



**Town of Lexington
Transportation System Plan**

February 2003



Town of Lexington Transportation System Plan

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Preface

Preface

This project is partially funded by a grant from the Transportation Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. TGM grants rely on federal Intermodal Surface Transportation Efficiency Act and Oregon Lottery funds. The contents of this document do not necessarily reflect the views or policies of the state of Oregon.

The progress of this plan was guided by the Management Team, Transportation Advisory Committee, and Consultant Team identified below.

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Advisory Committee members devoted a substantial amount of voluntary time and effort to the development of the Transportation System Plan, and their participation was instrumental in the development of the recommendations that are presented in this report. The Consultant Team and Management Team believe that the Town of Lexington's future transportation system will be better because of their commitment.

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Revisions of this document were conducted during 2002. With the help of a consultant, the Town of Lexington was able to accomplish revisions of this document, implement accompanying ordinances, and adopt this Transportation System Plan in December 2002.

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Section 1

Introduction

Introduction

The Town of Lexington, in conjunction with Morrow County and the Oregon Department of Transportation (ODOT) initiated a study of the town's transportation system during the summer of 1998. The purpose of this study was two-fold: to guide the management and development of appropriate transportation facilities; and to incorporate the vision of the community into a land use and transportation system that addresses both the potential for infill and redevelopment strategies and the multimodal needs of the community.

Since 1990, Lexington has experienced a modest growth rate as well as an economic restructuring as it has become less resource dependent. This economic restructuring will likely continue to produce new growth pressures and community needs. To address these changing needs, Lexington needs to develop land use and transportation strategies that continue to plan for the economic development associated with the existing agriculture and timber industries. Care should also be taken to continue to foster economic development associated with recreation and tourism.

This study was prepared as part of a Transportation Growth Management Grant and is formatted to provide the necessary elements for the Town of Lexington to assemble its Comprehensive Plan. In addition, this document provides Morrow County and ODOT with recommendations for incorporation with their respective planning efforts.

State of Oregon guidelines stipulate that the TSP must be based on the current comprehensive plan land use map and must provide a transportation system that accommodates the expected 20-year growth in population and employment that will result from implementation of the land use plan. Oregon Revised Statute 197.712 and the Land Conservation and Development Commission (LCDC) administrative rule known as the Transportation Planning Rule (TPR) require that all jurisdictions develop the following:

- a road plan for a network of arterial and collector streets;
- a public transit plan;
- a bicycle and pedestrian plan;
- an air, rail, water, and pipeline plan;
- a transportation finance plan; and,
- policies and ordinances for implementing the transportation system plan.

The TPR requires that alternative travel modes be given equal consideration and that reasonable effort be applied to the development and enhancement of the alternative modes in providing the future transportation system. In addition, the TPR requires that local jurisdictions adopt land use and subdivision ordinance amendments to protect transportation facilities and to provide bicycle and pedestrian facilities between residential, commercial, and employment/institutional areas. It is further stipulated that local communities coordinate their respective plans with county and state transportation plans.

STUDY AREA

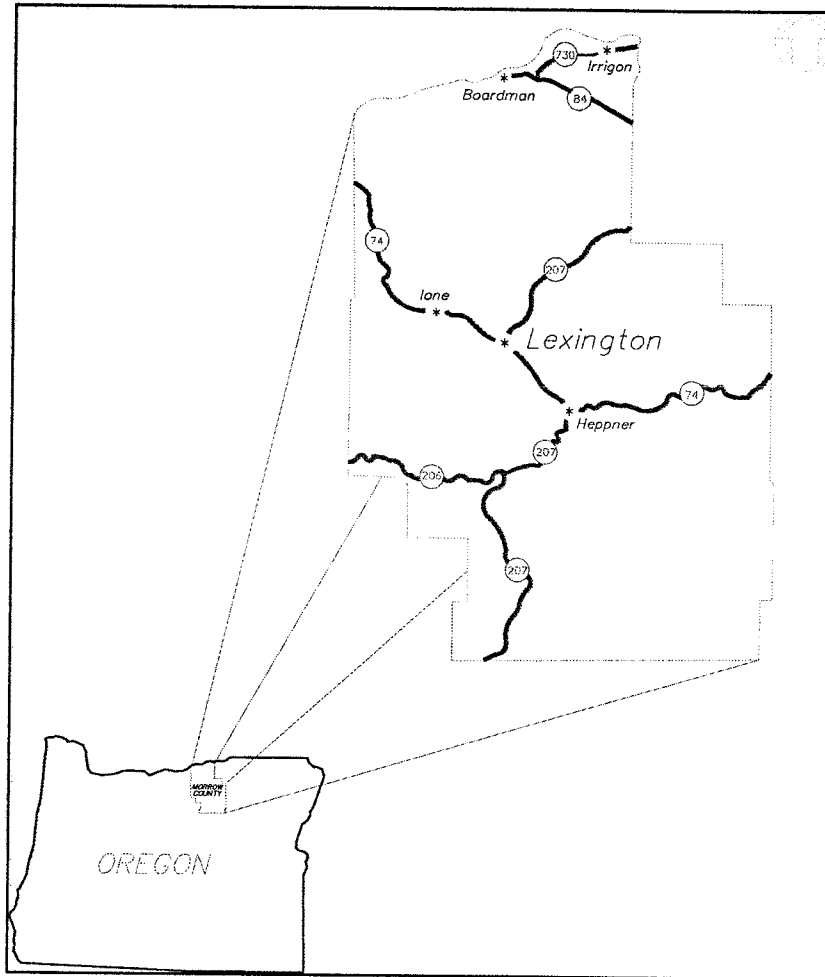
The Town of Lexington is located along Highway 74 in Morrow County, Oregon, as shown in Figure 1. Home to an estimated population of 290 persons (1997 census estimate), Lexington's development pattern reflects its agricultural heritage and remote location in eastern Oregon. The 2000 Census indicates that there is a population of 260 people. All traffic forecast was based on the 1997 population estimate.

While the Morrow County Grain Growers is the town's primary employer, the Main Street downtown area contains a mix of commercial, public, and residential uses.

Most of the commercial uses along Main Street are auto-oriented and of relatively low intensity. Reflecting the rural nature of the area, Lexington's residential development is all of low-density design. Single family homes on modest lots are located throughout the town. In general, future growth and development of the town is somewhat limited by topographical constraints and the availability of developable residential land within the town.

The Town of Lexington has a small airport located to the north of the town. Interest has been expressed by the Port of Morrow to develop an industrial park near the airport, though no plans for such a development have been formally proposed.

Figure 1 – Study Area Map



PUBLIC INVOLVEMENT AND STUDY GOALS

The TSP planning process provided the citizens of Lexington with the opportunity to identify their priorities for future growth and development. Expressing their vision for the future in terms of goals and objectives for the TSP was a central element of the public involvement process. The goals and objectives identified by the community were used as guidelines for developing and evaluating alternatives, selecting a preferred transportation plan, and prioritizing improvements.

Two committees were formed to guide the planning process: the Management Team and the Transportation Advisory Group (TAC). The Management Team was composed of representatives of the Town of Lexington, Morrow County, ODOT, and the consultant team. The Transportation Advisory Committee included several community members with a specific interest in transportation and land use planning in the community.

The two committees convened at several key junctures of the project including: project inception, completion of the existing conditions analysis, presentation of the future conditions and alternatives analysis findings, and presentation of the

draft TSP. Given the town's Comprehensive Plan, and through the direction provided by both the two TSP committees and the public hearing process, a series of transportation system goals and objectives evolved that provided the planning process with direction as well as evaluation criteria. Those goals and objectives are listed below.

Goal 1

Promote a balanced, safe, and efficient transportation system.

Objectives

1. Develop a multi-modal transportation system that avoids reliance upon one form of transportation as well as minimizes energy consumption and air quality impacts.
2. Protect the qualities of neighborhoods and the community.
3. Provide for adequate street capacity and optimum efficiency.
4. Promote adequate transportation linkages between residential, commercial, public, and industrial land uses.

Goal 2

Ensure the adequacy of the roadway network in terms of function, capacity, level of service, and safety.

Objectives

1. Develop a functional classification system that addresses all roadways within the study area.

2. In conjunction with the functional classification system, identify corresponding street standards that recognize the unique attributes of the local area.
3. Identify existing and potential future capacity constraints and develop strategies to address those constraints, including potential intersection improvements, future roadway needs, and future street connections.
4. Evaluate the need for modifications to and/or the addition of traffic control devices.
5. Identify access spacing standards on Highway 74 and Highway 207 that conform to the Oregon Highway Plan.
6. Provide an acceptable level of service at all intersections in the town, recognizing the rural character of the area. Intersection operations on Highway 74 and Highway 207 should conform to the level of service and volume/capacity ratio requirements identified in the Oregon Highway Plan.
7. Identify existing and potential future safety concerns as well as strategies to address those concerns.

Goal 3

Promote alternative modes of transportation.

Objectives

1. Develop a comprehensive system of pedestrian and bicycle routes that link major activity centers within the study area.
2. Encourage the continued use of public transportation services.

Goal 4

Identify and prioritize transportation improvement needs in the Town of Lexington, and identify a set of reliable funding sources that can be applied to these improvements.

Objectives

1. Develop a prioritized list of transportation improvement needs in the study area.
2. Develop construction cost estimates for the identified projects.
3. Evaluate the adequacy of existing funding sources to serve projected improvement needs.
4. Evaluate new innovative funding sources for transportation improvements.

TRANSPORTATION SYSTEM PLAN STUDY METHODOLOGY AND ORGANIZATION

The development of the Town of Lexington's Transportation System Plan began with an inventory of the existing transportation system and a review of the local, regional, and statewide plans and policies that guide land use and transportation planning in the town (Appendix "A" contains the plans and policies review). The inventory included documentation of all transportation-related facilities within the study area and allowed for an objective assessment of the current system's physical characteristics, operational performance, safety, deficiencies, and general function. A description of the inventory process, as well as documentation of the existing conditions analyses and their implications, is presented in **Section 2** of this report. The findings of the existing conditions analysis were presented to and verified by the two TSP committees.

Upon completion of the existing conditions analysis, the focus of the project shifted to forecasting future travel demand and the corresponding long-term future transportation system needs. Development of long-term (year 2020) transportation system forecasts relied heavily on population and employment growth projections for the study area and review of historical growth in the area. Through the Town's Comprehensive Plan and land use projections provided by the consultant team, reasonable assumptions could be drawn as to the potential for and location of future development activities. **Section 3** of this report, *Future Conditions Analysis*, details the development of anticipated long-term future transportation needs within the study area.

Section 4 of this report, *Alternatives Analysis*, documents the development and prioritization of alternative measures to mitigate identified safety and capacity deficiencies, as well as projects that would enhance the multi-modal features of the local transportation system. The process by which future transportation system projects were identified and prioritized included extensive cooperation with both TSP committees. The impact of each of the identified alternatives was considered on the basis of individual merits, conformance with the existing transportation and land use system, as well as potential conflicts to implementation and integration with the surrounding transportation and land use system components. Ultimately, a preferred

plan was developed that reflected a consensus as to which elements should be incorporated into the town's long-term transportation system.

Having identified a preferred set of alternatives, the next phase of the TSP planning process involved presenting and refining the individual elements of the transportation system plan through a series of decisions and recommendations. The recommendations identified in **Section 5, *Transportation System Plan***, include a Roadway Network and Functional Classification Plan, a Pedestrian Plan, a Bikeway Plan, a Public Transportation Plan, and other multi-modal plans.

Section 6, *Transportation Funding Plan*, provides an analysis and summary of the alternative funding sources available to finance the identified transportation system improvements.

The town's existing comprehensive plan and zoning ordinances were limited and did not allow the town to develop the type of transportation system desired. In an effort to rectify this situation and ensure compliance with the TPR, several comprehensive plan and zoning ordinance modifications have been developed. Development review guidelines were also drafted. The recommended modifications presented in **Section 7, *Policies and Land Use Ordinance Modifications***, address major land use and transportation issues identified through development of the TSP and reflect the desire to enhance all modes of the transportation system.

Finally, **Section 8, *Transportation Planning Rule Compliance***, lists the requirements and recommendations of the Oregon Transportation Planning Rule (OAR 660 Division 12) and identifies how the Town of Lexington TSP satisfies that criterion.

The town did not adopt the TSP draft prepared in 1999, due to unresolved concerns about the future of the Town. The Town initiated additional review of the draft TSP document in 2002, revised portions of the document and the accompanying ordinances, and adopted the TSP with the ordinances in November 2002.

Section 2

Existing Conditions

INTRODUCTION

The development of this transportation system plan began with an assessment of the existing transportation system and land use conditions within the community. This section describes the existing conditions for all transportation modes that the transportation system plan will address, including trucks, cars, bicycles, pedestrians, transit, air, marine, and pipeline facilities. The purpose of this section is to provide an inventory description of existing facilities while setting the stage for a basis of comparison to future conditions.

LAND USE HISTORY

The Lexington community began in the 1860's as a sheep camp associated with sheep and wool enterprises located at the mouth of the Black Horse Canyon. The early years of the community reflected the local economy's dependence on livestock production until a transition was made to grain growing in the 1880's. Since that time, the local economy has primarily been dependent on wheat production that steadily increased after the introduction of center-pivot irrigation techniques. The Lexington Airport was built in the town after World War II.

Lexington's relatively remote location in eastern Oregon and dependence on the local agricultural industry has shaped the community's land use patterns and transportation system. Most of the commercial uses along Main Street are auto-oriented and of relatively low intensity. Reflecting the rural nature of the area, Lexington's residential development is all of low-density design. Single family homes on modest lots are located throughout the town. In general, future growth and development of the town is somewhat limited by topographical constraints and the availability of developable residential land within the town. Figure 2 illustrates the current zoning within the town.

The town's airport is operational and interest has been expressed by the Port of Morrow to develop an industrial park near the airport, though no plans for such a development have been formally proposed.

TRANSPORTATION FACILITIES

The Town of Lexington's transportation system includes facilities that serve several different travel modes. All of these facilities are identified and discussed in detail in the remainder of this section.

Roadway Facilities

All public roadways within the Town of Lexington are operated and maintained under the auspices of one of three jurisdictions – the Oregon Department of Transportation (ODOT), Morrow County, and/or the town. The following paragraphs highlight the existing roadway network, which is illustrated in Figure 3. Figure 3 also identifies the jurisdiction responsible for the various roadways.

State Facilities

The Town of Lexington is served by two state highways, Highway 74 and Highway 207.

Highway 74

Highway 74 (Heppner Highway) comprises Main Street in the Town of Lexington and is maintained by the Oregon Department of Transportation (ODOT). ODOT classifies Highway 74 as being a *District Highway* north of Highway 207 and a *Regional Highway* south of Highway 207 as described in ODOT's 1999 *Oregon Highway Plan*.

The primary function of a *Regional Highway* is to provide connections and links to areas within regions of the state, between small urbanized and larger population centers, and to other facilities. By comparison, the primary function of a *District Highway* is to serve local traffic and land access.

Highway 74 connects Lexington with Interstate 84 and the City of Ione to the northwest and the City of Heppner to the southeast. Highway 74 has a two-lane cross section and posted speed limit of 30 miles per hour (mph) throughout the town. The speed limit increases to 55 mph outside the town limits. Sidewalks are provided intermittently within the town limits along the north side of the highway. No bike lanes are provided along the highway within the town's urban growth boundary.

Highway 207

Highway 207, the Lexington-Echo Highway, is classified as a *Regional Highway*. Highway 207 provides a continuous link between the Town of Lexington and Interstate 84 to the northeast. Highway 207 continues to the southeast of Lexington in

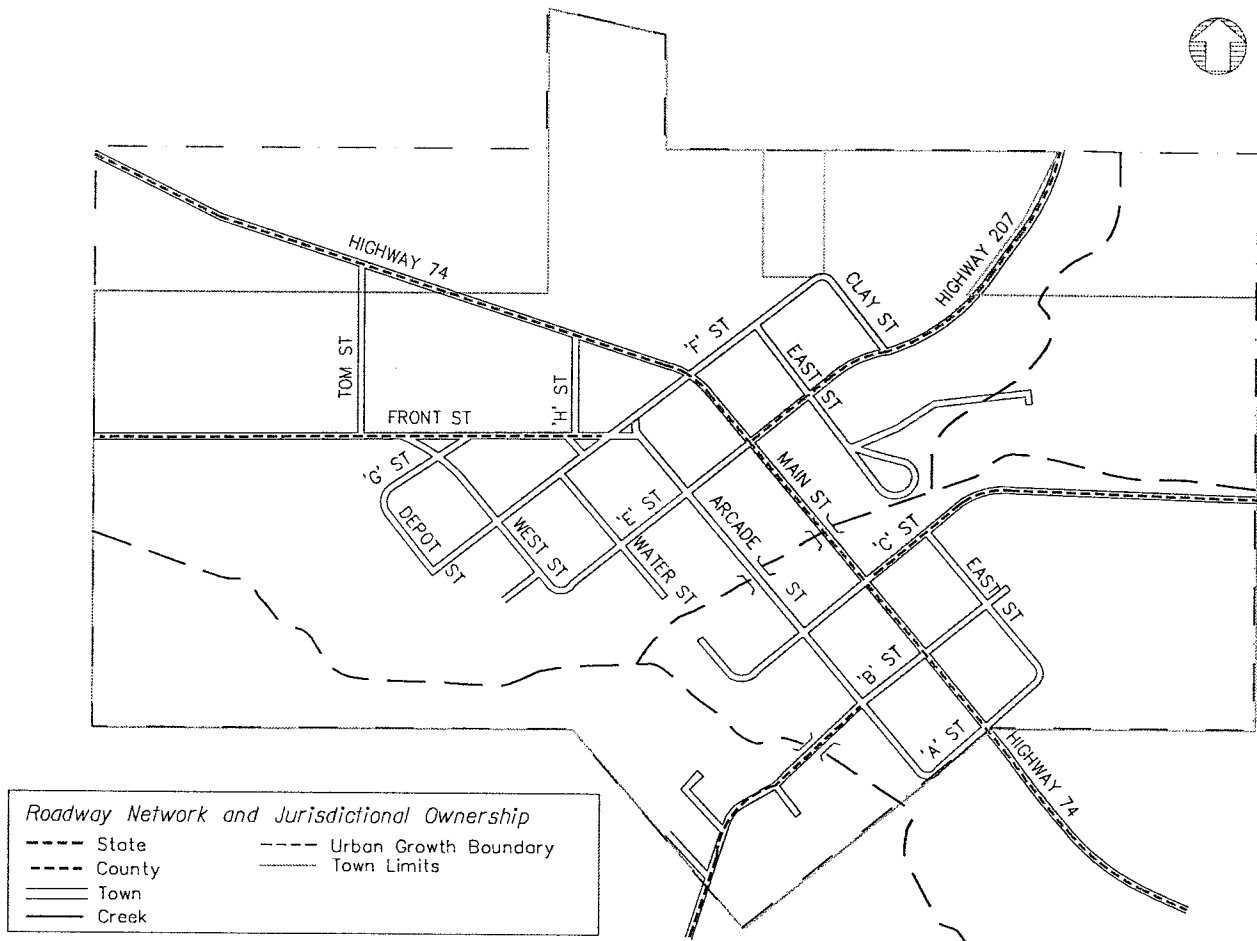
conjunction with Highway 74 and serves as a city-to-city link between such neighboring communities as Heppner and Hermiston. (Note: The section of Highway 207 that traverses the Town of Lexington is also designated as Highway 74).

Town of Lexington Facilities

The Town of Lexington's roadway system has a loosely defined grid network of streets that are oriented parallel to Highway 74 and 207. From that grid, several streets then branch out to serve the town. The local roadway system is confined by topographical constraints and seasonal flooding associated with the Blackhorse Canyon. "C" Street is subject to occasional flooding.

Figure 2 identifies the location of paved and unpaved roads within the town limits. As indicated in Figure 4, portions of Clay Street, East Street, "D" Street, "H" Street, "G" Street, and Depot Street are currently unpaved. No striped on-street parking was identified within the community and the Town of Lexington does not currently maintain a defined street classification system.

Figure 2 – Roadway Network and Jurisdictional Ownership



PEDESTRIAN SYSTEM

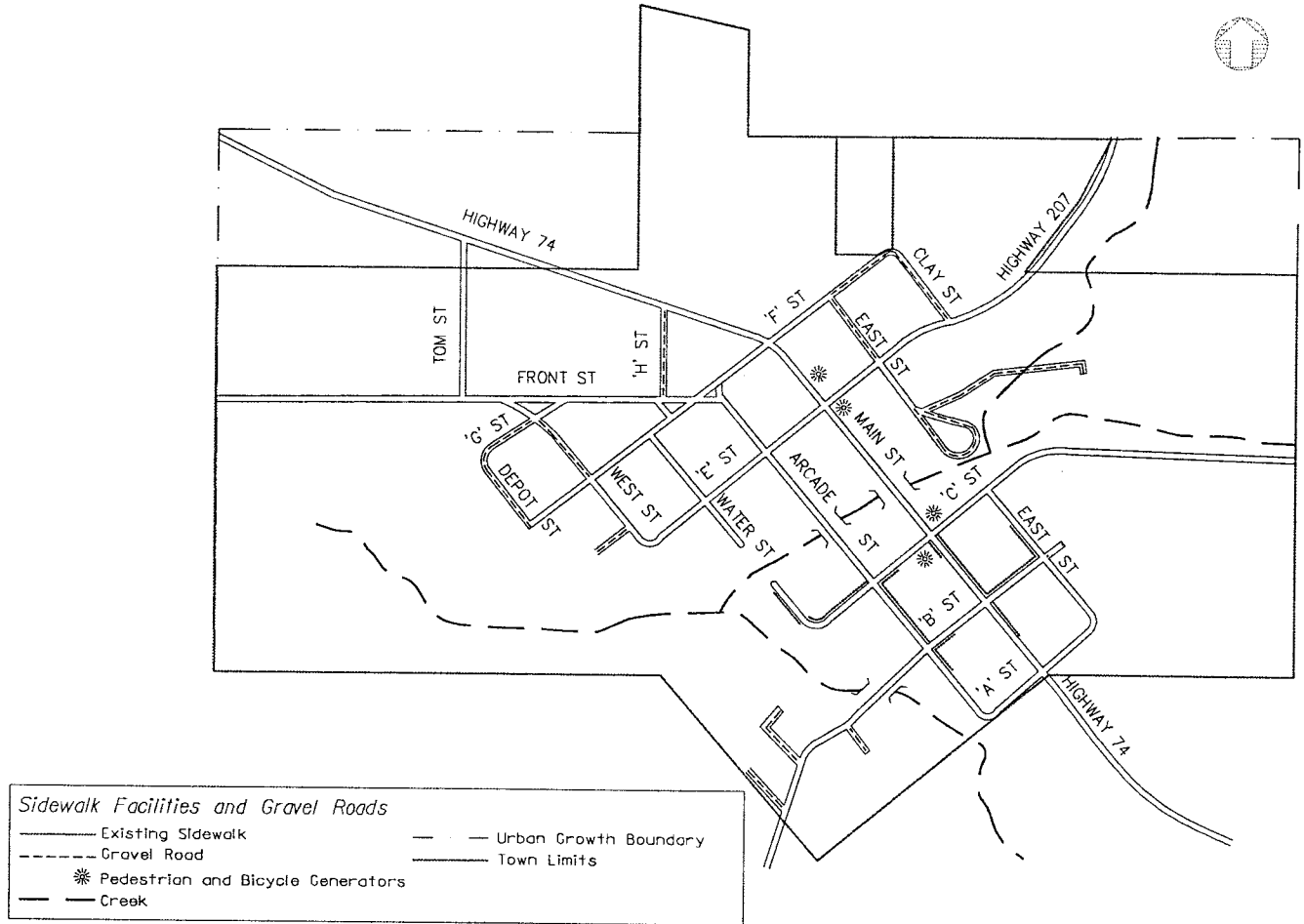
As shown in Figure 3, the sidewalk facilities provided within the town are relatively limited. Sidewalks are currently present on the west side of "B" Street, "C" south of Highway 74, along a portion of East Street, and along the north side of Main Street. Some of the existing sidewalks are poorly maintained and do not satisfy current ODOT or Americans with Disability Act (ADA) design standards. Beyond these facilities, Lexington's pedestrian network relies almost exclusively on shared roadways along both arterial and local streets. The bridge and the cut bank next to the Morrow County School District office offer major constraints for the pedestrian system.

Ideally, pedestrian facilities should provide connectivity between major activity centers, such as housing, commercial areas, schools, the post office, and recreation areas. Students within the town of Lexington attend classes in neighboring communities such as Ione or Heppner, thereby negating the need to provide school access. However, commercial land uses located along Main Street have the potential to attract pedestrian traffic.

BICYCLE SYSTEM

The Town of Lexington does not currently offer designated bicycle facilities and very little bicycle activity was noted. Topographical constraints and the remote location of the town in relation to trip generators limit the attractiveness of this mode of transportation for commuter purposes. There may however, be children or recreational bicyclists in the area that would benefit from provision of such facilities. In addition, there is a bike road race held annually in May along Highway 74. The bridge and the cut bank next to the Morrow County School District office offer major constraints for the bicycle system.

