

TOWN OF LAKEVIEW TRANSPORTATION SYSTEM PLAN

July 2001



Prepared for:
The Town of Lakeview, Oregon and
Oregon Department of Transportation

Prepared by:
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And

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CHAPTER 1: INTRODUCTION

The Town of Lakeview Transportation System Plan (TSP) guides the management of existing transportation facilities and the design and implementation of future facilities for the next 20 years. This Transportation System Plan constitutes the transportation element of the Town's Comprehensive Plan and satisfies the requirements of the Oregon Transportation Planning Rule established by the Department of Land Conservation and Development. It identifies and prioritizes transportation projects for inclusion in the Oregon Department of Transportation's (ODOT's) Statewide Transportation Improvement Program (STIP).

LAND USE AND TRANSPORTATION CONNECTION

The Town of Lakeview TSP needs to 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. For Lakeview this would principally include coordination with the Oregon Department of Transportation (ODOT) and Lake County. For example, the Lakeview plan must be coordinated with statewide transportation plans. The elements of the plans for these jurisdictions that pertain to the Town of Lakeview are delineated in this chapter.

Goal 12

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 updated 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."

The comprehensive plan for the Town of Lakeview includes land use policies corresponding to the Transportation Planning Rule.

The Transportation Planning Rule

The Department of Land Conservation and Development (DLCD) and ODOT developed the Transportation Planning Rule (TPR). It was adopted in April 1991, and has been revised many times since then. The TPR implements Goal 12.

Overview

The Transportation Planning Rule 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 rule is to encourage a multi-modal transportation network throughout the state. A network 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 following plan elements are required in order to satisfy the TPR.

1. Identification of transportation needs;
2. A street system plan for a network of arterial and collector roadways;
3. Bicycle and pedestrian plans;
4. A public transportation plan;
5. Air, rail, water, and pipeline plans;
6. Policies and land use regulations for implementing the TSP; and
7. A transportation financing program.

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.”

PLANNING AREA

The Town of Lakeview TSP covers the area within the Lakeview Urban Growth Boundary (UGB). The current Lakeview UGB contains approximately 2,518 acres, and extends a mile south and west of the town limits, a mile and a half north, and includes the bench areas to the east. The town lies along the western base of the Warner Mountain Range of the Fremont National Forest, at an elevation of 4,800 feet. Lakeview provides opportunities to live, work, shop, and recreate within a rural small-town setting. The area outside of Lakeview is rural, and is primarily open fields used for agriculture and grazing.

The principal routes into and out of Lakeview are the Fremont Highway (OR 31/US 395), and the Klamath Falls-Lakeview Highway (OR 140). They are the arterials for the local street system, and the primary connections to Bend to the north, California to the south, and Klamath Falls to the west.

Historically, Lakeview has relied upon agriculture, timber, mining, and government services for its livelihood. With the changing economy in Oregon and the effects it has had on the timber industry, the Town has looked forward to new developments for economic growth. One development currently in the planning process is the construction of a new Department of Corrections Work Camp Facility just north of the Urban Growth Boundary.

The Town of Lakeview planning area is shown in Figure 1-1, and the Lakeview land use designations are shown in Figure 1-2.

PLANNING PROCESS

The Town of Lakeview TSP was developed through a series of technical analyses combined with systematic input and review by the Transportation Advisory Committee (TAC), a local stakeholder group, ODOT, and the public. The TAC consisted of staff, elected and appointed officials, residents, and business people from the Town. Key elements of the process include:

- Involving the Lakeview community (Chapter 1);
- Defining goals and objectives (Chapter 2);
- Reviewing existing plans and transportation conditions (Chapters 3 and 4; Appendices A, B and C);
- Developing population, employment, and travel forecasts (Chapter 5; Appendix D);
- Developing and evaluating potential transportation system improvements (Chapter 6; Appendix E);
- Developing the Transportation System Plan (Chapter 7);
- Developing a Financing Plan (Chapter 8); and
- Developing recommended policies and ordinances (Chapter 9; Appendix F).

Community Involvement

Community involvement is an integral component in the development of a TSP. Several different techniques were utilized to involve the local jurisdiction, ODOT, and the general public.

A transportation advisory committee (TAC) provided guidance on technical issues and direction regarding policy issues to the consultant team. Staff members from the local jurisdiction and ODOT served on this committee. This group met five times during the course of the project.

A group of local stakeholders, over 25 representatives from businesses, the public, and agencies, also provided input via phone interviews. This group was contacted at the beginning of the project to discuss transportation needs and issues facing the Town of Lakeview.

Another part of the community involvement effort consisted of community meetings within the Town of Lakeview. The first public open house was held April 3, 2001. The general public was invited to learn about the TSP planning process and provide input on transportation issues and concerns. Approximately eight people attended this meeting who were not associated with the project team. A second public open house was held May 22, 2001. The public was notified of the public meetings through public announcements in the local newspapers and on the local radio stations.

Goals and Objectives

Based on input from the management team/TAC and stakeholders, goals and objectives were defined for the TSP. These goals and objectives were used to make decisions about various potential improvement projects. They are described in Chapter 2.

Review and Inventory of Existing Plans, Policies, and Public Facilities

To begin the planning process, all applicable Lakeview area transportation and land use plans and policies were reviewed and an inventory of public facilities was conducted. The purpose of these efforts was to understand the history of transportation planning in the town, including the street system improvements planned and implemented in the past, and how the town is currently managing its ongoing development. Existing plans and policies are described in Appendix A of this report.

The inventory of existing facilities catalogs the current transportation system. The results of the inventory are described in Chapter 3, while Chapter 4 describes how the system operates. Appendix B summarizes the inventory of the existing highway and road systems.

Future Transportation System Demands

The Transportation Planning Rule requires the Transportation System Plan to address a 20-year forecasting period. Future traffic volumes for the existing plus committed transportation systems were projected using ODOT's *Level 1 -- Trending Analysis* methodology. The overall travel demand forecasting process is described in Chapter 5.

Transportation System Potential Improvements

Once the travel forecasts were developed, it was possible to evaluate a series of potential transportation system improvements. The evaluation of the potential transportation improvements were based on a qualitative review of safety, environmental, socioeconomic, and land use impacts, as well as estimated cost. These improvements were developed with the help of the TAC, and they attempt to address the concerns specified in the goals and objectives (Chapter 2). After evaluating the results of the potential improvements analysis, a series of transportation system improvements were selected. The recommended improvements are described in Chapter 6.

Transportation System Plan

The Transportation System Plan addresses each mode of transportation and provides an overall implementation program. The street system plan was developed from the forecasting and potential improvement evaluation described above. The bicycle and pedestrian plans were developed based on current usage, land use patterns, and the requirements set forth by the Transportation Planning Rule. The public transportation, air, water, rail, and pipeline plans were developed based on discussions with the owners and operators of those facilities. Chapter 7 details the plan elements for each mode.

Funding Options

The Town of Lakeview will need to work with ODOT to finance new transportation projects over the 20-year planning period. An overview of funding and financing options that might be available to the community is described in Chapter 8.

Policies and Ordinances

Comprehensive Plan policies and zoning and subdivision ordinances are included in Chapter 9. These policies and ordinances are intended to support the TSP and satisfy the requirements of the TPR.

RELATED DOCUMENTS

The Town of Lakeview TSP addresses the regional and rural transportation needs in the town. There are several other documents that address specific transportation elements in the Lakeview area.

Inventories and Plans

- Town of Lakeview Comprehensive Plan of 1980 (Revised, November 1988);
- Town of Lakeview Zoning Ordinance (Revised, April 2001);
- Town of Lakeview Periodic Review-Lakeview and Lake County Department of Corrections Facility Impact Assessment Report (Final Report June 30, 1999);
- Town of Lakeview Periodic Review-Growth Analysis (Final Report June 30, 1999);

- South Central Oregon Regional Investment Plan (February 2000); and
- Town of Lakeview Public Facility Plan Draft (February 2001).

Other State Plans

Coordination with the following state plans is required:

- Oregon Transportation Plan;
- Oregon Highway Plan; and
- Oregon Bicycle and Pedestrian Plan.

CHAPTER 2: GOALS AND OBJECTIVES.....1

OVERALL TRANSPORTATION GOAL.....1

Goal 1.....1

Goal 2.....1

Goal 3.....1

Goal 4.....2

Goal 5.....2

CHAPTER 2: GOALS AND OBJECTIVES

The purpose of the TSP is to provide a guide for the Town of Lakeview to meet its transportation goals and objectives. The following goals and objectives were developed from information contained in the Town of Lakeview Comprehensive Plan, Town of Lakeview Periodic Review, the South Central Oregon Regional Investment Plan, and public concerns as expressed during public meetings. An overall goal was drawn from the plans, along with more specific goals and objectives. Throughout the planning process, each element of the plan was evaluated against these parameters.

OVERALL TRANSPORTATION GOAL

Develop a transportation system that enhances the livability of Lakeview and accommodates growth and development through careful planning and management of existing and future transportation facilities.

Goal 1

Preserve the function, capacity, level of service, and safety of the state highways by identifying and addressing transportation needs relevant to the planning area and scale of the transportation network.

Objectives

- A. Develop access management standards that will meet the requirements of the TPR and also consider the needs of the community;
- B. Develop alternative, parallel routes;
- C. Continue federal, state, and local efforts to establish long-haul trucking capacity on Highway 140, 395, and 31;
- D. Support coordinated land-use and transportation planning for the Highway 140 corridor;
- E. Protect the function of the State Highways as they approach town; and
- F. Work closely with the Oregon Department of Transportation in the planning of Lakeview Streetscape Project 2001.

Goal 2

Improve and enhance safety and traffic circulation and preserve the level of service on local street systems.

Objectives

- A. Develop an efficient road network that will maintain a level of service D or better;
- B. Improve and maintain existing roadways, and maintain the current grid pattern system in Lakeview;
- C. Ensure planning coordination between the town, county, and the state;
- D. Identify local problem spots and recommend solutions; and
- E. Implement ordinances to include provisions for buffering, screening, and traffic control;

Goal 3

Identify the 20-year roadway system needs to accommodate developing or undeveloped areas within the Urban Growth Boundary of the Town of Lakeview.

Objectives

- A. Continue to develop the road system as the principal mode of transportation both for access to Lakeview and for local traffic;
- B. Coordinate with the county in encouraging development of the Industrial Park south of town limits, and the industrial area north of town;
- C. Address the needs of the community and impacts that the placement of the Department of Corrections Work Camp Facility will have on the local transportation system;
- D. Adopt policies and standards that address street connectivity, spacing, and access management; and
- E. Consider alternative funding sources for future road developments such as System Development Charges.

Goal 4

Increase the use of alternative modes of transportation (walking, bicycling, rideshare/carpooling, and transit) through improved access, safety, and service.

Objectives

- A. Develop a Town of Lakeview bicycle plan;
- B. Periodically assess pedestrian and bicycle modes of transportation within Lakeview and develop programs to meet demonstrated needs;
- C. Create a bikeway map identifying bikeway and destination opportunities;
- D. Initiate a sidewalk improvement program;
- E. Promote alternative modes and rideshare/carpool programs through community awareness and education to improve transit services and access to transit services as community needs are identified;
- F. Encourage development to occur near existing community centers where services are presently available so as to reduce the dependence on automotive transportation;
- G. Seek Transportation and Growth Management (TGM) grants and other funding for projects evaluating and improving the environment for alternative modes of transportation;
- H. Promote railroad freight service; and
- I. Recruit additional air service to Klamath Falls and Lakeview.

Goal 5

To provide and encourage a safe, convenient, and economic transportation system.

Objectives

- A. Promote commerce and improve the availability of parking in the Lakeview downtown commercial district with improved pedestrian access and amenities;
- B. Develop attractive signage to encourage passing travelers to stop, and improve interpretation of local history, geology, and other community attractions;
- C. Encourage underground utilities within the existing right-of-way whenever possible;
- D. Develop public subsidized bus transportation for the transportation disadvantaged as the need is demonstrated and budgetary priorities will allow;

- E. Support provisions of basic mobility services for the elderly and people with special transportation needs;
and
- F. Continue to educate non-motorized users and motorists about safety and use of the bikeway system.

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CHAPTER 3: TRANSPORTATION SYSTEM INVENTORY

As part of this Transportation System Plan, an inventory was conducted of the existing transportation system within the Lakeview Urban Growth Boundary (UGB). This inventory addressed the street system as well as the existing pedestrian, bikeway, public transportation, air transportation facilities, rail, water, and pipeline facilities.

The inventory was initiated by examining and summarizing past plans and maps (Appendix A). The physical portion of the inventory consisted of walking or driving each street within the UGB, as well as completing record searches. Phone interviews and five TAC meetings were conducted with citizens of Lakeview and a list of identified road issues were developed based on their comments. Recommendations for improvements were based on issues substantiated by a combination of TAC guidance, the street inventory, and engineering studies.

A complete list of the facilities inventoried is located in Appendix B. Chapter 4 summarizes the existing operations data for the transportation system (i.e., volumes, collision rates, etc.), and Chapter 5 summarizes the forecast operations for the 20-year planning horizon. Chapters 6 and 7 present an analysis of improvement alternatives and prioritized recommendations.

ROADWAY SYSTEM

In the United States, the majority of transportation dollars are allocated to building, maintaining, and planning the roadway system, mainly to carry automobiles and trucks. In more urban areas, the roadway system also provides facilities for bicyclists and pedestrians. The existing roadway system inventory was reviewed for all roadways within the Lakeview UGB. Inventory elements included:

1. Road classification and jurisdiction;
2. Road and right-of-way width;
3. Number of travel lanes;
4. Presence of on-street parking, sidewalks, curbs, or bikeways;
5. Speed limits; and
6. General pavement conditions.

Facilities for bicyclists and pedestrians were also inventoried. These are discussed under Pedestrian System and Bikeway System, below.

Appendix B lists the complete inventory for state highways, county roads, and local roads located inside the Lakeview UGB. Figure 3-1 depicts the current state and local road system.

Roadway Classification and Jurisdiction

The streets within the Lakeview UGB are currently classified as local streets and state highways. In the street system of Lakeview, no official designation has been made for collectors and arterials, but several roads function as such and are described in the following sections. The streets that function as arterials are the state highways, which are under the jurisdiction of the state and are maintained by Oregon Department of Transportation (ODOT). The Town maintains the local roads that form the street grid system within the town limits. Roads that extend beyond the town limits are county roads and are maintained by the Lake County Road Department.

Arterials

Two state highways – US Hwy 395, and OR Hwy 140 – extend through Lakeview, constituting Lakeview's arterial streets within the UGB. These highways are known as the Fremont Highway (US 395), and the Klamath Falls-Lakeview Highway (OR 140), as shown in Table 3-1.

TABLE 3-1 STATE HIGHWAYS IN THE LAKEVIEW UGB		
State Highway Name	Highway Route Number	Classification
Fremont Hwy (US 395)	Highway 19	Statewide
Klamath Falls-Lakeview Hwy (OR 140)	Highway 20	Statewide

The highways are part of a statewide road system that distributes traffic through and between regions, and are important freight and tourism routes. Generally, arterial streets are high capacity roadways that carry large traffic volumes with minimal localized activity. However, in the Lakeview UGB, the Fremont Highway serves as F Street, and is part of the downtown commercial district, and the Klamath Falls-Lakeview Highway serves as North 4th Street in the Lakeview street grid system. All the state highways through the Town are two lanes wide. There are no stoplights.

The 1999 *Oregon Highway Plan* (OHP) classifies the state highway system into five categories: Interstate, Statewide, Regional, and District Highways, and Local Interest Roads. ODOT has established primary and secondary functions for each type of highway and objectives for managing the operations for each one. In Lakeview, the highways are classified as Statewide.

Statewide Highways are intended to provide mobility between cities and regions that are not directly served by Interstate Highways. As in Lakeview, Statewide Highways are also frequently a town's arterial streets for local trips. In constrained urban areas, the State's management objective is to provide safe and efficient operation while minimizing interruptions to through traffic flows.

Collectors

The Town of Lakeview has no official designation for collectors, and no street is currently classified as a collector, however several roads within the town limits and UGB function as collectors. The east-west streets that function as collectors are North 2nd Street, Center Street, South 3rd Street, South 7th Street, South 9th Street, Kadrmas Road, and Missouri Avenue. The north-south collectors are H Street, North J Street, L Street, Roberta Avenue, Metzker Road, and South M Street.

Roberta Avenue, Metzker Road, Kadrmas Road, and Missouri Avenue are outside the town limits and under Lake County jurisdiction. The portions of South 9th Street from the railroad tracks west, and South M Street from 9th Street south to Kadrmas Road are also outside of the town limits and under Lake County Jurisdiction.

Local Streets

Local streets provide access to parcels of land and serve travel over relatively short distances. They are designed to carry the low traffic volumes associated with the local uses abutting them. The local streets in the Lakeview UGB are comprised of all streets not classified as either arterials or collectors. In Lakeview that includes all streets but the Highways and collectors described previously. Local streets in Lakeview are under town jurisdiction within the town limits and form most of the grid system within the UGB.

Pavement Conditions

All Oregon State highways are surveyed and assessed annually to determine current pavement conditions. There are two methodologies used to determine the condition:

- 1) GFP rating method used to rate the condition of Non-National Highway System highways consisting of a subjective value from very good to very poor, and
- 2) The Objective Rating process that produces a single index value comprised of a collection of individual equations rating distress type, severity, and quantity. Both methods result in five pavement condition categories including Very Good, Good, Fair, Poor, and Very Poor.

In 1999, the Fremont Highway (US 395) from milepost 140.66 near Hunters Lodge to milepost 144.05 (S. 9th Street) at the south town limit was rated in Fair Condition. Asphalt pavements in the Fair category are generally stable with minor areas of structural weakness evident. Cracking is easy to detect and patch, but not excessively. Deformation is more pronounced and easily noticed. The overall ride qualities are good to acceptable.

In 1999, the Klamath Falls Lakeview Highway (OR 140) from milepost 92.24 at Maddock Corner to the US 395/OR 140 junction was rated in Poor condition. Asphalt pavements in the Poor category have areas of instability marked with evidence of structural deficiency, large crack patterns (alligatoring), heavy and numerous patches, with noticeable deformation. Riding quality ranges from acceptable to poor.

Identified Road Issues

Issues discussed in this chapter were identified by stakeholders and by TAC members through interviews and meetings. Some of these issues warranted additional investigation and solutions. Some issues or conditions identified by these sources were not determined to be present. This determination was made through either discussions with the TAC, or engineering studies conducted. The manner in which the TSP addresses each issue is briefly described as the issues are presented.

- *“Insufficient funding for all infrastructure improvements limits the Town’s options for undertaking new projects and maintaining existing resources.”* – This was raised by a stakeholder and TAC member who indicated that there is no funding available to undertake additional projects. Funding options are addressed in more detail in Chapter 8.
- *“Storm drains need to be added to O through S Streets.”* – These streets are prone to flooding according to local officials. The recommended addition of storm drains, curbs, sidewalks is discussed in greater detail in Chapters 6 and 7.
- *“Traffic north of town is going too fast on Highway 395 and should be slowed.”* 1999 ODOT speed zone traffic study indicates that 85 percentile travel speeds are as posted. However, there are improvements that can be made to improve pedestrian safety while also encouraging slower speeds. Alternatives addressing this issue are presented in Chapters 6 and 7.
- *“The Town of Lakeview needs to adopt access standards for all street classifications.”* – Prior to the TSP, no street standards existed in the Town of Lakeview. Street standards are needed to achieve a safe and functional transportation system. Recommended street standards are described in Chapter 7.
- *“The Town of Lakeview needs to widen Highways 395 and 140 for bike lanes.”* –The Streetscape 2000 paving project will provide for bikeways on these two facilities with 14-ft lanes. The street standards in Chapter 7 continue this cross-section within the town limits and do provide bike lanes outside the town limits where traffic speeds are higher.
- *“The Town of Lakeview should pave gravel and dirt roads inside UGB”* – Paving roadways improve their function and improve the local air quality. This TSP recommends paving the remaining public gravel and dirt roads inside the UGB. This is discussed further in Chapters 6 and 7.
- *“Numerous street overlays have created a crown in the middle of the street and there are abrupt transitions between curbs and driveways.”* – TAC recommendations, research, and engineering studies associated with the project did not recommend this issue for further consideration.
- *“S. 3rd and L Street near the fields can become congested during peak use.”* – TAC recommendations, research, and engineering studies associated with the project did not recommend this issue for further consideration.
- *“Narrow streets such as E, F, and G Streets may be better as one way streets.”* – TAC recommendations, research, and engineering studies associated with the project did not recommend this issue for further consideration.

Downtown Core

A downtown core is often the historic town center, commonly, a commercial area characterized by a high density of shops, restaurants, and civic buildings such as the courthouse and town hall. These areas usually have on-street parking to attract shoppers and sidewalks to accommodate the ability for pedestrians to easily walk to a variety of destinations. The Town of Lakeview has a unique and vital downtown core that fits this description and unlike many other towns, the downtown core is the primary commercial center for the county.

In the Town of Lakeview, this area has been defined from North 2nd Street to South 1st Street, and D Street to G Street. It is important to note that the downtown core is not an exact definition, and that other streets may be included in the downtown area. However, for the sake of this discussion, the area described above is the area considered the downtown core in this study.

Continuous sidewalks are present in the downtown core. With some exceptions, these are generally in good condition, and are from 10-15 ft. wide. The sidewalks downtown, however, do not comply with the Americans with Disabilities Act (ADA) due to a lack of ADA curb ramps, and the presence of steep slopes, and varying heights relative to the street. Installing sidewalks and curb ramps that comply with ADA standards is of high priority for the Town of Lakeview.

Many businesses have awnings in the downtown core, establishing a pleasant refuge from the elements and a sense of human scale. Street furniture such as benches, trash receptacles, and water fountains are not located consistently throughout the area, but can be found nearby.

The availability of parking is a crucial link in maintaining the vitality of downtown areas. Availability is subjective, however, and factors such as the number, size, and location of parking spaces, distances to desired locations and people's habits affect the overall perception of availability of parking in these areas. For example, the Town of Lakeview Zoning Ordinances requires off-street parking for store employees and suggests that employees park off-street to provide parking for the public. If employees ignore this policy, parking in the downtown core may seem less available. Thus, the problem may not be an issue of supply, but of behavior.

In the area from North 2nd Street to South 1st Street, and D Street to G Street, there are approximately 480 marked parking spaces, including two parking lots (one town owned and one county owned). Nearly all of these spaces are slant or diagonal parking spaces that are approximately 15 feet deep and eight feet wide. There are approximately eighty spaces per block where both sides are fully striped.

Identified Downtown Core Issues

- *“Sidewalks in the downtown area need to comply with the ADA standards.”* – This issue is addressed in greater detail in Chapters 6 and 7, where improvements to downtown's sidewalks are discussed.
- *“Cars parked on-street too close to stop signs limit visibility, particularly in the downtown area.”* – TAC members mentioned this topic throughout the TSP planning process. The Town of Lakeview has adopted a revised zoning ordinance that has a clear vision area standard. The Town of Lakeview should enforce their existing standard by removing parking in the clear vision areas. No additional recommendations related to this topic are included in the TSP.
- *“There may be a parking supply problem downtown.”* – This comment was received during stakeholder interviews and mentioned infrequently in discussions with the TAC. A process has been identified in Chapters 6 and 7 to address this topic.
- *“There should be a stoplight on Center Street and Highway 395 to improve east/west traffic flow. This would improve the ease and safety of pedestrian crossings and slow through traffic to entice them to stop in Lakeview.”* – This idea was stated by a TAC member. However, subsequent PM Peak Hour traffic counts at this location indicate a signal will not be needed at this intersection through the year 2020.

- *“Better signage may increase usage of public parking lots.”* – There are two signs directing drivers to the public parking lots. Improved signage and striping will improve the use of these lots as drivers become more aware of their presence and can use the lots easily and safely. This TSP recommends improvements related to this issue in Chapters 6 and 7.
- *“Business owners and employees in the downtown area are not parking off-street and are taking up spaces that should be used by patrons.”* – This TSP recommends improvements related to this issue in Chapters 6 and 7.

Bridges

Bridge information was obtained from ODOT’s Bridge Maintenance Section after an October 2000 inventory. One of the most significant pieces of information gathered from the inventory is the overall sufficiency rating. This rating system determines if the bridge is structurally deficient or functionally obsolete. The scale ranges from zero to 100 with higher ratings indicating optimal conditions and lower ratings indicating insufficiency. Sufficiency ratings of 55 or less indicate an insufficiency. Bridges with ratings under 55 may be nearing a structurally deficient condition. Table 3-2 displays the sufficiency rating for the bridges in the Lakeview UGB.

TABLE 3-2
BRIDGES IN THE LAKEVIEW UGB

Bridge Number	Facility	Approximate Location	Sufficiency Rating	Sufficiency Status
02345	OR 140 (HWY 020)	0.21 MI W Lakeview	43.7	Insufficient
03917	US 395 (HWY 019)	In Lakeview culvert over Deadman Creek	100.0	Sufficient
08303A	OR 140 (HWY 020)	0.18 MI W Lakeview	84.0	Sufficient
37C060	Mountainview	0.40 MI West Hwy 395	95.0	Sufficient

With the exception of bridge number 02345, all of the bridges in Lakeview’s UGB are in acceptable condition. Bridge 02345, over Goose Lake Swale, was inspected in 1999 and was rated 43.7 on the ODOT sufficiency rating scale. This bridge is scheduled to be replaced in the summer of 2001 as part of the Streetscape 2001/Paving project. There are no other identified bridge needs in the town.

Street Layout

Most of the streets in the Lakeview UGB are aligned in a grid pattern running north and south parallel to the main arterial F Street (US 395), and east and west parallel to the second main arterial Klamath Falls Lakeview Highway (OR 140). The town block size varies, but is typically around 300 feet. The core of the downtown commercial area runs from North 2nd Street (OR 140) to South 1st Street, and one block east and west of F Street (US 395) from G Street to E Street.

The Lakeview street layout has a natural barrier to the east due to the Fremont National Forest and Warner Mountain Range, which backs up to the Lakeview UGB.

Identified Street Layout Issues

- *“Local streets are too narrow.”* - Lakeview has numerous local streets, such as portions of K, J, I, N. 10th, 11th, 12th, Center, S. 1st Streets, and F Street, that are as narrow as 24 feet (roadway and parking). However, speeds are typically slower on these streets and a higher rate of crashes has not been recorded on these streets. Local street cross sections in Chapter 7 include a standard for a 28’ foot cross section with parking on one side.

- *“There needs to be a more consistent approach to placing yield and stop signs at local intersections because the current method causes confusion.”* - Traffic control devices are placed according to specific criteria outlined in the Manual for Uniform Traffic Control Devices. This manual has not been consulted for the placement of some traffic control devices on the Town’s local streets. Chapter 6 discusses recommendations to improve this situation at nine intersections.
- *“The intersection of US 395 and OR 140 is confusing and should be reconfigured to accommodate additional traffic volumes.”* - Numerous curb cuts and a lack of stop control lend to this intersection being perceived as confusing. A suggestion to improve this intersection’s operations and make it less confusing to drivers is described in Chapters 6 and 7.
- *“The road and access configurations at G Street by the motel are confusing and unsafe.”* - A curb cut exceeding 50 feet serves the motel on G Street north of N. 4th Street. G Street is in a gentle sweeping curve in this area and there is an inadequate line of sight for traffic exiting the motel parking lot. A suggestion to improve this intersection’s operations and make it less confusing to drivers is described in Chapters 6 and 7.
- *“The Town of Lakeview should maintain the rural character of town with improvements such as roundabouts instead of stoplights.”* - A stakeholder mentioned that, all-else being equal, roundabouts would enhance the rural character of Lakeview compared to a traffic signal. A roundabout alternative is shown on Figure 6-2 for the intersection of US 395 and OR 140, but not recommended because of its impacts on adjacent properties. No other intersection warranted evaluation for a signal or roundabout improvement.
- *“Intersection improvements such as adding left-turn lanes, stop lights, curb extensions, and crosswalks may be needed at roads serving as main access points to the Oregon Department of Corrections Work Camp.”* - The main access to the work camp is outside the Lakeview UGB and is outside this project’s planning area. The work camp traffic study, being done under the direction of the Department of Corrections, will include that intersection in its analysis.
- *“There may be a need for intersection improvements on US 395 and Hunters Hot Springs Road because of accidents at that location”* - Based on the forecasted traffic volumes to 2020, this intersection does not warrant either a traffic control device or channelization improvements. A review of crash data did not identify this intersection as a safety problem. Safety analysis is provided in Chapter 4.
- *“There have been accidents on the corner of 5th and H Street. The stop sign is placed on 5th Street and should be on H Street.”* - A stakeholder mentioned this as an issue, but the stop sign is placed correctly according to the standards for placing stop signs described in the Manual for Uniform Traffic Control Devices. Interviews with local police and emergency services did not reveal an accident history for this intersection.
- *“There have been accidents on the corners of 8th Street and H and G Streets.”* - This was a stakeholder comment. Interviews with local police and emergency services revealed there are no accident histories at these intersections.
- *“There may be a need for a left-turn lane at the Forest Service compound.”* – Approximately 120 employees, most of which live south of the Forest Service Compound, use two entrances to access the Forest Service Compound during the A.M. and P.M. peak periods. With approximately 60 turns per entrance and total Design Hour Volumes of 118 vehicles (1999 ATR 19-004 S. of Junction with Lakeview-Burns Highway), the right and left-turn lane warrants are not met at this location.

Maintenance

The Public Works Department of Lakeview maintains local roads within the town limits. Lake County Road Department maintains all local roads that extend beyond the town limits and all other county roads within the Urban Growth Boundary. The Oregon Department of Transportation maintains the two state highways.

Identified Maintenance Issues

- “*The Town needs to perform more sidewalk maintenance.*” - The Town of Lakeview requires homeowners to maintain sidewalks in front of their property even though sidewalks are in the public right-of-way. Recommended new and replacement sidewalk projects are identified in Chapters 6 and 7.

PEDESTRIAN SYSTEM

The most basic transportation option is walking. Walking is particularly appropriate for trips of around 1/4 mile. The pedestrian transportation system is typically found as part of the roadway system, since it is usually made up of sidewalks in urban areas. Other important components of a pedestrian system include safe and convenient crossing facilities, appropriate levels of lighting and street furniture. One of the Town’s goals is to improve pedestrian facilities and increase walking as a mode of transportation through the provision of improved facilities.

Continuous sidewalks are found in the downtown core (North 2nd Street, G Street to E Street and South 1st Street). Downtown sidewalks are typically 8-15 ft. wide, are generally in good to fair condition, do not have ramps compliant with ADA codes, and have different curb/sidewalk heights. F Street (US 395) will be improved as part of the Lakeview Streetscape Project 2001. This project will improve the current sidewalks that run along F Street with a more pedestrian-friendly environment. For example, continuous 6-foot sidewalks with ADA compliant curb ramps will be constructed from the junction of Highways 395 and 140 to S. 9th Street. In addition, street lights, benches, and a planting strip would be a part of the Streetscape 2001 project. These improvements are expected to be in place by 2002.

Sidewalks outside the downtown core are generally in fair to poor condition due to their age and are often not continuous. The existing Pedestrian System Inventory is shown in Figure 3-2. Most sidewalks outside the downtown core are missing curb ramps, or have ramps that do not meet current Americans with Disabilities Act (ADA) guidelines.

Identified Pedestrian System Issues

- *“The Streetscape Project elements should be continued on G and E Streets from 4th Street to S. 1st Street.”* – Continuing the elements of the Streetscape project on G and E Streets from 4th Street to South 1st Street would fall under Town jurisdiction; however, after consideration of transportation needs in Lakeview, the TAC did not recommend this issue for further consideration at this time.
- *“The Town of Lakeview needs to establish priority locations for sidewalk improvements.”* - Lakeview has an established sidewalk grid. Improvements such as adding missing segments can be made to improve connectivity between residential, public, and commercial areas. Chapter 6 and 7 outline improvements for sidewalk improvements in the Lakeview UGB.
- *“Sidewalks along Highway 140 and near the Lakeview Hospital should be improved.”* – Adding missing segments of sidewalk on J Street between S. 7th and S. 8th will improve connectivity between the Lake District Hospital, schools, and residential areas. Chapter 6 and 7 outline improvements for sidewalk improvements near the Lake District Hospital.
- *“The Town of Lakeview needs to improve safety for pedestrians with better sidewalks.”* - Tree root uplift and wear and tear has resulted in broken sidewalks throughout the Town of Lakeview. Crumbled and cracked sidewalks are difficult to navigate in poor light and bad weather conditions. Chapter 6 and 7 discuss recommended improvements for sidewalks in the Lakeview UGB.
- *“The Town of Lakeview needs more pedestrian amenities such as trash receptacles, benches, and lights.”* – Street lights, new benches, and trash receptacles will be added to F Street from N. 4th to S. 1st Street as part of the Town’s and ODOT’s Streetscape 2000 project. New sidewalks, curbs, and a concrete roadway will also be added. They were added as a result of an enhancement grant received by the Town. TAC recommendations, research, and engineering studies associated with the project did not recommend adding additional pedestrian amenities in the Town.
- *“The Town of Lakeview needs better disabled access by bringing more sidewalk ramps up to ADA codes.”* – Chapter 6 and 7 outline improvements for sidewalk improvements in the Lakeview UGB. These recommendations include making sidewalks ADA compliant in pedestrian corridors linking residential, public, and commercial areas.
- *“Highway 395 divides the town and improving crossings for pedestrians would improve connectivity and safety.”* - As part of Streetscape 2000, curb extensions on F Street between 3rd Street and S. 1st Street will be added. Curb extensions shorten the distance of crossings, make pedestrians more visible, and slow traffic. These will enable pedestrians to cross with greater ease and safety. TAC recommendations, research, and engineering studies associated with the project did not recommend adding additional crossing improvements in the Town.

BIKEWAY SYSTEM

Bicycling is an efficient mode of travel, particularly for local trips of about two miles. The bicycle transportation system is mainly found as part of the roadway system, and is typically made up of bike lanes on arterials and collectors in urban areas. Often, bike lanes are forgone in a downtown commercial core where right-of-way is limited and on-street parking is critical. One of the goals of the Town is to encourage the use of bicycles through improved bicycle facilities.

In some special circumstances, such as through parks, greenways, or along rivers, separated trails are appropriate. Trails are usually shared with pedestrians, skaters, and other non-motorized modes of transportation.

Lakeview has one existing bike path that runs west from the high school ball fields on South 3rd Street to Roberta Avenue, goes south on Roberta Avenue, and then turns east onto South 9th Street ending at the intersection of

South 9th Street and Birch Street. The total length of the bike path is approximately one mile. The 14-ft. wide travel lanes along Highways 140 and 395 provide shared bike lane facilities on the state highways. The existing bikeway system is shown in Figure 3-3.

Identified Issues

- *“The Town of Lakeview needs bike paths south of town on Highway 395.”* - There is no crash history involving bicycles south of 9th Street to the UGB along Highway 395. This portion of Highway 395 has 12-ft. travel lanes and 4-ft. paved shoulders. No on-street parking is present on this portion of Highway 395. The highways accommodate bicyclists within the town limits as a shared facility with wide lanes (14 feet and greater) to provide room for bicyclists. Street standards in Chapter 7 address bike lanes along rural portions of Highways.
- *“A bicycle plan is needed.”* - A bicycle plan is a part of the TSP. The plan discusses recommended improvements to the bicycle system. The bicycle plan is presented in Chapter 7.
- *“New developments should provide bike lanes or paths, laid out to provide convenient access.”* - Bike lanes are a part of new road standards adopted through this plan. The newly adopted Town of Lakeview Zoning Ordinance requires new developments subject to site plan review to provide bicycle parking. All new development except single family detached housing must also provide pedestrian circulation paths. However, most streets in the town have sufficiently low traffic volumes and speeds that bicyclists can safely share the street with the cars.
- *“Additional bicycle parking is needed in the downtown area.”* - Fourteen new bicycle racks are recommended for the downtown area. This is described in greater detail in Chapters 6 and 7.
- *“Safety should be improved for bicyclists with more bike lanes.”* - Local emergency service personnel were interviewed and state records were researched with regard to crashes involving bicycles. No crash records involving bicycles were observed. New arterial streets constructed to the arterial street standard adopted as part of this TSP will have 6-foot bike lanes on each side.
- *“Bike lanes should be added to Highways 140 and 395.”* - Bike lanes are typically added to state highways when the roadway (paved surface) is widened. The roadway is not being widened during the Streetscape 2000 project, so ODOT and the Town did not add bike lanes to Highways 395 and 140 as part of this project. The highways accommodate bicyclists within the town limits as a shared facility with wide lanes (14 feet) to provide room for bicyclists.

PUBLIC TRANSPORTATION

There are no public transportation services available in Lakeview. Lake County Activity Center offers the Dial-A-Ride program for seniors but availability is limited. Currently the Dial-A-Ride program has one station wagon that seats 4 passengers and one mini-van with wheel chair lift that seats one passenger. On Monday, Wednesday, and Friday the service destination is the Lake County Activity Center and the Senior Meal Program. On Tuesday and Thursday they offer scheduled services for destinations such as doctor appointments and hairdresser. The Lake County Dial-A-Ride services include the communities of Lakeview, Christmas Valley, and Paisley and are on a first call first serve basis. They are currently working towards funding for a second mini-van to provide additional passenger carriage.

The Lakeview Assisted Living Facility provides scheduled services for the seniors living in the facility as part of the overall services. They currently operate one mini-van and have adequate capacity for the services they provide. The destinations for the passengers are primarily within the Town of Lakeview, but occasionally they travel outside the community for activities and doctor appointments with specialists in Klamath Falls. The Lakeview Assisted Living Facility is open for discussion on expanding their transportation services to other senior citizens within the community.

Lakeview does not currently provide any Park and Ride facility for commuters from Lakeview to Klamath Falls.

One commercial bus line, the Red Ball Stage Line, makes two trips per day from Lakeview to Klamath Falls. The Red Ball Stage Line primarily serves freight, and passenger service availability is limited.

Identified Issues

- *“The town should develop support facilities for transit, carpooling, and the use of non-motorized modes.”* - TAC recommendations, research, and engineering studies associated with the project did not recommend developing transit services in the Town of Lakeview. Improvements to encourage use of non-motorized modes of transportation are described in Chapters 6 and 7.
- *“The Town of Lakeview needs public transport out of the community.”* - A private bus service, Red Ball Stage Lines, offers transport from Lakeview to Klamath Falls. TAC recommendations, research, and engineering studies associated with the project did not recommend the development of public transit for further consideration in the TSP.

