City of Winston

Transportation System Plan

Adopted June 23, 2003
CITY OF WINSTON
ORDINANCE NO. 587

AN ORDINANCE ADOPTING A
TRANSPORTATION SYSTEM PLAN
FOR
THE CITY OF WINSTON URBAN AREA

WHEREAS, the City obtained a Periodic Review Planning Grant to update the Winston Comprehensive Plan, including a contract work element to complete preparation of a Transportation System Plan (TSP) in conformance with Statewide Planning Goals and Oregon Administrative Rule 660 Division 12, Transportation Planning, and

WHEREAS, the City appointed a Transportation Technical Advisory Committee with representatives from the City, Douglas County, ODOT, transportation providers and the public to prepare a (TSP) for recommendation to the Planning Commission and City Council for adopting and including as a major revision for the Comprehensive Plan.

NOW, THEREFORE, THE CITY OF WINSTON ORDAINS AS FOLLOWS:

Section 1. Findings:

A. A TSP was prepared by the Transportation Technical Advisory Committee, reviewed by the City Traffic Safety Committee and recommended to the Planning Commission for approval and adoption as part of the City's Comprehensive Plan Periodic Review.

B. The Transportation System Plan was presented at a Winston Planning Commission public hearing on May 21, 2003 at 7:00 PM in the Winston City Hall and continued to May 28, 2003. Notice of the hearing was given by publication in the News-Review a newspaper of general circulation in the City of Winston.

C. The Transportation System Plan was presented at a City Council public hearing on June 2, 2003 at 7:00 p.m. in the Winston Community Center and continued to June 9, 2003 at 7:00 pm in City Hall.

D. Notice of the City Council Public Hearing was mailed to all property owners within the City and UGB as part of a Measure 56 mailing to notify property owners of Comprehensive Plan, TSP, Public Facilities Plan, Zoning and Subdivision revisions being
considered that may affect property development in the City and UGB. Also, notice of the hearing was given by publication in the News-Review a newspaper of general circulation in Winston.

E. The City Council has reviewed the entire record of the proceedings, the recommendation of the Planning Commission, Staff and URCOG as adopted by reference and specified in City Council Resolution #573.

Section 2. **Adoption of the City of Winston Transportation System Plan (TSP):**

Based on the foregoing findings, the City Council declares the TSP an important addition to the City Plans and hereby adopts the TSP to assist in providing for future transportation system needs in the City of Winston and the City's Urban Growth Area.

Section 3. **Severance:**

Should any section, provision, clause or portion of the Ordinance be declared by the courts to be invalid, the same shall not affect the validity of the Ordinance as a whole, or any part thereof, other than the part so declared to be invalid.

**FIRST READING BEFORE THE WINSTON CITY COUNCIL**, the 16th day of June, 2003.

**SECOND READING AND ADOPTION** by the City Council this 23rd day of June, 2003.

[Signatures]

REX A. STEVENS, MAYOR

ATTEST: [Signature]

Bruce Kelly, City Administrator
City of Winston

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CITY OF WINSTON

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CITY OF WINSTON

Transportation System Plan

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Bruce Kelly
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CITY OF WINSTON
Transportation System Plan

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Section 7--- Transportation System Plan

Section 8--- Funding Options & Financial Plan

Section 9--- Public Participation

Section 10—Appendix

A) Winston Local Street Network Plan, Nov 1995
B) Greater Roseburg Transportation Study, May 1996
C) City of Winston Transportation System Plan, Feb 1999
D) City of Winston Comp Plan Update, June 2001 Draft
E) City of Winston Public Facilities Plan, June 2001 Draft
F) Corridor Plans for OR 38 and OR 42, June 2001
G) Oregon Highway Plan, 1999
H) Oregon Bicycle & Pedestrian Plan, June 1995
I) Ass'mt & Enhancem't Plan/Public & Spec transit, Nov 2001
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SECTION 1

INTRODUCTION
SECTION 1 - INTRODUCTION

This Winston Transportation System Plan (TSP) is a summary of the past transportation planning efforts and current Comprehensive Plan Periodic Review program activities underway for the City of Winston. This report expands upon the draft TSP prepared February 1999 by JHR Consulting Engineers. This plan includes the best available data for the City and URCOG to use, without undertaking new research to update the February 1999 Draft Plan. The Technical Advisory Committee has assisted with providing information to the URCOG and City staff. This TSP has been prepared with a minimum amount of updating information from the other transportation studies and plans that have been undertaken during the recent past. Generally, growth and travel patterns are not changing from those documented in the studies completed in the recent past. Summaries of the following studies/plans and other information is provided in the Appendix for reference and inclusion as a vital part of this plan.

(A) Winston Local Street Network Plan, Nov 1995  
(B) Greater Roseburg Area Transportation Study, May 1996  
(C) City of Winston Transportation System Plan, Feb 1999 Draft  
(D) City of Winston Comprehensive Plan, June 2001 Draft  
(E) City of Winston Public Facilities Plan, June 2001 Draft  
(F) Corridor Plans For OR 38 and OR 42, June 2001  
(G) Oregon Highway Plan, 1999  
(H) Oregon Bicycle & Pedestrian Plan, June 1995  
(I) Comp Sys Ass‘mt & Enhancm’t Plan/Public & Spec Transit, Nov 2001  
(J) Transportation Planning Rule 660-12-045  
(K) Street Condition Inventory/Summaries  
(L) School Access Hazards & Barriers  
(M) Douglas County TSP

Background

In 1995 the Transportation Planning Rule (TPR) was passed through the Oregon Legislature with significant changes that impact local communities and how they plan for transportation services. The TPR was amended in 1998 and 2000 to include additional requirements for local planning consideration during the preparation of a Transportation System Plan (TSP). The TPR requires that cities practice multi-modal transportation planning and, through ordinance and policy changes, reduce principle reliance on the automobile. In adoption the city must develop:

- a road plan for a network of arterial and collector streets
- a public transportation element
- bicycle and pedestrian plans
- air, rail, water, and pipeline plans
- transportation financing program
- policies and land use regulations (ordinances) for implementing the TSP
In addition, the TPR requires local jurisdictions to adopt land use and subdivision ordinances to protect existing roadway capacity, establish bicycle and pedestrian connections between activity centers and residences, and establish standards that minimize pavement and right-of-way width for local streets. The TPR mandates that these take place with an appropriate amount of notice and coordination with State and regional agencies and plans.

To meet these requirements, the City of Winston, with the Umpqua Regional Council of Governments (URCOG) and the Oregon Department of Transportation (ODOT) entered into an agreement in 1994 to develop the Winston Local Street Network Plan, in 1995 the Greater Roseburg Area Transportation Study and in 1998 the City of Winston Transportation System Plan Draft prepared by JRH Engineers and Planners. These documents provided the background information and the delineation of community issues utilized to prepare this Transportation System Plan.

Purpose

The purpose of this report is to describe the existing transportation system for the Winston Urban Growth Area as illustrated on the following aerial photograph, provide a summary analysis of the system, present planning goals/policies that are consistent with statewide land-use and transportation policies and propose a plan for improving the area’s transportation system. Specifically this report:

- Presents an inventory of existing transportation facilities within the Winston Urban Growth Boundary (UGB) including roads, bicycle and pedestrian routes, public transportation facilities, and air, rail, and pipeline facilities.
- Analyzes transportation needs.
- Presents policies and land-use regulations for implementing the TSP that are consistent with the state and local transportation goals.
- Presents a Transportation Improvement Plan that outlines specific transportation improvements, the timing of the improvements, estimated costs, and potential funding sources.

Transportation Planning Rule Issues and Implementation

The Transportation Planning Rule implements Statewide Planning Goal 12 (transportation) and explains how local governments and state agencies responsible for transportation planning demonstrate compliance with other statewide planning goals. It sets the requirements for coordination among affected levels of government for preparation, adoption, refinement, implementation, and amendment of transportation system plans. Transportation plans adopted pursuant to the TPR fulfill the requirements for public facilities planning required under ORS 197.712 (2)(e), goal 11, and OAR Chapter 660, Division 11, as they relate to transportation facilities. The TPR is provided in its entirety in Appendix J.

The TPR requires ODOT to adopt a state TSP. The state TSP includes the state
transportation policy plan, modal system plans including the State highway plan, and transportation facilities plans. State transportation project plans must be consistent with acknowledged comprehensive plans.

Cities and counties are required to adopt local TSPs that establish a system of transportation facilities and services adequate to meet identified needs and must be consistent with regional TSPs and adopted elements of the State TSP.

The primary issues of consistency with the TPR, related to the Winston Transportation Plan, occur between the City’s policy and regulation and the implementation requirements of the Transportation Planning Rule (660-12-045). The TSP must involve revisions to local policy and regulation, as well as identification of necessary improvement projects. Identification of needed improvements have resulted largely from previous plans, including the local street network plan that produced an inventory of existing conditions which was updated for the TSP in 1999, and an analysis of the transportation system and traffic circulation, which was confirmed by this TSP. Once the adoption of this TSP is completed, the City must revise their public facilities plan and local land use development ordinances to reflect the findings of this TSP and satisfy the requirements in the Transportation Planning Rule 660-12-045 (2), (3), and (7).
SECTION 2

Transportation System Inventory
Section 2
Transportation System Inventory

Street System Inventory/Conditions

Highway 42 (Interstate 5 to Highway 101) runs through and provides the most direct access to the city. Winston is a very pedestrian-oriented community, and ODOT has recorded a high degree of pedestrian activity within this corridor. This presents a problem that must be addressed in the continued development of this facility; presently the highway acts as a barrier to pedestrian activity within the community.

The 1999 Oregon Highway Plan has classified this corridor as having "statewide significance" and has designated the route as part of the state highway freight system. In 2000 the Highway Plan was amended to designate the section of OR 42 between Interstate 5 and Lookingglass Road as an expressway. As such it is expected that this highway will maintain appropriate access control to preserve the needed capacity to serve the statewide need, while remaining sensitive to the needs of the City of Winston. According to the 1999 highway plan, facilities with statewide significance should provide connections and links to larger urban areas, ports, and major recreation areas that are not directly served by interstate highways. State Highway 42 provides the Winston area with the major east-west access to the Roseburg Urban Area, Oregon Coast port facilities, regional recreation areas and provides a connection to I-5 for north-south travel through the county with access also to the Northwest and California for people and goods movements.

County Roads that are within the UGB are Old Highway 99 (Co RD 387), Lookingglass, Brockway and Winston Section Rd. These County Roads provide for moving traffic through the Urban Area connecting with the State Highways. Old Highway 99 is also Main Street where major traffic generators are located within the major Winston Business District. The following Map 3 shows these roads and their pavement conditions.

City Streets inventory from previous studies were updated and summarized in Appendix (J). The street pavement conditions for the City of Winston and UGA are illustrated on the following Map 3. The following Map 4 provides a summary of traffic volumes on the major City Streets, County Roads and State Highway 42 within the Urban Growth Area of Winston.
City of Winston
ADT Traffic Volumes

ADT Traffic Volumes Over 10,000
ADT Traffic Volumes 5,000-10,000
ADT Traffic Volumes 500-5,000
City Limits
UGB

Map Produced By
UNION REGIONAL COUNCIL OF GOVERNMENTS

Revised September, 2002

Map 4
**Existing Traffic Control**

The majority of intersections in the Winston area are two-way stop controlled. There is a four-way stop controlled intersection at Jorgens and Darrell. The only signalized control in the city is located at the intersection of Highway 42 and Main Street. This traffic signal operates under fully actuated control.

**Pedestrian & Bicycle Facilities**

Bicycling is now recognized as an important element of a multimodal transportation system. It provides a viable transportation option for people who cannot or choose not to use private automobiles. Bicycling helps to reduce traffic congestion and air pollution, helps to conserve energy resources, and is an increasingly popular form of recreation and exercise.

Bicycling was a useful mode of transportation in the early part of the 20th century when communities were smaller and travel distances shorter. As the automobile became increasingly available, and vast sums of money were invested in the roadway network in communities across America, cycling became less practical and less attractive as a means of transportation.

The following Map 5 displays the existing bicycle/pedestrian facilities within the City of Winston and Urban Growth Area. Sidewalks are provided most consistently in the downtown area and sporadically in different areas of the City. Current development codes require sidewalks to be installed with all new subdivisions. Bike lanes have been provided along a few streets and bike/pedestrian facilities are located along Hwy 42 as illustrated on Map 5.
City of Winston
Existing Bicycle/Pedestrian Routes

- City Limits
- U.G.B.
- Bike and Pedestrian
- Bike Lane
- Sidewalk

0.5 0 0.5 1 Miles

Map 5
Revised September, 2002
Public Transportation

The City of Winston has had a long-standing Dial-a-Ride program primarily for seniors and disabled residents within the City. Trips can be for any purpose such as medical, shopping or social. Particular emphasis is given to service to the Senior Services Dining Site located in Winston. A trip is scheduled by telephone with no advance notice necessary. The service is provided Monday-Friday 9:30 to 5:00. The Winston Dial-a-Ride services has access to two vans for the program. The program is operated with approximately 15 volunteer drivers, with the City providing a backup vehicle should the van suffer an equipment failure. The program has shown rapid growth since its inception and fulfills an essential service in transportation for the community.

In 1995 the City of Winston was included in a 3-year demonstration project for public transportation to provide fixed route service in Central Douglas County. This program was funded by ODOT and administered out of the Douglas County Health and Human Services Department. In July 1996, the program was transferred to the Umpqua Regional Council of Governments (URCOG) which then created Umpqua Regional Transit. As Umpqua Regional Transit began the administration of the Douglas County public transportation program, it was realized that the greatest demand for services was in the greater Roseburg service area, which includes the City of Winston. Residents of the City of Winston now have access to daily fixed route service to the greater Roseburg area eight times a day beginning at 6:45 am, with the last bus leaving Winston at 6:15 pm.

Greyhound Bus Lines has a terminal in downtown Roseburg, approximately seven miles from Winston. Currently, eight buses per day operate between Portland and California, with four leaving southbound and four northbound out of the terminal in Roseburg.

Rail

The Central Oregon & Pacific Railroad operates freight terminals in Roseburg, Green and Dillard, and serves primarily the wood products industry. This short line operator provides connections to Eugene and the Oregon International Port of Coos Bay for shipping across the country or overseas. The Central Oregon & Pacific Railroad is a subsidiary of Railtex Corporation. Passenger rail service is provided by AMTRAK in Eugene, approximately 75 miles north of Winston.

Air

The Roseburg Regional Airport is a General Aviation Airport that serves the greater Roseburg area. While there are no commercial flights, a private charter service is available. Scheduled passenger service was discontinued at this facility in 1980. The Airport Master Plan, updated in 1994, estimated that there were 108 based aircraft with an estimated 31,000 annual operations. The master plan estimates that by the year 2014 there will be 150 based aircraft and 46,000 operations. Although the master plan called for new commercial commuter services to begin in 1997, this has not happened, and subsequent discussions
with State Aviation Division staff have cast doubt on whether this type of service will be viable in the near future.

Passenger service is currently provided at airports in Eugene, Medford, North Bend, and Portland. Eugene, Medford, and North Bend are all about 75-85 miles from Winston, with the Portland International Airport approximately 180 miles north of Winston.

**Water**

Historically, the South Umpqua River has been used for the shipment of raw timber and other bulk goods, as well as passenger transportation around the turn of the 20th Century. Current use of the river is only for fishing and recreational boating. The Oregon International Port of Coos Bay is located 70 miles west of the City of Winston via State Highways 42 and 101.

**Pipeline**

There are no pipelines for movement of products in or around the Winston area.

**Telecommunications**

The rapid expansion of telecommunications in the last decade has created new options. Today many people have the opportunity to choose where they want to live, because they can work out of their home and report to an office hundreds and perhaps thousands of miles away. This year, more than any other, people purchased merchandise over the internet. People can do all their banking, pay their bills, and communicate with friends, relatives and associates from the comfort of their own homes. There is little debate that this telecommunications revolution is changing our society and has the ability to change our quality of life, and our travel behavior.

Presently the fastest modem connection available in the City of Winston is 28,800 baud, when the industry standard is 56,000 baud. This limitation in speed combined with the lack of a fiber optic telecommunication network creates a negative community image for business recruitment and residential location decisions.

**Street Functional Classification**

The following Map 6 shows the current Functional Classification for the streets and highways within the City of Winston and Urban Growth Area. The function is determined by operational characteristics such as traffic volume, operating speed, safety, and capacity. The ODOT and federal guidelines were used to determine the functional classification for existing streets and highways in Winston and the Urban Growth Area.
SECTION 3

Transportation System Conditions & Analysis
SECTION 3
TRANSPORTATION SYSTEM CONDITIONS & ANALYSIS

The City of Winston's transportation system has developed around Highway 42 and Main Street (Old Highway 99/County Road 387). The South Umpqua River is the major topographical feature within the community that has influenced growth to some extent. It is these roads and the community's connection with I-5 that have helped shape the City as we know it today. While this arterial network has connected Winston with the region, it has also divided the community and acts as a barrier between neighborhoods.

The City's connection with the timber industry has been evident from its earliest beginnings. Winston's Main Street connects the community with the small town of Dillard and the largest mill in Douglas County, operated by Roseburg Forest Products. The downsizing of the timber industry has impacted this community and required its economy to become more diversified. While the economy is changing, and has changed significantly over the last 20 years, the transportation system for the community has stayed virtually the same. To keep pace with the growing demands for transportation services, the growth that the community is experiencing, and the increasing demands that will be placed on the existing infrastructure, Winston must plan to improve the connectivity of the existing transportation network. Improving connectivity within the community will give people options for local circulation away from Highway 42 and Main Street, preserving essential capacity, de-emphasizing the division these roads create, and enhancing the livability of the area.

Winston has participated in several significant transportation studies over the last four years. In 1995, the City developed a local street network plan that went a long way toward establishing inventories and base level data necessary to develop this Transportation System Plan (TSP). At the same time, ODOT established a regional transportation planning process in the Greater Roseburg Area Transportation Study (GRATS) and the Highway 42 Corridor Plan, both of which included Winston in a regional setting for transportation improvements. In 1997 the Umpqua Regional Council of Governments, through a Transportation Growth Management grant, conducted a public transportation feasibility study, designed to implement a limited fixed route transit service in the Roseburg and Winston area. A Comprehensive System Assessment and Enhancement Plan for Public Transit and Special Transportation, Douglas County, Oregon was undertaken by the Umpqua Regional Council of Governments in 2000 with a draft report completed in November 2001.

The TSP development began with a check of the existing conditions and an update of the information collected for the Local Street Network Plan (LSNP). This included inventory of the physical, operational, traffic safety, and travel characteristics of all the major roadways within the study area. The issues identification portion of the LSNP is still largely relevant, but was checked through a meeting with the advisory committee and a public open house held in October 1997.
Existing Roadway Deficiencies

The Local Street Network Plan determined that additional contiguous east/west connections were needed to link the various parts of the city, and lessen dependence on the State highway for local trips. This again has been substantiated through the public input and analysis of roadway needs. The City of Winston is fairly well developed in areas where roads would need to be placed, creating serious impacts on local residential and business areas that would make the cost of these improvements extremely expensive. To mitigate these impacts, and lessen dependence on the State highway for local trips, smaller connections need to be implemented on existing facilities.