Figure 3 – Location of Existing Sidewalk Facilities and Gravel Roads



PUBLIC TRANSPORTATION SYSTEM

Morrow County Special Transportation Program

Morrow County currently provides two public transportation programs that serve the Town of Lexington. A senior bus service is available to groups by appointment and provides service for seniors, disabled persons, and low-income persons. Other users are welcome as long as they do not displace the primary users (i.e., seniors, the disabled, and the disadvantaged). A dial-a-ride service is also available by appointment to serve the same audience. Both programs are funded through the tobacco tax and rely on a volunteer pool of drivers.

Volunteer dispatchers handle appointment requests on weekdays and the actual transportation service is available as needed except on holidays (pending the availability of volunteer drivers. The transportation service is free to users, although anonymous donations are accepted by sealed envelope. Trip requests outside the county to areas such as Pendleton or the Tri-cities are honored as long as the purpose of the trip is appropriate (for example, trips to specialized medical service providers located in Pendleton). While increased usage of these services is desirable, there are no current or pending plans to expand public transportation services to the area.

General Comments

The county's transit program does not typically operate on weekends due to the nature of the volunteer staff pool and the limited demand for trips. Instead, if there is a need for handicapped accessible service on weekends, family members of the person to be transported can be van-trained and (once qualified) are then allowed to operate the vehicles.

Discussions with local agency staff indicate that the two public transportation services are not as well used as they could be. A commonly repeated theme was the notion that there is a need to create greater awareness of the programs among community members. The need for additional volunteer staff was also noted. Aside from the identified services, for most of the town's residents, private transportation is the only available option to get to the local medical, social, and retail services and the educational and employment opportunities located in adjacent communities. Although enhanced service is desired, no segment of the town's population was specifically identified as being without transportation service.

AIR TRANSPORTATION SYSTEM

The Lexington Airport is located on the north side of the town and provides local air service. The airport is estimated to support approximately 2,500 flight operations per year, with fourteen aircraft based at the airport. In addition to typical charter and transport services, the airport also serves recreational interests such as hunting and fishing activities as well as medivac needs. The airport's single runway, Runway 08-26, has an asphalt surface that measures 4,150 feet in length and 75 feet in width. Efforts have begun to have the Federal Aviation Administration develop a Global Positioning Satellite instrument approach to the Lexington Airport.

Regional freight cargo and air passenger services are provided at the Eastern Oregon Regional Airport at Pendleton, located approximately 80 miles to the northeast. In addition, the City of Hermiston owns and operates a general aviation airport located approximately 55 miles to the northeast that offers charter service.

Due to the elevation and location of the airport relative to the Town, there is not a need for regulation at this time.

RAILROAD TRANSPORTATION SYSTEM

Railroad service is no longer provided to the Town of Lexington. The former railroad right-of-way within the town has been purchased by a private concern; plans for the use of the right-of-way are unknown at this time.

Freight rail service would potentially be available through the Port of Morrow, though intermediate non-rail transport to the Port of Morrow would be necessary. Shippers in the area have the use of two inter-modal facilities, located in Spokane, Washington and Nampa, Idaho.

Passenger rail service to Hermiston was discontinued in May 1997. The nearest service is provided by Empire Builder line (Portland – Spokane) in Pasco, Washington, approximately 40 miles to the north.

MARINE TRANSPORTATION SYSTEM

Marine transportation is not available within the Town of Lexington, though the Port of Morrow maintains a barge area along the Columbia River in Boardman, Oregon. Similarly, The Port of Umatilla maintains two marine facilities along the Columbia River. These facilities are available for use by persons in the Town of Lexington through intermediate truck transfer.

PIPELINE TRANSPORTATION SYSTEM

No major pipelines within the Town of Lexington were identified at the time this TSP was prepared.

TRAFFIC OPERATIONS ANALYSIS

Four intersections within the town were selected for operational analysis under 1998 existing conditions. Traveling west to east, those intersections include Heppner Highway (Main Street) and:

- Tom Street
- E Street (Lexington-Echo Highway)
- C Street
- B Street

Traffic Control

Figure 4 illustrates the existing lane configurations and traffic control devices at each of the study intersections, all of which are currently unsignalized. Traffic operations at each of the intersections were examined during the weekday p.m. peak hour. The p.m. peak period represents the worst-case condition for traffic operations on the transportation system. Travel patterns during this weekday period typically combine commuting, shopping, and recreational trips, thus generating higher traffic volumes on the transportation system than during any other period or day of the week.

Traffic Volumes

Weekday p.m. peak hour manual traffic volume counts at the intersections were conducted in late October 1998. Manual turning movement traffic counts were conducted between 4:00 p.m. and 5:30 p.m. on a mid-week day. The highest one-hour flows during these periods were used in this study.

Based on the turning movement counts conducted at study area intersections, the system wide p.m. peak hour of traffic on a typical weekday afternoon was estimated to occur between 4:00 and 5:00 p.m. Existing weekday p.m. peak hour traffic volumes are shown in Figure 5. Traffic volumes have been rounded to the nearest five vehicles per hour. For comparative purposes, local average daily traffic (ADT) volume data obtained from ODOT are summarized in Figure 6.

It should be noted that the October 1998 traffic volume data shown in Figure 5 were not adjusted. Comparison to the ODOT 1997 Transportation Volume Tables shown in Figure 5 suggests that the traffic volume data collected in October 1998 were lower than would be expected based on ODOT's historical data. There were no significant anomalies noted during the October data collection process and the traffic volume data were believed to be representative of travel conditions, as they existed during the data collection period. It is conceivable that fluctuations in harvest activities may partially explain the inconsistency in the volume data as the harvest process was essentially complete at the time the volume data was collected. Further, the local hunting season had not started, potentially contributing to the lower traffic volumes. Based on a review of the volume data collected in October 1998 and ODOT's 1997 traffic volume data, in conjunction with a review of the operational analysis of the study intersections, it was concluded that the existing conditions analysis findings are representative of average conditions in the Town of Lexington. As is documented below, there were no apparent capacity deficiencies at the study intersections and further refinement of the existing traffic volumes was determined to be unwarranted.

Figure 4 – Existing Lane Configurations and Traffic Control Devices

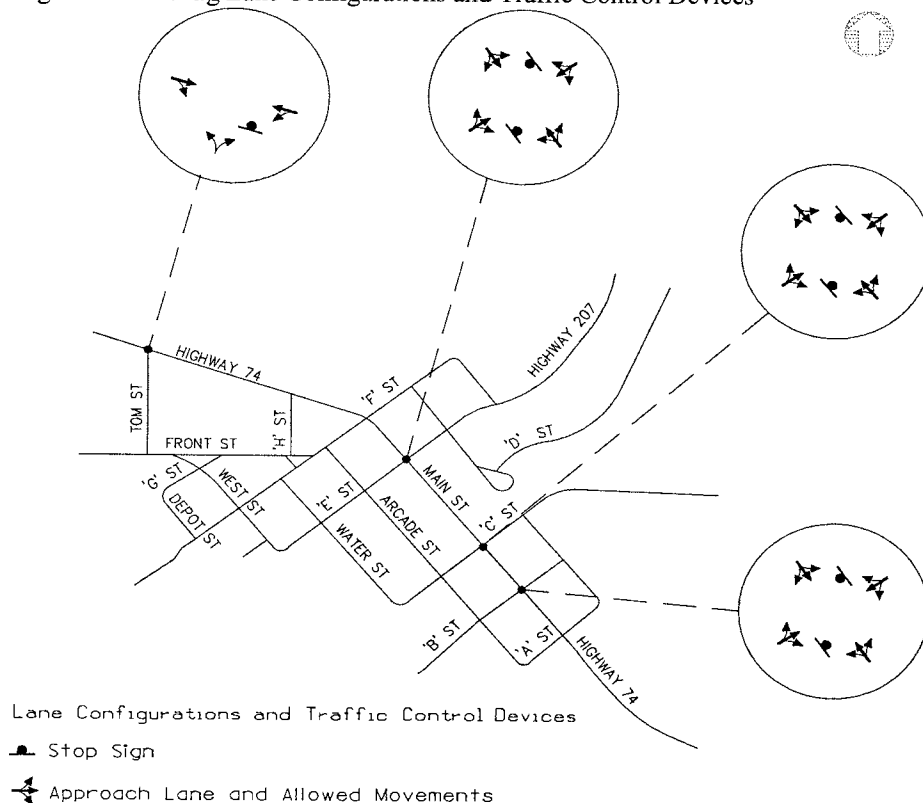


Figure 5 – 1998 Traffic Volumes, Weekday PM Peak Hour

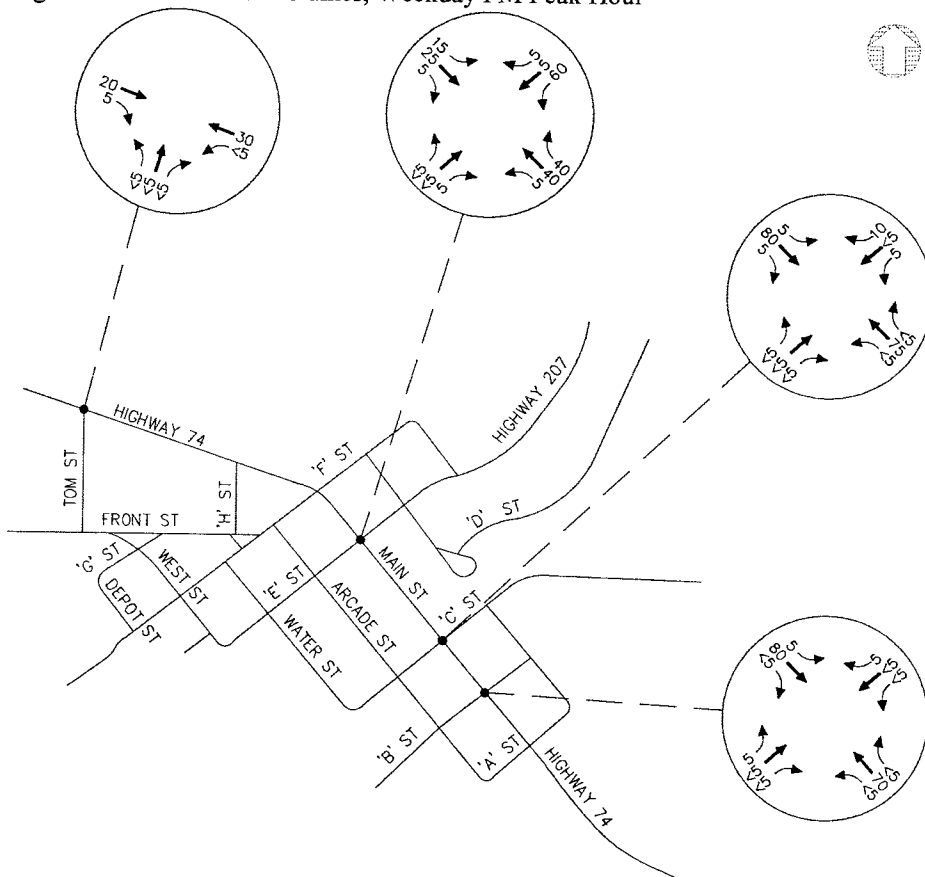
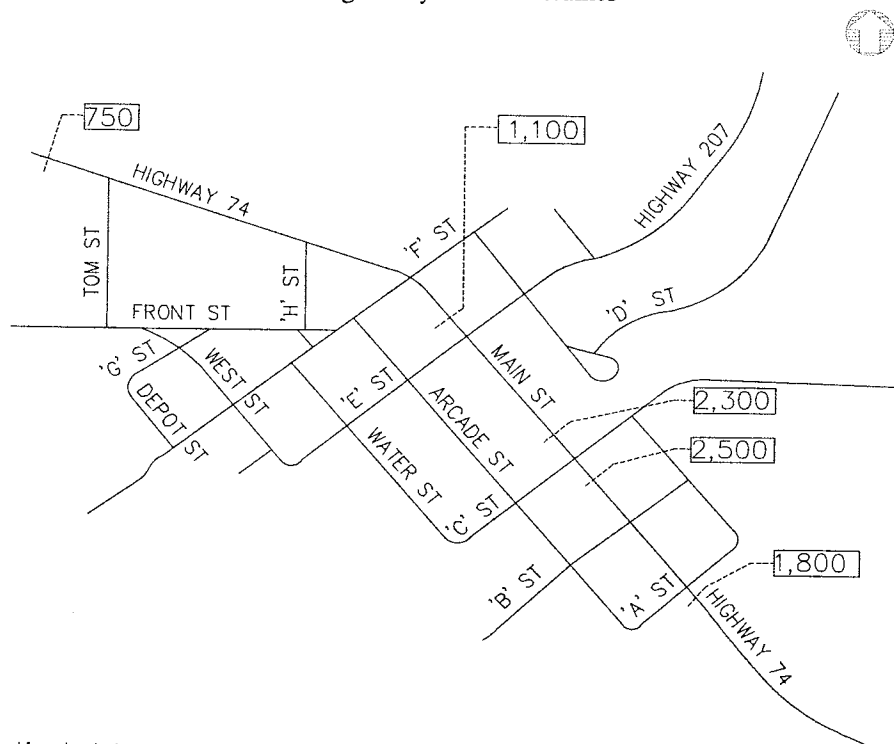


Figure 6 – 1997 Estimated Average Daily Traffic Volumes



Estimated Average Daily
 Traffic Volumes (1997)

NOTE: TRAFFIC VOLUME DATA BASED ON 1997 ODOT TRANSPORTATION VOLUME TABLES

Level of Service and Volume to Capacity Ratio Analysis

Transportation engineers have established various standards for measuring traffic capacity of roadways or intersections. Each standard is associated with a particular level of service (LOS). The LOS concept summarized in Appendix B, requires consideration of factors that include travel speed, delay, frequency of interruptions in traffic flow, relative freedom for traffic maneuvers, driving comfort and convenience, and operating cost. In the 1991 Oregon Highway Plan, levels of service were defined by a letter grade from A-F, with each grade representing a range of volume to capacity (v/c) ratios. A volume to capacity ratio (v/c) is the peak hour traffic volume on a highway divided by the maximum volume that the highway can handle. If traffic volume entering a highway section exceeds the section's capacity, then disruptions in traffic flow will occur, reducing the level of service. LOS A represents relatively free-flowing traffic and LOS F represents conditions where the street system is totally saturated with traffic and movement is very difficult. The 1999 Oregon Highway Plan maintains a similar concept for measuring highway performance, but represents LOS by specific v/c ratios to improve clarity and ease of implementation. Table 1 presents the level of service criteria and the corresponding volume to capacity ratio for arterial and collector streets.

Table 1 – Level of Service and Volume to Capacity Ratio Criteria for Arterial and Collector Streets

Service Level – Volume to Capacity Ratio	Typical Traffic Flow Conditions
A (0.00 – 0.48)	Relatively free flow of traffic with some stops at signalized or stop sign controlled intersections. Average speeds would be at least 30 miles per hour.
B (0.49 – 0.59)	Stable traffic flow with slight delays at signalized or stop sign controlled intersections. Average speed would vary between 25 and 30 miles per hour
C (0.60 – 0.69) C-D (0.70 – 0.73)	Stable traffic flow with delays at signalized or stop sign controlled intersections. Delays are greater than at level B but still acceptable to the motorist. The average speeds would vary between 20 and 25 miles per hour
D (0.74 – 0.83) D-E (0.84 – 0.87)	Traffic flow would approach unstable operating conditions. Delays at signalized or stop sign controlled intersections would be tolerable and could include waiting through several signal cycles for some motorists. The average speed would vary between 15 and 20 miles per hour.
E (0.88 – 0.97) E-F (0.98 – 0.99)	Traffic flow would be unstable with congestion and intolerable delays to motorists. The average speed would be approximately 10 to 15 miles per hour.
F (> 1.00)	Traffic flow would be forced and jammed with stop and go operating conditions and intolerable delays. The average speed would be less than 10 miles per hour

Source(s): Transportation Research Board, *Highway Capacity Manual*, Special Report 209; ODOT, *SIGCAP Users Manual*, ODOT, 1984

Using the weekday p.m. peak hour turning movement volumes shown in Figure 5, an operational analysis was conducted at each of the study area intersections to determine existing levels of service. All level of service analyses described in this study was conducted in accordance with the *1994 Highway Capacity Manual*, published by the Transportation Research Board.

To ensure that this analysis was based on a reasonable worst-case scenario, the peak 15 minute flow rate during the weekday p.m. peak hour was used in the evaluation of all intersection level of service and volume to capacity ratio analyses. For this reason, the analyses reflect conditions that are only likely to occur for 15 minutes out of each average weekday p.m. peak hour. Traffic conditions during all other weekday periods will likely operate under better conditions than those described in this report. (It should be noted that peak seasonal traffic conditions typically occur during the summer harvest season, hence Design Hour Volumes may be up to 25 percent higher than the peak hour analyzed in the TSP.)

Unsignalized Intersections

For unsignalized two-way stop-controlled (TWSC) intersections, level of service (LOS) is based on an intersection's capacity to accommodate the worst, or critical, movement. Typically, the left-turn from the stop-controlled approach is the most difficult movement for drivers to complete at a TWSC intersection. This is due to this movement being exposed to the greatest potential number of conflicting, higher-priority movements at the intersection. Available gaps in the through traffic flow of the uncontrolled approach(es) are used by all other conflicting movements before the side street left-turn can be negotiated. Therefore, the number of available gaps for the side street left-turn to negotiate its movement safely is likely to be substantially

lower than any other movement. As a result, the side-street left-turn typically experiences the highest delays and the worst level of service.

For the Highway 74 corridor through the Town of Lexington South of Highway 207 and Highway 207, ODOT stipulates a maximum volume to capacity ratio of 0.80 south of Highway 207. For the segment of Highway 74 north of Highway 207, a maximum volume to capacity ratio of 0.85 is required to be maintained. Table 2 summarizes the level of service and the volume to capacity ratio results for the unsignalized study intersections.

Table 2 – 1998 PM Peak Hour Level of Service and Volume to Capacity Ratio, Unsignalized Intersections

Intersection	Critical Movement	V/C Ratio	Average Delay (sec/veh)	Critical Movement LOS	Major Street LOS
Tom Street/Highway 74	Northbound	0.01	3.3	A	A
E Street/Highway 74	Southbound	0.01	4.5	A	A
C Street/Highway 74	Northbound	0.01	3.9	A	A
D Street/Highway 74	Northbound	0.01	3.9	A	A

Legend: LOS = Level of Service, V/C = Volume/Capacity Ratio

As Table 2 indicates, all of the unsignalized study area intersections operate well below maximum volume to capacity ratios under existing weekday p.m. peak hour conditions.

In reviewing the level of service analysis and volume to capacity ratio results, it should be noted that the presence of trucks at the study intersections was accounted for in the analysis based on the October 1998 traffic count data. The October 1998 traffic count data indicates that the percentage of trucks on Highway 74 was approximately four percent on the north end of town and ranged from four to ten percent (eastbound vs. westbound) south of Highway 207. The percentage of trucks is somewhat lower than that reported at the Lexington ATR but it should be recognized that the ATR is located 1.4 miles south of Lexington and does not include local trips made internal to the town by area residents.

TRAFFIC SAFETY

Another important aspect of the transportation system is safety. The safety analysis described in the following section focuses on the accident history for Highway 74 within the Town of Lexington urban growth boundary.

Intersection Accident Analysis

The accident history of the study intersections was examined for potential and existing safety problems. ODOT accident data for the period January 1993 through December 1998 were used for this analysis. In addition, the ODOT District 12's 1996-1998 Safety Priority Index System (SPIS) lists were reviewed. The SPIS list identifies locations with relatively high accident rates and locations that have been the site of one or more fatal accidents. Review of the three respective annual SPIS lists indicates that no SPIS sites are located within the Town of Lexington.

Table 3 presents accident rates for the individual study intersections. Accident rates for intersections are calculated by relating the total entering volume of traffic at the intersection, on an average daily basis, to the number of reported accidents for a given period of time. The accident rate for intersections is expressed as the number of accidents per million entering vehicles (acc/mev).

Table 3 – Study Intersection Accident Rates

Intersection	Number of Accidents	Accidents/MEV
Tom Street/Highway 74	0	0
E Street/Highway 74	2	0.53
C Street/Highway 74	0	0
D Street/Highway 74	0	0

*ODOT Accident data search period of 1993 – 1998

As shown in Table 3, the accident data indicate that only the “E” Street/Highway 74 intersection had reported accidents. Further, both of the two reported accidents at the “E” Street intersection occurred in 1994. Based on this information, there is not an indication of a safety problem at the study intersections.

OTHER IDENTIFIED EXISTING TRANSPORTATION DEFICIENCIES

As an extension of the existing conditions analysis, different aspects of the transportation system with existing deficiencies were identified. A description of the deficiencies and potential improvements follows. The summary is based on field data/observations and information/suggestions that were made by members of the respective transportation agencies and the public.

Speeds on Highway 74

During the TSP development process, several community members expressed a desire to reduce speeds on Highway 74 as it passes through the town. Community sentiment reflects a common theme that many motorists and truckers drive too fast through town. The County Sheriff Department is the only police agency that currently enforces speed limits along Highway 74.

Highway 74 is operated and maintained by ODOT and the posted speed limit of 30 miles per hour on the highway through town is established by ODOT. ODOT (and most other transportation agencies) consider the 85th percentile speed (essentially the speed that 85 percent of the roadway users drive at or below) to be the best indicator of prevailing speeds on a given roadway. Posting speed limits based on the 85th percentile recognizes that drivers will travel at a speed that they are comfortable with regardless of the posted speed limit.

“F” Street/Front Street and “F” Street/Arcade Street Intersections

One issue that was identified by community members for consideration was the geometric configuration of the existing intersections of “F” Street/Front Street and “F” Street/Arcade Street. According to representatives of the town, modifications to this intersection have been made in the past but were found to be unsuccessful. At one point, a stop sign was posted on Front Street; however, this signing was later removed and a yield sign is currently posted on the eastbound approach of the intersection.

Access to Future Development

Although there has been a limited amount of new construction and development in the Town of Lexington during the last ten years, several areas have the potential to develop or redevelop during the next twenty years. These include a 74-acre residentially zoned parcel and the commercially zoned property near the airport. The accessibility of these areas is a concern for the community.

The 74-acre parcel of vacant land in the northeast quadrant of the town could potentially develop as large lot single family residential uses in the long-term. Access to a new residential subdivision on this parcel to the town’s street network would likely be from “C” Street. Similarly, there are large lots on the west end of Town south of Highway 74 that could be developed as residential housing in the long-term future.

In case of development of an industrial park or other industrial/commercial related uses near the airport, adequate transportation linkages would need to be made to Highway 207 and possibly Highway 74. Such connections would be necessary to accommodate goods movement into and out of the industrial area and airport and should include multimodal facilities that provide better access for pedestrians, cyclists, and motorists. Airport access from Highway 207 is limited due to sight distance restrictions to ensure safe ingress and egress from the state facility.

The town considers a conceptual future street plan that shows a conceptual access for these properties an important element of this TSP as identified in Figure 16.

Placement of Traffic Signing

The placement of some traffic signing within the Town of Lexington was also identified as a concern. Based on field inspection, it appears that some traffic control devices (e.g. stop and yield signs) and street name placards have been inappropriately installed in the past. The primary issue with respect to the signing is visibility. Many of the signs are not mounted at an appropriate height or at a visible location, making identification of street names difficult and potentially creating a hazardous situation. The placement of the traffic control devices represents a liability to the town if they are inappropriately installed (Placement standards are identified in the *Manual on Uniform Traffic Control Devices*).

SUMMARY

Through an inventory of existing conditions, several key findings were identified. Those findings include:

- The Town of Lexington's transportation system is comprised primarily of auto-oriented transportation facilities and is focused around Highway 74.
- Local topographical constraints, flood-prone areas near Blackhorse Canyon, and the lack of major transportation corridors in the area have shaped the town's transportation system and will continue to present constraints to both growth and transportation improvements.
- Existing sidewalk facilities within the town are limited and no bicycle facilities were identified.
- Public transit service is available in the form of a senior bus and dial-a-ride service provided through Morrow County.
- Local airport service is available through the Lexington Airport located on the north side of the town. Although the Port of Morrow is considering developing an industrial park near the airport, no plans have formalized to date.
- On a typical weekday afternoon, the transportation system experiences its peak roadway traffic demand between 4:00 and 5:00 p.m. During this peak period, the transportation system operates well within established standards.
- An evaluation of historical ODOT accident data at the study intersections did not identify any safety deficiencies.
- Other existing transportation concerns identified include speeds on Highway 74, the geometric configuration of the existing intersections of "F" Street/Front Street and "F" Street/Arcade Street, access to future development, and placement of traffic signing.
- A conceptual future street plan could identify potential street extensions to guarantee access and rights of way as properties develop.