TRUCKING SERVICE

Scheduled freight carrier, Overnight Express Parcel, and Overnight Express Mail services are available. Red Ball Stage Line also connects Lakeview and Klamath Falls with freight delivery. Eastern Oregon Fast Freight provides freight service east of Interstate 5 and from Lakeview to Boise. Oregon Department of Transportation is currently working on a feasibility study for upgrading the condition of OR 140 east to allow for long haul truck traffic. The eastern route of OR 140 is beyond the UGB of Lakeview, but the increase of truck traffic running through Lakeview may be significant if the upgrade were to take place.

Identified Trucking Service Issues

- *“ODOT and the Town need to maintain OR 140 and US 395 to accommodate through truck traffic.”* - Street standards and proposed treatments to Highways OR 140 and US 395 are appropriate for roadways serving commercial trucks. Final recommendations impacting the highway are presented in Chapters 6 and 7.
- *“Improved truck route accesses should be added from major highways to avoid trucks in residential neighborhoods.”* - The reason for this comment is the fact that some residents of Lakeview are commercial truck drivers and some people believe these trucks shouldn't be allowed to park in residential areas. This is addressed in greater detail in Chapter 9, which discusses additions to the Town of Lakeview Zoning Ordinance.
- *“There is no place for commercial trucks to park so they use the Safeway parking lot at night.”* - Commercial trucks use the Safeway parking lot for overnight parking. If allowed by private property owners, this is an appropriate use for this parking area after normal business hours.
- *“The Town of Lakeview should consider a possible truck bypass (south on Roberta Avenue to Stock Drive, Stock Drive east to Highway 395).”* - There are no existing or anticipated capacity shortfalls at any intersections on Highways 140 and 395 inside the Lakeview UGB. Discussions with the TAC suggested that adding new truck routes is not a priority for the Town.

RAIL SERVICE

Railroad serving the community is the Lake County Railroad, and is owned by Lake County. This rail service is limited to freight only. Klamath Falls is the closest location for passenger services.

Identified Rail Service Issues

- *“If rail traffic increases, crossing arms on South 3rd and South 9th Streets may be needed.”* - The Manual on Uniform Traffic Control Devices describes when different types of lights, signs, signals, and gates are required for railroad crossings. Railroad crossings are recommended improvements discussed in Chapters 6 and 7.

AIR SERVICE

There is one publicly owned non-towered airport just outside the Lakeview UGB.

The Klamath Falls Airport is located in Klamath Falls approximately 95 miles west of Lakeview. The Klamath Falls Airport is a commercial airfield with control tower and two runways at an elevation of 4092 ft. The main runway #14-32 is 10,301 ft. long and 150 ft. wide. The second runway #7-25 is 239 ft. long and 100 ft. wide. Horizon Airlines is currently the only commercial airline that services the Klamath Falls Airport. Flight information can be found by contacting Horizon Air at 1-800-547-9308.

Identified Air Service Issues

- *“The Lakeview airport needs to be expanded.”* - There are no airports inside the Lakeview UGB. There is an airport owned and operated by Lake County west of the Town of Lakeview that offers non-commercial air services. The project did not recommend this issue for further consideration as it is outside the project planning area.

PIPELINE SERVICE

Pipelines are considered along with other modes of transportation because shipping commodities via pipeline may reduce the need for commercial truck and rail service. There is currently no pipeline delivery to Lakeview or Lake County. The nearest natural gas pipelines are in Klamath Falls and the natural gas carrier in Klamath Falls is Avista Utilities.

WATER TRANSPORTATION

There are no water transportation services such as ferries in the Lakeview UGB and no water transport services are proposed or practical, therefore, this source of transport is not discussed further.

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CHAPTER 4: CURRENT TRANSPORTATION CONDITIONS

As part of the planning process, current operating conditions for the transportation system inside the Lakeview UGB were evaluated. This focused primarily on the street system operating conditions since the automobile is by far the dominant mode of transportation in Lakeview. This involved analysis of existing traffic volumes, street capacity, and street safety. Census data was examined to determine travel mode distributions.

TRAFFIC VOLUMES

The 1999 Average Daily Traffic (ADT) volumes for the state highways within Lakeview were collected by ODOT and summarized in the *1999 ODOT Traffic Volume Tables*. ADT volumes are defined as the average amount of two-way traffic recorded on a roadway over a 24-hour period.

Average Daily Traffic

Local Streets

The Town of Lakeview has not collected or maintained traffic count information along local streets. The Transportation Advisory Committee (TAC) identified busy streets in Lakeview and David Evans and Associates, Inc. collected traffic volume data at the identified locations. Data was obtained from hose counters that were set out from 11:00 A.M. to 5:00 P.M. during a weekday in March 2001. The 6 hour volumes obtained by the hose counters were then converted to a 24 hour volume. This methodology was used to determine ADT on the following roads, and was not used in any analysis.

TABLE 4-1
2000 ADT VOLUMES OF SELECTED STREETS IN LAKEVIEW

Local Road Location	Estimated Average Daily Traffic
• H Street north of S. 5 th Street	860
• N. 2 nd Street west of G Street	1750
• H Street north of N. 2 nd Street	820
• S. 9 th Street west of F Street	890

Source: DEA hose counters

County Roads

The Lake County Road Department has in the past collected ADT data for the county roads that exist within the Lakeview UGB. The most recent traffic data for county roads was collected in 1995. Table 4-2 summarizes the ADT volumes for the roads in Lakeview under county jurisdiction.

TABLE 4-2
LAKE COUNTY ADT VOLUMES IN LAKEVIEW UGB

County Road Location	1995 Average (vehicles/day)	1999 Estimated (vehicles/day)
• Stock Drive CR 1-10	390	390
• Kadrmas Road CR 1-14	70	80
• Metzker Road CR 2-18	80	80
• Goldmohr Terrace – Hunters Lodge CR 2-18A	220	220
• Missouri Avenue CR 2-18B	760	770
• Precision Pine Road CR 2-18C	100	100
• Bullard Canyon Road CR2-22	3	3
• Roberta Avenue CR 2-23	310	320

Source: Lake County Road Department 1995 Road Master File

State Highways

The 1999 ADT volumes on the state highways in Lakeview are shown on Figure 4-1. The volumes are average volumes for the year. Summertime is the season when volumes are the highest. ODOT data from a permanent traffic recorder station along the Fremont Highway (US 395) and Klamath Falls-Lakeview Highway (OR 140) indicate summer volumes exceed ADT volumes by 30 percent and 41 percent respectively. Table 4-3 summarizes the 1999 ADT and estimated peak summer ADT for locations along the state highways within the Lakeview UGB.

TABLE 4-3
1999 STATE HIGHWAY ADT VOLUMES IN LAKEVIEW UGB

Highway Location	Milepost	Average	Peak Summer Factor
Fremont Highway (OR 31/ US 395)			
• .01 mile north of road to Hot Springs	140.77	2,100	2,700
• North city limits of Lakeview	142.64	3,000	3,900
• 0.01 mile north of Klamath Falls Lakeview Highway (OR 140)	143.02	3,500	4,600
• 0.03 miles southeast of Klamath Falls Lakeview Highway (OR 140)	143.06	7,100	9,200
• 0.01 miles south of Center Street	143.31	8,300	10,800
• 0.01 miles south of South 4 th Street.	143.68	5,300	6,900
• South city limits of Lakeview	144.05	3,400	4,400
• 0.01 miles south of South 10 th Street	144.21	2,600	3,400
Klamath Falls Lakeview Highway (OR 140)			
• 0.01 miles west of Roberta Avenue	95.36	2,500	3,500
• West city limits of Lakeview	95.91	3,700	5,200
• 0.01 miles west of Fremont Highway (US 395)	96.36	4,700	6,600

Source: ODOT 1999 Transportation Volume Tables

Design Hour Volumes

The design hourly volume (DHV) is the hourly volume that is used for design. For any roadway, it represents the 30th highest hourly traffic volume recorded along the roadway segment throughout the year. For example, if the

total number of vehicles in both directions at a specific roadway location was counted for every hour throughout the year, and then the hourly volumes were ranked from highest to lowest, the 30th highest hourly volume of the year would represent the DHV. Past examples have shown that the 30th highest hourly volume as a percentage of ADT fluctuates minimally each year, even in cases of significant ADT variations. Typical values for the 30th highest hourly volumes range from approximately 10 to 20 percent of the ADT.

The only locations along state highways in Oregon where hourly roadway volumes are counted on a daily basis throughout the year are at ODOT's automatic traffic recorder (ATR) stations. Information regarding ADT, 30th highest hourly volume, vehicle classification and seasonal variations are collected at these locations.

The nearest ATR stations to Lakeview are ATR #19-004 located on US 395 south of the junction with Lakeview-Burns Highway, ATR #19-008 located on US 395 approximately 0.3 miles north of the California border, and ATR #18-017 located on OR 140 approximately 4.2 miles east of Beatty¹. The three ATR stations are located on rural stretches of highway outside the Lakeview UGB, therefore the ODOT Transportation Planning and Analysis Unit (TPAU) has developed seasonal adjustment factors for finding the design hourly volumes in Lakeview. The seasonal adjustment factors have been developed from a five-year average of the three nearest ATR stations design hourly volumes, and a combination of other factors based on local traffic patterns for an urbanized area. Table 4-4 lists the TPAU seasonal adjustment factors developed for Lakeview. These 24 seasonal adjustment factors are used to convert a PM peak hour traffic count conducted in Lakeview to a design hourly volume by multiplying the PM peak hour by the seasonal adjustment factor for the day closest to the day the PM peak hour traffic count was conducted.

TABLE 4-4
SEASONAL ADJUSTMENT FACTORS FOR LAKEVIEW DHV

Month	Jan		Feb		Mar		Apr		May		Jun	
Day	1 st	15 th	1 st	15 th	1 st	15 th	1 st	15 th	1 st	15 th	1 st	15 th
DHV Seasonal Factor	1.32	1.44	1.42	1.40	1.32	1.25	1.21	1.18	1.16	1.14	1.10	1.05
Month	Jul		Aug		Sep		Oct		Nov		Dec	
Day	1 st	15 th	1 st	15 th	1 st	15 th	1 st	15 th	1 st	15 th	1 st	15 th
DHV Seasonal Factor	1.03	1.00	1.01	1.03	1.05	1.07	1.11	1.14	1.19	1.24	1.22	1.20

Source: ODOT Transportation Analysis and Planning Unit.

It can be seen from Table 4-4 that the peak traffic period for the Town of Lakeview is around the 15th of July, undoubtedly due to recreational tourism. The lowest traffic period is around the 15th of January, reflecting the poor driving conditions from heavy snowfalls that occur in Lakeview during the winter months.

Roadway Capacity

Transportation engineers have established various standards for measuring traffic capacity of roadways and intersections. One way to quantify capacity is by comparing the volume of traffic at an intersection with the

¹1999 Oregon Department of Transportation Daily Traffic Volume Tables.

capacity of the intersection. This measure, called a volume-to-capacity ratio, is used by ODOT to represent the operations of an intersection.

This TSP reports the analytical results as volume to capacity ratios. It is important to note that there are established volume to capacity standards for intersection operations along the State highways, and these standards are used to determine if an intersection is performing adequately.

The 1999 Oregon Highway Plan establishes operating standards for the state highway system². Inside Urban Growth Boundaries, Statewide Highways such as the Fremont Highway (US 395) and Klamath Falls-Lakeview Highway (OR 140) with a speed limit of less than 45-mph should operate at or below a volume-to-capacity ratio of 0.80. At 55 mph, these facilities should operate at or below a volume-to-capacity ratio of 0.75.

Unsignalized Intersections

Analysis of the street capacity in Lakeview is primarily focused on the intersection operations along the state highways through town where traffic volumes are the greatest. Currently, all intersections along US 395 and OR 140 are unsignalized, and STOP-controlled on the minor street approaches. The volume-to-capacity ratios were determined at Lakeview's highest volume intersections, US 395 and OR 140 Junction, US 395 and Center Street, US 395 and South 3rd Street, and OR 140 and J Street.

Analysis of the existing intersection operating conditions, and operating conditions for the 20-year planning period were performed. Chapter 4 discusses the existing operating conditions for the year 2001, and Chapter 5 discusses the forecast operating conditions in the year 2020. All intersection capacity analysis worksheets for existing and future operating conditions are located in Appendix C.

Fremont Highway (US 395) and Klamath Falls-Lakeview Highway (OR 140) Junction

The junction of US 395/ OR 140 is a 5-leg intersection. Manual traffic counts at this intersection were performed by ODOT in October 1997. For the purpose of the intersection capacity analysis, the 5-leg intersection was analyzed as a 4-leg intersection by allocating the traffic from the least traveled leg (North 4th Street) to the other turning movements. The traffic count performed by ODOT in October 1997 was used as the basis for the analysis. It is generally preferred that traffic counts used for capacity analysis be taken within a three year period; however, no significant development has occurred in Lakeview between 1997 and 2001, and the annual traffic growth rate during this period is fairly low at 1.2 percent. For these reasons, the 1997 traffic count conducted by ODOT is still considered valid for use in the intersection capacity analysis.

The ODOT October 1997 traffic count is a 16-hour count starting at 6:00 AM ending at 10:00 PM. For the purpose of the intersection capacity analysis, the PM Peak hour during the 16-hour count was used. The PM peak hour for this intersection was from 4:00 - 5:00 PM.

The 1997 PM peak hour volumes were grown to the 2001 existing volumes using the traffic growth rate obtained from the ODOT Transportation Planning and Analysis Unit (TPAU). The TAPU annual traffic growth rate for intersections inside the Lakeview UGB is approximately 1.2 percent. A more detailed discussion of how the annual percentage of traffic growth in Lakeview was developed is found in Chapter 5.

In order to obtain the DHV needed for the analysis of the intersection operating conditions, the seasonal factor developed by TPAU was used to convert the PM peak hour count to a DHV. The seasonal adjustment factor for a traffic count conducted in mid October is shown in Table 4-4 to be 1.14. This seasonal adjustment was applied to the estimated 2001 PM peak hour traffic volumes.

²1999 Oregon Highway Plan, Table 6, Maximum Volume to Capacity Ratios for Peak Hour Operating Conditions.

The current operating conditions for the intersection of US 395/ OR 140 was performed using UNSIG10, a software application developed by ODOT for the analysis of unsignalized intersections. The intersection was analyzed as a 4-leg intersection with stop controls on the minor road approaches.

The results for the intersection operating conditions for US 395/ OR 140 show that for the existing conditions in year 2001, the intersection is operating with a volume-to-capacity ratio of 0.34, an acceptable level of operation. Both OR 140 and US 395 are Statewide Highways. According to the 1999 *Oregon Highway Plan*, the minimum acceptable mobility standard for a Statewide Highway is 0.80 where the speed limit is less than 45 mph, and 0.75 where the speed limit is greater than or equal to 45 mph. Therefore, according to ODOT's mobility standards this intersection currently meets the minimum acceptable operating conditions.

Fremont Highway (US 395) and Center Street

In March 2001, DEA conducted manual PM Peak Hour traffic counts at the intersection of US 395 and Center Street. The PM peak hour volumes at this intersection were seasonally adjusted using the TPAU seasonal adjustment factor (Table 4-4) for mid March of 1.25. The 2001 intersection capacity analysis at US 395 and Center Street is based on these adjusted intersection volumes.

Using UNSIG10, the intersection was analyzed with stop controls on the minor approaches. The results for the intersection operating conditions for US 395 and Center Street show that for the existing conditions in year 2001, the intersection is operating with a volume-to-capacity ratio of 0.24. This intersection currently meets ODOT's minimum acceptable operating conditions (volume-to-capacity ratio less than 0.80) for a Statewide Highway with the speed less than 45-mph.

Fremont Highway (US 395) and South 3rd Street

In March 2001, DEA conducted manual PM Peak Hour traffic counts at the intersection of US 395 and South 3rd Street. The PM peak hour volumes at this intersection were seasonally adjusted using the TPAU seasonal adjustment factor (Table 4-4) for mid March of 1.25. The 2001 intersection capacity analysis at US 395 and South 3rd Street is based on these adjusted intersection volumes.

Using UNSIG10, the intersection was analyzed with stop controls on the minor approaches. The results for the intersection operating conditions for US 395 and South 3rd Street show that for the existing conditions in year 2001, the intersection is operating with a volume-to-capacity ratio of 0.16. This intersection currently meets ODOT's minimum acceptable operating conditions (volume-to-capacity ratio less than 0.80) for a Statewide Highway with the speed less than 45-mph.

Klamath Falls-Lakeview Highway (OR 140) and J Street

In March 2001, DEA conducted manual PM Peak Hour traffic counts at the intersection of OR 140 and J Street. The PM peak hour volumes at this intersection were seasonally adjusted using the TPAU seasonal adjustment factor (Table 4-4) for mid March of 1.25. The 2001 intersection capacity analysis at OR 140 and J Street is based on these adjusted intersection volumes.

Using UNSIG10, the intersection was analyzed with stop control on the minor approach. The results for the intersection operating conditions for OR 140 and J Street show that for the existing conditions in year 2001, the intersection is operating with a volume-to-capacity ratio of 0.05. This intersection currently meets ODOT's minimum acceptable operating conditions (volume-to-capacity ratio less than 0.80) for a Statewide Highway with the speed less than 45-mph.

TRANSPORTATION DEMAND MANAGEMENT MEASURES

Transportation Demand Management (TDM) measures consist of efforts taken to reduce the demand on an area's transportation system by diverting trips to other travel modes or to less crowded travel times. TDM measures include alternative work schedules, carpooling, and telecommuting. The appropriateness of TDM measure can be determined by examining data on departure to work, travel times, and current mode distribution. The following statistics are from the 1990 US Census. Updated data from the 2000 census was not available for this analysis.

Departure to Work Statistics

In urban areas, daily peak traffic demands can create congestion problems in the late afternoon and early evening. One way to maximize the use of the existing transportation system is to spread out the demand over several hours instead of a single hour. Statistics from the 1990 US Census show the spread of departure to work times over a 24-hour period in Lakeview (see Table 4-5). An average of 26 percent of the total employees depart for work between 8:00 and 9:00 a.m. Another 30 percent depart in either the hour before or the hour after the peak. Assuming an average nine-hour workday, the corresponding afternoon peak can be determined for work trips. Using this methodology, the peak work travel hour in Lakeview would occur between 5:00 and 6:00 p.m.

TABLE 4-5
TOWN OF LAKEVIEW DEPARTURE TO WORK DISTRIBUTION

Departure Time	1990 Census	
	Trips	Percent
12:00 a.m. to 4:59 a.m.	28	2.8
5:00 a.m. to 5:59 a.m.	80	8.0
6:00 a.m. to 6:59 a.m.	131	13.0
7:00 a.m. to 7:59 a.m.	243	24.2
8:00 a.m. to 8:59 a.m.	262	26.1
9:00 a.m. to 9:59 a.m.	54	5.4
10:00 a.m. to 10:59 a.m.	33	3.3
11:00 a.m. to 11:59 a.m.	11	1.1
12:00 p.m. to 3:59 p.m.	137	13.6
4:00 p.m. to 11:59 p.m.	25	2.5
Total	1004	100.0

Source: US Bureau of Census, 1990 Census.

Travel Mode Distribution

Although the automobile is the primary mode of travel for most residents in the Town of Lakeview, other modes are used as well. The 1990 Census data includes statistics for journey to work trips as shown in Table 4-6. The census data reflects the predominance of automobile use. However, it should be noted that these counts include trips to work only, and do not include trips taken for shopping, school, or recreation.

**TABLE 4-6
TOWN OF LAKEVIEW JOURNEY TO WORK TRIPS**

Trip Type	1990 Census	
	Trips	Percent
Private Vehicle	844	82.4
<i>Drove Alone</i>	735	71.8
<i>Carpooled</i>	109	10.6
Public Transportation	0	0.0
Motorcycle	0	0.0
Bicycle	28	2.7
Walk	86	8.4
Other	46	4.5
Work at Home	20	2.0
Total	1024	100.0

Source: US Bureau of Census, 1990 Census.

Most Lakeview residents travel to work by private vehicle. In 1990, 82.4 percent of all trips to work were in an auto, van, or truck. Trips in single-occupancy vehicles accounted for just about 71.8 percent of all trips and carpooling accounted for approximately 10.6 percent.

Approximately 8.4 percent of the trips to work were made by walking. This is two times the State average of 4.2 percent, and reflects the relatively small size and accessibility of Lakeview. This is most likely also the reason for the approximately 2.7 percent of the residents commuting to work by bicycle in 1990, a rate also twice the state average. Because the census data do not include trips to school or other non-work activities, overall pedestrian and bicycle usage is likely to be higher.

Travel time also affects the mode chosen. Table 4-7 shows the 1990 Census travel time to work data. Nearly 85 percent of commute trips in Lakeview were less than 10 minutes, indicating a travel distance of less than five miles. With appropriate facilities such as bike lanes and sidewalks, some of these trips may be converted from automobile to walking or bicycling.

TABLE 4-7
TOWN OF LAKEVIEW TRAVEL TIME TO WORK DISTRIBUTION

Departure Time	1990 Census	
	Trips	Percent
Less than 5 minutes	328	32.0
5 to 9 minutes	537	52.4
10 to 14 minutes	51	5.0
15 to 19 minutes	40	3.9
20 to 29 minutes	4	0.4
30 to 39 minutes	0	0.0
40 to 59 minutes	0	0.0
60 to 89 minutes	39	3.8
More than 90 minutes	5	0.5
Worked at home	20	2.0
Total	1024	100.0

SAFETY ANALYSIS

Collision data within the Lakeview UGB was reviewed to identify those locations with potential collision patterns and associated safety concerns. The two sources of data reviewed included:

- Collision-specific summaries generated by ODOT's Transportation Development Branch for 1997 through 1999; and
- Collision summaries generated from the ODOT Accident Summary Database for locations along State Highways in the Lakeview UGB.

ODOT's Accident Summary Database calculates two useful factors for comparison with statewide statistics based on information over the three-year period studied. The first factor is a computed average three-year collision rate, which compares the number of collisions with the average daily traffic (ADT) volume and the length of the roadway segment analyzed. The second factor is the Safety Priority Index System (SPIS) value. This factor evaluates collision frequency, severity and traffic volumes to create an index for prioritizing state highway locations with potential safety concerns.

The Safety Priority Index System (SPIS) value identifies high collision and severe accident locations to prioritize where safety money should be spent. The SPIS value is based on three factors: frequency, rate, and severity. The frequency and rate indicator are values between 0 and 25 determined by a logarithmic distribution of total crashes over a 3-year period. The crash severity indicator is numbered between 0 and 50 that is linearly distributed based on the severity. The overall SPIS value is the sum of the three indicators and the maximum severity score considered is 300.

The SPIS value weights collisions involving fatalities and severe injuries most heavily. It is therefore possible for a location with one fatal collision to have a higher SPIS value than a location with multiple minor incidents. The SPIS value is also sensitive to traffic levels, recognizing that the opportunity for collisions generally increases as traffic volume increase. A location with a high SPIS value does not necessarily indicate that a roadway safety problem exists, but it may indicate that further examination of the collision history at this location is warranted.

Table 4-8 summarizes the collision information for the state highways in the Lakeview UGB for the years of 1997 through 1999.

TABLE 4-8
COLLISION INFORMATION SUMMARIES FOR HIGHWAYS IN THE LAKEVIEW UGB
(1997-1999)

Location	Fatalities	Injuries	Total Accidents	Accident Rate (acc/mvm) ¹	High SPIS Value
Fremont Highway (US 395)					
N of CL (MP 140.7–142.64)	1	4	4	0.66	31.71
Lakeview (MP 142.64–144.2)	0	12	12	1.27	0.00
S of CL (MP 144.20–144.47)	0	4	3	5.02	0.00
Total	1	20	19	0.72	31.71
Klamath Falls Lakeview Highway (OR 140)					
W of CL (MP 93.90-95.91)	0	3	4	0.77	0.00
Lakeview (MP 95.91 – 96.36)	0	1	2	0.86	0.00
Total	0	4	6	0.71	0.00

Source: ODOT Accident summary Database 1997-1999; information compiled by DEA.

¹: acc/mvm represents accidents per million vehicle miles traveled

A total of 25 collisions occurred on state highways inside the Lakeview UGB within the analyzed three-year period. One fatality and 24 injuries occurred during this time period. Of these injuries, 4 or 7% were considered Moderate or Most Severe, with the remaining 93% of the injuries considered Least Severe. Over half of the collisions occurred during daylight hours under dry conditions, and most occurred at intersections. As could be expected, the highest numbers of collisions occurred in the section of Lakeview with the highest volumes of traffic and the greatest number of intersections. There were no recorded collisions between motorists and pedestrians or bicyclists during this period.

With the exception of the short section of Fremont Highway from milepost 144.20 to 144.47 south of the Lakeview city limits, the annual collision rates for the urban highways within Lakeview were consistently lower than the statewide averages for all non-freeway highways during the three-year period analyzed. The statewide 1997 accident rate per million vehicle-miles for non-freeway highways was 1.70. The overall accident rate within the Lakeview UGB for the Fremont Highway (US 395) is 0.72 and for Klamath Falls Lakeview Highway (OR 140) is 0.71.

The collision rate computed by ODOT is based on the ratio of a variety of data. The numerator is calculated by multiplying the number of collisions during the year by 1,000,000. The denominator is calculated by multiplying the roadway section length, the roadway ADT, and the number of days in the year. The ratio of these quantities is the collision rate.

The equation is clearly susceptible to producing high collision rates along roadway sections with low ADT volumes. The underlying assumption is that low volume roadways are less prone to experiencing collisions. However, one collision along a low volume roadway does not necessarily indicate that a safety concern exists.

As an example, a two-mile roadway with an ADT of 500 vpd that experiences one collision during the year would result in a rate of 2.74 collisions per million vehicle miles (mvm) of travel. Doubling the ADT along this same roadway to 1,000 vpd would lower the collision rate to 1.37, while halving the ADT to only 250 vpd would increase the collision rate to nearly 5.5. Although all three scenarios involve only one incident, the rate is highly variable.

The SPIS is used to identify areas with higher or more severe collision rates. The 1999 cutoff rate was 50.11. Highway segments with a high SPIS value above the SPIS Cutoff receive special attention to reduce the frequency and severity of collisions in these areas. None of the highway segments inside the Lakeview UGB had a 1999 high SPIS value above the 1999 Cutoff.

Summary

In general, the collisions along the state highways within the Lakeview UGB were located at the intersections on the state highways and within the central business core. Of the 25 total collisions on state highways inside the Lakeview UGB, 12 collisions, or 48%, occurred along the Fremont Highway (US 395) inside the city limits of Lakeview.

The majority of collisions inside the Lakeview UGB were rear-end and angle type collisions at intersections. This is a typical collision pattern for an urban arterial. Thirteen of the accidents were classified as Least Severe by ODOT, four were Moderate, and one Fatality between 1997-1999 inside the Lakeview UGB. The one fatality occurred on Fremont Highway US 395 north of the Lakeview city limits near the intersection of US 395 and Precision Pine Road (county road 2-18C). The fatality occurred on a clear dry day in which a motor vehicle operator under the influence of alcohol turned in front of a logtruck and trailer. The trailer overturned and the motor vehicle operator was killed. Because the fatality was alcohol related, it does not directly imply a safety issue at this intersection. This was the only accident between 1997-1999 in which a truck was involved in a collision, and pedestrians and bicycles were not involved in any collisions during the same period. The collision rates for all of the state highway segments inside the Lakeview UGB are less than the collision rate for non-freeway highways in the state of Oregon.

CHAPTER 5: TRAVEL FORECASTS1

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CHAPTER 5: TRAVEL FORECASTS

The traffic volume forecasts for the Town of Lakeview are based on historic growth of the state highway system, historic population growth, and projected population growth.

POPULATION

The population forecast summarized below is developed to determine future transportation needs. The amount of growth, and where it occurs, will affect traffic and transportation facilities in the study area.

Population projections in the Town of Lakeview are based on historic growth rates and forecasts produced by the State of Oregon Office of Economic Analysis. Factors that will affect the future growth rate of Lakeview include employment opportunities, available land area for development, and community efforts to manage growth.

Both historic and projected population for Lake County and its incorporated cities are summarized in Table 5-1. A more detailed description of existing and future land use projections is contained in the Population and Employment Analysis located in Appendix D.

**TABLE 5-1
LAKE COUNTY POPULATION TRENDS**

	1960 ¹	1970 ¹	1980 ¹	1990 ¹	2000 ¹	2020 ² Projected
Lake County	7,158	6,343	7,532	7,180	7,422	8,615*
Lakeview	3,260	2,705	2,770	2,526	2,475	4,394*
Paisley	219	260	343	350	245	427
Unincorporated	3,679	3,378	4,419	4,304	4,702	3,794*

Sources:

1) US Census Bureau.

2) Lake County Planning Department, Department of Land Conservation and Development.

Notes:

County population includes the population of all the county's incorporated cities.

*Estimates are for the UGB and consider impacts of the DOC work camp. The Town of Lakeview and DLCD has approved these estimates.

Historic Growth

The population of Lake County and Lakeview actually declined during the 1960s and 1980s, reflecting the general slowdown in the state's economy during these periods. With the 2000 Census figures showing the population of Lake County to be 7,422, the population of Lake County has grown an average of 0.15% annually since 1960 and approximately 0.33% annually since the 1990 Census.

Projected Growth

Lake County is expected to experience some population gains for the next 20 years, increasing from 7,422 in 2000 to a projected population of 8,615 by the year 2020. This represents a 0.8% annual increase. The *Town of Lakeview Periodic Review – Buildable Lands Inventory (June 30, 1999)*, addressed the issues of future growth for the Town of Lakeview. The potential growth impacts to the community due to the placement of the Department of Corrections (DOC) Work Camp Facility just north of the Lakeview Urban Growth Boundary was considered the most significant source for growth in population. It was determined in the Buildable Lands Inventory that even with the DOC Facility there was sufficient available land within the Lakeview UGB for the 20-year projected population growth. Lakeview is also expected to grow from its 2000 population of 2,474 to 4,394 persons in 2020. This represents a 3.8 percent per year growth rate over 20 years.

TRAFFIC VOLUMES

Historic

Before projecting future traffic growth, it is important to examine past growth trends on the roadway system in the Town of Lakeview. Historic data is only available for the two state highways in Lakeview; however, these roadways carry far more traffic than any of the local streets. The Oregon Department of Transportation (ODOT) collects traffic count information on the state highways (rural and urban sections) every three years at the same locations and makes estimates of traffic for the years in between. The town streets are not expected to experience any capacity deficiencies during the 20-year planning period, except where they intersect with the state highways.

Historic growth trends on the state highways in Lakeview were established using the average annual daily traffic (AADT) volume information presented in the ODOT Traffic Volume Tables for several locations for the years 1978 through 1998. Analysis of the 20-year traffic history was performed to determine the historic growth trend at these locations. Table 5-2 summarizes the results of the historic analysis for the highways in Lakeview. The AADT volumes have fluctuated the last 20-years, with recent declines in traffic volumes on OR 140 as shown in Table 5-2.

TABLE 5-2
HISTORIC TRAFFIC GROWTH RATES ON STATE HIGHWAYS

Highway Urban/Rural Location	Average Annual Growth (1978-1998)	Total Growth (1978-1998)
Fremont Highway (US 395)		
MP 140.77 - 0.01 mi. N of RD. to Hot Springs	1.13%	22.6%
MP 142.64 - North City Limits of Lakeview	1.74%	34.8%
MP 143.02 - 0.01 mi. N of Klamath Falls Lakeview Hwy	1.07%	21.4%
MP 143.06 - 0.03 mi. S of Klamath Falls Lakeview Hwy	0.39%	7.8%
MP 143.31 - 0.01 mi. S of Center Street	0.86%	17.2%
MP 143.68 - 0.01 mi. S of South 4 th Street	0.10%	2.0%
MP 144.05 - South City Limits of Lakeview	0.31%	6.2%
MP 144.46 - 0.01 mi. S of South 12 th Street	0.00%	0.0%
Klamath Falls Lakeview Highway (OR 140)		
MP 95.36 - 0.01 mi. W of Roberta Ave.	0.21%	4.2%
MP 95.91 – Lakeview West City limits	-0.93%	-18.6%
MP 96.36 - 0.01 mi. W of Fremont Highway junction	-0.48%	-9.6%

Source: ODOT 1978-1998 Transportation Volume Tables; information compiled by DEA.

Future Traffic Volumes

As part of the 1999 Oregon Highway Plan update, the ODOT Transportation Planning and Analysis Unit conducted 20-year trend line forecasts for all state highway segments that ODOT has ADT information. ODOT forecasts have been completed up to the year 2019. Using the ODOT growth rates as given by the Transportation Planning and Analysis Unit, projections for the two highway segments in Lakeview have been continued through the year 2020. The forecasted traffic volumes and total growth on the state highways are listed in Table 5-3. It is important to note that the growth rates used to forecast future ADT volumes were based on historic trends, but in the case where historic trends show a strong decline in growth, ODOT uses a zero growth rate for projections.

TABLE 5-3
FORECAST TRAFFIC VOLUMES AND TOTAL GROWTH ON STATE HIGHWAYS

Location	ADT Volumes (vehicles/day)			Estimated Average Annual Growth Rate
	1998	2019	2020	
Fremont Highway (US 395)				
MP 140.77 – 0.01 mi. N of RD. to Hot Springs	2,000	3,200	3,300	2.86%
MP 142.64 – North City Limits of Lakeview	2,900	4,400	4,500	2.46%
MP 143.02 – 0.01 mi. N of Klamath Falls Lakeview Hwy	3,400	5,100	5,200	2.38%
MP 143.06 – 0.03 mi. S of Klamath Falls Lakeview Hwy	7,100	8,000	8,000	0.60%
MP 143.31 – 0.01 mi. S of Center Street	8,200	10,700	10,900	1.45%
MP 143.68 – 0.01 mi. S of South 4 th Street	5,300	5,600	5,600	0.27%
MP 144.05 – South City Limits of Lakeview	3,400	3,600	3,600	0.28%
MP 144.46 – 0.01 mi. S of South 12 th Street	1,600	1,900	1,900	0.89%
Klamath Falls Lakeview Highway (OR 140)				
MP 95.36 - 0.01 mi. W of Roberta Ave.	2,500	3,100	3,100	1.14%
MP 95.91 – Lakeview West City limits	3,700	4,000	4,000	0.39%
MP 96.36 - 0.01 mi. W of Fremont Highway junction	4,700	5,200	5,200	0.51%
Estimated Average Annual Traffic Growth Rate in Lakeview				1.20%
Source: ODOT Transportation Analysis and Planning Unit Estimated 2019 ADT volumes; forecast information compiled by DEA.				

HIGHWAY SYSTEM CAPACITY

The overall efficiency of the highway system is a combination of the operating conditions of arterial roadways through urban areas, and the continuous flow patterns of traffic in the rural transportation system. The highway system capacity in the Lakeview UGB has been analyzed for the future intersection operating conditions within the Urban Growth Boundary.

Future Intersection Operations

An unsignalized intersection analysis was performed for the intersections in Lakeview that experience the highest PM Peak Hour traffic volumes. The existing operating conditions for these intersections was discussed in Chapter 4. With the seasonal adjustments already made for the year 2001 existing intersection operating conditions (in Chapter 4), arriving at the year 2020 design hourly volumes is just a matter of applying the estimated average annual traffic growth rate to the seasonally adjusted 2001 volumes. The estimated average annual traffic growth rate for intersections in Lakeview is 1.2 percent. As shown in Table 5-3, the 1.2 percent is estimated by taking the average of the expected average annual growth rates at various locations on the state highways in Lakeview. It is assumed for the purpose of this analysis that traffic volumes on the Lakeview local roads will grow at the same growth rate expected on the state highways.

The results of the unsignalized intersection analysis are shown in Table 5-4. Traffic operations were determined at the intersections using the UNSIG10 software application developed by ODOT for the analysis of unsignalized

intersections. All intersection capacity analysis worksheets for existing and forecast intersection operating conditions can be found in Appendix C.

TABLE 5-4
SUMMARY OF FUTURE INTERSECTION OPERATIONS

<i>Location</i>	2001	2020
	Volume to Capacity Ratio (V/C)	Volume to Capacity Ratio (V/C)
Fremont Hwy (US395) & Klamath Falls Lakeview Hwy (OR140) junction	0.34	0.49
Fremont Hwy (US395) & Center Street	0.24	0.37
Fremont Hwy (US395) & South 3 rd Street	0.16	0.24
Klamath Falls – Lakeview Hwy (OR140) & J Street	0.11	0.16

Source: UNSIG10

Fremont Highway (US395) and Klamath Falls Lakeview Highway (OR140)

The intersection capacity analysis results for US 395 and OR 140 show that the existing operating conditions in the year 2001 is a volume-to-capacity ratio of 0.34. In the year 2020, the intersection operations analysis shows a volume-to-capacity ratio of 0.49. According to the 1999 Oregon Highway Plan the minimum acceptable operating condition for a Statewide Highway with the speed limit less than 45 mph is a volume-to-capacity ratio of 0.80. This intersection meets ODOT's minimum operating conditions for the year 2001 and in the year 2020.

Fremont Highway (US395) and Center Street

The intersection capacity analysis results for US 395 and Center Street show that the existing operating conditions in the year 2001 is a volume-to-capacity ratio of 0.24. In the year 2020, the intersection operations will worsen to a volume-to-capacity ratio of 0.37. Both of these volume-to-capacity ratios represent good operating conditions. This intersection meets ODOT's minimum operating conditions now, and will continue to meet ODOT's mobility standards in the year 2020.

Fremont Highway (US395) and South 3rd Street

The intersection capacity analysis results for US 395 and South 3rd Street show that the existing operating conditions in the year 2001 is a volume-to-capacity ratio of 0.16. In the year 2020, the intersection operations analysis is a volume-to-capacity ratio of 0.24. This intersection meets ODOT's minimum operating conditions now, and will continue to meet ODOT's mobility standards in the year 2020.

Klamath Falls-Lakeview Highway (OR140) and J Street

The intersection capacity analysis results for OR 140 and J Street show that the existing operating conditions in the year 2001 is a volume-to-capacity ratio of 0.11. In the year 2020, the intersection will continue to operate well with a volume-to-capacity ratio of 0.16. This intersection meets ODOT's minimum operating conditions now, and will continue to meet ODOT's mobility standards in the year 2020.

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CHAPTER 6: TRANSPORTATION IMPROVEMENT OPTION EVALUATION

As required by the Oregon Transportation Planning Rule, transportation improvements were formulated and evaluated for the Lakeview TSP. This chapter discusses transportation improvement options for all areas within the Lakeview UGB. The potential improvements evaluated in this chapter were developed to address the concerns identified in the goals and objectives (Chapter 2), the inventory (Chapter 3), evaluation of the existing operating conditions (Chapter 4), traffic forecasts (Chapter 5), and meetings with the Lakeview Transportation Advisory Committee and the public.