Connectivity

The November 1995 Winston Local Street Network Plan identified several issues around local street connectivity and how it could be improved within the community. That study identified three neighborhood areas that had to use the arterial road system to circulate through the community. Establishing local network connections would take traffic off State Highway 42 and County Road 387 (Main Street). This benefits the community and the State by preserving the capacity of the arterial network and minimizing the need for costly road upgrades.

The three areas identified are the area to the east of Highway 42 as it enters the north side of Winston and Main Street; the area north and west of Highway 42; and the area south of Highway 42, and west of Main Street. As is evidenced by Map 7 (pg 28), it is difficult to travel between areas within Winston without using either Highway 42 or Main Street. To change this situation, the Winston Local Street Network Plan recommended a series of local street improvements that were intended to connect the areas identified previously.

Looking at Map 7, every connection between neighborhoods separated by Highway 42 and Main Street (Old Highway 99) would need to use the arterial network to complete the trip. This situation can be best illustrated when looking at the post office in Winston. The City presently has very limited mail delivery service, requiring many local people to go to the post office at least once a day to collect their mail. The post office is located on Main Street (Old Highway 99) and, because there are no connections between the City's three major residential areas, every trip to the post office is on Highway 42 and Main Street (Old Highway 99). Some of these circulation deficiencies should be alleviated through a series of minor connections and realignments.

Another circulation problem is access to McGovern Elementary School. There are no local routes that link Cary Street with the remainder of the northwest neighborhood or any other neighborhood within Winston. To access Cary Street, all traffic is required to use the City's arterial street network (Highway 42, Main Street, and Lookingglass Road). The school area also lacks pedestrian connections to allow children pedestrian-access to the school grounds.

New north/south connections to the southwest and northwest neighborhood areas across Highway 42 would allow better local connectivity. In addition, new
north/south connections would improve circulation in the vicinity of the Jorgen Street neighborhood and the neighborhood areas around Brosi Orchard Road.

**Existing Traffic Control Deficiencies**

At this time no additional signals are warranted within the City of Winston, and the existing signal operates acceptably. As part of the proposed Brockway Oaks/Brockway Village development, the City has agreed to the installation of a signal, when warranted, at the intersection of Highway 42 and Brockway Road.

**Existing Pedestrian and Bicycle Deficiencies**

Connectivity is the greatest problem for the bicycle and pedestrian system within the City of Winston. Neither system fully connects schools, parks, and commercial areas within the community. Another problem is that some streets have very long blocks with no direct bicycle or pedestrian connections. Some of the deficiencies can be corrected through the development of roadway connections discussed earlier; however, several arterial and collector streets within Winston will need to be retrofitted with these improvements to fully correct deficiencies.

**School Access Hazards & Barriers**

The City has recently completed a study to identify the school access hazards and barriers. The concerns & recommendations of School Access Hazards & Barriers Study need to addressed as part of the implementation of this TSP by the City, Douglas County and ODOT. A copy of the School Access Hazards & Barriers Study is included as Appendix L.

**Traffic Operations**

During the development of the Local Street Network Plan, there was an extensive analysis conducted of the traffic operations within the city. It has been determined, through comparison of counts taken on the State Highway 42 in 1994, 1996 and 2000, that there has been little change (less than 5%) in traffic volumes since the publication of the LSNP. Thus; the conclusions reached in that analysis are still valid. Traffic volumes are an excellent indicator for changes in circulation patterns and levels of service on the road network. The following is an excerpt from the LSNP describing the present state of traffic operations in Winston.

"Manual turning movement counts were conducted at each study area intersection during the weekday p.m. peak period (4:00pm to 6:00pm) in May 1994 as part of the Greater Roseburg Area Transportation Study and were supplemented with counts conducted in January 1995 by ODOT. The p.m. peak hour traffic counts were examined for reasonableness and were also compared to previous traffic counts conducted in the area as reported in previous traffic studies.”
Existing Operational Analysis

All of the intersections within the study area are currently operating at acceptable levels of operation for their traffic volume to capacity ratios. The following Table 1 shows the Year 2000 and Year 2022 V/C Ratios. The only intersection that is expected to exceed the acceptable by Year 2022 is Lookingglass Road and Highway 42.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Year 2000</th>
<th>Year 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brockway Road</td>
<td>0.29</td>
<td>0.61</td>
</tr>
<tr>
<td>Abraham Avenue</td>
<td>0.08</td>
<td>0.20</td>
</tr>
<tr>
<td>Glenhart Avenue</td>
<td>0.20</td>
<td>0.55</td>
</tr>
<tr>
<td>Old Highway 99</td>
<td>0.54</td>
<td>0.73</td>
</tr>
<tr>
<td>Jorgen Street</td>
<td>0.17</td>
<td>0.70</td>
</tr>
<tr>
<td>Lookingglass Road</td>
<td>0.74</td>
<td>2.55</td>
</tr>
</tbody>
</table>

With the exception of the Lookingglass Road intersection, all inventoried intersections are expected to operate within acceptable levels through the planning horizon of this TSP. Because of the high volumes of traffic on Highway 42, Lookingglass Road experiences a high degree of delay for left turns from Lookingglass Road. This in turn may create an operational level that exceeds the minimum standards set by ODOT. In order to improve the operational efficiency of this intersection, improvements may be needed to either restrict left turn movements in their entirety, or to more easily permit them.

Consideration should be given to four alternatives available that may resolve the operational issues at Highway 42 and Lookingglass.

1. Install a raised median creating a right-in/right-out intersection.
   Median should be landscaped. Impacts to Highway 42/Main St. intersection, Brosi Orchard, and Expressway should be examined.

2. Install a traffic signal at the existing intersection when warranted.
   Additional study will be required. Impacts to the Highway 42/Main St. intersection, Brosi Orchard, and Expressway will also need to be examined.

3. Develop Lost Lane from Safari Rd to OR 42/Brosi Orchard intersection and install a traffic signal when warranted.
   Additional study will be required. Impacts to Lookingglass (Highway and Safari intersections), Brosi Orchard, Highway 42/Main St. intersection

4. Separated grade crossing.

ODOT has not agreed to any new signals on Highway 42 and generally discourages the installation of new traffic signals on freight designated routes. Additional study will need to be completed to evaluate the impacts to the highway, the local street system, and other potentially impacted intersections. Traffic signals require the approval of the State Highway Traffic Engineer.
Bicycle Element

Increasing traffic demand and its associated impacts on communities has led to renewed interest in bicycling as a means of transportation, as well as recreation. Recent legislation such as ISTEA and the Oregon Transportation Planning Rule has once again elevated the importance of bicycling (as well as other alternatives to the private automobile) in transportation system planning and improvements. Bicycles are viewed as a viable way to meet a portion of the travel demand in communities, and an attractive alternative to private automobiles.

Today people use bicycles for a wide variety of trips, including commutes to work, personal business (e.g., shopping or banking), school, and recreation. It is a critical transportation mode for those people too young to drive, and an increasingly popular mode for other travelers as well. The relatively flat terrain over much of the Winston Urban Area, combined with the mild climate, make this travel mode a good option in this area.

Bicycle System Facilities

A complete bicycle system consists of several different types of facilities or improvements to safely and efficiently accommodate travel by bicycle. The challenge for local governments is to provide facilities within the area’s financial constraints that adequately meet the needs of experienced and inexperienced cyclists. Inexperienced and less stable riders usually feel more secure when there is some physical separation from automobile traffic. More experienced riders may need only a little extra pavement along the side of the road that is properly maintained. The impact of bicyclists on traffic is also an important consideration, especially in congested locations where they must compete for limited space. The Oregon Bicycle and Pedestrian Plan (Appendix H) includes a summary of the major types of facilities and a brief description of their key characteristics.

Pedestrian Element

Pedestrians are walking in Winston’s downtown at almost any hour of the day, even though there are a lack of pedestrian facilities within the town. Some streets do have sidewalks, such as both sides of Highway 42 to Glenhart, Main Street (Old Hwy 99) to Thompson, Glenhart, and Thompson. This serves the downtown core well, but misses some important areas where sidewalks would be very beneficial.

Unlike bike lanes that are not appropriate on all levels of roadway, sidewalks should be included on all street types. Past development standards have not required sidewalks, and consequently this need is not served well in the community. The City leaders recognize this and the need for safe pedestrian
accommodation. Standards have been included in this plan by which certain areas in the community might be retrofitted with pedestrian facilities. It is important to note that these facilities may not always be the standard concrete sidewalk with curb and gutter attached, due to expense and right-of-way constraints. These might be an asphalt pathway, widened shoulder, or a road shoulder with a curb between the pedestrian area and the travel way.

Certain areas within Winston need sidewalks, or other pedestrian facilities, because they tend to generate many pedestrian trips as illustrated on the previous Map 7. These areas include:

- McGovern Elementary School
- Winston Community Center
- Winston Public Library
- Commercial areas West of Glenhart on Highway 42
- Riverbend Park

The following streets should to be considered for retrofitting of sidewalk facilities:

- Darrell Street
- Cary Street
- Grape Street
- Rose Avenue
- Highway 42 from Glenhart west
- Safari Road south of Lookingglass
- Baker Street

Still other areas in Winston need to have pedestrian connections made where presently no road exists. These are needed for circulation purposes or to make a more direct route for pedestrians. These areas are:

- a connection between Gregory and Darrell
- a connection between Civil Bend and Cary
- a connection between Darrell and Grape
- a connection between Tower and Theil

The facility between Gregory and Darrell is needed to allow more direct access between the neighborhoods on the east side and the downtown commercial areas. This allows people to walk to do errands, go to the post office or grocery store without the extensive out-of-direction travel that is currently required by these residents. Without this more direct connection, it is not reasonable to expect people living in neighborhoods east of Main Street, to walk to downtown.

The connection between Civil Bend and Cary will give a pedestrian connection to the local elementary school. At the present time, children need to walk along one of two major arterials in Winston: along Highway 42 on an area without sidewalks; or along Lookingglass Road, which is narrow and without sidewalks as well. A third option exists which is a path that has been cut along a fence and connects with Tumlin Avenue. This land is not owned by the City and, therefore, cannot be improved and maintained at this time. Further study is necessary if this third pedestrian option is to be continued.
Telecommunications

There is an infrastructure component that is critical to making full use of this burgeoning new technology. Many small towns and rural areas do not have the needed capacity in their telecommunications networks to make full use of this new medium of travel and communication. This lack of infrastructure can negatively impact Winston’s economy, as well as stifle creativity in developing long-range transportation solutions to regional traffic congestion.

The development and installation of upgraded telecommunication infrastructure can have a beneficial impact on community travel behavior and Vehicle Miles of Travel (VMT) reduction. Having improved telecommunications would allow business to locate in Winston, allowing jobs to be closer to where people live, and would allow a range of travel options that are presently only partially available to people that live in limited service areas.

Traffic Accidents

Traffic accident data for the City of Winston was obtained from ODOT and reviewed for the period 1/1/96 to 12/31/00. The following Table 2 provides a summary analysis of these accidents.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatal</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Non-Fatal</td>
<td>14</td>
<td>9</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Property Damage Only</td>
<td>13</td>
<td>11</td>
<td>14</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>27</td>
<td>21</td>
<td>21</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>People Killed</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>People Injured</td>
<td>23</td>
<td>16</td>
<td>11</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Trucks</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Dry Surface</td>
<td>23</td>
<td>17</td>
<td>13</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Wet Surface</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Day</td>
<td>25</td>
<td>16</td>
<td>18</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Dark (Night)</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Intersection</td>
<td>15</td>
<td>6</td>
<td>10</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Off-Road</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Angle</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Rear-End</td>
<td>8</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Turning Movement</td>
<td>13</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Parking Movements</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fixed/Other Object</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Backing</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Pedestrian</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Transportation Safety

A summary of accidents reported in Winston from January 1994 to December 2000 was assembled from ODOT records and is summarized in Table 2 on the preceding page. Accidents reported for intersections are listed by severity and type. As the table shows, most accidents in the City of Winston result from turning movements and rear-end collisions.

The location and number of reported accidents is illustrated on Map 8. The intersections having six or more accidents in the past three and a half years are all located along Highway 42. The Highway 42/Civil Bend Avenue intersection had the most reported accidents, a total of nine, with seven collisions being rear-end accidents which may be the result of vehicles following too closely or driving too fast in an urban area.

PREVIOUS PLAN EFFORTS AND FINDINGS

The City of Winston has undergone or participated in several recent planning activities that impact in whole or part the development of this Transportation System Plan. Recent plans include:

- Greater Roseburg Area Transportation Study
- Winston Local Street Network Plan
- Highway 42 Corridor Plan
- Draft Update of the Oregon Highway Plan
- Douglas County Transit Feasibility Study
- Douglas County Transportation System Plan
- Douglas County Population Projections

The following is a brief synopsis of each plan effort and how it effects the development of the Winston TSP. Each of these plans have been reviewed in its entirety, and salient parts have been included or used in the preparing this TSP.

GREATER ROSEBURG AREA TRANSPORTATION STUDY (GRATS) — The GRATS was a planning study initiated by the Oregon Department of Transportation (ODOT) after the initial passage of the Transportation Planning Rule (TPR) in 1993 by the Oregon Legislature. Once passed, it became clear that the analytical basis for local transportation planning needed to be improved, and the TPR established a timeline by which local agencies needed to update the transportation element of their local comprehensive plan or TSPs. The GRATS was designed to give Roseburg, Winston, and the surrounding Douglas County area the analytical basis they needed to develop their TSPs.

This document's main concern, with respect to Winston, is an effort to establish a more balanced jobs-to-housing ratio. To do this, the document has slightly decreased total housing in Winston and more than doubled the employment base for the community. This was in an effort to reduce forecast congestion on Highway 42 from I-5 to Main Street in Winston by reducing the total commuter demand during the peak hour.

The GRATS also identifies Winston as a mixed use and medium density node for
intensification of land use. Under the preferred alternative, Winston is forecast to
develop with small lot single family development of about 9 units per acre and
multi-family units of about 12 units per acre. Employment densities are increased
to 40 employees per acre for retail developments and 80 employees per acre for
office development.

WINSTON LOCAL STREET NETWORK PLAN — The LSNP was developed
concurrently with the GRATS. The LSNP is far more detailed in its analysis of
transportation within the City of Winston. There are several recommendations in
this plan that have significantly impacted the development of the TSP. The LSNP
covers all modes of transportation within Winston and establishes a
comprehensive project list designed to improve local circulation.

This document emphasizes the current dependence on Highway 42 and Main
Street for circulation within the community. This ultimately fractures the
community with overcrowded arterials that inhibit pedestrian movement and
decrease community livability. The Local Street Network Plan focuses on
improving circulation within the community and decreasing dependence on the
City’s two main arterials. To do this it has established several links in the street
network that connect neighborhoods, promote easier bicycle and pedestrian
access, and increase the utility of the local street system for circulation within
town. The LSNP also has recommendations for bicycle and pedestrian
improvements.

The LSNP also included an inventory of local streets and facilities that was
updated for the TSP effort. Other significant features of the LSNP are the
analysis done for levels of service, an historical look at accidents in the
community, which is updated for the TSP, and cost estimates for the
improvements suggested, which also have been updated to reflect inflation over
the last three years.

HIGHWAY 42 CORRIDOR PLAN — This document focuses on the Highway 42
facility as it relates to statewide mobility and its operation, maintenance, and
improvement as the road traverses southwestern Oregon from Roseburg to Coos
Bay. The Plan focuses on policies for the operation, maintenance, and
improvement of the facility; the Plan focuses more on the physical features of the
road and what project needs and priorities exist for improvement of the highway
over the next twenty years.

The Plan also recommends keeping pace with the significant improvements that
have already been made to the road, in an effort to attract freight movements to
this alignment rather than the Highway 38 alignment. This supports projects that
enhance this facility from Glenhart to Brockway Road. Finally, the Corridor Plan
identifies urban areas for potential traffic calming measures. This can include
things like narrowing the lane width in town to enhance pedestrian movement
across the facility and reduced speeds and signalization of intersections for a
more orderly flow and to enhance local traffic accessibility.
THE OREGON HIGHWAY PLAN— The plan states: “The through function on major freight routes designated in this plan will be protected because of the route’s importance to the State’s economy. An existing urban center on major freight routes may be acceptable as an STA, but proposed centers that straddle highways will not. Centers will be encouraged to be off the highway system.

This highway plan will also address the issue of access management, much like the current plan. However, the access spacing requirements for Statewide highways in developed urban areas have not been determined at this time. Further detail will be needed to understand the range of impacts on Highway 42 in Winston. This plan also addresses appropriate traffic volume to capacity criteria for State highways.

DOUGLAS COUNTY TRANSIT FEASIBILITY STUDY— This document looks at placing a park-n-ride facility in Winston, with hourly fixed route service available, basically along Highway 42. This study would establish service between Winston on the southern end and Sutherlin on the northern end, with frequent service to the Umpqua Community College.

DOUGLAS COUNTY TRANSPORTATION SYSTEM PLAN— The Transportation Planning Rule requires that local TSPs be consistent with Regional or County TSPs. Douglas County submitted their TSP to Department of Land-use Conservation and Development (DLCD) for review and 45 day comment period in mid 1997. The County had pushed back their original submittal date to allow time to meet ODOT concerns with the Draft Plan and Land Use Development Ordinance. The Department of Land Conservation and development have appealed the County TSP on two general issues: alternate (minimized) street standards and pedestrian facilities. The remainder of the County TSP was not appealed and is considered completed. The City has several county roads within the Winston City Limits & Urban Growth Area and is anticipating County funded upgrades to these facilities. The City is actively working with Douglas County to coordinate these with City projects.

DOUGLAS COUNTY POPULATION PROJECTIONS— Oregon Planning Rules require Douglas County to provide population forecasts for its areas, as well as the incorporated cities within its boundaries. The County’s forecast, however, was appealed to the Land Use Board of Appeals (LUBA) by the Department of Land Conservation and Development (DLCD). The appeal was being made because the DLCD believes the County’s projections are too high. The County prevailed in the LUBA decision and the population analysis was upheld. The coordinated population growth rate for the City of Winston was 3%. The following Table 3 shows the projected population for the City of Winston for the planning periods for this TSP. However, it is important to note that the 2000 Census tabulation for the City of Winston was 4613.
TABLE 3
POPULATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>4724</td>
<td>5476</td>
<td>6346</td>
<td>7360</td>
<td>8532</td>
<td>9052</td>
</tr>
</tbody>
</table>

Public Transportation

The City of Winston owns and operates a Dial-a-Ride service that is primarily used by elderly and disabled patrons. The service is run on time and money donations with the City of Winston and the County providing partial financial support for transportation services. The following Table 4 shows the rides provided by the City's Dial-a-Ride service from 1993 to 2001.

