # 3 Postponement
Revised Agenda

The Prineville TSP Staff Meeting was originally scheduled for June 3, 1998. Due to the recent flooding the Staff Meeting has been rescheduled for June 10, 1998. The revised agenda is give below.

Date: June 10, 1998

Time: 1:00 pm -3:00 pm

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Dick Brown**, City of Prineville
- ❑ **Dennis Evans,** Prineville Street Superintendent
- ❑ **Norm Thompson**, Crook County Road Master
- ❑ **John Boynton**, Prineville EMS Director
- ❑ **Lane Allen**, School Bus Services Supervisor
- ❑ **Jim Bryant**, ODOT Region #4
- ❑ **Jerry Baggett**, ODOT District Office
- ❑ **Bob Schnoor**, Prineville Fire Chief
- ❑ **Jim Soules,** Prineville Police Chief
- ❑ **Laren Wooley,** DLCD
- ❑ **Gary Ward,** Parks and Recreation
- ❑ **Gary Timmerman,** Mngr., Crook County Fairgrounds
- ❑ **Rodd Clark,** Sherriff, Crook County Sherriff
- ❑ **Carol Garside,** US Postal Service
- ❑ **Jerry Price,** Manager, Prineville Railroad

Consultant Staff Support

- ❑ **Andy Mortensen, Ron Kleinschmid, Cathy Corliss, Chris Eaton**, and **Barry Johnson** - W&H Pacific

Agenda:

1. Introductions (2 min)
2. TSP Update – Follow up on Current Conditions – Chapter 5 (10 min)
3. TSP Update – Follow up on Short-Term Improvements – Chapter 6 (15 min)
4. TSP Update – Travel Forecasts – Chapter 7 (20 min)
5. TSP Update – Alternative Street System Analysis – Chapter 8 (40 min)
6. Misc / Next Steps (5 min)

Attachments:

TSP Chapter #7, Draft Travel Forecasts – to be sent under separate cover.
TSP Chapter #8, Alternative Street System Analysis – to be sent under separate cover.

Prineville
Transportation System Plan (TSP)

Staff Meeting # 4
Agenda

Date: July 20, 1998

Time: 10:00 am - 12:00 pm

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Dick Brown**, City of Prineville
- ❑ **Dennis Evans,** Prineville Street Superintendent
- ❑ **Norm Thompson**, Crook County Road Master
- ❑ **John Boynton**, Prineville EMS Director
- ❑ **Lane Allen**, School Bus Services Supervisor
- ❑ **Jim Bryant**, ODOT Region #4
- ❑ **Jerry Baggett**, ODOT District Office
- ❑ **Bob Schnoor**, Prineville Fire Chief
- ❑ **Jim Soules**, Prineville Police Chief
- ❑ **Laren Wooley,** DLCD
- ❑ **Gary Ward,** Parks and Recreation
- ❑ **Gary Timmerman,** Mngr., Crook County Fairgrounds
- ❑ **Rodd Clark,** Sherriff, Crook County Sherriff
- ❑ **Carol Garside,** US Postal Service
- ❑ **Jerry Price,** Manager, Prineville Railroad

Consultant Staff Support

- ❑ **Andy Mortensen**, **Ron Kleinschmid**, **Cathy Corliss, Chris Eaton**, and **Barry Johnson** - W&H Pacific

Agenda:

1. Short-Term Improvements (30 min)
2. Traffic Forecasts (30 min)
3. Long-Term Needs and Alternatives (30-45 min)
4. Misc / Next Steps (5 min)

Attachments:

Transmittal under separate cover to include Chapter 6 (update0, Chapter 7 (Traffic Forecasts), and Chapter 8 (Alternatives Analysis).

Prineville
Transportation System Plan (TSP)

Staff Meeting # 5
Agenda

Date: September 15, 1998

Time: 10:00 am - 12:00 pm

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Dick Brown**, City of Prineville
- ❑ **Dennis Evans,** Prineville Street Superintendent
- ❑ **Norm Thompson**, Crook County Road Master
- ❑ **John Boynton**, Prineville EMS Director
- ❑ **Lane Allen**, School Bus Services Supervisor
- ❑ **Jim Bryant**, ODOT Region #4
- ❑ **Jerry Baggett**, ODOT District Office
- ❑ **Bob Schnoor**, Prineville Fire Chief
- ❑ **Jim Soules**, Prineville Police Chief
- ❑ **Laren Wooley,** DLCD
- ❑ **Gary Ward,** Parks and Recreation
- ❑ **Gary Timmerman,** Mngr., Crook County Fairgrounds
- ❑ **Rodd Clark,** Sherriff, Crook County Sherriff
- ❑ **Carol Garside,** US Postal Service
- ❑ **Jerry Price,** Manager, Prineville Railroad

Consultant Staff Support

- ❑ **Andy Mortensen, Ron Kleinschmid, Cathy Corliss, Chris Eaton,** and **Barry Johnson** - W&H Pacific

Agenda:

1. Discussion Draft – Prineville TSP Update (1 hr, 30 min)
2. SDC Methodology (25 min)
3. Misc / Next Steps (5 min)

Attachments:

Discussion Draft – Prineville TSP Update

Transmittal under separate cover to include Revised SDC Methodology

Prineville
Transportation System Plan (TSP)

Final Staff Meeting
Agenda

Date: December 14, 1998

Time: 10:00 am - 12:00 pm

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Dick Brown**, City of Prineville
- ❑ **Dennis Evans,** Prineville Street Superintendent
- ❑ **Norm Thompson**, Crook County Road Master
- ❑ **John Boynton**, Prineville EMS Director
- ❑ **Lane Allen**, School Bus Services Supervisor
- ❑ **Jim Bryant**, ODOT Region #4
- ❑ **Jerry Baggett**, ODOT District Office
- ❑ **Bob Schnoor**, Prineville Fire Chief
- ❑ **Scott Cooper,** Chamber of Commerce
- ❑ **Jim Soules**, Prineville Police Chief
- ❑ **Laren Wooley,** DLCD
- ❑ **Gary Ward,** Parks and Recreation
- ❑ **Gary Timmerman,** Mngr., Crook County Fairgrounds
- ❑ **Clyde McClain,** Sherriff, Crook County Sherriff
- ❑ **Carol Garside,** US Postal Service
- ❑ **Jerry Price,** Manager, Prineville Railroad

Consultant Staff Support

- ❑ **Andy Mortensen**, **Ron Kleinschmid**, **Cathy Corliss, Chris Eaton**, and **Barry Johnson** - W&H Pacific

Agenda:

1. Draft TSP Comments and Updates (30 minutes)
2. SDC and Financial Plan Updates (30 minutes)
3. Misc / Next Steps (15 minutes)

Attachments:

Chapter 9 is attached.

Transmittal under separate cover to include Chapter 11 (update) and SDC Methodology update.

Prineville
Transportation System Plan (TSP)
Transportation Advisory Committee

TAC Meeting # 1
Agenda

Date: May 5, 1998

Time: 1:00-3:00 pm

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Tim Larkin**, Flegel Trucking
- ❑ **Mike Fisher**, Les Schwab
- ❑ **Todd Vallie,** Community First Bank
- ❑ **Gene Fawbush,** Dairy Queen
- ❑ **Jackie Warren,** Pioneer Club & Motel
- ❑ **Jim Lane**, Prineville Mens Wear
- ❑ **Joe Hankins,** Chair, Airport Commission
- ❑ **Gary Goodman,** Prineville Disposal
- ❑ **Mary Thurman,** The Associates Realty
- ❑ **Dale Comini,** Soroptomist Intl.
- ❑ **Shauna Zinn,** Rustlers Roost Motel
- ❑ **Mark Severson,** Barrs Cafe

City, State and Consultant Staff Support

- ❑ **Dick Brown**, City of Prineville
- ❑ **Jim Bryant,** ODOT
- ❑ **Andy Mortensen,** W&H Pacific

Agenda:

1. Introductions (5 min)
2. Prineville TSP Update Work Program, Schedule and Public Involvement Process (5 min)
3. Prineville Policy/Plan Summary - TPR Compliance Status Report (30 min)
4. Socio-Economic Forecasts (30 min)
5. Draft Prineville Transportation Systems Development Charge (45)
6. Misc / Next Steps (5 min)

Attachments:

TSP Chapters #2, #4 and #5 (including appendices), and Draft SDC Methodology Report. Chapter #6 will be delivered by hand at the May 5th meeting.