Section 3

Future Conditions Analysis

Future Conditions Analysis

INTRODUCTION

This section presents estimates of long-term future travel conditions within the TSP study area. The long-term future transportation needs for the Town of Lexington were examined based on available employment and population forecasts, review of the proposed roadway network, review of the operational analysis of the existing street system, and discussions with regional transportation personnel and representatives from the Town of Lexington.

TRANSPORTATION DEMAND

Future transportation demand within the Town of Lexington was estimated based on expected growth in the study area population, employment, and traffic traveling through the study area for the horizon year 2020. Future growth estimates were developed based on historical traffic volume trends in the study area as well as consideration of the unique trip making characteristics of residential and employment-based activities. The estimation included a review of the land use mix proposed in the town's Comprehensive Plan.

As part of this analysis, planned developments and transportation improvement projects were identified and reviewed within the town's urban growth boundary. Historic transportation trends were compared with proposed future site-specific growth to arrive at a reasonable forecast condition.

Land Use/Demographics

Year 2020 traffic volumes on the Town of Lexington's transportation system were forecast based on population and employment estimates developed by the State of Oregon for Morrow County and the town. These estimates were compared against recent development trends, planned developments, and forecast growth rates provided by local agencies to verify their appropriateness. The 20-year planning horizon was chosen to ensure compliance with the Transportation Planning Rule.

Population and Employment

Tables 4 and 5 summarize population and employment projections prepared for the Town of Lexington in conjunction with the TSP process.

Table 4 – Population Projections

Year	1990	1997	2000	2002	2005	2010	2015	2020	1997-2020 Average
Town of Lexington Projections									
Projected Population	286	290	294	297	314	340	366	390	--
Annual Percent Change	--	0.2%	0.5%	0.5%	1.8%	1.6%	1.5%	1.3%	1.3%
Morrow County Projections									
Projected Population	--	9,895	11,131	12,039	12,701	13,750	14,812	15,801	--
Annual Percent Change	--	--	4.0%	4.0%	1.8%	1.6%	1.5%	1.3%	2.1%

Table 5 – Employment Projections

Year	1990	1997	2000	2002	2005	2010	2015	2020
Town of Lexington Projections								
Projected Employment	108	110	110	111	117	126	133	139
Annual Percent Change	--	0.3%	0.2%	0.2%	1.9%	1.5%	1.0%	0.9%
Morrow County Projections								
Projected Employment	2,232	2,924	3,283	3,449	3,613	3,890	4,097	4,290
Annual Percent Change	--	3.93%	3.93%	2.5%	1.6%	1.5%	1.0%	0.9%

As shown in Table 4, the Town of Lexington’s population is forecast to grow by an average annual rate of 1.3 percent (approximately 100 people) between 1997 (estimated population of 290) and 2020 (projected population of 390). Table 5 suggests a corresponding addition of 29 local employment opportunities between 1997 and 2020.

During the same period, the population of Morrow County is projected to increase by approximately 2.1 percent annually (from an estimated population of 9,895 in 1997 to a projected population of 15,801 in 2020). The countywide employment projects approximately 1,365 additional employment opportunities will become available over the same 23-year period.

The near-term growth projections for the Town of Lexington suggest relatively flat growth; only seven new residents and two employment opportunities are forecast for the five-year period between 1997 and 2002. The majority of the town’s growth is expected to occur during the last 18 years of the horizon period. The Town expects this trend to continue through the study period, unless some major factor changes, such as a new employer in or near the Town, installation of a sewer system, etc. In contrast, Morrow County is anticipating significant growth in the near-term horizon with the annual growth rate more closely paralleling Lexington’s after the year 2005.

While these assumptions are what the Towns’ traffic projections were based on, note that new figures from the 2000 Census show a population reduction to 260 persons. The Town anticipates that it is likely to continue to grow at a minimal rate of 0.5 percent. Census demographics also suggest an aging population. No new employment opportunities are likely soon, as the Town has no public sewer system.

These findings reflect the current development patterns being experienced in the area. Within the Town of Lexington, no significant development or employment activities are anticipated, suggesting that near-term future population increases will continue to be relatively small. While the Town of Lexington has not been the site of significant growth, there has been a recent acceleration in regional growth as suggested by the county’s population estimates. This regional growth phenomenon has been attributed to several new employment and development activities that have occurred in and around the county. This affects the Town of Lexington’s transportation system in the form of increased traffic volumes traveling through town on Highway 74 and Highway 207.

Additional information regarding the population and employment estimates is included in Appendix “C”.

Anticipated Future Growth

In an effort to account for regional traffic growth, a net annual growth rate was chosen to forecast the year 2020 traffic analysis. This rate was determined based on a review of historical traffic volume trends, anticipated population and employment growth, regional population densities, and local knowledge of planned development.

Historical Growth

ODOT maintains an automatic traffic recorder along Highway 74 that indicated a historical 2.3 percent average annual growth rate between 1960 and 1997 as shown in Figure 6. The recorder, Station 25-007, is located approximately 1.4 miles south of the Town of Lexington. While this location is not within the Town of Lexington, it is the closest historical data source and is considered representative of local growth trends.

Based on the local and regional population and growth estimates, the addition of new residents in the region over the next 20 years is expected to result in a growth in traffic of approximately 2.3 percent annually. Like the regional population growth, the growth in traffic volumes is expected to occur at a relatively stable pace.

PLANNED TRANSPORTATION IMPROVEMENTS

Two planned roadway improvement projects within the Town of Lexington urban growth boundary were identified at the time this TSP was prepared including the “B” Street bridge construction and Highway 74 scenic vista turnouts.

“B” Street Bridge Reconstruction

During the year 2000, ODOT replaced the “B” Street Bridge (former railroad flatcar) with a new structure.

Highway 74 Scenic Vista Turnouts

As part of the Statewide Transportation Improvement Program (STIP), ODOT is tentatively planning a project to construct scenic pullouts along Highway 74 between Interstate 84 and the Town of Lexington. No specific project information or timeline has been identified and it is unclear whether any of the pullouts will be constructed within the Town of Lexington. ODOT has identified this project as being a “low” priority within Region 5 and it is not funded. Construction cost is estimated by ODOT to be \$50,000.

Pavement overlay and bike and pedestrian improvements

As part of the Statewide Transportation Improvement Program, ODOT is tentatively planning a pavement overlay and bike/pedestrian improvement project along Highway 74 starting at “E” (MP 36.45) Street and continuing through to Mile Post 45.45. The project is expected to get underway in 2005 with an approximate cost of \$1,449,000. The Town would like to extend the bicycle and pedestrian improvements from “E” Street (MP 36.45) through to “H” Street (MP 36.24) with an estimated cost of \$36,000.

No other planned improvement projects were identified.

FORECAST FUTURE TRAFFIC VOLUMES/DEFICIENCIES

The transportation needs and travel demand patterns of Lexington will change with time. It is generally understood that as smaller rural communities grow in population and employment they become entities that are more self-sufficient and are better able to serve the full needs of their population. Citizens are able to find employment and services desired within the community instead of having to travel to large urban areas located nearby. The benefit to the transportation system is in the potential for some of these trips (now local as opposed to long distance) to be made via modes other than the automobile; thus reducing demand on the overall network. The future traffic volume forecast presented in this report reflects the anticipated benefits of a more multi-modal transportation system as well as the changing character of travel demand.

Future conditions within the Town of Lexington were forecast by applying the 2.3 percent annual growth rate assuming a “no-build” condition (i.e., no new roadways would be constructed in the 23-year horizon) to the 1997 local average daily traffic (ADT) volume data shown in Figure 7. Figure 9 illustrates the resulting forecast year 2020 average daily traffic volumes under the no-build condition.

Typically, two-lane rural highways with geographic features similar to Highway 74 and 207 can accommodate a maximum of 17,000 to 20,000 vehicles (including vehicles in both directions) daily based on the *Highway Capacity Manual* (Reference 2). Accordingly, the year 2020 forecast average daily traffic volumes shown in Figure 7 could be accommodated by two-lane roadways such as Highways 74 and 207. It should be further noted that the daily traffic volumes on the two respective highways could range up to 5,000 to 7,000 vehicles and still maintain the level of service that residents of Lexington are accustomed. The forecast volumes shown in Figure 8 clearly indicate that no capacity deficiencies are anticipated for highway traffic.

A similar analysis of traffic volumes at the study intersections was completed by applying the 2.3 percent annual growth factor to the 1998 existing intersection traffic counts shown in Figure 6. Figure 8 summarizes the forecast year 2020 weekday p.m. peak hour traffic volumes at the study intersections under the no-build condition. It should be noted that the traffic volumes shown in Figure 8 reflect the assumption that side-street traffic volumes along Highway 74 will grow by more than 2.3 percent (many of the side street approach volumes were less than five vehicles per hour under 1998 existing conditions). Adjustments were made to the side street volumes based on anticipated land-use scenarios discussed with town staff.

While the exact nature of future growth and development is not defined, the increases in side-street traffic volumes are not expected to be substantial and the volumes shown in Figure 8 were felt to reflect a conservative analysis.

Level of Service and Volume to Capacity Ratio Analysis

For the Highway 74 corridor through the Town of Lexington, ODOT stipulates a maximum volume to capacity ratio of 0.85 south of Highway 207. For the segment of Highway 74 north of Highway 207 and along Highway 207, a maximum volume to capacity ratio of 0.80 is required to be maintained on the major street approaches. Where traffic movement on and off State Highway 74 operates at Level of Service A or better, the correlating volume to capacity ratio of <0.48 is acceptable for level of service as defined in the 1999 Oregon Highway Plan. Where traffic movement on and off State Highway 74 operates at Level of Service B or better, the correlating volume to capacity ratio of <0.59 is acceptable for level of service as defined in the 1999 Oregon Highway Plan. Increased traffic volumes over the 20 year projection period within the city’s urban growth boundary will not impact the level-of-service (LOS) or meet or exceed the maximum volume to capacity ratio of:

- 0.80 for Highway 74 south of Highway 207 (Regional Highway)
- 0.85 for Highway 74 north of Highway 207 (District Highway)
- 0.80 for Highway 207 (Regional Highway)

To ensure that the local study area intersections will continue to operate at an acceptable level of service, the forecast future traffic volumes were analyzed. The findings of this analysis are summarized in Table 6.

Table 6 – 2020 Forecast Level of Service and Volume to Capacity Ratio, Unsignalized Intersections

Intersection	Critical Movement	V/C	Average Delay (sec/veh)	Critical Movement LOS	Major Street LOS
Tom Street/Highway 74	Northbound	0.02	3.5	A	A
E Street/Highway 74	Southbound	0.20	6.0	B	A
C Street/Highway 74	Northbound	0.09	5.4	B	A
B Street/Highway 74	Northbound	0.04	4.7	A	A

Legend: LOS = Level of Service, V/C = Volume/Capacity Ratio

As Table 6 indicates, all of the unsignalized study area intersections are forecast to continue operating below the maximum volume to capacity ratios under year 2020 weekday p.m. peak hour conditions. Clearly, even if side-street volumes were to increase substantially as suggested in Figure 7, there is more than adequate capacity at the study intersections. Based on these results, no roadway capacity-related mitigation measures are anticipated.

Figure 7 – 2020 Forecast Average Daily Traffic Volumes

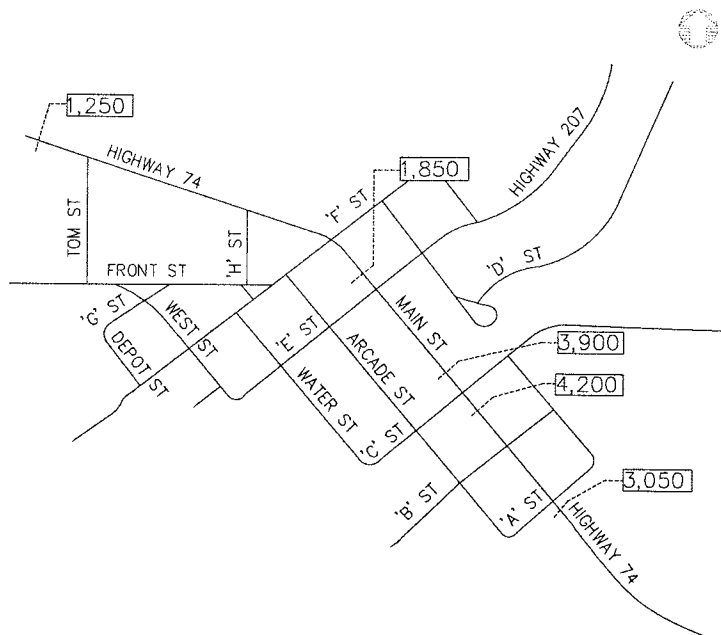
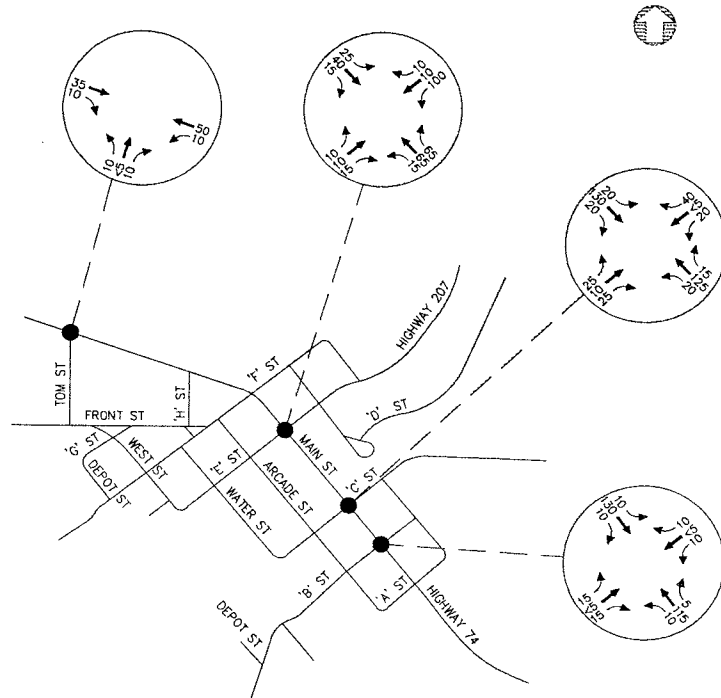


Figure 8 – 2020 Forecast Traffic Volumes, Weekday PM Peak Hour



Anticipated Future Circulation Deficiencies

In addition to the previously described capacity analysis, the future conditions evaluation involved the review and identification of potential future circulation deficiencies. Given the size and projected growth potential of the Town of Lexington, it appears that future circulation deficiencies will primarily involve the exacerbation of existing deficiencies as discussed below.

Pedestrian Circulation

There are several anticipated future circulation deficiencies that will need to be addressed including:

- In general, sidewalk facilities are extremely limited within the town and tend to appear only in areas of residential development.
- Some of the existing sidewalks are poorly maintained and do not satisfy current ODOT or Americans with Disability Act (ADA) design standards. The condition of sidewalks was identified at the first TAC meeting as a source of concern as it relates to access for the town's elderly residents. In addition to sidewalk condition, community members have identified a need for crosswalk facilities along Main Street.
- Ideally, pedestrian facilities should provide connectivity between major activity centers, such as housing, commercial areas, the post office, and recreation areas. There are commercial land uses located along Main Street that have the potential to attract pedestrian traffic and future development in the area can be expected to increase the demand for pedestrian amenities. Sidewalk connections to the former school building located in the southwest quadrant of the town would also be desirable. The bridge and the School District Building offer constraints to bicycle and pedestrian circulation and future remedies.
- While the Town acknowledges the need for pedestrian facilities and multi-use pathways. It has limited resources to apply to new projects or to maintenance of existing facilities.

At a minimum, roadway design standards should ensure that pedestrian facilities are provided in conjunction with all new or substantially reconstructed arterials, collectors, and local streets. It is essential that existing sidewalks be connected to new pedestrian facilities as new developments are constructed or as road improvements are made. The alternatives analysis presented in the next section identifies potential methods to develop a comprehensive pedestrian network within the town.

Bicycle Circulation

The Town of Lexington does not currently offer designated bicycle facilities and has no circulation plan for bicyclists. The future potential for bicycle activity is somewhat limited by topographical constraints and the remote location of the town in relation to trip generators. It was noted that there currently are children riding bicycles in the community and there may be other recreational bicyclists in the area during seasonal cycling events that occur along Highway 74.

Given the potential for future bicycle access, the town should consider development of a bicycle circulation plan. The scope of the plan could be limited to on-street bicycle facilities along Highway 74 and one or two designated roadways in the town for bicycle use. Such alternatives will be further discussed in the **Alternatives Analysis** section.

OTHER ANTICIPATED DEFICIENCIES

The growth in the local and regional population will affect many aspects of the local transportation system. System deficiencies identified in the **Existing Conditions** section expect to exacerbate the increase in demand for transportation services. Accordingly, other subject areas that will need to be considered in the alternatives analysis include:

- public transportation services;
- potential changes that could be made to pursue speed reductions along Highway 74;
- potential geometric alternatives to the existing ‘F’ Street/Front Street/Arcade Street intersection;
- access to future development; and
- placement of traffic signing.

SUMMARY

Several significant findings were identified through the future conditions analysis, most notably:

- The Town of Lexington’s population is forecast to grow by an annual rate of 1.3 percent (approximately 100 people) between 1997 (estimated population of 290) and 2020 (projected population of 390). During the same period, the population of Morrow County is projected to increase by approximately 2.1 percent annually (from an estimated population of 9,895 in 1997 to a projected population of 15,801 in 2020). Though the traffic projections were based on 1997 population estimates noted above, it should be noted that the 2000 Census indicates a population decline since 1990. The 2000 Census data indicates that the Town of Lexington’s population is forecast to remain stable or grow by a minimal annual rate of 0.5 percent between 1997 (est. pop. 290) and 2020. Based on this information, Lexington anticipates minimal growth through 2020, reflecting current development patterns, and experience in the area.
- The near-term growth projections for the Town of Lexington suggest limited growth; only seven new residents are forecast for the five-year period between 1997 and 2002.
- The majority of the Lexington’s population growth is expected to occur during the last 18 years of the horizon period with approximately five new residents being added to the town on an annual basis. These findings reflect the current development patterns being experienced in the area. Within the Town of Lexington, no significant development or employment activities are anticipated, suggesting that near-term population will remain stable or that increases will continue to be relatively small.
- The Town of Lexington’s transportation system is expected to accommodate forecast future growth in travel demand without triggering the need for major capacity-related roadway improvements.
- In the absence of capacity-related improvements, there are connectivity and access issues that should be planned for and addressed. Enhancements to the town’s roadway, pedestrian, bicycle, and public transit systems are desirable and will be reviewed in Section 4, **Alternatives Analysis**.
- The Town’s resources for new projects and for maintenance of existing facilities are limited.

Section 4

Alternatives Analysis

Alternatives Analysis

INTRODUCTION

This section presents a summary of future transportation improvement alternatives that could be implemented to mitigate existing and projected future transportation system deficiencies. Potential roadway improvement alternatives are presented and recommendations are offered as to their feasibility. As potential deficiency mitigation projects were developed, consideration was given to how a multi-modal approach could contribute to individual projects. Thus, while the primary impetus for a given mitigation alternative may center on increasing vehicular capacity, provision of appropriate bicycle and pedestrian amenities was given equal consideration.

Special effort was provided in considering and recommending improvements to the pedestrian and bicycle systems. Recommendations were developed that create direct linkage to all identified pedestrian/bicycle generators and provide for a core pedestrian and bicycle transportation system. The alternative analysis and subsequent recommendation process were handled separately to ensure that a complete system for each mode was identified without constraint.

It should be noted that, in this section, formal alternative development and analysis have only been presented for the roadway network and its components. Other elements of the transportation system such as pedestrian access, bicycle access, etc. currently exist at a level such that an entire network needs to be developed. The **Transportation System Plan** section of this report contains the recommended improvements to all of the modal systems.

The remainder of this section is organized into two parts. First, a general discussion of improvement needs and associated ramifications are presented. A discussion of specific improvement alternatives, including estimated costs, then follows.

LAND USE/TRANSPORTATION SYSTEM RELATIONSHIP

The existing and future land uses within the Town of Lexington have a substantial impact on the local transportation system. As a result, the town's transportation system will continue to reflect a strong relationship to local land use well into the future. For illustrative purposes, the following discussion presents some of the transportation implications associated with various land use alternatives.

Background

In the past, Lexington has experienced very little population growth (less than 10 people since 1990) and consequently, relatively little new commercial and residential development. There are a significant number of vacant and redevelopable properties within the central part of town with direct access to existing town streets and potential access to town water and sewer services. However, in part because owners of these parcels have been unwilling to sell or develop many of these properties, recent growth has occurred and is expected to continue to occur in areas of the town that are not well served by existing roads or other services.

There are a number of vacant or redevelopable commercially zoned properties in the central commercial portion of town. In addition, there is a large section of vacant commercially zoned land at and around the Lexington Airport. At the same time, there is no industrial land within the town's urban growth boundary. Town staff reports that the Port of Morrow has expressed interest in the past in developing some of the land adjacent to the airport for industrial use.

The recent closure of the Kinzua Mill, located between Heppner and Lexington is expected to affect current and future employment levels in the area and increase the amount of commuting between Lexington and other parts of Morrow and adjacent counties.

Specific land use opportunities and constraints are described below for industrial, commercial, and residential land.

Commercial Land

There are two primary issues related to the town's commercial and industrial land. First, there is the possibility that potential new commercial development near the airport could compete with commercial businesses in the central part of town. Second, there is a lack of industrially zoned land within Lexington. To address these issues, the following measures are recommended:

1. Rezone commercial land near the airport to industrial use
2. Develop an access plan to serve undeveloped land in the area near the airport.

This approach would help direct future commercial activity to the town's main street area. It also could help provide additional land for industrial development. This in turn would support town policies to encourage commercial development to meet the needs of residents and visitors while also encouraging diversified, non-polluting industrial development that supports a stable job market.

Currently, a portion of the land near the airport is being used by the Morrow County Grain Growers. The existing land use (a farm implement dealership) presumably would be allowed under either commercial or industrial zoning. However, other types of commercial uses that could be developed under the existing zoning might compete with commercial businesses in the Main Street area. To protect the integrity of the Main Street businesses, these competing uses should not be allowed within the industrial zone.

Given the topography and current access limitations of the land surrounding the airport, primarily between Highway 74 and the airport, it will be necessary to develop an access plan to utilize this area effectively and efficiently. The town's current subdivision regulations require that a developer provide a sketch plan with any proposal for a subdivision or major partition. Among other items, the sketch plan must show the approximate location and width of proposed streets. After review and approval of the sketch plan by the town, an applicant must provide a more detailed tentative plan, including the location, width, names, approximate grades and radii of curves of proposed streets, as well as the relationship of proposed streets to projected streets shown on the town's Comprehensive Plan. These elements of the sketch and tentative plans would constitute an access plan.

It is important that the town enforce the development requirements and work closely with the developer during and, if possible, prior to the approval process to develop plans for the location of new streets and connection to existing roads. In doing so, the town should pay particular consideration to developing a street system that provides for effective internal circulation, adequate connections to existing streets, efficient development of land within the subdivision or partitioned area, and the ability to access and develop adjacent undeveloped land.

Residential Land

Recent residential development has occurred on the western edge of town (between Highway 74 and Front Street) in an area not well served by existing streets and other town services. This development has raised several issues related to the ability to cost-effectively provide town services and make efficient use of land. For example, it is likely to be more expensive to provide public services to these areas. In some cases (e.g., in the northwestern portion of the town between Front Street and Highway 74, west of Tom Street), dwelling units and access-ways have been located with relatively little consideration given to effectively providing access and services to adjacent undeveloped land in the future. In addition, in one case (vacant property in the northeastern corner of town), property owners are likely considering fewer lots than probably could be accommodated on their property. Without adequate planning for future access and provision of services, such practices could lead to less efficient use of land.

Furthermore, the Town does not have a public sewer system. Development and redevelopment is unlikely to occur at "urban" densities without this basic public facility. Until the Town does have a public sewer system, densities will be relatively low to accommodate individual sewage disposal systems.

To address these issues, the following measures are recommended.

Encourage Infill and Development of Properties Served by Existing Infrastructure

To encourage more development in the portion of the town served by existing streets and other infrastructure, the following measures are recommended.

- Use existing information and county Geographic Information Services (GIS) resources to prepare a map showing buildable, vacant properties.

One way to encourage development of existing vacant or underutilized parcels is to provide potential builders or developers with information about them. It is useful to develop a map of such parcels along with a simple list, describing their location, size, zoning, physical constraints (if any) and ownership information.

Through a review of aerial photographs and field checks, vacant parcels in Lexington have been identified. This information can be provided to individuals interested in future development in Lexington. Though it does not resolve the issue of unwilling sellers, it may help encourage future development in the central portion of town instead of areas on the fringe.

- Amend the town's zoning ordinance to reduce barriers to the creation of flag lots or other potential infill development.