Table 4
Winston Dial-a-Ride
Public Transit Ridership (People Trips)

<table>
<thead>
<tr>
<th>Period</th>
<th>Ridership</th>
<th>Elderly</th>
<th>Disabled</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>2,412</td>
<td>830</td>
<td>1,517</td>
<td>4,759</td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>4,470</td>
<td>1,244</td>
<td>1,241</td>
<td>6,955</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>6,501</td>
<td>1,545</td>
<td>932</td>
<td>8,978</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>6,124</td>
<td>1,092</td>
<td>480</td>
<td>7,696</td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>5,633</td>
<td>858</td>
<td>1,554</td>
<td>8,045</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>6,560</td>
<td>759</td>
<td>1,684</td>
<td>9,003</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>7,089</td>
<td>538</td>
<td>1,447</td>
<td>9,074</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>7,700</td>
<td>723</td>
<td>1,595</td>
<td>10,018</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>8,694</td>
<td>924</td>
<td>1,680</td>
<td>11,298</td>
<td></td>
</tr>
</tbody>
</table>

Presently Winston is the southern terminus of a fixed route transit system operated by the Umpqua Regional Council of Governments (URCOG). This service provides transportation to the greater Roseburg area, extending to Sutherlin in the north and Winston in the south. The service has three loops and mainly provides service to Umpqua Community College, medical and commercial centers in Roseburg.

It is anticipated that the Dial-a-Ride service will meet demand for public transportation services over the duration of this plan precluding the need to implement a more intensive type of service. Ridership on the current system has stabilized and, based on growth projections for the community, should handle future demands over the life of this plan, with moderate growth in the program.
SECTION 4

Traffic Resulting From Growth
Traffic Resulting From Growth

Winston Urban Area Growth
The Winston UGA is a relatively low density developed community with large areas of open undeveloped land surrounding the City. However, the South Umpqua River forms a barrier to the City developing south and limits the potential for future growth around the east and south sides of the City as is shown on the following Map 9. The City is projected to experience a 4% rate of growth as illustrated by projected population increases shown in the preceding Table 3. If employment growth in Winston increases in proportion to the population growth of Winston in relation to Douglas County, approximately 670 jobs would be added during the next 20 years.

The estimated 2002 population is 5,012 with the projected 20 year population of 9,052. The household size for Winston in 2000 was 2.61 people. If the household size for the area remains the same, this increase of 4,040 residents for the City will result in about 1,548 new households by the end of the planning horizon for this TSP in 2022. The traffic resulting from this growth is anticipated to be modest and will disperse relatively evenly onto the existing and planned street system for the City and Urban Growth Area. If the average number of vehicle trips generated per household in the Winston Area is 10 per day, the annual increase in traffic would be approximately 774 vehicle trips as a result of residential growth in the area.

PLANNED GROWTH

Approximately 300 acres of land designated by the City’s Comprehensive Plan for residential use is either vacant or underdeveloped. Almost all of this will need to be developed to accommodate the anticipated residential growth if the average density of new development is 6 houses per acre. About 258 acres will be needed to accommodate the planned addition of 1,548 dwelling units within the City of Winston and Urban Growth Area. It is clear that a substantial portion of this new residential development will occur to the north of Highway 42 and east of Old Highway 99 where the bulk of the undeveloped residential land is located. The majority of anticipated residential growth will be single-family.

Commercial is mostly located along Highways 42 & 99. There are a wide variety of employment categories that can be accommodated on land designated for commercial use. Douglas County has been transitioning from one based on agricultural, timber and extractive industries. Like much of the rest of the state and the region, the area has been changing to one with more retail and service jobs. For the purposes of estimating the traffic growth for the next 20 years, a combination of new employment is assumed to be in the retail and service sectors.

The following Table 5 lists the traffic expected as a result of the new growth anticipated in the next twenty years. The trip generation rates are approximations that correspond with the variety of uses that fall into the categories indicated. For the purposes of the analysis, equal growth in two employment sectors was assumed.
## TABLE 5
TRAFFIC (ADT) FROM ANTICIPATED 20-YEAR GROWTH

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Rate</th>
<th>Total Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Dwellings</td>
<td>945 houses</td>
<td>10 trips/dwelling unit</td>
<td>9,450</td>
</tr>
<tr>
<td>Retail employment</td>
<td>225 employees</td>
<td>10 trips/employee</td>
<td>2,250</td>
</tr>
<tr>
<td>Service employment</td>
<td>225 employees</td>
<td>7 trips/employee</td>
<td>1,575</td>
</tr>
<tr>
<td><strong>Total Trips</strong></td>
<td><strong>13,275</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Increases in Residential Densities
The usual densities for single-family residences are in the range of 4 to about 6 dwelling units per acre. Assuming 20 percent of land is devoted to road rights-of-way, a subdivision with 8000 square foot residential lots has a density of approximately 4.5 dwelling units per acre. In fact, this is very similar to the configuration and density of the newer residential areas of Winston.

Medium density multi-family dwellings usually fall in the range of about 8 to 12 dwelling units per acre. This is likely to be the maximum density that will be constructed in the City of Winston and adjacent Urban Growth Area.

Increases in residential densities have at least two benefits from a transportation standpoint. First, the increase in density can reduce driving distances. A given population can be contained in a smaller space. This reduces by a small degree, the distance from each house to various destinations. Since the average vehicle trip is several miles in length, a reduction resulting from an increase in densities would not likely make a significant difference in the annual mileage traveled within the community.

A more significant difference may be in relation to walking and transit trips. The transit industry uses a standard of one-quarter mile to determine whether one has transit service available. An increase in residential densities from 4.5 to 6 dwelling units per acre can increase the number of houses within walking distance of a bus stop by one-third. Likewise, increases in density can reduce walking distance for other types of trips, perhaps by just enough to change some of them from driving trips to walking or bike trips. Map 9 is the City of Winston & Urban Growth Area Future Land Use Plan which illustrates the patterns of growth for the area.

Studies in larger communities indicate that housing density and overall employment density are the key variables that influence the demand for public transit. The City of Winston’s Goals, Objectives & Policies promote in-fill development, one of the easiest and most cost-effective methods of promoting increased densities for residential development. If there is a desire to increase transit demand by increasing residential densities further, it may be appropriate to review the lot sizes, setbacks, and other factors influencing residential development density. This TSP is an element of the program underway to update the Winston Comprehensive Plan.
Concentration of Commercial Establishments

Traditional downtown areas and other concentrations of retail establishments are typically more supportive of transit and alternatives modes of travel. Among other things, the traditional downtown area usually has buildings located in much closer proximity to streets than do the modern, “big box” establishments. “Big box” establishments such as Wal-Mart have increasingly dominated the retail market. Where large retail establishments are used, smaller stores are sometimes clustered around them. This approach may, at least, provide opportunities for shared parking and reduce walking distances between adjoining establishments.

For Winston, the key to concentration of commercial establishments is a benefit for transit service. As indicated in the preceding discussion of residential densities, the density of employment is the second key element for generating transit use.

Mixed-Use Development Patterns

A mixed land use development concept is one that provides both commercial and residential uses in close proximity. The typical mix includes small-scale retail establishments and services, but may also include offices and other employment sites. The mixed-use concept is reminiscent of the inclusion in neighborhoods of the “corner grocery” store as well as the neighborhood pharmacy, dry cleaners, or the newer establishments such as video stores. The small insurance office, bookkeeping services, and other businesses that provide services are similar uses that may mix reasonably with residential uses.

In recent years, the concept of mixed-use developments has received strong support. In the discussion of mixed land use concepts, Winston is small enough that much of the community already meets the definition of a mixed-use development. Indeed, some of the mixed-use developments constructed in recent years in large metropolitan areas are larger, both geographically and in population, than is Winston. Many of Winston’s residential neighborhoods already lie within walking distance of the downtown.

Large amounts of the vacant land designated for residential growth in Winston lies both in the western and eastern sides of the city. Rezoning of some of the commercial parcels to residential near the downtown core of the City would provide a better mix of uses in that area. Parcels currently designated for commercial zoning that might be candidates for mixed-use development or for residential use include some larger parcels along Highway 42.

The astute reader will note an apparent contradiction between the mixed-use development concept and the concentration of commercial establishments. There is in fact a conflict between them. Those issues do need to be considered in light of the community’s overall goals including the provision of affordable housing, preservation of open space, and all of the other factors that relate to Winston’s livability.
TRANSPORTATION SYSTEM CHANGES

Enhancing the Local Street System
Like many communities, Winston has developed and grown around the state highway. Highway 42 and Old Highway 99 serves as the community's "Main Streets." Numerous businesses have subsequently developed along these Highways.

As the region grows, the state highway system can be expected to carry additional regional traffic. Highway 42 is a major freight movement route with access from I-5 through Winston to the Oregon Coast at Coos Bay. New development in Winston will increase traffic volumes on Highway 42. The impact on the highway will be especially important if new developments are oriented to the highways and if the local street system does not provide attractive alternative routes. This TSP proposes undertaking changes in the local street system to serve local traffic and provide a means for traffic circulation within areas of the City that will not require using Highway 42 and Old Highway 99 for virtually all travel within the Winston.

Protection of the Functionality of the State Highway System

Because of severe limits on resources available for modernizing state highways or building new highways, ODOT has placed a priority on maintaining the existing system. Access management is one of the key tools being used by ODOT to retain the functionality of the system and to maintain the appropriate level of mobility. The 1999 Oregon Highway Plan specifies the access management standards for the state highway system. The Highway Plan's access management standards seek to promote a balance between access to adjacent properties and the need to provide adequate capacity for through traffic. The standards are generally considered to be more restrictive than the previous versions.

Each highway improvement project is approached on an individual basis and must account for unique characteristics of right-of-way width, access, and topography. When the design of improvements is undertaken, special efforts are usually made to reduce access. Access adjustments typically include narrowing extra-width driveways, eliminating second and third driveways serving individual parcels, and by combining access with that provided for adjacent parcels. To the extent possible, access is provided to intersecting streets rather than the state highway. To the extent that Winston's land use policies support such actions, the implementation of access management measures on the state highway system within the UGB will be easier. Land use policies that support the state's access management policies will also make it less expensive to implement future improvement projects, thus increasing the likelihood that such improvements will be advanced for inclusion in the State Transportation Improvement Program.

Pedestrian and Bicycle System Improvements

The City of Winston's policies already provide for construction of sidewalks with new development. The street standards proposed in the Transportation System
Plan provide even more specific provisions for sidewalks and bike lanes for the city's street system. The provision of these facilities will supplement the effect of land use actions (including higher density developments, mixed use, and in-fill development) to help achieve some traffic reductions in the areas where bike and pedestrian facilities are to be provided in the future.

Public Transportation Demand

It is assumed that the need for public transportation services will grow at the same rate as the population. An average of people trip totals from 1993 to 1997 was divided by the number of households in 1995. This gave information on rides per household, based on a rolling 5-year average. The average of 4.41 rides per household was used to determine total trip demand in 2020. Based on these calculations, demand for rides should reach approximately 18,800. This demand will continue to largely be from elderly and disabled patrons.
SECTION 5

Future Transportation Needs
SECTION 5
FUTURE TRANSPORTATION NEEDS

TRAFFIC CAPACITY ISSUES
Historically, traffic has increased at a slightly higher rate than has population. Factors that have contributed to this trend include smaller households (fewer persons per household), higher labor force participation (more two-worker families), and increased automobile ownership (more households with two and three autos). The population and employment figures would represent increases of approximately 27 percent between 1997 and year 2020. The daily traffic generated by new development as shown in the preceding Table 5 would represent an increase estimated at 35 percent over current traffic volumes.

Traffic increases will be greatest on a percentage basis at the fringes of the community where current traffic volumes are low and where land is vacant but proposed for development. On an absolute basis the traffic increases will be greatest on major routes that already carry significant amounts of traffic. Collector streets serving vacant land designated for residential use will experience high percentage increases in traffic. Probably the most significant examples of concern to Winston would be the streets serving the residential land north of Highway 42 and Lookingglass Rd. Development of this land inside the urban growth boundary is calculated to produce as many as 4,000 daily trips. Since access to this planned residential area is basically restricted to two major routes, the calculation of traffic increases on the collector streets is fairly easy. Other collector roads which can be expected to have significant percentages increases in traffic volume measured on a daily basis are likely to range from a few hundred to a few thousand vehicles per day.

The arterial and major collector streets, including Highway 42, Old Highway 99 and Lookingglass Road, will experience significant traffic volume increases. Vacant and under-utilized parcels designated for commercial and industrial use abut these major roads. As shown in Table 5, retail and service employment has high trip generation rates. Retail uses, such as fast food restaurants and convenience stores have particularly high trip generation rates. Where these uses abut the arterial streets, significant increases in traffic can be expected. In addition, the arterial streets can be expected to experience significant increases in through traffic. The most impacted through traffic routes in Winston are Highway 42 from the east city limits to the west city limits, Old Highway 99 from the intersection with Highway 42 to the south city limits and Lookingglass Road from the intersection of Highway 42 to the west city limits.

The most important aspect of traffic increases is the relationship between expected traffic and the capacity of the individual streets. The highest priority for local streets is serving adjacent properties. They generally have a design capacity of 200 to 1,200 vehicles per day. Residential Collector Streets have a dual purpose: they serve adjacent uses and carry a portion of through traffic destined for more distant locations. Residential Collector Streets have a design capacity of 1,200 to 6,000 vehicles per day. Major Collector Streets place a higher priority on carrying through traffic and a design capacity of up to 10,000 vehicles per day.
Arterial Streets are designed to give priority to carrying high traffic volumes with minimum service to adjacent lands. Design capacities of 10,000 to more than 30,000 vehicles per day are commonly used for arterial streets.

FUTURE TRAFFIC CAPACITY DEFICIENCIES
Based upon the analysis of existing traffic volumes and the expected traffic generated by planned development, there do not appear to be significant deficiencies related to the capacity of the roads in Winston. The expected traffic volumes on Winston's collector streets are not expected to exceed their capacity. Likewise, the traffic volumes on arterial streets, Highway 42, Old Highway 99 and Lookingglass Road, are not expected to exceed the capacity of five-lane arterial streets. There are, however, some specific locations where capacity issues may be anticipated.

Four specific locations have been identified where increased traffic may result in need for capacity improvements. Three locations of concern are intersections of collector streets with Highway 42, Old Highway 99 and Lookingglass Roads.

The potential capacity deficiencies are summarized in the following Table 6.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Location</th>
<th>Existing Condition</th>
<th>Capacity Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway 42</td>
<td>Pepsi Rd</td>
<td>Stop-controlled</td>
<td>Proposed closing Winston Section Rd will increase traffic with limited sight distance east by So Umpqua River bridge making turns onto highway hazardous.</td>
</tr>
<tr>
<td>Highway 42</td>
<td>Lookingglass</td>
<td>Stop-controlled</td>
<td>Turning vehicles must slow or stop in 45 MPH travel lanes</td>
</tr>
<tr>
<td>Highway 42</td>
<td>Old 99</td>
<td>Signal controlled</td>
<td>Access/properties on east side of intersection confusing with no signal control from east accesses</td>
</tr>
<tr>
<td>Highway 42</td>
<td>Brockway Rd</td>
<td>Stop controlled</td>
<td>Important freight intersection expected to fall below v/c standards/existing eastbound right turn on private prop</td>
</tr>
</tbody>
</table>

The existing signalized intersection at Highway 42 and Old Highway 99 was specifically analyzed to determine whether this represented a likely capacity deficiency. It was determined that the existing intersection configuration could accommodate traffic increases of up to 70 percent without exceeding standards.
established for the highway. A right turn lane westbound is needed to improve traffic flow.

Highway and Street System Connectivity Needs

Connectivity project needs illustrated on the following Map 10 were the starting point for the Transportation System Plan to begin to prioritize needs and improvements that will be built over the life of the plan. Several of these projects, along with others, have been prioritized for inclusion in the plan and, ultimately, construction. Connectivity projects that are included in the plan include:

- Extend Ronald Avenue to Darlene Street/Brosi Orchard Road, and extend Darlene Street to Highway 42/Lookingglass Road
- Extend Tokay Street to Winston Section Road
- Extend Jorgen Street from Ronald Avenue to Winston Section Road
- Extend Thiele Street to Ford Street
- Extend Johnson Road to Tokay
- Extend Edwards Street to Grape Street
- Connect Abraham Avenue to Brockway Road

Roadway Design Deficiencies

Like most communities, the City of Winston has developed from a small rural center. As the community has developed, development occurred along the roads leading to outlying areas. For the most part, houses were constructed individually without significant improvements to the abutting streets. Not until recently did development occur as subdivisions which require curb, gutter, sidewalks and paving to be installed before houses are constructed.

Many of the streets within the city are merely rural streets with houses and businesses constructed on the adjacent property. Most of these rural roads feature paved travel lanes, either gravel or paved shoulders, and open ditches for drainage. Newer streets including those constructed in connection with subdivisions in the last twenty to thirty years feature curbs, gutters, and sidewalks. These streets meet "urban standards." Streets designed to urban standards are generally considered to be less expensive to maintain than are rural streets. They are also superior to the rural streets since they make provisions for pedestrians and bicyclists. These advantages have led to the adoption of design standards for all new streets and policies of improving existing streets to urban standards.
Highway and Street System Needs

The inclusion of an improvement in the TSP does not represent a commitment by ODOT to fund, allow, or construct the project. Projects on the state highway system that are contained in the TSP are not considered “planned” projects until they are programmed into the Statewide Transportation Improvement Program (STIP). As such, projects proposed in the TSP that are located on a State highway cannot be considered for future development or land use actions until they are programmed into the STIP. Highway projects that are programmed to be constructed may have to be altered or cancelled at a later time to meet changing budgets or unanticipated conditions such as environmental constraints.

The following is a list of street and highway improvements needed for the City of Winston and UGB. The following Map 11 illustrates the location of these needs.

1) Widen Highway 42 west from Glenhart Avenue to Milepost 71
2) Widen and resurface Lookingglass Rd from Abraham Avenue to Glenhart Ave
3) Extend Ronald Ave to Brosi
4) Extend Tokay to Winston Section Road
5) Extend Jorgen Street from Ronald Avenue to Winston Section Road
6) Improve Winston Section/Pepsi Road to collector standards from Highway 42 to Thompson Avenue
7) Extend Thiele Street to Ford Street
8) Install acceleration and deceleration lanes on Highway 42 at the Pepsi Road intersection and the Lookingglass Road intersection
9) Install a traffic signal at the Lookingglass Road/Highway 42 intersection as warrants justify
10) Upgrade remaining section of Brosi Orchard Road to local street standards
11) Upgrade Johnson Road
12) Connect Main St to Grape Street
13) Upgrade Brockway from Douglas Ave to Lookingglass Rd
City of Winston
Transportation System Plan

Highway and Street System Needs
Widen and Resurface
\nWiden Rd.
\nExtend Rd.
\nUpgrade Rd.

City Limits
U.G.B.

Map 11
Revised September, 2002
Public Transportation System Needs

Presently the Dial-a-Ride system is staffed with volunteers and has access to one van and one sedan. Douglas County provides reimbursement for transporting senior and disabled people to the community center. This, however, is a fairly specialized service and funding is from year to year.

To meet future demand, an additional van is needed. Presently one van is used, and it still has some additional capacity. The addition of a second van will ensure that timely service is available during high demand times. There may be a need for more orderly reservations. At present, when a call comes in, the City calls in a driver specifically to provide the ride. If another call comes in, the driver provides that ride after the first is complete. As the area grows, there may be a need for regular driver hours and advance reservations, while still allowing some flexibility. This will allow coordination of trips as needed. Finally, there will be a need for additional volunteer drivers to serve the anticipated volume.