The following list includes all of the potential transportation system improvements considered for the Lakeview TSP. The transportation system improvement options discussed for Lakeview include state highway, county road, city street, pedestrian and bike path projects.

EVALUATION CRITERIA

The evaluation of the recommended transportation improvements was based on a quantitative review of traffic operations, including speed, delay, collision records, and congestion; and a qualitative review of effects on perceived safety and livability. In addition, costs (estimated in year 2001 dollars) were factored into the evaluation of each potential transportation improvement. Costs were estimated for construction using a typical unit cost, such as per linear foot, and do not include purchase of right-of-way, design, or other contingencies. No consideration of potential environmental impacts was included in the evaluation of the improvements, and it is possible that the identification of environmental issues could result in increased costs, project modification, or cancellation.

No quantified capacity or safety issues were identified for the Town of Lakeview for the existing street system; however, capacity, safety, maintenance, and livability conditions were identified that will require attention over the next 20 years. They were the main factors used to determine and evaluate the transportation improvements discussed below.

The recommendation of whether to include a suggested improvement in the 20-year plan was based on the potential effectiveness of the suggested improvement relative to its cost or feasibility. If a project was recommended for inclusion in the 20-year plan, it was assigned a priority based on the urgency of the improvement. Priorities are assigned as follows: High = 0-5 years; Medium = 5-10 years; Low = 10-20 years.

The evaluation of each suggested improvement addresses the following five categories: (1) overview, (2) impacts, (3) cost, (4) recommendation, and (5) priority.

EVALUATION OF POTENTIAL TRANSPORTATION IMPROVEMENTS

Street System Need: Improve mobility at the intersection of US 395 and OR 140

Description: The intersection capacity analysis results for Fremont Highway US 395 and OR 140 show that the existing operating conditions in the year 2001 is a volume-to-capacity ratio of 0.34. In the year 2020 the intersection operations is a volume-to-capacity ratio of 0.49. According to the 1999 Oregon Highway Plan, the minimum acceptable operating condition for a Statewide Highway with the speed limit less than 45-mph is a volume-to-capacity ratio of 0.80. This intersection meets ODOT's minimum operating conditions for the year 2001 and in the year 2020. Two improvement options in addition to the No Build Alternative were evaluated for

this intersection: installation of a traffic signal, and construction of a roundabout. These two improvement options are discussed in the following sections.

Improvement Option #1 – No Build Alternative

Overview: The No Build Alternative consists of no change to Lakeview's existing street system. The purpose of a No Build Alternative is to examine future conditions without improvements to the system. The No Build Alternative will have no construction or right-of-way costs since it is based on the assumption that no new roadway construction will occur.

Impacts: The No Build Alternative, like the improvement alternatives would have several pros and cons. The pros associated with the No Build Alternative are no construction costs and no right-of-way acquisition. A future volume-to-capacity ratio of .49 indicates that the intersection operations exceed ODOT standards. Congestion is expected to be minimal, if any.

Cost: There are no costs associated with a No Build Alternative.

Recommendation: The No Build Alternative is not recommended for the entire planning period (until year 2020). However, the intersection meets ODOT's intersection performance standards and only marginally meets signal warrants. Further, crash data do not indicate the intersection is unsafe. The No Build Alternative is a reasonable alternative until the year 2015 given the lack of deficiencies identified. The intersection does meet some of the signal warrants within the planning period.

Priority: None.

Improvement Option #2 - Close access to North 4th Street, restrict driveway access, and install a traffic signal

Overview: The US Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD), the generally accepted industry standard for traffic control devices, outlines eleven "warrants" for traffic signals. Traffic signals are typically not installed unless one or more of the eleven warrants is met; however, satisfaction of a warrant or warrants is not in itself justification for a traffic signal.

An analysis of five of the signal warrants was made for the intersection of US 395 and OR 140. Traffic volumes were forecast for the year 2020 based on a 1.2 percent average annual growth rate. The analysis indicated that two of the five signal warrants analyzed will be met under the year 2020 conditions. While meeting only two of the signal warrants does not make a good case for the installation of a traffic signal, it does suggest that signal warrants at this intersection should be reevaluated in the year 2015. The placement of a traffic signal in the 20-year planning period should be recommended as a low priority project. A summary of the findings from the signal warrants analysis is provided below:

- Warrant 1 – Minimum Vehicular Volume – will not be met by the year 2020.
- Warrant 2 – Interruption of Continuous Traffic – will not be met in the year 2020.
- Warrant 9 – Four Hour Volumes – will be met in the year 2020.
- Warrant 10 – Peak Hour Delay – will not be met in the year 2020.
- Warrant 11 – Peak Hour Volume – will be met in the year 2020.

There are several driveway accesses in the vicinity, which contribute to the motorists' confusion when navigating the intersection. Restricting driveway accesses at this location will be necessary to improve the operating conditions. Specifically, the closest driveways to the intersection along each leg will need to be closed to enhance the intersection operations. Fortunately, each business adjacent to the intersection has multiple accesses, up to

four per corner for the gas stations, and removing accesses will not seriously hamper the internal circulation of the adjacent businesses. Refer to Figure 6-1 for a conceptual design of a signal at this intersection.

Impacts: The installation of a traffic signal will improve the mobility at this intersection in the year 2020 to a volume-to-capacity ratio of 0.48, which is only a marginal improvement over the 0.49 volume-to-capacity ratio of the No Build Alternative. The pros and cons of installing a traffic signal at this location are described below.

PROS

- Requires no additional right-of-way.
- Provides pedestrian signals for safer pedestrian passage.
- Relieves confusion for motorists approaching intersection.
- Favors the dominant turning movements with proper signal phasing.
- Reduces confusion at the intersection with channelized turning movements.

CONS

- May cause unnecessary delays during non-peak hours.
- Requires the closure of access from North 4th Street.
- Higher long-term maintenance costs for ODOT to maintain the traffic signal.
- Restricts driveway access.

Cost: The cost estimated to install a traffic signal and make the other necessary improvements at this intersection is approximately \$213,000. This includes the cost of the traffic signal installation, concrete curbs, mobilization, signage, engineering, and other contingencies. A list of items and construction costs associated with each alternative is located in Appendix E. Installing a traffic signal at this location will require no additional right-of-way.

Recommendation: This improvement option is recommended to improve the volume-to-capacity ratio at this intersection in the 20-year time frame. A signal warrant analysis as outlined in the Manual on Uniform Traffic Control Devices will need to be conducted at this intersection in the year 2015 to determine if the installation of a traffic signal will be warranted.

Priority: Low. This improvement option will be needed by approximately year 2020.

Improvement Option #3 – Restrict driveway access and construct a Roundabout

Overview: Roundabouts have become increasingly accepted in the United States as an alternative to traffic signals to improve operations at intersections. The placement of a roundabout at the intersection US 395 and OR 140 was considered to mitigate congestion in the future.

The ODOT minimum outside radius for a roundabout to enable truck traffic with a wheel base of 67 ft. (WB-67 design vehicle) to maneuver through the roundabout is 80 ft. The configuration of the roundabout allows for the leg of North 4th Street to remain part of the intersection for entering the roundabout only. Traffic would not enter North 4th Street from the proposed roundabout. A conceptual design of a roundabout at this intersection is shown in Figure 6-2.

Impacts: Roundabouts provide a better volume-to-capacity ratio at intersections when the traffic distribution on the roundabout is even for each leg. At the intersection of US 395 and OR 140 the traffic is heaviest on the

highway approaches. A capacity analysis was performed using the software package SIDRA, which was developed specifically for the analysis of roundabout intersections. In the year 2020, a roundabout at this intersection will provide a volume-to-capacity ratio of 0.26. This represents good operating conditions with little delay. The volume to capacity ratio for the roundabout alternative is lower than that of the signalized intersection at a volume-to-capacity ratio of 0.48. Pros and cons for the roundabout alternative are listed below.

PROS

- Fewer high-speed crashes and reduction of speeds entering and exiting the roundabout.
- Less delay during non-peak hours.
- Lower long-term maintenance costs.

CONS

- Requires acquisition of significant amounts of additional right-of-way.
- Not familiar to many drivers, and drivers of through vehicles may be confused.
- Snow removal can be difficult.

Cost: \$357,000. This cost does not include right-of-way acquisitions, but does include installation, mobilization, signage, striping, landscaping and engineering.

Recommendation: Although the roundabout has many positive attributes, this alternative will also require the acquisition of additional right-of-way, which could make the final installation costs substantially higher than that of a traffic signal. For this reason the roundabout alternative is not recommended for this intersection.

Priority: None.

Pedestrian System Need: Improve the condition of the Town's sidewalks to enhance the connectivity and safety of the pedestrian environment

Description: The Town of Lakeview has constructed the majority of its local streets to a uniform improvement standard that includes sidewalks and a planting strip on each side of the street. However, some of these sidewalks have deteriorated or have been destroyed by vehicle and foot traffic and tree root uplift. Many of the existing sidewalk segments do not comply with the Americans with Disabilities Act (ADA). With approximately eight percent of Lakeview's population walking to work daily, and with walking being a popular pastime and means of travel, improvements need to be made to the Town's sidewalks.

Some concerns about improving the safety of pedestrians crossing the highways have also been raised by the TAC, so implementing a Special Transportation Area (STA) in the downtown area is discussed below (Improvement Option #1).

ODOT's *Streetscape 2000* project in Lakeview will add new ADA-compliant sidewalks with curbs from OR 140 east of the railroad tracks to US 395 south to South 9th Street. Curb extensions, decorative lighting, and benches will be added along US 395 from North 4th Street to South 1st Street. Crossings will be safer, ADA codes will be met, and pedestrian amenities will be available. This corridor will be the backbone of the pedestrian environment. The Town of Lakeview will connect pedestrian generators such as schools, parks, and downtown commercial areas with this corridor to improve connectivity.

Three concepts arose from discussions with the TAC with regard to improvements to the pedestrian system. The first priority for the pedestrian system is to provide continuous sidewalks on streets within one block of the Town's schools (Improvement Option #2). The second concept is to create ADA-compliant pedestrian corridors along future collectors that will extend from OR 140 and US 395 into the surrounding neighborhoods (Improvement Options #3 and #4). Since new ADA-compliant sidewalks are a part of ODOT's Streetscape project, linking neighborhoods to these sidewalks will effectively link neighborhoods with commercial areas via

new ADA-compliant sidewalks. Third, a pedestrian corridor on a local street is desirable for those who prefer to avoid access along the highway (Improvement Options #5 and #6). Within each improvement option the Town should first fill in missing segments, then improve broken segments, and finally replace non ADA-compliant curbs on existing sidewalks.

Improvement Option #1 – Establish a Special Transportation Area for US 395 through Lakeview

Overview: The Town of Lakeview has an opportunity to manage the segment of state highway through the downtown as a Special Transportation Area, or STA. An STA is a designation that may be applied to a highway segment where a downtown straddles the state highway. The primary management objective of an STA is to provide access to community activities, businesses, and residences along and across the highway. In other words, the point of an STA is to manage the highway segment as a main street rather than a rural highway. The STA designation does not apply to an entire city or to strip development, and STAs are not located on Freeways or Expressways. In Lakeview, the appropriate STA is on US 395 from North 2nd Street to South 1st Street.

The highway segment through Lakeview already has many of the characteristics appropriate for an STA designation:

- It is a compact district located on a state highway where the need for local access is balanced with highway mobility;
- There is an identified focus on pedestrian movement in the downtown area;
- Land uses are relatively mixed (i.e., there is commercial, office, and residential in close proximity);
- Buildings are spaced close together and located adjacent to the street with little or no setback;
- Sidewalks are located adjacent to the highway and the buildings;
- An interconnected local street network facilitates local circulation;
- There is on-street parking on the highway; and most shared or general purpose parking lots are located behind or to the side of buildings rather than in front; and
- Posted speed is 25 mph, and actual speeds typically do not exceed that speed.

An STA allows ODOT to reduce highway mobility standards in order to preserve a downtown's characteristics. Because US 395 is a Statewide Highway, ODOT's management objective currently favors through traffic. However, with an STA designation, ODOT will recognize the need to balance through traffic with local access, especially by pedestrians, encouraging slower vehicle movement and improved pedestrian crossings. The Streetscape project demonstrates that ODOT recognizes this need in Lakeview.

The STA designation is not needed in the Town of Lakeview. It is unlikely that options to improve mobility (for example, adding traffic signals or removing on-street parking) that could compromise Lakeview's downtown character will be needed by 2020. Intersections are anticipated to exceed ODOT's performance standards and the Streetscape 2000 project will provide pedestrian amenities to improve crossings.

Although unlikely, if an STA is needed or desired in Lakeview, a process must be followed to create an STA. ODOT and Lakeview would work together to mutually develop and agree to a management plan, within an Intergovernmental Agreement or Memorandum of Understanding. The STA management plan may include less

restrictive highway mobility standards and may use flexible streetscape designs in order to improve local access and community functions. The agreement would be in effect if the STA is adopted as part of a local transportation system plan, comprehensive plan, and in the corresponding corridor plan.

Currently, ODOT requires that a Management Plan be completed as part of the STA designation. The Management Plan includes the following elements, some of which, but not all, are addressed in this TSP.

- Goals and objectives;
- Clearly defined STA boundaries;
- Design standards that are to be applied to the STA to improve local access and community functions, such as highway mobility standards, street spacing standards, signal spacing standards and street treatments;
- Strategies for addressing freight and through traffic including traffic speed, possible signalization, parallel or other routes, and actions in other parts of the corridor which address through traffic needs;
- Parking strategies, which address on- and off-street and shared parking;
- Provisions for a network of local traffic, transit, pedestrian, and bicycle circulation;
- An analysis of the regional and local traffic and safety impacts of the STA to determine the effects of the STA designation;
- Identification of needed improvements within the STA or improvements that will support access to the STA and designation of the party responsible for implementation, likely funding source and anticipated time frame; and
- Identification of maintenance and operational strategies to be employed.

Impacts: The immediate traffic impacts of establishing an official STA designation in downtown Lakeview will be very small, since the area is currently functioning like an STA. With an STA, the Town would need to institute access management techniques outside of the STA, which could limit direct access to the highway for some land currently zoned as commercial.

Cost: There are no construction costs associated with the establishment of an STA. However, completion of an STA Management Plan, as currently stated, would require significant additional studies.

Recommendation: Intersection operations along both highways are expected to meet ODOT's minimum mobility standards in the next 20 years. The downtown area has on-street parking and new accesses are not anticipated because buildout has occurred. Pedestrian improvements associated with ODOT's Streetscape project will protect pedestrian mobility in the future.

For these reasons, there is no immediate or anticipated need for an STA designation in the Lakeview UGB. If intersection operations on US 395 between North 2nd Street and South 1st Street deteriorate to the point where the volume-to-capacity ratios approach 0.80, Lakeview should proceed with the STA designation. The appropriate location for an STA in Lakeview would be between North 2nd Street and South 1st Street.

Priority: None. This improvement option is not recommended unless conditions not identified at this time become a reality. These conditions, such as increased traffic volumes above expected levels, or safety concerns not apparent in the present, would most likely occur after the year 2020.

Improvement Option #2 – Add new ADA compliant sidewalk segments and curbs near significant pedestrian trip generators

Overview: The existing sidewalk system in front of the school blocks are discontinuous and in poor condition. It has been noted that children in the area before and after school generally walk in the street. There are clear safety reasons why a functional sidewalk system should be made available for passage to and from school. The sidewalks are in similar condition in the vicinity of the hospital. Individuals with mobility limitations can not easily use the sidewalk system in its current condition. Adding ADA-compliant sidewalk segments and curbs near these significant trip generators will provide a safer pedestrian environment and greater mobility.

Impacts: The following proposed locations are for entirely new sidewalks where none are currently present. These sidewalk segments should be added first under this improvement option. Refer to Figure 6-3 for locations of sidewalks associated with this improvement option.

- 1,200 linear feet on south side of South 2nd Street between South H Street west to South L Street.
- 250 linear feet on north side of South 2nd Street between South K Street and South L Street.
- 600 linear feet on the east side of South J Street between South 1st Street and South 2nd Street.
- 850 linear feet on west side of L Street between South 1st Street and South 3rd Street.
- 1,500 linear feet on the north side of South 3rd Street between South I Street and the railroad tracks.
- 200 linear feet on the south side of South 3rd Street between South L Street and Mountain View Drive.
- 1,500 linear feet on the north side of South 6th Street between South G Street and Mountain View Drive.
- 1,000 linear feet on south side of South 6th Street between South G Street and South J Street.

The following sidewalk segments near schools were classified as broken during the inventory process. These sidewalks range in condition from mostly continuous and in good condition with periodic missing segments, to mostly missing with portions of good sidewalk. Therefore, the approximation of the linear feet of replacement described below is most likely an overstatement. Since some sidewalks are present in these areas, they should be improved after missing sidewalk segments have been added.

- 750 linear feet of replacement sidewalk (375 feet on each side) on South I Street between South 1st Street and South 2nd Street.
- 750 linear feet of replacement sidewalk (375 feet on each side) on the east side of South K Street and South L Street between South 1st Street and South 2nd Street.
- 400 linear feet of replacement sidewalk on the east side of South L Street between South 2nd and South 3rd Streets.
- 650 linear feet (approximately 325 on each side) of replacement sidewalk on South I Street between South 4th Street and South 5th Street.
- 600 linear feet (300 on each side) of replacement sidewalk on South 5th Street between South G Street and South H Street.

- 600 linear feet (300 on each side) of replacement sidewalk on South H Street between South 6th Street and South 7th Street.
- 400 linear feet (200 on each side) of replacement sidewalk on South I Street between Linda Lane and South 4th Street.

The following sidewalk segments near schools were classified as continuous during the inventory process. This means the sidewalk is in mostly good condition without significant gaps. However, these are lacking ADA-compliant curbs and may have portions that are not in good condition. ADA-compliant curbs should be added to these sidewalk segments to improve their function. Since sidewalks are present in these areas, these improvements should be completed after missing segments have been filled and broken sidewalks replaced.

- ADA-compliant curbs on the north side of South 2nd Street between South K Street to South H Street.
- ADA-compliant curbs on the west side of South J Street between South 1st Street and South 2nd Street.
- ADA-compliant curbs on the west side of South K Street between South 1st Street and South 2nd Street.
- ADA-compliant curbs on the north side of South 3rd Street fronting the high school, east to G Street.
- ADA-compliant curbs on the south side of South 3rd Street from South L Street to South G Street.
- ADA-compliant curbs on both sides of South I Street between Linda Lane and South 3rd Street.
- ADA-compliant curbs on both sides of South 5th Street between South I Street and South H Street.
- ADA-compliant curbs on both sides of South I Street between South 6th Street and South 7th Street.
- ADA-compliant curbs on both sides of South J Street between South 6th Street and South 7th Street.
- ADA-compliant curbs on the south side of South 6th Street between Mountain View Drive and South J Street.
- ADA-compliant curbs on both sides of H Street between South 5th Street and South 6th Street.
- ADA-compliant curbs on both sides of H Street between South 2nd Street and South 3rd Street.
- ADA-compliant curbs on both sides of South 3rd Street between G Street and F Street.

PROS

- Improves pedestrian access.
- Improves safety on higher traffic volume roadways.
- Promotes use of alternative modes of travel.
- Reduces congestion by removing some vehicular trips (less than ½ mile) from the street system.

CONS

- No cons are associated with this improvement option.

Cost: \$431,000. The majority of this cost is in the new sidewalks, but concrete ADA-compliant curbs and the contingency are significant portions of this total cost.

Recommendation: A long-term commitment to improve the pedestrian environment in Lakeview is recommended. Costs associated with the construction of new sidewalk segments can be dispersed over time as the budget allows, or can be addressed with bond measures or grant money.

Priority: High. Sidewalk improvements should be implemented right away, but the time involved for construction of new sidewalks should be considered an ongoing project for many years.

Improvement Option #3 – Add new ADA compliant sidewalk segments and curbs to create pedestrian corridors

Overview: This improvement option focuses on adding sidewalks to collectors that connect with OR 140 and US 395. Future collectors that will connect with OR 140 and US 395 that have been identified for sidewalk improvements are North J Street, North 2nd Street, South 3rd Street, South 9th Street, Center Street, South 7th Street, Metzker Road, Kadrmass Road, Missouri Avenue, Roberta Avenue, and South M Street. Many of these corridors will connect to the ODOT Streetscape project providing a safe and pedestrian friendly environment for people to walk to the commercial areas of Lakeview.

Like the prioritization for adding sidewalks around schools, the Town should first fill in missing segments, followed by improving broken segments, and finally replacing non ADA-compliant curbs on continuous sidewalk segments with new, ADA-compliant curbs. Metzker Road, Kadrmass Road, Missouri Avenue, Roberta Avenue, and South M Street are currently unimproved roadways under Lake County jurisdiction. The TAC proposed adding new sidewalks to these future collectors when road improvements occur.

Impacts: The following proposed locations are for entirely new sidewalks where none are currently present. These should receive the highest priority for construction. Refer to Figure 6-4 for the locations of sidewalk improvement associated with this improvement option.

- 4,800 linear feet of new sidewalk on North J Street (2,400 feet on each side) between North 12th Street to Highway OR 140.
- 600 linear feet (300 feet on both side) of new sidewalk on North 2nd Street between Q Street and R Street.
- 500 linear feet (250 feet on each side) of new sidewalk on South 3rd Street between South L Street and the railroad tracks.
- 5,200 linear feet (2,600 feet on each side) of new sidewalk on South 9th Street between US 395 and the railroad tracks.
- 4,200 linear feet (2,100 feet on each side) of new sidewalk on South 7th and Center Streets.
- 2,600 linear feet (1,300 feet on each side) on South 3rd Street between Roberta and S Street.

The following sidewalk segments were classified as broken during the inventory process. These areas range in condition from mostly continuous and in good condition with periodic missing segments, to mostly missing with portions of good sidewalk. Nearly all sidewalks do not have ADA-compliant curbs. The approximation of the linear feet of replacement described below may be over estimated due to potential sidewalk segments that will not need total replacement. Since some sidewalks are present in these areas, they have a medium replacement priority.

- 3,400 linear feet of replacement sidewalk (1,700 feet on each side) on L Street between OR 140 and South 1st Street.
- 600 linear feet of replacement sidewalk (300 feet on each side) on North 2nd Street between North L Street and North M Street.
- 500 linear feet of replacement sidewalk (250 feet on each side) on North 2nd Street between North H Street and North I Street.

The following sidewalk segments along proposed collector streets were classified as continuous during the inventory process. This means the sidewalk is in mostly good condition without significant gaps. However, these are lacking ADA-compliant curbs. ADA-compliant curbs should be added to these sidewalk segments to improve their function. Since sidewalks are present in these areas, these improvements should be completed after missing segments have been filled and broken sidewalks replaced.

- ADA-compliant curbs on both sides of North 2nd Street between Q Street and D Street.
- ADA-compliant curbs on both sides of South 3rd Street between US 395 and E Street.

PROS

- Improves pedestrian access.
- Improves safety on higher traffic volume roadways.
- Promotes use of alternative modes of travel.
- Reduces congestion by removing some vehicular trips (less than ½ mile) from the street system.

CONS

- No cons are associated with this improvement option.

Cost: \$861,000. With approximately 22,400 linear feet of sidewalk proposed under this improvement option, the cost is relatively high. However, this assumes the town or county will pay for the entire sidewalk improvement. In all likelihood, private development will also pay portions of this as new developments along these collectors occur, new sidewalk segments will be added over the next 20 years.

Recommendation: A long-term commitment to improve the pedestrian environment in Lakeview is recommended. Costs associated with the construction of new sidewalk segments can be dispersed over time as the budget allows and as land is redeveloped (paid by developers).

Priority: Medium. Since most of the proposed collector streets still have relatively low traffic volumes, this improvement option is intended to be implemented later in the planning period as these streets start to experience higher traffic volumes.

Improvement Option #4 – Add new ADA compliant sidewalk segments and curbs on US 395 from South 9th Street to South 12th Street.

Overview: The ODOT Streetscape project will replace sidewalks and add ADA-compliant curbs along US 395 from OR 140 south to South 9th Street. This improvement option will be a continuation of those improved sidewalks from where ODOT leaves off at South 9th Street to South 12th Street. Refer to Figure 6-4 for the location of sidewalk improvements associated with this improvement option.

Impacts: Continuing the sidewalks and ADA-compliant curbs to extend further south on US 395 will provide continuous pedestrian access along US 395.

PROS

- Improves pedestrian access.
- Promotes use of alternative modes of travel.

CONS

- No cons are associated with this improvement option.

Cost: \$131,000. This assumes 4,000 linear feet of sidewalks will be constructed and eight ADA-compliant curbs will be added to US 395 from South 9th Street to South 12th Street.

Recommendation: Continuous sidewalks and ADA-compliant curbs along the arterial street system in Lakeview should be completed in the next 5 years. In order to accomplish this, it is recommended that new sidewalk segments and ADA-compliant curbs on US 395 from South 9th Street to South 12th be constructed.

Priority: High.

Improvement Option #5 – Add new ADA compliant sidewalk segments and curbs to create a pedestrian corridor along H Street

Overview: This improvement option focuses on adding sidewalks to a single street that extends through most of the Town of Lakeview. Pedestrians often favor walking along streets that have less vehicular traffic. H Street was identified by the TAC as a street that is not congested, will remain a local street, and is also one of the only streets that spans nearly the entire Town of Lakeview. This street is also adjacent to the Town's schools, which will eventually be surrounded by continuous sidewalks.

Like the prioritization for adding sidewalks around schools, the Town should first fill in missing segments, followed by improving broken segments, and finally replacing old sidewalks with new sidewalks.

Impacts: The following proposed locations are for entirely new sidewalks where none are currently present. These should receive the highest priority for construction. Refer to Figure 6-5 for the locations of sidewalk improvements associated with this improvement option.

- 3,600 linear feet of new sidewalk (1,800 feet on each side) of North H Street between North 9th Street and North 4th Street.

The following sidewalk segments were classified as broken during the inventory process. These areas range in condition from mostly continuous and in good condition with periodic missing segments, to mostly missing with portions of good sidewalk. Nearly all sidewalks do not have ADA-compliant curbs. Since some sidewalks are present in these areas, they have a medium replacement priority.

- 2,000 linear feet of replacement sidewalk (1,000 feet on each side) on H Street between North 1st Street and North 2nd Street.
- 800 linear feet of replacement sidewalk (400 feet on each side) on H Street between South 6th Street and South 8th Street.

The following sidewalk segments were classified as continuous during the inventory process. This means the sidewalk is in mostly good condition without significant gaps. However, these are lacking ADA-compliant curbs. ADA-compliant curbs should be added to these sidewalk segments to improve their function. Since sidewalks are present in these areas, these improvements should be completed after missing segments have been filled and broken sidewalks replaced.

- Add ADA-compliant curbs on both sides of H Street between North 1st Street and South 6th Street.

PROS

- Improves pedestrian access.
- Provides alternative pedestrian routes along less busy roadways.
- Promotes use of alternative modes of travel.

CONS

- No cons are associated with this improvement option.

Cost: \$244,000. The cost of this improvement option is relatively low compared to the other sidewalk improvement options because improving portions of H Street are part of Improvement Option #2.

Recommendation: A long-term commitment to improve the pedestrian environment in Lakeview is recommended. Costs associated with the construction of new sidewalk segments can be dispersed over time as the budget allows.

Priority: Low. The overall priority for this improvement option is low compared with the other pedestrian improvements. The low priority is assigned because the other sidewalk improvement options are intended to improve safety and function, whereas this option is based on providing a pedestrian corridor that is more aesthetically pleasing.

Improvement Option #6 – Add new ADA compliant sidewalk segments and curbs to O Street west to S Street.

Overview: In the Town of Lakeview Public Facilities Plan, a street improvement project to install storm drainage on O Street west to S Street has been outlined. New sidewalk segments and ADA-compliant curbs should be installed at these locations in conjunction with adding storm drainage. Refer to Figure 6-5 for the locations of sidewalk improvements associated with this improvement option.

Impacts: Adding sidewalks and curbs to these segments of roadway will improve the function of the new drainage system as well as provide safer pedestrian access.

PROS

- Improves access for people with limited mobility.
- Promotes use of alternative modes of travel.
- Can be done in conjunction with installing new storm drainage.

CONS

- Cost associated with the construction of new sidewalks and ADA-compliant curbs.

Cost: \$584,000. This assumes 18,000 linear feet of sidewalks will be constructed and 26 ADA-compliant curbs will be added to O Street west to S Street.

Recommendation: Install the new sidewalk segments and ADA-compliant curbs at the same time the new storm drainage is installed on O Street west to S Street.

Priority: High.

Improvement Option #7 – Add ADA-compliant curbs in the downtown area

Overview: The Town has been replacing old curbs at intersections in the downtown core area with ADA-compliant curbs when funds are available. The sidewalks currently meet ADA standards in the downtown area. The downtown area has been defined as the area from North 2nd Street to South 1st Street, and D Street to G Street. Historic buildings with wide adjacent sidewalks and on-street parking characterize this area. There is a focus on the pedestrian environment and a high density of businesses. This practice of replacing non ADA-compliant curbs should continue until all curbs in the downtown core area are ADA-compliant.

Impacts: The Town of Lakeview has an estimate of two percent or 54 people in the year 2000, with a mobility limitation. Adding ADA-compliant curbs to all intersections in the downtown area will dramatically improve the pedestrian environment for individuals with mobility limitations.

PROS

- Improves pedestrian access.
- Promotes use of alternative modes of travel.

CONS

- No cons are associated with this improvement option.

Cost: \$41,000. This assumes 250 linear feet of sidewalks will be constructed and 50 ADA-compliant curbs will be added to the downtown area.

Recommendation: A long-term commitment to improve the pedestrian environment in Lakeview is recommended. Costs associated with the construction of new sidewalk segments can be dispersed over time as the budget allows.

Priority: High.

Bicycle System Need – Improve the bicycle system to encourage use of bicycles as alternative modes of transportation

Description: According to the 1990 US Census, approximately three percent of the total population of the Town of Lakeview uses a bicycle for their source of transportation to and from work. This is a relatively high proportion of bike commuters, but not surprising, since Lakeview is compact and topographically flat. Most of Lakeview's streets are local, in a grid pattern, and have relatively low traffic volumes, allowing cyclists to move about freely and safely. However, the availability of bicycle parking in commercial areas is not consistent. Bicycle parking facilities are now required for all new developments other than single family residential dwellings. The following options address improvements to the bicycle system in the Town of Lakeview.

Improvement Option #1 – Add Bike Lanes

Overview: Currently, Lakeview does not have street standards that require bike lanes to be included on new collectors. Rural arterial streets are required to have 6-foot bike lanes adjacent to each travel lane. However, the

only arterials in the Town of Lakeview are the two highways. Both urban portions of the Town's highways currently do not have bike lanes, but have 14-ft. travel lanes with a shared bike lane facility. Retrofitting bike lanes onto existing local streets is not appropriate because low traffic volumes on local streets do not pose a threat to bicyclists. The well established grid system, low traffic volumes (under 3,000 ADT), and wide paved roadways in Lakeview enable bicyclists to travel easily and safely without additional bike lanes.

Recommendation: Lakeview does not need to add additional bike lanes to their existing street system. The only arterials in the Town of Lakeview, OR 140 and US 395, are maintained by ODOT. If ODOT widens the pavement width on a highway without bike lanes it is their policy to add bike lanes during the reconstruction. However, it is unlikely that the pavement width will be altered in the Lakeview UGB in the next 20 years. If bike lanes are desired for recreational purposes, then they should be paved, 6 feet wide, and designated with a solid 6-inch white stripe. The newly adopted Town Code encourages the use of separated paths for pedestrians and bicyclists. As new developments occur, the Town should work with developers to encourage such improvements.

Priority: None.

Improvement Option #2 – Add Bicycle Parking

Overview: Adequate bicycle parking is an important component of a bicycle transportation system. Lack of good parking results in bikes locked to poles, trees, and railings, and can be a problem in crowded pedestrian areas. It also discourages overall bicycle use. In the downtown area, at least two bicycle parking spaces per block, on both sides of the street, should be provided. These can be shared spaces, and can be concentrated in areas that have high demand.

Town of Lakeview Zoning Ordinances require varying amounts of bicycle parking for different uses. Typically, the more intense the use, the more bicycle parking is required. With this ordinance, new developments will provide necessary bicycle parking.

To encourage existing businesses to retrofit with bike racks, the Town can provide partial or full funding (racks typically cost about \$100/bike parking space). The Town may want to consider contracting with a local fabricator to build bike racks to their specifications.

Impacts: Bicycle parking needs to be properly placed and installed to be effective, and must not interfere with pedestrian movement. Bicycle parking should be located in the town right-of-way near business entrances and in visible areas with cover.

Cost: About \$100 per bicycle parking space. One inverted "U" rack provides two parking spaces. About 14 racks are needed in downtown, for an approximate cost of \$3,700. This cost also includes signage for bicycle parking.

Recommendation: Bicycle racks should be installed where wider sidewalks and curb extensions are provided on F Street as part of the Streetscape project. Bicycle racks should be installed at a frequency of 2 bicycle spaces per block on G Street and E Street from North 1st Street to South 1st Street. Inverted "U" style racks are recommended.

Priority: High.

Street System Need: Improve the condition of unpaved roads and roads subject to flooding and the safety of local roadways crossing railroad tracks

Description: Accidents are few and roadways are generally in good condition inside the Lakeview UGB. The sum of discussions with the local police department, review of accident data from ODOT, and TAC comments is that the roadways in Lakeview are relatively safe. Accidents involving fatalities are rare and most are considered “least severe” on OR 140 and US 395. In order to continue this successful trend, some safety-related issues need consideration in the coming years.

Nearly all streets inside the Lakeview UGB were treated with an asphalt overlay in 1999. The condition of these roads is good to excellent. Unpaved roadways inside the Town’s UGB should be paved to improve their function while reducing particulate pollution. Some areas of Lakeview are also prone to flooding. Preventing flooding will protect the integrity of the roadways in these areas.

Improvement Option #1 – Pave County Road 1-14 (extension of E Street) from South 9th Street to US 395, and County Road 2-18 west of Roberta Avenue and Missouri Avenue intersection north to the Department of Corrections Work Camp.

Overview: There are a small number of roads inside the Lakeview UGB that are unpaved. An ODOT CMAQ Grant was obtained by the county to pave county roads inside the Lakeview UGB. In the Town of Lakeview 2001 Public Facility Plan, capital improvement projects have been prioritized in three phases. Paving these road segments has been included in Phase I and is to be completed before 2005.

The segment of County Road 1-14 from South 9th Street to US 395 is currently an unpaved gravel road. Paving this section of roadway will provide an alternative to using the state highway to and from the Industrial Parkway at the south end of Town.

The segment of County Road 2-18 west of the Roberta Avenue and Missouri Avenue intersection is currently an unpaved gravel road. The Department of Corrections (DOC) Minimum Security Work Camp is planned to be located approximately 1.3 miles beyond the Lakeview UGB on County Road 2-18. The portion of the road to be paved that is located inside the UGB is approximately 1.7 miles. Paving this section of roadway will encourage more traffic to use this as a route to and from the DOC Work Camp instead of using US 395.

Impacts: Paving these sections of roadway will decrease local particulate air pollution, and improve the function and longevity of these roads. Paving also expands the grid roadway system. This grid provides more travel options, reduces impacts on busy roadways, and improves pedestrian access.

Cost: The total cost to pave these roads is estimated at \$450,000. The section of County Road 1-14 will cost approximately \$150,000, and County Road 2-18 will cost approximately \$300,000. Both Projects are committed with funding from an ODOT CMAQ Grant, Lake County, and partial funding on County Road 2-18 from the DOC.

Recommendation: These roads should be paved within the next five years. Much of the work, such as grading and adding base has already occurred. Paving should comply with Town of Lakeview Zoning Ordinance design standards in Chapter 3.4.100.

Priority: High.

Improvement Option #2 –Pave County Road 1-14 west of US 395 approximately ½ mile.

Overview: A ½ mile section of County Road 1-14 west of US 395 was not included as part of the paving project for County Road 1-14 from South 9th Street to US 395. To have all of the roads inside the Lakeview UGB paved to improve connectivity and air quality this section should be included for future street improvements.

Impacts: This street improvement project will construct a continuous paved section of County Road 1-14, providing a southern connection between the east and west side of US 395 in Lakeview.

Cost: The estimated cost to pave this section of road is \$108,000.

Recommendation: It is recommended that County Road 1-14 west of US 395 be paved.

Priority: Medium.

Improvement Option #3 -Add Storm drainage from O Street west to S Street

Overview: Adding storm drains to O through S Streets is part of Phase I in the Town of Lakeview Public Facilities Plan. Adding storm drains to streets prone to flooding will improve their function and safety, and is a part of the Town's commitment to reduce flooding in residential areas. This improvement is listed in the Town of Lakeview 2001 Public Facilities Plan.

Impacts: Storm drains will improve the function and safety on O through S Streets during periods of heavy rainfall and flooding.

Cost: The Town of Lakeview 2001 Public Facilities Plan estimates this project to cost \$220,000.

Recommendation: Adding storm drains from O Street west to S Street such as outlined in the proposed year 2001 Town of Lakeview Public Facilities Plan is recommended.

Priority: High.

Improvement Option #4 - Add railroad crossing safety improvements on South 3rd Street and South 9th Street

Overview: Crossings can be treated in various ways, including signing, signals, gates, and separations. The amount of traffic on the roadway, train traffic, and sight distance are key variables in determining the appropriate treatment. Traffic control devices used at railroad crossings must be consistent with the design and application in the Manual on Uniform Traffic Control Devices (MUTCD). It is stated in the MUTCD that there is no single standard system of active traffic control for railroad crossings. Based on an engineering and traffic investigation, a determination is made whether any active traffic control system is required at a crossing and, if so, what type is appropriate. If rail traffic increases through Lakeview, an engineering and traffic investigation will need to be conducted for crossings at South 3rd Street and South 9th Street. Before a new or modified grade crossing traffic control system is installed, the ODOT Rail Division must approve it.

Traffic control devices range from passive too active, respectively increasing in the degree of control and cost. Passive control systems include signs, pavement markings, and illumination. Active grade crossing traffic control systems range from post-mounted flashing light signals to automatic gates that include flashing light signals, cantilever flashing light signals, bells, or a combination of these control measures. Lake County operates the railroad that is inside the Town limits, therefore the County and the Town have jurisdiction over the crossings. The two agencies would need to coordinate the appropriate crossing treatment and submit it for ODOT approval.