Prineville
Transportation System Plan (TSP)
Transportation Advisory Committee

TAC Meeting # 2
Agenda

Date: July 20, 1998

Time: 1:00-3:00 pm

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Tim Larkin**, Flegel Trucking
- ❑ **Mike Fisher**, Les Schwab
- ❑ **Todd Vallie**, Community First Bank
- ❑ **Gene Fawbush**, Dairy Queen
- ❑ **Jackie Warren**, Pioneer Club & Motel
- ❑ **Jim Lane**, Prineville Mens Wear
- ❑ **Joe Hankins**, Chair, Airport Commission
- ❑ **Gary Goodman**, Prineville Disposal
- ❑ **Mary Thurman**, The Associates Realty
- ❑ **Dale Comini**, Soroptomist Intl.
- ❑ **Shauna Zinn**, Rustlers Roost Motel
- ❑ **Mark Severson**, Barrs Cafe

City, State and Consultant Staff Support

- ❑ **Dick Brown**, City of Prineville
- ❑ **Jim Bryant**, ODOT
- ❑ **Andy Mortensen**, W&H Pacific

Agenda:

1. Short-Term Improvements (30 min)
2. Traffic Forecasts (30 min)
3. Long-Term Needs and Alternatives (30-45 min)
4. Misc / Next Steps (5 min)

Attachments:

Transmittal under separate cover to include Chapter 6 (update), Chapter 7 (Traffic Forecasts), and Chapter 8 (Alternatives Analysis).

Prineville
Transportation System Plan (TSP)
Transportation Advisory Committee

TAC Meeting # 3
Agenda

Date: September 15, 1998

Time: 1:00-3:00 pm

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Tim Larkin**, Flegel Trucking
- ❑ **Mike Fisher**, Les Schwab
- ❑ **Todd Vallie,** Community First Bank
- ❑ **Gene Fawbush,** Dairy Queen
- ❑ **Jackie Warren,** Pioneer Club & Motel
- ❑ **Jim Lane**, Prineville Mens Wear
- ❑ **Joe Hankins,** Chair, Airport Commission
- ❑ **Gary Goodman,** Prineville Disposal
- ❑ **Mary Thurman,** The Associates Realty
- ❑ **Dale Comini,** Soroptomist Intl.
- ❑ **Shauna Zinn,** Rustlers Roost Motel
- ❑ **Mark Severson,** Barrs Cafe

City, State and Consultant Staff Support

- ❑ **Dick Brown**, City of Prineville
- ❑ **Jim Bryant,** ODOT
- ❑ **Andy Mortensen,** W&H Pacific

Agenda:

1. Discussion Draft – Prineville TSP Update (1 hr, 30 min)
2. SDC Methodology (25 min)
3. Misc / Next Steps (5 min)

Attachments:

Discussion Draft – Prineville TSP Update

Transmittal under separate cover to include Revised SDC Methodology

Prineville
Transportation System Plan (TSP)
Transportation Advisory Committee

Final TAC Meeting
Agenda

Date: December 14, 1998

Time: 1:00-3:00 pm

Location: Prineville City Hall – Council Chambers

Attendance:

- ❑ **Tim Larkin**, Flegel Trucking
- ❑ **Mike Fisher**, Les Schwab
- ❑ **Todd Vallie,** Community First Bank
- ❑ **Gene Fawbush,** Dairy Queen
- ❑ **Jackie Warren,** Pioneer Club & Motel
- ❑ **Jim Lane**, Prineville Mens Wear
- ❑ **Jerry Hicks,** KRCO-KIJK
- ❑ **Joe Hankins,** Chair, Airport Commission
- ❑ **Gary Goodman,** Prineville Disposal
- ❑ **Mary Thurman,** The Associates Realty
- ❑ **Dale Comini,** Soroptomist Intl.
- ❑ **Shauna Zinn,** Rustlers Roost Motel
- ❑ **Mark Severson,** Barrs Cafe
- ❑ **Chet Peterson,** Farmers Insurance

City, State and Consultant Staff Support

- ❑ **Dick Brown**, City of Prineville
- ❑ **Jim Bryant,** ODOT
- ❑ **Andy Mortensen,** W&H Pacific

Agenda:

1. Draft TSP Comments and Updates (30 minutes)
2. SDC and Financial Plan Updates (30 minutes)
3. Misc / Next Steps (15 minutes)

Attachments:

Chapter 9 is attached.

Transmittal under separate cover to include Chapter 11 (update) and SDC Methodology update.

Prineville
Transportation System Plan (TSP)

Joint City Council Planning Commission Agenda

Date: December 14, 1998

Time: 6:00 pm

Location: Prineville City Hall – Council Chambers

Agenda:

1. Draft TSP Comments and Updates (30 minutes)
2. SDC and Financial Plan Updates (30 minutes)
3. Misc / Next Steps (15 minutes)

Attachments:

Chapter 9 is attached.

Transmittal under separate cover to include Chapter 11 (update) and SDC Methodology update.

City of Prineville Transportation System Plan Update Newsletter

Volume 1, Issue 1 **April, 1998**

City of Prineville Transportation System Plan Update Underway

The City of Prineville completed and adopted its Transportation System Plan Report in October 1994, and has incorporated many of the reports findings and recommendations in the City's Comprehensive Plan. Since 1994, a number of significant planning issues have been raised and discussed. These issues are of significant magnitude to warrant a full re-assessment and update of the Prineville TSP.

The City of Prineville, through assistance from the Oregon Department of Transportation (ODOT), has hired W&H Pacific to update the Prineville TSP. W&H Pacific's technical work is scheduled to begin in April 1998 and end by November 1998.

The Prineville Transportation Advisory Committee (TAC) will be reconvened and meet regularly to review the consultant's work, and provide local input and guidance to the TSP update.

Recommendations for plan and policy refinement will be made to the Prineville Planning Commission and City Council through a series of four work sessions. These work sessions will be advertised locally and are open to public attendance. Each of the work sessions will be preceded by a two-hour Public Open House Meeting for local citizens to ask questions, express concerns, and offer ideas for solutions. The planning project will be completed in December, 1998, upon adoption of the plan's findings and recommendations by the Prineville City Council.

MAJOR TRANSPORTATION ISSUES

The Prineville TSP Update will address area transportation issues in response to Oregon□s statewide Transportation Planning Rule - or □TPR□ for short. The TPR requires all Oregon cities and counties to develop 20-year, transportation plans with strategies

continued on page 2

Upcoming Public Participation Opportunities

Topic: to discuss transportation issues, alternative solutions, and proposed Transportation Systems Development Charge.

Public Open House

Date: Tuesday, May 5, 1998

Time: 5:00 PM to 7:00 PM

Place: City Hall, Council Chambers, City of Prineville

Joint Prineville City Council/ Planning Commission Work Session

Date: Tuesday, May 5, 1998

Time: 5:00 PM to 7:00 PM

Place: City Hall, Council Chambers, City of Prineville

FOR MORE INFORMATION CONTACT:

Dick Brown, Director

Planning and Community Development

City Hall – 400 East Third Avenue

Prineville, Oregon 97754

(541) 447-5627

continued from page 1

and local land use and transportation policies to manage future growth. It also requires local jurisdictions to assess ways in which future transportation improvements are paid for.

The Prineville TSP Update process has identified a number of transportation issues including:

- Downtown Enhancement Plan (1997) / One-Way Couplet improvement plan
- UGB growth and expansion
- Airport area development
- Possible new street, bike lane and sidewalk improvements
- Need for more detailed examination of transportation systems development charge
- Highway 126 grade improvements
- Crestview Area Emergency Access / New Crooked River crossing improvement plans
- Revised and Adopted Prineville Land Development Ordinance

This Public Information Bulletin was prepared in cooperation with the City of Prineville.

W&H Pacific, Inc., 1998.

NEW CROOKED RIVER CROSSING OPTIONS

Long-range plans for a new Crooked River Crossing with access to the Crestview area via South Second Street were identified in the 1994 Prineville TSP. A new river crossing greatly reduces local traffic demand on Highway 126, and provides significant enhancement to emergency access to the Crestview area. The Prineville TSP Update will conduct a detailed planning cost analysis of the Crooked River bridge crossing options.

PRINEVILLE TSP UPDATE SCHEDULE

A series of four Public Open House meetings will be held to present findings and recommendations of the Prineville TSP Update planning process. These meetings will be held immediately prior to the Joint City Council/Planning Commission Work Sessions. A tentative schedule of the Prineville TSP Public Open House meetings is summarized below. These meetings give Prineville residents an excellent opportunity to provide input and recommendations regarding critical transportation issues.

May 5 (5:00PM – 7:00 PM) Transportation System Inventory and Existing Conditions Update, Population Forecasts, Draft SDC Methodology

July 7 (5:00 PM – 7:00 PM) Future Travel Forecasts, System Needs Analysis Update, Evaluation of Improvements Alternatives (including One-Way Couplet analysis)

September 15 (5:00PM – 7:00 PM) Draft Transportation System Plan Update (including recommended projects and Financial Plan)

November 11 (5:00 PM - 7:00 PM) Final Transportation System Plan, Comprehensive Plan Policies and Development Codes for Local Adoption

City of Prineville,
Planning & Community Development
City Hall – 400 East Third Street
Prineville, Oregon 97754

ADDRESS CORRECTION REQUESTED

Mailing Address
Street Number and Name
City, State 98765-4321

City of Prineville Transportation System Plan Update Newsletter

Volume 1, Issue 2 June, 1998

Preliminary List of Transportation Improvements Identified

Short-Term Improvements

As part of updating the Transportation System Plan (TSP), Prineville is revisiting its "short-term" transportation projects. These are transportation improvements that the City would like to have built in the next five years. Below is a preliminary list of projects that will be further studied and ranked in the Draft Plan. A map is shown on page 2.