Pedestrian/Bike System Needs

Sidewalks should be provided on both sides of all future arterial, collector, and local streets within the City of Winston. The only collector or arterial streets which have sidewalks at present are Old Highway 99 (County Road 387), Highway 42, Glenhart Avenue, and Thompson Avenue. Winston is a very pedestrian oriented community with very few sidewalks and pedestrian facilities. Landscaping and other treatments need to be installed that crate a more inviting environment for pedestrians.

Striped on-street bicycle lanes should be provided on all arterial streets, and on collector streets. Lanes should also be provided anywhere that it may be necessary to ensure safe bicycle travel. In some instances, the provision of separately striped bicycle lanes on arterial and collector streets may require street widening and perhaps the acquisition of addition right-of-way.

Both Gregory Drive and Darrell Avenue are very long blocks that discourage residents from walking to destinations within the City. Pedestrians avoid walking because they must travel so far out of direction to get to the downtown area, Community Center, and other locations. Providing a mid-block pedestrian path would make the Winston town center more accessible to pedestrians on the east side of the City.

An off-street bicycle path should be provided between Cary Street and Civil Bend Avenue in the vicinity of Tumlin avenue. This would allow bicyclists to access the elementary school from neighborhoods on the west side of Highway 42 without having to access Highway 42 or Lookingglass Road. Currently, there are no pedestrian/bike connections between Cary Street and Civil Bend Avenue and children walking between McGovern Elementary School and their homes must walk on either Highway 42 or Lookingglass Road.
The bicycle path and pedestrian path connecting the City with Douglas High School is a valuable beginning for an area-wide network of paths. Other needs to establish a good pedestrian/bike path network include the following improvements which are also shown on the following Map 12.

- Along Thompson Avenue from County Road 387 east to the area of the regional sewer line, then northward to Highway 42 north of town.
- From Thompson Avenue south directly to the river.
- From Highway 42 west along Lookingglass Road to Brockway Road, then south to Highway 42, then east on Highway 42 to the High School.
- From the High School east along Highway 42, then north on Rose Street to Jorgens Street, then east to Highway 42, then to the Lookingglass Road intersection.
- From Suksdorf Street east to Ronald Street, then north on Ronald to Brosi Orchard Road, then east to the sewer line easement.
- Along a proposed collector street from Brockway Road to Highway 42 on the north side of Lookingglass Creek.
- Along Brockway Road from Lookingglass Road, south to the Urban Growth Boundary.
- Add an off-street bicycle/pedestrian path between Cary Street and Civil Bend Avenue.
- Improve pedestrian way on both sides of Cary Street.
- Add a pedestrian path from Gregory Drive to Darrell Avenue
- Provide pedestrian path, Highway 42, Sherry Street, and Rose Avenue.
- Striped on-street bicycle lanes should be developed on all collector and arterial streets.
- Pedestrian path on both sides Grape Street.
- Improve pedestrian path on both sides of Newton Drive.
- Improve pedestrian way along Safari Road south.
- Construct pedestrian path on both sides of Brosi Orchard Road.

Air
The City of Winston is served by the Roseburg Municipal Airport. There are no airport facilities planned for the Winston area.

Rail
The City of Winston does not have railroad facilities within the UGB. The Green District between Winston and I-5 has railroad service and the Dillard area south of the City has rail facilities.

Water
Highway 42 provides access to Coos Bay and the Port facilities for shipping and receiving freight via water for the area.
City of Winston
Transportation System Plan

Bicycle and Pedestrian System Needs

- Bike/Ped Path
- Bike Lane
- Sidewalk

1. Between Cary St. and Civil Bend -- Add off street bike/ped path.
2. Cary Street -- Sidewalks on both sides.
3. Between Gregory Dr. and Darrell -- Add off street bike/ped path.
4. Hwy. 42, Sherry St., Rose St. -- Provide new sidewalks.
5. Striped on-street bike lanes developed on all collector and arterial roads.
6. Grape St. -- New sidewalks on both sides.
7. Newton Dr. -- Improve sidewalks on both sides.
8. Safari Rd. (south) -- Improve sidewalks.
9. Brosi Orchard Rd. -- New sidewalks on both sides.
10. Darrell Ave. -- New Bike/Ped. path.

Revised September, 2002

Map 12
SECTION 6

Goals, Objectives & Policies
GOALS, OBJECTIVES AND POLICIES

General Transportation Goal: The overall goal of the Winston Transportation System Plan is to provide a safe and efficient transportation system for moving people and goods within/through the urban area.

1. GENERAL TRANSPORTATION OBJECTIVES

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

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

   C. The City will coordinate transportation planning and construction efforts with Douglas County and ODOT.

   D. The implementation of transportation system and demand management measures, enhanced transit service, and provision for bicycle and pedestrian facilities shall be pursued as a first choice for accommodating travel demand and relieving congestion in a travel corridor, before street widening projects are considered.

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

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

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

2. LAND USE OBJECTIVES

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

   B. The City should implement plans for the downtown area and the area designated for future downtown development that include mixed-use, high-density (where appropriate), transit oriented and pedestrian-friendly design standards.
C. To reinforce the implementation of this transportation plan in land use decision making, corridors for future auto, bicycle and pedestrian facilities have been adopted into this plan.

D. The City will adopt a new Subdivision and Land Partition Ordinance that includes simplified Planned Unit Development requirements, and that includes design standards and review criteria for adequate transportation facilities. Such provisions shall include, but are not limited to, connections between neighborhoods for vehicles, bicycles and pedestrians, access management standards, and street width and parking requirements.

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

F. The City will coordinate land use planning with transportation planning by notifying the City Administrator, Traffic Committee, Public Works Director, City Engineer, Fire Department and Police Department of all planning proposals that include transportation components. All departments will be invited to make suggestions for design improvement and conditions of approval, and to participate in pre-application conferences whenever practical.

G. The City will coordinate land use planning activities with the Oregon Department of Transportation and Douglas County. To this end, the City will provide notice of pending decisions and invite ODOT and/or Douglas County to make suggestions for design improvement and conditions of approval, and to participate in pre-application conferences whenever practical.

3. STREET GOAL, OBJECTIVES & POLICIES

Goal: Provide a comprehensive system of streets and highways that serves the mobility and multi-modal travel needs of the Winston Urban Area.

Objective 1: Develop a comprehensive, hierarchical system of streets and highways that provides for optimal mobility for all travel modes throughout the Winston Urban Area.

Policies:
A. The City will fulfill its system wide travel capacity needs through the use of multiple travel modes within the public rights-of-way.

B. The City’s street system will contain a network of collector streets that connect local traffic to the arterial street system.

C. The City shall classify streets and highways within the Winston Urban Area based on
how they will function within the overall system.

D. The City will periodically review and revise street design standards. The City shall consider incorporating traditional neighborhood design elements into their Public Facilities Standards, including, but not limited to, planting strips, minimum necessary curb radius, alleys and “appropriately” sized streets based upon the anticipated needs of the area.

E. To facilitate pedestrian crossing, discourage through traffic, and reduce speeds, local streets should not be excessive in width. However, streets must have sufficient width to provide emergency access.

F. The City will integrate traffic calming techniques into city street design standards to reduce automobile speeds within new and existing neighborhoods.

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

H. The City will prohibit development of new unpaved roads.

I. The City should discourage new development on unpaved roads.

J. The City should discourage cul-de-sac or dead-end street designs whenever an interconnection alternative exists. Development of a modified grid street pattern will be encouraged for connecting new and existing neighborhoods during subdivisions, partitions, and through the use of the Public Facilities Plan.

K. The City will require street dedications as a condition of land development.

L. Improvements to streets in addition to those in or abutting a development may be required as a condition of approval of subdivisions, land partitions, comprehensive plan changes and re-zoning requests.

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

Policies:
A. The City of Winston will design its streets to safely accommodate pedestrian, bicycle and motor vehicle travel.

B. Arterial and collector street intersections will be designed to promote safe and accessible crossings for pedestrians and bicyclists.

C. Left-turn pockets should be incorporated into the design of intersections of arterial streets with other arterial and collector streets, as well as collector streets with arterial and other collectors.
D. The City of Winston will develop “Standard Details” for design of all streets within the Winston Urban Area, in cooperation with Douglas County and ODOT.

E. The City of Winston should apply the street design standard that most safely and efficiently provides motor vehicle capacity appropriate for the functional classification of the street.

F. Wherever possible the City of Winston should incorporate safely designed, aesthetic features into the streetscape of its public rights-of-way.

G. When existing streets are widened or reconstructed they should be designed to the adopted street design standards for the appropriate street classification. Adjustments to the design standards may be necessary to avoid existing topographical constraints, historic properties, schools, cemeteries, existing on-street parking and significant cultural features. The design of the street should be sensitive to the livability of the surrounding neighborhood.

H. Impacted neighborhoods should be invited to review proposed designs before construction begins.

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

Objective 3: The City will continue to promote traffic safety by enforcing clear vision area regulations applicable to public and private property located at intersections. The existing clear vision area ordinance shall be reviewed and revised as needed to ensure that fences, hedges, foliage and other landscaping features do not obstruct the line of sight or drivers and cyclists entering intersections.

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

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

C. The City should place a higher priority on funding and constructing street projects that address identified vehicular, bicycle, and pedestrian safety problems than those projects that solely respond to automotive capacity deficiencies in the street system. Exceptions are those capacity improvements that are designed to also resolve identified safety problems.

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

E. The City should develop a process for identifying and addressing areas prone to traffic accidents.
Objective 4: Efficiently plan, design, and construct City-funded street improvement projects to meet the safety and travel demands of the community.

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

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

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

D. The City should involve representatives of affected neighborhoods and citizens in an advisory role in the design of street improvement projects.

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

Policies:
A. The City will require Traffic Impact Analyses as part of land use development proposals to assess the impact that a development will have on the existing and planned transportation system. Thresholds for having to fulfill this requirement and specific analysis criteria shall be established in the Winston Public Facilities Standards.

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

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

Goal: A transit system that provides convenient and accessible transit services to the citizens of the Winston Urban Area.

Objective 1: Ensure that transit services be accessible to Winston Urban Area residences and businesses.

Policies:
A. The City of Winston will continue to support and maintain the Winston Dial-a-Ride Bus Program.

B. The City will work with the local transit provider to encourage transit services to be routed in a manner that, where practical, service coverage is provided within a ¼ mile walking distance of Winston Urban Area residences and businesses.

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

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

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

F. The City will support the continued development and implementation of accessible fixed-route and appropriate complementary “dial-a-ride” services.

G. The City of Winston will encourage connectivity between different travel modes. The Winston Public Transit facilities should be accessible by pedestrian, bicycle, bus and automobile travel modes.

H. The City should cooperate with the local transit provider to identify and include features beneficial to transit riders and transit district operations when developing plans for roadway projects.

I. The City should support the local transit providers efforts to provide pleasant, clean, safe, comfortable shelters along transit lines, at or near transit stops.

J. The City should install bike racks or lockers at transit stops when adequate financial resources are available.

K. The City should identify park and ride, bike and ride, and walk and ride lots in Winston to support ridesharing.
Objective 2: Increase overall daily transit ridership in the Winston Urban Area, to mitigate a portion of the traffic pressures expected by regional growth.

Policies:
A. Through rideshare programs and other Transportation Demand Movement (TDM) efforts, the City should work with Winston employers and government agencies to encourage commuter transit ridership through voluntary, employer-based incentives such as subsidized transit passes and guaranteed ride home programs.

B. The City will work through the local public transit provider rideshare programs and other transportation demand efforts (TDM) to assist in the effective marketing of the local transit provider services to Winston Urban Area residents and businesses.

C. The City will encourage promotional and educational activities that encourage school children and other people to use public transit.

5. PEDESTRIAN GOAL, OBJECTIVES & POLICIES

Goal: To provide a comprehensive system of connecting sidewalks and walkways that will encourage and increase safe pedestrian travel.

Objective 1: The City of Winston will create a comprehensive system of pedestrian facilities.

Policies:
A. The City should establish evaluation criteria for prioritizing sidewalk projects.

B. The City will identify a systematic approach to filling gaps in the sidewalk system.

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

D. The City should establish a Sidewalk Construction Program to complete the pedestrian facility network.

E. Sidewalks and walkways should complement access to transit stations/stops and multi-use paths. Activity centers and business districts should focus attention on and encourage pedestrian travel within their proximity.

F. All future new street development should include sidewalk and pedestrian access construction as required by the Winston Zoning Ordinance and adopted Street Standard Details. All major road construction or renovation projects, except maintenance and pavement preservation projects, shall include sidewalks.

G. Encourage ODOT and Douglas County to have marked crosswalks at all signalized intersections. Crosswalks at controlled intersections should be provided near schools, commercial areas, and other high volume pedestrian locations on collector and arterial streets within the City and Urban Growth Area.
H. The location and design of sidewalks will comply with the requirements of the Americans with Disabilities Act

I. The City should require pedestrian and bicycle easements to connect neighborhoods and reduce vehicle trips. The City shall modify the street vacation process so pedestrian and bicyclist through-access is maintained.

J. Pedestrian walkway or access way connections should be required between adjacent developments when roadway connections cannot be provided.

Objective 2: Mixed-use development that encourages pedestrian travel by including housing close to commercial and institutional activities will be encouraged.

Policies
A. The Zoning Ordinance provisions for mixed-use development will be reviewed to consider changes that will increase opportunities and incentives for mixed-use development.

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

C. Zoning will be developed to allow for mixed land uses that promote pedestrian travel.

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

E. The City will encourage the development of a connecting, multi-use trail network.

F. The City should provide sidewalks and other amenities to make pedestrian access to bus stops easier.

Objective 3: The City of Winston will encourage education services and promote safe pedestrian travel to reduce the number of accidents involving pedestrians.

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

B. The City will enforce pedestrian safety laws and regulations to help increase safety as measured by a reduction in accidents. Attention should be focused on areas where high volumes of automobile and pedestrian travel occur. Warnings and citations given to drivers and pedestrians will serve to impress the importance of safety issues.

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

6. BICYCLE GOAL, OBJECTIVES & POLICIES

Goal: To facilitate and encourage the increased use of bicycle transportation in Winston by assuring that convenient, accessible and safe cycling facilities are provided.

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

Policies:
A. The City of Winston recognizes bicycle transportation as a necessary and viable component of the transportation system, both as an important transportation mode, and as an air quality improvement strategy.

B. The City of Winston should progressively develop a linked bicycle network, focusing on the arterial and collector street system, and concentrating on the provision of bicycle lanes, to be completed within the planning period (20 years). The bikeway network will serve bicyclists’ needs for travel to workplaces, commercial district, transit stops, schools and recreational destinations.

C. The City of Winston will use all opportunities to add bike lanes in conjunction with road reconstruction and striping projects on collector and arterial streets.

D. The City of Winston should encourage ODOT and Douglas County to use all opportunities to add bike lanes in conjunction with road reconstruction and striping projects on collector and arterial roads.

E. The City of Winston will assure that the design of streets and public improvement projects facilitate bicycling by providing proper paving, lane width, traffic control, storm drainage grates, striping, signage, lighting, etc.

F. The City of Winston should assure regular maintenance of existing City bicycle facilities and encourage ODOT and Douglas County to regularly maintain State/County bicycle facilities which will include taking actions to improve crossings at creeks and major streets.

G. The City of Winston should assure the provision of bicycle racks and/or shelters at critical locations within the downtown and other locations where publicly provided bicycle parking facilities are called for.

H. The City of Winston will actively work with ODOT to improve bicycling on State Highway 42 within the City and Urban Growth Area.

I. The City of Winston will actively work with Douglas County to improve bicycling on County maintained roads within the City and Urban Growth Area.

J. The City of Winston should support the local transit provider in their efforts to facilitate bikes on buses and bicycle facilities at transit stations and stops.
K. The City of Winston will encourage bicycle recreation.

L. The City will require sidewalks and pedestrian access in all new developments.

M. The City will coordinate bicycle planning efforts within the City and Urban Growth Area with Douglas County and ODOT.

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

Policies:
A. The City of Winston will actively support and encourage local and state bicycle education and safety programs intended to improve bicycling skills, observance of laws, and overall safety for both children and adults.

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

7. AVIATION OBJECTIVES

A. The City will support reasonably priced air transportation and convenient connections with other areas through the Roseburg Regional Airport.

B. The City should support inter-modal connections between the City of Winston and the Roseburg Airport.

8. RAIL GOAL OBJECTIVE

A. The City will support rail transportation in the region and its connections with the other areas in the state and nation. The City shall encourage passenger service as part of statewide rail transportation planning efforts.

9. TRANSPORTATION SYSTEM MANAGEMENT GOAL, OBJECTIVES & POLICIES

Goal: To maximize the efficiency of the existing surface transportation system through management techniques and facility improvements.

Objective 1: A system of traffic control devices maintained and operated at an optimal volume/capacity ratio that is consistent with existing funding levels.

Policies:
A. The City will regularly maintain all of the traffic control devices (signs and markings) within its inventory to minimize congestion and driver delay due to confusion. While priority shall always be given to regulatory and warning signs, informational (street name and directional) signs shall also be given proper maintenance.
B. The City will encourage Douglas County and ODOT to regularly maintain all of the traffic control devices on county and state maintained roads within the City of Winston and Urban Growth Area.

**Objective 2:** To maximize the effective capacity of the street system through improvements in physical design and management of on-street parking.

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

B. The City should facilitate implementation of bus bays by the local public transit provider on congested city collector and arterial streets as a means of facilitating traffic flow during peak travel periods. The feasibility, location and design of bus bays for City Streets shall be developed in consultation between the City and the local public transit provider.

C. The City should facilitate implementation of bus bays by the local public transit provider on congested collector and arterial roads maintained by Douglas County and ODOT. The feasibility, location and design of bus bays for county and state maintained roads shall be developed in consultation between the City, County, ODOT and the local public transit provider.

**10. ACCESS MANAGEMENT GOAL, OBJECTIVES & POLICIES**

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

**Objective:**
1. The City will develop and adopt specific access management standards to be contained in the Department of Public Works Standard Details, based on the following policies:

**Policies:**
A. Properties with frontage along two streets shall take primary access from the street with the lower classification.

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

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

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

E. All access to the public right-of-way will be located, designed, and constructed to the approval of the Public Works Superintendent, or his designee. Likewise, variances to access management standards should be granted at the discretion of the Public Works Superintendent, or his designees.

F. The City will incorporate access management standards into all of its arterial street design projects. Access management measures may include, but are not limited to, construction of raised median, driveway consolidation, driveway relocation, and closure of local street access to the arterial.

G. Consistent with the City's goal of improving mobility, the City should consider developing access management projects for any congested arterial to help improve safety and traffic flow. Access management projects may include, but are not limited to, construction of raised medians, driveway consolidation, driveway relocation, and closure of local street access to the arterial.

H. The City should maintain carrying capacity and safety of pedestrian, bicycle, public transit and motor vehicle movement on arterial and collector streets through driveway and curb cut consolidation or reduction.

I. The City will discourage direct driveway access onto streets designated as collector and arterial whenever an economically feasible alternative exists or can be made available.

J. The City should require design that combines multiple driveway accesses to a single point in a residential and commercial development along collector and arterial streets.

**11. TRANSPORTATION DEMAND MANAGEMENT GOAL, OBJECTIVES & POLICIES**

**Goal:** To reduce the demands placed on the current and future transportation system by the single-occupant automobile.

**Objective 1:** The City of Winston will encourage the use of alternative travel modes by serving as an institutional model for other agencies and businesses in the community.