If rail and vehicular traffic become more intensive as industrial or commercial activities increase in the next 20 years, additional control devices may be warranted. If this occurs, a high degree of safety and traffic control at the crossings is recommended. This suggests the use of more active control measures such as gate crossings with flashing lights.

Impacts: Installing railroad crossings at these locations will improve the safety for motorists and pedestrians.

Cost: The cost estimated for the installations of two gate crossings is \$661,000. This includes signals, mobilization, concrete crossing surfaces, signage, and engineering.

Recommendation: If rail traffic increases through Lakeview, an engineering and traffic investigation will need to be conducted for crossings at South 3rd Street and South 9th Street to determine the most appropriate traffic control devices at these crossings.

Priority: Low. This improvement option is required only if traffic and rail volumes increase significantly above current levels. Such increases are anticipated after the year 2015.

Street System Need: Reduce travel speed along US 395 from North 9th Street (Town of Lakeview UGB) to North 4th Street

Description: This portion of US 395 is signed 55 mph at Hunters Hot Springs Road to 35 mph at J Street. This portion of road does not slow people by design, so speeds tend to remain higher than posted as traffic approaches town. This trend continues to a lesser extent as travelers continue south to the intersection of US 395 and OR 140. Alterations to the roadway environment need to be made to slow speeds as travelers continue south towards town.

The area from Hunters Hot Springs Road to North 9th Street is a transition zone from highway to a more urbanized environment. Drivers slow down slightly as posted speeds decrease and due to an increasingly urbanized environment of businesses and homes. Additional indicators should be added as travelers from the north approach town. The existing curve in the road north of North 9th Street and the Town of Lakeview entry sign are excellent indicators. Additional indicators south of this initial gateway treatment should also decrease speeds to more appropriate levels.

Improvement Option #1 – Improve traffic enforcement with radar trailer and road markings.

Overview: Many communities have invested in a radar trailer as a way to slow traffic. The radar trailer displays the travel speeds as motorists approach. Above the motorists' detected travel speed is a large speed sign displaying the actual speed limit. Generally when motorists realize they are traveling faster than the posted speed, they slow down. The radar trailer is most effective for motorists that are unfamiliar with the area speed limit, and becomes less effective if the trailer is left in one location for extended periods of time.

Improved road markings with the posted speed limit can also be effective. The road markings tend to get motorists attention as they drive over them, making them aware that the speed limit has changed. Also road markings that say "SLOW DOWN" between the posted speed limit signs can be an effective tool to slowing traffic.

Impacts: Both measures can be implemented to help reduce travel speed on US 395 south as it approaches town. The radar trailer can be located on request by citizens where other traffic enforcement issues are a concern.

Cost: A radar trailer will cost approximately \$13,000. Once the trailer is purchased there is little to no maintenance costs associated with the trailer. Generally the radar trailer is a tool of the traffic enforcement

department of the local police department and in some communities it is shared with the public works department, depending on available resources. The radar trailer takes very little time to set up, and in a relatively small community such as Lakeview where travel time will be short it is estimated that the total time per day to set up and take down will be around 30 minutes.

Recommendation: This improvement option is recommended. This is a low cost strategy to slowing travel speeds, but alone it is not the most effective. It is recommended that the speed control measures be used in conjunction with other traffic calming measures to have a more pronounced effect.

Priority: High.

Improvement Option #2 – Construct sidewalks on the west side of US 395 and add curb extensions to 6th Street and 5th Street on US 395

Overview: Lateral clearance on a roadway has been proven to have an effect on the travel speeds. The narrower a road is, the slower drivers tend to travel. Where on-street parking exists, constructing sidewalks with curb extensions, or bulbs at intersections such that the sidewalk is extended to the end of the parking lane, is an effective way to narrow a road. Narrower streets mean shorter crosswalk lengths, thus improving pedestrian safety by reducing the amount of time pedestrians are in the street. They can also slow traffic in these areas.

Impacts: Road narrowing usually does not result in reduced traffic volumes nor in reduced noise. Curb extensions can also pose a problem in areas where heavy snowfall requires the use of snowplows. While the road width is still wide enough for the use of snowplows, it does make it more difficult.

Cost: This improvement option has high to moderate construction costs. The cost of a single curb extension is about \$2,000. The total cost of the curb extensions at the intersections of US 395 and 5th Street and 6th Street will be approximately \$16,000. The total estimated cost of adding new sidewalk segments on the west side of US 395 and the necessary curb extensions is approximately \$87,000.

Recommendation: It is recommended that Improvement Option #2 should be considered if increased enforcement is not successful.

Priority: High.

Improvement Option #3 – Add planting strips with trees and street lighting on US 395 from North 9th Street to North 4th Street

Overview: Vertical architectural elements to the sides of a two-lane highway within an urban area give the appearance of narrowness. This technique, sometimes called “Gateway Treatment” also gives drivers a sense of “place” i.e. a feeling that they have entered into an urban area with lower speed limits, on street parking, conflicting pedestrian and bicycle movements, and increased highway access. This option combined with curb extensions and sidewalks (Improvement Option #2) is illustrated in Figure 6-6.

The most common and aesthetically pleasing way of accomplishing this is with the use of trees in a landscape strip along the highway’s edge. Trees provide shade and improve the landscape. The subliminal effect of getting drivers to slow down when driving a stretch of highway that has been treated this way is best when the trees consist of mature shade trees which provide a canopy over the road. The disadvantage to this is that it takes many years for newly planted trees to reach the maturity level needed to provide the desired effect. There is sufficient right-of-way to provide sidewalks, street trees, and on-street parking in the area of concern.

Other vertical elements that can be used in place of trees are period street lamps. Placing trees further apart with street lamps intermittently placed between provides an aesthetically pleasing environment with the added safety of additional street lighting. Using street lamps will also minimize some of the conflicts associated with trees.

Impacts: Site specific maintenance issues such as irrigation and drainage will need to be determined. Appropriate species should be selected so that their roots do not disturb the sidewalks. Electrical services will need to be provided when lights are installed. The pros and cons associated with this design alternative are:

PROS

- Improves safety by slowing motorists as they approach the Town limits.
- Street lighting improves safety for motorists and pedestrians at night.
- Provides an aesthetically pleasing environment.
- Little or no maintenance after construction.

CONS

- Moderate to high construction costs.
- Conflicts with utility lines.
- Trees may obscure traffic signs and limit sight distance.
- Trees with heavy leaves or fruit may cause slippery conditions.

Cost: \$255,000. The majority of costs associated with this improvement option are attributed to the purchase and installation of luminaries (18 feet tall), deciduous trees with a 2-inch caliper, and engineering. Also included are costs associated with grass landscaping and irrigation systems installed in the planting strip.

Recommendation: It is recommended that this alternative be considered if Improvement Options #1 and #2 fail to have the desired effect of slowing traffic on this segment of US 395. While the overall effect would greatly enhance the aesthetics of the “Gateway” to Lakeview, and help slow travel speeds on this section of roadway, the initial construction costs and maintenance are significantly higher than Options #1 and #2.

Achieving the desired effect of slowing traffic and improving the pedestrian environment will require meeting installation and maintenance standards. Tree wells ideally measure at least 4 feet by 4 feet and are surrounded by 4 feet of dry-set pavers or similar tree grate. These provide for root aeration and for surface water collection. Tree species need to be selected for the climate and site, so an urban forester should be consulted to pick the ideal tree species. Protect trees from damage by car doors by setting them back at least 4 feet from the roadway or spacing them between parking stalls.

Space trees so that mature tree canopy diameter grows within 10 feet of one another to improve shade and better reduce speeds. Typical spacing should be centered at 30 feet. To achieve the desired effect, trees with a minimum of a 2-inch caliper should be installed. Grass should also be placed inside the planting strip. Annuals can be planted in the same planting strip if desired. Trees must be maintained to maintain their health, restrict root uplift of sidewalks, and keep an attractive appearance.

Street lights should be of a similar design as the Streetscape project lights. Generally, an 18 foot light every 100 feet spaced between trees will provide sufficient lighting for pedestrians and have the desired vertical presence to slow drivers.

Priority: Medium

Street System Need: A standard means for establishing the need and placement of stop and yield signs, and replace existing yield signs with stop signs at the locations below:

- South 6th Street and South I Street;
- South 6th Street and South H Street;
- South 4th Street and South H Street;
- North 2nd and North 3rd Streets and L Street;
- North 2nd and North 3rd Streets and K Street;
- Center Street and K Street;
- South 2nd Street and H Street; and
- Add stop control to K and J Streets at their intersection with South 2nd Street.

Overview: There are several locations in the Town of Lakeview where the random placement of stop and yield signs is confusing and unsafe to motorists. The warrants for the placement of traffic control devices, such as stop and yield signs, is outlined in the Manual on Uniform Traffic Control Devices (MUTCD). The future use of the MUTCD in Lakeview by the appropriate decision makers will provide a uniform system of traffic control devices in Lakeview. This will help provide a safer environment for motorists and pedestrians by establishing clear right-of-way.

As outlined in the MUTCD, a STOP sign may be warranted when one of the following conditions exist:

1. Intersection of less important road with a main road where application of the normal right-of-way rule is unduly hazardous;
2. Street entering a through highway or street;
3. Unsignalized intersection in a signalized area; or
4. Other intersections where a combination of high speed, restricted view, and serious accident record indicates a need for control by the STOP sign.

STOP signs should normally be posted on the minor street to stop the lesser flow of traffic. In Lakeview, the minor road approaches to the arterials, and collectors, should be stop-controlled. STOP signs should not be used for speed control.

Impacts: Initially motorists will need time to become familiar with the new signs that will replace the incorrect signs, but in the long term, a more uniform system of STOP signs will provide a safer environment for motorists and pedestrians.

Cost: One-time cost of replacing the incorrect signs is \$1,200, not including labor. No maintenance costs are associated with this improvement option.

Recommendation: It is recommended that the yield signs be replaced by STOP signs at the locations below:

- South 6th Street and South I Street;
- South 6th Street and South H Street;
- South 4th Street and South H Street;
- North 2nd and North 3rd Streets and L Street;
- North 2nd and North 3rd Streets and K Street;
- Center Street and K Street;
- South 2nd Street and H Street; and
- Add stop control to K and J Streets at their intersection with South 2nd Street.

Priority: High.

Street System Need: Improve the availability of parking in the downtown core

Description: The availability of parking is a crucial link in maintaining the vitality of downtown commercial areas. Availability is subjective and factors such as the number, size, location of parking spaces, distances to desired commercial outlets, and parking behaviors affect the overall perception of availability. Different options to improve the parking supply proposed for the downtown core in Lakeview are described below.

Improvement Option #1 – Improve the function of existing public parking lots with improved signs and striping

Overview: The Town of Lakeview currently has two off-street parking lots located at the corner of E Street and S. 1st Street and E Street and North 2nd Street. These parking lots are not used to their full capacity because the parking lots are not clearly striped. When designated stalls are not present, motorists tend to take up more space than necessary for parking. Striping the off-street parking lots with standard stall spaces will increase the number of spaces available in these lots, improve the circulation within the parking lot, and encourage their use. Placing signs on downtown streets directing motorists to the off-street parking locations will also encourage their use.

Impacts: Optimal use of the off-street parking spaces will provide more overall parking in the downtown core.

Cost: \$1,600. This cost includes six signs, 3,000 linear feet of painting, mobilization, engineering, and a contingency.

Recommendation: This improvement option is a low cost way to improve the current parking in the downtown core of Lakeview and is recommended for immediate implementation. Parking stalls should comply with the Town of Lakeview Zoning Ordinance regarding automobile parking standards (Chapter 3.3.300).

Priority: High.

Improvement Option #2 – Initiate an information campaign to educate downtown business owners and employees about possible downtown parking restrictions

Overview: The Town of Lakeview does not have established restrictions directing downtown business owners and employees to use public parking lots, off-street parking, or more distant on-street parking. Encouraging parking in these areas will free spaces for patrons and make better use of the public parking lots. Initiating an information campaign to educate business owners and employees of the problem may be sufficient to improve the supply of parking. If after the information campaign parking supply is not noticeably improved, implementing an

ordinance requiring employees to park in off-street spaces, in parking lots, or outside the downtown core, should be considered.

Impacts: If downtown business owners and employees utilize the off-street parking lots, and parking outside the downtown core, more on-street parking will be available for customers.

Cost: Costs associated with this are mostly staff labor costs. A letter to each downtown business owner and their employees notifying them that unless they park in public parking lots, in off-street parking areas, or outside the downtown core, that an ordinance requiring this will be brought before the Town Council. Costs to write and distribute the letter will likely be less than \$500. Staff time to prepare an ordinance and bring it before the Town Council should be less than \$3,000.

Recommendation: It is recommended that informational letters be sent to all business owners in the Lakeview downtown commercial area. These letters should be posted or distributed to downtown business employees.

Priority: High

Improvement Option #3 – Establish and enforce limited time parking restrictions

Overview: Many cities have downtown parking restrictions that limit the amount of time any one vehicle can be in a parking stall. This is done to ensure that parking is available for customers and patrons of downtown business. In most cases, a ticket is given to those that choose not to obey the restrictions. Not only is this an effective way to free up parking space for customers and patrons, but it may also provide the city with a revenue source that can be used to maintain the current available parking, or construct additional parking if needed.

Impacts: Time restrictions increase turnover of the most valuable parking spaces in commercial areas. Time restrictions will allow the most valuable spaces to be reserved for customers instead of employees. Studies indicate most shopping or business trips are less than two hours in duration, so establishing time restrictions in certain areas should not adversely impact retail operations. Off-street parking areas, parking lots, and parking outside of the time restriction zones will be used more intensively with time restrictions.

PROS

- Restrictions discourage the use of on-street parking by employees.
- Improved parking supply.
- Sources of revenue for the Town of Lakeview to use towards further improving the downtown parking or cover enforcement costs.

CONS

- Unpopular solution.
- Cost of posting appropriate signage, equipment, and initial enforcement.

Cost: Costs vary depending on if the police department, Town staff, or a private contractor carries out the enforcement. Costs to the Town will be very low if parking restrictions are enforced by a private contractor or the Police Department. If Town staff is responsible, costs will increase. Costs include a full time staff person and varying equipment expenses depending on the method of recording (i.e. marking tires with chalk vs. hand held computers). If the Town maintained the enforcement internally, costs including a study, signage (2 per block per side), and labor could be as low as \$47,000 the first year. It is important to note that revenues of up to \$100 per space/year with consistent enforcement may be achievable.

Recommendation: If efforts to increase voluntary parking in off-street parking areas, public parking lots, and outside the downtown core are not successful and parking shortages continue, a parking availability study should be conducted. If a shortage of parking is determined by the parking study, an ordinance implementing parking time limitations should be implemented.

Once the ordinance is adopted, enforcement will be required. The Town may rely upon its staff to enforce the parking restrictions or a contract may be awarded to a private service provider.

Priority: Medium.

Improvement Option #4 – Construct new parking lots

Overview: Constructing new off-street parking lots will increase the amount of available parking in the downtown area.

Impacts: Constructing new parking areas such as garages and lots will increase the supply of parking, however, there are costs such as the loss of valuable property for a non-commercial activity, construction, and maintenance. The pros and cons associated with this improvement option are:

PROS

- Additional parking spaces.
- Politically feasible.

CONS

- Most expensive option.
- Inefficient land use.

Cost: Assuming 55 spaces in a 200' x 80' lot, costs will be approximately \$101,000. This cost includes a land purchase of \$50,000, clearing, paving, and striping the lot, and six signs.

Recommendation: This alternative is recommended if other improvement options have been exhausted and are not effective.

Priority: Low.

SUMMARY

Table 6-1, on the following page, summarizes the recommendations for the transportation system based on the evaluation process described in this chapter. Chapter 7 discusses how these improvements fit into the modal plans for Lakeview.

TABLE 6-1
SUMMARY OF TRANSPORTATION IMPROVEMENT OPTION EVALUATION

Improvement Options	Cost	Recommendation	Priority	Responsibility
Close access to North 4 th Street, restrict driveway access, and install a traffic signal	\$213,000	Recommend evaluate in 15-years for signal warrants	Low	ODOT
Restrict driveway access and construct a roundabout	\$357,000	Not Recommended	N/A	N/A
Establish a Special Transportation Area for US 395 through Lakeview	N/A	Not Recommended	N/A	N/A
Add new sidewalks segments and ADA-compliant curbs near significant pedestrian trip generators	\$431,000	Recommended	High	Town of Lakeview and Lake County
Add new sidewalk segments and ADA-compliant curbs to create pedestrian corridors	\$861,000	Recommended	Medium	Town of Lakeview and Lake County
Add new sidewalk segments and ADA-compliant curbs on US 395 from South 9 th Street to South 12 th Street.	\$131,000	Recommended	High	Town of Lakeview and Lake County
Add new sidewalk segments and ADA-compliant curbs to create a pedestrian corridor along H Street	\$244,000	Recommended	Low	Town of Lakeview and Lake County
Add new sidewalk segments and ADA-compliant curbs to O Street west to S Street	\$584,000	Recommended	High	Town of Lakeview and Lake County
Add ADA-compliant curbs in the downtown area	\$41,000	Recommended	High	Town of Lakeview
Add Bike Lanes to local streets and collectors	N/A	Not Recommended	N/A	N/A
Add Bicycle Parking	\$3,700	Recommended	High	Town of Lakeview
Pave County Road 1-14 from South 9th Street to US 395, and County Road 2-18 west of Roberta Avenue and Missouri Avenue intersection north to the DOC Work Camp.	\$450,000	Recommended	High	Lake County
Pave County Road 1-14 from US 395 west approximately ½ mile to M Street.	\$108,000	Recommended	Medium	Lake County
Add Storm drainage from O Street west to S Street	\$220,000	Recommended	High	Lake County
Add railroad crossing safety improvements on South 3rd Street and South 9th Street	\$661,000	Recommended	Low	Town of Lakeview
Improve traffic enforcement with the purchase of a radar trailer, and increased signage.	\$13,000	Recommended	High	ODOT/Town of Lakeview

TABLE 6-1 CONTINUED

Improvement Options	Cost	Recommendation	Priority	Responsibility
Construct sidewalks on the west side of US 395 from North 9 th Street to North 4 th Street with curb extensions at North 6 th Street and North 5 th Street.	\$87,000	Recommended	High	Town of Lakeview
Add planting strips with trees and street lighting on US 395 from North 9 th Street to North 4 th Street	\$255,000	Recommended	Medium	Town of Lakeview
Adopt a standard means for establishing the need and placement of stop and yield signs, and replace existing yield signs with stop signs on 11 local streets	\$1,200	Recommended	High	Town of Lakeview
Improve the function of existing public parking lots with improved signs and striping	\$1,600	Recommended	High	Town of Lakeview
Initiate an information campaign to educate downtown business owners and employees about possible downtown parking restrictions	\$3,000	Recommended	High	Town of Lakeview
Establish and enforce limited time parking restrictions	\$47,000	Recommended	Medium	Town of Lakeview
Construct new parking lots	\$101,000	Recommended	Low	Town of Lakeview

*By intergovernmental agreement, ODOT is responsible for curb-to-curb (or edge of pavement) and the Town of Lakeview maintains the rest of the ROW (sidewalk/planter strip). Sidewalk and planting projects would be the responsibility of the Town of Lakeview.

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CHAPTER 7: STREET STANDARDS, ACCESS MANAGEMENT, AND MODAL PLANS

The purpose of this chapter is to provide a detailed transportation system plan that will achieve the goals and objectives set forth by the Lakeview community. This chapter addresses recommended street standards, access management measures, transportation system management measures, and transportation demand management measures. Under *Modal Plans*, this chapter addresses improvements or approaches to meet the needs of all transportation modes appropriate for the Town of Lakeview.

STREET STANDARDS

Street standards relate the design of a roadway to its function. The function is determined by operational characteristics such as existing or planned land use, traffic volume, desired speed, safety, and capacity. Street standards are necessary to provide a community with roadways that are relatively safe, attractive, and easy to maintain. The street standards included here were developed based on experience, research, and state and local policies.

The Town of Lakeview has jurisdiction over the design and construction of all streets within the Town limits, except for state highways. County roads located within the Urban Growth Boundary (UGB), but outside of the Town limits are under Lake County jurisdiction. The development of the Lakeview Transportation System Plan (TSP) provided the Town with an opportunity to review and revise street design standards to more closely fit the roadways' intended use. The following street standards shall be implemented in all areas within the Lakeview UGB.

Arterial Streets

Arterial streets connect cities and other major traffic generators. They serve both through traffic and trips of moderate length, and access is usually controlled. Arterials are high-volume roadways due to the combination of local and through traffic. Depending on adjacent land uses, speeds range between 25 and 45 mph. The arterials in Lakeview are the Fremont Highway US 395 and the Klamath Falls-Lakeview Highway OR 140.

On-street parking is generally allowed along the urbanized portions of highway inside the Town limits. Outside the Town limits but inside the UGB, on-street parking is generally not allowed. For this reason, two arterial standards are proposed: one with on-street parking, and one without. Inside the Town limits, the arterial standard shall consist of two 14-ft. travel lanes, 8-ft. parking strips, 0-9 ft. planting strips, and 6 ft. sidewalks. The total pavement width shall be 44 feet inside an 80-ft. right-of-way. On-street parking is appropriate due to the lower speeds and land uses present inside the Town limits.

Outside the Town limits, but inside the UGB, the arterial standard shall consist of two 12-ft. travel lanes, a 14-ft. center turn lane, 6-ft. bike lanes, no parking, 0-9 ft. planting strips, and 6 ft. sidewalks. The total pavement width shall be 50 ft. inside an 80 ft. right-of-way. Standard curbs shall be required along the pavement edge. Six-foot, property line-tight sidewalks shall be required. Sidewalks shall be separated from the roadway by a 0- to 9-ft. planting strip, depending on the right-of-way width.

These two standards shall replace the existing Arterial Boulevard standard in the Town of Lakeview Zoning Ordinance. Suggested changes to the code will be discussed in more detail in Chapter 9.

The street standards for arterial streets are shown in Figure 7-1.

Collector Streets

Collector streets connect residential neighborhoods with the arterial system. Property access is generally a higher priority for collectors than arterials, and through traffic is served as a lower priority. Collectors are intended to carry local traffic, including limited through traffic, at design speeds of 25 to 35 mph. The Town of Lakeview has no official designation for collectors, and no street is currently classified as a collector, however several roads within the town limits and UGB function as collectors. The east-west streets that function as collectors are North 2nd Street, Center Street, South 3rd Street, South 7th Street, South 9th Street, Kadrmas Road, and Missouri Avenue. The portion of South 9th Street from the railroad tracks west is outside of the town limits and under Lake County jurisdiction. The north-south collectors are H Street, North J Street, L Street, Roberta Avenue, Metzker Road, and South M Street. By adoption of this plan, these roads shall be classified as collectors. Extensions of these streets shall be constructed to the standards described below.

Collectors shall consist of two 11-ft. travel lanes and 7-ft. parallel parking strips. The total pavement width shall be 36 feet, inside a 60-ft. right-of-way. Standard curbs shall be required along the pavement edge. Six-foot, property line-tight sidewalks shall be required. Sidewalks shall be separated from the roadway by a 0- to 6-ft. planting strip, depending on the right-of-way width. This collector standard applies to all zones except the Downtown Service Core Subdistrict.

In the General Industrial (M-1) and Industrial Park Sub-District (M-2) zoning districts, on-street parking fronting a proposed development shall be removed if a center turn lane is desired.

A second collector standard is needed for the downtown core area because the street cross section in this area is unique. The Downtown Service Core Subdistrict Collector Angled Parking Both Sides standard applies only to the Downtown Service Core Subdistrict Zone. This standard consists of two 10-ft. travel lanes and 17-ft. angled parking on both sides. Property line-tight 6-to 15-ft. sidewalks, 0-to 8-ft. planting strips and the 54-ft. paved roadway and parking will fit inside a 100-ft right-of-way.

The street standards for collector streets are shown in Figure 7-2. These standards shall replace all existing collector street standards in the Town of Lakeview Zoning Ordinance.

Local Streets

Local streets have property access as their main priority and through traffic movement is not encouraged. The design of a local residential street affects its operation, as well as the safety and livability of the area that road serves. Local streets shall be designed to carry very small volumes of traffic at relatively slow speeds (15 to 25-mph). The emphasis of the local road design is to keep speeds lower by narrowing the street widths. The local streets in Lakeview consist of all streets not designated as arterials or collectors.

Local streets in industrial (M1, M2), highway commercial (HCSD), and higher density residential zones (MF) shall have two 11-ft. travel lanes and 7-ft. parking strips. The total pavement width shall be 36 feet, inside a 60-ft. right-of-way. Standard curbs shall be required along the pavement edge. Six-foot, property line-tight sidewalks shall be required. Sidewalks shall be separated from the roadway by a 0-to 6-ft. planting strip, depending on the right-of-way width.

Local streets in the Downtown Service Core Subdistrict shall be built just as collectors in this zone. This creates a uniform standard for the downtown area. This standard consists of two 10-ft. travel lanes and 17-ft. angle parking on both sides. Property line-tight 6-to 15-ft. sidewalks, 0-to 8-ft. planting strips and the 54-ft. paved roadway and parking will fit inside a 100-ft right-of-way. Wider sidewalks provide more room for needed pedestrian amenities such as trash receptacles, benches, and bicycle racks.

Another local road standard shall apply to residential areas (R Zone) only. This standard consists of two 10-ft. travel lanes and 8-ft. parking on one side. Property line-tight 6-ft. sidewalks, 0-to 10-ft. planting strips and the 28-ft. paved roadway and parking will fit inside a 60-ft right-of-way. This is a narrower road standard for low density residential areas. The narrower road discourages speeding, reduces construction and maintenance costs, and reduces runoff. This standard also allows for snow storage on the side without parking.

The street standards for local streets are shown in Figure 7-3.

Alleys

Alleys and pathways can be a useful way to diminish street width by providing rear access and parking to residential areas. Including alleys in a subdivision design allows homes to be placed closer to the street and eliminates the need for garages to be the dominant architectural feature. This pattern, once common, has been recently revived as a way to build better neighborhoods. Alleys shall be encouraged in the urban area of Lakeview. Alleys shall be 12 to 16 feet wide, have 1-to 2-ft. unpaved strips within a 16-to 20-ft. right-of-way. Pathways are to be 6-ft. to 10-ft. wide with 2-ft. to 4-ft. unpaved strips inside a 10-ft. to 18-ft. right-of-way. These standards exist in the recently adopted Town of Lakeview Zoning Ordinance and are shown in Figure 3.4.100F(2).

The street standards are also shown in Table 7-1 below.

**TABLE 7-1
TOWN OF LAKEVIEW STREET STANDARDS**

Type of Street	Ave. Daily Trips (ADT)	Right of Way Width	Curb to Curb Pavement Width	Motor Vehicle Travel Lanes	Median and/or Center Turn Lane	Bike Lane (both sides)	On-Street Parking	Curb	Planting Strip	Side-walks
Arterial Streets										
Urban (inside Town limits)	3,000-10,000	80 ft.	44 ft.	14 ft.	None	Shared	8 ft.	6 in.	0-9 ft.	6 ft.
Rural (outside Town limits)	3,000-10,000	80 ft.	50 ft.	12 ft.	14 ft.	6 ft.	None	6 in.	0-9 ft.	6 ft.
Collector Streets										
All Zones Except DSCSD Zone	1,500-3,000	60 ft.	36 ft.	11 ft.	None	None ¹	7 ft.	6 in.	0-6 ft.	6 ft. ²
DSCSD Zone	1,500-3,000	100 ft.	54 ft.	10 ft.	None	None ¹	17 ft. angled	6 in.	0-8 ft.	6-15 ft.
Local Streets										
Industrial Zones (M1, M2), Highway Commercial Zones (HCSD), High Density Residential Zone (MF)	Less than 1,500	60 ft.	36 ft.	11 ft.	None	None ¹	7 ft. both sides	6 in.	0-6 ft.	6 ft. ²
DSCSD Zone	Less than 1,500	100 ft.	54 ft.	10 ft.	None	None ¹	17 ft. angled parking	6 in.	0-8 ft.	6-15 ft.
R Zones (except MF)	Less than 1,500	60 ft.	28 ft.	10 ft.	None	None ¹	8 ft. one side	6 in.	0-10 ft.	6 ft. ²
Alleys	N/A	16-20 ft.	12-16 ft.	N/A	N/A	N/A	None	None	None	None
Accessways and Multi-Use Paths	N/A	10-18 ft.	6-10 ft.	N/A	N/A	N/A	N/A	None	None	None
¹ = Bike lanes are generally not needed on low volume (less than 3,000 ADT) and/or low travel speed (less than 35 mph) streets ² = 6 ft. sidewalks are strongly recommended, but 5 ft. wide sidewalks are allowable in these zones for compatibility with existing 5 ft. sidewalks.										

ACCESS MANAGEMENT

Access management is an important tool for maintaining a transportation system. Too many access points along arterial streets lead to an increased number of potential conflict points between vehicles entering and exiting driveways, and through vehicles on the arterial streets. This not only leads to increased vehicle delay and deterioration of the volume-to-capacity ratio on the arterial, but also leads to a reduction in safety. Research has shown a direct correlation between the number of access points and collision rates. Experience throughout the United States has also shown that a well-managed access plan for a street system can minimize local cost for transportation improvements needed to provide additional capacity and/or access improvements along unmanaged roadways. Therefore, it is essential that all levels of government maintain the efficiency of existing arterial streets through better access management.

The Transportation Planning Rule (TPR) defines access management as measures regulating access to streets, roads and highways from public roads and private driveways. The TPR also requires that all new connections to arterials and state highways be consistent with designated access management categories. As Lakeview continues to develop, the street system will become more heavily used and relied upon for a variety of travel needs. As such, it will become increasingly important to manage access on the existing and future street system as new development occurs.

One objective of the Town of Lakeview TSP is to develop an access management policy that maintains and enhances the integrity (capacity, safety, and volume-to-capacity ratio) of the Town's streets. Too many access points along a street can contribute to a deterioration of its safety, and on some streets, can interfere with efficient traffic flow.

Access Management Techniques

The number of access points to arterials and collectors shall be restricted through the techniques described below. The 2001 Town of Lakeview Development Code provides the mechanisms by which access points can be controlled by the Town. These mechanisms exist in the code and are not proposed by this TSP.

- Restricting spacing between access points (driveways) based on the type of development and the speed (as per Table 7-2, 7-3 of TSP, and as allowed by Zoning Ordinance 3.1.200);
- Restricting the number of access points (as allowed by Zoning Ordinance 3.1.200);
- Sharing of access points between adjacent properties (as allowed by Zoning Ordinance 3.1.200);
- Providing access via mid-block lanes, private streets or driveways connected to an adjoining property having direct access to the street, local, or frontage streets where possible (as allowed by Zoning Ordinance 3.1.200);
- Providing acceleration, deceleration, and right-turn-only lanes (as allowed by Zoning Ordinance 3.1.200);
- Installing curbs to the property along the arterial to restrict access width to a minimum (as allowed by Zoning Ordinance 3.4.100);
- Implement and enforce local ordinances that require use of shared driveways (as allowed by Zoning Ordinance 3.1.200); and
- Offsetting driveways to produce T-intersections to minimize the number of conflict points between traffic using the driveways and through traffic (as allowed by Zoning Ordinance 3.1.200);

- Providing service drives to prevent spill-over of vehicle queues onto the adjoining streets (as allowed by Zoning Ordinance 3.1.200);
- Installing medians to control conflicts associated with left turn movements and cross traffic (as allowed by Zoning Ordinance 3.1.200); and
- Developing long-term signal system plans for the state roadways consistent with ODOT priorities for optimum signal progression performance (i.e., timing signals to achieve progression along a signalized arterial).

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

Access Management Standards for the Town of Lakeview

Table 7-2 shows the access management standards on city streets by functional classification. The only arterials in Lakeview are the State Highways; their access management standards are described in the following section.

TABLE 7-2
ACCESS MANAGEMENT STANDARDS FOR TOWN STREETS

Classification	Spacing Between Intersections of Public Streets ¹	Spacing Between Private Driveways and Alleys ¹
Arterial	See Table 7-3	See Table 7-3
Collector	300 feet	100 feet
Local	300 feet	50 feet

Notes:

¹ Measurement of the approach road spacing is from center to center on the same side of the roadway.

Application

These access management standards are generally not intended to eliminate existing intersections or driveways. Rather, they should be applied as new development occurs. Over time, as land is developed and redeveloped, the access to roadways will meet these standards. However, where there is a recognized problem, such as an unusually high number of accidents, these techniques and standards can be applied to retrofit existing roadways.

Access Management Standards for State Highways

Access management is important to promoting safe and efficient travel for both local and long distance users along State Highways. The 1999 *Oregon Highway Plan (OHP)* specifies an access management classification system for state facilities. Future developments on state highways (zone changes, comprehensive plan amendments, redevelopment, and/or new development) shall be required to meet the 1999 OHP State Classification System and Access Management policies and standards. Although Lakeview may designate state highways as arterial roadways within its transportation system, the access management categories for these facilities shall follow the guidelines of the *Oregon Highway Plan*.

US 395 and OR 140 in Lakeview are classified as Statewide Highways. The access management standards for Statewide Highways are listed in Table 7-3. The management objective is to provide safe and efficient, high-speed, continuous-flow operation. In constrained and urban areas, interruptions to flow should be minimal. Inside urban areas, local access may also be a priority.

TABLE 7-3
1999 OREGON HIGHWAY PLAN ACCESS MANAGEMENT CLASSIFICATION SYSTEM

Posted Speed	Statewide Highway Spacing Standards
≥ 55 mph	1,320 feet
50 mph	1,100 feet
40 & 45 mph	990 feet
30 & 35 mph	770 feet
≤ 25 mph	550 feet

Notes: Measurement of the approach road spacing is from center to center on the same side of the roadway.

Application

The existing **legal** driveway connections, public street intersections, 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 shall 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.

A conditional access permit may be issued by ODOT for a single connection to a property that cannot be accessed in a manner that is consistent with the spacing standards (shown in Table 7-3). These conditions typically apply to properties that either have no reasonable access or cannot obtain reasonable alternative access to the public road system. The permit shall carry a condition that the access may be closed at such time that reasonable access becomes available to a local public street. In addition, approval of a conditional permit might require ODOT-approved turning movement design standards to ensure safety and managed access. Under special circumstances, ODOT may be required to purchase property in order to prevent safety conflicts.

MODAL PLANS

A number of transportation improvements were developed for the Town of Lakeview during the inventory, forecasting, and public involvement phases of this TSP. Each of these improvements was analyzed, recommended or not recommended, and assigned a priority in Chapter 6. The following modal plans reflect the findings of Chapter 6.

The modal plans consider the transportation system needs for the Town of Lakeview over the next 20 years, assuming the growth projections discussed in Chapter 5. The timing for individual improvements will be guided

by changes in land use patterns and population growth. This TSP should be reviewed every several years to adjust specific projects and implementation schedules to these changes.

Street System Plan

The street system plan includes a series of improvements for the Town of Lakeview over the next 20 years. These improvements were described and prioritized in Chapter 6.

Local Street Connectivity Projects

Local street connectivity projects were identified for the Town of Lakeview. The connectivity projects consisted of paving existing roads inside the Lakeview UGB that are currently gravel or dirt. The following street connectivity projects were identified to expand the existing street grid system:

- Pave County Road 1-14 (extension of E Street) from South 9th Street to US 395;
- Pave County Road 2-18 west of Roberta Avenue and Missouri Avenue intersection north to the DOC Work Camp; and
- Pave County Road 1-14 west of US 395 approximately ½ mile to M Street.

All three of the identified connectivity projects are located on roads in the Lakeview UGB under Lake County jurisdiction.

Safety Projects

The Town of Lakeview has identified the need for safety improvements at railroad crossings on South 3rd Street and South 9th Street. This project consists of intersection realignment to improve sight distance at the intersection of a city collector and the state highway. The following safety project shall be undertaken by the Town of Lakeview, Lake County and ODOT:

- Install railroad crossing safety improvements on South 3rd Street and South 9th Street.

Capacity Improvements at Intersections

The only potential need for capacity improvements is the intersection of US 395 and OR 140. While it meets operating standards through the planning period, the intersection did marginally meet warrants for a traffic signal. The following intersection capacity improvements, as discussed in Chapter 6, should be undertaken by ODOT:

- Assess the need to install a traffic signal at the intersection of US 395 and OR 140 in 15 to 20 years.

Any new traffic signal installations require State Traffic Engineer approval. Approval by the State Traffic Engineer is not guaranteed. The recommended signal must be approved by ODOT.

Statewide Transportation Improvement Program (STIP) Projects

The Oregon Department of Transportation has a comprehensive transportation improvement and maintenance program encompassing the entire state highway system. The Statewide Transportation Improvement Program

(STIP) identifies all the highway improvement projects in Oregon. The STIP lists specific projects, the counties in which they are located, and their construction year. The STIP covers a four-year period, however, it is updated every two years. The final 2000-2003 STIP is a reliable data source for projects scheduled for construction during fiscal years 2000 and 2001. The draft 2002-2005 STIP is a better data source for projects scheduled for construction during fiscal years 2002 through 2005.

The final 2000-2003 STIP identifies two pavement preservation projects inside the Lakeview UGB. The following projects shall be undertaken by ODOT and completed by 2001:

- Pavement preservation on Highway OR 140 between Mile Post 92 and 95.1 (approximately UGB to railroad tracks); and
- Pavement preservation on Fremont Highway US 395 between Mile Post 142.7 and 144.1 (approximately North 5th Street to South 9th Street).

Bridge Projects

Bridge repairs needed within the Lakeview UGB are scheduled for completion in 2001. ODOT's Bridge Maintenance Section maintains an inventory of bridges on the State and local roadway system. ODOT's inventory indicated that there are no structurally deficient or functionally obsolete bridges in the Town of Lakeview. There are no bridges in the Town of Lakeview that require repair or replacement.

Prioritized Street System Plan

Table 7-4 summarizes the local street and highway improvement projects that are included in the Street System Plan. Their locations are shown in Figure 7-4. The projects are listed as high priority (construction in the next 0 to 5 years), medium priority (construction expected in the next 5 to 10 years) and low priority (construction expected in the next 10 to 20 years). The improvements in the Street System Plan shall be implemented and funded according to mechanisms described in the Prioritized Capital Improvement Program and Potential Funding Sources Table (Table 8-11). Any state highway project identified in this TSP shall not be the basis for land use approval until the project is programmed into the Statewide Transportation Improvement Program (STIP).