- Install traffic signals on 3rd Street at Harwood Street and Knowledge Street (a signal at Combs Flat Road is already programmed for the year 2000)
- Extend 4th Street from Court to Elm
- Install a computerized traffic signal system coordination network on 3rd Street between Harwood and Elm
- Extend Laughlin Road to Main Street
- Extend 9th Street from Locust to Highway 26, re-align 9th/10th/Lamonta Road intersection
- Add north/south left-turn phases to 3rd/Main Street traffic signal

Long-Term Needs and Alternatives

The Prineville TSP Update is a 20-year plan (1998-2018). Transportation improvements are being identified to address expected long-term problem areas including downtown/3rd Street traffic, Crooked River crossings (especially emergency access), and Highway 126/Airport area industrial access.

Downtown Street Alternatives

Below are the three major long-term alternatives the City and ODOT are considering to improve the traffic situation on 3rd Street.

- One-Way couplet using 2nd and 4th Streets
- One-Way couplet using 3rd and 4th Streets
- Improve and extend 2nd and 4th Streets to provide an alternative to 3rd Street but keep two-way traffic on all streets

New Crooked River Crossing

Also being discussed are alternatives for improved access across the Crooked River. Alternatives for the Crestview area are listed below.

- Extend Crestview Road to Highway 27 (with new bridge across Crooked River)
- Extend Rimrock Road to 2nd Street (with new bridge across Crooked River)
- Extend Rimrock Road under Highway 126 with a new connection to O'Neil Highway

Upcoming Public Participation Opportunities

Topic: to discuss traffic forecasts, transportation projects such as downtown street alternatives and short-term projects.

Public Open House

Date: Monday, July 20, 1998

Time: 5:00 PM to 7:00 PM

Place: City Hall, Council Chambers, City of Prineville

Joint Prineville City Council/ Planning Commission Work Session

Date: Monday, July 20, 1998

Time: 7:00 PM to 9:00 PM

Place: City Hall, Council Chambers, City of Prineville

FOR MORE INFORMATION CONTACT:

Dick Brown, Director

Planning and Community Development

City Hall – 400 East Third Avenue

Prineville, Oregon 97754

(541) 447-5627

continued from page 1

This Public Information Bulletin was prepared in cooperation with the City of Prineville.

W&H Pacific, Inc., 1998.

Preliminary Map of Short-Term Transportation Improvements

PRINEVILLE TSP UPDATE SCHEDULE

The first Public Open House was held on May 5th. Three more public Open House meetings will be held to present findings and recommendations of the Prineville TSP Update planning process. These meetings will be held immediately prior to the Joint City Council/Planning Commission Work Sessions. A tentative schedule of the Prineville TSP Public Open House meetings is summarized below. These meetings give Prineville residents an opportunity to provide input and recommendations regarding critical transportation issues. A Draft TSP should be available to the public in August.

OPEN HOUSE SCHEDULE

July 20 (5:00 PM – 7:00 PM) Future Travel Forecasts, System Needs Analysis Update, Evaluation of Improvements Alternatives (including One-Way Couplet analysis)

September 15 (5:00PM – 7:00 PM) Draft Transportation System Plan Update (including recommended projects and Financial Plan)

November 11 (5:00 PM - 7:00 PM) Final Transportation System Plan, Comprehensive Plan Policies and Development Codes for Local Adoption

City of Prineville,
Planning & Community Development
City Hall – 400 East Third Street
Prineville, Oregon 97754

BULK RATE
US POSTAGE
PAID
PERMIT NO. 98765

ADDRESS CORRECTION REQUESTED

Mailing Address
Street Number and Name
City, State 98765-4321

Appendix H

Draft Review Comments

INTEROFFICE MEMORANDUM

TO: ANDY MORTENSEN, W& H PACIFIC

FROM: JIM BRYANT, ODOT REGION 4

SUBJECT: PRINEVILLE TSP CHAPTER 9

DATE: 05/24/99

CC: DICK BROWN

I've reviewed the draft Chapter 9 and have the following comments. I have not gone over the rest of the TSP in great detail and, as it is still a draft document, will provide additional comments on other sections of the plan before the final document is approved. Others at ODOT will still need to review the draft once its out for public review.

CHAPTER 9

Page 9-6 #15, 16 , 17 and elsewhere(?) – The use of the word "may" requires some explanation or criteria to clarify where/when the requirement will be imposed. The word "should (or shall) obviates the need for this clarification.

Page 9-7 – D.1. Connectivity to the Street System

- The local and neighborhood streets shown on Figure 9-1 are a good beginning to street connectivity but, in and of themselves, do not provide enough guidance on the location, spacing, and/or linkages of the local or neighborhood streets within the UGB. (See below for additional comments on Figure 9-1.) There should either be a policy on the maximum block length, perimeter or length, or there should be a local street master plan which lays out the actual anticipated location and connections of the local street sytem.

Page 9-9 – Sidewalk Construction Program

- This seems difficult to implement without a significant public subsidy. Perhaps the city should identify this effort as part of their capital improvement program for current deficiencies as a complement to the requirement for new or redevelopment to construct sidewalks as part of their approval process. In commercial areas, a business improvement district may be another option.

Page 9-14 and Figure 9-1

- "The existing functional classification system is shown in Chapter 5.... Figure 9-1 identifies the recommended functional street classification and probable location of

new neighborhood streets." Figure 9-1 is not exhaustive of the probable location of new local streets within the entire urban growth boundary. As mentioned above, a local street master plan would be optimal. Perhaps figure 9-1 should be footnoted or something to clarify that the proposed local and neighborhood streets are only shown for the northern section of the city experiencing residential growth. There are numerous other areas within the UGB, both developed and to be developed, that will need to provide a local street grid.

- Figure 9-1 The street system proposed for north of Peters Road is good and should be expanded to the area south of Peters Road (centered on the "Mariposa" subdivision), as well as for the area south of Third between Knowledge and Willowdale. Local and neighborhood streets should be anticipated for these areas in the 20-year horizon. There are other areas that also seem to need some framework of future connectivity, but Dick and others would better know.
- I would suggest a couple of changes in functional class designations. Rawhide would seem to be better classified as a collector than a local. Similarly, the neighborhood streets off of Martindale look more like local streets. Also, the east/west neighborhood streets bounded by Peters and Del Rio look to be the local street framework for those developing areas.
- Figure 9-2, Tables 9-1&2 – These entries do not speak to the downtown core except through some of the footnotes. In keeping with the commitment to a vibrant downtown, which I believe to be the single most important issue addressed in the TSP, perhaps it's appropriate to show the distinct attributes of the downtown core streets including the cross sections and amenities (including street lighting).

Page 9-23

- "To address this conflict, the Ochoco Highway shall be ~~broken down~~ (segmented, divided, apportioned, etc) into four specific segments."
  "The third segment … to Fairview ~~Knowledge~~. The fourth segment … Fairview ~~Knowledge~~ (These changes also need to be reflected in Table 9-3.)
- Misspelling of *recognizing* in the last sentence on this page.

Page 9-29 – Street Improvements

- Add rebuilding Laughlin. The intersection with Hwy 26 needs to be a short term improvement and the rest could be probably be deferred to latter years.

Page 9-34 – Bicycle Projects

- Number projects and show numbered projects on the map (Fig. 9-5) as was done for the street projects. Not all the projects shown on Fig. 9-5 are discussed in the text. They need to be listed with some explanation, including the type of bike facility. Also, there needs to be a prioritization of the projects (access to schools is certainly one critical criterion) and a cost estimate for the projects.

- Figure 9-5 uses the term bikeway yet the projects shown on 9-34 all call for bike lanes. (Related issue to bullet above.)
- Projects have been completed on Combs Flat Road, from Third to Lynn and on the O'Neil Highway from MP 18 to Hwy 126. Do they meet the TSP standard? If so, show as existing on Figure 9-5, otherwise show just additional work to meet standard as a future improvement.

Page 9-37 – Pedestrian Projects

- Figure 9-6 Good graphic that shows the pedestrian destinations. The priority of the pedestrian facilities show be based on the pedestrian generators as well as the arterial/collector classification. As for the bike projects, a prioritization of the projects needs to be established.
- Table 9-4
  Map No. 5, Given its location to the elementary school, this should be a high priority.
  Map No. 13 Main route to schools—high priority

Page 9-45 – Issue for Further Study

- One-Way Couplet – As worded, this paragraph undermines the findings and recommendations in the TSP. I believe the community, with the adoption of the Downtown Plan and this TSP, is, in fact, making a conscious decision to invest in a strong, vibrant downtown even at the "cost" of some future peak hour congestion. In part, this trade-off is being made with the expectation that alternative routes will be available for those who choose to avoid Third Avenue during peak hours. These alternatives, the Laughlin local truck route and the enhanced Second and Fourth Streets, are justified on the basis of this community choice.