Two types of development are possible on existing lots within the central portion of town: 1) development of completely vacant lots; and 2) additional development on lots that already have a house but are large enough, given minimum lot sizes, to accommodate additional development. Both types of development will help make more efficient use of existing streets and other infrastructure, ultimately reducing the cost to provide public services. The town's zoning and subdivision ordinances were reviewed to identify provisions that may inhibit development on vacant lots or infill/redevelopment of underutilized parcels. No regulations were identified that necessarily inhibit development of vacant lots where there is no partition or subdivision required.

- Consider differential development permitting or impact fees for land currently served by town services versus land not served to encourage development in the core area of the town, resulting in more cost-effective provision of public services.

As noted above, it is more costly for the town in the short and long term to provide services to land that is not currently served by existing roads, water, sewer and other services. This is particularly important given Lexington's limited municipal budget. To address these higher costs, the town may want to consider implementing systems development charges for new development that is not served by existing infrastructure. This approach would encourage infill and redevelopment, and make more efficient use of existing roads and other infrastructure.

Provide for More Efficient, Orderly New Development

As noted previously, some recent development has been undertaken with relatively little consideration of connections to adjacent vacant land, existing town streets, and efficient use of land. To address these issues and improve future connectivity between new and existing streets and neighborhoods in Lexington, the measures outlined below are recommended:

- Amend and supplement existing subdivision regulations to include policies/requirements that ensure adequate connection to existing streets and provisions for connections to adjacent undeveloped land. Recommended ordinance provisions are included in Section 7, *Policies and Land Use Ordinance Modifications*.

In addition to general policies related to connectivity, ordinance language regarding minimum block length and maximum cul-de-sac lengths is recommended. Such policies help provide for more travel options, can reduce the distance needed to get from one part of town to another and help improve access for emergency vehicles.

This approach would allow for future infill in areas where new development is occurring and facilitate more efficient planning and provision of roads and other town services. It also could facilitate more orderly and possibly more compact development.

- Work with developers to incorporate the above requirements in a local access plan for any proposed development.

The town's subdivision regulations already require developers to submit sketch and tentative plans indicating the layout of streets in both the subdivided and un-subdivided portions of the property. It is important that the town meet with developers to develop these access elements of the sketch and tentative plans to meet the connectivity objectives outlined above (and in the attached ordinance recommendations) as well as policies related to topography and other design/layout issues.

IMPROVEMENT ALTERNATIVES EVALUATION

The following discussion presents specific improvement alternatives that were considered for inclusion as part of the recommended Town of Lexington Transportation System Plan. For reference purposes, each alternative has been identified by number.

It should be noted that the order in which the alternatives are presented is not intended to convey the relative rank or significance of the respective projects. Further, the identified improvement alternatives were evaluated based on construction costs and ability to meet identified transportation needs. Other factors, including potential environmental impacts, were not specifically considered. Some environmental impacts that could occur have the potential to increase costs or require project modifications. The required modifications or increased costs could be significant enough to make the project impractical. All cost estimates were based on industry unit costs and do not reflect utility relocation, environmental constraints, property acquisitions, or inflationary increases in cost over the planning horizon of this document.

OPERATIONAL ISSUES AND IMPROVEMENT ALTERNATIVES

The need for mitigation of existing and future roadway/intersection operations in the Town of Lexington is relatively limited in scope. The long-term future forecast conditions did not identify any specific capacity-related roadway or intersection

deficiencies. Although no capacity improvement needs were identified, the community did identify four areas of concern as discussed below.

POSTED SPEED LIMIT ON HIGHWAY 74

Community input identified operating speeds on Highway 74 through the town as an issue of concern. The current posted speed limit of 30 miles per hour on the highway was established by ODOT and reflects the 85th percentile speed. Posting speed limits based on the 85th percentile recognizes that drivers will travel at a speed that they are comfortable with regardless of the posted speed limit.

Improvement Alternative #1 – Influence Highway 74 & 207 Streetscape

Given that changing the posted speed limit will not influence driver behavior, it is necessary to influence the driving environment to effect driver's speeds. Wide travel lanes and open shoulders convey a sense of security that encourages higher speeds. Specific changes to the roadway such as condensing the road environment through construction of curbs, lane restriping, adding bike lanes, and other amenities such as planter strips or street trees may contribute to reduced travel speeds on the highway. Once changes have been made to the roadway environment that effect drivers' perceptions, speeds will likely drop. Following these modifications, ODOT could determine the new 85th percentile speed and evaluate the need to change the posted speed limit.

Highway 74 & 207 Recommendations

Through new roadway and land-use standards, future development activities and roadway improvements along Highway 74 starting at "H" Street and continuing through town to "A" Street should be focused to influence the streetscape of Highway 74. The same ideas should be applied to Highway 207 from Clay Street and continuing through to Main Street. By modifying the streetscape of Highway 74 and 207, driver's perceptions can be influenced and travel speeds may be reduced. Section 5, **Transportation System Plan**, presents recommended roadway cross-section standards that will assist in fostering a more constrained perception of the Highway 74 and 207 travel environment.

It should be noted that the addition to or modification of Highways 207 & 74 cross sections, as well as potential signing changes, would require the approval of the State Traffic Engineer. Identification and documentation of the need for such changes in the town's TSP does not guarantee the provision or modification will occur.

"F" STREET/FRONT STREET AND "F" STREET/ARCADE STREET INTERSECTIONS

As noted in the **Existing Conditions** section, the geometric configuration of the existing intersections of "F" Street/Front Street and "F" Street/Arcade Street has been identified as a subject of community concern. A previous attempt to improve the intersection by installing a stop sign on Front Street was unsuccessful and a yield sign is currently posted on the eastbound approach of the intersection.

Improvement Alternative #2 – "F" Street Intersection Restriping/Traffic Control Modification

Although field investigation of the existing intersections indicated that some opportunity to realign the existing intersection approaches was available, community input suggested that such realignment was not feasible due to cost and property issues. Based on this information, the existing intersection configurations were further evaluated and it was determined that an acceptable alternative would be to control the northbound approach to the "F" Street/Front Street intersection with a yield sign. The curve from "F" Street to Front Street could also be restriped as the through movement, potentially offering a more "user-friendly" solution to the existing intersection configuration. Curbed channelization should also be provided to delineate a clear path for drivers.

The estimated cost to complete this project is \$15,000.

Recommendation

The town should improve the existing "F" Street design as described in the mid- to long-term future.

ACCESS TO FUTURE DEVELOPMENT

There are several areas within the town that have the potential to develop or redevelop during the next twenty years and the accessibility of these areas is a concern for the community.

Improvement Alternative #3 - Modify Town Ordinances to Ensure Connectivity between Town Facilities and Future Residential Developments

From a more global policy perspective, as new subdivisions are constructed within the Town of Lexington in the future, better consideration should be given to the placement and availability of pedestrian, bicycle, and vehicular access both within the subdivision and the linkages to the remainder of the town. Town ordinances should be reviewed and modified as appropriate to encourage connectivity and to limit the lengths and use of cul-de-sacs in locations where the local topography does not dictate their use. Suggested ordinance modifications are discussed in Section 7.

In the event of development of an industrial park or other industrial/commercial related uses in the vicinity of the airport, adequate transportation linkages would need to be made to Highway 207 and possibly Highway 74. Such connections should be provided to accommodate goods movement into and out of the industrial area and airport and should include multi-modal facilities that provide better access for pedestrians, cyclists, and motorists.

PLACEMENT OF TRAFFIC SIGNING

Improvement Alternative #4 – Inventory and Review Posting of Town Signing

As discussed in the **Existing Conditions** section, the current placement of some traffic signing within the town is questionable. Inappropriate placement of traffic signing makes identification of street names difficult and has the potential to create hazardous situations as well as a liability issue for the town.

Under this improvement alternative, the Town of Lexington would inventory all existing traffic signing (including street name placards and traffic control devices) within the town's jurisdiction and evaluate whether those devices comply with the placement methodology identified in the *Manual on Uniform Traffic Control Devices*. Any signing identified as not being compliant should then be relocated or remounted per the specifications of the *Manual on Uniform Traffic Control Devices*.

The cost for this project is approximately \$1000. With proper guidance and instruction, the field inventory could be completed relatively inexpensively by a summer intern. Further, it is unlikely that many new signs will need to be purchased given that the issue is primarily placement of the signs for visibility. Accordingly, the primary cost associated with this alternative would involve mobilizing local crews to remove and/or replace identified traffic control devices as appropriate.

Recommendation

This improvement alternative should be implemented in the immediate future to promote public safety. *It should be noted that the addition to, or modification of, signs along Highway 74 would require the approval of the State Traffic Engineer. Identification and documentation of the need for such changes in the town's TSP does not guarantee the provision or modification will occur.*

REDUCED RELIANCE ON THE AUTOMOBILE

Alternative #5 – Reduce Vehicular Reliance Through Zoning and Development Code Revisions

In part, Oregon's Transportation Planning Rule seeks to reduce the reliance on personal vehicles as a mode of travel through the creation of environments that foster alternative modes of transportation. Local land uses can have a significant impact on the form of transportation necessary to travel from one location to another. Specifically, by carefully structuring local zoning and development codes, development activities can be focused such that a more self-contained community can be achieved. Construction of mixed-use developments, the location of commercial and service businesses in the vicinity of residential land uses, and the provision of employment opportunities near residential areas are all means by which the need for travel by personal automobile can be reduced.

In relatively rural areas such as Lexington, the need to travel long distances to employment, commercial, and service opportunities fosters a travel environment dependent on personal automobiles. This is an issue for Lexington residents, many of whom work in other communities such as Boardman, which are 20 to 40 miles away. The recent closing of the Kinzua Mill between Lexington and Heppner may exacerbate this problem, as residents who formerly were employed at the mill likely will have to drive even further to new jobs. Recent residential development also has contributed to reliance on the automobile. Much of the recent development in the town has occurred in the northern periphery of the town, away from the core downtown area.

Currently there is no limited pedestrian and bicycle access within the town. Development of vacant parcels within the central part of Lexington or future development of large parcels on either end of the community with direct connections to the town's street grid system would reduce reliance on the automobile for short trips to local community commercial establishments and other uses.

Recommendation

Implementation of the land use recommendations identified in this TSP should be encouraged through appropriate zoning and development code revisions.

ACCESS MANAGEMENT

Alternative #6 – Promote Access Management along Highway 74 and Highway 207

The Oregon Department of Transportation has established access spacing standards for Highway 74 and Highway 207. These standards, which are presented in detail in Section 5, are intended to ensure the long-term safety and efficiency of the respective highway corridors. Implementation of the standards as they relate to local development activities will be essential to ensure the long-term viability of the highway corridors.

The future conditions analysis, as presented in this document, assumes that current public roadway spacing along Highway 74 and Highway 207 will be maintained into the long-term future. As long as the current public road access spacing standards along the two highways are maintained and new private access points are allowed in accordance with the access spacing standards presented in Section 5, it is expected that the forecast future traffic conditions will be reflective of long-term operations along the corridors. Conversely, if multiple additional access points are granted along the two highways, it can be expected that additional incremental delay will be added to highway operations.

Access Management Recommendation

Access Management should be implemented in the immediate future. No specific construction need is evident to implement this improvement as it simply promotes compliance with existing roadway policy. No immediate land use actions would be required either. Instead, as property along Highway 74 and Highway 207 is developed or redeveloped, appropriate action should be taken by local and state agencies to ensure that the relevant access spacing standards are reasonably enforced. Section 5, **Transportation System Plan** includes a full access management plan and corresponding implementation strategy complete with typical spacing standards, driveway widths, etc.

TRANSPORTATION DEMAND MANAGEMENT

Alternative #7 – Implement Transportation Demand Management Measures

Transportation Demand Management (TDM) measures identify opportunities to reduce the impact of trips generated by various land uses. Specifically, TDM techniques typically seek to reduce reliance on single-occupant vehicle trips and promote the use of alternative travel modes by persons accessing a given area or facility. The Transportation Planning Rule encourages the evaluation of TDM measures as part of the TSP development process.

TDM strategies often focus on major employers or other sources of traffic that can be influenced through scheduling changes, alternative transit opportunities such as carpools and buses, and other means. Oftentimes, financial disincentives are included in programs as a revenue generator to support other elements of an overall program. The success of commonly used disincentives is dependent on the environment in which a given employer is located.

Given the rural nature of Eastern Oregon and the Town of Lexington, the TDM measures available to the town are limited in scope as compared to larger metropolitan areas. One of the most promising options available to the town is the provision of a carpool or vanpool service for people who live in Lexington and work in neighboring communities. Coordination of a vanpool and/or carpool(s) to the major employers in the area could help to reduce the number of single occupant vehicle commute trips from Lexington and help the community to achieve transportation demand management objectives. The town could also promote carpooling to out-of-town employers through education.

Provision of a park-and-ride facility at a key location within the community is another means by which the use of non-auto dependent travel can be encouraged.

The cost of implementing a TDM program is dependent on the type and variety of measures selected. Facilitation of carpools, vanpools, or a park-and-ride facility could be completed through a volunteer network and/or coordination with major employers at minimal cost.

Recommendation

It is recommended that the Town of Lexington focus TDM efforts on supporting carpools and/or vanpools to major employers through education, coordination with employers, and provision of appropriate facilities such as park-and-ride areas.

SUMMARY

This section has presented the alternatives that have been developed and evaluated to address the near-term and long-range transportation deficiencies and to encourage infill/redevelopment within the Town of Lexington urban growth boundary. Table 7 summarizes the potential improvement alternatives and recommendations as to their implementation.

Table 7 – Summary of Improvement Alternative Recommendations

Alternative Number	Improvement Description	Estimated Cost*	Implementation Timeline	Responsible Jurisdiction
#1	Influence Highway 74 and 207 Streetscape	Not estimated	Concurrent with future development and roadway improvements along Highways 74 & 207	Town/ODOT
#2	"F" Street Intersection Restriping/Traffic Control Modification	\$15,000	Near-term future	Town/ODOT
#3	Modify Town Ordinances to Ensure Connectivity Between Town Facilities and Future Residential Developments	Administrative	Near-term future	Town
#4	Inventory and Review Posting of Town Signing	\$1,000	Near-term future	Town
#5	Reduce Vehicular Reliance Through Zoning and Development Code Revisions	Administrative	As appropriate	Town
#6	Promote Access Management along Highway 74 and Highway 207	Administrative	Concurrent with future development	Town/ODOT
#7	Implement Transportation Demand Management Measures	Administrative	As appropriate	Town

*Estimated costs are in 1999 dollars and do not include right-of-way acquisition

Section 5 incorporates the recommended improvements into the town's transportation system.

Section 5

Transportation System Plan

Transportation System Plan

INTRODUCTION

This section describes the individual elements of the Town of Lexington Transportation System Plan. The preferred alternative presented in this TSP consists of those transportation improvements necessary to support the Town of Lexington's Comprehensive Land Use Plan. The TSP addresses several components for development of the future transportation network including:

- Preferred Land Use Plan
- Roadway System Plan
- Pedestrian System Plan
- Bicycle System Plan
- Public Transportation System Plan
- Marine System Plan
- Air/Water/Pipeline System Plan
- Access Management Plan
- Implementation Plan

The individual plans and policies presented in this section were developed specifically to address the requirements of Oregon's Transportation Planning Rule. Projects associated with each plan element have been identified and costs have been estimated as described herein. The recommendations set forth by this plan reflect the findings of the existing and forecast future conditions analyses, the alternatives analysis, and the concerns expressed by both the citizens of Lexington and the public agencies that serve them.

PREFERRED LAND USE PLAN

Desirable Elements of the Preferred Alternative

The following are considered beneficial elements that should be explored as part of future land use planning and design efforts, preferably through amendments to the comprehensive plan, implementing ordinances and local street network:

- Rezone commercial land near the airport to industrial use;
- Develop an access plan to adequately serve undeveloped commercial land near the airport;
- Encourage infill and redevelopment in the portion of the town served by existing infrastructure;
- Use existing information and county Geographic Information System resources to prepare a map showing buildable vacant properties;
- Adopt differential development permitting or impact fees for land currently served by town services versus land not served;
- Amend and supplement the existing subdivision regulations to include policies and/or requirements that ensure connectivity with existing streets and adjacent properties, including a requirement to provide a conceptual future street plan;
- Amend the town's subdivision regulations to limit cul-de-sac length; and
- Work with local developers to agree upon a local access plan for individual development proposals.

ROADWAY SYSTEM PLAN

Based on the identified existing and anticipated operational and circulation needs the roadway system plan was developed. The town's roadway system plan provides guidance as to how to best facilitate travel within the town by addressing two key issues:

- Roadway functional classification system and corresponding roadway design standards, and
- Roadway connectivity, including new and improved streets to meet future capacity, circulation, and safety needs.

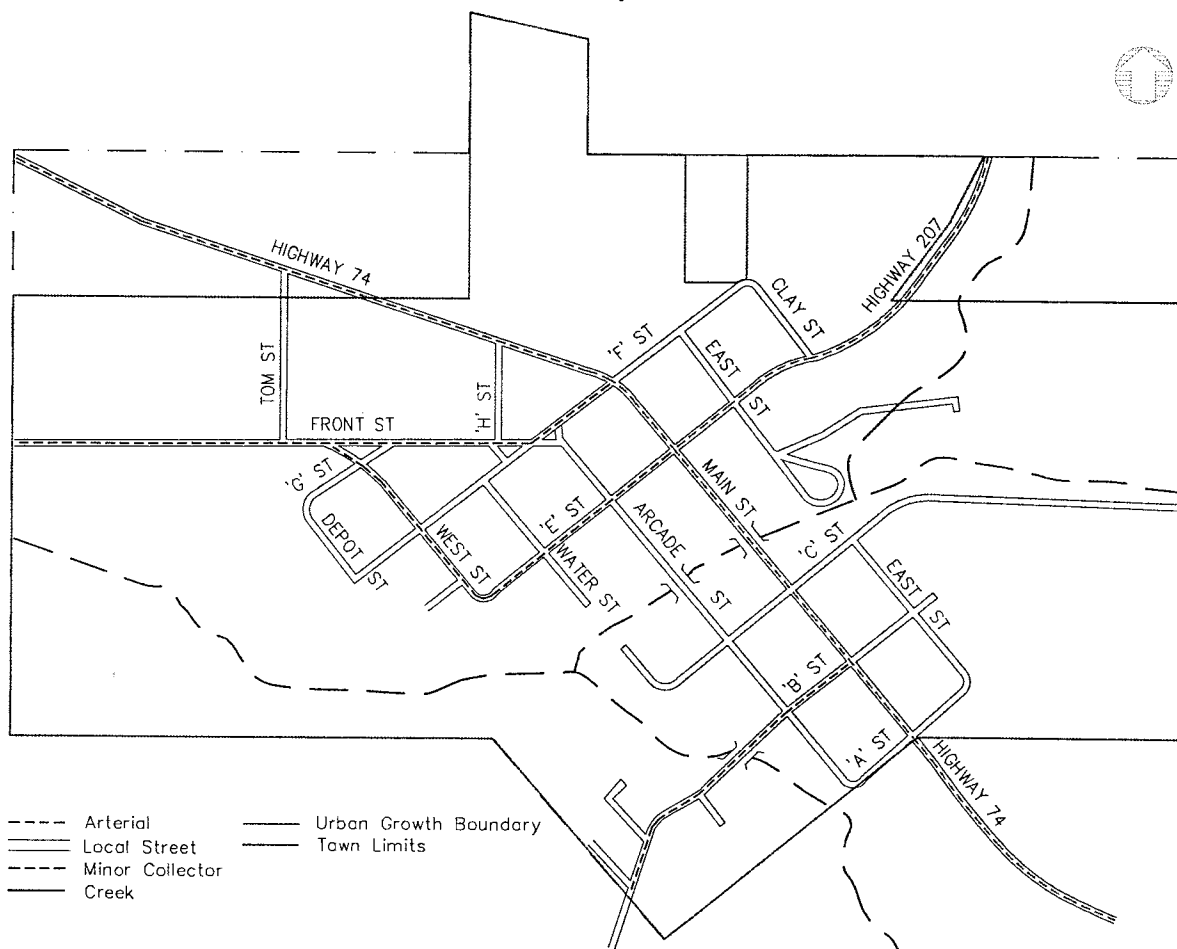
Functional Classification

The purpose of classifying roadways is to create a mechanism through which a balanced transportation system can be developed that facilitates mobility for all modes of transportation. A functional classification of a given roadway determines its intended purpose, the amount, and character of traffic that it is expected to carry commitment to serve and promote non-auto travel, and its design standards.

The classification of a given street is intended to convey the requirements, capabilities, and capacity of each respective roadway while recognizing that roadway's contribution to the overall transportation system. It is imperative that the classification of streets is considered in relation to adjacent properties, the land uses that they serve, and the modes of transportation that can be accommodated. Further, each roadway must be appropriately designed to accommodate vehicles local to the roadway (i.e., passenger cars, heavy trucks, pedestrians, and bicycles). The public right-of-way must also provide sufficient space for utilities to serve adjacent land uses.

The functional classification plan for the Town of Lexington incorporates three functional categories: arterials, collectors, and local streets. For the present, the Town will only use two of the designations, "arterials" for the state highways and "local streets" for all other roadways.

Figure 9 – Roadway Network and Functional Classification System



In small communities, arterials are roadways that are primarily intended to serve traffic entering and leaving the urban area. Arterials tend to carry significant intra-urban travel between downtown areas and outlying residential areas. While arterials may provide access to adjacent land, that function is subordinate to the travel service provided to major traffic movements. Arterials are the longest distance, highest volume roadways within the urban growth boundary. Although focused on serving longer distance trips, pedestrian and/or bicycle activities often are associated with the arterial streetscape.

Collectors

Collector facilities link arterials with the local street system. As implied by their name, collectors are intended to collect traffic from local streets (and sometimes from direct land access) and channel it to arterial facilities. Collector facilities tend to carry

lower traffic volumes at slower speeds than arterials. On-street parking is more prevalent and pedestrian amenities are typically provided. On collectors, bicycle facilities may be exclusive lanes or shared roadways.

For the purposes of TPR compliance, all collector facilities in this TSP are considered Minor Collectors. (The TPR requires that sidewalks and bike lanes be provided on all Major Collectors within a given Urban Growth Boundary). The preferred cross-section includes sidewalks but considered optional at the discretion of the Town.

Local Streets

Local streets are primarily intended to provide access to abutting land uses. Local street facilities offer the lowest level of mobility and consequently tend to be short, low-speed facilities. As such, local streets should primarily serve passenger cars, pedestrians, and bicyclists; heavy truck traffic should be discouraged. On-street parking is common and sidewalks are typically present.

Using the roadway designations, all current and future streets within the town have been designated in the functional classification plan presented in Figure 9. The major roadway designations are summarized below.

Arterial

Highway 74

Highway 207

Minor Collector

"B" Street

"C" Street

"E" Street

"F" Street

Front Street

West Street

Local Streets

The remaining roads in the town are designated as local streets.

STREET DESIGN STANDARDS

Street design standards are based on the functional and operational characteristics of streets such as travel volume, capacity, operating speed, and safety. The standards are also established to provide appropriate separation between travel lanes and pedestrian and bicycle facilities. They are necessary to ensure that the system of streets, as it develops, will be capable of safely and efficiently serving the traveling public while also accommodating the orderly development of adjacent lands.

Figures 10, 11, 12, 13, 14, and 15 presents the typical cross sections for the various roadways identified in the functional classification system. The typical roadway cross sections comprise the following elements: right-of-way, number of travel lanes, bicycle and pedestrian facilities, and optional amenities such as landscape strips.

The cross sections illustrated in Figures 10 and 11 reflect the desire to develop multi-modal roadway facilities within the Town of Lexington in the future incorporating pedestrian facilities where appropriate. The identified cross sections are intended for planning and design purposes for new road construction as well as for those locations where it is physically and economically feasible to improve existing streets.

The typical cross sections present standards for roadways that allow for flexibility in defining the actual roadway width through optional features such as planter strips, and on-street parking. The use of on-street parking and planter strips and other amenities would be subject to the discretion of the Town of Lexington. Should residents want to improve or install pedestrian and/or bicycle use facilities, the Town has set a minimum standard of 5 foot sidewalks and 6 foot multi-use (Bicycle/Pedestrian) hard surface facilities.

Table 8 summarizes the street design standards for the different roadway classifications.

In reviewing these standards, it should be noted that ODOT has sanction over improvements that are implemented along Highway 74 and Highway 207.