TABLE 7-4
STREET SYSTEM IMPROVEMENT PROJECTS

Improvement Options	Cost	Map Identification Number	Priority	Jurisdiction
Add Storm drainage from O Street west to S Street	\$220,000	4	High	Town of Lakeview
A standard means for establishing the need and placement of stop and yield signs, and replace existing yield signs with stop signs on 11 local streets.	\$1,200	9	High	Town of Lakeview
Construct sidewalks on the west side of US 395 and add curb extensions to 6 th Street and 5 th Street on US 395*	\$87,000	7	High	Town of Lakeview
Improve the function of existing public parking lots with improved signs and striping	\$1,600	10	High	Town of Lakeview
Initiate an information campaign to educate downtown business owners and employees about possible downtown parking restrictions	\$3,000	N/A	High	Town of Lakeview
Improve traffic enforcement with the purchase of a Radar Trailer.	\$13,000	6	High	ODOT/Town of Lakeview
Pave County Road 1-14 from South 9th Street to US 395, and County Road 2-18 west of Roberta Avenue and Missouri Avenue intersection north to the DOC Work Camp.	\$450,000	2	High	Lake County
Add planting strips with trees and street lighting on US 395 from North 9 th Street to North 4 th Street*.	\$255,000	8	Medium	Town of Lakeview
Establish and enforce limited time parking restrictions	\$47,000	N/A	Medium	Town of Lakeview
Pave County Road 1-14 west of US 395 approximately ½ mile to M Street.	\$108,000	3	Medium	Lake County
Add railroad crossing safety improvements on South 3rd Street and South 9 th Street	\$661,000	5	Low	Town of Lakeview
Construct new parking lots	\$101,000	N/A	Low	Town of Lakeview
Close access to North 4 th Street, restrict driveway access, and install a traffic signal	\$213,000	1	Low	ODOT

*By intergovernmental agreement, ODOT is responsible for curb-to-curb (or edge of pavement) and the Town of Lakeview maintains the rest of the ROW (sidewalk/planter strip). Sidewalk and planting projects would be the responsibility of the Town of Lakeview.

Pedestrian System Plan

The pedestrian system shall provide direct and safe access to all areas of the town and to every land use. The primary reason for providing sidewalks separated from the roadway, is to improve pedestrian safety; however, a separate pedestrian system has several qualitative benefits as well. When pedestrians can walk on a sidewalk, separated from vehicular street traffic, it makes the walking experience more enjoyable and may encourage walking, rather than driving, for short trips.

Every new paved street within the Lakeview UGB shall have sidewalks on both sides of the street, meeting the requirements set forth in the Town of Lakeview street standards. Ordinances specifying these requirements are included in Chapter 9. New sidewalks and curbs shall be constructed to comply with the Americans with Disabilities Act (ADA). Sidewalk and other pedestrian facilities may also be added as stand-alone projects as discussed below.

Prioritized Pedestrian System Plan

Table 7-5 summarizes the improvement projects that are included in the Pedestrian System Plan. Their exact locations are shown in Figures 6-3 through 6-5, and Figure 7-4. The improvements in the Pedestrian System Plan shall be implemented and funded according to mechanisms described in the Prioritized Capital Improvement Program and Potential Funding Sources Table (Table 8-11).

TABLE 7-5
PEDESTRIAN SYSTEM IMPROVEMENT PROJECTS

Improvement Options	Cost	Location	Priority	Jurisdiction
Add new sidewalks segments and ADA-compliant curbs near significant pedestrian trip generators	\$431,000	Figure 6-3	High	Town of Lakeview and Lake County
Add new sidewalk segments and ADA-compliant curbs to create pedestrian corridors	\$861,000	Figure 6-4	Medium	Town of Lakeview and Lake County
Add new sidewalks and ADA-compliant curbs on US 395 from South 9 th Street to South 12 th Street	\$131,000	Figure 6-4	Medium	Town of Lakeview
Add new sidewalk segments and ADA-compliant curbs to create a pedestrian corridor along H Street	\$244,000	Figure 6-5	Low	Town of Lakeview and Lake County
Add new sidewalks and ADA-compliant curbs on O Street west to S Street	\$584,000	Figure 6-5	High	Town of Lakeview
Add ADA-compliant curbs in the downtown area	\$41,000	Figure 7-4, #11	High	Town of Lakeview

Bicycle System Plan

Prioritized Bicycle System Plan

Table 7-6 summarizes the improvement project that is included in the Bicycle System Plan. The location is shown in Figure 7-4. The improvements in the Bicycle System Plan shall be implemented and funded according to mechanisms described in the Prioritized Capital Improvement Program and Potential Funding Sources Table (Table 8-11).

The bicycle system plan does not include the addition of bike lanes. The only street standard with bike lanes is a rural arterial street standard, and it applies only to rural portions of arterial streets, in this case, rural portions of US 395 and OR 140.

The existing street system provides safe and convenient routes for bicyclists without adding bike lanes to existing streets or proposed collectors. First, the only proposed arterial streets, US 395 and OR 140, have a shared bike lane facility. This consists of a 14-ft. outside travel lane. The shared bike lane facility is appropriate because of low speeds (under 35 mph) and the presence of additional width along the highways' travel lanes. Second, Lakeview has a well connected grid system that provides many direct alternative routes by way of local and collector streets. Speeds on the local streets are typically 25 mph and Average Daily Traffic volumes are less than 3,000 vehicles. Bike lanes are typically not needed on streets with such low speeds and volumes. Third, the typical existing paved roadway width of local roads inside the Lakeview UGB is 36-ft. Considering the low speeds, low volumes, and paved width, additional bike lanes are not needed on local streets within the planning period.

This is also true on the Town's collector streets. While the Town's collector streets have higher ADTs than the local streets, they are currently under 3,000 ADT. Collector streets are expected to have ADTs under 3,000 by the year 2020.

TABLE 7-6
BICYCLE SYSTEM IMPROVEMENT PROJECT

Improvement Options	Cost	Location	Priority	Jurisdiction
Add Bicycle Parking	\$3,700	Figure 7-4, #12	High	Town of Lakeview

Transportation Demand Management Plan

Transportation Demand Management (TDM) is aimed at altering driver behavior and more efficient use of the entire transportation system. This can be accomplished either by using alternative modes of transportation or lowering the demand during peak travel times. An important aspect of altering driver behavior is education. The Town of Lakeview can work toward implementation of TDM measures through coordination with major employers, the Lakeview Chamber of Commerce, employees, and citizens. Successful implementation includes public support, industry involvement, quantifiable goals, and employer/employee incentives.

Through transportation demand management, the peak travel demands can be reduced or spread to more efficiently use the transportation system, rather than building new or wider roadways. Techniques that have been successful and can be initiated to help alleviate some traffic congestion include alternative work schedules, carpooling and vanpooling, improved bicycle and pedestrian facilities, and telecommuting in 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. Staggered work schedules shall continue to be encouraged with new industries.

Carpooling and Vanpooling

The Town of Lakeview 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.

Improved Bicycle and Pedestrian Facilities

Implementing strategies discussed earlier in this plan could increase the bicycle and pedestrian modes of travel. Providing bicycle parking, showers, and locker facilities helps to encourage bicycle commuting and walking to work.

Telecommuting

The ability for people to work at home with the telecommuting technology is likely to continue to grow during the next two decades. It is estimated that 2 to 3 percent of the work force could stay home and work, thus reducing peak hour journey-to-work trips.

High Density Employment Areas

TDM measures 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 TDM measures in Lakeview include the downtown core business district and the industrial areas to the north and south of town.

Public Transportation Plan

Local public transportation available in Lakeview is the Lake County Dial-A-Ride service offered by Lake County Activity Center. This service is operated and coordinated by the Lake County Activity Center, and provides services for seniors to participate in the Lake County Activity Center and the Senior Meal Program. Scheduled services are offered for destinations such as doctor appointments and hairdresser. The Lake County Dial-A-Ride services include the communities of Lakeview, Christmas Valley, and Paisley and are on a first call first serve basis.

The Lakeview Assisted Living Facility provides scheduled services for the seniors living in the facility as part of the overall services. They currently have adequate capacity for the services they provide. The destinations for the passengers is primarily within the Town of Lakeview, but occasionally they travel outside the community for activities and doctor appointments with specialists in Klamath Falls. The Lakeview Assisted Living Facility is

open for discussion on expanding their transportation services to other senior citizens within the community of Lakeview.

The Town of Lakeview is not supporting any other transit programs or proposals at this time. Proposals such as fixed route or city shuttle systems are too costly for the Town to support in the immediate and near future. Other agencies and non-profit groups involved in transit issues, such as the Lakeview Assisted Living Facility, may be a possible resource to develop transit in the future.

Rail Service Plan

The Lake County Railroad is limited to freight only. No plans are being recommended at this time to expand services to passengers. The nearest passenger rail service is located in Klamath Falls approximately 95 miles west of Lakeview.

Air Service Plan

There are no airports within the Lakeview UGB. The Lake County Airport is a non-towered airport just outside the Lakeview UGB. This is a non-towered airport with one 100 ft. wide by 5,305 ft. long runway, that serves extensive airtanker operations in the fire season.

The Klamath Falls Airport is located in Klamath Falls approximately 95 miles west of Lakeview. Horizon Airlines is currently the only commercial airline that services the Klamath Falls Airport.

Pipeline Service Plan

The Town of Lakeview has no pipeline service, and no plan is recommended at this time.

Water Transportation Plan

The Town of Lakeview has no water transportation service, and no plan is recommended at this time.

TRANSPORTATION SYSTEM PLAN IMPLEMENTATION PROGRAM

Implementation of the Lakeview Transportation System Plan will require both changes to the Comprehensive Plan, Subdivision Ordinance, and Zoning Ordinance and preparation of a Capital Improvement Plan (CIP). These actions will enable the Town of Lakeview to address both existing and emerging transportation issues throughout the Town in a timely and cost-effective manner. This implementation program is geared towards providing the Town of Lakeview with the tools to amend the Comprehensive Plan, Subdivision Ordinance and Zoning Ordinance to conform with the Oregon Transportation Planning Rule and to fund and schedule transportation system improvements.

One part of the implementation program is the formulation of a CIP. The purpose of the CIP is to detail what transportation system improvements will be needed as the Town of Lakeview grows and to provide a process to fund and schedule the identified transportation system improvements. It is expected that projects identified in this Transportation System Plan Capital Improvement Plan will be integrated into the existing Town CIP and the

ODOT STIP as appropriate. This integration is important since the Transportation System Plan proposes that all three governmental agencies fund some of the identified transportation improvement projects.

Policy and ordinance language that conforms with the requirements of the Transportation Planning Rule is included in Chapter 9. The ordinance amendments will require recommendation by the Planning Commission and adoption by the Town Council.

20-Year Transportation Project Priorities

The projects in the TSP are shown with the following priorities:

- High Priority (implement in the next 0 to 5 years);
- Medium Priority (implement in 5 to 10 years); and
- Low Priority (implement in 10 to 20 years).

These priorities are based on current need, the relationship between transportation service needs, and the expected growth of the Town. The following schedule indicates priorities and may be modified to reflect the availability of finances or the actual growth in population and employment.

The transportation project list is summarized in Table 7-7. TAC members voted on the relative importance of the projects within each priority grouping (high, medium, and low priority projects). The order of the improvements in Table 7-7 (first to last on the list within each priority grouping) reflects the relative importance of the improvements as determined by the TAC.

The cost of each project is shown in year 2001 dollars. These costs include design, construction, and some contingency costs. They are preliminary estimates and do not include right-of-way acquisition, water or sewer facilities, or detailed intersection design.

The Town of Lakeview has identified transportation needs totaling \$4,456,500. The improvements in the Capital Improvement Program shall be implemented and funded according to mechanisms described in the Prioritized Capital Improvement Program and Potential Funding Sources Table (Table 8-11).

**TABLE 7-7
TRANSPORTATION PROJECT LIST**

Project Description	Town of Lakeview	ODOT	Lake County	Total Costs (Year 2001 \$)
<i>High Priority</i>				
Adopt a standard means for establishing the need and placement of stop and yield signs, and replace existing yield signs with stop signs on 11 local streets	\$1,200			\$1,200
Add new sidewalk segments and ADA-compliant curbs near significant pedestrian trip generators	\$399,000		\$32,000	\$431,000
Add ADA-compliant curbs in the downtown area	\$41,000			\$41,000
Construct sidewalks on the west side of US 395 from North 9 th Street to North 4 th Street with curb extensions at North 6 th Street and North 5 th Street*.	\$87,000			\$87,000
Improve the function of existing public parking lots with improved signs and striping.	\$1,600			\$1,600
Initiate an information campaign to educate downtown business owners and employees about possible downtown parking restrictions	\$3,000			\$3,000
Add new sidewalk segments and ADA-compliant curbs on US 395 from South 9 th Street to South 12 th Street.			\$131,000	\$131,000
Improve traffic enforcement with the purchase of a Radar Trailer (ODOT is a possible funding partner).	\$13,000			\$13,000
Add Bicycle Parking in the downtown area	\$3,700			\$3,700
Pave County Road 1-14 from South 9th Street to US 395, and County Road 2-18 west of Roberta Avenue and Missouri Avenue intersection north to the DOC Work Camp.			\$450,000	\$450,000
Add storm drainage from O Street west to S Street			\$220,000	\$220,000
Add new sidewalks and ADA-compliant curbs from O Street west to S Street.			\$584,000	\$584,000
<i>Total High Priority</i>	<i>\$549,500</i>	<i>\$0</i>	<i>\$1,417,000</i>	<i>\$1,966,500</i>

**TABLE 7-7 CONTINUED
TRANSPORTATION PROJECT LIST**

Project Description	Town of	ODOT	Lake County	Total Costs
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	Lakeview		(Year 2001 \$)	
Medium Priority				
Add new sidewalk segments and ADA-compliant curbs to create pedestrian corridors	\$451,000		\$410,000	\$861,000
Add planting strips with trees and street lighting on Fremont Highway US 395 from North 9 th Street to North 4 th Street*.	\$255,000			\$255,000
Pave county Road 1-14 west of US 395 approximately ½ mile to M Street.			\$108,000	\$108,000
Establish and enforce limited time parking restrictions in downtown area	\$47,000			\$47,000
Total Medium Priority	\$753,000	\$0	\$518,000	\$1,271,000
Low Priority				
Add new sidewalk segments and ADA-compliant curbs to create a pedestrian corridor along H Street	\$206,000		\$38,000	\$244,000
Construct new parking lots	\$101,000			\$101,000
Close Access to North 4 th Street, restrict driveway access, and install a traffic signal (when warranted).		\$213,000		\$213,000
Add railroad crossing safety improvements on South 3 rd Street and South 9 th Street	\$661,000			\$661,000
Total Low Priority	\$968,000	\$213,000	\$38,000	\$1,219,000
TOTAL OF ALL PROJECTS	\$2,270,500	\$213,000	\$1,973,000	\$4,456,500

*By intergovernmental agreement, ODOT is responsible for curb-to-curb (or edge of pavement) and the Town of Lakeview maintains the rest of the ROW (sidewalk/planter strip). Sidewalk and planting projects would be the responsibility of the Town of Lakeview.

CHAPTER 8: FINANCIAL PLAN

The Transportation Planning Rule requires Transportation System Plans to include an evaluation of the funding environment for recommended improvements. This evaluation must include a listing of all recommended transportation improvement projects, estimated costs to implement those improvements, and a review of potential funding mechanisms. The Town of Lakeview TSP identifies specific capital improvement projects and strategic management practices over the next 20 years. This section of this TSP provides an overview of some funding and financing options that may be available to Lakeview to fund these improvements.

Pressures from increasing growth throughout much of Oregon have created an environment of planned improvements that remain without funding. Lakeview will need to work with ODOT to finance the proposed new transportation projects over the 20-year planning horizon. The actual timing of these projects will be determined by the rate of population and employment growth actually experienced by the community. This TSP assumes that Lake County will grow at the rate forecast by the State of Oregon Office of Economic Analysis over the next 20 years. If population growth exceeds this rate, the improvements may need to be accelerated. Slower than expected growth will relax the improvement schedule.

HISTORIC STREET IMPROVEMENT FUNDING SOURCES

In Oregon, state, county, and city jurisdictions work together to coordinate transportation improvements. Table 8-1 shows the distribution of road revenues for the different levels of government within the state by jurisdiction level. Although these numbers were collected and tallied in 1991, ODOT estimates that these figures accurately represent the current revenue structure for transportation-related needs.

TABLE 8-1
SOURCES OF ROAD REVENUES BY JURISDICTION LEVEL

	Jurisdictions			Statewide Totals
Revenue Source	State	County	City	
Federal Road	34%	40%	4%	30%
State Road Trust	58%	38%	41%	48%
Local	0%	22%	55%	17%
Other	9%	0%	0%	4%

At the statewide level, nearly half (48 percent in Fiscal Year 1991) of all road-related revenues are attributable to the State Highway Fund, whose sources of revenue include fuel taxes, weight-mile taxes on trucks, and vehicle registration fees. As shown in Table 8-1, the State Road Trust is a considerable source of revenue for all levels of government. Federal sources (generally the Federal Highway Trust account and Federal Forest Revenues) comprise another 30 percent of all road-related revenue. The remaining sources of road-related revenues are generated locally, including property taxes, LIDs, bonds, traffic impact fees, road user taxes, general fund transfers, receipts from other local governments, and other sources.

As a state, Oregon generates 94 percent of its highway revenues from user fees, compared to an average of 78 percent among all states. This fee system, including fuel taxes, weight distance charges, and registration fees, is regarded as equitable because it places the greatest financial burden upon those who create the greatest need for road maintenance and improvements. Unlike many states that have indexed user fees to inflation, Oregon has static road-revenue sources. For example, rather than assessing fuel taxes as a percentage of price per gallon, Oregon's fuel tax is a fixed amount (currently 24 cents) per gallon.

This chapter describes existing sources of transportation funding in Lakeview, the outlook for revenue from those funding sources, and potential sources of additional transportation revenue.

EXISTING TRANSPORTATION FUNDING IN LAKEVIEW

Federal, State, and local revenue sources contribute funding for transportation improvements in Lakeview. These funds are tracked in budgets and documents at the State and local level. The description of existing funding sources begins with the Street Fund from the Lakeview budget. The Street Fund tracks funds that flow through the Town of Lakeview from local, State, and Federal sources. These funds are spent to maintain and improve the Town's transportation system. The Town of Lakeview has also identified three other funds in conjunction with the primary Street Fund, the Bike Path Fund, Street Paving Project Fund, and the Streetscape 2000 Project Fund. These funds have been identified in order to track specific revenue and expenditures for some of the significant transportation improvement projects planned in Lakeview.

Street Fund

Table 8-2 shows revenues in the Town's Street Fund for the current year and previous three years. Total annual revenue in the Street Fund has fluctuated between \$596,114 to \$279,300 over the past three years. Based on the 2000-01 proposed budget, the major source of revenue in the Street Fund is from State Highway funding at 43 percent.

TABLE 8-2
TOWN OF LAKEVIEW STREET FUND REVENUES (CURRENT DOLLARS)

	Proposed	Adopted	Actual	Actual
	00-01	99-00	98-99	97-98
REVENUE				
Beginning Fund Balance - Street Fund	\$145,000	\$141,000	\$195,689	\$181,143
Beginning Fund Balance - Bike Path	0	\$16,000	0	0
State Highway – Street	\$120,000	\$120,000	\$124,795	\$113,029
State Highway – Bike	0	0	0	\$1,142
Lake County Federal Forest	\$6,500	\$6,100	\$21,874	\$30,753
FEMA Grant	0	0	0	\$64,964
Investment Earnings – Street Fund	\$6,500	\$6,500	\$9,551	\$10,422
Sidewalk Permits	\$300	0	\$320	0
Other Revenue	\$1,000	\$8,000	\$621	\$48,770
Transfer In - General Fund	0	0	0	\$145,891
Total Revenues	\$279,300	\$297,600	\$352,850	\$596,114

Expenditures from the Street Fund are shown in Table 8-3. The proposed 2000-01 budget distributes expenditures as follows:

- *Operating Contingency* (13% of proposed expenditures). This line item has increased from zero in 1997-98 to \$35,000 in 2000-01.
- *Personal Services* (25%). This line item has decreased from \$89,138 to \$70,370 from 1997-98 to 2000-01.

- *Materials and Supplies* (33%). This line item has fluctuated between \$283,541 in 1997-98 and \$91,500 in 2000-01. In 1997-98, \$219,034 went towards construction of streets, curbs and sidewalks.
- *Capital Outlay* (7%). Capital improvements have fluctuated between \$11,810 in 1997-98 and \$20,000 in 2000-01.

The expenditures from the Street Fund do not include any of the project costs involved in the Bike Path Fund, Street Paving Project, or the Streetscape Project; however, \$16,000 was transferred from the Street Fund to the Bike Path Fund in the fiscal year 1999-00. This transfer went towards materials and services to construct a bike path in Lakeview.

TABLE 8-3
TOWN OF LAKEVIEW STREET FUND EXPENDITURES (CURRENT DOLLARS)

	Proposed	Adopted	Actual	Actual
	00-01	99-00	98-99	97-98
Expenditures				
Personal Services	\$70,370	\$107,060	\$95,457	\$89,138
Material and Supplies	\$91,500	\$115,540	\$44,651	\$283,541
Capital Outlay	\$20,000	\$39,000	\$28,751	\$11,810
Contingency	\$35,000	\$20,000	\$0	\$0
Transfers	\$0	\$16,000	\$0	\$0
Ending Fund Balance	\$62,430	\$0	\$183,991	\$211,625
Total Expenditures	\$279,300	\$297,600	\$352,850	\$596,114

Bike Path Fund

Table 8-4 lists the Town of Lakeview budget for the Bike Path Fund from 1997-98 to the current planning year of 2000-01. Allocation of revenue to the Bike Path fund began in the fiscal year 1998-99. The primary source of revenue for bike path funding is from the State Highway Fund. Currently in Lakeview there is one designated bike path that is approximately one mile long and is located on the shoulder of existing paved roadways.

TABLE 8-4
TOWN OF LAKEVIEW BIKE PATH REVENUE (CURRENT DOLLARS)

	Proposed	Adopted	Actual	Actual
	00-01	99-00	98-99	97-98
Revenue				
Beginning Fund Balance	\$19,500	\$0	\$15,935	0
State Highway Fund	\$1,300	\$1,200	\$1,261	0
Investment Earnings	\$900	\$500	\$929	0
Transfer In - Street fund	\$0	\$16,000	\$0	0
Total Revenue	\$21,700	\$17,700	\$18,125	0

Expenditures from the Bike Path Fund are shown in Table 8-5. The proposed 2000-01 budget distributes expenditures entirely to material and services for bike paths and trails.

TABLE 8-5
TOWN OF LAKEVIEW BIKE PATH EXPENDITURES (CURRENT DOLLARS)

	Proposed	Adopted	Actual	Actual
	00-01	99-00	98-99	97-98
Expenditures				
Material and Services	\$21,700	\$17,700	\$0	\$0
Ending Fund Balance	\$0	\$0	\$18,125	\$0
Total Expenditures	\$21,700	\$17,700	\$18,125	\$0

Street Paving Fund

Table 8-6 lists the Town of Lakeview budget for the Street Paving Fund from 1997-98 to the current planning year of 2000-01. This fund began in the fiscal year of 1998-99 when the Town of Lakeview passed a General Obligation Bond (GO) Initiative for the purpose of repairing and paving all of the local streets in the current Lakeview street system. The total GO bond passed for the Street Paving project was a lump sum of \$1,750,000. Currently, as of May 2001, there is approximately \$400,000 left of the total bond issued. The completion of this project is scheduled for summer 2001. As a result, the local roads in Lakeview are currently in fair to very good condition.

TABLE 8-6
TOWN OF LAKEVIEW STREET PAVING REVENUE (CURRENT DOLLARS)

	Proposed	Adopted	Actual	Actual
	00-01	99-00	98-99	97-98
Revenue				
Beginning Fund Balance	\$415,000	\$1,700,000	\$0	\$0
Investment Earnings	\$12,500	\$15,000	\$7,442	\$0
Bond Proceeds	\$0	\$0	\$1,750,000	\$0
Total Revenue	\$427,500	\$1,715,000	\$1,757,442	\$0

The Street Paving Project expenditures are listed in Table 8-7. The project expenditures covered the engineering costs and project costs incurred to repair and pave the existing street system in Lakeview.

TABLE 8-7
TOWN OF LAKEVIEW STREET PAVING EXPENDITURES (CURRENT DOLLARS)

	Proposed	Adopted	Actual	Actual
	00-01	99-00	98-99	97-98
Expenditures				
Engineering	\$6,000	\$40,000	\$0	\$0
Paving Project	\$421,500	\$1,675,000	\$18,135	\$0
Bond Issuance Costs	\$0	\$0	\$61,095	\$0
Ending Fund Balance	\$0	\$0	\$1,678,212	\$0
Total Expenditures	\$427,500	\$1,715,000	\$1,757,442	\$0

Streetscape Project

The Streetscape Project is a cooperative effort between ODOT and the Town of Lakeview. The Lakeview Streetscape project is designed to improve sections of G Street and F Street in the downtown core of Lakeview. Improvements will include sidewalks, planters, street signs, trees, ADA compliant curb extensions and ornamental lighting.

There are two separate sources of funding for this project. The downtown enhancement portion of this project is being funded by the federal Transportation Enhancement Program. This federally funded program earmarks 10% of state Surface Transportation Program (STP) funds, for projects that relate to 12 categories in the Transportation Equity Act for the 21st Century (TEA-21). Projects must demonstrate a link to the intermodal transportation system, compatibility with approved plans, and local financial support.

A 10.27 percent minimum local match is required for eligibility. The total dollar amount for the Transportation Enhancement Program in the Streetscape Project is \$442,000. The town match is \$56,000, which is greater than the 10.27 percent minimum local match.

The paving portion of the Streetscape project is funded with federal money in the state's paving preservation program. The section of roadway that is part of the Streetscape portion of the project will be resurfaced with concrete, and include red pigmented concrete pedestrian crosswalks. The other sections of highway that will be resurfaced in conjunction with the Streetscape project will be resurfaced with asphalt. The total dollar amount for the paving portion of the project is \$2.2 million.

Work on this project began in Spring 2001 and will continue throughout the summer months. Project completion is scheduled for Summer 2002.

Sidewalk Loan Program

In addition to the funding from the Streetscape project, the Town of Lakeview has applied for a federal grant to use towards financing a Sidewalk Loan Program. The Town of Lakeview will receive approximately \$80,000 in revenue to finance short-term loans for property owners to use for sidewalk improvements. The loans will be in increments of \$3,000 to \$5,000 to be paid back over a period of 5 years at a 5% interest rate.

Lake County Street Paving Projects in Lakeview UGB

Paving projects on County Road 1-14 from South 9th Street to US 395, and on County Road 2-18 from west of the Roberta Avenue and Missouri Avenue intersection north to the Department of Corrections (DOC) Work Camp are committed with funding.

The County Road 1-14 paving project is jointly funded by an ODOT CMAQ grant and Lake County. The total estimated cost for this street improvement to be covered by the CMAQ grant is \$150,000. This estimate is to include the paving portion of the project only. Lake County Road Department has completed all necessary work to prepare the street for paving, including placing base rock, grading and compacting. The paving portion of this project is to be completed by the year 2002.

County Road 2-18 paving project is jointly funded by ODOT CMAQ grant, Lake County, and the DOC. The total estimated cost for this street improvement to be covered by the CMAQ grant is \$300,000. This estimate is to include the paving portion of the project only. The total length of roadway to be paved is 3 miles and 1.7 miles is within the Lakeview UGB. Lake County Road Department has completed all necessary work to prepare the street for paving, including placing base rock, grading and compacting. The paving portion of this project is to be completed by the year 2002.

OUTLOOK FOR CAPITAL IMPROVEMENT FUNDING

State Highway Fund

Lakeview, like many Oregon cities, is highly dependent on state funding for road maintenance and capital improvements. A significant source of state funding is the State Highway Fund, which consists of gas taxes, vehicle registration fees, overweight/overheight fines and weight/mile taxes collected by ODOT, which is then partially returned to cities and counties through an allocation formula. The revenue share to cities is divided among all incorporated cities based on population.

Lakeview has in the past received a portion of the State Highway Fund. On average, Lakeview receives approximately \$119,500 annually towards the Street Fund, and \$1,200 annually towards the Bike Path Fund. The revenue received from the State Highway fund has historically been the primary source of funding for the Lakeview transportation system.

ODOT's Financial Services section has projected revenue for the State Highway Fund through fiscal year 2006-07. This projection is based on current laws and holds fees and taxes constant. The revenue projection is presented in Table 8-8.

TABLE 8-8
STATE HIGHWAY FUND REVENUE (CURRENT DOLLARS)

	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07
	Millions \$							
Weight Mile & Truck Reg.	\$239.2	\$226.6	\$222.8	\$228.9	\$234.6	\$242.0	\$250.0	\$257.2
Motor Fuels Tax	\$394.3	\$396.1	\$402.0	\$406.9	\$411.6	\$416.0	\$420.5	\$424.6
Registrations/Licensing & Other DMV	\$88.6	\$91.2	\$92.0	\$94.5	\$96.0	\$97.9	\$98.1	\$98.7
Driver Licenses	\$180.0	\$23.4	\$25.7	\$25.8	\$26.2	\$25.4	\$25.6	\$25.8
Road use Assessment Fees	\$0.8	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7
<i>Total Gross Hwy Fund</i>	<i>\$741.0</i>	<i>\$738.1</i>	<i>\$743.2</i>	<i>\$756.8</i>	<i>\$769.2</i>	<i>\$782.0</i>	<i>\$794.8</i>	<i>\$807.4</i>
Collection, Programs & Transfers	(110.9)	(118.0)	(112.9)	(115.0)	(115.8)	(112.4)	(122.4)	(126.8)
<i>Net Revenue to HWY Fund</i>	<i>\$630.1</i>	<i>\$620.0</i>	<i>\$630.3</i>	<i>\$641.9</i>	<i>\$653.4</i>	<i>\$659.5</i>	<i>\$672.5</i>	<i>\$680.2</i>

Source: Oregon Department of Transportation

It is difficult to project revenue beyond 2007. The last projection to 2020 was done by ODOT in May 1998. In its *Financial Assumptions* document prepared at that time, ODOT considered not only the continuation of current law, but also the following set of assumptions about how fees and taxes might increase:

- Fuel tax will increase 1 cent per gallon per year (beginning in year 2002), with an additional 1 cent per gallon every fourth year;
- Vehicle registration fees will be increased by \$10 per year in 2002, and by \$15 per year in year 2012;
- Revenues will fall halfway between the revenue-level generated without TPR and the revenue level if TPR goals were fully met. TPR is the state goal of a ten-percent reduction in per-capita vehicle miles of travel (VMT) in MPO planning areas by year 2015, and a 20-percent reduction by year 2025);
- Revenue from new funding mechanisms will be shared among the state, counties, and cities on a “50-30-20 percent” basis rather than the previous “60.05-24.38-15.17 percent” basis;
- Inflation occurs at an average annual rate of 3.6 percent (since lowered to 3.1% in a revision of federal aid estimates by ODOT in April 2000).

The projection based on the above assumptions causes the State Highway Fund to increase more slowly than inflation early in the planning horizon until fuel-tax and vehicle-registration fee increases occur in year 2002. After that, the projection increases somewhat faster than inflation through year 2015, then (again) more slowly than inflation. Without fee increases, in contrast, revenues will still grow due to increases in the vehicle fleet and miles traveled, but may not keep pace with inflation.

Based on these projections of State Highway Fund revenue, and assuming that Lakeview grows at approximately the same rate as other Oregon cities, estimated resources available from the State Highway Fund to Lakeview for all operations, maintenance, and capital outlay purposes will remain at about \$119,500 annually (in 2001 dollars). If fees and taxes are not increased, the amount may not keep pace with inflation and may be less in 2001 dollars.

Outlook for Other Capital Funding Sources

Because of its small population, Lakeview must look beyond State Highway Fund allocations for capital funding of large projects. Other state programs are described later in this chapter. The outlook for state funding programs is expected to be stable.

Lakeview does not, like other cities in Oregon, fund capital transportation improvements with local sources, such as system development charges (SDC's), franchise fees, or utility fees. As such, no prognosis of revenue growth can be given. The next section of this chapter shows how the capital improvement projects included in the TSP stack up against the small amount of funding expected from the State Highway Fund. The implications are that Lakeview will need to look for state funds other than its State Highway Fund allocation, and possibly develop some new local sources of funding, to pay for the capital improvements in its TSP.

PROJECT COSTS IN THE TSP

Table 8-9 shows the total project costs in the Lakeview TSP by system and project phase. Project costs are estimated by what it would cost to construct them this year, so the project costs are in 2001 dollars. Total project costs in the TSP for the twenty-year planning period are approximately \$4,456,500 or an average of \$222,825/year. Comparing the total costs with projected funding indicates that Lakeview will face a funding shortfall. Project funding is addressed in more detail in the next section.

TABLE 8-9
SUMMARY OF PROJECT COSTS IN THE LAKEVIEW TSP (2001 DOLLARS)

	Town of Lakeview	ODOT	Lake County	Total Costs
Project Priority	Costs	Costs	Costs	(Year 2001 \$)
High Priority	\$549,500	\$0	\$1,417,000	\$1,966,500
Medium Priority	\$753,000	\$0	\$518,000	\$1,271,000
Low Priority	\$968,000	\$213,000	\$38,000	\$1,219,000
Total	\$2,270,500	\$213,000	\$1,973,000	\$4,456,500

POTENTIAL SOURCES OF ADDITIONAL REVENUE

Table 8-10 shows that with existing levels of funding, the Town of Lakeview faces significant unfunded project costs in the TSP. In order to finance the recommended transportation system improvements requiring expenditure of capital resources, it may be necessary to consider a range of funding sources. The alternative revenue sources described in this section may not all be appropriate in Lakeview. However, this overview is provided to illustrate the range of options currently available to finance transportation improvements during the next 20 years. Specific matches between projects and revenue sources are made in a later section of this report.

TABLE 8-10
SUMMARY OF UNFUNDED PROJECT COSTS IN THE LAKEVIEW TSP (2001 DOLLARS)

	Town of Lakeview	ODOT	Lake County	Total Costs
Project Priority	Costs	Costs	Costs	(Year 2001 \$)
High Priority	\$549,500	\$0	\$967,000	\$1,516,500
Medium Priority	\$753,000	\$0	\$518,000	\$1,271,000
Low Priority	\$968,000	\$213,000	\$38,000	\$1,219,000
Total	\$2,270,000	\$213,000	\$1,523,000	\$4,006,500

Criteria for Choosing Potential Funding Sources

Transportation improvements are funded by a wide variety of programs and sources at the State and local levels. Potential funding sources are evaluated by two primary criteria: *financial capacity* (can the source pay for the improvements?) and *political acceptability* (is the source politically acceptable to the citizens of Lakeview?). A critical issue for political acceptability is who pays for the funding source. In general, citizens of Lakeview will prefer Federal and State funding for improvements over local sources. If local sources must be used, a basic principle of public finance is that the people should pay based on either the costs they impose or the benefits they receive, unless they belong to some group that deserves special treatment. The public is much more likely to support programs such as System Development Charges or assessments that place the financial burden on those who benefit most from an improvement. If charging people who benefit from an improvement is not feasible or the benefits are widespread, funding sources that spread the cost out among a large number of people may be acceptable because of the low cost to individuals.

The standard criteria for evaluating potential funding sources also include legal authority, stability, and administrative costs. The legal authority and administrative feasibility criteria are addressed by considering only funding sources currently used in Oregon, and assessing the *financial capacity* of funding sources in this section.

Given the consideration of who pays and the perspective of citizens in the Town of Lakeview, the Town should pursue funding sources for transportation improvements in the following order:

- Use Federal, State, or County funds first. Try to get more projects or funds from ODOT (which distributes State and Federal funds), or tie what might otherwise be local projects (e.g., sidewalks and bike paths) to Federal or State highway projects.
- For the remaining projects that primarily benefit specific areas, charge property owners (through local improvement districts or special assessments) or new development (through land use requirements and System Development Charges) where possible and appropriate.
- For remaining projects that do not directly benefit property owners or new development that is willing to pay for the project, make sure that they are needed and that the design options have considered lower-cost alternatives.
- Pay for remaining projects out of existing revenue sources if possible.
- If additional revenue is needed beyond existing revenue sources, implement new funding mechanisms, based on a consideration of financial capacity, who pays, and the other criteria described above. Some new fees or taxes (such as tolls, vehicle registration fees, street utility fees, and fuel taxes) are based on use of the transportation system, while others (such as property taxes) charge residents regardless of their use of the transportation system. Some funding sources (such as tolls and fuel taxes) spread some of the cost to non-residents. Many new funding mechanisms need voter approval.
- If raising additional revenue is not politically acceptable, scale back or eliminate the proposed improvements.

Local Revenue Sources

Property Taxes

Property taxes have historically been the primary revenue source for local governments. Most counties and cities in Oregon avoid using general property tax revenues to fund transportation maintenance, but occasionally use property tax revenue to fund capital improvements for transportation. Capital improvements are typically funded by a serial levy that implements additional property taxes for a set period of time, often for a specified set of projects. Voters must approve serial levies. In Oregon, Washington County has been relatively successful with serial levies for specific transportation improvements (in contrast to other jurisdictions that have been unsuccessful with levies for unspecified projects).

Property taxes can be levied through: 1) tax base levies, 2) serial levies, and 3) bond levies. The most common method uses tax base levies that do not expire and are allowed to increase annually. Serial levies are limited by the amount and time they can be imposed. Bond levies are for specific projects and are limited by time based on the debt load of the local government or the project.

The dependence of local governments on property taxes for non-transportation revenue is partly due to the fact that property taxes are easy to implement and enforce. Property taxes are based on real property (i.e., land and buildings) which has a predictable value and appreciation to base taxes upon. This contrasts with income or sales taxes, which can fluctuate with economic trends or unforeseen events.

The historic dependence on property taxes is changing with the passage of Ballot Measure 5 in the early 1990s. Ballot Measure 5 limits the property tax rate for purposes other than payment of certain voter-approved general obligation indebtedness. Under full implementation, the tax rate for all local-taxing authorities is limited to \$15 per \$1,000 of assessed valuation. As a group, all non-school taxing authorities are limited to \$10 per \$1,000 of assessed valuation. All tax bases, serial, and special levies are subject to the tax rate limitation. Ballot Measure 5 requires that all non-school taxing districts' property tax rate be reduced if together they exceed \$10 per \$1,000 per assessed valuation by the county. If the non-debt tax rate exceeds the constitutional limit of \$10 per \$1,000 of assessed valuation, then all of the taxing districts' tax rates are reduced on a proportional basis. The proportional reduction in the tax rate is commonly referred to as compression of the tax rate.