**Policies:**
A. The City should serve as a leading example for other businesses and agencies by maximizing the use of alternative transportation modes among City employees through incentive programs. The City should provide information on alternative transportation modes and provide incentives for employees who use alternatives to the single-occupant automobile.

B. The City should offer flexible schedules and compressed work-week options whenever feasible, as a way of reducing travel demand. The City should allow employees to telecommute, whenever feasible.
Objective 2: The City will work towards reducing the vehicle miles traveled (VMT) in the Winston Urban Area by assisting individuals in choosing alternative travel modes.

Policies:
A. The City will encourage major employers to allow work arrangements providing an alternative to the 8-to-5 work schedule. These arrangements shall include, but are not limited to, employee flex-time programs, staggered work hours, and compressed work weeks.

B. The City will encourage major employers to allow telecommuting where feasible.

C. The City and major employers should encourage ridesharing by making ridesharing more convenient.

D. The City should encourage major employers to work with the local public transit provider to adopt trip reduction goals designed to reduce site vehicular trip generation.

12. PARKING GOALS, OBJECTIVES & POLICIES

Goal: To ensure the Winston Urban Area has an appropriate supply of parking facilities that supports the goals and objectives of this plan.

Objective 1: The City will define an appropriate role for on-street parking facilities.

Policies:
A. The City should manage the supply, operations and demand for parking in the public right-of-way to encourage economic vitality, traffic safety and livability of neighborhoods. Parking in the right-of-way, in general, should serve land uses in the immediate area.

B. The provision of on-street parking is second in priority to the needs of the travel modes (i.e., vehicle, transit, bicycle & pedestrian) using the street right-of-way, except where abutting properties have no ability to provide their own off-street parking, or where on-street parking is needed to support an existing business district.

C. Where practical, existing on-street parking will be removed in preference to widening streets for additional travel lanes, except for streets within the central business district. Efforts will be made to mitigate the impact of parking removal in those areas where abutting properties have no ability to provide their own adequate supply of off-street parking, or where on-street parking is needed to support an existing business district.

D. The City should re-evaluate parking space size requirements due to the increased use of smaller cars.

E. In those areas where demand exists, an adequate supply of on-street carpool and vanpool parking spaces should be provided. The location of these spaces shall have preference over those intended for general purpose on-street parking.
Objective 2: The City of Winston will promote economic vitality and neighborhood livability by requiring an appropriate supply of off-street parking facilities.

Policies:
A. To avoid the negative impacts to surrounding residential neighborhoods or other nearby land uses, new development must provide, or have access to, an appropriate supply of off-street parking.

B. The City should consider adopting maximum parking requirements in the current zoning code to reduce the amount of off-street parking supply provided by new businesses.

C. The location of major activity centers should be accessible by transit, and shall meet their parking demand through a combination of shared, leased, and new off-street parking facilities.

D. The City should encourage sharing of existing and future parking facilities by various nearby businesses.

E. The City should continue to require effective landscaping throughout continuous paved parking areas to provide shading, screening and buffering aesthetics, and shall consider standards for percolation of water into the groundwater table.

Objective 3: The City will work towards meeting the State Transportation Planning Rule goals to reduce per capita parking supply by the year 2022 to discourage reliance on private cars and consequently encourage the use of public transit, bicycles and walking.

Policies:
A. The City of Winston should carefully monitor how new lands are designated in the Winston Comprehensive Plan to achieve a decrease in the parking supply per capita for commercial, and institutional lands over the next 20 years.

B. Impacts on overall parking supply and Transportation Planning Rule compliance will be taken into account when any significant expansion in the supply of commercial, industrial, or institutional designated land is considered.

C. The City should inventory the parking spaces available and shall set up a process for updating the parking space inventory.

13. FINANCE GOAL, OBJECTIVES & POLICIES

Goal: A transportation system for the Winston Urban Area that is adequately funded to meet its current and future capital, maintenance and operations needs.

Objective 1: Meet the current and future capital improvement needs of the transportation system for the Winston Urban Area, as outlined in this plan, through a variety of funding sources.
Policies:
A. Transportation System Development charges (SDCs), as defined by Oregon Revised Statutes and City ordinances, will be collected by the City to offset costs of new development on area-wide transportation facilities. The City will continue to collect SDCs as an important and equitable funding source to pay for transportation capacity improvements.

B. The City will require those responsible for new development to mitigate their development’s impacts to the transportation system, as authorized in the City of Winston Development Ordinances and Oregon Revised Statutes, concurrent with the development of the property.

C. The City should set-aside part of its allocation of State Highway Fuel Tax funds for creation of bicycle and pedestrian facilities.

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

E. The City should seek changes in the criteria for allocations of State funding sources to increase funding for local street system improvements proposed in the TSP.

F. The City should pursue new sources of federal, state and private funding to pay the costs of improvements recommended in the TSP.

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

Policies:
A. Assuming no changes in State funding mechanisms, the primary funding sources for street system maintenance activities will be the City’s allocation of the State Highway Fuel Tax.

B. The City should seek additional funding sources to meet the long-term financial requirements of sustaining a street maintenance program.

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

Objective 3: Secure adequate funding for the operation of the transportation system including advance planning, design engineering, signal operations, system management, illumination, and cleaning activities.
C. The City will continue to participate in cooperative agreements with other State and local jurisdictions for maintenance and operation activities based on equitable determinations of responsibility and benefit.

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

Policies:
A. Assuming no changes in State funding mechanisms, transportation system operations should be funded primarily from the City’s allocation of the State Highway Fuel Tax.

B. The City should seek changes in the State funding sources criteria for allocation of more funding to local street systems operation.

C. Other funding sources should be pursued to augment the financial requirements of providing adequate future system operations.

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

E. Transportation system development charges (SDCs), as defined by Oregon Revised Statutes and City ordinances, will be collected by the City to offset costs of new development on area-wide transportation facilities. The City will continue to collect SDCs as an important and equitable funding source to pay for transportation capacity improvements.

F. The City will require those responsible for new development to mitigate their development’s impacts to the transportation system, as authorized in the Winston Development Ordinances and Oregon Revised Statutes, concurrent with the development of the property.
Section 7

Transportation System Plan
SECTION 7
TRANSPORTATION SYSTEM PLAN

The Transportation System Plan includes plans for all modes of transportation. Components of the street system plan include:

- street improvements and other transportation system improvements
- other modal plans
- access management standards
- street classification and street development standards

Street Improvements

The following Table 7 summarizes the recommended Street and Highway improvements and Map 13 (pg 74) illustrates the TSP project time line.

<table>
<thead>
<tr>
<th>PROJECT NAME</th>
<th>PROJECT COST</th>
<th>TIME LINE (Years)</th>
<th>FUNDS See **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widen Hwy 42 to 3 lane, west from Glenhart Ave. to Lookingglass Cr Bridge/appropriate turn lanes.</td>
<td>$3,000,000</td>
<td>0-5</td>
<td>C&amp;D</td>
</tr>
<tr>
<td>Widen Hwy 42 to 3 lanes from Lookingglass Creek Bridge to Brockway Rd/appropriate turn lanes.</td>
<td>$1,500,000</td>
<td>0-5</td>
<td>C&amp;D</td>
</tr>
<tr>
<td>Highways 42 &amp; 99 intersection improvements/west bound right turn lane</td>
<td>$950,000</td>
<td>0-5</td>
<td>C&amp;D</td>
</tr>
<tr>
<td>Lookingglass Road from Abraham Ave. to Glenhart Ave. widen, resurface &amp; include bike-ped facilities</td>
<td>$750,000</td>
<td>0-5</td>
<td>E</td>
</tr>
<tr>
<td>Extend Tokay to Winston Section Road</td>
<td>$672,000</td>
<td>0-5</td>
<td>A&amp;B</td>
</tr>
<tr>
<td>Improve Winston Section/Pepsi Road to collector standards from Highway 42 to Thompson Ave., including closure of Winston Section Road and Highway 42 intersection.</td>
<td>3,192,000</td>
<td>0-5</td>
<td>D&amp;E</td>
</tr>
<tr>
<td>Install acceleration/deceleration lanes on Highway 42 at the Pepsi Road and Lookinglass Road intersections.</td>
<td>$150,000</td>
<td>0-5</td>
<td>A&amp;D</td>
</tr>
<tr>
<td>Extend Jorgen Street from Ronald Ave. to Winston Section Road</td>
<td>$780,000</td>
<td>5-10</td>
<td>A&amp;C</td>
</tr>
<tr>
<td>Upgrade remaining section of Brosi Orchard Road to local street standards</td>
<td>$200,000</td>
<td>5-10</td>
<td>C</td>
</tr>
<tr>
<td>Signalization of Highway 42 and Brockway to handle traffic anticipated from proposed development</td>
<td>$250,000</td>
<td>5-10</td>
<td>A</td>
</tr>
<tr>
<td>Extend Ronald Ave. to Brosi.</td>
<td>$772,800</td>
<td>10-20</td>
<td>A&amp;B</td>
</tr>
<tr>
<td>Extend Thiele Street to Ford Street</td>
<td>168,000</td>
<td>10-20</td>
<td>A&amp;C</td>
</tr>
<tr>
<td>Install a traffic signal at the Lookinglass Road/Highway 42 intersection as warrants provide</td>
<td>$250,000</td>
<td>10-20</td>
<td>D</td>
</tr>
<tr>
<td>Upgrade Johnson Road to Residential Collector</td>
<td>$1,008,000</td>
<td>10-20</td>
<td>A&amp;B</td>
</tr>
<tr>
<td>Extend Edwards Street to Connect Main Street with Grape Street</td>
<td>$414,400</td>
<td>10-20</td>
<td>C</td>
</tr>
</tbody>
</table>

TOTAL IMPROVEMENT COST $14,056,800

**Funding Sources: (A) Developer, (B) LID, (C) City Revenue, (D) ODOT, (E) County and (F) Other State/Federal Funds
Inclusion of an improvement in this TSP (Table 7 & Table 8) does not represent a commitment by the City, Douglas County or ODOT to fund, allow or construct the project.

Projects on the state highway system that are contained in this TSP are not considered “planned” projects until they are programmed into the Statewide Transportation Program (STIP). As such, projects proposed in this TSP that are located on a State highway cannot be considered for future development or land use actions until they are programmed into the STIP. Highway projects that are programmed to be constructed may have to be altered or cancelled at a later time to meet changing budgets or unanticipated conditions such as environmental constraints.

Projects proposed in this TSP that are located on a County Road cannot be considered for future development or land use actions until they are programmed into the Douglas County Public Improvement Program. County road projects that are programmed to be constructed may have to be altered or cancelled at a later time to meet changing budgets or unanticipated conditions such as environmental constraints.

Projects proposed in this TSP that are located on City Streets cannot be considered for future development or land use actions until they are programmed into the City of Winston Public Facilities Plan/Annual Capital Improvement Budget. City street projects that are programmed to be constructed may have to be altered or cancelled at a later time to meet changing budgets or unanticipated conditions such as environmental constraints.

**Estimation of Costs**

The planned projects are a summary of the identified future transportation needs that may be financially possible from current and future funding sources as shown on Table 7. A detailed discussion of funding options is in the following Section 8 of this TSP. The project cost estimates in Table 7 include a general cost for engineering, right-of-way, and construction. It is important to note that these cost estimates are planning level cost estimates and, as such, do not have the accuracy that a more refined engineering construction estimate would yield. These planning level estimates are meant to give a relative feel for the cost of each project, and how it may compare, relative to other projects.

The project list, presented in Table 7, totals over $14 million. There are some projects identified as future needs, however, that were not included, which would make the actual total somewhat higher. A funding source for these projects did not seem likely at this time, so, they were not included as a project for this plan.
City of Winston
Transportation Plan/Roadway Improvements Timeline

- City Limits
- U.G.B.

Tsm Improvements Timeline
- 0-5 Years
- 5-10 Years
- 10-20 Years

Road Improvements Timeline
- 0-5 Years
- 5-10 Years
- 10-20 Years

3000 0 3000 Feet

Improvements Key
1. Widen Highway 42, Glenhart to UGB
2. Improve Lookingglass Rd., Abraham to Glenhart
3. Extend Roland Avenue to Brosi Orchard Road
4. Extend Tokay, Shigley to Winston Section Road
5. Extend Jorgen Street, Ronald to Winston Section Road
6. Improve Winston Section Road to Collector Status
7. Extend Thiele Street, Ford Street to Tower Street
8. Install Acceleration/Deceleration Lanes on Hwy 42 at Critical Intersections
9. Install Traffic Light at Lookingglass Road and Hwy 42
10. Update Brosi Orchard Road
11. Update Johnson Road
12. Connect Main Street to Grape Street

Map 13
Bicycle and Pedestrian Improvements

The bicycle and pedestrian improvements included in this portion of the plan primarily add bicycle and pedestrian facilities around alternative mode trip generators. Some of the identified projects create bicycle and pedestrian linkages specifically, minimizing required out-of-direction travel for people choosing to use alternative modes. Table 8 has a list of the projects cost estimates, proposed time line for construction and the anticipated sources of funding. The following Map 14 illustrates the proposed time line for construction of the planned Bike/Pedestrian improvements. In addition, Map 14 shows several bike/pedestrian improvements that are included in the street/highway projects on Table 7 and Map13.

Table 8
Bike/Pedestrian Improvements

<table>
<thead>
<tr>
<th>PROJECT TYPE</th>
<th>PROJECT NAME</th>
<th>PROJECT COST</th>
<th>TIME LINE (Years)</th>
<th>FUNDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIKE/PED</td>
<td>Add an off-street bicycle/pedestrian path between Cary St. and Civil Bend Ave.</td>
<td>$300,000</td>
<td>0-5</td>
<td>C</td>
</tr>
<tr>
<td>PEDESTRIAN</td>
<td>Pedestrian path on both sides of Grape Street.</td>
<td>$75,000</td>
<td>0-5</td>
<td>C &amp; F</td>
</tr>
<tr>
<td>PEDESTRIAN</td>
<td>Construction of pedestrian way on both sides of Cary Street</td>
<td>$22,400</td>
<td>5-10</td>
<td>C</td>
</tr>
<tr>
<td>BIKE/PED</td>
<td>Add a bicycle/pedestrian path from Gregory Drive to Darrell Avenue.</td>
<td>$56,000</td>
<td>5-10</td>
<td>C</td>
</tr>
<tr>
<td>PEDESTRIAN</td>
<td>Provide pedestrian path, Highway 42, Sherry Street, and Rose Avenue</td>
<td>$22,000</td>
<td>5-10</td>
<td>C</td>
</tr>
<tr>
<td>BIKE</td>
<td>Striped on-street bicycle lanes should be developed on all collector and arterial roads.</td>
<td>$125,000</td>
<td>5-10</td>
<td>C, D &amp; E</td>
</tr>
<tr>
<td>PEDESTRIAN</td>
<td>Construct pedestrian path on both sides of Brosi Orchard Road.</td>
<td>$75,000</td>
<td>5-10</td>
<td>C &amp; F</td>
</tr>
<tr>
<td>BIKE/PED</td>
<td>Construction of new Darrell Ave bicycle/pedestrian path</td>
<td>$25,000</td>
<td>5-10</td>
<td>B &amp; C</td>
</tr>
<tr>
<td>PEDESTRIAN</td>
<td>Improve pedestrian path on both sides of Newton Drive</td>
<td>$40,000</td>
<td>10-20</td>
<td>C</td>
</tr>
<tr>
<td>PEDESTRIAN</td>
<td>Improve pedestrian way along Safari Road south</td>
<td>$28,000</td>
<td>10-20</td>
<td>C</td>
</tr>
</tbody>
</table>

**TOTAL IMPROVEMENT COST** $768,400

**Funding Sources: (A) Developer, (B) LID, (C) City Revenue, (D) ODOT, (E) Douglas County and (E) Other State/Federal Funds**

The project list, presented above in Table 8, totals $768,400. There are some projects identified as future needs that were not included because a funding source for these projects did not seem likely at this time. The project cost estimates include a general cost for engineering, right-of-way, and construction.
City of Winston
Bike & Pedestrian Improvements Timeline

City Limits
U.G.B.

Bike/Ped Improvements Timeline
0-5 Years
5-10 Years
10-20 Years

Revised October, 2002
Map 14
Public Transportation Improvements

Winston has had a long rich history of providing publicly available transportation services to its residents who choose to use them. The Winston Dial-a-Ride system has been in place for many years. Recently the Umpqua Regional Council of Governments has established the Umpqua Transit System which serves the City of Winston with one of three (3) routes. The Umpqua Transit system connects the City of Winston with Roseburg and Sutherlin routes to provide riders with regional access to employment and services outside the City of Winston. The recommendations for public transit are to maintain the City of Winston Dial-a-Ride program.

Access Management

During the development of the Greater Roseburg Area Transportation Study (GRATS) a supplemental report was developed that detailed access management strategies for the GRATS study area. These strategies represent Oregon Department of Transportation guidelines where access management is concerned, and they can apply to Highway 42 through the study area.

The GRATS classified Highway 42 as an access management category 4, which applies to statewide level of importance highways. Under currently adopted access management guidelines, accesses should have limited control, with public roads no more frequent than every 1/4 mile, and individual driveway spacing no more frequent than every 500 feet. These guidelines have been compromised through the years to the point where there is a driveway approximately every 210 feet through Winston on Highway 42.

While the ODOT guidelines for access management on this Highway currently stipulate the desired 500 feet between access points, no appreciable degradation in level of operations is shown over the life of this plan, despite the average driveway spacing of 210 feet. Should traffic increase beyond our projections, however, we could anticipate diminished levels of operation as a direct result of multiple access points.

Another consideration is that current accesses are clustered rather than evenly spaced at 210 feet. Thus, there are areas greater than 210 feet with no direct access. The Access Management policies and standards need to be updated with the latest ODOT guidelines for incorporation into the City of Winston Public Facilities Plan and Subdivision Regulations as a follow-up to this TSP.

Functional Classification of Roads

Functional classification is the process by which streets and highways are grouped into classes or systems according to the character of service they are intended to provide. Basic to this process is recognition that individual roads and streets do not serve travel independently in any major way; rather, most travel involves movement through a network of roads. It becomes necessary to
determine how this travel can be channeled within the network in a logical and efficient manner. Functional classification defines the nature of this channeling process by defining the part that any particular road or street should play in serving the flow of trips through the highway network.

The City of Winston has developed a future street functional classification system, shown on the following Map 15, that is based upon the Federal and ODOT standards for classification of roads. The City also has further delineated some street classifications to better describe their intended function and plan for needed improvements to existing facilities. While Winston conforms to the standards for arterial, collector, and local street classifications, they have also found a need to develop a residential collector classification and a classification for local access ways.

**Arterial**—The system of streets and highways under the arterial system should serve the major centers of activity within the city, the highest traffic volume corridors, and should carry a high proportion of the total urban area travel on a minimum of mileage. This system should carry the major amount of traffic entering and leaving the urban area, as well as the majority of traffic desiring to move through the city without stopping.

**Major Collector**—The collector street system provides both land access service and traffic circulation between residential neighborhoods, commercial areas, and industrial areas.

**Residential Collector**—As the City of Winston has developed, certain streets have been developed as residential streets in an area large enough to generate and carry a large enough volume of traffic to be considered collectors. In these areas, the City recognizes the dual function of the facility and balancing that must take place to maintain a livable street, while allowing higher levels of traffic.