  This paragraph, or elsewhere in the document, should rather articulate the community vision for downtown and document the reasoned choice to forgo the couplet for a livable downtown. ODOT supports Prineville's assertion of its community values and decision not to fall lockstep into the typical knee-jerk response to perceived capacity needs. This decision needs to be illuminated in the TSP so that when the inevitable pressure to increase capacity is raised in the future, people will be able to understand the thought process that went into making the decision. The community may feel differently in the future but I suspect the retrospect will be one of appreciation for having invested and believed in the future of the downtown.
- Crooked River Bridge – This should really be labeled Rimrock Road.

Table 9-5 Under Partnership, show a rough cost split between the various entities (i.e. 25%/50%/75%) and add rebuilding Laughlin. Also, there's a header that says "Short-Term Projects" under the description. Delete or also label midrange/long-term.

February 02, 1999

Dick Brown, Planning Director
City of Prineville
400 E. Third Street
Prineville, Oregon 97754

RE: City of Prineville Transportation System Plan-Draft.

Dear Dick,

Thank you for the opportunity to review and comment on the City of Prineville's draft Transportation System Plan (TSP). In general, the draft TSP adequately addresses many of the challenging transportation issues facing the city. However, there are general policy issues and some specific issues, relating to compliance with the Transportation Planning Rule (TPR) (OAR 660-12), which have not been fully addressed in the draft TSP. Attached please find our comments and suggestions for your review. We request that you consider and incorporate our comments into the TSP prior to the city adopting the final TSP.

Population and Employment Forecast

The city should coordinate population and employment forecast with Crook County. Further, the city should adopt these population and employment forecast, which are consistent with the State's projections, into the city's comprehensive plan and they should appear in the TSP.

Selection of Alternatives based upon Reasonable Cost

The TPR requires the TSP to be "*based upon evaluation or potential impacts of system alternatives that can reasonably be expected to meet the identified transportation needs in a safe manner and at a reasonable cost . . .* " (OAR 660-12-035). In Chapter 10 of the draft TSP several million dollars worth of capital improvement projects are identified for construction within the city over the next twenty years. It appears the funding identified in the TSP would fall significantly short of meeting the identified capital needs. The city should balance the costs of potential capital projects against likely revenue sources. This can be accomplished through a variety of methods to include: (1) scaling back the list of capital projects to equal revenue projections; (2) specify which revenue generating measures will likely be implemented; or (3) some combination of (1) and (2) which would bring capital expenditures and revenues into balance.

We request that you develop a prioritized listing of capital projects in the TSP so that the highest priority projects are financially constrained by available funding and the remainder of necessary projects are tied to the listed potential revenue generating measures.

Timing of Improvements

The TPR requires a TSP to contain a general estimate of the timing for planned transportation facilities and major improvements (660-12-040(2)(b)). We did not locate any reference to the timing of project development. A TSP which does not contain a general estimate of the timing of listed improvements would not be in compliance with the TPR. Accordingly, the city must ensure a project timing element is included in the final TSP prior to adoption.

There are a variety of approaches the city could use to meet the above referenced requirement. Many jurisdictions have met the requirement by listing short-term (a 0-5 year), midterm (a 5-10 year) and a long term (10-20 years) project development time lines.

Street Standards

The TPR requires local governments to establish standards for local streets and access ways that minimize pavement width and total right-of-way (ROW) consistent with the operational needs of the facility (660-12-045(7)). The city's existing and proposed street standards retain ROW which would appear excessive when compared to the actual pavement width and ADT. We suggest three changes:

- Develop a standard for narrow local street ROW and pavement width in instances where alleyways are present and can be used for off street parking and alternative access.

- The draft TSP suggests that cul-de-sac streets not exceed 800 feet in length. We suggest that a cul-de-sac with a length in excess of 400 feet inhibits effective and efficient auto, pedestrian and bicycle circulation.

- We urge the city to revise the street standards for cul-de-sacs. We recommend the city revise and develop street standards which reduce excessive ROW and pavement width consistent with the TPR.

Bicycle and Pedestrian Facilities

While the draft TSP contains maps and lists of existing and proposed bicycle and pedestrian facilities, we found it difficult to ascertain the type of facilities (striped bike lane, shared roadway, ADA compliant sidewalk, substandard sidewalk or pathway) being referenced by both the maps and text. Further, we did not find a timetable for development or retrofitting of proposed facilities. We recommend that the city provide maps and text showing the types of existing and planned bicycle and pedestrian facilities along with a time line for development and retrofitting.

Thank you for the opportunity to review and comment on the draft City of Prineville TSP. After careful review and analysis, we request that you consider our comments and amend the draft TSP accordingly prior to beginning the approval and adoption process. If you have any questions regarding our comments please do not hesitate to contact me at telephone number 503-373-0050 extension 288. Thank you for your time.

Regards,

Rick Williams, AICP
Transportation/Land Use Planner

cc: Jim Bryant, ODOT Region 4
Laren Woolley, DLCD Field Representative
Andy Mortensen, W& H Pacific

APPENDIX I
RECOMMENDED CHANGES TO COMPREHENSIVE PLAN AND LAND DEVELOPMENT ORDINANCE TO COMPLY WITH THE TRANSPORTATION PLAN

INTRODUCTION

The following report, prepared by W&H Pacific, Inc. for the City of Prineville, is intended to help guide the City of Prineville in updating their Comprehensive Plan and implementing ordinances in order to comply with the Transportation Planning Rule (TPR). It includes proposed revisions to the following documents:

- Comprehensive Plan (July, 1997).
- Land Development Ordinance No. 1057, hereafter referred to as the "Development Ordinance" (March, 1998).

The proposed code amendments are organized around the following TPR compliance issues:

A. Approval Process for Transportation Facilities
B. Assure Amendments are Consistent with the Transportation System Plan (TSP)
C. Recommended Regulations to Provide Notice to Public Agencies
D. Street Standards
E. Safe and Convenient Pedestrian and Bicycle Circulation
F. Bicycle Parking
G. Protecting Existing and Future Operation of Facilities

A brief discussion of the TPR compliance issues rationale for the proposed code changes introduces each subsection. A table identifying the proposed language and its suggested location(s) within the adopted Prineville ordinances follows.

For both the comprehensive plan and development ordinance, proposed new code language is *italicized*, and existing code language remains in a regular font format. Those sections of the existing code proposed for deletion are distinguished with a ~~strikethrough~~, and proposed replacement language immediately follows.

The Transportation Planning Rule (TPR)

In 1991, the Oregon Transportation Planning Rule (TPR) was adopted to implement State Planning Goal 12—Transportation (amended in May and September 1995). The Transportation Planning Rule requires all jurisdictions to revise their land use regulations to implement a Transportation System Plan that addresses the following elements of the TPR:

- *Amend land use regulations to reflect and implement the Transportation System Plan.*
- *Clearly identify which transportation facilities, services, and improvements are allowed outright, and which will be conditionally permitted or permitted through other procedures.*

- *Adopt land use or subdivision ordinance measures, consistent with applicable federal and state requirements, to protect transportation facilities, corridors and sites for their identified functions, to include the following topics:*

    - *access management and control;*
    - *protection of public use airports;*
    - *coordinated review of land use decisions potentially affecting transportation facilities;*
    - *conditions to minimize development impacts to transportation facilities;*
    - *regulations to provide notice to public agencies providing transportation facilities and services of land use applications that potentially affect transportation facilities;*
    - *regulations assuring that amendments to land use applications, densities, and design standards are consistent with the Transportation System Plan.*

- *Adopt land use or subdivision regulations for urban areas and rural communities to provide safe and convenient pedestrian and bicycle circulation and bicycle parking, and to ensure that new development provides on-site streets and accessways that provide reasonably direct routes for pedestrian and bicycle travel.*

- *Establish street standards that minimize pavement width and total right-of-way.*

In addition to the development of a Transportation System Plan, local jurisdictions are required to create policies and ordinances that implement the Plan.

PROPOSED AMENDMENTS TO THE COMPREHENSIVE PLAN AND IMPLEMENTING ORDINANCES

A. APPROVAL PROCESS FOR TRANSPORTATION FACILITIES

Pursuant to the TPR, projects that are specifically identified in the Prineville Transportation System Plan (TSP), which the City has made all the required land use and goal compliance findings, are permitted outright and subject only to the standards established by the TSP. A city only may allow outright an improvement that complies with the TSP. Therefore, it is recommended that the City ofPrineville use the conditional use permit process to review those transportation projects not allowed outright within the Urban Growth Boundary. Adoption of the proposed code language will meet the requirements of OAR 660-12-045 (1).

Comprehensive Plan

Suggested Location	Proposed Language Change
Amend Transportation Element, Goals and Objectives, Section 2. New language is a subset to the existing Goal 2.	*A. The city shall coordinate with the Oregon Department of Transportation (ODOT) to implement the highway improvements listed in the Statewide Transportation Improvement Program (STIP) that are consistent with the Transportation System Plan and comprehensive plan.* *B. The city shall consider the findings of ODOT's draft Environmental Impact Statements and Environmental Assessments (if any) as integral parts of the land use decision-making procedures. Other actions required, such as a goal exception or plan amendment, will be combined with review of the draft EA or EIS and land use approval process.*

Implementing Ordinances

The Development Code currently permits transportation projects as either a permitted or conditional use, in accordance with OAR 660-12-045 (1).