Oregon voters passed Measure 47, an initiative petition, in November 1996. It is a constitutional amendment that reduces and limits property taxes and limits local revenues and replacement fees. The measure limits 1997-98 property taxes to the lesser of the 1995-96 tax minus 10 percent, or the 1994-95 tax. It limits future annual property tax increases to three percent, with exceptions. Local governments' lost revenue may be replaced only with state income tax, unless voters approve replacement fees or charges. Tax levy approvals in certain elections require 50 percent voter participation.

The state legislature created Measure 50, which retains the tax relief of Measure 47 but clarifies some legal issues. Voters approved this revised tax measure in May 1997.

Measure 50 adds another layer of restrictions to those which govern the adoption of tax bases and levies outside the tax base, as well as Measure 5's tax rate limits for schools and non-schools and tax rate exceptions for voter approved debt. Each new levy and the imposition of a property tax must be tested against a longer series of criteria before the collectible tax amount on a parcel of property can be determined.

Franchise Fees

These are annual fees paid by TV cable, electricity, and telephone utilities for the use of the City right-of-way. Ashland is an example of a city that imposes these fees; in Ashland, they total approximately \$350,000 annually.

Utility Fees

A street utility fee would charge businesses and residences in Lakeview a fee for use of streets, based on the amount of use typically generated by each type of land use. This fee is similar to those charged for water and sewer utility service, and it would not be subject to the limits of Measure 5. Cities in Oregon that charge a street utility fee include Ashland and Medford, and a typical fee is \$2/month for a single-family residence. Revenue from this source can only be used for maintenance of streets, but this would free up other funds to use for capital improvements such as the projects in the TSP.

System Development Charges

System Development Charges (SDCs) are becoming increasingly popular for funding public works infrastructure needed for new local development. Generally, the purpose of a System Development Charge is to allocate portions of the costs associated with capital improvements on the developments, which increase demands on transportation, sewer or other infrastructure systems.

Local governments have the legal authority to charge property owners and/or developers fees for improving local public works infrastructure to meet the projected demand resulting from their developments. Charges are most often targeted toward improving community water, sewer, or transportation systems. In order to collect SDCs, cities and counties must have specific infrastructure plans in place that comply with state guidelines.

Typically, an SDC is collected when new building permits are issued. Transportation SDCs are based on trip generation of the proposed development. Residential calculations would be based on the assumption that a typical household will generate a given number of vehicle trips per day. Nonresidential use calculations are based on employee ratios for the type of business or industrial uses. SDC revenues would help fund the construction of transportation facilities necessitated by new development. A key legislative requirement for charging SDCs is the link between the need for the improvements and the developments being charged.

Some economists have criticized the prevalent SDC methodology, which charges property owners rather than road users. The road users, the argument goes, are the ones who receive the benefit of traveling by road and therefore ought to be the ones who pay for the roads, rather than the property owners whose activities generate or attract traffic.

Local Gas Taxes

The Oregon Constitution permits counties and incorporated cities to levy additional local gas taxes with the stipulation that the money generated from the taxes will be dedicated to street-related improvements and maintenance within the jurisdiction. At present, only a few local governments (including the cities of Woodburn, Tillamook, The Dalles, and Multnomah and Washington Counties) levy a local gas tax. An increase in the cost differential between gas purchased in Lakeview and gas purchased in neighboring areas may encourage drivers to seek less expensive fuel elsewhere. Local option gas taxes require citywide voter approval under current state statutes. These taxes are often strongly opposed by area gasoline retailers who fear the tax will reduce sales. Voters have not approved most local option gas taxes proposed in Oregon.

Local gas taxes typically range from \$.01 to \$.03 per gallon (compared to \$0.183 per gallon Federal and \$0.24 State). Revenues from a gas tax are typically substantial and relatively stable. A \$.01 tax in the City of Woodburn generates over \$97,000/year; a \$.01 tax in Lakeview would probably generate less due to the smaller population and less through-traffic. Non-residents passing through would pay a portion of this funding.

Vehicle Registration Fees

The Oregon Vehicle Registration Fee is allocated to the state, counties, and cities for road funding. Oregon counties are granted authority to impose a vehicle registration fee covering the entire county. The Oregon Revised Statutes would allow Lake County to impose a biannual registration fee for all passenger cars licensed within the county. Although both counties and special districts have this legal authority, vehicle registration fees have not been imposed by local jurisdictions. In order for a local vehicle registration fee program to be viable in Lake County, all the incorporated cities and the county would need to formulate an agreement which would detail how the fees would be spent on future street construction and maintenance.

Local Improvement Districts

The Oregon Revised Statutes allow local governments to form Local Improvement Districts (LIDs) to construct public improvements. LIDs are most often used by cities to construct localized projects such as streets, sidewalks or bikeways. The statutes allow formation of a district by either the local government or property owners. Cities that use LIDs are required to have a local LID ordinance that provides a process for district formation and payback provisions. Through the LID process, the costs of local improvements are generally spread out among a group of property owners within a specified area. The cost can be allocated based on property frontage or other methods such as trip generation. The types of allocation methods are only limited by the Local Improvement Ordinance. The cost of LID participation is considered an assessment against the property which is a lien equivalent to a tax lien. Individual property owners typically have the option of paying the assessment in cash or applying for assessment financing through the local government. Since the passage of Ballot Measure 5, cities have most often funded local improvement districts through the sale of special assessment bonds.

State and Federal Funding

There is a variety of state and federal grant and loan programs available, most with specific requirements related to economic development or specific transportation issues, rather than for the general construction of new streets. Many programs require a match from the local jurisdiction as a condition of approval. Because grant and loan programs are subject to change as well as statewide competition, they should not be considered a secure long-term funding source for Lakeview. Most of the programs available for transportation projects are funded and administered through ODOT and/or the Oregon Economic and Community Development Department (OECDD). Some programs, which may be appropriate for Lakeview, are described below.

STIP Program

Projects on state highways in Lakeview may be funded directly by ODOT through the *Statewide Transportation Improvement Program* (STIP). The STIP outlines the schedule for ODOT projects throughout the state. The STIP, which identifies projects for a four-year period, is updated on a bi-annual basis. In developing this funding program, ODOT must verify that the identified projects comply with the Oregon Transportation Plan (OTP), ODOT Modal Plans, Corridor Plans, local comprehensive plans, and TEA-21 Planning Requirements. The STIP must fulfill TEA-21 planning requirements for a staged, multi-year, statewide, intermodal program of transportation projects. Specific transportation projects are prioritized based on a review of the TEA-21 planning requirements and the different state plans. ODOT consults with local jurisdictions before highway related projects are added to the STIP.

The highway-related projects identified in Lakeview's TSP will be considered for future inclusion on the STIP. The timing of including specific projects will be determined by ODOT based on an analysis of all the project needs within Region 4. Lakeview and ODOT will need to communicate on a bi-annual basis to review the status of the STIP and the prioritization of individual projects within the project area. Ongoing communication will be important for the city, county, and ODOT to coordinate the construction of both local and state transportation projects.

ODOT also has the option of carrying out some highway improvements as part of its ongoing highway maintenance program. Types of road construction projects that can be included within the ODOT maintenance programs are intersection realignments, additional turn lanes, and striping for bike lanes. Maintenance related construction projects are usually conducted by ODOT field crews using state equipment. The maintenance crews do not have the staff or specialized road equipment needed for large construction projects.

An important change that occurred with the passage of ISTEA and TEA-21 was the widening of criteria for federal funding. ODOT now has the authority and ability to use federal dollars for transportation projects that are located outside the boundaries of the highway corridors. Many programs can now be used to fund local system improvements that reduce traffic on state highways or reduce the number of access points for future development along state highways.

Local Street Improvement Grants

This program was created by the 1999 state legislature and makes a one-time sum of \$30 million available for local street improvements.

Bike-Pedestrian Grants

By law (ORS 366.514), all road, street or highway construction or reconstruction projects must include facilities for pedestrians and bicyclists, with some exceptions. ODOT's Bike and Pedestrian Program assists in the development of walking and bicycling improvements. Cities and counties with projects on local streets or urban state highways are eligible for local grant funds. A 20% local match is not required but is looked upon favorably. Eligible projects include curb extensions, pedestrian crossings and intersection improvements, widening shoulders and restriping existing roads for bike lanes. The program is limited to projects costing up to \$100,000. Projects that cost more than \$100,000, require ROW acquisition, or generate environmental impacts should be submitted to ODOT for inclusion in the STIP.

Transportation Enhancement Program

This federally funded program earmarks 10% of state Surface Transportation Program (STP) funds, up to \$8 million annually in Oregon, for projects that relate to 12 categories in the Transportation Equity Act for the 21st Century (TEA-21). Projects must demonstrate a link to the intermodal transportation system, compatibility with approved plans, and local financial support. About \$5 million of Oregon's \$8 million annually is transferred by ODOT to local governments.

A 10.27 percent local match is required for eligibility, and each proposed project is evaluated against all other proposed projects in its region. Within the five Oregon regions, the funds are distributed on a formula based on population, vehicle miles traveled, number of vehicles registered and other transportation-related criteria.

January 29, 1999 was the application deadline for projects to be included in the 2001-02 funding cycle. The next round of applications will occur in February-May 2002 for projects beginning in FY 2004.

Highway Bridge Rehabilitation or Replacement Program

The Highway Bridge Rehabilitation or Replacement Program (HBRR) provides federal funding for the replacement and rehabilitation of bridges of all functional classifications. A portion of the HBRR funding is allocated for the improvement of bridges under local jurisdiction. A quantitative ranking system is applied to the proposed projects based on their sufficiency rating, cost factor, and load capacity. They are ranked against other projects statewide, and require state and local matches of 10 percent each. The HBRR includes the Local Bridge Inspection Program and the Bridge Load Rating Program.

Transportation Safety Grant Program

Managed by ODOT's Transportation Safety Section (TSS), this program's objective is to reduce the number of transportation-related accidents and fatalities by coordinating a number of statewide programs. These funds are intended for use as seed money, funding a program for three years. Eligible programs include those relating to impaired driving, occupant protection, youth, pedestrians, speed, enforcement, and bicycle and motorcycle safety. Capital construction is not considered for funding.

Every year, TSS produces a Highway Safety Plan that identifies the major safety programs, suggests countermeasures, and lists successful projects selected for funding, rather than granting funds through an application process. The program totals \$6 million annually, and requires a sliding scale local match.

Special Transportation Fund

The Special Transportation Fund (STF) awards funds to maintain, develop, and improve transportation services for people with disabilities and people over 60 years of age. The funds are awarded to mass transit districts, transportation districts, where no such districts exist, and to counties. [Lakeview, as a city, would not be eligible for this funding].

Financed by a two-cent tax on each pack of cigarettes sold in the state, the annual distribution of funds is approximately \$10 million. Three-quarters of these funds are distributed on a per-capita formula, and the remaining funds are distributed on a discretionary and competitive basis.

Special City Allotment Program

The Special City allotment is a grant program available to cities with a population less than 5,000. The funds are only available for maintenance, repair, and improvement of existing roads. Cities must submit specific projects to ODOT for consideration. Projects are reviewed annually and ranked on a statewide basis by a committee of regional representatives; funds are distributed based on this ranking. ODOT distributes a total of \$1 million annually through this program—individual projects are eligible for a maximum of \$25,000 each.

Immediate Opportunity Grant Program

OECD and ODOT collaborate to administer this grant program, designed to assist local and regional economic development efforts. The program is funded to a level of approximately \$7 million per year through state gas tax revenues. The following are primary factors in determining eligible projects:

- Improvement of public roads;

- Inclusion of an economic development-related project of regional significance;
- Creation or retention of primary employment; and
- Ability to provide local funds (50/50) to match grant.

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, Douglas County, the City of Hermiston, Port of St. Helens, and the City of Newport.

Oregon Special Public Works Fund

The Special Public Works Fund (SPWF) program was created by the 1995 State Legislature for economic development projects in communities throughout the State. This fund is one of several programs created for the distribution of revenue from the Oregon Lottery. The program, administered by OECDD, provides grant and loan assistance to eligible municipalities primarily for the construction of public infrastructure, which supports commercial and industrial development, and results 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. SPWF awards can be used for improvement, expansion, and new construction of public sewage treatment plants, water supply works, public roads, and transportation facilities.

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. Jurisdictions that have received SPWF funding for projects that include some type of transportation-related improvement include the Cities of Baker City, Bend, Cornelius, Forest Grove, Madras, Portland, Redmond, Reedsport, Toledo, Wilsonville, Woodburn, and Douglas County.

The state legislature has recently added a new component to this program, which allows loans for “community facility projects.” The criteria are less stringent, and projects that are not necessarily economic development-related may be awarded loans.

Oregon Transportation Infrastructure Bank

The Oregon Transportation Infrastructure Bank (OTIB) program is a revolving loan fund administered by ODOT to provide loans to local jurisdictions, including cities, counties, special districts, transit districts, tribal governments, ports, and state agencies. Eligible projects include construction of highways, bridges, roads, streets, bikeways, pedestrian accesses, and right-of-way costs for all federal-aid (Title 23) projects (major collector or higher roads). Capital outlays such as buses, light-rail cars and lines, maintenance yards, and passenger facilities (under Title 49) are also eligible. This funding source may not be available in the future, as this program is being phased-out.

FINANCING TOOLS

In addition to funding options, the recommended improvements listed in this plan may benefit from a variety of financing options. Although often used interchangeably, the words financing and funding are not the same. Funding is the actual generation of revenue by which a jurisdiction pays for improvements. Some examples of funding include the sources discussed above: property taxes, SDCs, fuel taxes, vehicle registration fees, LIDs, and various grant programs. In contrast, financing refers to the collecting of funds through debt obligations.

There are a number of debt financing options available to Lakeview. The use of debt to finance capital improvements must be balanced with the ability to make future debt service payments and to deal with the impact on its overall debt capacity and underlying credit rating. Again, debt financing should be viewed not as a source of funding, but as a time shifting of funds. The use of debt to finance these transportation-system improvements is appropriate since the benefits from the transportation improvements will extend over a period of years. If such improvements were to be tax financed immediately, a large short-term increase in the tax rate would be required.

By utilizing debt financing, local governments spread the burden of the costs of these improvements to more of the people who are likely to benefit from the improvements and lower immediate payments.

General Obligation Bonds

General obligation (GO) bonds are voter-approved bond issues, which represent the least expensive borrowing mechanism available to municipalities. GO bonds are typically supported by a separate property tax levy specifically approved for the purposes of retiring debt. The levy does not terminate until all debt is paid off. The property tax levy is distributed equally throughout the taxing jurisdiction according to assessed value of property. General obligation debts are typically used to make public improvement projects that will benefit the entire community.

State statutes require that the general obligation indebtedness of a jurisdiction not exceed three percent of the real market value of all taxable property in its boundary. Since general obligation bonds would be issued subsequent to voter approval, they would not be restricted to the limitations set forth in Ballot Measures 5, 47, and 50.

Ballot Measure 50, approved in 1997 by Oregon voters, allows local taxing districts to seek voter approval of a local option property tax levy that exceeds the district's permanent limit but is within the limits of Measure 5. Except in general elections in even-numbered years, approval of a local option property tax levy would require a "double majority": 50% of registered voters participating in the election, and a majority of those who vote approving the levy.

Limited Tax Bonds

Limited tax general obligation bonds (LTGOs) are similar to general obligation bonds in that they represent an obligation of the municipality. However, a municipality's obligation is limited to its current revenue sources and is not secured by the public entity's ability to raise taxes. As a result, LTGOs do not require voter approval. However, since the LTGOs are not secured by the full taxing power of the issuer, the limited tax bond represents a higher borrowing cost than general obligation bonds. The municipality must pledge to levy the maximum amount under constitutional and statutory limits, but not the unlimited taxing authority pledged with GO bonds. Because LTGOs are not voter approved, they are subject to the limitations of Ballot Measures 5, 47, and 50.

Bancroft Bonds

Under Oregon Statute, municipalities are allowed to issue Bancroft bonds, which pledge the city's full faith and credit to assessment bonds. The bonds become general obligations of the city but are paid with assessments. Historically, these bonds provided cities with the ability to pledge their full faith and credit in order to obtain a lower borrowing cost without requiring voter approval. However, since Bancroft bonds are not voter approved, taxes levied to pay debt service on them are subject to the limitations of Ballot Measures 5, 47, and 50. As a result, since 1991, municipalities that were required to compress their tax rates have not used Bancroft bonds.

MATCHING LAKEVIEW PROJECTS WITH FUNDING SOURCES

Table 8-11 on the following pages is a list of the prioritized capital improvement programs for the Town of Lakeview as established in the TSP, matched with potential funding sources. The projects may or may not be eligible for all sources listed, and further research will need to be conducted by the Town to seek the most appropriate funding.

TABLE 8-11

PRIORITIZED CAPITAL IMPROVEMENT PROJECTS AND POTENTIAL FUNDING SOURCES

Project Description	Total Costs (Year 2001 \$)	Potential Sources of Funding
<i>High Priority</i>		
Add new sidewalk segments and ADA-compliant curbs near significant pedestrian trip generators	\$431,000	• Transportation Enhancement Program • Town of Lakeview Sidewalk Loan Program
Add ADA-compliant curbs in the downtown area	\$41,000	• Bike - Pedestrian Grant
Add Bicycle Parking	\$3,700	• Bike - Pedestrian Grant
Pave County Road 1-14 from South 9th Street to US 395, and County Road 2-18 west of Roberta Avenue and Missouri Avenue intersection north to the DOC Work Camp.	\$450,000	• ODOT CMAQ Grant • Lake County Department of Transportation • DOC in the form of SDC's
Add storm drainage from O Street west to S Street	\$220,000	• Special City Allotment Program
Add new sidewalk segments and ADA-compliant curbs on US 395 from South 9 th Street to South 12 th Street.	\$131,000	• Transportation Enhancement Program • State Transportation Improvement Program
Add new sidewalks and ADA-compliant curbs from O Street west to S Street.	\$584,000	• Special City Allotment Program
Improve traffic enforcement with the purchase of a Radar Trailer.	\$13,000	• Transportation Safety Grant Program
Construct sidewalks on the west side of US 395 and add curb extensions to North 6 th Street and North 5 th Street on US 395	\$87,000	• Transportation Enhancement Program • State Transportation Improvement Program
Adopt a standard means for establishing the need and placement of stop and yield signs, and replace existing yield signs with stop signs on 11 local streets	\$1,200	• Town of Lakeview Street Fund
Improve the function of existing public parking lots with improved signs and striping.	\$1,600	• Oregon Special Public Works Fund • System Development Charges
Initiate an information campaign to educate downtown business owners and employees about possible downtown parking restrictions	\$3,000	• Oregon Special Public Works Fund
<i>Total High Priority</i>	<i>\$1,966,500</i>	

TABLE 8-11
PRIORITIZED CAPITAL IMPROVEMENT PROJECTS AND POTENTIAL FUNDING SOURCES

Project Description	Total Costs (Year 2001 \$)	Potential Sources of Funding
<i>Medium Priority</i>		
Pave county Road 1-14 west of US 395 approximately ½ mile to M Street.	\$108,000	• ODOT CMAQ Grant
Add new sidewalk segments and ADA-compliant curbs to create pedestrian corridors	\$861,000	• Bike – Pedestrian Grant
Add planting strips with trees and street lighting on Fremont Highway US 395 from North 9 th Street to North 4 th Street	\$255,000	• Transportation Enhancement Program • State Transportation Improvement Program
Establish and enforce limited time parking restrictions	\$47,000	• Oregon Special Public Works Fund
<i>Total Medium Priority</i>	<i>\$1,271,000</i>	
<i>Low Priority</i>		
Close Access to North 4 th Street, restrict driveway access, and install a traffic signal at US 394 and OR 140 intersection	\$213,000	• Transportation Enhancement Program • State Transportation Improvement Program
Add new sidewalk segments and ADA-compliant curbs to create a pedestrian corridor along H Street	\$244,000	• Bike – Pedestrian Grant
Add railroad crossing safety improvements on South 3 rd Street and South 9 th Street	\$661,000	• Transportation Safety Grant Program
Construct new parking lots	\$101,000	• SDC's • Oregon Special Public Works Fund
<i>Total Low Priority</i>	<i>\$1,219,000</i>	
TOTAL OF ALL PROJECTS	\$4,456,500	

CHAPTER 9: IMPLEMENTATION OF TRANSPORTATION SYSTEM PLAN1

ELEMENTS REQUIRED BY THE TRANSPORTATION PLANNING RULE.....1

RECOMMENDED AMENDMENTS TO THE TOWN OF LAKEVIEW COMPREHENSIVE PLAN, CHAPTER 12:

TRANSPORTATION (GOAL 12).....2

RECOMMENDED ORDINANCES5

Access and Circulation – Chapter 3.1 Access and Circulation5

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CHAPTER 9: IMPLEMENTATION OF TRANSPORTATION SYSTEM PLAN

Implementation of the Town of Lakeview Transportation System Plan will require both changes to the Town of Lakeview Comprehensive Plan of 1980 and 2001 Draft #3 Zoning Ordinance Text. These actions will enable the Town of Lakeview to address existing and emerging transportation issues throughout the urban area in a timely and cost-effective manner.

This implementation program is geared towards providing the Town of Lakeview with the tools to amend the Comprehensive Plan and Zoning Ordinance to conform with the Oregon Transportation Planning Rule and to fund and schedule transportation system improvements. It is recommended that the Town of Lakeview take the following actions to adopt and implement the TSP.

1. Amend the policies of the Town of Lakeview Comprehensive Plan of 1980 as detailed in this chapter.
2. Amend the Zoning Ordinance, (March, 2001 Draft #3).
3. Incorporate the prioritized Capital Improvement Program, detailed in Chapter 7, into future Town of Lakeview Capital Improvement and Public Facilities Plans.

ELEMENTS REQUIRED BY THE TRANSPORTATION PLANNING RULE

In 1991, the Oregon Transportation Planning Rule was adopted to implement State Planning Goal 12 — Transportation (amended in May and September 1995). The Transportation Planning Rule requires counties and cities to complete a TSP that includes policies and ordinances to implement the TSP.

The applicable portion of the Transportation Planning Rule is found in Section 660-12-045 — *Implementation of the Transportation System Plan*. In summary, the Transportation Planning Rule requires that local governments revise their land use regulations to implement their TSP in the following manner:

- 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 (not applicable in Lakeview because it currently has no airport within the UGB);
 - 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 to ensure that new development provides on-site roads and accessways that provide reasonably direct routes for pedestrian and bicycle travel.
- Establish road standards that minimize pavement width and total right-of-way.

In addition, state regulations in ORS 836.600 to 836.630 and OAR 660-013 mandates planning for airports consistent with their function in the state airport system. The regulations require local governments with jurisdiction over airports to amend their comprehensive plans and zoning regulations to:

- Create an Aviation System Plan (not included in this document);
- Identify and classify airports in their jurisdictions;
- Acknowledge permitted uses on public use airports; and
- Implement land use compatibility and safety requirements.

Since Lakeview has no airports within the UGB it does not need to implement these regulations. However, if an airport is built within the Lakeview UGB, the standards described above must be added to the Town's comprehensive plans and zoning regulations.

The Town of Lakeview has previously completed a number of changes to the Comprehensive Plan, Subdivision Ordinance, and street standards to comply with the Transportation Planning Rule. These documents were reviewed to determine where the language or standards should be amended to implement the policies and standards contained in this TSP.

The recommended changes to each document are shown below. Strikeouts (~~such as this~~) indicate where language should be deleted; underlined text is recommended new language.

RECOMMENDED AMENDMENTS TO THE TOWN OF LAKEVIEW COMPREHENSIVE PLAN, CHAPTER 12: TRANSPORTATION (GOAL 12)

Revise Policies as follows:

- ~~2. That subdivision and major partitioning activity will be approved only in those areas where roads meet minimum recommended standards and winter road maintenance can be provided for all weather vehicular access.~~
2. The Town of Lakeview Transportation System Plan is an element of the Town of Lakeview Comprehensive Plan. As such, it identifies the general location of transportation improvements and allows the following actions without land use review:

- a. Changes in the specific alignment of proposed public road and highway projects are permitted without plan amendment if the new alignment falls within a transportation corridor identified in the Transportation System Plan.
 - b. Operation, maintenance, repair, and preservation of existing transportation facilities without land use review, except where specifically regulated.
 - c. Dedication of right-of-way, authorization of construction and the construction of facilities and improvements, for improvements designated in the Transportation System Plan, the classification of the roadway and approved road standards without land use review.
 - d. Changes in the frequency of transit, rail and airport services that are consistent with the Transportation System Plan.
8. The Town of Lakeview shall provide safe and convenient pedestrian and bicycle circulation through the following actions:
- a. Development of a network of streets, accessways, and other improvements, including bikeways, walkways, and safe street crossings to promote safe and convenient bicycle and pedestrian circulation within the Urban Growth Boundary of Lakeview as described in each city's Transportation System Plan.
 - b. Shared bikeway and bike lanes shall be included on all new arterials within the Urban Growth Boundary as described in the Transportation Systems Plan.
 - c. Walkways shall be included on all new streets within the Urban Growth Boundary as described in the Transportation Systems Plan.
 - d. Retrofit existing streets with walkways on a prioritized schedule as shown in the Transportation System Plan.
 - e. Bikeways and walkways shall be designed and constructed following the guidelines of the Town of Lakeview Zoning Ordinance.
 - f. Bicycle parking facilities shall be provided at all uses subject to Site Design Review as described in the Town of Lakeview Zoning Ordinance.
9. Draft Environmental Impact Studies (EIS) or Environmental Assessments (EA) will serve as the documentation for State projects that require local land use review, if local review is required in the following circumstances:
- A. Where the project is consistent with the Transportation System Plan, formal review of the draft EIS or EA and concurrent or subsequent compliance with applicable development standards or conditions;
 - B. Where the project is not consistent with the Transportation System Plan, formal review of the draft EIS or EA and concurrent completion of necessary goal exceptions or plan amendments.
- Section 60-12-045(2) of the Transportation Planning Rule requires that jurisdictions protect future operation of transportation corridors. In addition, the proposed function of a future roadway and other transportation facilities, such as airports, must be protected from incompatible land uses.
10. The Town of Lakeview will protect the operation of existing and future transportation facilities as identified in the Transportation System Plan through the use of one or more of the following actions:

- C. Consider the impact of all land use decisions on existing or planned transportation facilities.
- D. Protect the function of existing or planned transportation corridors through appropriate land use regulations.
- E. The Town will notify ODOT, DLCD, and Lake County of proposed changes to this TSP.
- F. Consider the potential to establish or maintain accessways, paths, or trails prior to the vacation of any public easement or right-of-way.
- G. Preserve right-of-way for planned transportation facilities through exactions, voluntary dedication, or setbacks.
- H. The function of airports shall be protected through the application of appropriate land use designations to assure that future land uses are compatible with the continued operation of the airport.

Section 660-12-045(2)(d) of the Transportation Planning Rule requires that jurisdictions develop a process for the coordinated review of land use decisions affecting transportation facilities.

- 11. The Town of Lakeview will provide coordinated review of land use decisions affecting transportation through the use of one or more of the following actions:
 - a. Coordinate with ODOT to implement the highway improvements listed in the STIP that are consistent with the Transportation System Plan and comprehensive plan.
 - b. Consider the findings of ODOT's draft Environmental Impact Statements and Environmental Assessments as integral parts of the land use decision-making procedures.

Technical Data Report of 1980: Public Facilities and Services Section

Transportation System

The Town of Lakeview Transportation Systems Plan (TSP), adopted in July of 2001, is a 20-year transportation improvement plan for the Town of Lakeview. The TSP presents coordinated improvements to the Town's sidewalks, streets, and multi-modal transportation system. This plan was completed to implement the Oregon Transportation Planning Rule and involved citizen participation in advisory committee meetings, engineering and planning studies, and public participation in open houses and meetings. The TSP is adopted by reference by the Town of Lakeview Comprehensive Plan and is also implemented through the Town's development code.

The TSP establishes projects to be completed along a timeline until the year 2020. The two highest priority projects for the street system include establishing a standard means for placing stop and yield signs at the Town's intersections and constructing sidewalks on the west side of US 395 from North 4th Street to North 9th Street. Also part of this project is adding curb extensions to 6th Street and 5th Street on US 395. The two highest priority pedestrian system improvement projects include adding new sidewalk segments and ADA-compliant curbs near significant pedestrian trip generators and adding new sidewalk segments and ADA-compliant curbs to create pedestrian corridors. Adding bicycle parking in the downtown area is the highest priority project for the bicycle system. The total cost of these and other recommended projects is expected to be \$2.2 million for the Town of Lakeview and \$1.9 million for Lake County.

ORDINANCES

The recently adopted Town of Lakeview Development Code requires very few modifications to implement the Town's Transportation System Plan. The ordinance contains street standards, bicycle parking requirements, pedestrian access and circulation standards, access spacing and management standards, and ordinances to improve pedestrian connectivity. These ordinances have provisions to provide safe and convenient pedestrian, bicycle, and vehicular circulation. These ordinances also require major residential, industrial, institutional, and commercial developments to provide on-site facilities that encourage pedestrian and bicycle use and access. The following text contains minor modifications to the Town of Lakeview Development Code to implement the Town of Lakeview Transportation System Plan.

Text that is underlined shall be added to the Development Code. Text that has strikethrough (~~such as this~~) should be deleted. Normal text in **bold** is existing ordinance language that should be preserved.

Access and Circulation – Chapter 3.1 Access and Circulation

3.1.200 Vehicular Access and Circulation

G. Access Spacing

1. Local Streets. A minimum of 50 feet of separation (as measured from the sides of the driveway/street) shall be required on local streets (i.e. streets not designated as collectors or arterials), except as provided in subsection 3, below.

2. Arterial and Collector Streets. Access spacing on collector and arterial streets, and at controlled intersections (i.e. with four-way stop sign or traffic signal), shall be determined based on the policies and standards contained in the Town's Transportation System Plan. These standards are contained in Table 3.1.200 (A). Access to highways within the Town limits Highway 395 shall be subject to the applicable standards and policies contained in the Lake County Transportation Plan. the Town's Transportation System Plan and Table 3.1.200(B).

TABLE 3.1.200(A)
ACCESS MANAGEMENT STANDARDS FOR TOWN STREETS

<u>Classification</u>	<u>Spacing Between Intersections of Public Streets¹</u>	<u>Spacing Between Private Driveways and Alleys¹</u>
<u>Arterial</u>	<u>See State Highway Standards</u>	<u>See State Highway Standards</u>
<u>Collector</u>	<u>300 feet</u>	<u>100 feet</u>
<u>Local</u>	<u>300 feet</u>	<u>50 feet</u>

Notes:

- 1 Measurement of the approach road spacing is from center to center on the same side of the roadway.

TABLE 3.1.200(B)
**ACCESS MANAGEMENT STANDARDS FOR HIGHWAYS WITHIN TOWN LIMITS (BASED ON 1999
 OREGON HIGHWAY PLAN ACCESS MANAGEMENT CLASSIFICATION SYSTEM)**

<u>Posted Speed</u>	<u>Statewide Highway Spacing Standards</u>
<u>≥ 55 mph</u>	<u>1,320 feet</u>
<u>50 mph</u>	<u>1,100 feet</u>
<u>40 & 45 mph</u>	<u>990 feet</u>
<u>30 & 35 mph</u>	<u>770 feet</u>
<u>≤ 25 mph</u>	<u>550 feet</u>

Notes: Measurement of the approach road spacing is from center to center on the same side of the roadway.

Transportation Standards – Chapter 3.4 Public Facilities Standards

Delete Table 3.4.100 – Proposed Street Standards and replace with the following table.

Type of Street	Ave. Daily Trips (ADT)	Right of Way Width	Curb to Curb Pavement Width	Motor Vehicle Travel Lanes	Median and/or Center Turn Lane	Bike Lane (both sides)	On-Street Parking	Curb	Planting Strip	Side-walks
Arterial Streets										
Urban (inside Town limits)	3,000-10,000	80 ft.	44 ft.	14 ft.	None	Shared	8 ft.	6 in.	0-9 ft.	6 ft.
Rural (outside Town limits)	3,000-10,000	80 ft.	50 ft.	12 ft.	14 ft.	6 ft.	None	6 in.	0-9 ft.	6 ft.
Collector Streets										
All Zones Except DSCSD Zone	1,500-3,000	60 ft.	36 ft.	11 ft.	None	None ¹	7 ft.	6 in.	0-6 ft.	6 ft.
DSCSD Zone	1,500-3,000	100 ft.	54 ft.	10 ft.	None	None ¹	17 ft. angled	6 in.	0-8 ft.	6-15 ft.
Local Streets										
Industrial Zones (M1, M2), Highway Commercial Zones (HCSD), High Density Residential Zone (MF)	Less than 1,500	60 ft.	36 ft.	11 ft.	None	None ¹	7 ft. both sides	6 in.	0-6 ft.	6 ft.
DSCSD Zone	Less than 1,500	100 ft.	54 ft.	10 ft.	None	None ¹	17 ft. angled parking	6 in.	0-8 ft.	6-15 ft.
R Zones (except MF)	Less than 1,500	60 ft.	28 ft.	10 ft.	None	None ¹	8 ft. one side	6 in.	0-10 ft.	6 ft.
Alleys	N/A	16-20 ft.	12-16 ft.	N/A	N/A	N/A	None	None	None	None
Accessways and Multi-Use Paths	N/A	10-18 ft.	6-10 ft.	N/A	N/A	N/A	N/A	None	None	None
¹ = Bike lanes are generally not needed on low volume (less than 3,000 ADT) and/or low travel speed (less than 35 mph) streets										

Delete Figures 3.4.100F(1)(3)(4)(5)(6). Replace these deleted street standards with the street standards contained in Chapter 7 of the TSP, Figures 7-1, 7-2, 7-3. These standards are for arterials, collectors, and local streets. The Town should keep the existing alley and pathway standards in 3.4.100F(2).

3.4.100 I. Street Alignment and Connections.

- 1. Staggering of streets making “T” intersections at collectors and arterials shall be designed so that jogs of more than 300 feet on such streets are created, as measured from the centerline of the street. are spaced to conform with the spacing standards contained in the TSP and Town of Lakeview Development Code 3.1.200 Vehicular Access and Circulation.**
- 2. Spacing between local street intersections shall ~~have a minimum separation of 125 feet~~ conform to the spacing standards contained in the TSP and Town of Lakeview Zoning Ordinance 3.1.200 Vehicular Access and Circulation, **except where more closely spaced intersection are designed to provide an open space, pocket park, common area or similar neighborhood amenity. This standard applies to four-way and three-way (off-set) intersections.****

Other Design Standards – Chapter 3.6 Other Design Standards

3.6.500 Signs.

A. General Provisions.

- 10. Traffic Control Signs.** The type and location of traffic control signs shall be determined by the Town Engineer in accordance with the applicable standards in the most recent version of the Manual for Uniform Traffic Control Devices.

Review Procedures – Chapter 4.1 Types of Applications and Review Procedures

11. Description of Permit/Decision-making Procedures.

D. Type IV Procedures (Legislative). Type IV procedures apply to legislative matters. Legislative matters involve the creation, revision, or large-scale implementation of public policy (e.g. adoption of land use regulations, zone changes, revisions to the Town’s Transportation System Plan, and comprehensive plan amendments that apply to entire districts, not just one property). The IV matters are considered initially by the Planning Commission with final decisions made by the Town Council.

Modify “Table 4.1.200 Summary of Development Decisions/Permit by Type of Decision-making Procedure” to add the following text after the Action item “Tree Removal”:

Action	Decision Type	Applicable Regulations
<u>TSP modification</u>	<u>IV</u>	<u>Town's Transportation System Plan, Comprehensive Plan, and Zoning Ordinance</u>

Land Use Maps – Chapter 4.7 Land Use District Map and Text Amendments

D. Transportation Improvements.

1. Uses Permitted Outright. Except where otherwise specifically regulated by this ordinance, the following improvements are permitted outright:

- a. Normal operation, maintenance, repair, and preservation activities of existing transportation facilities;
- b. Installation of improvements within the existing right-of-way;
- c. Projects identified in the adopted Transportation System Plan as not requiring further land use review and approval;
- d. Landscaping as part of a transportation facility;
- e. Removing vegetation and debris in the public right-of-way to maintain clear vision areas as defined in Chapter 3 (3.1.200.N. Vision Clearance);
- f. Emergency measures;
- g. Acquisition of right-of-way for public roads, highways, and other transportation improvements designated in the Transportation System Plan except for those that are located in exclusive farm use or forest zones.
- h. Construction of a street or road as part of an approved subdivision or land partition consistent with the applicable land division ordinance.

2. Transportation Uses Subject to Approval

- a) Construction, reconstruction, or widening of highways, roads, bridges or other transportation projects that are: (1) not improvements designated in the Transportation System Plan or (2) not designed and constructed as part of a subdivision or planned development subject to conditional use permit review, which shall comply with the Transportation System Plan and applicable standards, and shall address the following criteria. For State projects that require an Environmental Impact Statement (EIS) or EA (Environmental Assessment), the draft EIS or EA shall be reviewed and used as the basis for findings to comply with the following criteria:
 - 1) The project is designed to be compatible with existing land use patterns, including noise, safety, and zoning.

- 2) The project is designed to minimize avoidable environmental impacts to identified wetlands, wildlife habitat, air and water quality, cultural resources, and scenic qualities.
 - 3) The project preserves or improves the safety and function of the facility through access management, traffic calming, or other design features.
 - 4) Project includes provision for bicycle and pedestrian circulation as consistent with the comprehensive plan and other requirements of this ordinance.
- b) If review under this Section indicates that the use or activity is inconsistent with the Transportation System Plan, the procedure for a plan amendment shall be undertaken prior to or in conjunction with the conditional permit review.

Sidewalks – Ordinance No. 770

Section 5. Sidewalk Construction and Repair Specifications: Unless otherwise allowed or permitted pursuant to Section 16 below, all sidewalks constructed within the Town of Lakeview shall be a minimum of ~~five~~ six feet in width, ...

Section 6. Location of Sidewalks: ~~Unless otherwise provided pursuant to Section 16 below, all residential sidewalks shall be located with a parking strip between the sidewalk and curb line as depicted on attached Exhibit "A", and all sidewalks adjoining business property, shall extend from the property line to the curb line of the adjoining street. Business properties, as used in this Ordinance, shall mean any property located within a commercial or industrial zone that is used totally or partially for providing products or services to the public.~~ within right-of-way according to the street standards developed by the Town's Transportation System Plan, Chapter 3.4 of the Town's Development Code, and as depicted on attached Exhibit "A". All references to a minimum sidewalk widths in Exhibit "A" shall conform to the standards developed by the Town's Transportation System Plan and Chapter 3.4 of the Town's Development Code.