**Residential Street**—The local street system comprises all facilities not on one of the higher systems or local access ways. It serves primarily to provide direct access to abutting land and access to the City’s collector and arterial street systems. Service to through traffic movement is deliberately discouraged.

**Local Access Way**—This street classification is intended to recognize the lowest order of roads in the Winston urban area. These roads only serve private residences, and are typically either narrower than required by City residential street standards, serve flag lots, or some combination of all these factors. These streets are considered to be in a transitional state.
Street Width Standards

The Transportation Planning Rule requires that local communities re-examine their standards for local street widths. This is done for several reasons. Many communities have older street development standards, using wider widths to allow for future development of the community. This model no longer reflects the prevailing thought in planning; there is an overall feeling that land is scarce and should be preserved, and that neighborhoods should be protected from encroachment of the arterial network. Since many local roads are actually constructed by private land developers, the width standards have come under scrutiny because they take greater land resources that would otherwise be usable by the developer.

Finally, maintenance costs for wider streets are greater than for narrow streets. The ability to hold on-going maintenance costs in check can be essential to the municipality's ability to provide needed services.

Street standards are necessary to provide a community with roadways that are relatively safe, aesthetic, and easy to administer when new roadways are planned or constructed. Within the generally accepted range of standards, communities have some flexibility in adopting specific design requirements to match the planned roadways with adjacent land uses.

In light of the Transportation Planning Rule 660-12-045 (7), Winston must now assess their present set of street standards. The local street standards must be scrutinized for needed widths. Because of changes that have occurred since development of the original standards, the existing street standards probably do not provide sufficient guidance for planned development in Winston. As a result, a new set of recommended street standards are proposed as part of this TSP. The proposed standards provide for more categories of streets and are designed to be used in combination with the new, proposed functional classification system. The proposed standards are based on input from city staff, and the Technical Advisory Committee (TAC), Planning Commission and Traffic Safety Committee. The new, proposed street standards are summarized and shown graphically in the following Illustrations.

Current City Standards

Dimensional standards for streets as required in the City of Winston Public Facilities Standards and Subdivision Ordinance are shown in Table 9.

Table 9  
**Winston Roadway Dimensional Standards**

<table>
<thead>
<tr>
<th>Road Type</th>
<th>Right of Way Width</th>
<th>Pavement Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterials</td>
<td>80 feet</td>
<td>64 feet</td>
</tr>
<tr>
<td>Collectors</td>
<td>60 feet</td>
<td>40 feet</td>
</tr>
<tr>
<td>Local Streets</td>
<td>60 feet</td>
<td>30-36 feet</td>
</tr>
<tr>
<td>Alley Way</td>
<td>20 feet</td>
<td>18 feet</td>
</tr>
<tr>
<td>Cul-de-sac Radius</td>
<td>50 feet</td>
<td>40 feet</td>
</tr>
</tbody>
</table>
Proposed Standards

Upon review of the current street development standards, it was found that some of the requirements for the roads may be reduced, while others may be increased to improve the intended function. The following standards are recommended for the City of Winston and Urban Growth Area street network for future street improvements and subdivision/platting requirements. It should be noted that these are minimal standards for Right-of-Way and they should be increased when additional easements for water, sewer and storm drainage are identified during project planning, subdivision and platting proposal reviews. The following 4 pages contain illustrations of the proposed street standards for Arterial, Major Collector, Residential Collector, Residential and a Local Access Way. These proposed standards need to be incorporated into the City Public Facilities Plan and Development Regulations.
Arterial

5-Lane
- No Parking
- With Bike Lane
- With Sidewalk
- 90' Row Width

4-Lane
- No Parking
- With Bike Lane
- With Sidewalk
- 76' Row Width

3-Lane
- No Parking
- With Bike Lane
- With Sidewalk
- 66' Row Width
Major Collector

With Parking
With Bike Lane
With Sidewalk
68' Row Width

With Parking
No Bike Lane
With Sidewalk
56' Row Width

No Parking
No Bike Lane
With Sidewalk
44' Row Width

No Parking
With Bike Lane
With Sidewalk
52' Row Width
## Residential Collector

<table>
<thead>
<tr>
<th>Row Width</th>
<th>With Parking</th>
<th>With Bike Lane</th>
<th>With Sidewalk</th>
</tr>
</thead>
<tbody>
<tr>
<td>64'</td>
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Residential

No Parking
No Bike Lane
With Sidewalk

With Parking
No Bike Lane
With Sidewalk

Local Access Way

No Parking
No Bike Lane
One Sidewalk
Bicycle Element

The bicycle element of the Winston Urban Area study is based on several sources of information. The Winston Local Street Network Plan provided an inventory of what had been proposed in the past for the area. Information gathered about the local transportation system and its current utilization helped in the analysis of the status of the proposed improvements, as well as information about the current environment for travel by nonmotorized travel modes, and the ODOT Bicycle and Pedestrian Plan provided guidelines for proposed improvements.

Bicycle System Facilities

A complete bicycle system consists of several different types of facilities or improvements to safely and efficiently accommodate travel by bicycle. The challenge for local governments is to provide facilities within the area’s financial constraints that adequately meet the needs of experienced and inexperienced cyclists. Inexperienced and less stable riders usually feel more secure when there is some physical separation from automobile traffic. More experienced riders may need only a little extra pavement along the side of the road that is properly maintained. The impact of bicyclists on traffic is also an important consideration, especially in congested locations where they must compete for limited space. The following Map 13 illustrates the Bicycle and Pedestrian Improvement needs for the City of Winston and UGB. Map 14 illustrates the recommended timeline for Bicycle and Pedestrian Improvements for the City of Winston and UGB. Appendix H includes a summary of the major types of facilities and a brief description of their key characteristics.

Pedestrian Element

Certain areas within Winston need sidewalks, or other pedestrian facilities, because they tend to generate many pedestrian trips as illustrated on the previous Map 7. These areas include:

- McGovern Elementary School
- Winston Community Center
- Winston Public Library
- Commercial areas West of Glenhart on Highway 42
- Riverbend Park

The following streets (illustrated on Map 13), should to be considered for retrofitting of sidewalk facilities:

- Darrell Street
- Cary Street
- Grape Street
- Rose Avenue
- Highway 42 from Glenhart west
SECTION 8

Funding Options & Financial Plan
SECTION 8
FUNDING OPTIONS & FINANCIAL PLAN

The Transportation Planning Rule requires that all cities over 2500 population have a financing element that implements the plan and explains how projects identified will be funded. The finance element will include a list of planned transportation facilities, a general estimate of the timing for each improvement, a rough cost estimate, and a discussion of the City of Winston's existing funding mechanisms and the ability of new mechanisms to fund the projects identified in the TSP. To the greatest extent possible, projects should be prioritized and constrained to revenue likely to be available or that may be made available through other funding mechanisms such as LIDs, SDCs, etc. The importance of this is emphasized in TPR Section 660-12-060 Plan and Land Use Regulation Amendments, which states:

"Amendments to functional plans, acknowledged comprehensive plans, and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g. level of service, volume to capacity ratio, etc.) of the facility. This shall be accomplished by either:

(a) Limiting allowed land uses to be consistent with the planned function, capacity, and performance standards of the transportation facility;

(b) Amending the TSP to provide transportation facilities adequate to support the proposed land uses consistent with the requirements of this division;

(c) Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes; or

(d) Amending the TSP to modify the planned function, capacity and performance standards, as needed, to accept greater motor vehicle congestion to promote mixed use, pedestrian friendly development where multi-modal travel choices are provided."

The transportation-planning rule was adopted to ensure that adequate transportation facilities are or will be made available to support proposed land use changes. OAR 660-12-060(1) requires that "amendments to functional plans, acknowledged comprehensive plans, and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g. level of service, volume to capacity ratio, etc.) of the facility."

In order to determine whether a proposed Comprehensive Plan amendment or zone change will "significantly affect" a facility, the TPR establishes a set of specific criteria against which the proposed amendment is to be evaluated. The
TPR states that "a plan or land use regulation amendment significantly affects a transportation facility if it:

(a) Changes the functional classification of an existing or planned transportation facility;

(b) Changes standards implementing a functional classification system;

(c) Allows types or levels of land uses which would result in levels of travel or access which are inconsistent with the functional classification of a transportation facility; or

(d) Would reduce the performance standards of the facility below the minimum acceptable level identified in the TSP.

Interpretation of this passage has been that, if a project is listed in the local or regional TSP with identified funding for the project, a developer may use that identified project as part of their mitigation for their proposed development. The City of Winston has recently adopted a System Development Charge (SDC) that factors in the costs for impact mitigation on planned projects. Additional mitigation may be needed on a development by development basis depending on the anticipated impacts to the localized transportation network. The City of Winston will attempt, where possible, to coordinate projects with proposed improvements which affect other transportation providers.

Estimation of Costs

By looking back on previous plans and through the public and stakeholder involvement for this TSP, a project list was assembled. Cost estimates include the total cost of the project (e.g. engineering, right-of-way, and constructions). It is important to note that these cost estimates are planning level cost estimates and, as such, do not have the pinpoint accuracy that a more refined estimate would yield. These planning level estimates are meant to give a relative feel for the cost of each project, and how it may compare, relative to other projects.

The project list, presented in Table 16, totals approximately $13.9 million. There are some projects, however, that were not included, which would make the actual total somewhat higher. These projects have costs associated with them that can vary so widely as to make any estimate meaningless. An example is public transportation. The City could decide to keep current levels of public investment and have only the dial-a ride system they now have, or they might scrap this totally and invest nothing, saving money. They may decide to invest in a fixed route system to give greater service, and the amount of service would be directly related to the amount of public investment. Similarly, in developing bikeways, the cost is a function of the extent of the bicycle network developed. The cost is so small that it typically can be piece-mealed into the city streets budget. Because of the varying cost, these types of projects have been left out of the cost estimate.
Revenue Sources

City Streets Budget—In 2001 the budget for the City Street Department was $1,825,422. This budget included a one-time $1,500,000 loan from Douglas County to finance a Local Improvement District for road upgrades. The actual working capital was $325,422. This budget was almost entirely taken by operating and equipment expenses and one-time allocations earmarked for specific projects. These include $22,000 for bike path improvements on Lookingglass Road, $25,000 in the Street Improvement Reserve, and almost $27,000 in transfers for on-going work and carry-over from previous fiscal years. When all is accounted for, there is about $35,000 of discretionary funding that is allocated to the Street Department on an annual basis. This $35,000, while not a large amount in any given year, can be used as a revenue stream against which the City can bond to accomplish some larger projects up front. Over the life of this plan, this revenue source will generate $700,000.

System Development Charges—New to the City of Winston, System Development Charges (SDCs) are levied against new development for impacts they cause to the transportation system. SDCs for transportation in Winston hold promise for a significant source of local revenue annually. After the first half year of the SDCs being in place, the revenue is approximately $1,600. This is low, but as the program becomes more widely accepted by local developers, and as development continues in Winston, this could be a significant money generator. It is not unreasonable to assume that this source could generate $20,000 annually, which would yield $400,000 over the life of this plan.

At this time, these funds are dedicated to two intersection improvements on Highway 42. The intersections at Brockway Road, and Main Street are the focus for these funds. These intersections are seen as critical once the proposed Brockway Oaks subdivision and business establishments are developed.

Local Street Fee—In Oregon, some cities assess a fee for maintenance of the street system. This needs to be based upon use and is levied against all taxable properties with improvements. The street fee is typically placed on the City utility bills, and usually amounts to between one to two dollars a month for residential units. For multi-family and commercial areas, the charge can be levied per 1000 square feet of floor area, based on parking space requirements, or based on trip generation. This currently is not in place in Winston, but could produce revenue around $2,000 per month. Over the life of this plan this would generate $480,000.

Local Improvement Districts — Local Improvement Districts (LIDs) have been around for a long time in Oregon and elsewhere. The general premise behind LIDs is that those who benefit from an improvement are the ones to pay for it. LIDs in Oregon require that a district be identified. Presently Winston has one LID in place that is funded for $1.5 million for street improvements east of Main Street. It is anticipated that, over the life of this plan, an additional $3 million worth of LIDs can be voted in and funded.

Tax Increment Finance—Tax Increment Finance (TIF) is yet another district
level funding concept. Establishment of a TIF requires that an economic development district be created by the City Council, which identifies an area of emphasis for economic development efforts. This district then attracts development and improvements based in part on the promise of infrastructure improvements from the increment.

The increment is based on the difference in assessed value of the property before and after development occurs. The base value continues to go to the City, County, school district, etc., but the increment, or that amount of tax revenue above the base value without new development in the district, is reinvested into infrastructure improvements. This revenue stream is usually converted into a twenty-year revenue bond that is paid for by the annual increment assessment.

Depending upon the type of development attracted, the value of the increment could vary. However, over the 20 year life of the plan, if significant tourism-based development occurs, it is conceivable that the value of the increment could approach or even surpass $1 million.

In total, the City of Winston could generate approximately $5.6 million for locally sponsored projects over the life of this plan. ODOT has committed $5 million to improvements on Highway 42 for a possible total of $10.6 million for TSP improvements during the next 20 years. However, this is well short of the identified $14,056,800 million in street project needs and $768,000 in bike/pedestrian project proposals contained in this TSP. That brings the shortfall to about $4.23 million which will require a serious prioritization of needs for funding and a concerted effort to seek additional funds to carry out the projects in this TSP.

The City is urged to pursue new sources of State and Federal Transportation Improvement Funds. The City should actively seek a larger allocation of State funds for transportation system improvements.
Section 9
Public Participation
PROJECT IDEA SUMMARY

1) The promotion of the Lookingglass Road, Safari Road, Highway 99/42 area as a new commercial/residential node would provide Winston with a necessary community link with Wildlife Safari. Many travelers to Wildlife Safari require goods and services available at such a tourist access link. If land use in the community includes the area surrounding Lookingglass Road, and is thematic around Wildlife Safari, it will strengthen the Safari’s linkage to the city.

2) The majority of travelers to Wildlife Safari will be using Interstate 5, thus the appearance of the approach from I-5 to the Safari area is important. Efforts should be made to beautify the route with landscaping along the rights-of-way, and attention to aesthetics on existing and proposed developments along the roadway.

3) It will become progressively important to develop an access management plan for the existing and future collector/arterial street system as new development occurs. A well managed access plan can minimize the number of conflicts between all users of the street system which provides a safer and more efficient traffic system. Such a plan would also minimize costs for transportation improvements needed to provide additional capacity and/or access improvements along unmanaged roadways.

4) There is a need to link the three major residential communities in Winston (the area east of Main Street and Highway 42, the area west of Main Street and south of Highway 42, and the area northwest of Highway 42) with continuous roadway facilities. This can be accomplished through the development of a series of roadway extensions and additions through and around the city which would allow residents to access all areas of the city without having to rely on Highway 42.

5) Sidewalks should be provided on both sides of all future arterial, collector, and local streets within the City of Winston. The only collectors or arterials which have sidewalks at present are County Road 387, Highway 42, Glenhart Avenue, and Thompson Avenue. Winston is a very pedestrian oriented community with very few sidewalks and pedestrian facilities. Treatments need to be installed that create a more inviting environment for pedestrians.

6) There have been several rear-end accidents at the location where one lane of westbound traffic ends abruptly at Glenhart Avenue. Drivers realize that the lane ends and try to quickly merge into the through lane of traffic. Widening the Highway all the way to the Urban Growth Boundary would reduce the described problem.

7) Left turns from Pepsi Road have been cited as a problem. Installing a center acceleration/deceleration lane on Highway 42 would allow traffic to safely move into and out of the traffic stream.

8) An analysis of the expected volumes at the Lookingglass Road/Highway 42 intersection indicates that the increase in volumes along Highway 42 will make it very difficult for
Lookingglass Road drivers to merge onto the highway. The new developments expected along the western boundary of Winston are also expected to significantly increase the demand on Lookingglass Road. Analysis shows that the Lookingglass Road/Highway 42 intersection will meet conditions requiring a traffic signal in the next 1 - 2 years.

9) Improving Winston Section/Pepsi Roads to collector standards between Highway 42 and Thompson Avenue would allow travelers from Roseburg, Green, and other northern points destined for neighborhoods in the eastern portion of Winston to access Highway 42 at the northeastern Urban Growth Boundary rather than having to access the neighborhoods at Baker Street or Thompson Avenue. This would also provide a continuous connection between the northeast and southeast neighborhoods of Winston.

10) Upgrading Brosi Orchard Road to city standards would provide a link to the northeast portion of Winston. This improvement would shift school traffic traveling to and from Winston Middle School from Highway 42 and County Road 387 to the new northeast link.

11) The extension of Newton Drive to Oak Street would provide better circulation within the neighborhoods to the south of Highway 42 and west of County Road 387, and between the three major residential areas in Winston. Ideally, as part of this extension, the intersection of Oak Street / County Road 387 should be realigned to the intersection of Thompson Avenue / County Road 387. In addition, the intersection of Newton Drive with Highway 42 should be aligned opposite the Cary Street intersection.

12) The extension of Thiele Street to Ford Street would provide better circulation within the neighborhoods to the south of Highway 42 and the west of County Road 387.

13) The extension of Civil Bend Avenue to Newton Drive would provide better circulation within the neighborhoods to the south of Highway 42 and the west of County Road 387.

14) The extension of Tumlin Avenue to Midway Street would provide better circulation within the neighborhoods to the northwest of Highway 42.

15) The extension of Edwards Street to Grape Street would provide better circulation within the neighborhoods to the east of Main Street.

16) The extension of Tokay Street to Winston Section Road would provide better circulation within the neighborhoods to the east of Main Street.

17) The extension of Ronald Avenue to the intersection of Darlene Street / Brosi Orchard Road and the extension of Darlene Street to the intersection of Highway 42 / Lookingglass Road would provide an additional connection into and out of the neighborhoods to the east of Highway 42. It will also serve as a connection between the middle school and the neighborhoods in northeast Winston.

18) The extension of Johnson Street to Winston Section Road would improve circulation within southeast Winston neighborhoods and provide a connection to Winston Section Road and access to Highway 42.
19) The extension of Abraham Street to Brockway Road and Highway 42 will provide additional access to the new developments along the perimeter of the Winston Urban Growth Boundary. Currently, Abraham Street is being constructed as part of the Trinity Estates subdivision.

20) A north-south facility should be constructed between Highway 42 and Lookingglass Road with an intersection at Abraham Street to provide additional access to the developing areas in west Winston.

21) The extension of Jorgens Street from Ronald Avenue to Winston Section Road would improve circulation within southeast Winston neighborhoods and provide a connection to Winston Section Road and access to Highway 42.

22) Constructing a connection between Hart Street and Oak Street would facilitate better neighborhood connections without establishing a reliance on County Road 387.

23) Striped on-street Bicycle lanes should be provided on all arterial streets, and on collector streets. Lanes should also be provided anywhere that it may be necessary to ensure safe bicycle travel. In some instances, the provision of separately striped bicycle lanes on arterial and collector streets may require street widening and perhaps the acquisition of additional right-of-way.

24) Both Gregory Drive and Darrell Avenue are very long blocks that discourage residents from walking to destinations within the city. Pedestrians avoid walking because they must travel so far out of direction to get to the downtown area, the community center, and other locations. Providing a mid-block pedestrian path would make the Winston town center more accessible to pedestrians on the east side of the city.