Table 8 – Street Design Standards

Classification	Cross Section	Right-of-way	Turn Lane	Paved Travel Lanes	Bike Lane	Pedestrian Facilities	On-Street Parking	Landscape Strip
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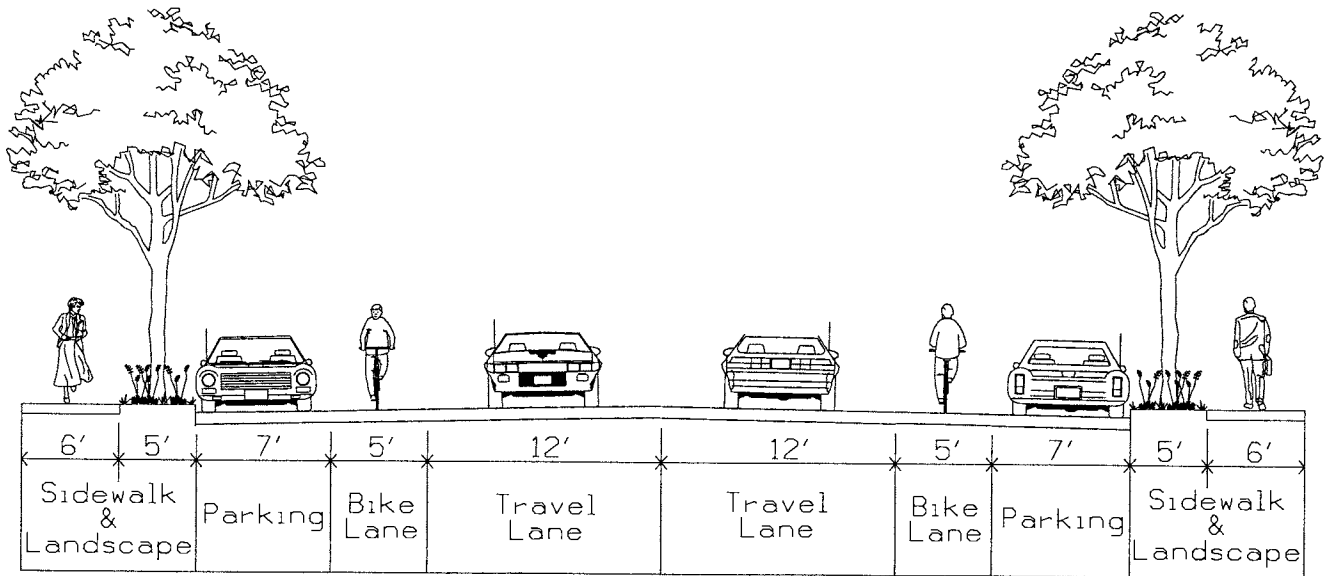
Arterial	2 lanes	70 feet	No	12 foot	5 foot	6 foot sidewalk – Both sides of roadway	7 foot where right-of-way is available	5 foot – Both sides
Collector	2 lanes	66 feet	No	12 foot	5 foot	6 foot sidewalk – Both sides of roadway	Optional – where right-of-way is available	6 foot – Both sides
Residential Street – Option 1	2 lanes	66 feet	No	12 foot	Shared Roadway	Shared Roadway	No	At discretion of the Town
Residential Street – Option 2	2 lanes	66 feet	No	12 foot	Shared Roadway	6 foot pedestrian facility separated one or both sides at the discretion of Town	At the discretion of the Town	5 foot landscaped strip on both sides which may include a swale
Residential Street – Option 3	2 lanes	66 feet	No	7 foot	Shared Roadway	6 foot sidewalks	7 foot on both sides of roadway	7½ foot on both sides of roadway
Alley	NA	16 feet	No	10 foot road surface minimum	Shared Roadway	Shared	No	No

Arterial Cross Sections

As indicated in Table 8, *arterial* facilities will have a right-of-way requirement of 70 feet and cross-section consisting of:

- Two 12 foot wide travel lanes
- 5 foot bike lanes on both sides of street
- 6 foot sidewalks on both sides of street
- 5 foot landscape strip
- 7 foot on-street parking on both sides of the roadway where right-of-way is available

Figure 10 – Arterial Cross-Sections



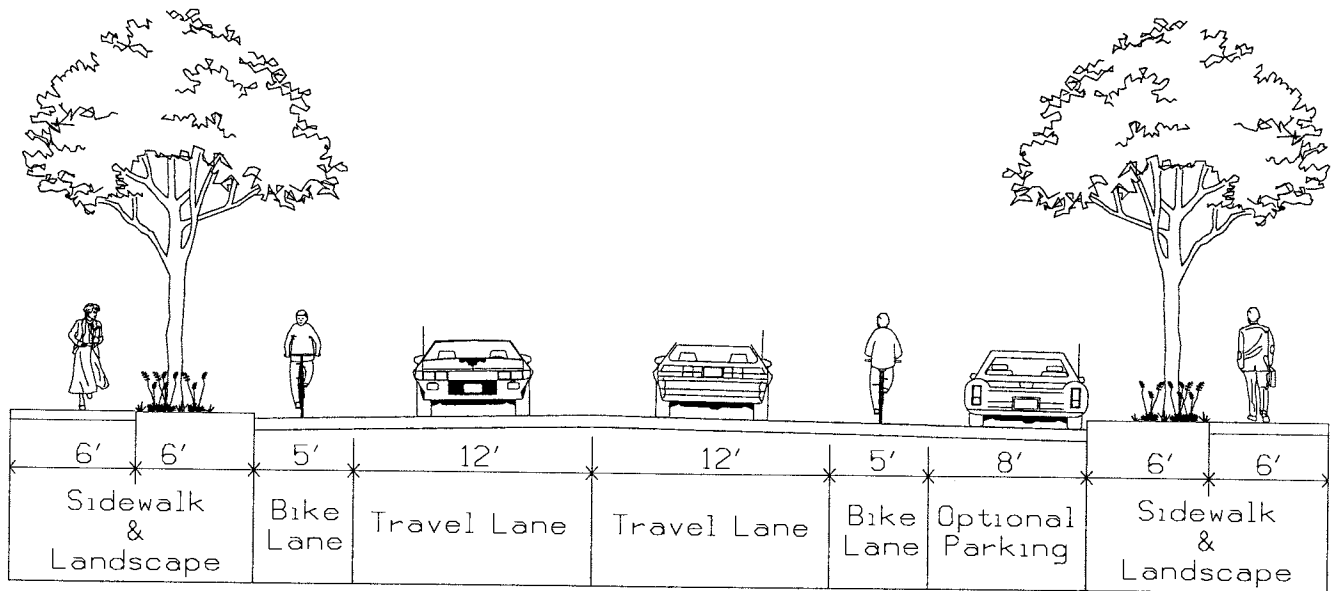
Collector Cross Sections

Collector streets will have a right-of-way requirement of 66 feet and a cross-section consisting of:

- two 12 foot wide travel lanes
- optional on-street parking may be required at the discretion of the town where right-of-way is available
- 6 foot landscaping strip on both sides of street

- 6 foot wide sidewalks on both sides of street
- 5 foot bike lanes on both sides of the street

Figure 11 – Collector Street Cross Sections



Local Street Cross Sections

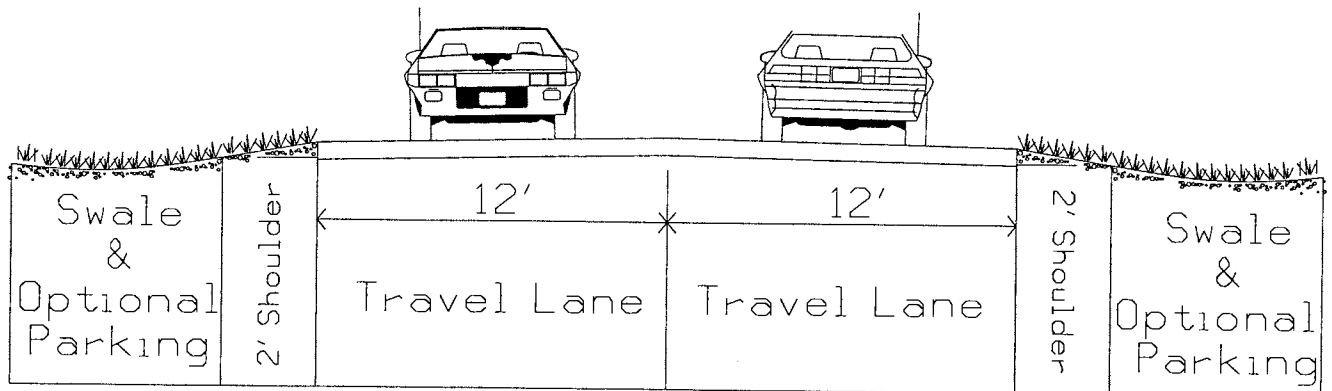
There are three *local street* options.

Option 1 indicates that *local streets* will have a right-of-way requirement of 66 feet and a required cross-section consisting of:

- Two 12 foot wide travel lanes
- 2 foot shoulders located on each side of the roadway
- Requirement of adjacent landscape strips and/or grassy swales on both sides of the roadway may be made at the discretion of the town.
- 11 feet on 1 side or 5½ feet (either/or at discretion of town) on both sides located outside each landscape strip and adjacent to landowner shall be provided for utilities.

Option 1 provides a cross section similar to current town standards. Pedestrians and bicycles will share the roadway with vehicular traffic.

Figure 12 – Local Street Cross Sections – Option 1

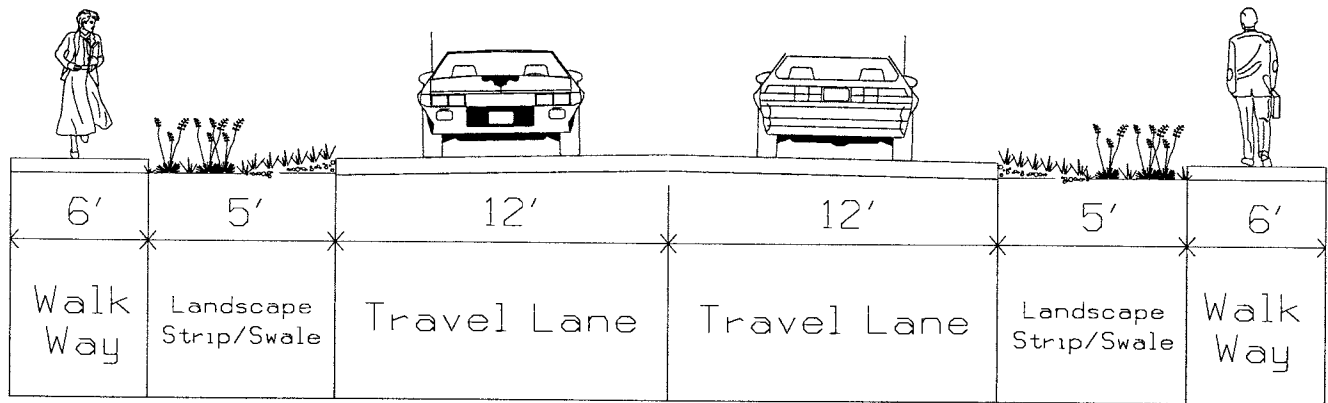


Local street option 2 indicates that the local streets will have a right-of-way requirement of 66 feet with a cross-section consisting of:

- Two 12 foot wide travel lanes
- 5 foot landscaped strips that may include planting trees or other landscaping plants on both sides of the roadway. Grassy swales may be incorporated into landscape strips at the discretion of the Town as they provide storm drainage as well as separate pedestrians from vehicles.
- 6 foot separated paved pedestrian facilities on both sides of the roadway – one 6 foot separated paved pedestrian facility may be allowed at the discretion of the town.

Option 2 allows the town a cross section similar to current standards but incorporates the requirement of sidewalks and landscape strips into the cross-section.

Figure 13 – Local Street Cross Sections – Option 2

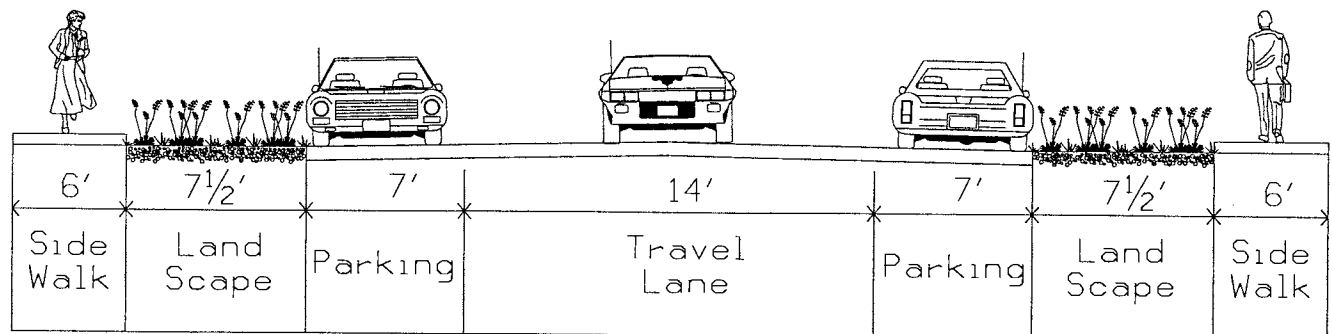


Local street option 3 provides a 66 foot right-of-way containing:

- Two 7 foot travel lanes (one 14 foot)
- 7 foot parking strips on each side of the street
- 7½ foot landscape strips on each side of the street
- 6 foot sidewalks on each side of the street
- The remaining 11 feet of the right-of-way will provide an area reserved for utility placement. At the discretion of the town, the utility area may be split, placing 5½ feet on each side of the street as needed.

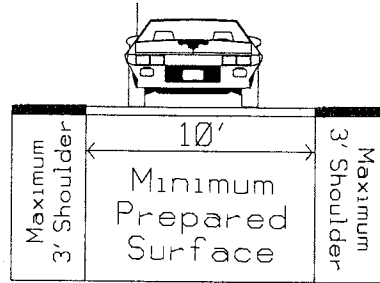
Option 3 allows the town a cross section that provides reduced paved surface resulting in more efficient use of land and reduced storm water run-off. This option costs less to construct, improve, and maintain and encourage more cautious driving and slower speeds, providing safety and convenience for pedestrians and bicyclists.

Figure 14 – Local Street Cross Sections – Option 3



Alleys will have a 16 foot right of way and a required 10 foot minimum prepared road surface. Bicycles and pedestrians will share the roadway.

Figure 15 – Alley Cross Sections



Through the flexible road standards provided in Table 8, the Town of Lexington will have the ability to reduce impervious surface and provide site-specific standards for roadway improvement projects that reflect local conditions. The optional availability of streetscape treatments such as landscape strips and on-street parking may be valuable to the town in the future as an instrument by which the character of roadways can be influenced. For example, narrow collector streets may be desirable in neighborhood areas as a speed deterrent for traffic on local streets. The landscaping strips are recommended between street and sidewalk on arterial and minor collector facilities to provide a buffer between cars and pedestrians. Locating the landscaping strip between the street and the pedestrian facility also allows for areas with no obstructions or impediments that would prevent or discourage pedestrian movements.

Connectivity

The Town has a grid system in place and considers the continuation of the grid an important element to promote greater connectivity for all modes of transportation. Figure 16 illustrates several potential road connection points that with future development will improve Town connectivity. However, due to the topography of the Town there are major complications in the feasibility of possible connections. The Town intends to encourage the completion and continuation of the grid pattern that is already in place, and considers it an important piece in maintaining the rural character of the Town.

Relation to Development Activities

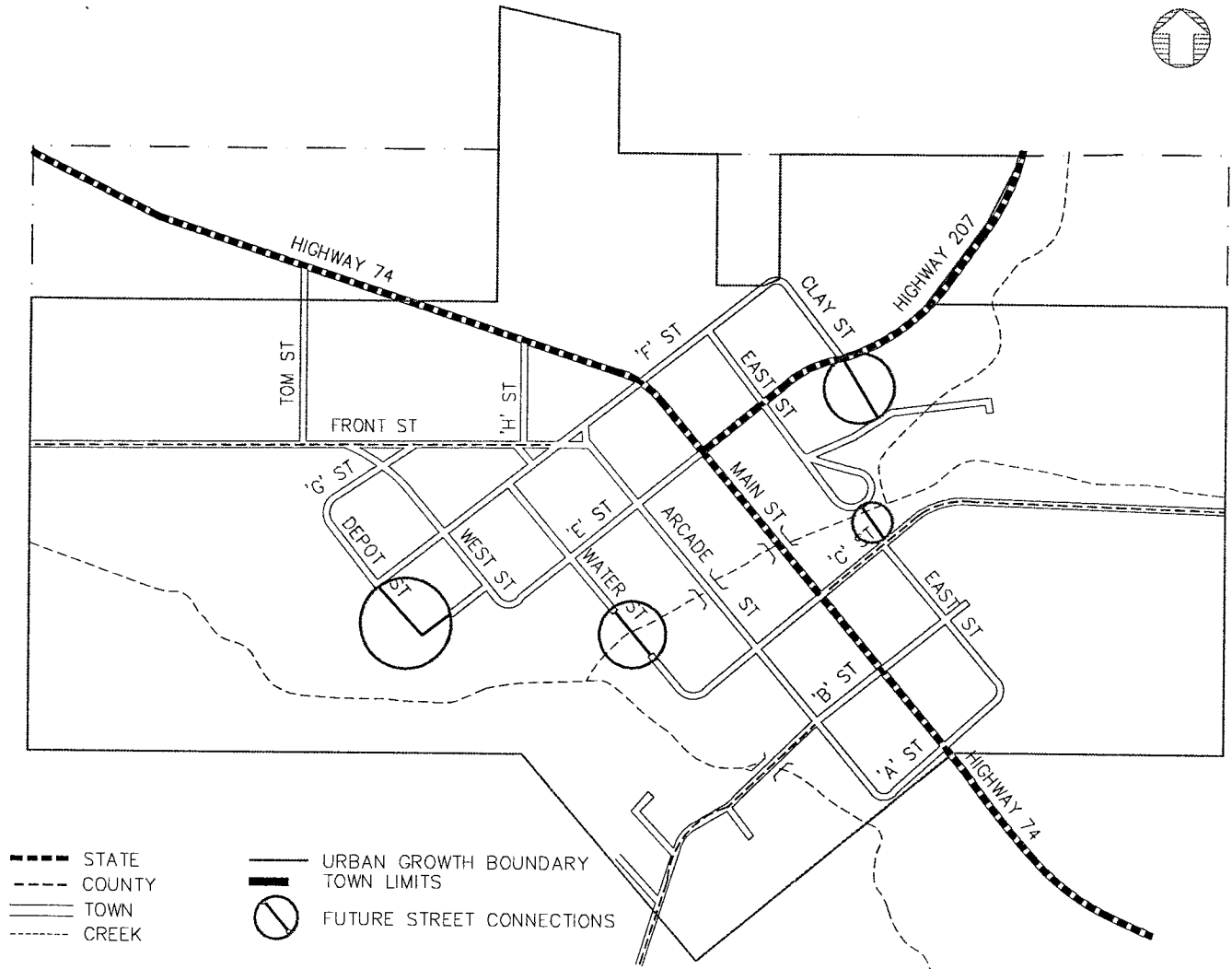
At the time development activities are proposed, the Town of Lexington, when appropriate, will require half-street improvements as part of a given project's conditions of approval. The conditions of approval should require that roadways adjacent to development activities be constructed to comply with the street standards presented in this TSP. Section 7, **Policies and Land Use Ordinance Modifications**, provides sample development review guidelines that are recommended for adoption by the town.

Relation to County Facilities

The Morrow County Transportation System Plan identified roadway standards for county facilities. The county's right-of-way requirement for Rural Access Roadways is 60 feet is in line with the 60 foot right-of-way requirement identified for local collector roads in this TSP. Although the county's Rural Access Roadways may be applicable to some roadways within the Town of Lexington Urban Growth Area, the roadway standards contained in the Town of Lexington TSP do not conflict with the county's standards. The county's Rural Access Roadway standards are intended for roads that do not exhibit substantial traffic volumes now but may be expected to expand in the future, hence the additional right-of-way requirement. It is likely that the county roads will become collectors when incorporated into town limits.

By comparison, the 66 foot right-of-way required on town streets designated as being residential roads reflects the expectation that these roadways will not require additional widening in the long-term future. The town's collector designation would be an appropriate counterpart to the county's Rural Access Roadway designation.

Figure 16 – Potential Street Connections



Parking Restrictions

To ensure adequate intersection sight distance, curbside parking should be prohibited within 20 feet of the edge of a given intersection.

Access spacing standards for the respective roadway classifications are presented later within this section.

ROADWAY IMPROVEMENT PROGRAM

Transportation infrastructure improvements within the Town of Lexington urban growth boundary over the next 20 years to meet both short- and long-term needs are listed below in Table 9. The projects have been divided into three time periods; 0 to 5 years, 5 to 10 years, and concurrent with local development.

Table 9 – Roadway Improvements

Improvement Description	Estimated Cost*	Responsible Jurisdiction
Near-Term, High Priority Projects (0-5 years)		
Inventory and Review Posting of Town Signing	\$1,000	Town

Modify Town Ordinances to Ensure Connectivity Between Town Facilities and Future Residential Developments	Administrative	Town
Reduce Vehicular Reliance Through Zoning and Development Code Revisions	Administrative	Town
Improve West Street pavement conditions	Estimated at \$60,000 per 1000' of finished roadway including sidewalks & landscaping	Town/County/ODOT
Improve Front Street pavement conditions	Estimated at \$60,000 per 1000' of finished roadway including sidewalks & landscaping	Town/County/ODOT
Improve "E" Street pavement conditions	Estimated at \$60,000 per 1000' of finished roadway including sidewalks & landscaping	Town/County/ODOT
Influence Highway 74 Streetscape – Improve roadway, add landscaping, sidewalks, curbs, etc.	\$560,000	Town/ODOT
Mid-Term Projects (5-10 years)		
Improve "B" street pavement conditions	Estimated at \$60,000 per 1000' of finished roadway including sidewalks	Town/County/ODOT
Improve "C" street pavement conditions	Estimated at \$60,000 per 1000' of finished roadway including sidewalks	Town/County/ODOT
"F" Street Intersection Restriping/Traffic Control Modification	\$15,000	Town/County/ODOT
Implement Transportation Demand Management Measures	Not applicable	Town
Concurrent with Development and Improvement Projects		
Influence Highway 207 Streetscape – Improve roadway, add landscaping, sidewalks, curbs, etc.	\$560,000	Town/County/ODOT
Promote Access Management along Highway 74 and Highway 207	Administrative	Town/ODOT

*Estimated costs are in 1999 dollars and do not include right-of-way acquisition

ACCESS MANAGEMENT STRATEGIES

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 leads to not only increased vehicle delay and deterioration in the level of service on the arterial, but also 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-developed access plan for a street system can minimize local cost for 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 and requires that new connections to arterials and state highways be consistent with designated access management categories. As the Town of Lexington continues to develop, the arterial/minor collector/local street system will become more heavily relied upon for a variety of travel needs. As such, it will become increasingly important to manage access on the existing and future arterial/minor collector street system as new development occurs. Access locations on roadway sections need to be properly located to ensure safe and efficient travel along a given transportation facility. Access locations should be placed appropriately to limit potential conflicting turning movements, weaving maneuvers over short distances, and congestion along facilities.

One objective of the Lexington TSP was to develop an access management policy that maintains and enhances the integrity (capacity, safety, and level-of-service) of the town's streets. From a policy perspective, the Oregon Department of Transportation has legal authority to regulate access points along Highway 74 and Highway 207 within the town's urban growth boundary. The Town of Lexington will manage access on other minor collector and local streets within its jurisdiction to ensure the efficient movement of traffic and enhance safety.

Access management standards vary depending on the functional classification and purpose of a given roadway. Roadways in the upper echelon of the functional classification system (i.e., arterials) tend to have stringent spacing standards, while facilities ranked lower in the functional classification system allow more closely spaced accesses. The following discussion presents the access management system for roadways in Lexington.

ODOT Access Management Standards

Access management is important to promoting safe and efficient travel for both local and long distance users along Highways 74 and 207 in and around Lexington. The *1999 Oregon Highway Plan* specifies the access management spacing standards and policies for state facilities. Future developments on state highways (zone changes, Comprehensive Plan amendments, redevelopment, and/or development) will be required to meet the Access Management Spacing Standards of the 1999 OHP. Although Lexington may designate state highways as arterial roadways within their transportation system, the access management for these facilities follows the Access Management Spacing Standards of the 1999 Oregon Highway Plan

Highway 207 and Highway 74 South of Highway 207 are categorized in the 1999 Oregon Highway Plan as Regional Highways. The primary function of these highways is to provide connections and links to regional centers, Statewide or Interstate Highways, or economic or activity centers of regional significance. The management objective is to safe and efficient, High-speed, continuous flow operation in rural areas and moderate to high-speed operations in urban and urbanizing areas. A secondary function is to serve land uses near these highways. Inside Special Transportation Areas (STA), local access is also a priority.

Highway 74 North of Highway 207 is categorized in the 1999 Oregon Highway Plan as a District Highway. According to the OHP, the primary function of these highways is to provide connections and links between small-urbanized areas, rural centers and urban hubs, and serve local access and traffic. The management objective is to provide for safe and efficient, moderate to high-speed continuous flow operation in rural areas reflecting the surrounding environment and moderate to low-speed operation in urban and urbanizing areas for traffic flow and for pedestrian and bicycle movements. Inside Special Transportation Areas (STA), local access is also a priority.