Parking Restrictions

Sample language establishing restricted parking areas and restricted types of parking (commercial vehicles in residential areas) is provided below. This language would be inserted into an appropriate section of the Town of Lakeview Civil Code or equivalent.

1.00 Duties and Powers of the Town Manager. The Town Manager or designee shall:

(1) Establish, maintain, remove or alter the following classes of traffic controls:

- (a) Crosswalks, safety lanes, and traffic lanes.
- (b) Intersection channelizations and areas where drivers of vehicles shall not make right, left, or U-turns and the time when the prohibition applies.
- (c) Parking areas and time limitations, including the form of permissible parking (e.g., parallel or diagonal).

PARKING CITATION AND OWNER RESPONSIBILITY

1.200 An Illegally Parked Vehicle. When a vehicle without an operator is found parking in violation of a restriction imposed by this code or State law, the officer finding the vehicle shall take its license number and any other information displayed on the vehicle that may identify its owner and shall conspicuously affix a parking citation to the vehicle. The citation shall instruct the operator to answer to the charge or pay the penalty imposed within ten days during specified hours and at a specific place. The citation shall also state the penalties that may be imposed for failure to comply.

1.205 Failure to Comply with Parking Citation. If the operator does not answer the parking citation or pay the penalty imposed within the required ten days, then the Town shall send a letter to the owner or lessee of the vehicle informing the owner or lessee of the violation and giving notice that if the citation is not paid then:

(1) In addition to the penalty imposed for the citation, a charge shall be imposed to recover the costs associated with collecting the parking citation (including but not limited to the costs of collection letters and of immobilizing and/or impounding the vehicle).

(2) The vehicle may be immobilized or impounded. A vehicle that has been immobilized or impounded shall not be released until all outstanding penalties and charges have been paid to the Town. No person other than an authorized Town agent shall remove or attempt to remove an immobilizer device; and no person shall move or attempt to move an immobilized vehicle until the immobilizer device is removed.

1.300 Illegal Cancellation of Parking Citation.

(1) No person shall dismiss a parking citation in any manner, except when approved by the municipal judge.

(2) A violation of this section is a Class B civil infraction.

1.305 Owner/Lessee Responsibility. The owner or lessee of a vehicle in violation of a parking restriction is responsible for the offense unless use of the vehicle was secured by the operator without the owner's or lessee's consent.

1.310 Registered Owner Presumption. In a proceeding against a vehicle owner charging violation of a parking restriction, proof that the vehicle was registered to the defendant at the time of the violation shall constitute a rebuttable presumption that the defendant was the owner.

1.315 Prohibited Parking or Standing. In addition to those areas designated in the Oregon Vehicle Code, no person shall stop, park, or leave standing any vehicle, whether attended or unattended, except when necessary to avoid conflict with other traffic or in compliance with the directions of a peace officer or official traffic control device, in any of the following places:

(1) A motor truck in excess of 12,000 pounds between the hours of 9:00 p.m. and 7:00 a.m. in front of or adjacent to a residence.

(2) A vehicle in an alley, except for a stop of not more than 15 consecutive minutes for loading or unloading persons or materials.

(3) A vehicle in violation of a lawfully erected parking limitation sign.

1.320 Extending Parking Time. Where maximum parking time limits are designated by sign, movement of a vehicle to another parking space within 500 feet shall not extend the time limits for parking. Vehicles so moved that exceed the maximum parking time limits shall be deemed in violation of the parking regulations.

APPENDIX A

SUMMARY OF EXISTING PLANS AND POLICIES

***TOWN OF LAKEVIEW COMPREHENSIVE PLAN OF 1980 - PLANNING DOCUMENT NO. 1
(AS REVISED NOVEMBER 1988)***

Section I. Citizen Participation

State Planning Goal:

- To develop a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process.

The pertinent policies are summarized as follows:

- I.B.1 That opportunities will be provided for the public to respond to preliminary planning documents prior to their finalization.
- I.B.6 That citizens will have the opportunity to participate in all phases of the planning process.

Section VIII. Recreation Needs

State Planning Goal:

- To make provisions to satisfy the recreational needs of the town, county, state and visitors.

The pertinent policies are summarized as follows:

- VIII.B.4 To provide facilities for hiking & biking, and for the handicapped, elderly, and minority needs.

Section IX. Economic Development

State Planning Goal:

- To diversify and improve the economy in the county and state.

The pertinent policies are summarized as follows:

- IX.B.2 That the town will cooperate with the County in encouraging development of the Industrial Park south of town limits and the industrial area north of town.
- IX.B.8 Implemented ordinances shall include provisions for buffering, screening, and traffic control.

Section XI. Public Services and Facilities

State Planning Goal:

- To plan and develop a timely, orderly, and efficient arrangement of public facilities and services to serve as a frame work for urban and rural development.

The pertinent policies are summarized as follows:

- XI.B.6 Underground utilities will be encouraged and located within the existing right-of-way whenever possible.
- XI.B.7 Coordinate storm drainage improvements with the County, State, and the Railroad and make additional improvements as needed and affordable.

Recommendations:

- XI.C.4 That a sidewalk improvement program be initiated.

Section XII. Transportation

State Planning Goal:

- To provide and encourage a safe, convenient, and economic transportation system.

The pertinent policies are summarized as follows:

- XII.B.1 Roads created by partitioning and subdividing will tie into existing or anticipated systems and constructed to town standards.
- XII.B.2 Subdivision and partitioning will only be approved where roads meet minimum standards and winter road maintenance can be provided for all-weather vehicular access.
- XII.B.3 Air and rail facilities will be protected from encroaching incompatible uses that may have a limiting effect on their future use.
- XII.B.4 The Town's airport plan will become an element of the County Plan and the Town will assist the County in the implementation thereof.
- XII.B.5 The Town has recognized nine factors to meet the State compliance requirements and will consider such factors in related decisions:
 - (a) Consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle, and pedestrian.
 - (b) Be based upon an inventory of local, regional, and state transportation needs.
 - (c) Consider the social consequences that would result from utilizing different combinations of transportation modes.
 - (d) Avoid principal reliance of any one mode of transportation.
 - (e) Minimize adverse social, economic, and environmental impacts and costs.
 - (f) Conserve energy.
 - (g) Meet the needs of the transportation disadvantaged by improving transportation services.
 - (h) Facilitate the flow of goods and services to strengthen the local and regional economy.
 - (i) Conform to regional and local plans.

- XII.B.7 Town shall coordinate public facility and transportation plans with ODOT.

Recommendations:

- XII.C.1 Town and County provide more input into decisions regarding railroad improvements.
- XII.C.2 Improve the availability of downtown parking.
- XII.C.3 Support programs to improve conditions for the transportation disadvantaged.

- XII.C.4 That a detailed transportation plan be prepared.

Section XIII. Energy

State Planning Goal:

- To conserve energy.

The pertinent policies are summarized as follows:

- XIII.B.4 That high-density residential, industrial, and commercial development will be located along major transportation and utility routes to conserve energy.

Section XIV. Urbanization

State Planning Goal:

- To provide an orderly and efficient transition from rural to urban use and to minimize adverse effects of growth and/or change.

The pertinent policies are summarized as follows:

- XIV.C.7 Ordinance No. 776 amended; Town and County will jointly prepare and adopt a comprehensive transportation plan to include future arterial and connector street corridors for the Urban Growth Boundary within five years. (OAR 660-12)

TOWN OF LAKEVIEW ORDINANCES

Section 2 establishes the classification of land use zones. Single-Family and Multiple-Family Residential (R-1 and R-2), Central and General Commercial (C-1 and C-2), General and Light Industrial (M-1 and M-2), and Significant Resource Combining (SR) all have off-street parking requirements as described in Sections 4.107 through 4.110.

Off-Street parking is required “at the time of construction, reconstruction, enlargement of a structure, or at the time a use is changed in any zone, off-street parking facilities shall be provided in accordance with the requirements set forth” in Section 4.107. Different parking requirements are established for different uses based on square footage, number of employees, and other methods. Design standards for parking facilities and off-street loading facilities are provided in Section 4.108-.110.

The subdivision ordinance contains requirements for the application, review, and approval process of subdivisions inside the Town of Lakeview. Section 2.103 requires tentative plans for subdivisions. In a tentative plan, the proposed streets must conform with the streets of adjoining developments, be dedicated to the public, should have provisions made for pedestrian access to abutting properties.

Section 5 contains street design and improvement standards and requirements. For example, pedestrian and bike ways should be at least 10 feet in width. Streets should be aligned with existing streets, be extended to the boundaries of new subdivisions, and should have intersections at near right angles. Cul-de-sacs are allowable, and curbs and sidewalks may be required.

Vision clearance areas to maintain sight distances at intersections are described in Section 4.102.

TOWN OF LAKEVIEW PERIODIC REVIEW

LAKEVIEW DEPARTMENT OF CORRECTIONS FACILITIES IMPACT ASSESSMENT REPORT (JUNE 30, 1999)

The Town of Lakeview and Lake County, in an attempt to assess the impacts of the proposed Department of Corrections (DOC) minimum security work camp, had a local impact study performed. The study’s major focus was to assess the existing conditions of the area land use, transportation, economy, population growth, inmate family relocation, local government/infrastructure services, and social/cultural issues, and to address the impact the DOC

APPENDIX A: SUMMARY OF EXISTING PLANS

facility would have on these local issues. The findings and goals of this report that are relevant to the long-range Transportation System Plan for the town of Lakeview are summarized in the following.

Oregon Department of Transportation preliminary study concluded that approximately 400 trips per day (ADT) would be generated by the DOC facility. The impact to local residents and issues of the placement of the main entrance were of primary concern. Three of the four locations considered for the main entrance are within the Urban Growth Boundary. Potential road improvements were also considered to address the higher volumes of traffic in the area. A preliminary staff report by the DOC for the recommendation of the placement of the main entrance to the facility was reviewed and generalized in a table for the Facilities Impact Assessment. The Facilities Impact Assessment recommended that the DOC should perform a Traffic Impact Analysis, and that a Transportation Systems Plan be developed with the coordination of the County and DOC.

Table 12. (Lakeview DOC Facilities Impact Report pg. 30) Access Considerations

Main Entrance/Access	Intersection at State Hwy	Potential Road Improvements	Impact to Existing Residents
1. Hwy 140 at Roberta Ave. to 2-18 (Metzker Rd.)	Right turn lane at Roberta Ave on westbound Hwy 140	Pave 2-18 north of 2-17	Medium Inside UGB
2. Hwy 395 at 2-16 to 2-18	Left turn refuge at county road 2-16	Pave 2-16 and 2-18	Low Outside UGB
3. Hwy 395 at 2-17 to 2-18 (Hunters Lodge Gold Mohr Territory)	Left turn refuge at county road 2-17	Pave 2-18 north of 2-17, possible improvements at 2-17 to address topographic constraints, curves and creek.	Along 2-17 Medium Inside UGB
4. Hwy 395 at 2-18A to 2-18 (Missouri Rd. to Metzker Rd)	Left turn refuge at county road 2-18A	Pave 2-18 north of 2-17	Along 2-18A and 2-18 High Inside UGB

Source: DOC Preliminary Staff Report, (1996). Page 6, Agency Comments (ODOT)

Other transportation impacts addressed in the report were the sudden one time increase in population from the construction activity and the resulting increase of traffic. It was recommended that the Town and County establish outstanding road needs prior to increased traffic and consider Systems Development Charges as a way to finance future road improvements.

***TOWN OF LAKEVIEW PERIODIC REVIEW – BUILDABLE LANDS INVENTORY
AND NEEDS ANALYSIS (JUNE 30, 1999)***

The purpose of the Buildable Lands Inventory and Needs Analysis is to provide a framework and examination of whether or not to expand or reconfigure the Urban Growth Boundary in order to accommodate future land needs in a 20-year planning period. The most important factor to the future growth patterns for Lakeview is the placement of the Department of Corrections Work Camp Facility, which has been covered in greater detail in the Lakeview Periodic Review DOC Facilities Impact Assessment.

The existing land uses as outlined in the Lakeview Comprehensive Plan are Single Family Residential (R-1), Multiple Family Residential (R-2), Commercial (C-1, C-2), Industrial (M), and Public (P). It is concluded in the Buildable Lands Inventory that there is sufficient available land within the UGB for residential, commercial, and industrial land needs to the year 2020.

TOWN OF LAKEVIEW PERIODIC REVIEW - GROWTH ALTERNATIVES AND IMPLEMENTING MEASURES (JUNE 30, 1999)

In a continuation of the periodic review, a growth analysis for the town of Lakeview was performed with the focus on development patterns and transportation issues within the Urban Growth Boundary. Using the conclusions drawn from the *Buildable Lands Inventory and Needs Assessment* and *Department of Corrections Facilities Impact Assessment*, community growth objectives were developed with growth alternatives and recommendation. The pertinent goals of this report are summarized as follows.

Community Growth Objectives:

- Objective 1. Take advantage of infrastructure opportunities provided by the development of the DOC Facility in 2001. Encourage new residential, commercial, and industrial development to the north with the provisions of urban services.
- Objective 3. Encourage commercial nodes outside of downtown core to alleviate downtown parking problems.
- Objective 4. Maintain the grid pattern of Lakeview.
- Objective 10. Protect the function of the State Highways as they approach town. Provide a well-connected street system to accommodate future growth.

The preferred growth alternative for the Town of Lakeview identifies three areas outside the town limits that are recommended for annexation and future development. They include:

1. The area west of the current town limits that is bounded by Highway 140 to the north, Roberta Avenue to the west and South 3rd Street to the south (153 acres);
2. The area west of town limits that is bounded by South 3rd Street to the north, the sewage lagoons to the west and South 9th Street to the south (84 acres); and
3. The area south of the current town limits that is bounded by the UGB to the west, South 12th Street to the south, and the edge of the steep slopes to the east; just east of E Street (185 acres).

It is recommended that future growth be developed by the use of specific design types that would be enforced with adding new code language to the Lakeview Comprehensive Plan. The design types considered for Lakeview are the Downtown Service Core, Neighborhood Centers, Mixed Use Commercial, and Gateways. The Transportation System Plan is noted as the appropriate place to address access management standards and develop policy and code language that supports mixed use commercial development.

SOUTH CENTRAL OREGON REGIONAL INVESTMENT PLAN (FEBRUARY 2000)

This plan outlines regional economic development constraints and opportunities for Klamath and Lake Counties. Long-term strategies and proposals to enhance the economic conditions and livability of these communities are discussed. Long-term goals are developed, and supporting objectives and specific strategies are presented. The study's goals include improving economic development, providing quality infrastructure to support growth, capacity building to maximize limited resources, improving access to health and human service for livability, maintaining strong public safety and emergency response capabilities, improving diverse community amenities, and maintaining a well balanced use of natural resources. Specific strategies to implement these goals related to the transportation system are described below.

Goal: Infrastructure

Objective 1: Provide physical infrastructure to entice and support new industry and commerce.

The region's general lack of airline connections and the isolation of parts of the region from reliable and affordable transportation inhibit the businesses of Lakeview from exporting goods and services. Existing commercial air service does not provide enough route options or alternatives to meet the needs of a growing region.

Strategies:

- Recommend priority road or alternative construction projects to ODOT especially as they pertain to long-haul trucking through Lake County on Highway 140 east.
- Seek funding for construction and maintenance for road and rail facilities to improve freight and passenger movement in Lake County.
- Recruit additional air service to Klamath Falls and Lakeview in the form of additional seats/carriers and destinations.
- Revitalize old commercial districts in Lakeview.

Goal: Housing, Health, and Human Services

Objective 1: Provide essential community services.

Many communities lack access to transportation to and from social, medical, dental, and other services for disabled and elderly residents.

Strategies:

- No specific strategies indicated

Goal: Community Amenities

Objective 1: Develop the community amenities that enhance the overall quality of life.

Lakeview lacks the funding to establish and maintain greenways, parks, and streetscapes.

Strategies:

- Improve and maintain community walking, hiking, and biking trails, parks, and athletic fields.
- Increase the effectiveness of code enforcement in cities.
- Develop a transportation plan for the urban area that includes all modes of transportation.

Goal: Economic Development

Objective 3: Recruit new industry and commerce especially in leading economic markets.

The Lakeview area is perceived as too far away from major markets and the area lacks commercial air service and long-haul trucking. Highways 140, 31, and 395 need to be more accessible for trucking freight year around.

APPENDIX A: SUMMARY OF EXISTING PLANS

Strategies:

- Develop and market transportation infrastructure capabilities, intermodal potential, and access to markets in the west coast.
- Continue federal, state, and local efforts to establish long-haul trucking capacity on Highway 140, 395, and 31.
- Develop attractive signage to encourage passing travelers to stop and improve interpretation of local history, geology, and other rural attractions.

Goal: Capacity Building

Objective 2: Develop collaborative projects between counties, cities, private industry and non-profit organizations to achieve goals of the plan.

There is a lack of regional coordination due to dispersed physical location, difficulty traveling during the winter, and lack of funding for such coordination. Better coordination could improve the economic conditions for the small communities in the region.

Strategies:

- Continue regional efforts in transportation planning projects and programs
- Support coordinated land-use and transportation planning for the Highway 140 corridor.

Specific projects to achieve these goals were prioritized submitted to the State Community Economic Revitalization Team for assignment to state and federal lead agencies for funding. On this prioritized list for Lake County is the Oregon Outback National Scenic By-Way Marketing Study by the Lake County Chamber of Commerce. This project would create marketing schemes and educational signs to show the value of spending more time in Lake County. Also on the prioritized list within the Town of Lakeview are a Community Center Swimming Pool Feasibility Study, Park and Recreation Development and Management Plan, and the Lakeview 2001 Streetscape.

TOWN OF LAKEVIEW PUBLIC FACILITIES PLAN DRAFT (FEBRUARY 2001)

The Public Facilities Plan represents the current state of the public facilities (at the time the document was written), and addresses future development up to the year 2020. Within this document is the Capitol Improvement Program, and the Public Facilities Development Plan. The Public Facilities Plan is broken down into three phases. Phase 1 is for capitol improvements that are scheduled to be completed by the year 2005, Phase 2 is for projects to be completed between the years 2005 and 2010, and Phase 3 is for projects to be completed between the years 2010 and 2020.

There is one capitol improvement project that is part of the transportation system. In Phase 1, paving county road 1-14 is to be completed. This would wrap up paving all of the county roads inside the Lakeview Urban Growth Boundary. The estimated cost for this project is \$150,000.

APPENDIX B

YEAR 2000 STREET INVENTORY

APPENDIX B
2000 Street Inventory
Town of Lakeview Transportation System Plan

Street	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	No. of Travel Lanes	On-Street Parking	Bikeway	Pavement Condition	Sidewalks	Crosswalks
North/South Street System											
Metzker Road/County Road 2-18											
Hunters Lodge Goldmohr Terr./Missouri Ave.	County	Local	NP	60	28	2	no	no	gravel	no	no
Fremont Logging Road											
Hunters Lodge Goldmohr/Precision Pine Rd.	Private	NA	NP	NA	20	1	no	no	dirt	no	no
Precision Pine Rd./Missouri Ave.	Private	NA	NP	NA	20	1	no	no	dirt	no	no
Missouri Ave./Millview St.	Private	NA	NP	NA	20	1	no	no	dirt	no	no
Roberta Avenue											
Missouri Ave./Klamath Falls Lakeview Hwy	Local	Local	NP	36	24	2	no	no	fair	no	no
Klamath Falls Lakeview Hwy/S. 3rd Street	Local	Local	NP	36	24	2	no	no	fair	no	no
S. 3rd Street/S. 9th Street	Local	Local	NP	36	24	2	no	yes	fair	no	no
V Street											
Klamath Falls Lakeview Hwy/N. 2nd Street	Local	Local	25	36	24	2	no	no	fair	no	no
U Street											
Klamath Falls Lakeview Hwy/N. 2nd Street	Local	Local	25	32	20	2	no	no	poor	no	no
T Street											
Klamath Falls Lakeview Hwy/N. 2nd Street	Local	Local	25	32	20	2	no	no	poor	no	no
N. 2nd Street/Center Street	Local	Local	25	32	20	2	no	no	poor	no	no
Center Street/S. 3rd Street	Local	Local	25	36	24	2	no	no	fair	no	no
S Street											
Klamath Falls Lakeview Hwy/N. 2nd Street	Local	Local	25	36	24	2	no	no	fair	no	no
N. 2nd Street/Center Street	Local	Local	25	36	24	2	no	no	fair	no	no
Center Street/S. 3rd Street	Local	Local	25	36	24	2	no	no	fair	no	no
R Street											
Klamath Falls Lakeview Hwy/N. 2nd Street	Local	Local	25	38	26	2	no	no	fair	no	no
Q Street											
Klamath Falls Lakeview Hwy/N. 2nd Street	Local	Local	25	36	24	2	no	no	fair	no	no
P Street											
Klamath Falls Lakeview Hwy/N. 3rd Street	Local	Local	25	36	24	2	no	no	poor	no	no
N. 3rd Street/N. 2nd Street	Local	Local	25	36	24	2	no	no	poor	no	no
S. 3rd Street/S. 9th Street	Local	Local	NP	36	24	2	no	no	fair	no	no
O Street											
Klamath Falls Lakeview Hwy/N. 3rd Street	Local	Local	25	36	24	2	no	no	poor	no	no
N. 3rd Street/N. 2nd Street	Local	Local	25	36	24	2	no	no	poor	no	no

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2000 Street Inventory
Town of Lakeview Transportation System Plan

Street	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	No. of Travel Lanes	On-Street Parking	Bikeway	Pavement Condition	Sidewalks	Crosswalks
N Street											
N. 3rd Street/N. 2nd Street	Local	Local	25	60	36	2	yes	no	good	no	no
N. 2nd Street/Center Street	Local	Local	25	60	36	2	yes	no	good	no	no
Center Street/S. 1st Street	Local	Local	25	72	36	2	yes	no	good	no	no
Mountain View Dr.											
S. 3rd Street/Linda Ln.	Local	Local	25	60	36	2	yes	no	good	E and W 5'	no
Linda Ln./S. 4th Street	Local	Local	25	60	36	2	yes	no	good	E and W 5'	no
S. 4th Street/S. 6th Street	Local	Local	25	60	36	2	yes	no	good	E and W 5'	no
Lakeview Hospital											
S 6th Street/S. 7th Street	Local	Local	25	48	36	2	yes	no	good	E and W 6'-8'	no
Western Pl.											
S. 4th Street to end	Local	Local	25	60	36	2	yes	no	good	E and W 5'	no
M Street											
Klamath Falls Lakeview Hwy/N. 3rd Street	Local	Local	25	60	36	2	yes	no	good	no	no
N. 3rd Street/N. 2nd Street	Local	Local	25	60	36	2	yes	no	good	no	no
N. 2nd Street/Center Street	Local	Local	25	60	36	2	yes	no	good	no	no
Center Street/S. 1st Street	Local	Local	25	60	36	2	yes	no	good	no	no
Birch St.											
End to S. 9th Street	Local	Local	25	46	34	2	yes	no	seal	E and W partial	no
L Street											
Klamath Falls Lakeview Hwy/N. 3rd Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
N. 3rd Street/N. 2nd Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
N. 2nd Street/Center Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
Center Street/S. 1st Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
S. 1st Street/S. 2nd Street	Local	Local	25	60	36	2	yes	no	good	partial on Est	no
S. 2nd Street/S. 3rd Street	Local	Local	25	60	36	2	yes	no	good	partial on Est	no
S. 9th Street/S.10th Street	Local	Local	25	60	24	2	no	no	gravel	no	no
S. 10th Street/S. 11th Street	Local	Local	25	60	36	2	no	no	fair	no	no
K Street											
Klamath Falls Lakeview Hwy/N. 3rd Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
N. 3rd Street/N. 2nd Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
N. 2nd Street/Center Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
Center Street/S. 1st Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
S. 1st Street/S. 2nd Street	Local	Local	25	60	36	2	yes	no	good	W 4'/ E broken	no
S. 9th Street/S.10th Street	Local	Local	25	36	24	2	no	no	fair	no	no
S. 10th Street/S. 11th Street	Local	Local	25	36	24	2	no	no	fair	no	no

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Town of Lakeview Transportation System Plan

Street	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	No. of Travel Lanes	On-Street Parking	Bikeway	Pavement Condition	Sidewalks	Crosswalks
J Street											
Fremont Hwy/Missouri Ave.	Local	Local	25	60	24	2	yes	no	good	no	no
Missouri Ave./N. 12th Street	Local	Local	25	60	24	2	yes	no	good	no	no
N 12th Street/N 11th Street	Local	Local	25	60	24	2	yes	no	good	no	no
N 11th Street/N 10th Street	Local	Local	25	60	41	2	yes	no	good	no	no
N 10th Street/N9th Street	Local	Local	25	60	41	2	yes	no	good	no	no
N 9th Street/N 8th Street	Local	Local	25	60	41	2	yes	no	good	no	no
N 8th Street/Millview Street	Local	Local	25	60	41	2	yes	no	good	no	no
Millview Street/N 7th Street	Local	Local	25	60	41	2	yes	no	good	no	no
N 7th Street/N 6th Street	Local	Local	25	60	41	2	yes	no	good	no	no
N 6th Street/N 4th Street	Local	Local	25	60	41	2	yes	no	good	no	no
N. 3rd Street/N. 2nd Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
N. 2nd Street/Center Street	Local	Local	25	60	36	2	yes	no	good	W 4'	no
Center Street/S. 1st Street	Local	Local	25	60	36	2	yes	no	good	W 4'	no
S. 1st Street/S. 2nd Street	Local	Local	25	60	36	2	yes	no	good	W 4'	no
S. 9th Street/S. 10th Street	Local	Local	25	36	24	2	yes	no	good	no	no
S. 10th Street/S. 11th Street	Local	Local	25	36	24	2	yes	no	good	no	no
I Street											
End to N. 2nd Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
N. 2nd Street/Center Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
Center Street/S. 1st Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
S. 1st Street/S. 2nd Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
S. 3rd Street/Linda Ln.	Local	Local	25	60	36	2	yes	no	good	E and W 4'	no
Linda Ln./S. 4th Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	yes
S. 4th Street/S. 5th Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	yes
S. 5th Street/S. 6th Street	Local	Local	25	60	36	2	yes	no	good	no	no
S. 6th Street/S. 7th Street	Local	Local	25	58	36	2	yes	no	good	E and W 4'	no
S. 7th Street/S. 8th Street	Local	Local	25	58	36	2	yes	no	good	E 4'/ W no	no
S. 8th Street/S. 9th Street	Local	Local	25	58	24	2	yes	no	fair	no	no
S. 10th Street/S. 11th Street	Local	Local	25	36	24	2	yes	no	fair	no	no
S. 11th Street/S. 12th Street	Local	Local	25	36	24	2	yes	no	fair	no	no
S. 12th Street to end	Local	Local	25	36	24	2	yes	no	fair	no	no
H Street											
Fremont Hwy/N. 9th Street	Local	Local	25	60	36	2	yes	no	good	no	no
N 9th Street/N 8th Street	Local	Local	25	60	36	2	yes	no	good	no	no
N 8th Street/Millview Street	Local	Local	25	60	36	2	yes	no	good	no	no
Millview Street/N 7th Street	Local	Local	25	60	36	2	yes	no	good	no	no
N 7th Street/N 6th Street	Local	Local	25	60	36	2	yes	no	good	no	no
N 6th Street/N 5th Street	Local	Local	25	60	36	2	yes	no	good	no	no
N 5th Street/N 4th Street	Local	Local	25	60	36	2	yes	no	good	no	no
Klamath Falls Lakeview Hwy/N. 3rd Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no

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Street	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	No. of Travel Lanes	On-Street Parking	Bikeway	Pavement Condition	Sidewalks	Crosswalks
N. 3rd Street/N. 2nd Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
N. 2nd Street/N. 1st Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
N.1st Street/Center Street	Local	Local	25	60	36	2	yes	no	good	E and W 4'	no
Center Street/S. 2nd Street	Local	Local	25	60	36	2	yes	no	good	E and W 4'	yes
S. 2nd Street/S.3rd Street	Local	Local	25	60	36	2	yes	no	good	E and W 4'	yes
S. 3rd Street/S. 4th Street	Local	Local	25	60	36	2	yes	no	good	E and W 4'	yes
S. 4th Street/S. 5th Street	Local	Local	25	60	36	2	yes	no	good	E and W 4'	yes
S. 5th Street/S. 6th Street	Local	Local	25	60	36	2	yes	no	good	E and W 4'	yes
S. 6th Street/S. 7th Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
S. 7th Street/S. 8th Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
S. 8th Street/S. 9th Street	Local	Local	25	60	36	2	yes	no	good	E and W 4'	no
S. 9th Street/S.10th Street	Local	Local	25	36	24	2	no	no	fair	no	no
S. 10th Street/S. 11th Street	Local	Local	25	36	24	2	no	no	fair	no	no
S. 11th Street/S. 12th Street	Local	Local	25	36	24	2	no	no	fair	no	no
S. 12th Street to end	Local	Local	25	36	24	2	no	no	fair	no	no
G Street											
N. 4th Street/N. 2nd Street	Local	Local	25	70	36	2	yes	no	good	E and W broken	no
N. 2nd Street/N. 1st Street	Local	Local	25	70	36	2	yes	no	good	E and W 4'	no
N. 1st Street/Center Street	Local	Local	25	70	36	2	yes	no	good	E and W 4'	no
Center Street/S. 1st Street	Local	Local	25	70	36	2	yes	no	good	E and W 4'	no
S. 1st Street/S.3rd Street	Local	Local	25	70	36	2	yes	no	good	E and W 4'	yes
S. 3rd Street/S. 4th Street	Local	Local	25	60	36	2	yes	no	good	E and W 4'	no
S. 4th Street/S. 5th Street	Local	Local	25	60	36	2	yes	no	good	E and W 4'	no
S. 5th Street/S. 6th Street	Local	Local	25	60	36	2	yes	no	good	E and W 4'	no
S. 6th Street/S. 7th Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
S. 7th Street/S. 8th Street	Local	Local	25	60	36	2	yes	no	good	no	no
S. 8th Street/S. 9th Street	Local	Local	25	60	36	2	yes	no	good	no	no
S. 9th Street/S. 10th Street	Local	Local	25	48	36	2	yes	no	good	no	no
F Street											
End to N. 6th Street	Local	Local	25	50	24	2	yes	no	fair	E 5'/ W no	yes
N. 6th Street/N. 5th Street	Local	Local	25	50	24	2	yes	no	fair	E 5'/ W no	yes
N. 5th Street/N. 4th Street	Local	Local	25	50	24	2	yes	no	fair	E and W 5'	yes
N. 4th Street/N. 3rd Street	Local	Local	25	60	24	2	yes	no	fair	E and W 8'-10'	yes
N. 3rd Street/N. 2nd Street	State	Statewide	25	75	24	2	yes	no	fair	E and W 8'-10'	yes
N. 2nd Street/N. 1st Street	State	Statewide	25	75	24	2	yes	no	fair	E and W 8'-10'	yes
N. 1st Street/Center Street	State	Statewide	25	75	38	2	yes	no	fair	E and W 8'-10'	yes
Center Street/S. 1st Street	State	Statewide	25	75	38	2	yes	no	fair	E and W 8'-10'	yes
S. 1st Street/S.3rd Street	State	Statewide	25	75	24	2	yes	no	fair	E and W 4'	yes
S. 3rd Street/S. 4th Street	State	Statewide	25	75	24	2	yes	no	fair	E and W 4'	yes
S. 4th Street/S. 5th Street	State	Statewide	20 school	75	24	2	yes	no	fair	E and W 4'	yes
S. 5th Street/S. 6th Street	State	Statewide	25	75	24	2	yes	no	fair	E and W 4'	yes
S. 6th Street/S. 7th Street	State	Statewide	25	75	24	2	yes	no	fair	E and W 4'	yes

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Street	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	No. of Travel Lanes	On-Street Parking	Bikeway	Pavement Condition	Sidewalks	Crosswalks
S. 7th Street/S. 8th Street	State	Statewide	25	75	24	2	yes	no	fair	no	no
S. 8th Street/S. 9th Street	State	Statewide	25	75	24	2	yes	no	fair	partial W 4'	no
S. 9th Street/S. 10th street	Local	Local	25	75	22	2	yes	no	fair	no	no
S. 10th Street/S. 11th Street	Local	Local	25	75	24	2	yes	no	fair	no	no
S. 11th Street/S. 12th Street	Local	Local	25	75	24	2	yes	no	fair	no	no
E Street											
End to N. 3rd Street	Local	Local	25	70	24	2	yes	no	good	no	no
N. 3rd Street/N. 2nd Street	Local	Local	25	70	36	2	yes	no	good	W 8'-10'	yes
N. 2nd Street/N. 1st Street	Local	Local	25	70	54	2	yes	no	good	E and W 8'-10'	yes
N. 1st Street/Center Street	Local	Local	25	70	54	2	yes	no	good	E and W 8'-10'	yes
Center Street/S. 1st Street	Local	Local	25	70	54	2	yes	no	good	E and W 8'-10'	yes
S. 1st Street/S.3rd Street	Local	Local	25	60	36	2	yes	no	good	E and W broken	yes
S. 3rd Street/S. 4th Street (one way north)	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
S. 4th Street/S. 5th Street (one way north)	Local	Local	25	60	36	2	yes	no	good	E and W broken	no
S. 5th Street/S. 9th Street (one way north)	Local	Local	25	60	36	2	yes	no	good	no	no
S. 9th Street/S. 10th Street	Local	Local	25	60	20	2	no	no	poor	no	no
S. 10th Street/S. 11th Street	Local	Local	25	60	20	2	no	no	gravel	no	no
S. 11th Street/S. 12th Street	Local	Local	25	60	20	2	no	no	gravel	no	no
S.12th Street/Kadmas Road	Local	Local	20	60	20-30	2	no	no	1/2 gravel	no	no
Lake Pl.											
S 1st Street to End	Local	Local	25	50	20	2	no	no	fair chip seal	no	no
D Street											
N. 2nd Street/N. 1st Street	Local	Local	25	28	29	2	no	no	good	E and W 4'	yes
N. 1st Street/Center Street	Local	Local	25	28	29	2	no	no	good	no	yes
Kadmas Road (M Street)											
S. 9th Street/S. 10th Street	Local	Local	NP	36	24	2	no	no	good	no	no
S. 10th Street/Kadmas Rd.	Local	Local	NP	36	24	2	no	no	good	no	no
Fremont Hwy No. 19											
Hunters Lodge Goldmohr Terr./Harlan Ln.	State	Statewide	55	60	24 w/ 3'	2	no	no	poor	no	no
Harlan Ln./Precision Pine Rd.	State	Statewide	55	60	24 w/ 3'	2	no	no	poor	no	no
Precision Pine Rd./J Street	State	Statewide	55	60	24 w/ 3'	2	no	no	poor	no	no
J Street/MP 142.64	State	Statewide	45	60	24 w/ 3'	2	no	no	poor	no	no
MP 142.64/Klamath Falls Lakeview Hwy	State	Statewide	35	60	24 w/ 10'	2	yes	no	fair	E 5'	yes
Klamath Falls Lakeview Hwy/MP 144.05 (section know as "F" Street)											
MP 144.05/BLM Office	State	Statewide	35	60	24 w/ 6'	2	no	no	good	no	no
BLM Office/Kadmas Road	State	Statewide	45	60	24 w/ 4'	2	no	no	good	no	no
Kadmas Road/UGB	State	Statewide	55	60	24 w/ 4'	2	no	no	good	no	no
East/West Street System											

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Hunters Lodge Goldmohr Terr./County Road 2-17											
Fremont Logging Road/Fremont Hwy	County	local	NP	60	25	2	no	no	fair	no	no
Fremont Hwy to End	County	local	25	60	25	2	no	no	fair	no	no
Harlan Ln.											
Fremont Hwy to End	County	Local	25	60	24	2	no	no	fair	no	no
Precision Pine Road											
Fremont Logging Road/Fremont Hwy	County	Local	NP	60	24	2	no	no	fair	no	no
Missouri Ave./County Road 2-18A											
Metzker Road/Roberta Ave.	County	local	NP	60	28	2	no	no	gravel	no	no
Roberta Ave./Fremont Logging Road	County	local	35	60	24	2	no	no	fair	no	no
Fremont Logging Road to End	County	local	35	60	24	2	no	no	fair	no	no
Klamath Falls Lakeview Hwy No. 20											
UGB/Roberta Ave.	State	Statewide	55	60	24	2	no	no	fair	no	no
Roberta Ave. to Fremont Hwy (section know as N. 4th Street)											
N 12th Street											
J Street to end	Local	Local	15	30	24	2	yes	no	good	no	no
N 11th Street											
J Street to end	Local	Local	25	30	24	2	yes	no	good	no	no
N 10th Street											
J Street to end	Local	Local	25	30	24	2	yes	no	good	no	no
N 9th Street											
J Street/H Street	Local	Local	25	60	36	2	yes	no	seal	N broken/S no	no
N 8th Street											
J Street/H Street	Local	Local	25	46	36	2	yes	no	good	no	no
Millview St.											
J Street/H Street	Local	Local	25	50	36	2	yes	no	seal	no	no
N 7th Street											
J Street/H Street	Local	Local	25	40	36	2	yes	no	good	N and S partial	no
H Street/Fremont Hwy	Local	Local	25	60	36	2	yes	no	good	no	no
N 6th Street											
J Street/H Street	Local	Local	25	40	27	2	yes	no	good	no	no
H Street/Fremont Hwy	Local	Local	25	60	36	2	yes	no	good	no	no