B. ASSURE AMENDMENTS ARE CONSISTENT WITH THE TRANSPORTATION SYSTEM PLAN (TSP)

The Transportation Planning Rule requires that jurisdictions develop regulations to assure that all development proposals, plan amendments, or zone changes conform to the Transportation System Plan. Adoption of the proposed code language will meet the requirements of OAR 660-12-045(2)(g).

Comprehensive Plan

Suggested Location	Proposed Language Change
Amend Transportation Element, Goals and Objectives, Section 2. New language is a subset to the existing Goal 7.	*A. All development proposals, plan amendments, or zone changes shall conform with the adopted Transportation System Plan.*

Implementing Ordinances

Suggested Location	Proposed Language Change
Insert in Development Ordinance, Amendments, Article 11	***Section 11.080 Conformance with the TSP*** *A. A plan or land use regulation amendment significantly affects a transportation facility if it:* *1. Changes the functional classification of an existing or planned transportation facility;* *2. Changes standards implementing a functional classification system;* *3. Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or* *4. Would reduce the level of service of the facility below the minimum acceptable level identified in the Transportation System Plan.* *B. Amendments to the comprehensive plan and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:* *1. Limiting allowed land uses to be consistent with the planned function of the transportation facility;* *2. Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,* *3. Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes.* *C. A Traffic Impact Study, prepared pursuant to Section 9.005 of the Development Ordinance, may be required.*

C. RECOMMENDED REGULATIONS TO PROVIDE NOTICE TO PUBLIC AGENCIES

Review of land use actions is typically initiated by a Notice. A Procedures Ordinance or Notification Policy usually defines this process. The TPR requires a city to provide notice to ODOT regarding any land use action on or adjacent to a State facility. All actions by the city potentially affecting another jurisdiction's road should include notification of that jurisdiction's public works department. In addition, the notification policy should be to notify providers of public transit and recognized special interest transportation groups such as truckers, railroad, bicyclists, pedestrians, and the disabled on any roadway or other transportation project. Adoption of the proposed code language will meet the requirements of OAR 660-12-045(2).

Comprehensive Plan

Suggested Location	**Proposed Language Change**
Amend Transportation Element, Goals and Objectives, Section 2. New language is a subset to the existing Goal 2.	*C. The city shall coordinate plan amendments, zone changes, and other land use decisions that affect transportation facilities and services with other providers of these services including ODOT and Crook County.*

Implementing Ordinances

Suggested Location	**Proposed Language Change**
Insert in the Development Ordinance, Amendments, Article 11	**Section 11.040 Public Notice Requirements** *(6) Any application that involves access to the State Highway System shall be provided to Oregon Department of Transportation for their review an comment regarding conformance with state access management standards and requirements.*
Insert in the Development Ordinance, Administration and Enforcement, Article 12	**Section 12.070 Public Hearings and Notice** (5) Contents of Public Notices (c) Set forth the street address or other easily understood geographical reference to the subject property,*including the location of project access point(s)*

D. STREET STANDARDS

The Transportation Planning Rule requires that cities balance mobility, access, and livability when specifying street standards. Historically, cities have tended to establish street dimensions based on highway standards. Many cities have found it increasingly expensive to construct and maintain very wide streets. In many cases, livability has been diminished because excessively wide streets make it difficult to walk, andcommunity aesthetics decline as the landscape is dominated by roads and motor vehicles. As understanding of roadway function has increased, local governments have established standards for local streets and accessways that minimize pavement width and total right-of-way, while maintaining the operational needs of the facility. This reduces the costs of new construction and maintenance, and provides for more efficient use of urban land. The goal is to allow for emergency vehicle access while discouraging inappropriate traffic volumes and speeds, along with accommodating pedestrians and bicyclists. Adoption of the proposed code language will meet the requirements of Section 660-12-045(7).

Comprehensive Plan

Suggested Location	**Proposed Language Change**
Amend Transportation Element, Goals and Objectives, Section 2. New language is a subset to the existing Goal 6.	*A. Design standards for local streets and accessways should minimize pavement width and total right-of-way, while maintaining the operational needs of the facility to reduce the costs of new construction and maintenance, and provide for more efficient use of urban land.* *B. Existing streets that are to be widened or reconstructed should 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, existingon-street parking, and significant cultural features. Whenever possible, the design of the street should be sensitive to the livability of the surrounding neighborhood.*

Implementing Ordinances

Suggested Location	**Proposed Language Change**
Insert in the Development Ordinance, Design and Improvement Standards and Requirements, Article 9	**Section 9.020 Lots and Blocks** (1) Blocks. ~~(a) No block shall be more than 1,000 feet in length between street corner lines unless it is adjacent to an arterial street, or unless topography or the location of adjoining streets justifies an exception, and is so approved by the reviewing authority.~~ ~~(b) The recommended minimum length of a block along an arterial is 1,800 feet.~~ *(a) Limit block length to 600 feet in length, except for 800 feet on arterials.* ~~(c)~~ *(b)* A block shall ....

Ibid.	**Section 9.0303 Easements** (3) Pedestrian Ways. When desirable for public convenience, a pedestrian and/or bicycle way of not less than four (4) feet in width may be required connect to a cul-de-sac or to pass through ~~an unusually long or oddly shaped block~~ *a block over six hundred feet in length,* or to otherwise provide ...
Ibid.	**Section 9.050 Streets and Other Public Facilities** (11) Cul-de-sacs. *Limit the use of cul-de-sac designs and closed street systems to situations where topography, pre-existing development or environmental constraints prevent full street extensions. If cul-de-sacs are used, they shall be as short as possible and shall have maximum lengths of six hundred feet.* A cul-de-sac shall terminate with a circular turn-a-round with a minimum radius of 45 feet of paved driving surface and a 50 – 60 feet right-of-way.
Ibid.	**Section 9.050 Streets and Other Public Facilities** (6) Minimum Right-of-Way and Roadway Widths. Unless otherwise approved in the tentative development plan, street, sidewalk and bike right-of-ways and surfacing ... *Supersede existing table with the following table*

Table 9- 1
Proposed Functional Classification System

	Arterial	Collector	Local Route	Neighborhood Street	Alley
Auto amenities	2 lanes (12 ft.)	2 lanes (11-12 ft.)	2 Lanes (11 ft)	2 Lanes (10-11 ft)	12-16 ft
Bike amenities[1]	2 lanes (6 ft.)	2 lanes (4-5 ft.)	Shared Surface	Shared Surface	None
Pedestrian amenities[2] (Sidewalks)	2 (5-8 ft.)	2 (5-8ft.)	2 (4-5 ft.)	2 (4-5 ft.)	None
Managed speed[3]	35 - 55 mph	25- 35 mph	25 mph	15-25 mph	10 mph
Ultimate Design ADT	10,000+	3 - 10, 000	1,200 - 3,000	1,200 max	500 Max
Curb-to-curb width[4] (two way)	50 ft.	46 ft.	36 ft.	28 ft.	Not Apply
Parking	NO	NO	YES	YES	NO
Traffic calming	Not typical[5]	Permissible/not typical	Permissible/not typical	Typical	Not Typical

1 An absolute minimum width for safety concerns is 5 ft. on arterials and 4 ft. on collectors, local routes and neighborhood streets, which is expected to occur only in locations where existing development along an established sub-standard route or other severe physical constraints preclude construction of the preferred facility width. Parallel multi-use paths in lieu of bike lanes are not appropriate along the arterial-collector system due to the multiple conflicts created for bicycles at driveway and sidewalk intersections. In rare instances, separated (but not adjacent) facilities may provide a proper function.

2 Sidewalks eight-feet in width are required in commercial areas unless otherwise provided for in the Prineville Land Development Ordinance. The *City of Prineville Downtown Enhancement Plan* (1997) recommends wider sidewalks in downtown Prineville in order to accommodate street trees and street furniture without comprimising ADA requirements or business access.

3 Arterial speeds in the central business or other commercial districts in urban areas may be 20-25 mph. Traffic calming techniques, signal timing, and other efforts will be used to keep traffic within the desired managed speed ranges for each Functional Class. Design of a corridor's vertical and horizontal alignment will focus on providing an enhanced degree of safety for the managed speed.

4 Street design for each development shall provide for emergency and fire vehicle access. Neighborhood street widths of less than 28 feet shall be applied as a development condition through the subdivision and/or planned development process. The condition may require the developer to make the choice between improving the street to the 28 ft. standard or constructing the narrower streets with parking bays placed intermittently along the street length. The condition may require fire-suppressive sprinkler systems for any dwelling unit more than 150 feet from a secondary access point.

5 Pursuant to the *City of Prineville Downtown Enhancement Plan* (1997) pedestrian flares (extensions) or half-flares are proposed at downtown intersections of arterials or collectors.

E. SAFE AND CONVENIENT PEDESTRIAN AND BICYCLE CIRCULATION

Bicycling and walking are often the most appropriate mode for short trips. In smaller cities where the downtown area is compact, walking and bicycling can replace short auto trips, and thus reduce the need for construction and maintenance of new roads. However, the lack of safe and convenient bikeways and walkways can discourage pedestrian and bicycle travel. The Transportation Planning Rule (660-12-045(3)) requires that urban areas and rural communities plan for bicycling and walking as part of the overall transportation system.