To assist in implementing state access management standards and policies, the 1999 Oregon Highway Plan also recognizes that state highways serve as main streets of many communities, such as downtown Lexington. Shorter block lengths and a well-developed grid system are important to a downtown area, along with convenient and safe pedestrian facilities. In general, downtown commercial arterial streets typically have blocks 200 to 400 feet long, driveway access sometimes as close as 100-foot intervals and occasionally; signals may be spaced as close as every 400 feet. The streets in downtown areas must have sidewalks and crosswalks, along with on-street parking. The need to maintain these typical downtown characteristics must be carefully considered along with the need to maintain the safe and efficient movement of through traffic. The Oregon Highway Plan recognizes the main street function through the designation of Special Transportation Areas (STAs).

Special Transportation Area

A Special Transportation Area (STA) is a designation that may be applied to a state highway, when a downtown, business district, or community center straddles the state highway within a community's urban growth boundary. STAs can include central business districts but they do not apply to whole cities or strip development areas along individual highway corridors. The primary objective of a STA is to provide access to community activities, businesses and residences, and to accomplish pedestrian, and bicycle movements along and across the highway in compact central business district. An STA designation will allow reduced mobility standards, accommodate existing public street spacing, compact development patterns, and enhance opportunities to provide improvements for pedestrians and bicyclists in the downtown area. Inclusion in a STA allows for redevelopment with exception to the proposed access management standards.

Access management in STAs corresponds to the existing city block for public road connections and discourages private driveways. However, where driveways are allowed and land use patterns permit, the minimum spacing for a driveway is 175 feet or mid-block if the current city block spacing is less than 350 feet. In addition, the need for local street connections may outweigh the consideration of maintaining highway mobility within a STA. In Lexington, the area along Highway 74 (ODOT Highway Number 52) between B Street (milepost 36.68) and F Street (milepost 36.34) exemplify the design features of a historic downtown. Within this segment of downtown highway, buildings are spaced close together, parking is on street, and the posted speed limit is 30 mph. The compact development pattern qualifies this area for consideration of an STA highway segment designation.

Upon adoption of the TSP by the Lexington City Council and a finding of compliance with the Oregon Highway Plan, the City of Lexington and ODOT Region 5 may jointly designate this segment of Highway 74 (ODOT Highway Number 52) as an STA

through a Memorandum of Understanding (MOU). The MOU will incorporate by reference the TSP and the following STA Management Plan provisions.

The primary objective of the proposed Lexington STA is to provide access to community activities, businesses and residences, and to accommodate pedestrian, and bicycle movements along and across the highway in the city's commercial area.

The designation of an STA in Lexington is intended to accommodate the existing public street spacing and compact development pattern. Specific access management conditions for the Lexington STA on Highway 74 (ODOT Highway No. 52) include:

- The minimum spacing for public road approaches in the STA is the city block spacing of approximately 325 feet.
- Public road connections are preferred over private driveways. Private driveways are discouraged in a STA.
- Where land use patterns permit, ODOT will work with the City and property owners to identify appropriate access to adjacent property owners within the STA.
- Where a right to access exists, access will be allowed to property at less than the designated spacing standard only if that property does not have reasonable alternative. Where possible, other options should be considered, such as joint access.
- Where the right to access exists, the number of driveways to a single property shall be limited to one. ODOT will work with the City and property owners if additional driveways are necessary to accommodate and service the traffic to the property, and will not interfere with driver expectancy and the safety of through traffic on the highway.
- Driveways shall be located where they do not create undue interference or hazard to the free movement of normal highway or pedestrian traffic. Locations in areas of restricted sight distance or at points that interfere with the placement and proper functioning of traffic control signs, lighting or other devices that affect traffic operation will not be permitted.
- If a property is landlocked (no reasonable alternative exists) because a driveway cannot be safely constructed and operated and all other alternatives have been explored and rejected, ODOT might be required to purchase the property. However, if a hardship is self-inflicted, such as by partitioning or subdividing a property, ODOT has no responsibility for purchasing the property.

Traffic movement on and off the state highway operates at LOS A or better, correlating to a volume to capacity ratio of <0.48. Increased traffic volumes over the 20-year projection period will not affect the level-of-service (LOS) or meet the maximum volume to capacity ratio of 0.85 for Highway 74 (Regional Highway) south of Highway 207 or 0.80 for Highway 74 (District Highway) north of Highway 207 within the city's urban growth boundary. To maintain highway mobility through a STA in Lexington, land use development decisions (within the urban growth boundary) shall not cause traffic flow to exceed a volume to capacity ratio of 0.85 for a regional highway and 0.80 for a district highway. The posted speed limit in the STA is currently and will remain at 30 miles per hour as allowed by state statute in a business district. Curb (parallel or perpendicular) parking is permitted in the STA, provided minimum sight distance requirements are met for all public road connections and private driveways. Parking in this area is adequate at this time. No signals or traffic control devices currently exist in this area.

The designation of an STA in Lexington further identifies the need to accommodate pedestrian, and bicycle movements along and across the highway in the compact central business area. The recommended urban arterial standard for a state highway within the STA consists of a 70 foot right-of-way with a paved width of 50 feet that includes:

- two 12 foot travel lanes
- 5 foot bike lane on each side of the road
- 8 foot parking strip on each side of the road
- 6 to 10 foot walkway on each side of the road
- Planting strip of 0 to 5 feet depending on the width of the walkway and available right-of-way

To accommodate bicycle movements along the highway, bike lanes should be installed within the STA and extended to the City limits near A Street (milepost 36.76) and H Street (milepost 36.24), as recommended in the TSP, though the segment between the bridge and E Street may pose constraints to bike and pedestrian movement. The bridge is not wide enough to accommodate bicycle and pedestrian movement along Highway 74. The cut slope along the Morrow County School District Office also poses constraints to bicycle and pedestrian movement. In addition, Bicycle and Pedestrian movement needs to be accommodated along Highway 207 ('E' street), while other bicycle and pedestrian improvement should occur along identified collector and minor collector roadways as development and roadway improvements occur.

Another essential component to accommodate pedestrians in a STA is street crossings. The Town has applied to ODOT for inclusion of crosswalk enhancements, but were denied, as there was not enough traffic to warrant a crosswalk. The Town recognizes the need for safe crossing facilities and will ask ODOT to include a crossing facility during any future work conducted by ODOT within the Town. Future improvements and modifications to the highway within the STA and within the curb line, or if no regular established curb, to the r/w utilized for highway purposes will be made in accordance with the Oregon Highway Design Manual and with ODOT approval.

Existing maintenance and operational strategies along Highway 74 will be employed within the STA, consistent with Oregon Revised Statute 373.020, as follows:

ODOT shall be responsible for the ongoing maintenance of:

1. The roadway surface between curbs, or if no regular established curb, to that portion of right-of-way utilized for highway purposes
2. Painting centerline stripe
3. Designated school crosswalk delineation, directional and regulatory signs except those signs described as the City's responsibility
4. Plowing snow one blade-width of centerline stripe provided there are no conflicts with utilities.

Lexington shall be responsible for the on going maintenance of:

1. Storm sewer system
2. Sidewalks
3. Landscaping
4. Luminaries
5. U-turn signs, parking signs, and street name signs
6. Painting parking-stripes and other pavement delineation not described as ODOT's responsibility
7. Snow removal from parking strip

Future improvements and modifications to the highway within the STA will include maintenance and operational strategies with ODOT and City approval. Impact on Local Development Activities

Future developments along Highway 74 and Highway 207 (zone changes, comprehensive plan amendments, redevelopment, and/or new development) will be required to meet the 1999 *Oregon Highway Plan* Access Management policies and standards (Appendix C of 1999 Oregon Highway Plan).

At unsignalized intersection and road approaches, the 1999 *Oregon Highway Plan* indicates that the maximum volume to capacity ratio of 0.95 within a Special Transportation Area and 0.85 outside of a Special Transportation Area shall not be exceeded for intersections and road approaches.

The existing legal driveway connections, public street intersection spacing, 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 transportation system plan. However, existing permitted connections not conforming to the design goals and objectives of the roadway classification will be upgraded as circumstances permit and during redevelopment. At any time, an approach road may need to be modified due to a safety problem or a capacity issue that exists or becomes apparent. By statute, ODOT is required to ensure that all safety and capacity issues are addressed.

Proposed land use actions that do not comply with the designated access spacing policy will be required to request consideration for deviation from ODOT based on deviation standards and policies outlined in the 1999 Oregon Highway Plan.

Town Standards

Table 10 identifies the minimum public street intersection and private access spacing standards for the Town of Lexington roadway network as they relate to new development and redevelopment. Table 11 identifies standards for private access driveway widths. In cases where physical constraints or unique site characteristics limit the ability for the access spacing standards listed in Tables 10 and 11 to be met, the Town of Lexington should retain the right to grant an access spacing variance. County facilities within the town's urban growth boundary should be planned and constructed in accordance with these street design standards.

Table 10 – Minimum Intersection Spacing Standards

Functional Classification	Public Street (feet)	Private Access Drive (feet)
State Highways	See Access Management Spacing Standards, 1999 Oregon Highway Plan (Appendix C of OHP)	
Other Arterials and Major Collectors within UGB	600	300
Minor Collector	300	75
Local	150	15

Table 11 – Private Access Driveway Width Standards

Land Use	Minimum (feet)	Maximum (feet)
Single Family Residential	12	24
Multi-Family Residential	24	30
Commercial	30	40
Industrial	30	40

Management Techniques

From an operational perspective, the Town of Lexington should consider implementing access management measures to limit the number of redundant access points along the arterial and minor collector roadways. This will enhance roadway capacity and benefit circulation. Improvements that should be considered include:

- Planning for and developing intersection improvement programs in order to regularly monitor intersection operations and safety problems;
- Purchasing right-of-way and closing driveways; and
- Installing positive channelization and driveway access controls as necessary.

Enforcement of the access spacing standards should be complemented with the availability of alternative access points. Purchasing right-of-way and closing driveways without a parallel road system and/or other local access could seriously effect the viability of the impacted properties. Thus, if an access management approach is taken, alternative access should be developed prior to “land-locking” a given property.

As part of every land use action, the Town of Lexington should evaluate the potential need for conditioning a given development proposal with the following items, in order to maintain and/or improve traffic operations and safety along the arterial and minor collector roadways:

- Crossover easements should be provided on all compatible parcels (considering topography, access, and land use) to facilitate future access between adjoining parcels. Figure 14 illustrates how this process would in the long run, facilitate compliance with access management objectives.
- Conditional access permits should be issued to developments having proposed access points that do not meet the designated access spacing policy and/or have the ability to align with opposing driveways.
- Right-of-way dedications should be provided to facilitate the future planned roadway system in the vicinity of proposed developments.
- Half-street improvements (sidewalks or pedestrian facilities, curb and gutter, bike lanes/paths, and/or travel lanes) should be provided along site frontages that do not have full-buildout improvements in place at the time of development.

Using these guidelines, all driveways, and roadways along the state highways will eventually comply with the access spacing policy set for a particular segment of roadway as development and redevelopment occurs in the study area. State Highways are managed by the Oregon Department of Transportation and access and other state highway alterations must be submitted to the

Department of Transportation for review and the authorization of the proper permits. It should be noted that not every parcel can or should be addressed through the process. The topography of the parcel, type of proposed or adjoining use, and/or highway frontage may preclude a development from using consolidated or crossover access points (e.g., consolidating access for a commercial business and an industrial or agricultural land use would be inappropriate).

PEDESTRIAN SYSTEM PLAN

The pedestrian and bicycle system plan is shown in Figure 17. The key objective in the development of the pedestrian and bicycle system plan was to provide connectivity between major activity centers. Within Lexington, these activity centers include locations such as the school building, town offices (fire station), the convenience market on the northwest corner of the Highway 207/Highway 74 intersections, and commercial businesses such as restaurants along Highway 74.

Pedestrian Facilities

Under the pedestrian component of the plan, pedestrian facilities would be provided along all major roadways in an effort to develop and maintain a comprehensive pedestrian system. As shown in Figure 17, sidewalks are to be provided along Highways 74 and 207 throughout the town. It is essential that existing sidewalks be connected to new pedestrian facilities as new developments are constructed or as road improvements are made. Pedestrian facilities should be included in any full reconstruction of arterials or minor collectors. Provision of sidewalks or pedestrian facilities along one or both sides of key local roads is also encouraged.

Bicycle Facilities

Given the lack of existing bicycle infrastructure, and recognizing the rural character of the town, the bikeway system plan shown in Figure 17 was developed. As shown in Figure 17, the scope of the plan is proposed to be limited to designate on-street bicycle facilities along Highway 74 and Highway 207. The bikeway component of the overall system plan, while somewhat limited, provides for essential connections into and out of town. The existing and forecast traffic volumes and speeds along other roadways within Lexington do not warrant exclusive on-street bicycle lanes; the volumes and speeds are well within the range that permits bicyclists to comfortably and safely share the roadway with motorists. Therefore, the remainder of the town's minor collector and local street system is proposed to remain as shared facilities.

There are bicycle and pedestrian constraints along State Highway 74 between the bridge and "E" Street. The bridge is not wide enough to provide safe accommodations for pedestrians and bicycles to safely pass. The bridge sidewalk is not Americans with Disabilities Act compliant.

The cut slope located along the School District Office also constrains bicycle and pedestrian movement. Substantial improvements need to be made to ensure safe bicycle and pedestrian movement along the state facility.

To ensure that safe bicycle and pedestrian travel is available, a separate multi-use path may need to be constructed in order to accommodate non-motorized travel.

Figure 17 – Pedestrian and Bicycle System Plan

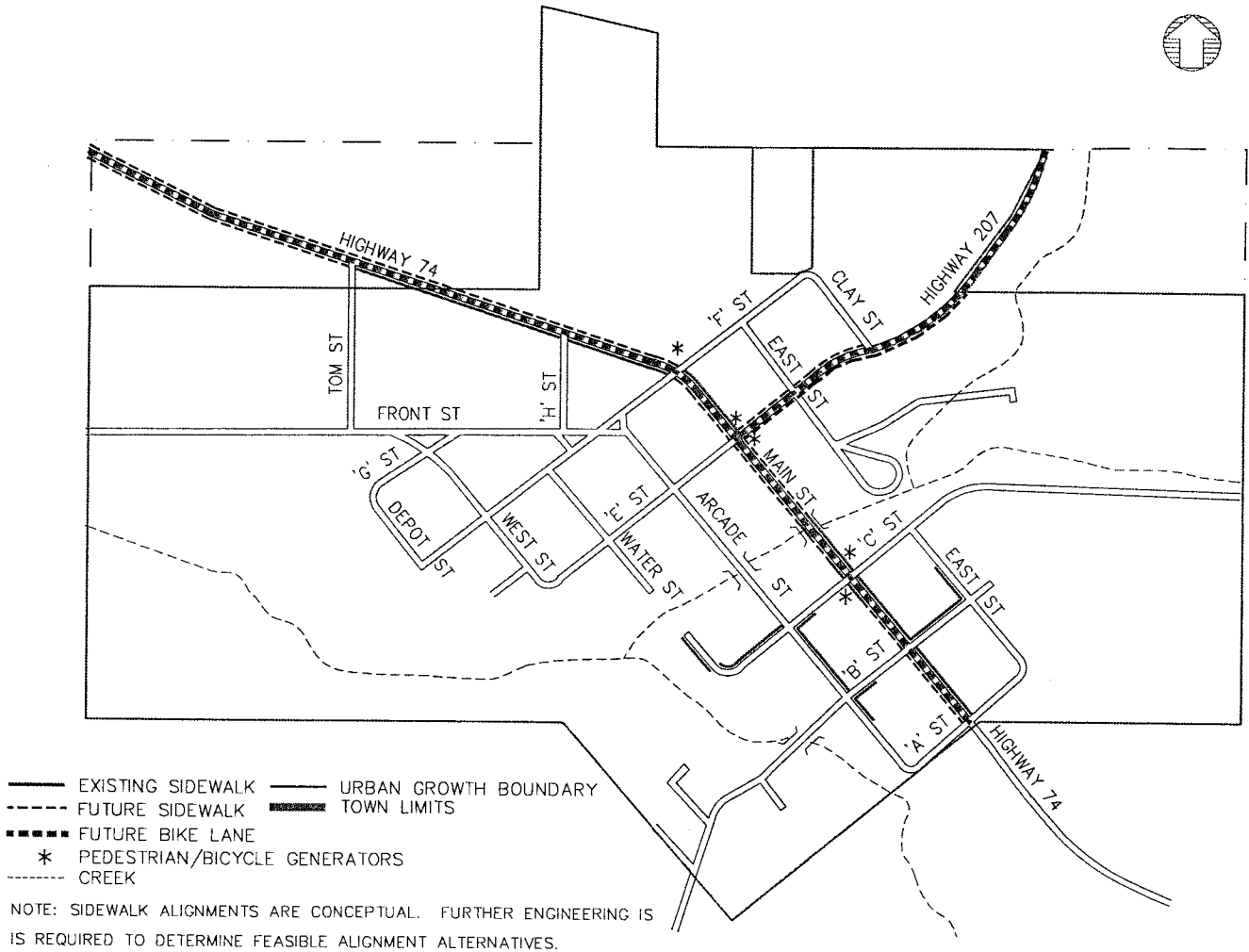


Table 12 provides a summary of pedestrian and bicycle system projects as well as corresponding cost estimates. The projects have been categorized into a near-term, mid-term, and long-term planning horizon to reflect the need to first connect major activity centers and then develop adjoining facilities in an incremental manner that recognizes the local budget constraints.

Table 12 – Pedestrian and Bicycle System Improvements

General Alignment	Project Start/End Point	Improvement Description	Estimated Cost*	Responsible Jurisdiction
Near-Term, High Priority Projects (0-5 years)				
Highway 74	"E" Street to "H" Street	Sidewalk/Bike Lanes	\$36,000	Town/ODOT
Highway 74	"E" Street to "A" Street	Sidewalk/Bike Lanes Improvements (STIP)	Cost of this project is included in the cost estimate outlined in Table 9	Town/ODOT
"E" Street – Highway 207	West Street to Clay Street	Sidewalk/Bike Lanes	\$25,000	Town/ODOT
Mid-Term Projects (5-10 years)				
"F" Street	West Street to Clay Street	Sidewalk	\$15,000	Town/Private
"B" Street	South of Highway 74	Sidewalk	\$13,000	Town/Private

Long-Term Projects (10-20 years)				
Arcade Street	"F" Street to "A" Street	Sidewalk	\$18,000	Town/Private
Concurrent with Development Projects				
Highway 74	North of "F" Street to northern town limit	Sidewalk	\$26,000	Town/ODOT
"C" Street	North of Highway 74	Sidewalk	\$17,000	Private/Town
Front Street	"F" Street to Tom Street	Sidewalk	\$22,000	Private/Town

*Estimated costs are in 1999 dollars and do not include right-of-way acquisition

**The cost of individually providing bike lanes was not estimated because the provision of bike lanes is likely to be completed in conjunction with future reconstruction of the two respective highways. The shoulder widths vary through town with some areas requiring widening and other simply involving restriping. The cost to restripe lanes is estimated to be \$0.25 per lineal foot; the cost of reconstructing the roadway shoulders has the potential to be much more substantial due to required cut/fill, asphalt, drainage, and other necessary improvements. Due to funding limitations ODOT is currently in a preservation/maintenance funding mode, hence the development of bike lanes is not anticipated until the long-term future.

In reviewing the cost estimates presented in Table 12 it should be noted that the cost estimates for sidewalk facilities assume minimum slope grading work, drywells for drainage, roadside curbing, and the sidewalk itself.

The remainder of the sidewalk facilities identified in Figure 17 should be provided in conjunction with development or redevelopment of adjacent properties. Similarly, many of the sidewalk and multi-use facilities presented in Table 12 could be completed incrementally as part of local development projects. Creating "partnership programs" with landowners and businesses to construct such facilities would be one method by which individual projects could be brought to fruition in a timely manner. The pedestrian facilities could be constructed as adjacent properties develop, thereby ensuring alternative modes of access to various land uses. The town would however, need to develop a reasonably equitable methodology of assessing the extent of facilities that individual developers would be required to provide.

PUBLIC TRANSPORTATION SYSTEM PLAN

Transit service provides mobility to community residents who do not have access to automobiles and provides an alternative to driving for those who do. Transit service should meet the needs both of travelers within the town and those of travelers making trips outside of the community.

The 1997 Oregon Public Transportation Plan identifies minimum level of service standards for rural and frontier communities such as the Town of Lexington. Under the 1997 Oregon Public Transportation Plan, public transportation in small communities and rural areas in the year 2015 (under Level 3-Respond to State and Federal Mandates and Goals) should:

- Provide public transportation service to the general public based on locally established service and funding priorities;
- Provide an accessible ride to anyone requesting service;
- Provide a coordinated centralized scheduling system in each county and at the state level;
- Provide phone access to the scheduling system at least 40 hours weekly between Monday and Friday; and
- Respond to service requests within 24 hours (not necessarily provide a ride within 24 hours).

Service Enhancements

Overall, the Town of Lexington should continue to monitor the adequacy of the transit service provided to the community and work with the county to extend service as necessary. The local transit program should also seek to meet the 2015 minimum level of service standards identified in the 1997 Oregon Public Transportation Plan. Three improvement strategies are identified below for further consideration.

Increase Public Awareness

Both the town and the county should promote a greater public awareness of the available public transit services and the need for additional volunteer dispatchers and drivers. Greater awareness of the service and its needs will likely result in increased usage and availability. Provision of better recognition for drivers and/or driver meetings would be an additional avenue by which to encourage more volunteer participation in the program.

Coordinate Trips

Consideration should be given to coordinating trip requests to other neighboring communities and areas outside the county such as Hermiston and Pendleton. For example, a given day of the week could be designated for trips to Pendleton. This would then allow the town's residents to visit specialized medical service providers or satisfy other needs on a scheduled basis. Similarly, weekly shopping trips to Hermiston or other communities could be established to allow community members to purchase commodities not available through local commercial and service providers.

A recent survey conducted by transportation provider staff suggests that coordination of medical visits could be difficult due to the unpredictable nature of office visits, though the need for such a service should be more closely examined. Assuming that the demand for such a service exists, a scheduled weekly service would lend itself to greater coordination with service providers in the neighboring communities of Ione and Heppner.

Close coordination between the Town of Lexington and adjacent communities is also encouraged and should increase ridership and efficiency through better use of the resources available. Such coordination could prove to be especially fruitful if the weekly trips previously discussed are established as a joint community service. Coordinated trips to local community events would likely generate significant interest. Ultimately, if an increased demand for service can be established and documented; additional resources (e.g., funding and equipment) may be successfully pursued through grant applications or other alternative financing sources.

Provide Commuter Service

It is recommended that a carpool or vanpool service be provided for people who live in Lexington and work in neighboring communities. Provision of a vanpool and/or carpools to major employers in the area could help to reduce the number of single occupant vehicle commute trips from Lexington and help the community to achieve transportation demand management (TDM) objectives.

Vehicle Replacement/Stationing in Lexington

Lexington should consider housing one of the Morrow County transit vehicles within the town. Similar to the communities of Heppner and Ione, a vehicle could be permanently stationed within the town and operated by volunteers on an as needed basis. Preliminary discussions with representatives from Morrow County indicate that such a service would be considered by the county and could be brought to fruition (The Morrow County transit program ultimately has the ability to finance a vehicle to be stationed in the Town of Lexington) if the Town of Lexington can demonstrate a need for such service. Lexington should pursue this and other transit opportunities.

An opportunity currently exists to pursue procurement of a vehicle in that the Morrow County Special Transportation Program replaces vehicles on an as-needed basis and the county has budgeted to replace one vehicle in 1999. The Town of Lexington should support the Morrow County Special Transportation Program in its pursuit of additional vehicles and funding.

MARINE SYSTEM PLAN

The Town of Lexington should actively support the continued presence and operation of port facilities along the Columbia River as an alternative means of transportation.

AIR TRANSPORTATION SYSTEM PLAN

Existing regional air service for passengers and freight is provided via the Lexington Airport as well as aviation facilities in Hermiston and Pendleton. The continued use and appropriate expansion of these facilities is recommended.

PIPELINE SYSTEM PLAN

No major pipelines within the Town of Lexington were identified at the time this TSP was prepared; creation of future facilities should be encouraged by the town as appropriate.

IMPLEMENTATION PLAN

This section has outlined specific transportation system improvement recommendations as well as a corresponding timeline for implementation of the identified improvements. The sequencing plan presented is not detailed to the point of a schedule identifying specific years when infrastructure should be constructed, but rather ranks projects to be developed over 0 to 5 year,

5 to 10 year, and 10 to 20 year horizon periods. In this manner, the implementation of identified system improvements has been staged to spread investment in this infrastructure over the 20-year life of the plan.

The construction of roads, water, sewer, and electrical facilities in conjunction with local development activity should be coordinated if the Town of Lexington is to develop in an orderly and efficient way. Consequently, the plans recommended in the TSP should be considered in light of developing infrastructure sequencing plans, and may need to be modified accordingly.

SUMMARY

The adoption and implementation of this Transportation System Plan will enable the Town of Lexington to address existing transportation system deficiencies while also facilitating growth in the study area population and employment levels assumed in this study.