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Street	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	No. of Travel Lanes	On-Street Parking	Bikeway	Pavement Condition	Sidewalks	Crosswalks
Fremont Hwy/F Street	Local	Local	25	60	36	2	yes	no	good	N broken/S 5'	no
N 5th Street											
H Street/Fremont Hwy	Local	Local	25	60	36	2	yes	no	good	N and S 5'	no
Fremont Hwy/F Street	Local	Local	25	60	36	2	yes	no	good	no	no
N 4th Street											
Roberta Ave./V Street	Local	Local	40	60	24	2	no	no	good	no	no
V Street/U Street	Local	Local	40	60	24	2	no	no	good	no	no
U Street/T Street	Local	Local	40	60	24	2	no	no	good	no	no
T Street/S Street	Local	Local	40	60	24	2	no	no	good	no	no
S Street/R Street	Local	Local	40	60	24	2	no	no	good	no	no
R Street/Q Street	Local	Local	40	60	24	2	no	no	good	no	no
Q Street/P Street	Local	Local	25	60	24	2	no	no	poor	no	no
P Street/O Street	Local	Local	25	60	24	2	no	no	poor	no	no
O Street/M Street	Local	Local	25	60	24	2	no	no	poor	no	no
M Street/L Street	Local	Local	25	60	24	2	no	no	poor	N and S broken	no
L Street/K Street	Local	Local	25	60	24	2	no	no	poor	N and S broken	no
K Street/J Street	Local	Local	25	60	24	2	no	no	poor	N and S broken	no
J Street/H Street	Local	Local	25	60	24	2	no	no	poor	N and S broken	no
H Street/G Street	Local	Local	25	60	24	2	no	no	poor	N and S broken	yes
G Street/F Street	Local	Local	25	60	24	2	no	no	poor	N and S broken	yes
N 3rd Street											
P Street/O Street	Local	Local	25	60	36	2	yes	no	good	no	no
N Street/M Street	Local	Local	25	60	36	2	yes	no	good	no	no
M Street/L Street	Local	Local	25	60	36	2	yes	no	good	no	no
L Street/K Street	Local	Local	25	60	36	2	yes	no	good	N and S broken	no
K Street/J Street	Local	Local	25	60	27	2	yes	no	good	N and S broken	no
J Street/I Street	Local	Local	25	40	27	2	yes	no	good	N and S broken	no
I Street/H Street	Local	Local	25	40	27	2	yes	no	good	N and S broken	no
N 2nd Street											
R Street/Q Street	Local	Local	25	48	36	2	no	no	good	no	no
Q Street/P Street	Local	Local	25	48	36	2	no	no	good	yes	no
P Street/O Street	Local	Local	25	48	36	2	no	no	good	yes	no
O Street/N Street	Local	Local	25	48	36	2	no	no	good	yes	no
N Street/M Street	Local	Local	25	72	36	2	yes	no	good	yes	no
M Street/L Street	Local	Local	25	72	36	2	yes	no	good	N and S broken	no
L Street/K Street	Local	Local	25	72	36	2	yes	no	good	yes	no
K Street/J Street	Local	Local	25	72	36	2	yes	no	good	yes	no
J Street/I Street	Local	Local	25	72	36	2	yes	no	good	N and S 4'	no
I Street/H Street	Local	Local	25	72	36	2	yes	no	good	N and S broken	no
H Street/G Street	Local	Local	25	72	36	2	yes	no	good	N and S 4'	no

APPENDIX B
2000 Street Inventory
Town of Lakeview Transportation System Plan

Street	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	No. of Travel Lanes	On-Street Parking	Bikeway	Pavement Condition	Sidewalks	Crosswalks
G Street/F Street	Local	Local	25	72	36	2	yes	no	good	yes	no
F Street/E Street	Local	Local	25	72	36	2	yes	no	good	yes	no
E Street/D Street	Local	Local	25	72	36	2	yes	no	good	yes	no
N 1st Street											
H Street/G Street	Local	Local	25	72	36	2	yes	no	good	yes	no
G Street/F Street	Local	Local	25	72	36	2	yes	no	good	yes	no
F Street/E Street	Local	Local	25	72	36	2	yes	no	good	yes	no
E Street/D Street	Local	Local	25	72	36	2	yes	no	good	yes	no
Center Street											
T Street/S Street	Local	Local	25	60	27	2	no	no	good	no	no
N Street/M Street	Local	Local	25	72	36	2	yes	no	good	no	no
M Street/L Street	Local	Local	25	72	36	2	yes	no	good	N 5'/S no	no
L Street/K Street	Local	Local	25	72	36	2	yes	no	good	N no/S 5'	no
K Street/J Street	Local	Local	25	72	36	2	yes	no	good	N and S 5'	no
J Street/I Street	Local	Local	25	72	36	2	yes	no	good	N and S 5'	no
I Street/H Street	Local	Local	25	72	36	2	yes	no	good	N and S 5'	no
H Street/G Street	Local	Local	25	72	36	2	yes	no	good	N and S 5'	no
G Street/F Street	Local	Local	25	72	24	2	yes	no	good	8'-10'	yes
F Street/E Street	Local	Local	25	60	24	2	yes	no	good	8'-10'	yes
E Street/D Street	Local	Local	25	60	24	2	yes	no	good	8'-10'	yes
S 1st Street											
N Street/M Street	Local	Local	25	60	36	2	yes	no	good	no	no
M Street/L Street	Local	Local	25	60	36	2	yes	no	good	no	no
L Street/K Street	Local	Local	25	60	36	2	yes	no	good	N and S broken	no
K Street/J Street	Local	Local	25	60	36	2	yes	no	good	N and S 5'	no
J Street/I Street	Local	Local	25	60	36	2	yes	no	good	N and S 5'	no
G Street/F Street	Local	Local	25	72	24	2	yes	no	good	8'-10'	yes
F Street/E Street	Local	Local	25	72	24	2	yes	no	good	8'-10'	yes
E Street to End	Local	Local	25	72	24	2	yes	no	good	6'-8'	yes
S 2nd Street											
L Street/K Street	Local	Local	25	75	36	2	yes	no	good	no	no
K Street/J Street	Local	Local	25	75	36	2	yes	no	good	N 4'/S no	no
J Street/I Street	Local	Local	25	75	36	2	N yes	no	good	N 4'/S no	yes
I Street/H Street	Local	Local	20 school	75	36	2	N yes	no	good	N 4'/S no	yes
S 3rd Street											
Roberta Ave./T Street	Local	Local	25	48	36	2	no	yes	good	no	no
T Street/S Street	Local	Local	25	48	36	2	no	yes	good	no	no
S Street/P Street	Local	Local	25	48	36	2	no	yes	good	no	no
P Street/Mountain View Dr.	Local	Local	25	60	36	2	no	yes	good	no	no

APPENDIX B
2000 Street Inventory
Town of Lakeview Transportation System Plan

Street	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	No. of Travel Lanes	On-Street Parking	Bikeway	Pavement Condition	Sidewalks	Crosswalks
Mountain View Dr./L Street	Local	Local	25	60	36	2	no	yes	good	no	no
L Street/I Street	Local	Local	20 school	60	36	2	no	no	good	N no/S 4'	yes
I Street/H Street	Local	Local	20 school	60	36	2	yes	no	good	N and S 4'	yes
H Street/G Street	Local	Local	25	60	36	2	yes	no	good	N and S 4'	yes
G Street/F Street	Local	Local	25	60	36	2	yes	no	good	N and S 4'	yes
F Street/E Street	Local	Local	25	60	36	2	yes	no	good	N and S 4'	no
Linda Ln.											
Mountain View Dr./I Street	Local	Local	25	54	36	2	yes	no	good	N and S broken	yes
S 4th Street											
Mountain View Dr./Western Pl.	Local	Local	25	60	36	2	yes	no	good	N and S 4'	no
Western Pl./ I Street	Local	Local	25	60	36	2	yes	no	good	N and S 4'	no
I Street/H Street	Local	Local	25	60	36	2	yes	no	good	N and S 4'	no
H Street/G Street	Local	Local	25	60	36	2	yes	no	good	N and S 4'	no
G Street/F Street	Local	Local	25	60	36	2	yes	no	good	N and S 4'	no
F Street/E Street	Local	Local	25	60	36	2	yes	no	good	N and S 4'	no
Sunset Pl.											
End to Mountain View Dr.	Local	Local	25	60	36	2	yes	no	good	N and S 5'	no
Pioneer Pl.											
Mountain View Dr. toEnd	Local	Local	25	60	36	2	yes	no	good	N and S 5'	no
S 5th Street											
I Street/H Street	Local	Local	25	60	36	2	yes	no	good	N and S 6'	yes
H Street/G Street	Local	Local	25	60	36	2	yes	no	good	N and S broken	yes
F Street/E Street	Local	Local	25	42	36	2	yes	no	good	no	yes
S 6th Street											
Mountain View/J Street	Local	Local	25	60	36	2	yes	no	fair	N no/S 5'	no
J Street/I Street	Local	Local	25	60	36	2	yes	no	good	no	no
I Street/H Street	Local	Local	25	60	36	2	yes	no	good	no	no
H Street/G Street	Local	Local	25	60	36	2	yes	no	good	no	no
G Street/F Street	Local	Local	25	60	36	2	yes	no	good	N and 1/2 S 4'	no
7th Street											
J Street/I Street	Local	Local	25	50	36	2	yes	no	good	no	no
I Street/H Street	Local	Local	25	60	36	2	yes	no	good	N no/S 4'	no
H Street/G Street	Local	Local	25	60	36	2	yes	no	good	no	no
G Street/F Street	Local	Local	25	60	36	2	yes	no	good	N 4'/S no	no
S 8th Street											
I Street/H Street	Local	Local	25	60	36	2	yes	no	seal	N 5'/S no	no

APPENDIX B
2000 Street Inventory
Town of Lakeview Transportation System Plan

Street	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	No. of Travel Lanes	On-Street Parking	Bikeway	Pavement Condition	Sidewalks	Crosswalks
H Street/G Street	Local	Local	25	60	36	2	yes	no	seal	N 5/S no	no
G Street/F Street	Local	Local	25	60	36	2	yes	no	seal	N 5/S no	no
S 9th Street											
Roberta Ave./P Street	Local	Local	25	36	24	2	no	yes	good	no	no
P Street/Birch Street	Local	Local	25	53	41	2	no	yes	good	no	no
Birch Street/L Street	Local	Local	25	54	42	2	yes	no	good	no	no
L Street/K Street	Local	Local	25	54	42	2	yes	no	good	no	no
K Street/J Street	Local	Local	25	54	42	2	yes	no	good	no	no
J Street/I Street	Local	Local	25	75	42	2	yes	no	good	no	no
I Street/H Street	Local	Local	25	100	42	2	yes	no	good	no	no
H Street/G Street	Local	Local	25	100	42	2	yes	no	good	no	no
G Street/F Street	Local	Local	25	100	42	2	yes	no	good	no	no
F Street/E Street	Local	Local	25	100	35	2	yes	no	good	no	no
Stock Drive											
UGB/Roberta Ave.	County	Local	NP	60	26	2	no	no	good	no	no
S 10th Street											
M Street/L Street	Local	Local	20	34	22	2	no	no	good	no	no
L Street/K Street	Local	Local	20	34	22	2	no	no	good	no	no
K Street/J Street	Local	Local	20	34	22	2	no	no	good	no	no
J Street/I Street	Local	Local	20	34	22	2	no	no	good	no	no
I Street/H Street	Local	Local	20	34	22	2	no	no	good	no	no
H Street/G Street	Local	Local	20	34	22	2	no	no	good	no	no
G Street/F Street	Local	Local	20	34	22	2	no	no	good	no	no
F Street/E Street	Local	Local	20	34	22	2	no	no	good	no	no
S 11th Street											
M Street/K Street	Local	Local	25	47	35	2	yes	no	good	no	no
K Street/J Street	Local	Local	25	47	35	2	yes	no	good	no	no
J Street/I Street	Local	Local	25	47	35	2	yes	no	good	no	no
I Street/H Street	Local	Local	25	47	35	2	yes	no	good	no	no
H Street/G Street	Local	Local	25	47	35	2	yes	no	good	no	no
G Street/F Street	Local	Local	25	47	35	2	yes	no	good	no	no
F Street/E Street	Local	Local	25	34	22	2	no	no	fair	no	no
S 12th Street											
I Street/H Street	Local	Local	25	42	30	2	no	no	good	no	no
H Street/G Street	Local	Local	25	42	30	2	no	no	good	no	no
G Street/F Street	Local	Local	25	42	30	2	no	no	good	no	no
F Street/E Street	Local	Local	25	42	30	2	no	no	fair	no	no
Kadmas Road											

APPENDIX B
2000 Street Inventory
Town of Lakeview Transportation System Plan

Street	Jurisdiction	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	No. of Travel Lanes	On-Street Parking	Bikeway	Pavement Condition	Sidewalks	Crosswalks
End to M Street	County	Local	NP	60	20-30	2	no	no	gravel	no	no
M Street/Fremont Hwy	County	Local	NP	60	20-30	2	no	no	gravel	no	no
Fremont Hwy/E Street	County	Local	NP	60	20-30	2	no	no	gravel	no	no

APPENDIX C

CAPACITY ANALYSIS

APPENDIX D

POPULATION AND EMPLOYMENT FORECASTS

METHODOLOGY AND DATA SOURCES

Population estimates and projections were developed from historic data as reported by the Census Bureau. Portland State University's Center for Population Research and Census (PSU CPRC) develops annual population estimates for cities and counties for the purpose of allocating certain state tax revenues to cities and counties. In January of 1997, the State of Oregon Office of Economic Analysis (OEA) developed long-term (through year 2040) state population forecasts, disaggregated by county, for state planning purposes. OEA also developed county-level employment forecasts based on covered employment payrolls as reported by the Oregon Employment Department.

The Office of Economic Analysis used business-cycle trends (as reflected by the Employment Department's employment forecasts) as the primary driver of population and employment for the short term. For the long term, the forecasts shift to a population-driven model, which emphasizes demographics of the resident population, including age and gender of the population, with assumptions regarding life expectancy, fertility rate, and immigration.

These population and employment forecasts were developed to determine future transportation needs. The amount of growth, and where it occurs, will affect traffic and transportation facilities in the study area. This report is not intended to provide a complete economic forecast or housing analysis, and it should not be used for any purpose other than that for which it is designed.

HISTORIC GROWTH

The population of Lake County and Lakeview has historically seen fluctuations in the population growth rate with declines from 1960 to 1970 and then again from 1980 to 1990, but with an overall slight upward growth trend. Paisley has, over the past 40-years, seen minor increases in population, and from 1990 to 2000 has grown nearly at the same rate as the State of Oregon. Lakeview's population has decreased over the 40-year period. Lake County's unincorporated area has been the greatest growth area in the county.

Table 1
Historic Population Growth, 1960 to 2000 - Lake County and its incorporated Cities

	1960	1970	1980	1990	2000 ¹	1990 to 2000 Change	
						Number	Annual Average
Lake County ¹	7,158	6,343	7,532	7,186	7,422	236	0.32%
Lakeview	3,260	2,705	2,770	2,526	2,475	-51	-0.20
Paisley	219	260	343	350	245	-105	-3.5%
Unincorporated county	3,679	3,378	4,419	4,304	4,702	398	0.89%
State of Oregon	1,768,687	2,091,533	2,633,156	2,842,321	3,300,800	458,479	1.51%

¹ U.S. Census Bureau, 2000 US Census

County population includes the population of all the county's incorporated cities.

Source: U.S. Census Bureau (1960, 1970, 1980, and 1990 Censuses); and Portland State University Center for Population Research and Census (2000 estimates)

As shown in Table 1, Lakeview's average annual population growth rate during the years between 1990 and 2000 is negative, versus the positive rate of growth for Lake County as a whole. Paisley's population also decreased during the last decade. The unincorporated area in Lake County surrounding the Town of Lakeview grew at 0.89% percent per year between 1990 and 2000, slightly faster than the rate of growth during the same time period for the county.

POPULATION AND EMPLOYMENT FORECASTS

Lake County is expected to experience some population gains over the next 20 years. Population and employment as forecast by the State of Oregon Office of Economic Analysis are shown in Table 2.

Table 2
Population and Employment Forecast, 2000 to 2020
Lake County and State of Oregon

	2000	2005	2010	2015	2020	2000 to 2020 Change	
						Number	Annual Average
Lake County							
Population ²	7,779	7,982	8,171	8,354	8,530	751	0.46%
Non-Agr. Emp. ¹	2,654	2,896	2,949	2,955	2,956	302	0.54%
State of Oregon							
Population ²	3,406,000	3,631,000	3,857,000	4,091,000	4,326,000	920,000	1.20%
Non-Agr. Emp. ²	1,601,718	1,718,659	1,814,276	1,882,653	1,947,702	345,984	0.98%

¹ Source: Department of Corrections Facility Impact Assessment, 1999

² Source: State Of Oregon Office of Economic Analysis.

The OEA forecasts suggest that Lake County is expected to grow at a slower rate than the State of Oregon. The estimated average annual population growth rate for Lake County between 1990 and 2000 was 0.32 percent; for the 2000 to 2020 period, the estimated population growth rate for Lake County is expected to slow, averaging 0.46 percent annually. The State of Oregon's average annual population growth rate is expected to average 1.20 percent.

This planning effort does not change the growth assumptions for the Town of Lakeview. Based on the OEA projections, population forecasts for the jurisdictions within Lake County are shown in five-year increments in Table 3.

Table 3
Population Forecast, 2000 to 2020
Lake County and its Incorporated Cities

	2000 ¹	2005 ²	2010 ²	2015 ²	2020 ²	Change 2000-2020	
						Number	CAARG
Lake County	7,422	7,982	8,171	8,354	8,615 ³	1,193	0.75%
Lakeview UGB	2,475	2,662	2,725	2,786	2,873	398	0.75%
Paisley	245	263	270	276	284	39	0.74%
Unincorporated	4,702	5,057	5,177	5,292	5,458	756	0.75%

¹ 2000 US Census for Lake County, Town of Lakeview, Town of Paisley, and Unincorporated Areas in Lake County

² Projections for Lakeview, Paisley, and the unincorporated area inside Lake County were calculated based on the percentages of the population in these areas relative to the population of Lake County in 2000. These percentages were multiplied by the OEA forecasts for Lake County to estimate the 2005, 2020, and 2010 populations of Lakeview, Paisley, and the unincorporated areas of Lake County.

³ 2020 Lake County estimate from 1999 DOC Facility Impact Assessment Report include population increases associated with the work camp

SPECIAL TRANSPORTATION NEEDS ASSESSMENT

Certain populations have been identified as having more intensive transportation needs than the general population. These populations include people under the legal driving age, those under the poverty level and those with mobility limitations.

As stated above, the 2000 US Census shows the Town of Lakeview population at 2,475 in 2000. The 1990 Census estimates that about 26 percent of the population are under the age of 16, the legal driving age. Because the purpose of this analysis is to determine the number of people with specific transportation needs, DEA used census age disaggregation to estimate that 421 people, or about 17 percent of the population, are between the ages of 5 and 15.

According to the 1990 Census, 14 percent of the 7,116 persons living in Lake County for whom poverty is determined were below the poverty level. The rate is slightly higher for the Town of Lakeview, where 15 percent of the 2,464 persons in the Town of Lakeview for whom poverty was determined were below the poverty level. The Department of Agriculture bases poverty statistics on a threshold of nutritionally adequate food plans in question. Poverty status for Lake County and the Town of Lakeview is shown in Table 4.

Table 4
Poverty Status, Lake County and Town of Lakeview, 1990 Census

	Number level	below poverty	Persons for whom poverty is determined	Percent of persons below poverty level
Lake County	992		7,116	14%
Town of Lakeview	362		2,464	15%

Source: U.S. Census Bureau.

The Census Bureau reports that 2% of the population in the Town of Lakeview had a mobility limitation in 1990. Persons were identified as having a mobility limitation if they had a health condition (physical and/or mental) that

lasted for six or more months and which made it difficult to go outside the home alone. A temporary health problem, such as a broken bone that was expected to heal normally, was not considered a health condition.

Using the proportion of the population with a mobility limitation and below the poverty level in 1990, DEA estimated the number of people with specific transportation needs in 2000. The following table shows that nearly 28 percent of the population may have specific transportation needs. There is likely to be some overlap between the 2 percent of the population with mobility limitations and the 17 percent below the poverty level; therefore, the sum of the figures may overstate the proportion of the population with specific transportation needs.

Table 5
Estimated Population with Specific Transportation Needs
2000, Town of Lakeview

	Percent of	Estimated
	Total Population	Number
Persons between the ages of 5 and 15	17%	421
Persons 18 and older under the Poverty Level	9%	223
Persons with Mobility Limitations	2%	50
Total Specific Transportation Needs Populations	28%	694

Sources: Percentages are from the 1990 U.S. Census Bureau. Estimated number is based on the 2000 US Census total for the Town of Lakeview multiplied by the 1990 percentages.

Planning for the overall transportation system will need to consider the special needs of these populations.

APPENDIX E

IMPROVEMENT OPTIONS COST ESTIMATES

APPENDIX E
TOWN OF LAKEVIEW TRANSPORTATION SYSTEM PLAN
IMPROVEMENT OPTIONS COST ESTIMATES

Item Description	Cost/Unit	Unit	Number of Units	Total
<i>Install a traffic signal at intersection of US 395 and OR 140</i>				
Install Traffic Signal	\$120,000.00	LS	1	\$120,000.00
Mobilization	\$6,621.73	LS	1	\$6,621.73
Concrete Curbs	\$7.00	FT	960	\$6,720.00
Asphalt Pavement Cutting	\$1.00	FT	205	\$205.00
Signs in Place	\$150.00	EACH	13	\$1,950.00
Removal of Existing Pavement Markings	\$0.60	FT	120	\$72.00
Pavement Legend (Arrows)	\$200.00	EACH	14	\$2,800.00
Pavement Stripping	\$0.50	FT	1,375	\$687.50
SUBTOTAL				\$139,056.23
Landscaping (5%)	\$6,952.81	LS	1	\$6,952.81
Engineering (10%)	\$13,905.62	LS	1	\$13,905.62
Contingency (20%)	\$27,811.25	LS	1	\$27,811.25
TOTAL				\$187,725.90
<i>Roundabout at Intersection of US 395 and OR 140</i>				
Install Roundabout	\$250,000.00	LS	1	\$250,000.00
Mobilization	\$12,594.25	LS	1	\$12,594.25
Signs in Place	\$150.00	EACH	11	\$1,650.00
Pavement Stripping	\$0.50	FT	470	\$235.00
SUBTOTAL				\$264,479.25
Landscaping (5%)	\$13,223.96	LS	1	\$13,223.96
Engineering (10%)	\$26,447.93	LS	1	\$26,447.93
Contingency (20%)	\$52,895.85	LS	1	\$52,895.85
TOTAL				\$357,046.99

**TOWN OF LAKEVIEW TRANSPORTATION SYSTEM PLAN
IMPROVEMENT OPTIONS COST ESTIMATES**

Item Description	Cost/Unit	Unit	Number of Units	Total
<i>Construct sidewalks and ADA ramps near significant pedestrian trip generators</i>				
Concrete Sidewalks	\$24.00	LF	11,250	\$270,000.00
Mobilization	\$16,400.00	LS	1	\$16,400.00
Concrete Sidewalk Ramps	\$500.00	EACH	116	\$58,000.00
SUBTOTAL				\$344,400.00
Engineering (5%)	\$17,220.00	LS	1	\$17,220.00
Contingency (20%)	\$68,880.00	LS	1	\$68,880.00
TOTAL				\$430,500.00
<i>Construct sidewalk and ADA ramps along pedestrian corridors</i>				
Concrete Sidewalks	\$24.00	LF	22,400	\$537,600.00
Mobilization	\$32,805.00	LS	1	\$32,805.00
Concrete Sidewalk Ramps	\$500.00	EACH	237	\$118,500.00
SUBTOTAL				\$688,905.00
Engineering (5%)	\$34,445.25	LS	1	\$34,445.25
Contingency (20%)	\$137,781.00	LS	1	\$137,781.00
TOTAL				\$861,131.25
<i>Construct new sidewalks and ADA compliant curbs on O Street west to S street</i>				
Concrete Sidewalks	\$24.00	LF	18,000	\$432,000.00
Mobilization	\$22,250.00	LS	1	\$22,250.00
Concrete Sidewalk Ramps	\$500.00	EACH	26	\$13,000.00
SUBTOTAL				\$467,250.00
Engineering (5%)	\$23,362.50	LS	1	\$23,362.50
Contingency (20%)	\$93,450.00	LS	1	\$93,450.00
TOTAL				\$584,062.50

**TOWN OF LAKEVIEW TRANSPORTATION SYSTEM PLAN
IMPROVEMENT OPTIONS COST ESTIMATES**

Item Description	Cost/Unit	Unit	Number of Units	Total
<i>Construct new sidewalks and ADA-compliant curbs along US 395 from South 9th street to South 12th Street</i>				
Concrete Sidewalks	\$24.00	LF	4,000	\$96,000.00
Mobilization	\$5,000.00	LS	1	\$5,000.00
Concrete Sidewalk Ramps	\$500.00	EACH	8	\$4,000.00
SUBTOTAL				\$105,000.00
Engineering (5%)	\$5,250.00	LS	1	\$5,250.00
Contingency (20%)	\$21,000.00	LS	1	\$21,000.00
TOTAL				\$131,250.00
<i>Reconstruct sidewalk and ADA ramps along H Street</i>				
Concrete Sidewalks	\$24.00	LF	6,400	\$153,600.00
Mobilization	\$9,305.00	LS	1	\$9,305.00
Concrete Sidewalk Ramps	\$500.00	EACH	65	\$32,500.00
SUBTOTAL				\$195,405.00
Engineering (5%)	\$9,770.25	LS	1	\$9,770.25
Contingency (20%)	\$39,081.00	LS	1	\$39,081.00
TOTAL				\$244,256.25
<i>Add ADA ramps to downtown area</i>				
Concrete Sidewalks	\$24.00	LF	250	\$6,000.00
Mobilization	\$1,550.00	LS	0	\$1,550.00
Concrete Sidewalk Ramps	\$500.00	EACH	50	\$25,000.00
SUBTOTAL				\$32,550.00
Engineering (5%)	\$1,627.50	LS	1	\$1,627.50
Contingency (20%)	\$6,510.00	LS	1	\$6,510.00
TOTAL				\$40,687.50
<i>Add bicycle parking</i>				
Signs in Place	\$150.00	EACH	6	\$900.00
Bicycle Racks	\$200.00	EACH	14	\$2,800.00
TOTAL				\$3,700.00

**TOWN OF LAKEVIEW TRANSPORTATION SYSTEM PLAN
IMPROVEMENT OPTIONS COST ESTIMATES**

Item Description	Cost/Unit	Unit	Number of Units	Total
<i>Pave County Road 1-14 (extension of E Street) from South 9th Street to US 395</i>				
2" Asphalt & 4" Base Rock	\$10.00	SY	24,548	\$245,480.00
Mobilization	\$12,427.43	LS	1	\$12,427.43
Pavement Stripping	\$0.50	FT	6,137	\$3,068.50
SUBTOTAL				\$260,975.93
Engineering (5%)	\$13,048.80	LS	1	\$13,048.80
Contingency (20%)	\$52,195.19	LS	1	\$52,195.19
TOTAL				\$326,219.91
TOTAL (CMAQ Grant)				\$150,000.00
<i>Pave County Road 2-18 west of Roberta Avenue and Missouri Avenue Intersection north to DOC Work Camp.</i>				
2" Asphalt & 4" Base Rock	\$10.00	SY	34,918	\$349,180.00
Mobilization	\$17,677.25	LS	1	\$17,677.25
Pavement Stripping	\$0.50	FT	8,730	\$4,365.00
SUBTOTAL				\$371,222.25
Engineering (5%)	\$18,561.11	LS	1	\$18,561.11
Contingency (20%)	\$74,244.45	LS	1	\$74,244.45
TOTAL				\$464,027.81
TOTAL (CMAQ Grant)				\$300,000.00
<i>Pave County Road 1-14 from US 395 west 1/2 mile to M Street</i>				
2" Asphalt & 4" Base Rock	\$10.00	SY	8,128	\$81,280.00
Mobilization	\$4,114.80	LS	1	\$4,114.80
Pavement Stripping	\$0.50	FT	2,032	\$1,016.00
SUBTOTAL				\$86,410.80
Engineering (5%)	\$4,320.54	LS	1	\$4,320.54
Contingency (20%)	\$17,282.16	LS	1	\$17,282.16
TOTAL				\$108,013.50

**TOWN OF LAKEVIEW TRANSPORTATION SYSTEM PLAN
IMPROVEMENT OPTIONS COST ESTIMATES**

Item Description	Cost/Unit	Unit	Number of Units	Total
<i>Add storm drainage from O Street west to R Street (as estimated In the Town of Lakeview 2001 Pubic Facilities Plan)</i>				
Mobilization	\$10,000.00	LS	1	\$10,000.00
Temporary Traffic Control	\$4,000.00	LS	1	\$4,000.00
Trench excavation	\$3.00	LF	5,040	\$15,120.00
3/4"-0" Pipe Bedding and Pipe Zone-Storm	\$15.00	CY	1,500	\$22,500.00
30" HDPE Storm Main	\$45.00	LF	400	\$18,000.00
24" HDPE Storm Main	\$34.00	LF	800	\$27,200.00
18" HDPE Storm Main	\$23.00	LF	400	\$9,200.00
12" HDPE Storm Main	\$17.00	LF	1,720	\$29,240.00
8" HDPE Storm Laterals	\$13.00	LF	360	\$4,680.00
Storm Drain Catch Basin Assembly	\$1,200.00	EACH	25	\$30,000.00
Storm Drain Manhole Assembly	\$2,000.00	EACH	4	\$8,000.00
Asphalt Pavement Cutting	\$1.00	FT	2,400	\$2,400.00
Asphaly Replacement	\$65.00	TON	300	\$19,500.00
SUBTOTAL				\$199,840.00
Engineering (5%)	\$9,992.00	LS	1	\$9,992.00
Contingency (5%)	\$9,992.00	LS	1	\$9,992.00
TOTAL				\$219,824.00
<i>Add railroad crossings on South 3rd Street and South 9th Street</i>				
Warning Signals with Gate Arms	\$150,000.00	EACH	2	\$300,000.00
Mobilization	\$25,180.00	LS	1	\$25,180.00
Concrete Crossing Surfaces	\$100,000.00	EACH	2	\$200,000.00
Pavement Legend, RR Crossing Markers	\$750.00	EACH	4	\$3,000.00
Signs in Place	\$150.00	EACH	4	\$600.00
SUBTOTAL				\$528,780.00
Engineering (5%)	\$26,439.00	LS	1	\$26,439.00
Contingency (20%)	\$105,756.00	LS	1	\$105,756.00
TOTAL				\$660,975.00

**TOWN OF LAKEVIEW TRANSPORTATION SYSTEM PLAN
IMPROVEMENT OPTIONS COST ESTIMATES**

Item Description	Cost/Unit	Unit	Number of Units	Total
<i>Add planting strips with trees and street lighting along US 395 from North 9th Street to North 4th Street</i>				
Deciduous Trees (2" caliper, price includes labor and transport)	\$300.00	EACH	140	\$42,000.00
Mobilization	\$9,698.50	LS	1	\$9,698.50
Luminaries (installed)	\$3,000.00	EACH	42	\$126,000.00
Transformer for Luminaries	\$3,500.00	EACH	1	\$3,500.00
Landscaping (irrigation and grass in 5' planting strip)	\$5.35	LF	4,200	\$22,470.00
SUBTOTAL				\$203,668.50
Engineering (5%)	\$10,183.43	LS	1	\$10,183.43
Contingency (20%)	\$40,733.70	LS	1	\$40,733.70
TOTAL				\$254,585.63
<i>Construct sidewalks on west side of US 395 from North 9th Street to North 4th Street with curb extensions at 6th and 5th Street</i>				
Concert Sidewalks	\$24.00	SF	2,100	\$50,400.00
Curb Extensions	\$2,000.00	EACH	8	\$16,000.00
Mobilization	\$3,320.00	LS	1	\$3,320.00
SUBTOTAL				\$69,720.00
Engineering (5%)	\$3,486.00	LS	1	\$3,486.00
Contingency (20%)	\$13,944.00	LS	1	\$13,944.00
TOTAL				\$87,150.00
<i>Replace existing yield signs with stop signs</i>				
Remove and Replace Signs	\$100.00	EACH	12	\$1,200.00
TOTAL				\$1,200.00

**TOWN OF LAKEVIEW TRANSPORTATION SYSTEM PLAN
IMPROVEMENT OPTIONS COST ESTIMATES**

Item Description	Cost/Unit	Unit	Number of Units	Total
<i>Improve the function of existing public parking lots with improved signage and striping</i>				
Parking Stall Stripping (19' stall)	\$0.10	FT	3,000	\$300.00
Signs in Place	\$150.00	EACH	6	\$900.00
Mobilization	\$60.00	LS	1	\$60.00
SUBTOTAL				\$1,260.00
Engineering (5%)	\$63.00	LS	1	\$63.00
Contingency (20%)	\$252.00	LS	1	\$252.00
TOTAL				\$1,575.00
<i>Information campaign about downtown parking restrictions</i>				
Project Development	\$2,500.00	LS	1	\$2,500.00
Contingency (20%)	\$500.00	LS	1	\$500.00
TOTAL				\$3,000.00
<i>Establish and enforce limited time parking restrictions</i>				
Conduct a Parking Demand and Management Study	\$4,000	EACH	1	\$4,000.00
Parking Limit Signs in Place	\$150.00	EACH	70	\$10,500.00
Enforcement (\$25,000 per year staff)	\$25,000.00	LS	1	\$25,000.00
Contingency (20%)	\$7,900.00	LS	1	\$7,900.00
TOTAL				\$47,400.00

**TOWN OF LAKEVIEW TRANSPORTATION SYSTEM PLAN
IMPROVEMENT OPTIONS COST ESTIMATES**

Item Description	Cost/Unit	Unit	Number of Units	Total
<i>Construct new parking lot (200' x 80' for 55 spaces)</i>				
2" Asphalt & 4" Base Rock	\$10.00	SY	1,777	\$17,770.00
Land Purchase	\$50,000.00	PARCEL	1	\$50,000.00
Mobilization	\$3,696.00	LS	1	\$3,696.00
Clearing and Grubbing	\$5,000.00	LS	1	\$5,000.00
Parking Stall Stripping (19' stall)	\$0.10	FT	2,500	\$250.00
Signs in Place	\$150.00	EACH	6	\$900.00
SUBTOTAL				\$77,616.00
Landscaping (5%)	\$3,835.80	SF	1	\$3,835.80
Engineering (5%)	\$3,880.80	LS	1	\$3,880.80
Contingency (20%)	\$15,523.20	LS	1	\$15,523.20
TOTAL				\$100,855.80

APPENDIX F

TRANSPORTATION PLANNING RULE COMPLIANCE SUMMARY

APPENDIX F: TRANSPORTATION PLANNING RULE COMPLIANCE SUMMARY FOR THE TOWN OF LAKEVIEW

<i>660-12-045 Subsection</i>	<i>Provisions in proposed changes or existing Comprehensive Plan Goals and Policies</i>	<i>Provisions in proposed changes or existing Town of Lakeview Zoning Ordinances</i>	<i>Comments</i>
(1) Each local government shall amend its land use regulations to implement the TSP.	Provisions. Chapter 12.	Provisions. See Chapters 2, 3, 4, and 4.7.600 of the Town of Lakeview Zoning Ordinance (ordinance).	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(2) Ordinance provisions to protect transportation facilities, corridors, and sites.	N/A	Provisions. See Chapters 2, 3, 4, of the ordinance.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(a) Access control.	Provisions. Chapter 12.	Provisions. See ordinance 3.1.200.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(b) Protect future road and transit operation.	Provisions. Chapter 12.	Provisions. See ordinance 2.1.100, 3.1.200.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(c) Airport protection.	N/A	N/A	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(d) Coordinated land use decision and transportation review.	Provisions. Chapter 12.	Provisions. See ordinance Chapter 3.1 and 4.7.600.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(e) Conditions for development to minimize transportation impacts.	Provisions. Chapter 12.	Provisions. See ordinance Chapter 3.1.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(f) Agency notice regarding land use or land division, private access.	Provisions. Chapter 12.	Provisions. See ordinance 4.7.600.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(g) Plan/zone amendments consistent with TSP.	N/A	Provisions. See ordinance 4.7.600.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
660-12-045 Subsection			
(3) Ordinance provisions to provide safe and convenient pedestrian, bicycle, and vehicular circulation.	N/A	Provisions. See ordinance 2.1.1, 2.2.160, 2.2.170, 3.1.300, Chapter 3.4.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.

(a) Bicycle parking.	N/A	Provisions. See ordinance 3.3.400, Chapter 3.4.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(b) On-site facilities for pedestrian and bike access, sidewalks and bike lanes along streets, and minimize cul-de-sac use.	N/A	Provisions. See ordinance 2.2.160, 3.1.200, 3.1.300, Chapter 3.4.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(c) Off-site improvements shall include pedestrian and bicycle facilities.	N/A	Provisions. See ordinance Chapter 3.4.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(d) Safe and convenient means minimal hazards, reasonably direct, and 1/4-1/2 mi. for pedestrian trips.	N/A	Provisions. See ordinance 2.1.1, 2.1.100, 2.2.200, 3.1.300, Chapter 3.4.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(e) Internal pedestrian circulation within office parks and commercial developments.	N/A	Provisions. See ordinance 3.1.300, Chapter 3.4.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
660-12-045 Subsection			
(4) Ordinances to support transit.	N/A	N/A	Not required for the Town of Lakeview.
(a) Improvements to support transit use: bus stops, pullouts, shelters, street design, parking restrictions, etc.	N/A	N/A	Not required for the Town of Lakeview.
(b) Retail, office, and institutional development near transit shall provide connecting walkways in all cases and transit amenities at “major” transit stops.	N/A	N/A	Not required for the Town of Lakeview.
(c) Optional pedestrian districts to implement (4)(b).	N/A	N/A	Not required for the Town of Lakeview.
(d) Carpool/vanpool employee parking.	N/A	N/A	Not required for the Town of Lakeview.
(e) Existing development shall be allowed to convert some parking into transit-oriented uses.	N/A	N/A	Not required for the Town of Lakeview.
(f) New streets shall accommodate transit service and pedestrian access.	N/A	N/A	Not required for the Town of Lakeview.
(g) Supporting land uses and densities shall be provided along existing/planned transit routes.	N/A	N/A	Not required for the Town of Lakeview.
660-12-045 Subsection			

(5) Ordinances to reduce automobile reliance.	N/A	N/A	Not required for the Town of Lakeview.
(a) Transit-oriented developments along transit routes.	N/A	N/A	Not required for the Town of Lakeview.
(b) Demand management program in TSP.	N/A	N/A	Not required for the Town of Lakeview.
(c) Parking plan to reduce per capita parking by 10%, implement the TSP, and maximum parking standards.	N/A	N/A	Not required for the Town of Lakeview.
(d) Alternative to (5)(c) the city may adopt a variety of techniques to reduce parking requirements.	N/A	N/A	Not required for the Town of Lakeview.
(e) Require major industrial, institutional, and commercial developments to provide a bus stop or connection.	N/A	N/A	Not required for the Town of Lakeview.
660-12-045 Subsection			
(6) Bicycle and pedestrian circulation plan shall identify necessary improvements such as walkways, connections between destinations, etc.	Provisions. Chapter 12.	N/A	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.
(7) Street standards for local streets and accessways shall minimize right-of-way and pavement width consistent with operational needs.	Provisions. Chapter 12.	Provisions. See ordinance 3.4.100.	See Chapter 9 for recommended additions to the appropriate sections of the Town of Lakeview Comprehensive Plan and Zoning Ordinance.