In order for walking and bicycling to be viable forms of transportation, the proper facilities must be supplied. In addition, certain development patterns, such as orienting commercial uses to the street and placing parking behind the building, make a commercial district more accessible to non-motorized transportation and to existing or future transit. The Transportation Planning Rule specifies that, at a minimum, sidewalks and bikeways be provided along arterials and collectors in urban areas. Separate bicycle and pedestrian facilities should be provided, as they provide a "short cut" and could safely minimize trips distances. Adoption of the proposed code language will meet the requirements of OAR 660-12-045(3)(b), (c), and (d).

Comprehensive Plan

Suggested Location	Proposed Language Change	
Amend Transportation Element, Goals and Objectives, Section 2. Proposed language is a new goal – Goal 8. Additional language is a subset to the new goal.	*8.*	*Develop a network of streets, accessways, and other improvements, including bikeways, sidewalks, and safe street crossings to promote safe and convenient bicycle and pedestrian circulation within the community. This shall be done through the implementation of the TSP and review of new development proposals.*
Subset to Goal 8.	*A)*	*Require streets and, where appropriate, accessways to provide direct and convenient access to major activity centers, including downtown, schools, shopping areas, and community centers.*
Ibid.	*B)*	*In areas of new development, the city should investigate the existing and future opportunities for pedestrian and bicycle accessways. Many existing accessways such as user trails established by school children distinguish areas of need and should be incorporated into the transportation system.*
Ibid.	*C)*	*Maintenance and repair of pedestrian accessways (including sidewalks) and existing bikeways should be given equal priority to the maintenance and repair of motor vehicle facilities.*
Ibid.	*D)*	*Bikeways and pedestrian accessways shall connect to local and regional travel routes. Design and construction of such facilities shall follow the guidelines established by the Oregon Bicycle and Pedestrian Plan.*
Ibid.	*E)*	*Bike lanes shall be included on all new arterials and collectors within the Urban Growth Boundary .*
Ibid.	*F)*	*Arterial and collector streets shall include bike lanes except as otherwise specifically provided for in the TSP. Local routes and neighborhood streets will accommodate bicycles by allowing for shared use of travel lanes or shoulder bikeways.*

Suggested Location	Proposed Language Change
Insert in the Development Ordinance, General Provisions, Article 1, Section 1.040	*Accessway. A walkway that provides pedestrian and bicycle passage either between streets or from a street to a building or other destination such as a school, park, or transit stops. Accessways generally include a walkway and additional land on either side of the walkway, often in the form of an easement or right-of-way, to provide clearance and separation between the walkway and adjacent uses. Accessways through parking lots are generally physically separated from adjacent vehicle parking or parallel vehicle traffic by curbs or similar devices and include landscaping, trees, and lighting. Where accessways cross driveways, they are generally raised, paved, or marked in a manner that provides convenient access for pedestrians.*
	Bicycle Facilities. A general term denoting improvements and provisions made to accommodate or encourage bicycling, including parking facilities and all bikeways.
	Neighborhood Activity Center. An attractor or destination for residents of surrounding residential areas. Includes, but is not limited to existing or planned schools, parks, shopping areas, transit stops, employment areas.
	Reasonably direct. A route that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for likely users
	Safe and convenient bicycle and pedestrian routes are: *a. Reasonably free from hazards, and* *b. Provides a reasonably direct route of travel between destinations, considering that the optimum travel distance is one-half mile for pedestrians and three miles for bicyclists.*
	Walkway. A hard-surfaced area intended and suitable for pedestrians, including sidewalks and the surfaced portions of accessways.
Insert in the Development Ordinance, Central Commercial, C-1 Zone, Section 3.050	**Section 3.050 C-1 Zone** (6) Use Limitations. *(f) New commercial buildings, particularly retail shopping and offices, shall be oriented to the street, near or at the setback line. A main entrance shall be oriented to the street.*
Ibid.	(7) Off-Street Parking and Loading *(e) Where feasible, off-street motor vehicle parking for new commercial developments shall be located at the side or behind the building(s).*

Suggested Location	Proposed Language Change
Amend the Development Ordinance, Streets and Other Public Facilities, Section 9.0505	(23) Sidewalks *Sidewalks shall be required along arterials, collectors, local routes and neighborhood streets as specified in the TSP.*
Ibid.	(24) Bike Lanes *Bikeways and bikelanes shall be provided along arterial and collector streets as specified in the TSP*

F. BICYCLE PARKING

The lack of safe and convenient bicycle parking can discourage bicycling as a transportation mode. The following are recommended to comply with Section 660-12-045 (3) of the TPR.

Comprehensive Plan

Suggested Location	Proposed Language Change
Amend Transportation Element, Goals and Objectives, Section 2. Proposed language is a subset to new Goal 8.	*G) Bicycle parking facilities shall be provided at all new residential multifamily developments of four units or more, commercial, industrial, recreational, and institutional facilities.*

Implementing Ordinances

Suggested Location	Proposed Language Change
Insert in the Development Ordinance, General Provisions: Off-Street Parking and Loading, Section 4.060	*(5) The number of vehicular spaces required in Section 4.070may be reduced by up to 10% if one of the following is demonstrated to the satisfaction of the Planning Director or Planning Commission:* *(a) Residential densities greater than units per gross acre (parking shall be no less than one space per unit for multi-family structures).* *(b) The Planning Director or the Planning Commission conclude that the proposed development is pedestrian oriented by virtue of a location which is in convenient walking distance of existing or planned neighborhood activities (such as schools, parks, shopping etc.) and the development provides additional pedestrian amenities not required by the code which when taken together significantly contribute to making walking convenient (e.g. wider sidewalks, pedestrian plazas, pedestrian scale lighting, benches, etc.)*

Insert in the Development Ordinance, Supplementary Provisions, Article 4.	***4.075 Bicycle Parking Requirements*** *(1) General Standard:* *A minimum of 2 bicycle parking spaces (one sheltered and one unsheltered) per use shall be required.* *(2) Specific Uses:* *A. Residential:* *Multi-family dwellings: every multi-family development of four (4) or more dwelling units shall provide at least one sheltered bicycle parking space for each unit. Sheltered bicycle parking spaces may be located within a garage, storage shed, basement, utility room or similar area. In those instances in which the multi-family development has no garage or other easily accessible storage unit, the required bicycle parking spaces shall be sheltered under an eave, overhang, an independent structure, or similar cover.* *B. Place of Public Assembly* *1. Elementary or junior high schools: one bicycle parking space for every 10 students and employees. All spaces shall be sheltered under an eave, overhang, independent structure, or similar cover.* *2. High school: one bicycle parking space for every 5 students and employees. All spaces shall be sheltered under an eave, overhang, independent structure, or similar cover.* *3. Colleges. one bicycle parking space for every 10 motor vehicle spaces plus one space for every dormitory unit. Fifty percent of the bicycle parking spaces shall be sheltered under an eave, overhang, independent structure, or similar cover.* *C. Commercial* *1. Parking Lots. All public and commercial parking lots and parking structures shall provide a minimum of one bicycle parking space for every 10 motor vehicle parking spaces.* *2. Downtown Areas. In downtown areas with on-street parking, bicycle parking for customers shall be provided along the street at a rate of at least one space per use. Spaces may be clustered to serve up to six (6) bicycles; at least one cluster per block shall be provided. Bicycle parking spaces shall be located in front of the stores along the street, either on the sidewalks in specially constructed areas such as pedestrian curb extensions. Inverted "U" style racks are recommended. Bicycle parking shall not interfere with pedestrian passage, leaving a clear area of at least 5 feet. Customer spaces are not required to be sheltered. Sheltered parking (within a building, or under an eave, overhang, or similar structure) shall be provided at a rate of one space per 10 employees, with a minimum of one space per store.*
Insert in the Development Ordinance, Design/Improvement Standards - Off-Street Parking and Loading, Section 4.080	(14)Parking Lot Plans Required *(h) Location and number of bicycle parking stalls*

G. PROTECTING EXISTING AND FUTURE OPERATIONS OF FACILITIES

The Transportation Planning Rule requires that jurisdictions protect the future operation of transportation corridors. For example, an important arterial for through traffic should be protected from incompatible land uses in order to meet the community's identified needs. Other future transportation facilities that small jurisdictions may wish to address include rights-of-way or other easements for accessways, paths, and trails. Additionally, space and building orientation necessary to support future transit may also be an important issue.

Protection of existing and planned transportation systems can be provided by ongoing coordination with other agencies, adhering to the road standards, and to the access management policies and ordinances suggested below. Adoption of the proposed code language will meet the requirements of OAR 660-12-045(2).