Section 6

Transportation Funding Plan

Transportation Funding Plan

INTRODUCTION

The Transportation Planning Rule (OAR 660-12-040) requires that the Town of Lexington Transportation System Plan (TSP) include a transportation financing program. These programs are to include:

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

Section 5 of this TSP identified the recommended improvement projects, an implementation timeline, and estimated improvement costs. This section provides an overview of the Town of Lexington's historic funding levels and available funding sources at a federal, state, county, and local level.

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

TOWN OF LEXINGTON FUNDING HISTORY

The 1998-1999 Town of Lexington Street Fund provides an annual budget of \$25,650. By comparison, \$23,346 was allocated to the 1997-1998 Street Fund and \$40,100 is approved for the 1999-2000 fiscal year. The Street Fund is primarily dedicated to the operation and maintenance of the town's transportation facilities. Maintenance and preservation are the major work activities performed on the local street system. Virtually all of the annual Street Fund budget is derived from the town's share of the statewide gasoline tax and motor vehicle fees. This revenue sharing is based on population and distributed on a proportional share basis to all cities and counties.

It is expected that, for the foreseeable future, whatever funding is made available to the town through state and county resources will be applied to the maintenance and preservation of the existing street system. Should the town obtain funds in excess of the budget necessary to maintain the existing system, the TPR will seek to balance the application of these funds across all modes of travel. Therefore, the list of identified needs provided in this TSP should be the primary source for future projects to be implemented.

OREGON TRANSPORTATION FUNDING HISTORY

Road-Related Funding

The most significant portion of Oregon's highway user taxes and fees come from federal fuel and vehicle taxes, state taxes, and general motor vehicle fees. These categories account for 32 percent, 34 percent, and 25 percent, respectively, of all highway user taxes and fees collected in the State. Through the fiscal year 1996, the matching ratio in Oregon for Interstate Funds was: Federal 92.22 percent and State 7.78 percent.

During the 1980's, Oregon's transportation budget was bolstered by a series of two-cent annual gas tax increases. At the same time, the Federal Government was increasing investment in highways and public transportation. The situation is different today. The last three Oregon Legislatures failed to increase the gas tax and federal budget cuts are reducing transportation funding available to Oregon. The State Highway Fund is further losing buying power because the gas tax is not indexed to inflation, and increased fuel efficiency of vehicles reduces overall consumption. Nevertheless, fuel taxes are the largest single source of highway revenues at approximately \$390 million annually. Weight-miles taxes are the second largest source of revenue to the Highway Fund, at approximately \$215 million annually.

Oregon Highway Trust Fund revenues are distributed among State (60.05 percent), County (24.38 percent) and Town (15.57 percent) governments to fund their priority road needs. Under the 1997-1999 legislatively adopted Department of Transportation budget, a total of \$2,284 million revenue dollars was identified. Of the total available revenue, approximately \$317 million dollars was allocated to counties and \$185 million to cities.

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

Oregon's current fee for cars and other light vehicles weighing 8,000 pounds or less is \$30 biennially. Oregon law permits local governments (counties) and governmental entities to impose local option vehicle registration fees. To date, no county has implemented this tax.

Cities in Oregon have relied more on transfers from their general funds to support roadway improvements, than have counties. Ballot Measure 5, approved by the voters in 1990, reduced the range of funding and financing options available to both cities and counties. Measure 5 limited the property tax rate for purposes other than for payment of certain general obligation indebtedness to \$15 per \$1,000 of assessed value. The measure further divided the \$15 per \$1,000 property tax authority into two components: \$5 per \$1,000 dedicated to the public schools; the remaining \$10 dedicated to other local government units, including cities, counties, special service districts, and other non-school entities. The tax rate limitation for cities and counties went into effect in July 1991. The school portion of the measure was phased in over a five-year period beginning in July 1991.

In 1996, voters again approved a property tax limitation measure, Ballot Measure 47, which further affected the ability of cities and counties to pay for needed infrastructure through historic or traditional means. Ballot Measure 50 was approved by Oregon voters in May of 1997 and through legislation became law in July 1997. Ballot Measure 50 repealed Measure 47 and made efficiency changes to Measure 5. Measure 50 limits taxes on each property by rolling back the 1997-1998 assessed value of each property to 90 percent of its 1995-1996 value. Measure 50 also limits future growth on taxable value to three percent per year, with exceptions for new items such as new construction, remodeling, subdivisions, and rezoning. Permanent tax rates for Oregon's local taxing districts are also established in Measure 50 that replaces the former tax base amounts of the district. Measure 50 allows voters to approve new short-term levies outside the permanent rate limit if approved by a double majority.

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

Given this funding environment, current funding levels and sources are not adequate to meet the transportation needs of the State, counties, or cities, for the next 20 years. In response to this gap between needs and funding, Governor Kitzhaber organized the Oregon Transportation Initiative to look at statewide transportation needs and to develop a program to address how these needs will be met. Through a public process led by business and civic leaders across the State, findings and recommendations on the state of transportation needs and methods to address those needs was submitted to the Governor in July 1996.

A result of these recommendations was the appointment of a committee to develop a legislative proposal to the 1997 Legislature regarding transportation funding. Part of that proposal included a process for identifying a "base" transportation system, with a priority of maintenance, preservation, and operation of a system of transportation facilities and services that ensures every Oregonian a basic level of mobility within and between communities. Other components included provisions for realizing efficiencies resulting from better intergovernmental cooperation (shared resources and equipment, better communication on project needs and definition), and elimination of legislative barriers to more efficient and cost-effective methods of providing transportation services. The State Legislature was unable to reach consensus on the means to collect and distribute the funds and the package failed.

A part of future transportation funding will include identification of relationships and responsibilities relative to delivery of projects and services. In Oregon, the primary state role has been to construct and maintain the state highway system and to assist local government with funding of other modes. The State also has a role in inter-city passenger services and airports. This historically has been minor but would grow significantly if serious efforts were put into inter-city transportation improvements. Local governments provide local transit and airport support, in addition to providing maintenance, preservation, and construction for local roads, streets, and bridges. The Federal Intermodal Surface Transportation Efficiency Act of 1991

(ISTEA) began moving decision-making for federal programs to states and this program and other state policies incorporated in the Oregon Transportation Plan (OTP) encourage reassessment of responsibilities and obligations for funding. The Transportation Equity Act for the 21st Century (TEA21), passed in 1998, has continued the efforts first initiated by ISTEA.

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

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

Transit Funding

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

While the state's role in transit funding is limited, the ODOT Public Transit Section does currently administer three public transit funding sources. These include Small City and Rural Transit Assistance (Section 18), the Special Transportation Fund (STF), and Section 16.

The Small City and Rural Transit Assistance program is a federally funded initiative that provides capital to operate and acquire vehicles for public transportation systems in cities with populations of less than 50,000 and rural areas. This assistance program is funded annually through an appropriation from the Federal Transit Administration (FTA) to each state with funds allocated to eligible providers based on a three-part formula. Fifty percent of the funds are distributed based on population, 25 percent are based on ridership, and 25 percent are based on service hours. There is a 50 percent local match requirement for operating costs and a 20 percent match for capital costs. The program stipulates that service must be marketed as "public transit": exclusive transportation services such as those limited strictly to senior citizens or employers are not eligible for funding under this program. Additional funding details, application information, and general assistance with the Small City and Rural Transit Assistance is available through ODOT's Public transit Division.

The Special Transportation Fund is intended for elderly and disabled citizens and is funded through the State cigarette tax. Funding for the purchase of vehicles and equipment for special transportation providers (i.e., servicing the elderly and disabled) is provided through a federal funding program known as Section 16.

POTENTIAL TRANSPORTATION FUNDING SOURCES

There are a variety of methods to generate revenue for transportation projects. Funding for transportation improvement projects are derived from three sources: federal, state, and local governments. Appendix D (Tables D-1, 2, 3) provides a summary of federal, state, and local highway, bridge, sidewalk, and bicycle funding programs respectively, which have typically been used in the past. Although property tax is listed as a possible revenue source, the impacts of Ballot Measure 47 severely limit the opportunities for this funding source.

Appendix D (Table D-2) presents details of the revenue sources for streets, bridges, sidewalks, and bicycle facilities currently used by cities. The information is summarized by type of facility, and indicates the percent of revenue each funding source represents for all cities in Oregon, likely trends for the source, known constitutional or other limitations, and their respective rates. The general status of each funding source is summarized in Table D-3.

Funding Program

To implement the full extent of transportation infrastructure projects identified in this TSP, major financial expenditures can be anticipated over the course of the next 20 years. The town can expect to make significant investments to improve transportation facilities for existing development and to improve minor collectors and arterials that serve the entire area. In future years,

however, the burden for expansion of the transportation network should be borne by the development community creating the additional demand.

Based on the recommended roadway improvement projects identified in Table 9, at least \$16,000 of roadway improvements has been identified for completion within the next 20 years. Additional projects for which cost estimates could not be prepared are also anticipated, though the expenditures necessary to complete these additional projects are expected to be minimal, as they are essentially administrative matters.

The vast majorities of the anticipated transportation improvements involve pedestrian and bicycle facility enhancements. Pedestrian and bicycle improvement projects are expected to be implemented on a gradual basis as roadways are reconstructed, development activities occur, or alternative funding becomes available through grant projects or some other financing mechanism. Sidewalk and bicycle facilities located along Highway 74 and Highway 207 may be provided by the State at such time that the roadways are substantially reconstructed; otherwise little, if any, ODOT funding is anticipated for pedestrian improvements. Thus, the identified pedestrian and bicycle improvement projects will be financed either by the town or developers as appropriate. Funding programs such as the Transportation Enhancement Program provide funds for enhancing pedestrian and bicycle facilities, landscaping, and other scenic beautification that may be a source of funding for adding sidewalks, multi-use paths, and bicycle facilities. Additional funding may be available through the creation of Local Improvement Districts or through grant projects.

State Funding

ODOT operates and maintains Highway 74 and Highway 207 in the Town of Lexington. State and federal funds administered through ODOT will be the primary sources of funding for improvements to these facilities. Additionally, most Federal funding is passed through ODOT to local jurisdictions. Due to funding limitations, ODOT is currently in a preservation/maintenance funding mode. While improvement projects affecting ODOT facilities are documented in this TSP, the inclusion of such projects in the TSP does not obligate ODOT to finance them.

A good working relationship with ODOT Region 5 planning staff and the Region Manager will be important to ensure that major roadway improvement projects on state facilities within the town are included in ODOT's State Transportation Improvement Plan (STIP) when it is updated. The town and Morrow County should take an active role in jointly representing the transportation priorities of Lexington to ODOT during its process of formally incorporating priorities into the STIP. For its part, the Town of Lexington Transportation System Plan will provide ODOT with highway-related transportation projects of importance to the town and should be used as a basis for discussion with ODOT.

Local funding participation in projects on state facilities may enable the ODOT to accelerate the priority of an improvement identified in the STIP. While not normally a requirement of project funding, local participation does demonstrate a strong commitment to ODOT and the local funds may be used to leverage state funds.

Local Funding

The Town of Lexington should continue to pursue federal, state, and county transportation funds for transportation projects. Given the high level of annual expenditures needed for construction of the transportation projects identified, existing sources of transportation revenue are not expected to be adequate to meet the demand for new projects. To meet the additional funding needs, the town may wish to consider additional revenue-generating options such as systems development charges, local improvement districts, and street maintenance fees as discussed below. It should be noted that, even with increased funding, it might prove difficult to fund all of the projects identified in this TSP within the 20-year planning horizon. Accordingly, the town should review the identified improvement projects on a periodic basis to prioritize local transportation system funding such that it most appropriately reflects current and projected needs.

Transportation System Development Charge

The Town of Lexington does not currently have a transportation system development charge, which would be assessed to developers. This charge could be implemented by the town, with both a "reimbursement fee" and an "improvement fee" element built into its structure. The reimbursement fee places a value on the amount of capacity on an existing street that is utilized by new site development traffic. The improvement fee is an assessment for the added traffic impact associated with new development that triggers new roadway improvements. As a follow up to the Lexington TSP study, it is recommended that the town undertake a study to consider the appropriateness of a transportation SDC structure that would further facilitate the development of a multi-modal charge where funds could be spent on pedestrian, bicycle, transit improvements, and street improvements. The study should determine the feasibility of implementing SDC fees, particularly with respect to evaluating equitability with neighboring cities both in economic and political terms. For the present, the level of development in the Town is insufficient to warrant pursuing this funding method.

Local Improvement Districts

Local improvement districts could be formed to improve currently substandard and unimproved roads. These projects may or may not be fully completed within the 20-year planning horizon.

Street Maintenance Fee

The Town of Lexington could investigate local adoption of a street maintenance fee to raise revenues to be dedicated toward street rehabilitation projects. These revenues could also be used to supplement the current State Highway Fund (State gas tax and vehicle registration fees) revenues already used for on-going maintenance.

Additional Considerations

There are important limitations that should be considered with respect to additional funding options. For example, the dollar amount of SDCs that can be assessed must meet legal requirements for establishing SDCs. Also, the success of any funding plan will be reliant on the approval of the community. Accordingly, the involvement of citizens of the community in developing and implementing a funding package is essential.

SUMMARY

Transportation funding resources available to the Town of Lexington and ODOT are limited. It is expected that, for the foreseeable future, those funding sources that are available will predominantly be applied to maintenance and preservation of the existing transportation system. As additional funding becomes available, the list of transportation improvement projects identified in this TSP should be used to select projects for implementation. In the interim, the Town of Lexington should consider developing alternative transportation funding sources such as System Development Charges, Local Improvement Districts, or Street Maintenance Fees as a mechanism by which to finance improvements to the town's transportation system. However, given the small population and low level of new development, the Town will most likely rely on grant funding for most projects.

Section 7

Policies and Land Use Ordinance
Modifications

Policies and Land Use Ordinance Modifications

INTRODUCTION

The purpose of this document is to summarize recommended amendments to the town's codes to implement the Transportation Planning Rule (TPR). Specific amendments to the Comprehensive Plan and Municipal Code are summarized below.

It is stressed that the Transportation Growth Management (TGM) Program has developed the "Model Development Code and Users Guide for Small Cities". The Communities are encouraged to refer to the model ordinance and guidebook for strategies and model code provisions that can be readily adapted, adopted, and implemented locally to focus and stimulate urban residential and commercial development. The Transportation Growth Management Program also may provide funding opportunities through the grant application process.

The Town of Lexington recognizes that the Transportation Planning Rule requires implementing measures for the Transportation System Plan and the associated development codes. As such, it is the intent of the Town to adopt the Transportation System Plan and the amended development code to help ensure smart development of the local transportation systems and modes.

Section 8

Transportation Planning Rule Compliance

Transportation Planning Rule Compliance

In April 1991, the Land Conservation and Development Commission (LCDC), with the concurrence of ODOT, adopted the Transportation Planning Rule (TPR), OAR 660 Division 12. The TPR requires local jurisdictions to prepare and adopt a Transportation System Plan (TSP) by 1997. Outlined below is a list of recommendations (designated by *italics*) and requirements for a TSP for an urban area with a population between 2,500 and 25,000, and how each of those were addressed in the Town of Lexington TSP. The comparison demonstrates that the Town of Lexington TSP complies with the provisions of the TPR.

DEVELOPMENT OF A TRANSPORTATION SYSTEM PLAN

TPR Recommendations/Requirements

Town of Lexington TSP Compliance

Public and Interagency Involvement

Establish Advisory Committees.

- Develop informational material.
- Schedule informational meetings; review meetings and public hearings throughout the planning process. Involve the community.
- Coordinate Plan with other agencies.

A Management Team and Technical Advisory Committee was established at the outset of the project. Membership on the Management Team included members of the Town, County, and ODOT staff. Membership on the Technical Advisory Committee included representatives from all facets of the community.

Technical memoranda and current status reports of work undertaken and completed by the advisory committee were published and made available to the public throughout the project. Press releases concerning the project and opportunities for participation at public workshops were published and materials (including report text, charts, and maps) were prepared for review defining critical components of the Town's TSP. Three Management Team/TAC meetings were held through the planning process. The meetings were advertised by distribution of meeting notices. All TAC meetings were advertised and open to the public.

Coordination with the Town, ODOT, and Morrow County was accomplished by including agency representatives on the project mailing list, individual project briefings/meetings, and participation on the Management Team and the TAC.

Review Existing Plans, Policies, Standards, and Laws

- *Review and evaluate existing comprehensive plan.*

The following plans were reviewed as part of the development of the TSP: *1991 Oregon Highway Plan*, (June 1991); *1996 Oregon Bicycle Plan*; *Town of Lexington Comprehensive Plan*, (1979); *Draft Statewide Transportation Improvement Program* (2000-2003).

- *Land use analysis - existing land use/vacant lands inventory.*
- *Review existing ordinances - zoning, subdivision, and engineering standards.*
- *Review existing significant transportation studies.*
- *Review existing capital improvements programs/public facilities plans.*
- Americans with Disabilities Act requirements.
- Review current Transportation System Plan and evaluate compliance with the 1999 Oregon Highway Plan

In developing the forecast of transportation needs, an analysis was conducted of current land use designations and land status within the project area to determine the capacity for growth, which would increase demand for transportation services. Population and employment forecasts were prepared for the year 2020 that reflect regional growth prospects and the economic role of the Town in the region. Estimates of needed housing, commercial, and employment lands were derived from these forecasts.

Existing Town Subdivision Ordinances, Zoning Ordinances, and Comprehensive Plan engineering standards were reviewed for adequacy in the development of the Town of Lexington TSP.

Significant transportation studies reviewed as part of the Town of Lexington TSP include the above mentioned comprehensive plans and their associated transportation elements and the Morrow County TSP.

The Morrow County CIP and the State TIP were reviewed as part of Town of Lexington TSP development.

ADA requirements were reviewed and acknowledged as part of the Town of Lexington TSP development.

Reviewed existing Transportation System Plan and updated document to reflect requirements, standards, and policies of the 1999 Oregon Highway Plan.

Inventory Existing Transportation System

- Street system (number of lanes, lane widths, traffic volumes, level of service, traffic signal location and jurisdiction, pavement conditions, structure locations and conditions, functional classification and jurisdiction, *truck routes, number and location of accesses, safety, substandard geometry*).
- Bicycle ways (type, location, width, condition, and ownership/jurisdiction).
- Pedestrian ways (location, width, condition, ownership/jurisdiction).
- Public Transportation Services (transit ridership, volumes, route, frequency, stops, fleet, intercity bus, passenger rail, and special transit services).
- Intermodal and private connections.
- Air transportation.
- Freight rail transportation.

An inventory of the existing street network, traffic volumes, traffic control devices, accident history, and levels of service is provided in Section 2: Existing Conditions.

As noted in Section 2: Existing Conditions, there are no existing bicycle ways within the Town of Lexington.

Section 2: Existing Conditions, summarizes the location of the existing sidewalk facilities within the Town of Lexington.

A summary of the existing public transportation services is presented in Section 2: Existing Conditions. Only Special Transit and Intercity Bus services exist within the Town of Lexington.

A summary of the existing intermodal and private carrier transportation services is presented in Section 2: Existing Conditions.

A summary of existing air transportation facilities is provided in Section 2: Existing Conditions.

As noted in Section 2: Existing Conditions, there are no freight rail transportation services within

- Water transportation.
- Pipeline transportation.
- *Environmental constraints.*
- Existing population and employment.

the Town of Lexington.

A summary of water transportation services is provided in Section 2: Existing Conditions.

A summary of pipeline transportation services is provided in Section 2: Existing Conditions.

Development of the TSP did not include the identification of environmental constraints beyond those specifically documented in the TSP.

As outlined Section 1: Introduction, the 1997 Town of Lexington population is approximately 290 persons in the town. This information and employment data cited in Section 3: Future Conditions Analysis is included in Future Conditions as the basis for the forecasts that were performed for this TSP.

Determine Transportation Needs

- Forecast population and employment
- Determination of transportation capacity needs (cumulative analysis, *transportation gravity model*).
- Other roadway needs (safety, bridges, reconstruction, and operation/maintenance).
- Freight transportation needs.
- Public transportation needs (special transportation needs, general public transit needs).
- Bikeway needs.
- Pedestrian needs.

Population and employment forecasts were prepared for the year 2020 that reflect regional growth prospects and Town of Lexington's economic role. This information is summarized in Section 3: Future Conditions.

Travel demand forecasts were undertaken as part of this project. The methodology for travel forecasting and assumptions used in the transportation model are contained in Section 3: Future Conditions, which presents an analysis of future transportation conditions and identifies capacity needs.

Non-capacity related transportation needs are identified and recommended for implementation in Section 5: Transportation System Plan.

Freight transportation needs are adequately met via motor carrier freight services.

Public transportation needs are discussed in Section 5: Transportation System Plan.

Future bicycle and pedestrian improvements are to be made in conjunction with roadway improvements to provide cyclists and pedestrians with full accessibility to Town of Lexington's street system. Plans for these facilities are shown in Figure 15 of Section 5: Transportation System Plan.

Develop and Evaluate Alternatives

- Update community goals and objectives.
- Establish evaluation criteria.
- Develop and evaluate alternatives (no-build system, all build alternatives, transportation system management, transit alternative/feasibility, improvements/additions to roadway system, land use alternatives, combination alternatives).

Goals were established as part of the TSP development (see Section 1: Introduction).

Evaluation criteria was established from the study goals and objectives and used to develop the Preferred Alternative presented in Section 5: Transportation System Plan.

Section 4: Alternatives Analysis includes a summary of the land use and transportation alternatives considered and analyzed for Town of Lexington's TSP. Land uses, roadway alternatives, transportation system management options, bike and pedestrian options were analyzed.

- Select recommended alternative.

A recommended alternative for roadways, bikeways, and pedestrian facilities is contained in Section 5: Transportation System Plan.

Produce a Transportation System Plan

- Transportation goals, objectives and policies.
- Streets plan element (functional street classification and design standards, proposed facility improvements, access management plan, truck plan, safety improvements).
- Public transportation element (transit route service, transit facilities, special transit services, intercity bus and passenger rail).
- Bikeway system element.
- Pedestrian system element.
- Airport element (land use compatibility, future improvements, accessibility/connections/conflicts with other modes).
- Freight rail element (terminals, safety).
- Water transportation element (terminals).

Section 7: Policies and Land Use Ordinance Modifications outlines specific recommendations regarding transportation goals and policies.

The streets plan element is outlined in Section 5: Transportation System Plan.

The public transportation element is outlined in Section 5: Transportation System Plan.

The bikeway plan is outlined in Section 5: Transportation System Plan, and shown in Figure 15.

The pedestrian plan is outlined in Section 5: Transportation System Plan, and shown in Figure 15.

The airport element is outlined in Section 5: Transportation System Plan.

There is no rail service available or anticipated to serve the Town of Lexington.

The water transportation element is outlined in Section 5: Transportation System Plan

Produce a Transportation System Plan (Continued)

- *Transportation System Management element (TSM).*
- *Transportation Demand Management element (TDM).*

TSM element not applicable per OAR 660-12-020(2)(f) and (g).

TDM element not applicable per OAR 660-12-020(2)(f) and (g).

Implementation of a Transportation System Plan

Plan Review and Coordination

- Consistent with ODOT and other applicable plans.

See Section 7: Policies and Land Use Ordinance Modifications

Adoption

- Is it adopted?

To follow.

Implementation

- Ordinances (facilities, services and improvements; land use or subdivision regulations).
- Transportation financing/capital improvements program.

Included in Section 7: Policies and Land Use Ordinance Modifications.

The transportation finance plan is summarized in Section 6: Transportation Funding Plan.

Section 9

References

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Appendix A

Plan and Policy Review

Plans and Policies Review

Existing plan policies and other actions will influence the analysis of land use and transportation issues and the alternatives to address these issues as well as other community objectives. This appendix provides a summary of the plans and policies reviewed as part of the development of the Transportation System Plan.

TOWN OF LEXINGTON COMPREHENSIVE PLAN

Lexington's Comprehensive Plan and implementing regulations were acknowledged by the Land Conservation and Development Commission (LCDC) in July 1980. They were last amended in 1979. The Plan consists of eight chapters as follows:

Chapter I:	Summary and Conclusions and Comprehensive Plan Map
Chapter II:	Summary of Findings
Chapter III:	Citizen Involvement
Chapter IV:	Goals and Policies
Chapter V:	Natural Environment
Chapter VI:	Socio-Economic Environment
Chapter VII:	Bibliography
Chapter VIII:	Appendices

Most findings and policies relevant to this study are found in Chapters II, IV, and VI (under a detailed discussion of current conditions and future need for transportation facilities). Relevant findings and policies are summarized below.

Chapters II and IV

- Open Spaces, Scenic and Historical Areas and Natural Resources: Examine any publicly owned lands including street rights-of-way for their potential open space use before their disposition.
- Economic Development: Encourage commercial development to meet the needs of residents and visitors; and encourage diversified, non-polluting industrial development in order to provide a stable job market.
- Housing: Allow for residential development which provides prospective buyers with a variety of residential lot sizes, a diversity of housing types, and a range in prices.
- Public Facilities and Services: Develop, maintain, update and expand police and fire services, streets and sidewalks, water and sewer system, and storm drains as necessary to provide adequate facilities and services to the community.