25) On-street bike lanes should be provided on Highway 42 in its entirety through Winston, and also on County Road 387 and Lookingglass Road. As new developments are constructed along the Urban Growth Boundary of Winston, care should be taken to ensure proper pedestrian and bicycle connections to the downtown, the schools, the parks, and the South Umpqua River.

26) Bicycle facilities should be provided on Cary Street and Thompson Avenue to enhance access to the elementary school and middle school.

27) An off-street bicycle path should be provided between Cary Street and Civil Bend Avenue in the vicinity of Tumlin Avenue. This would allow bicyclists to access the elementary school from the neighborhoods on the west side of Highway 42 without having to access Highway 42 or Lookingglass Road. Currently, there are no pedestrian connections between Cary Street and Civil Bend Avenue and children walking between McGovern Elementary School and their homes must walk to either Highway 42 or Lookingglass Road.

28) The bicycle and pedestrian path connecting the city with Douglas High School is a valuable start of an area-wide network. Other planned parts of the network include:

- Along Thompson Avenue from County Road 387 east to the area of the regional sewer line, then northward to Highway 42 north of town.
- From Thompson Avenue south directly to the river.
• From Highway 42 near the mouth of Lookingglass Creek through the proposed park site, then eastward along the river to County Road 387.
• From Highway 42 west along Lookingglass Road to Brockway Road, then south to Highway 42, then east on Highway 42 to the High School.
• From the high school east along Highway 42 to Rose Street, then north on Rose Street to Jorgens Street, then east to Highway 42, then north to the Lookingglass Road intersection.
• From Suksdorf Street east to Ronald Street, then north on Ronald to Brosi Orchard Road, then east to the sewer line easement.
• Along a proposed collector street from Brockway Road to Highway 42 on the north side of Lookingglass Creek.
• Along Brockway Road from Lookingglass Road, south to the Urban Growth Boundary.

29) Grape Street, since it functions as a collector street, should have sidewalks along its full length. Grape Street carries through traffic, making it necessary to provide a place for people to walk safely.

30) In the near term, Cary Street should be retrofitted with sidewalks on both sides of the road. This is needed to allow for safe pedestrian access to the elementary school.

31) Pedestrian access would be provided to the public library by constructing sidewalks on both sides of Lookingglass Road, Highway 42, Sherry Street, and Rose Avenue.

32) Sidewalks should be constructed on Safari Road to encourage pedestrian access to Wildlife Safari.

33) Constructing sidewalks on both sides of Brosi Orchard Road would increase pedestrian connections in a developing part of the community.

34) Newton Drive is in an area of town that is very populated with children who walk to McGovern Elementary School. The addition of sidewalks would enhance the safety of school children walking in this direction.

35) The City of Winston is participating in a three year demonstration project in cooperation with Douglas County, to enhance transportation services for the elderly and disabled. Shuttles are provided once a day between Sutherlin and Winston, traveling through Roseburg, and once a day between Canby and the Umpqua Community College, traveling through Winston and Roseburg. The shuttle service is integrated with the Winston Dial-A-Ride system which transports shuttle riders within a three mile radius of Winston to a central shuttle stop.
APPENDIX

APPENDIX A  Winston Local Street Network Plan, November 1995
APPENDIX B  Greater Roseburg Area Transportation Study, May 1996
APPENDIX C  City of Winston Transportation System Plan, Feb 1999
APPENDIX D  City of Winston Comp Plan Update, June 2001 Draft
APPENDIX E  City of Winston Public Facilities Plan, June 2001 Draft
APPENDIX F  Corridor Plans For OR 38 and OR 42, June 2001
APPENDIX G  Oregon Highway Plan, 1999
APPENDIX H  Oregon Bicycle & Pedestrian Plan, June 1995
APPENDIX I  Ass'mt & Enhanc Plan/Pub & Spec Transit, Nov 2001
APPENDIX J  Transportation Planning Rule 660-12-045
APPENDIX K  Street Condition Inventory/Summaries
APPENDIX L  School Access Hazards & Barriers
APPENDIX M  Douglas County TSP
Winston Local Street Network Plan

Prepared for:

City of Winston
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Winston, OR 97496

Prepared by:

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215 S.E. Main, Room 114
Roseburg, OR 97470

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November 1995
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EXECUTIVE SUMMARY

The Winston Local Street Network Plan was created in response to a growing concern among city residents about current and future traffic problems. Much of the work on the Plan occurred concurrently with two other important transportation studies: the Greater Roseburg Area Transportation Study (GRATS), and the Highway 38 and Highway 42 transportation corridor studies. Findings from these studies influenced and informed portions of the Winston Local Street Network Plan. As with the GRATS study, the consulting firm of Kittelson and Associates provided transportation analysis and modeling services.

Findings
The City of Winston has no continuous East-West collector streets to accommodate traffic movement between the northwest, southwest, and eastern neighborhoods of the city. This situation forces residents to rely on Highway 42, Highway 99, and County Road 387 for virtually all intra-city travel. Currently, these roads are the only arterials within Winston's Urban Growth Boundary, and they must serve traffic passing through Winston enroute to the coast and other destinations. By 2015, the local and through traffic together will create unacceptable levels of service (LOS) at two key intersections, and generally a much higher concentration of traffic along the city's only arterials. The potential for conflict between automobiles and pedestrians/cyclists will rise as well, as new residents put additional pressure on existing pedestrian and bicycle facilities.

Recommendations
The consultants recommend the creation of a system of "ring roads" within and around the city to relieve some of the pressure on Highway 42, Highway 99, and County Road 387. Improved internal circulation will be achieved by creating new connections between existing city streets through extensions of Newton Drive, Thiele Street, Civil Bend Avenue, Tumlin Avenue, Tokay Street, Edwards Street, Suksdorf Street, Ronald Avenue, Darlene Street, Johnson Street, and Abraham. Another key recommendation involves upgrading existing streets to enhance their capacity. Streets targeted for such improvements include: Winston Section Road, Oak Street, and Suksdorf Street. To improve pedestrian and bicycle circulation, numerous streets are targeted for sidewalk and bike lane additions. These and other recommendations are summarized in Section 3, Winston Public Facilities Plan Amendments.
The first phase of the Winston Local Street Network Plan included an analysis of the existing transportation system conditions as well as the community’s identification of transportation deficiencies. The results of this analysis revealed that the City of Winston currently experiences the following transportation system deficiencies:

- Currently, there are no continuous East-West Collectors linking the northwest, southwest, and eastern sections of the city. This requires the city residents to rely on Highway 42/99 for nearly all intra-city travel.
- Several roadways throughout the city need to be improved to include bicycle and pedestrian amenities as well as improved street lighting and adequate roadway width.
- Better pedestrian and bicycle access needs to be provided to the elementary and middle schools.

The second phase of the Winston Local Street Network Plan, summarized in this technical memorandum, identifies the future transportation system deficiencies and presents alternatives that can be implemented to mitigate those deficiencies. A preliminary analysis was conducted under a "Do-Nothing" (No-Build) Alternative under which the existing transportation system was assumed to be in place, unaltered. Based on the results of this analysis, several improvements were identified that will be needed to sustain acceptable traffic operations and circulation in the future. The identification of future transportation system improvements included the evaluation of the following:

- Future Land Use and Demographics
- Future Traffic Conditions and Transportation System Deficiencies
- Long-range Transportation System Improvements
- Pedestrian and Bicycle Infrastructure Needs
- Functional Classification and Street Design
- Roadway Design Standards
- Project Evaluation Criteria
- Evaluation of Alternatives
FUTURE LAND USE/DEMOGRAPHICS

The year 2015 was chosen as the twenty-year planning horizon for the study in order to identify future demographic and traffic conditions. Beyond the twenty-year planning horizon, population, employment and future travel demand forecasts become more speculative and less reliable for identifying future infrastructure needs. This section summarizes the development of future population and employment projections that were used to develop travel demand forecasts for the Winston urban area.

Population

The current Winston Comprehensive Land Use Plan, adopted by the City of Winston in 1983 and approved by the Land Conservation and Development Commission (LCDC) through periodic review in 1990, served as the basis from which future transportation system needs were assessed. The current Comprehensive Plan projects that by the year 2010 Winston's current population of approximately 3,985 will increase to approximately 6,000. However, the Umpqua Regional Council of Governments (URCOG) is currently undergoing a study of Winston population trends over the next twenty years (1995 - 2015). According to URCOG, Winston's current population will experience an average annual increase of 2 percent per year in addition to the development of seven major residential subdivisions. This is expected to result in a total population of approximately 8,600 by year 2015 within the City of Winston. The proposed residential developments include:

1. Trinity Estates: A 144-unit subdivision located between Lookingglass Road and Highway 42 just to the west of Elizabeth Avenue which will result in a population increase of approximately 350. Trinity Estates is currently under construction.

2. Sun East: An 80-unit subdivision located to the south of the Johnson Street extension and to the east of Ronald Avenue which will result in a population increase of approximately 190. Currently, the developers of Sun East have submitted a tentative map to the city.

3. Rockwood: A 50-unit subdivision located near the Sun East subdivision that will result in a population increase of approximately 120. Currently, the City of Winston has a recorded map for the Rockwood subdivision.

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1 City of Public Facility Plan for the City of Winston, 1984.
4. **Tokay**: A 44-unit subdivision located to the south of the Sun East and Rockwood subdivisions that will result in a population increase of approximately 105. Currently, the City of Winston has a recorded map for the Tokay subdivision.

5. **Parkway**: A 37-unit subdivision located to the south of Thompson Avenue in the vicinity of Parkway Drive that will result in a population increase of approximately 90. Currently, the developers of the Parkway subdivision have submitted a tentative map to the city.

6. **Brockway Oaks**: A 400-unit subdivision (225 single family units and 175 condominiums) located to the south of Highway 42 in the vicinity of Brockway Road that will include a commercial area (to the north of Highway 42), a golf course, a restaurant, and a hotel. The subdivision is expected to increase the City of Winston's population by approximately 950 and will require an urban growth boundary expansion.

7. **Byrd**: A 350-unit subdivision located to the north of Lookingglass Road in the vicinity of Brockway Road that will result in a population increase of approximately 850. The construction of the Byrd subdivision will also require an urban growth boundary expansion.

The approximate location of each of the proposed subdivisions is illustrated in Figure 1.

**Employment**

Employment projections for year 2015 were based on the expected development of the Winston Urban Growth Boundary (UGB) as identified in the Comprehensive Plan for the City of Winston. Given these projections, the new population and employment that are expected to occur by year 2015 were allocated geographically based upon developable lands within the UGB (by land use category) and Transportation Analysis Zone (TAZ) by the Greater Roseburg Area Transportation Study Management Team. Figure A-1 shows the TAZ system developed for the Winston Urban Growth Boundary. Areas that are expected to experience significant increases in employment include the Highway 42 and County Road 387 corridors as well as the Brockway Oaks property.

By the year 2015 the Winston UGB has the capacity for an additional 1,900 households and 1,450 jobs (in new commercial, office, and industrial land development). A summary of the projections of total future households and employment in each TAZ is included in Appendix A.
PROPOSED RESIDENTIAL SUBDIVISIONS
WINSTON LOCAL STREETS
WINSTON, OREGON
AUGUST 1995
FUTURE TRAFFIC CONDITIONS

Future year (2015) traffic conditions were determined by estimating the number of vehicle trips generated by existing and future land uses within the Winston urban area. Trips generated by existing and future households and employment were distributed to destinations inside and outside the Winston area, and then assigned to the Winston street system. These calculations were accomplished through use of a travel demand forecasting model developed and calibrated specifically for the Winston, Green, and Roseburg urban areas as part of the Greater Roseburg Area Transportation Study (Kittelson & Associates, Inc., 1995). For the purposes of calculating trip generation, distribution and travel assignment, all travel model data were summarized by TAZ (See Figure A-1). Figure 2 shows the total traffic volumes for the future year 2015 under the no-build alternative.

FUTURE TRANSPORTATION SYSTEM DEFICIENCIES - NO BUILD ALTERNATIVE

Future p.m. peak hour traffic assignments were calculated using the model developed for the City of Winston. Operational analyses were conducted on each of the study intersections detailed in Technical Memorandum #1 to determine the levels of service under future traffic conditions. All Level of Service (LOS) analyses described in this technical memorandum are in accordance with the procedures stated in the 1985 Highway Capacity Manual. A description of the LOS, the criterion that determines the LOS, and how the LOS is measured is available in Appendix B. In order to assure that this analysis was based on a worst case scenario, the peak 15-minute flow rate during the evening peak hour was used in the evaluation of all of the intersection LOS.

The LOS for critical study area intersections are listed in Table 1. For all-way stop-controlled and signalized intersections, the average delay and volume/capacity ratio are listed with the corresponding LOS. For the unsignalized intersections, the reserve capacity is listed with the corresponding LOS. LOS "D" and "E" were considered to be the minimum acceptable standards for signalized and unsignalized intersections, respectively.
Table 1
Future Level of Service
No-Build Alternative

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<td>Lookingglass Rd. / Glenhart Ave.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lookingglass Rd. / Cary St.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glenhart Ave. / Highway 42</td>
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</tr>
<tr>
<td>Highway 42 / County Rd. 387</td>
<td>1.15</td>
<td>&gt; 60</td>
</tr>
<tr>
<td>Highway 42 / Cary St.</td>
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<tr>
<td>Thompson Ave. / County Rd. 387</td>
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\(^1\) Volume to Capacity Ratio

The above analysis indicates that the Highway 42 / County Road 387 and the Highway 42 / Lookingglass Road intersections will likely exceed capacity by the year 2015 and the Glenhart Avenue / Highway 42 and the Cary Street / Highway 42 intersections will likely approach capacity by the year 2015.

Highway 42 / County Road 387

An analysis of the expected volumes at the Highway 42 / County Road 387 intersection indicated that the new developments expected along Highway 42 to the west will more than double the amount of traffic traveling to/from the north to the west at this intersection resulting in a Level of Service “F” in the future. If no other roadway improvements were made, this capacity deficiency can be mitigated through the installation of dual left-turn lanes on the eastbound approach and the widening of the southbound approach to include an exclusive right-turn lane, a shared right-through lane, and an exclusive through-lane. These improvements will require the widening of the southbound approach to add a right-turn lane and retaining the existing through-lane and the shared through-right
lane. This will also require the widening of the eastbound approach to include an additional left-turn lane as well as an additional through lane exiting the intersection and additional right-of-way.

An alternative solution to providing dual turn lanes at the intersection would be to create parallel routes that would allow residents to access all areas of the City without having to rely on Highway 99 / 42. This would, in effect, lessen the travel demand at this critical intersection in the city.

**Lookingglass Road / Highway 42**

An analysis of the expected volumes at the Lookingglass Road / Highway 42 intersection indicated that the increase in volumes along Highway 42 will make it very difficult for the Lookingglass Road drivers to merge onto the highway. The new developments expected along the western boundary of Winston are also expected to significantly increase the demand on Lookingglass Road. Therefore, an analysis was conducted to evaluate the need for the installation of a traffic signal at the Highway 42 / Lookingglass Road intersection in year 2015. The Volume Warrant, the Interruption of Continuous Flow Warrant, and the Peak Hour Warrant (Warrants 1, 2, and 11, respectively) were evaluated for year 2015 traffic conditions. The results of the signal warrant analysis are shown in Table 2. As shown in the table, the Lookingglass Road / Highway 42 meets all three signal warrants under year 2015 conditions. An analysis of the existing traffic volumes at this intersection reveals that the intersection will meet traffic signal warrants in the next 1 - 2 years. Since this intersection is located on the periphery of the city in an area where the speed limit is indicative of a rural setting, the city will need to ensure that proper signing is located in advance of the signal to warn drivers. The nearest upstream adjacent signal on Highway 42 is located at Kelly’s Corner in Green approximately 2.5 miles northeast of the Lookingglass Road / Highway 42 intersection.

**Cary Street / Highway 42 and Glenhart Avenue / Highway 42**

Level of Service analyses indicate that the intersections of Cary Street and Glenhart Avenue along Highway 42 are expected to approach capacity by the year 2015. The projected traffic volumes indicate that both intersections will operate at Level of Service “E” in year 2015 which is generally considered acceptable at unsignalized intersections; however, since the intersections are expected to approach capacity, an analysis was conducted to determine if either intersection will meet signal warrants by year 2015. The results of this analysis are shown in Table 2. As shown in the table, neither intersection will meet the warrants for a traffic signal by year 2015. City of Winston and Oregon Department of Transportation staff should monitor both intersections over the next twenty years to ensure that they continue to operate acceptably. This will ensure that safe and adequate access is provided to the elementary school and Wildlife Safari.
2. The extension of Newton Drive to Oak Street will provide better circulation within the neighborhoods to the south of Highway 42 and west of County Road 387 and between the three major residential areas within Winston. Ideally, as part of this extension, the intersection of Oak Street / County Road 387 should be realigned to the intersection of Thompson Avenue / County Road 387. In addition, the intersection of Newton Drive with Highway 42 should be aligned opposite the Cary Street intersection.

3. The extension of Thiele Street to Ford Street and the extension of Civil Bend Avenue to Newton Drive will provide better circulation within the neighborhoods to the south of Highway 42 and the west of County Road 387.

4. The extension of Tumlin Avenue to Midway Street will provide better circulation within the neighborhoods to the northwest of Highway 42.

5. The extension of Edwards Street to Grape Street combined with the extension of Tokay Street to Winston Section Road will provide better circulation within the neighborhoods to the east of Main Street.

6. The extension of Suksdorf Street to the intersection of Highway 42 / County Road 387 will provide better circulation within the neighborhoods to the east of Main Street.

7. The extension of Ronald Avenue to the intersection of Darlene Street / Brosi Orchard Road and the extension of Darlene Street to the intersection of Highway 42 / Lookingglass Road will provide an additional connection into and out of the neighborhoods to the east of Highway 42. It will also serve as a connection between the middle school and the neighborhoods in northeast Winston.

In addition, several roadway improvements should be made as new properties develop in order to improve the circulation needs of existing and future residents of the City of Winston, including:

1. The extension of Johnson Street to Winston Section Road will also improve circulation within southeast Winston neighborhoods and will provide a connection to Winston Section Road and access to Highway 42.

2. The extension of Abraham to Brockway Road will provide additional access to the new developments along the perimeter of the Winston urban growth boundary. Currently, Abraham is being constructed as part of the Trinity Estates subdivision.
3. A north-south facility should be constructed between Abraham and Lookingglass Road to provide additional access to the developing areas in west Winston.

As new development occurs within the City of Winston, roadway improvements should be made to enhance circulation for existing and future residents of the city.

BICYCLE AND PEDESTRIAN INFRASTRUCTURE IMPROVEMENTS

Future bicycle and sidewalk improvements made in conjunction with roadway improvements are intended to provide cyclists and pedestrians with full accessibility to Winston's arterial/collector street system. The system should provide a safe and convenient alternative to the automobile for short trips, particularly for travel between residential neighborhoods and schools/parks.