Comprehensive Plan

Suggested Location	**Proposed Language Change**
Amend Transportation Element, Goals and Objectives, Section 2. New language is a subset to the existing Goal 6.	*C) The city should protect the function of existing and planned roadways as identified in the Transportation System Plan.*
Amend Transportation Element, Goals and Objectives, Section 2. New language is a subset to the existing Goal 7.	*B) The city should include consideration of the impact on existing or planned transportation facilities in all land use decisions.*
Ibid.	*C) The city should protect the function of existing or planned roadways or roadway corridors through the application of appropriate land use regulations.*
Ibid.	*D) The city should consider the potential to establish or maintain accessways, paths, or trails prior to the vacation of any public easement or right-of-way.*
Ibid.	*E) The city should preserve right-of-way for planned transportation facilities through exactions, voluntary dedication, or setbacks.*

Implementing Ordianances

Suggested Location	**Proposed Language Change**
Insert in the Development Ordinance, Definitions, Section 1.040	*Access. A way or means of approach to provide pedestrian, bicycle, or motor vehicular entrance or exit to a property.*
	Access Connection. Any driveway, street, turnout or other means of providing for the movement of vehicles to or from the public roadway system.
	Access Management. The process of providing and managing access to land development while preserving the regional flow of traffic in terms of safety, capacity, and speed.
	Cross Access. A service drive providing vehicular access between two or more contiguous sites so the driver need not enter the public street system.
	Joint Access (or Shared Access). A driveway connecting two or more contiguous sites to the public street system.
	Lot Frontage. That portion of a lot extending along a street right-of-way line.
	Nonconforming Access Features. Features of the property access that existed prior to the date of ordinance adoption and do not conform with the requirements of this ordinance.
	Reasonable Access. The minimum number of access connections, direct or indirect, necessary to provide safe access to and from the roadway, as consistent with the purpose and intent of this ordinance and any applicable plans and policies of the (city/county).
	Stub-out (Stub-street). A portion of a street or cross access drive used as an extension to an abutting property that may be developed in the future.
Amend the Development Ordinance, Site Plan and Review, Section 4.240	(D) Site Development Plan 7. Parking and circulation areas, including their dimensions; *and the number and type of bicycle parking facilities required in Section 4.075.*
Amend the Development Ordinance, Site Plan and Review, Section 4.240	(D) Site Development Plan 13. Pedestrian and bicycle circulation. *Internal pedestrian circulation shall be provided in new commercial, office, and multi-family residential developments through the clustering of buildings, construction of hard surface walkways, landscaping, accessways, or similar techniques. Pedestrian circulation through parking lots shall be provided in the form of accessways.*

Suggested Location	Proposed Language Change
Ibid.	(D) Site Development Plan *20. On-site facilities shall be provided to accommodate safe and convenient pedestrian and bicycle access within new subdivisions, multi-family developments, planned development, shopping centers, and commercial districts, and connecting to adjacent residential areas and neighborhood activity centers. Residential developments shall include streets with sidewalks and accessways.* *21. For new office parks and commercial developments:* *(a) At least one walkway connection between the proposed development and each abutting property shall be provided.* *(b) walkways shall be provided to the street for every 300 feet of developed frontage.* *(c) walkways shall be direct and driveway crossings minimized.* *(d) walkways shall be linked to the internal circulation of the building.* *(e) walkways shall be at least five feet wide and shall be raised, have curbing, or have different paving material when crossing driveways.* *22. Access management requirements per 9.060 where applicable*
Amend the Development Ordinance, Access Management, Section 9.060	(3) General Access Management Guidelines. ~~In the review and approval of new developments, the reviewing authority shall consider the following guidelines.~~ *In the interest of promoting unified access and circulation systems, the number of access points permitted shall be the minimum number necessary to provide reasonable access to these properties, not the maximum available for that frontage. All necessary easements, agreements, and stipulations shall be met. This shall also apply to phased development plans. The owner and all lessees within the affected area are responsible for compliance with the requirements of this ordinance and both shall be cited for any violation.* *For any new development, the following information shall be shown on the site plan.* *A. Driveways shall meet the following standards:* *1. If the driveway is a one-way in or one-way out drive, then the driveway shall be a minimum width of 12 feet and shall have appropriate signage designating the driveway as a one way connection.* *2. For two-way access, each lane shall have a minimum width of 12 feet.* *B. Driveway approaches must be designed and located to provide an exiting vehicle with an unobstructed view. Construction of driveways along acceleration or deceleration lanes and tapers shall be avoided due to the potential for vehicular weaving conflicts.* *C. The length of driveways shall be designed in accordance with the anticipated storage length for entering and exiting vehicles to prevent vehicles from backing into the flow of traffic on the public street or causing unsafe conflicts with on-site circulation.* *D. The number and spacing of accesses to City Streets shall be as specified in the table below:* *Replace the existing table*

City of Prineville
Access Management Guidelines for City Streets

Functional Classification	Intersection			
	Public Road		Private Drive	
	Intersection Type	*Min. Spacing*	*Intersection Type*	*Min. Spacing*
Arterial	at-grade	500 feet	Left/Right Turns	300 feet
Collector	at-grade	150 feet	Left/Right Turns	100 feet
Local Route	at-grade	100 feet	Left/Right Turns	50 feet

Suggested Location	Proposed Language Change
Insert in the Development Ordinance, Access Management, Section 9.060	*(5) Joint and Cross Access Guidelines.* *Any developments requiring site plan review that do not meet access spacing requirements are subject to these requirements. In these cases, the following information shall be shown on the site plan:* *A. Adjacent commercial or office properties classified as major traffic generators (e.g. shopping plazas, office parks), shall provide a cross access drive and pedestrian access to allow circulation between sites.* *B. A system of joint use driveways and cross access easements shall be established wherever feasible and shall incorporate the following:* *1. A continuous service drive or cross access corridor extending the entire length of each block served to provide for driveway separation consistent with the access management classification system and standards.* *2. A design speed of 10 mph and a minimum width of 20 feet to accommodate two-way travel aisles designated to accommodate automobiles, service vehicles, and loading vehicles;* *3. Stub-outs and other design features to make it visually obvious that the abutting properties may be tied in to provide cross-access via a service drive;* *4. A unified access and circulation system plan for coordinated or shared parking areas is encouraged.* *5. Subdivisions with frontage on the state highway system shall be designed into shared access points to and from the highway. Normally, a maximum of two accesses shall be allowed regardless of the number of lots or businesses served. If access off of a secondary street is possible, then access should not be allowed onto the state highway. If access off of a secondary street becomes available, then conversion to that access is encouraged, along with closing the state highway access* *C. Shared parking areas may be permitted a reduction in required parking spaces if peak demands do not occur at the same time periods.* *D. Pursuant to this section, property owners shall:* *1. Record an easement with the deed allowing cross access to and from other properties served by the joint use driveways and cross access or service drive;* *2. Record an agreement with the deed that remaining access rights along the roadway will be dedicated to the city and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway;* *3. Record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners.* *E. The city may reduce required separation distance of access points where they prove impractical, provided all of the following requirements are met:* *1. Joint access driveways and cross access easements are provided in accordance with this section.* *2. The site plan incorporates a unified access and circulation system in accordance with this section.* *3. The property owner enters into a written agreement with the city, recorded with the deed, that pre-existing connections on the site will be closed and eliminated after construction of each side of the joint use driveway.* *F. The Planning Department may modify or waive the requirements of this section where the characteristics or layout of abutting properties would make a development of a unified or shared access and circulation system impractical.*

Suggested Location	Proposed Language Change
Insert in the Development Ordinance, Access Management, Section 9.060	*(6) Standards for State Highways In the review and approval of new developments, the reviewing authority shall consider the following guidelines.* *(1) Future developments abutting state highways (zone changes, comprehensive plan amendments, redevelopment, and/or new development) will be required to meet the 1998 Oregon Highway Plan (OHP) Level of Importance (LOI) and Access Management policies and standards.* *(a) **Special Access Management Guidelines – See Table I-1 at end of this Appendix*** *(b)The remaining portions of US 30 and SH 37 are designated District Highways. New development accessing these roadways will need to maintain a minimum 500-foot (speed 40-45 mph) or 400-foot (35 mph or less) spacing between public or private access points (centerline to centerline) on either side of the roadway. Additional property frontage along the State Highway does not guarantee that additional access points will be allowed.* *(c)The 1998 Oregon Highway Plan (OHP) does provide for designation of Urban Business Area for areas that do not fit the description of a Special Transportation Area, but where accesses closer than standard would be appropriate. This designation may be pursued for sections of roadway other than the downtown couplets where higher than standard access density is desired.* *(2) Proposed land use actions that do not comply with the designated access spacing policy will be required to apply for an access variance from the City of Prineville and/or ODOT. Cases within the 1998 OHP Minor Deviation Limits require approval of the City and/or the ODOT Region Access Management Engineer. Deviation beyond these limits will be permitted only if no other reasonable option (such as joint access) exists, and requires approval of the City Council and the ODOT Region Manager.* *(3) The 1998 Oregon Highway Plan also establishes Mobility Standards for all State Highways, including those within the Prineville Area. The transportation impact from proposed developments must be appropriately mitigated where necessary to meet these Mobility Standards.* *(4) The existing legal driveway connections, intersection spacings and other accesses to the state highway system are not required to meet the spacing standards of the assigned category immediately upon adoption of this access management plan. However, existing permitted connections not conforming to the design goals and objectives of the roadway classification will be upgraded as circumstances permit and during redevelopment. At any time, an approach road may need to be modified due to a safety problem or a capacity issue that exists or becomes apparent. By statute, ODOT is required to ensure that all safety and capacity issues are addressed.*
Ibid.	*(5) If a property is landlocked (no reasonable alternative access exists), if an approach road cannot be safely constructed and operated, and if all other alternatives are explored and rejected, ODOT must purchase the property. (Note, if a hardship is self-inflicted, such as by partitioning or subdividing a property, ODOT has no responsibility for purchasing the property.)* *(6) New direct accesses to individual one and two family dwellings shall be prohibited on all but District-level State Highways, unless doing so would deny reasonable access to an existing legal lot of record.*