Transportation Findings:

1. Most town streets are paved and well maintained.
2. At the time the Comprehensive Plan was prepared, the Union Pacific Railroad and State Highways 74 and 207 provided freight access to Lexington's commercial enterprises and grain elevators. Since the adoption of the Comprehensive Plan, the Union Pacific Railroad line in town has been abandoned.
3. Commercial air, bus and Amtrak services were available at Hinkle, Pendleton, Boardman, or Hermiston at the time the Comprehensive Plan was prepared. Amtrak service is no longer available at these locations.
4. Lexington Airport is located just north of the Lexington Urban Growth Boundary. The Comprehensive Plan identified the need for the Aeronautics Division of the Oregon Department of Transportation to calculate and map a clear zone for the crosswind runway and for Lexington and Morrow County to evaluate comprehensive plan designations for affected property.

Transportation Policies:

1. To develop good transportation linkages (pedestrian, vehicular, bicycles, etc.) between residential areas and major activity centers.
2. To encourage industry to locate in areas which are or can be served by the railroad.

3. To prioritize the paving of town streets.
4. To contract with Morrow County or the State of Oregon or private contractors to pave streets within the town when they are doing other work in the area.

Energy Conservation:

Develop subdivision regulations, which require that, the orientation of streets and buildings allow for utilization of solar energy and require landscaping to reduce summer cooling needs.

- Urbanization Finding: Annexation to the town will be limited to land included within the urban growth boundary (DLCD administrative rule and case law citations included).
- Urbanization Policy: To establish an urban growth boundary to identify and separate urbanizable land from rural land.

Chapters VI: Socio-Economic Chapter, Section on Transportation

- A well-planned transportation system is essential to serve the people and commerce of a community. A transportation system should be planned around the fulfillment of the following objectives:
 1. To provide an integrated transportation system that will link the town with regional production, distribution, and marketing centers.
 2. To incorporate safety and efficiency factors in transportation system design to allow people and goods to travel conveniently.
 3. To create a transportation system that is current, flexible, and coordinated with the comprehensive plan.
 4. Permit orderly and timely expansion of the transportation system in an economically feasible manner.
 5. To maintain and improve the transportation system to allow it to carry out its intended function.
- Future Transportation Needs include:
 1. The Town of Lexington should accumulate funds and provide for continued maintenance and expansion of their public streets and sidewalks.
 2. Lexington might benefit from an intra-city bus service especially to serve senior citizens, though most respondents to a community survey indicated they would not support bus service if it were provided.

IMPLEMENTING REGULATIONS

The Zoning Ordinance (Ordinance No. 79-1) as amended, implements the Comprehensive Plan by establishing specific standards for use of the land by zoning districts and other development standards. The ordinance contains regulations for off-street parking, loading, internal accesses, bicycle racks (in specific zones), and surfacing, but not development standards related to streets, use of streets or access standards.

The Subdivision Ordinance, last amended in 1996, requires the dedication of streets in subdivisions and contains street standards including street widths, as shown in Table A-1.

Table A-1 – Street Standards

Street Type	Minimum Right-of-Way	Minimum Pavement Width		Maximum Grade (percent)	
		Residential	Commercial/Industrial	Residential	Commercial/Industrial
Arterial	66	44	52	6	5
Collector	66	40	48	8	6
Continuous minor street	66	36	40	10	6
Minor street less than 2,400 feet in length	66	28	40	10	6
Alley	16	--	--	--	--

Other standards include minimum curve radius, minimum length of tangents between reverse curves, minimum sight distance, cul-de-sac radius, design speed, minimum length of vertical curves and pavement depths. Four-foot wide (minimum) sidewalks are required to be included within the dedicated non-pavement right-of-way for all roads. Concrete curbs also are required for all roads where sidewalks are required.

Other provisions include frontage on improved streets; topography and arrangements; intersection angles (no less than 75 degrees, with intersection of no more than two streets); minimum curb radius (20 feet for local streets and 25 feet if one or more streets is a collector); road surfacing; street names; excess right-of-way; and street lights. In non-residential subdivisions, street rights-of-way must be adequate to accommodate the type and volume of traffic anticipated to be generated and special requirements for street, curb, gutter and sidewalk design and construction may be imposed by the town. In addition, streets carrying nonresidential traffic, especially truck traffic are not normally to be extended to the boundaries of adjacent existing or potential residential areas.

STRATEGIC PLAN

The Town completed a Strategic Plan in April 1998. The plan identifies strengths, weaknesses, opportunities, and threats to the community in a number of areas: economic development; community services and development; infrastructure; and housing. Goals and Attendant Strategies are identified as part of the Strategic Foundation. The following are specific actions proposed by the Strategic Plan that could affect the TSP and land use alternatives.

GOAL: Establish a community recreation area for the community of Lexington.

Strategy: Identify available sites, form community self-help strategy, establish project scope and form funding partnerships.

Action Plan: Same as strategy.

GOAL: Upgrade and maintain the existing road system within the Town of Lexington.

Strategy: Develop scope, schedule, and costs of road improvements.

Action Plan: Same as strategy.

Appendix B

Description of Level-of-Service Methods and
Criteria

Description of Level-of-Service Methods and Criteria

LEVEL OF SERVICE CONCEPT

Level of service (LOS) is a concept developed to quantify the degree of comfort (including such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles) afforded to drivers as they travel through an intersection or roadway segment. Six grades are used to denote the various LOS from A to F.¹

SIGNALIZED INTERSECTIONS

The six LOS grades are described qualitatively for signalized intersections in Table B1. Additionally, Table B2 identifies the relationship between level of service and average stopped delay per vehicle. Using this definition, LOS D is generally considered to represent the minimum acceptable design standard.

Table B-1 – Level of Service Definitions (Signalized Intersections)

Level of Service	Average Delay per Vehicle
A	Very low average stopped delay, less than five seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Average stop delay is in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for a LOS A, causing higher levels of average delay.
C	Average stop delay is in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Average stopped delays are in the range of 25.1 to 40.0 seconds per vehicle. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle length, or high volume/capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Average stop delay is in the range of 40.1 to 60.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume/capacity ratios. Individual cycle failures are frequent occurrences.
F	Average stop delay is in excess of 60 seconds per vehicle. This is considered unacceptable to most drivers. This condition often occurs with over-saturation. It may also occur at high volume/capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also contribute to such high delay values.

¹ – Most of the material in this appendix is adapted from the Transportation Research Board, Highway Capacity Manual, Special Report 209 (1994).

Table B-2 - Level of Service Criteria for Signalized Intersections

Level of Service	Stopped Delay per Vehicle (Seconds)
A	# 5.0
B	5.1 to 15.0
C	15.1 to 25.0
D	25.1 to 40.0
E	40.1 to 60.0
F	> 60

UNSIGNALIZED INTERSECTIONS

Unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections. The 1994 Highway Capacity Manual provides new models for estimating total vehicle delay at both TWSC and AWSC intersections. Unlike signalized intersections, where LOS is based on stopped delay, unsignalized intersections base LOS on total vehicle delay. A qualitative description of the various service levels associated with an unsignalized intersection is presented in Table B3. A quantitative definition of LOS for unsignalized intersections is presented in Table B4. Using this definition, LOS E is generally considered to represent the minimum acceptable design standard.

Table B-3 – Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Delay per Vehicle to Minor Street
A	<ul style="list-style-type: none"> Nearly all drivers find freedom of operation. Very seldom is there more than one vehicle in queue.
B	<ul style="list-style-type: none"> Some drivers begin to consider the delay an inconvenience. Occasionally there is more than one vehicle in queue.
C	<ul style="list-style-type: none"> Many times, there is more than one vehicle in queue. Most drivers feel restricted, but not objectionably so.
D	<ul style="list-style-type: none"> Often there is more than one vehicle in queue. Drivers feel quite restricted.
E	<ul style="list-style-type: none"> Represents a condition in which the demand is near or equal to the probable maximum number of vehicles that can be accommodated by the movement. There is almost always more than one vehicle in queue. Drivers find the delays approaching intolerable levels.
F	<ul style="list-style-type: none"> Forced flow. Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection.

Table B-4 – Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Total Delay per Vehicle (Seconds)
A	< 5.0
B	5.1 to 10.0
C	10.1 to 20.0
D	20.1 to 30.0
E	30.1 to 45.0
F	> 45.0

It should be noted that the LOS criteria for unsignalized intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, there are a number of driver behavior considerations that combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, while drivers on the minor street approaches to TWSC intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized intersections than signalized intersections. For these reasons, it is considered that the total delay threshold for any given LOS is less for an unsignalized intersection than for a signalized intersection. **While overall intersection LOS is calculated for AWSC intersections, LOS is only calculated for the minor approaches and the major street left turn movements at TWSC intersections.** No delay is assumed to the major street through movements. For TWSC intersections, the overall intersection LOS is defined by the movement having the worst LOS (typically a minor street left turn).

Appendix C

Employment and Population Forecast Methodology

Employment and Population Forecast Methodology

320 WOODLARK BUILDING
813 SW ALDER STREET
PORTLAND, OREGON 97205-3111
503/225-0192 • FAX 503/225-0224

COGAN
OWENS
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PLANNING,
COMMUNICATIONS,
GOVERNMENTAL AND
COMMUNITY RELATIONS,
ENVIRONMENTAL STUDIES

MEMORANDUM

DATE: February 3, 1999
TO: Julie Kuhn
FROM: Matt Hastie *MH*
RE: Morrow County Population and Employment Projections

We have completed projections to be incorporated in Technical Memorandum #3 for the Morrow County TSP project. This memo outlines the methodology and assumptions used to develop projections for the cities of Boardman, Heppner, Ione, Irrigon and Lexington. For Boardman and Irrigon, we have estimated future population for the City and urban growth area (area between the existing city limits and urban growth boundary (UGB)). For the other cities, we have provided projections for the city limits only. All employment projections are for the cities only.

METHODOLOGY

Population

The Oregon Office of Economic Analysis (OEA) has developed population and employment forecasts through the year 2040 for each county in Oregon. These are recognized as the official projections to be used by state agencies and local jurisdictions for planning purposes. Counties are responsible for allocating population to their cities and unincorporated areas. For the purposes of buildable lands and other planning studies, local jurisdictions may modify the OEA projections if agreed to by the appropriate coordinating state agency. In 1997, Morrow County, in coordination with the Oregon Department of Land Conservation and Development (DLCD) and the cities of Boardman and Irrigon, agreed to a modified set of 1997 population estimates and future projections. These projections assumed a higher rate of growth than forecast by the OEA through the year 2002 and incorporate the OEA growth rates from 2002 through 2020. The higher growth rates are based on substantial recent/ ongoing population and employment growth in the region. In addition, growth rates for specific cities are assumed to fluctuate from the county average in the near term.

We used these 1997 estimates and modified growth rates in our projections. In addition, we estimated the number of people within the urban growth areas of Boardman and Irrigon (based on the number of dwelling units and the average number

of people per dwelling unit in Morrow County) to estimate and project the population within the UGB for these two cities.

Employment

Current estimates of employment for individual cities are not available through the County, state or any of the individual jurisdictions involved in this project. As noted above, the state has developed county-wide employment projections for non-agricultural employment which can be used to estimate future growth rates for the county. In estimating current and future employment, we assumed the following:

- Between 1990 and 1997, employment growth rates mirrored those for population growth with these exceptions:
 - The rate of employment growth was slightly lower than population growth in Boardman, where employment growth was high but population growth was likely higher, due to significant employment growth in Umatilla County (i.e., some new Boardman residents in the workforce work in Umatilla County).
 - The rate in Irrigon was significantly lower than the rate of population growth, given Irrigon's "bedroom community" characteristics and the high rate of population growth there.
- Between 1997 and 2002, we also estimate a somewhat higher rate of employment growth than the original OEA projections, following the same logic used to develop population estimates, as well as the assumptions stated above.
- For 2002 - 2020, as with the population estimates, we assumed the employment growth rates projected by the OEA.

The attached tables show the projections.

POPULATION PROJECTIONS

County/City	1997	2000	2002 % change	2005 % change	2010 % change	2015 % change	2020 % change					
OEA Morrow	9,895	9,828	11,179	2.5%	10,723	1.8%	11,594	1.6%	12,463	1.5%	13,322	1.3%
Adjusted Morrow	9,895	11,131	12,039	4.0%	12,701	1.8%	13,750	1.6%	14,812	1.5%	15,801	1.3%
Boardman City and	2700	3,126	3,446	5.0%	3,635	1.8%	3,936	1.6%	4,240	1.5%	4,523	1.3%
City and UGA	3082	3,545	3,908	5.0%	4,123	1.8%	4,463	1.6%	4,808	1.5%	5,129	1.3%
Heppner City and	1480	1,502	1,517	0.5%	1,601	1.8%	1,733	1.6%	1,867	1.5%	1,992	1.3%
City and UGA	-	-	-	0.5%	-	1.8%	-	1.6%	-	1.5%	-	1.3%
Ione City and	310	319	326	1.0%	344	1.8%	372	1.6%	401	1.5%	428	1.3%
City and UGA	-	-	-	1.0%	-	1.8%	-	1.6%	-	1.5%	-	1.3%
Irrigon City and	1200	1,470	1,683	7.0%	1,776	1.8%	1,922	1.6%	2,071	1.5%	2,209	1.3%
City and UGA	1444	1,769	2,025	7.0%	2,137	1.8%	2,313	1.6%	2,492	1.5%	2,658	1.3%
Lexington City and	290	294	297	0.5%	325	1.8%	352	1.6%	379	1.5%	404	1.3%
City and UGA	-	-	-	0.5%	-	1.8%	-	1.6%	-	1.5%	-	1.3%

EMPLOYMENT PROJECTIONS

County/City	1990	1997	2000 % change	2002 % change	2005 % change	2010 % change	2015 % change	2020 % change						
OEA Morrow Co. Proj.	2232	2,924	3,283	3.9%	3,449	2.5%	3,613	1.9%	3,890	1.5%	4,097	1.0%	4,290	0.9%
Boardman	641	1,029	1,261	7.0%	1,444	7.0%	1,528	1.9%	1,646	1.5%	1,730	1.0%	1,809	0.9%
Heppner	580	601	610	0.7%	616	0.5%	652	1.9%	702	1.5%	738	1.0%	772	0.9%
Ione	121	125	127	0.6%	128	0.5%	136	1.9%	146	1.5%	154	1.0%	161	0.9%
Irrigon	236	290	317	3.0%	336	3.0%	356	1.9%	384	1.5%	403	1.0%	422	0.9%
Lexington	108	110	110	0.2%	111	0.2%	117	1.9%	126	1.5%	133	1.0%	139	0.9%

Appendix D

Supplemental Funding Information

Table D-1 – Summary of road related transportation funding programs: Federal Sources

Program Name	Description
Community Development Block Grants (CDBG)	Community Development Block Grants are administered by the Department of Housing and Urban Development and potentially be used for transportation improvements in eligible areas.

Table D-2 – Summary of road related transportation funding programs: State Sources

Program Name	Description
State Highway Fund	<p>The State Highway Fund composed of gas taxes, vehicle registration fees, and weight-mile taxes assessed on freight carrier. In 1994, the state gas tax was \$0.24 per gallons. Vehicle registration fees were \$15 annually. Revenues are divided as follows: 15.57 percent to cities, 24.38 percent to counties, and 60.05 percent to ODOT. The city share of the State Highway Fund is allocated based on population.</p> <p>ORS 366.514 requires at least on percent of the State Highway Fund received by ODOT, counties, and cities be expended for the development of footpaths and bikeways. ODOT administers the bicycle funds, handles bikeway planning, design, engineering and construction, and provides technical assistance and advice to local governments concerning bikeways.</p>
Special Public Works Fund (SPWF)	The State of Oregon allocates a portion of revenues from the state lottery for economic development. The Oregon Economic Development Department provides grants and loans through the SPWF program to construct, improve, and repair infrastructure to support local economic development and create new jobs. The SPWF provides a maximum grant of \$500,000 for projects that will help create a minimum of 50 jobs.
Transportation Access Charges	<p>The most familiar form of a transportation access charge is a bridge or highway toll. Transportation access charges are most appropriate for high-speed, limited access corridors; service in high-demand corridors; and bypass facilities to avoid congested areas.</p> <p>Congestion pricing, where drivers are charged electronically for the trips they make based on location and time of day, is the most efficient policy for dealing with urban congestion. It not only generates revenue for maintenance and improvements; but also decreases congestion and the need for capital improvements by increasing the cost of trips during peak periods.</p> <p>ORS allow DODOT to construct toll bridges to connect state highways and improve safety and capacity. ORS also allow private development of toll bridges. Recent actions by the Oregon Legislature provide authority for developing toll roads. State authority for congestion pricing does not exist; new legislation would be required.</p>
Immediate Opportunity Fund (IOF)	Financed at a level of \$5 million per year to a maximum of \$40 million through FY96. The fund is to support specific economic developments in Oregon through the construction and improvement of roads and is restricted for use in situations that require a quick response and commitment of funds. It is anticipated that the maximum amount available for single project is \$500,000 or 10 percent of annual program level. This fund may be used only when other sources of financial support are unavailable or insufficient and are not a replacement or substitute for other funding sources.
Oregon Transportation Infrastructure Bank (OTIB)	As a pilot program for the USDOT, the Oregon Transportation Commission has made \$10 million available from projects that will not be contracted in FY 1996. The OTIB will make loans for transportation projects and will offer a variety of credit enhancements. Initial loans must be for improvements on federal aid highway, repayments go into an account that will be made available for any mode. Ability to repay will be a key factor in all loans.
Traffic Control Projects	<p>The State maintains a policy of sharing installation, maintenance, and operational costs for traffic signals and luminaries units at intersections between State highway and city and county streets, which are included on the statewide priority; and are eligible to participate in the cost sharing policy.</p> <p>ODOT establishes a statewide priority list for traffic signal installations on the State Highway System. The priority system is based on warrants outlined in the Manual for Uniform Traffic Control Devices. Local agencies are responsible for coordinating the Statewide signal priority list with local road requirements.</p>

Table D-3 – Summary of road related transportation programs: Local Sources

Program Name	Description
Special Assessments – Local Improvement Districts	Special assessments are charges levied on property owners for neighborhood public facilities and services, with each property assessed a portion of total project cost. They are commonly used for such public works projects as street paving, drainage, parking facilities, and sewer lines. The justification for such levies is that many of these public works activities provide services to or directly enhance the value of nearby land, thereby providing direct and/or financial benefit to its owners. Local Improvement Districts (LIDS) are legal entities established by the City to levy special assessments designed to fund improvements that have local benefits.

	Through a local improvement district, streets or other transportation improvements are constructed and a fee is assessed to adjacent property owners.
Systems Development Charges (SDC)	Systems Development Charges are fees paid by land developers intended to reflect the increased capital costs incurred by a municipality or utility because of a development. Development charges are calculated to include the costs of impacts on adjacent areas or services, such as increased school enrollment, parks and recreation use, or traffic congestion. Numerous Oregon cities and counties presently use SDCs to fund transportation capacity improvements. SDCs are authorized and limited by ORS 223.297 – 223.314.
Local Gas Tax	A local gas tax is assessed at the pump and added to existing state and federal taxes. Tillamook, The Dalles, and Woodburn are examples of Oregon cities that have a local gas tax. Multnomah and Washington counties also have gas taxes.
Local Parking Fees	Parking fees are a common means of generating revenue for public parking maintenance and development. Most cities have some public parking and many charge nominal fees for use of public parking. Cities also generate revenues from parking citations. These fees are generally used for parking related maintenance and improvements.
Street Utility Fee	Most city residents pay water and sewer utility fees. Street user fees apply the same concept to city streets. A fee would be assessed to all businesses and households in the city for use of streets based on the amount of use typically generated by a particular use. For example, a single-family residence might, generate 10 vehicle trips per day on average compared to 130 trips per 1,000 square feet of floor area for retail uses. Therefore, the retail use would be assessed a higher fee based on higher use. Street services fees differ from water and sewer fees because usage cannot be easily monitored. Street user fees are typically used to pay for maintenance more than for capital projects.
Vehicle Registration Fees	Counties may implement local vehicle registration fee, operating similar to the state vehicle registration fee, a portion of which would be allocated to the Town.
Property Taxes	Local property taxes could be used to fund transportation, although this is limited by Ballot Measures 5 and 47.
Revenue Bonds	Revenue Bonds are bonds whose debt service is financed by user charges, such as services charges, tolls, admissions fees, and rents. If revenues from user charges are not sufficient to meet the debt service payments, the issuer generally is not legally obligated to levy taxes to avoid default, unless they are also based by the full faith and credit of the insuring governmental unit. In that case, they are called indirect general obligation bonds. Revenue bonds could be secured by a local gas tax, street utility fee, or other stable transportation revenue stream.

Table D-4 – Current Revenue Sources for Cities

Facility	Revenue Source	Importance (not 100%) (Millions of 1995 Dollars)	3 Year Trend	Dedication	Rate
Streets, Bridges, Sidewalks, Bike Lanes	Oregon Highway Trust Fund	51% of total road or \$89	Growing at approximately 1.75% per year	Constitutionally limited to funding activities that benefit autos and trucks	24¢/gal. For gas; \$30biennium registration fee.
	General Fund Transfers	9% or \$15	Varies but assume growth @ 3%/year, but not used by all cities	May be used for any purpose	Varies widely
	Special Property Tax Levies	5% or \$7	Increasing and only used by 18 cities	May be used for purpose described in election	Varies widely
	Improvement District Assessments	7% or \$12.5	Varies but increases when local development increases	May be used for construction of adjacent streets and sidewalks	Varies with construction cost and local ordinances
	Systems Development Charges and Traffic Impact Fees	4% or \$7	Varies but increases when local development increases, only used by about 2 dozen cities	May be used for construction of new streets	Varies with construction cost and local ordinances. Rates are generally higher in the Metro area
	Utility Franchise Fee	3% or \$4	Flows roughly with population and inflation	Is a general revenue used by some cities for streets	Statutory limit of 5% of utility gross receipts

	Interest Earning	4% or \$6	Varies with current interest rates	Have same Constitutional limits as Highway Fund	Used as general street revenue
	Local Gas Tax	0.44% or \$0.7	Unchanged	Have same Constitutional limits as Highway Fund	Used by Tillamook, The Dalles, and Woodburn
	Private Contributions	3% or \$4.3	Varies widely	Usually contributions are related to specific development street impacts	Negotiated individually
	Miscellaneous – Permit fees, finds, fines, parking, Motel Tax, others	8% or \$14.5	Gradual Growth	General revenues use for streets	Varies widely by City
	Federal – FHWA and HUD	3% or \$5.6	Relatively Stable	Used mainly for new construction with some rehabilitation	Based on federal allocation to Oregon
	Miscellaneous State Revenues – Mainly Lottery funds	2% or \$3	Varies, no trend	Used mainly for economic development capital improvements	Specific grants to individual cities each year
Off Street Bike Paths	Miscellaneous general funds and ISTEA	Unknown	Varies from year to year	ISTEA and General funds used for construction, General Funds used for maintenance and repair	Varies from year to year

Table D-5 – Current Revenue Sources in Oregon

Transit Service Type/Function	Funding Source	Status
Urban Public Transportation – Portland and Eugene – Operating and Capital	<ol style="list-style-type: none"> Local Payroll Tax – operating Federal Grants – Capital Federal Grants – Operating Fares and Advertising 	<ol style="list-style-type: none"> Major Source – \$100 million/year and growing – Sensitive to economic conditions Major Source – \$10 million/year – stable Minor Source – \$5 Million/year – declining Minor Source – Growing with ridership
Urban Public Transportation – Salem, Corvallis, Medford, Kalamath Falls	<ol style="list-style-type: none"> Property Tax – Typically a taxbase or stand alone levy within \$10 cap for local government services Federal Grants – Capital Federal Grants – Operating Fares and Advertising 	<ol style="list-style-type: none"> Major Source – Growing slowly Major Source – \$2 Million/year – Stable Minor Source – \$2 Million/year – Declining Minor Source – Growing with ridership
Small City and Rural – Astoria, Union County, etc. – Operating and Capital	<ol style="list-style-type: none"> Local Payroll Tax – Typically within city or county operating levy Federal Grants – Capital Federal Grants – Operating Fares and Advertising 	<ol style="list-style-type: none"> Major Source – Stable Major Source – Declining Minor Source – Declining Minor Source – Stable
Mobility for Seniors and People with Disabilities – Operating and Capital	<ol style="list-style-type: none"> Special Transportation Fund - 2¢ State cigarette tax for operating and capital Social Service Agency grants and contracts for operating Local Property Tax – typically within city or county operating levy Federal Grants – Capital and Operating Fares, donations, and advertising 	<ol style="list-style-type: none"> Major Source – \$5 million/year – Declining Major Source – Declining Minor Source – Stable Major Source – Declining Minor Source – Stable
Inter-city Bus – Operating and Capital	<ol style="list-style-type: none"> Major Interstate Routes: Fares Branch and Feeder Routes: Private capital and fares 	<ol style="list-style-type: none"> Sole Source – Declining Private