Insert in the Development Ordinance, Access Management, Section 9.060	*(8) Nonconforming Access Features* *Legal access connections in place as of (date of adoption) that do not conform with the standards herein are considered nonconforming features and shall be brought into compliance with applicable standards under the following conditions:* *a. When new access connection permits are requested;* *b. Change in use or enlargements or improvements that will significantly increase trip generation.*
Ibid.	*(9) Exception Standards for City Facilities* *a. The granting of the exception shall be in harmony with the purpose and intent of these regulations and shall not be considered until every feasible option for meeting access standards is explored.* *b. An exception may be allowed from these standards, if the applicant can provide proof of unique or special conditions that make strict application of the provisions impractical. Applicants shall include proof that:* *i. Indirect or restricted access cannot be obtained;* *ii. No engineering or construction solutions can be reasonably applied to mitigate the condition; and* *iii. No alternative access is available from a street with a lower functional classification than the primary roadway.* *c. No exception shall be granted where such hardship is self-created.*

Insert in the Development Ordinance, Design and Improvement Standards and Requirements, Article 9	***Section 9.055 Traffic Impact Study*** *Any new development shall not impose an undue burden on the public transportation system. For developments that are likely to impact the existing transportation system, the applicant shall provide adequate information, such as a traffic impact study, to demonstrate the level of impact to the surrounding street system.* *(1) Proposed land use actions, new developments, and/or redevelopment will need to provide traffic impact studies to the respective local reviewing jurisdiction(s) and ODOT(where appropriate) if the proposed use:* *(a) Directly accesses a state highway; or* *(b) Requires a comprehensive plan amendment; or* *(c) There is a recognized traffic safety or operations deficiency in the vicinity of the proposed land use action;* *and the proposed use exceeds the thresholds defined as:* *(d) Trip Generation Threshold: 50 newly generated vehicle trips (inbound and outbound) during the adjacent street peak hour; or* *(e) Mitigation Threshold: installation of any traffic control device and/or construction of geometric improvements that will affect the progression or operation of traffic traveling on, entering, or exitingthe (state) highway; or* *(f) Heavy Vehicle Trip Generation Threshold: 20 newly generated heavy vehicle trips (inbound and outbound) during the day.* *(2) A traffic study will not be required if a proposed land use action is allowed outright or a conditional use and it does not exceed the thresholds defined above.* *(3) Traffic Impact Studies will be prepared in accordance with the following:* *(a) A proposal establishing the scope of the transportation impact study shall be coordinated with, and agreed to, bythe city engineer. The study requirements shall reflect the magnitude of the project in accordance with accepted transportation planning and engineering practices. Such studies shall be prepared by a licensed professional civil or traffic engineer.* *(b) If the study identifies level-of-service conditions less than the minimum standards established in thePrineville Transportation System Plan, improvements and funding strategies to mitigate the problem shall be considered as part of the land use decision for the proposal.* *(c) The determination of impact or effect and the scope of the impact study should be coordinated with the provider of the affected transportation facility.* *(4) Dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or accessways shall be required where the existing transportation system will be impacted by or is inadequate to handle the additional burden caused by the proposed use.* *(5) Improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, accessways, paths, or streets that serve the proposed use where the existing transportation system, may be burdened by the proposed use.*

Insert in the Development Ordinance, Streets and Other Public Facilities, Section 9.050	**Section 9.050 Streets and Other Public Facilities** (1) It shall be the responsibility of the developer … *a. If any lot abuts a street right-of-way that does not conform to the design specifications of this ordinance, the owner may be required to dedicate up to one-half of the total right-of-way width required by this ordinance.* *b. Dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or accessways shall be required where the existing transportation system will be impacted by or is inadequate to handle the additional burden caused by the proposed use.*
Ibid.	*(28) **Connectivity** The street system of proposed subdivisions shall be designed to connect with existing, proposed, and planned streets outside of the subdivision as provided in this Section.* *(a) Wherever a proposed development abuts unplatted land or a future development phase of the same development, street stubs shall be provided to provide access to abutting properties or to logically extend the street system into the surrounding area. All street stubs shall be provided with a temporary turn-around unless specifically exempted by the Public Works Director, and the restoration and extension of the street shall be the responsibility of any future developer of the abutting land.* *(b) Minor collector and local residential access streets shall connect with surrounding streets to permit the convenient movement of traffic between residential neighborhoods or facilitate emergency access and evacuation. Connections shall be designed to avoid or minimize through traffic on local streets. Appropriate design and traffic control such as four-way stops and traffic calming measures are the preferred means of discouraging through traffic.* *(c) All access must be internalized using the shared circulation system of the principal development or retail center. Driveways shall be designed to avoid queuing across surrounding parking and driving aisles.*
Insert in the Development Ordinance, Lots and Blocks, Section 9.020	(2) Lots A. The resulting or proposed size, width, shape and orientation … B. *To provide for proper site design and prevent the creation of irregularly shaped parcels, the depth of any lot or parcel shall not exceed 3 times its width (or 4 times its width in rural areas) unless there is a topographical or environmental constraint or an existing man-made feature such as a railroad line.* C. *Flag Lots or Panhandle-shaped Lots:* *a. Flag lots shall not be permitted when the result would be to increase the number of properties requiringdirect and individual access connections to the State Highway System or other arterials.* *b. Flag lots may be permitted for residential development when necessary to achieve planning objectives, such as reducing direct access to roadways, providing one legal connection to a residential street, or preserving natural or historic resources, under the following conditions:* *i. The flag lot driveway shall have a minimum width of 10 feet and maximum width of 20 feet.* *ii. The lot area occupied by the flag driveway shall not be counted as part of the required minimum lot area of that zoning district.*

Ibid.	(3) Access Each resulting or proposed lot or parcel shall abut upon a public street, … *Lots that front on more than one street shall be required to locate motor vehicle accesses on the street with the lower functional classification.*
Amend the Development Ordinance, Site Plan and Review, Section 4.240	(D) Site Development Plan *23. Distances to neighboring constructed access points, median openings (where applicable), traffic signals (where applicable), intersections, and other transportation features on both sides of the property;* *24. Number and direction of lanes to be constructed on the driveway plus striping plans;* *25. All planned transportation features (such as sidewalks, bikeways, auxiliary lanes, signals, etc.);*

TABLE I-1
Special Access Management Guidelines

Roadway	Minimum Posted Speed	Minimum Spacing between Driveways and/or Streets [1]	Minimum Spacing between Intersections	Area of Application
Ochoco Highway - Segment 1	35-50 mph	none	none	Highway 126 from West UGB to Crooked River Bridge
Ochoco Highway - Segment 2	25-35 mph	300 feet	300 feet	Highway 126/Third Street from Crooked River Bridge to Harwood Street
Ochoco Highway - Segment 3 (downtown core)	25 mph	150 feet	300 feet	Third Street/Fourth Street from Harwood Street to Fairfield Street
Ochoco Highway - Segment 4 [2]	35-50 mph	500 feet	1/4 mile	Highway 26 from Fairfield Street to East UGB
Madras-Prineville Highway [2/3]	25-50 mph	500 feet	1/4 mile	Highway 26 from West UGB to Gardner
Madras-Prineville Highway [2/3]	25-50 mph	300 feet	1/4 mile	Highway 26 from Gardner to junction with Highway 126
Paulina Highway [4]	25-50 mph	150 feet	500 feet	Paulina Highway from Southeast UGB to Combs Flat Road
O'Neil Highway [2]	25-50 mph	500 feet	500 feet	O'Neil Highway from West UGB to Highway 126
McKay Road	25-50 mph	150 feet	500 feet	McKay Road from North UGB to Tenth Street
Main Street/Crooked River Highway - Segment 1	25 mph	150 feet	300 feet	Main Street from Tenth Street to Lynn Boulevard
Crooked River Highway - Segment 2 [4]	25-50 mph	150 feet	500 feet	Highway 27 from Lynn Boulevard to UGB

[1] Desirable design spacing (existing spacing will vary).
[2] *1991 Oregon Highway Plan* Access Management Classification System - Category 4, Urban
[3] *1991 Oregon Highway Plan* Access Management Classification System - Category 5, Urban
[4] *1991 Oregon Highway Plan* Access Management Classification System - Category 6, Urban

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