Striped on-street bike lanes should be provided on all arterial streets, and on collector streets which have daily volumes more than 3,000 vehicles, or where a collector street directly connects major residential areas with schools, libraries, community centers, or parks, or where it may be necessary to ensure safe bicycle travel. In addition, the system should be linked with the system of bike paths provided for the recreational cyclist. In some instances, the provision of separately striped bicycle lanes on arterial and collector streets may require street widening and even the acquisition of additional right-of-way.

A draft plan for separately striped on-street bike lanes and posted bike routes is illustrated in Figure 4. On-street bike lanes or off-street bicycle paths should be provided on all arterials including Highway 42 in its entirety through Winston, County Road 387, and Lookingglass Road. As new developments are constructed along the urban growth boundary of Winston, care should be taken to ensure proper pedestrian and bicycle connection to the downtown, the schools, the parks and the South Umpqua River.

Bicycle facilities should also be provided on Cary Street and Thompson Avenue to enhance access to the elementary and middle school. In addition, an off-street bicycle path should be provided between Cary Street and Civil Bend Avenue in the vicinity of Tumlin Avenue before Tumlin Avenue is extended. This will allow bicyclists to access the elementary school from the neighborhoods on the westside of Highway 42 without having to access Highway 42 or Lookingglass Road. On-street bike lanes should also be provided on Glenhart Avenue and Safari Road to enhance access to Wildlife Safari.

Design of bicycle facilities should conform with Design for Development of New Bicycle Facilities by the American Association of State Highway and Transportation Officials (AASHTO). In addition the State of Oregon Bicycle Facilities Master Plan is of assistance. Bicycle pathway signing should
conform with the Manual on Uniform Traffic Control Devices and the Oregon supplement to this document.

Sidewalks should be provided on both sides of all future arterial, collector and local streets within the City of Winston. In the near term, the following roadways should be retrofitted with sidewalks on both sides of the road: Cary Street (safe pedestrian access to the elementary school), Lookingglass Road, Highway 42, and Sherry Street and Rose Avenue (safe pedestrian access to the library). As funding becomes available, all existing arterials, collectors, and local streets within Winston should be retrofitted with sidewalks on both sides of the street.

As properties develop along the perimeter of Winston's urban growth boundary, Brockway Road, Abraham, and Winston Section Road should be retrofitted with sidewalks and on-street bicycle lanes or an off-street mixed use pedestrian/bicycle path.

FUNCTIONAL CLASSIFICATION AND STREET DESIGN

The purpose of classifying roads within the City of Winston is to provide a balanced transportation system that facilitates mobility for all modes at acceptable service levels while also providing sufficient accessibility to adjacent land uses and ensuring neighborhood livability. The development of design standards will ensure that Winston's transportation facilities will operate safely and efficiently while serving the mobility and access needs of the traveling public.

Roadway Functional Classification

The roadway functional classification of existing arterial and collector streets as established in the Public Facility Plan for the City of Winston (1989) was described in Technical Memorandum #1. The future classification of existing and future arterial and collector streets, as outlined in the Public Facility Plan, is somewhat different from the existing designation of roadways.

According to the Public Facility Plan, only Highway 42 and County Road 387 should be designated as arterials in the future.
The following roadways are designated as collector facilities in the future: Cary Street, Glenhart Avenue, Thompson Avenue, Brosi Orchard Road, Winston Section Road, and a combination route of Baker Street to Gregory Drive to Suksdorf Street to Grape Avenue and south on Grape Avenue to Thompson Avenue. Two new collectors are also proposed for the Winston urban area including: a new collector road between Highway 42 on the north and the intersection of Tokay Street/Winston Section Road on the south, and a new collector from Brockway Road along Lookingglass Creek to Highway 42.

Four new local streets are also proposed in the Plan, including: an east-west street between Cary Street and Civil Bend Avenue, the extension of Thiele Street to Ford Street, an east-west street between Gregory Drive and Darrell Avenue, and the extension of Filbert from Carter Street to the new east-west street.

It is recommended that the following changes be made to the classification of existing roadway sections:

1. Brockway Road should be classified as a collector, and subsequently be improved to collector standards as properties develop on the westside of Winston.
2. Lookingglass Road should be classified as an arterial and improved to arterial standards.
3. Suksdorf Street should be classified as a collector when it is extended to Highway 42.
4. Ronald Avenue should be classified as a collector when it is extended to Brosi Orchard and Darlene Street should be classified as a collector when it is extended to the intersection of Highway 42 / Lookingglass Road.
5. Johnson Street should be classified as a collector when it is extended to Winston Section Road.
6. Tokay Street should be classified as a local street when it is extended to Winston Section Road.
7. Newton Drive should be classified as a collector when it is extended to Oak Street.
8. Civil Bend Avenue should be classified as a local street when it is extended to Newton Drive.
9. Elizabeth Avenue should be classified as a collector when it is extended to the new east-west collector.
The recommended functional classification system for all existing and proposed roadways is shown in Figure 5.

ROADWAY DESIGN STANDARDS

Roadway design standards are based upon the functional and operational characteristics of streets such as travel volume, capacity, operating speed and safety. They are necessary to ensure that the system of streets, as it develops, will be able to safely and efficiently serve the traveling public, and allow for the orderly development of adjacent lands, and the transportation infrastructure serving that land. The city of Winston currently has no adopted roadway design standards.

The roadway design standards should consist of the following parameters in order to conform with generally accepted practice:

- Typical Roadway Section
- Alignment and Operational Characteristics
- Access Management

The specific design standards for each of these parameters will be discussed in the following paragraphs.

Typical Roadway Sections

The typical roadway section comprises the following components: right-of-way, number of vehicle travel lanes, bicycle and pedestrian facilities, drainage system and other public amenities. Specific parameters suggested for typical roadway sections for each functional classification type are detailed in Figure 6.

Alignment and Operational Characteristics

The safety and efficiency of travel on the city's roadways will be highly affected by the alignment and operational characteristics. Alignment and operational characteristics include the design and operating speed, horizontal and vertical curvature, lane usage and parking usage.

Access Management

As the City of Winston continues to develop, the collector/arterial street system will become more heavily used and relied upon for a variety of travel needs. As such, it will become increasingly important to manage access on the existing and future collector/arterial street system as new
development occurs. Experience throughout the United States has shown that a well-managed access plan for a street system can: 1) minimize the number of potential conflicts among all users of the street system, and hence provide safer and more efficient traffic operations; and, 2) minimize local cost for transportation improvements needed to provide additional capacity and/or access improvements along unmanaged roadways.

Figure 7 illustrates the relationship between the function of land use access control, travel movement, and the types of roadways best used to serve each. In general, local streets serve local access needs and carry local traffic at lower speeds. Conversely, freeways operate best at higher speeds, serving non-local traffic under full access control.

Suggested design standards for access on the City of Winston roadway system have been developed to maximize the safety and efficiency of the entire transportation system.

The suggested roadway design standards are to be used as a guideline for the development of future roadway facilities within Winston. As Winston continues to develop, there may be the need to provide some flexibility in the City's road design standard, especially on local streets, assuming that the collector and arterial street system is functioning properly. The purpose of a flexible design standard is to accommodate development needs within the City of Winston in a consistent manner, but also allow for individual consideration of unique issues such as, but not limited to, land access, non-auto travel modes, right-of-way constraint(s), terrain, vegetation and building orientation.

If local traffic conditions arise that conflict with adopted roadway design and policies, the City should review ongoing research regarding roadway design and adopt new or improved design features when available, and if applicable to local Winston standards. Further, there are provisions which could be added to the Winston development code to provide the desired flexibility. For example, the City of Portland\(^2\) has established and adopted traffic control measures to identify and deal with problems related to safety, travel speed and travel volume on local streets. These measures are generally policy-oriented, but they allow the City to test and implement traffic control devices sought to achieve stated goals and policies (i.e., routing through-traffic from local streets onto arterials) through such measures as speed "humps" and turning circles. Furthermore, research and implementation of traffic "calming" devices used to control traffic on local streets have shown some success outside the United States\(^3\). As a minimum, there are four important references that should be used to assist in road design. These include:


Roadside Design Guide by the American Association of State Highway Transportation Officials (AASHTO).

A Policy on Geometric Design of Highways and Streets by AASHTO.

Residential Streets - Second Edition by the American Society of Civil Engineers (ASCE), National Association of Home Builders and the Urban Land Institute (ULI).

Residential Street Design and Traffic Control by the Institute of Transportation Engineers (ITE).

Further, for streets designated as Collector or lower, the City engineer is given the latitude to consider street design modifications to preserve trees. In conclusion, consideration of such policies as these will help the City to allow flexibility in the design of roads but still maintain a standard set of design parameters.

Currently, several of the existing streets within the City of Winston are not constructed to the recommended design standards. The following provides a list of roadways that need to be upgraded to standards as funding becomes available:

- Lookingglass Road (scheduled to be improved in 1996)
- Cary Street
- T Street / Barbur Boulevard (with the construction of Trinity Estates)
- Sherry Street / Rose Avenue
- Brosi Orchard Road
- Civil Bend Avenue
- Darrell Avenue
- Thompson Avenue (particularly to the east of the middle school)

As properties develop, the following streets should be upgraded to standards:

- Winston Section Road
- Brockway Road

The remainder of the existing streets within the City of Winston should be upgraded to standards when economically feasible. All new streets within the city should be constructed to standards.
5-LANE ARTERIAL

3-LANE ARTERIAL

THREE-LANE COLLECTOR
(* OPTIONAL)

TWO-LANE COLLECTOR
(* OPTIONAL)

LOCAL (RESIDENTIAL)
(* OPTIONAL)

RECOMMENDED ROADWAY STANDARDS
WINSTON LOCAL STREETS
WINSTON, OREGON
AUGUST 1995
FIGURE 7

RELATIONSHIP BETWEEN CONTROL OF ACCESS AND TRAFFIC MOVEMENT

ACCESS FUNCTION

Unrestricted access

Increasing Use of street for access purposes: Parking, Loading, etc.

Decreasing degree of Access Control

Full access control

MOVEMENT FUNCTION

No through traffic

Increasing proportion of through traffic, increasing speed

Little local traffic

Cul-de-Sac

Local Street

Collector Street

Minor Arterial

Major Arterial

Freeway
PROJECT (DECISION MAKING) EVALUATION CRITERIA

The following goals and objectives, grouped into four main categories, have been drafted by the Project Advisory Committee for the Winston Local Street Network Plan. These goals and objectives should be used by the Project Advisory Committee to evaluate the recommended transportation system improvements and to compare the recommended improvements to the levels of service (operations, circulation, etc.) provided by the existing system.

Mobility, Circulation, and Safety

1. Ensure a safe and efficient transportation system allowing access into and through the community for all users, including the transportation disadvantaged.

2. Improve personal mobility and access to transportation services by expanding the variety and availability of alternative travel modes (i.e., public transportation, bicycles, walking, air travel, rail, and pipeline).

3. Ensure the integration of adequate bicycle and pedestrian pathways through the community, particularly to connect residential areas with schools and activity centers.

4. Improve the movement of goods and delivery of services throughout the region using a variety of travel modes.

5. Improve area-wide quality of life by a) increasing the compatibility of regional transportation system development with existing and future land use patterns and b) minimizing the impacts of transportation system development on the natural and built environment.

6. Improve local circulation systems to reduce the community’s reliance on Highway 99/42 for local transportation needs.

Economic Development

7. Ensure adequate capacity for future travel demand on collector and arterial streets and on the local highways to enable economic development in the community

   a. Address the relationship of major non-jurisdictional controlled arterials on the development/redevelopment of the community’s urban core.
b. Integrate the transportation plan into the community's economic development plan to capitalize on visitors to Wildlife Safari as an economic resource for the community.

**Capital Improvement**

8. Ensure sustained funding for needed transportation improvement projects by

a. Identifying and prioritizing necessary transportation infrastructure to be constructed to implement the preferred circulation plan.

b. Identifying potential funding sources for the necessary construction

c. Building the necessary public support/awareness for the financing of necessary improvements

**Coordination**

9. Develop recommendations for improving the overall safety and efficiency of transportation system operations by a) managing access to and development along state highway facilities; b) promoting transportation demand management strategies (i.e., car pooling, flexible work hours, telecommuting, etc.); c) drafting ordinances and comprehensive plan amendments to ensure safe and convenient connections between travel modes and to ensure complimentary coordination between land use and transportation; and d) including the completed transportation network plan in the community's strategic plan.

10. Develop recommendation for ensuring that the Winston Local Street Network Plan will be consistent with the goals, policies, and action strategies of the Oregon Transportation Plan (the Transportation Planning Rule), the Greater Roseburg Area Transportation Study, Statewide Planning Goals, Oregon Benchmarks, the Intermodal Surface Transportation Efficiency Act (ISTEA), the Clean Air Act Amendments (CAAA), and the Americans with Disabilities Act (ADA).
EVALUATION OF ALTERNATIVES

The following section provides an evaluation of the recommended improvements to the Winston transportation system. The future transportation system improvements are evaluated based on the goals and objectives established by the Project Advisory Committee and are categorized as:

- New Roadways
- Street Upgrades (to recommended roadway standards)
- Pedestrian and Bicycle Facility Improvements

Each of the improvements are evaluated as either achieving (+) or failing to achieve (-) the goals and objectives outlined by the Project Advisory Committee. A "0" denotes that the Goal/Objective is not applicable in the evaluation of a particular improvement. The evaluation of the alternatives is summarized in Table 4.
### Table 4
Alternatives Evaluation Matrix

<table>
<thead>
<tr>
<th>Goal</th>
<th>New Roadways</th>
<th>Street Standard Upgrades</th>
<th>Improved Pedestrian and Bicycle Facilities</th>
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<tr>
<td>(1) Ensure a safe and efficient transportation system</td>
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<td>+</td>
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<td>(2) Improve personal mobility</td>
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<td>+</td>
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<tr>
<td>(3) Ensure the integration of bicycle and pedestrian pathways</td>
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<td>(4) Improve the movement of goods and delivery of services</td>
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<td>0</td>
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<tr>
<td>(5) Improve area-wide quality of life</td>
<td>+</td>
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<tr>
<td>(6) Improve local circulation systems</td>
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<td>(7) Ensure adequate capacity on collector and arterial streets</td>
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<tr>
<td>(8) Ensure sustained funding</td>
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<td>0</td>
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<tr>
<td>(9) Develop recommendations for improving the overall safety and efficiency of transportation systems</td>
<td>+</td>
<td>+</td>
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<tr>
<td>(10) Develop recommendations that will be consistent with the OTP, TPR, GRATS, ISTEA, CAAA, ADA, etc.</td>
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**Note:**
- + denotes that the improvement achieves the specified goal
- - denotes that the improvement fails to achieve the specified goal
- 0 denotes that it is not applicable to evaluate the improvement using the specified goal
## APPENDIX A

### 2015 LAND USE - WINSTON

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**TOTAL** 2223 878 1345 2617 914
ZONE STRUCTURE AND NUMBERING IS PART OF LARGER REGIONAL TRANSPORTATION STUDY (GRATS).
APPENDIX B

Table B-1

LEVEL OF SERVICE DEFINITIONS
(SIGNALIZED INTERSECTIONS)

<table>
<thead>
<tr>
<th>Level-of-Service</th>
<th>Traffic Flow Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>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.</td>
</tr>
<tr>
<td>B</td>
<td>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 LOS A, causing higher levels of average delay.</td>
</tr>
<tr>
<td>C</td>
<td>Average stopped 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 in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.</td>
</tr>
<tr>
<td>D</td>
<td>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.</td>
</tr>
<tr>
<td>E</td>
<td>Average stopped delays are 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.</td>
</tr>
<tr>
<td>F</td>
<td>Average stop delay is in excess of 60 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation. It may also occur at high volume/capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such high delay levels.</td>
</tr>
</tbody>
</table>

Note: A signal cycle failure is considered to occur when one or more vehicles are forced to wait through more than one green signal indication for a particular approach.


**TABLE B-2**

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

<table>
<thead>
<tr>
<th>Level-of-Service</th>
<th>Stopped Delay per Vehicle (Sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>&lt;= 5.0</td>
</tr>
<tr>
<td>B</td>
<td>5.1 to 15.0</td>
</tr>
<tr>
<td>C</td>
<td>15.1 to 25.0</td>
</tr>
<tr>
<td>D</td>
<td>25.1 to 40.0</td>
</tr>
<tr>
<td>E</td>
<td>40.0 to 60.0</td>
</tr>
<tr>
<td>F</td>
<td>&gt; 60.0</td>
</tr>
</tbody>
</table>

Source: 1985 Highway Capacity Manual
<table>
<thead>
<tr>
<th>LOS</th>
<th>General Description</th>
</tr>
</thead>
</table>
| A   | Average delay per vehicle ranges between 0 and 10 seconds  
     | Nearly all drivers find freedom of operation  
     | Very seldom is there more than one vehicle in the queue |
| B   | Average delay per vehicle ranges between 10 and 20 seconds  
     | Some drivers begin to consider the delay an inconvenience  
     | Occasionally there is more than one vehicle in the queue |
| C   | Average delay per vehicle ranges between 20 and 30 seconds  
     | Many times there is more than one vehicle in the queue  
     | Most drivers feel restricted, but not objectionally so |
| D   | Average delay per vehicle ranges between 30 and 40 seconds  
     | Often there is more than one vehicle in the queue  
     | Drivers feel quite restricted |
| E   | 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  
     | Average delay per vehicle ranges between 40 and 60 seconds  
     | There is almost always more than one vehicle in the queue  
     | Drivers find the delays to be approaching intolerable levels |
| F   | Forced flow  
     | Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection |
### TABLE B-4

<table>
<thead>
<tr>
<th>Reserve Capacity (pcph)</th>
<th>Level of Service</th>
<th>Expected Delay to Minor Street Traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 400</td>
<td>A</td>
<td>Little or no delay</td>
</tr>
<tr>
<td>300-399</td>
<td>B</td>
<td>Short traffic delays</td>
</tr>
<tr>
<td>200-299</td>
<td>C</td>
<td>Average traffic delays</td>
</tr>
<tr>
<td>100-199</td>
<td>D</td>
<td>Long traffic delays</td>
</tr>
<tr>
<td>0-99</td>
<td>E</td>
<td>Very long traffic delays</td>
</tr>
</tbody>
</table>

* When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection. This condition usually warrants improvement to the intersection.

Winston Local Street Network Plan
TECHNICAL MEMORANDUM #3
Preferred Transportation Alternative: Schedule and Cost Estimates

Date: August 22, 1995

To: Bruce Kelly, City of Winston

From: Julia Kuhn, Kittelson & Associates, Inc.

The first phase of the Winston Local Street Network Plan included an analysis of the existing transportation system conditions as well as the community’s identification of transportation deficiencies. The second phase of the Winston Local Street Network Plan identified the future transportation system deficiencies (roadway, bicycle, and pedestrian) and an evaluation of alternatives that can be implemented to mitigate those deficiencies. The primary focus of the recommended transportation system alternatives outlined in Technical Memorandum #2 is to provide a continuous roadway, pedestrian, and bicycle system that allows the community’s residents to access all areas of the city without having to rely on Highway 42. The need for these connections will help to alleviate the increasing demand on the Highway 42 / County Road 387 intersection.

This technical memorandum provides a implementation schedule and planning level cost estimates for the recommended transportation system improvements summarized in Technical Memorandum #2 (Future Conditions).

Because of funding limitations and the constraints caused by existing development, an improvement schedule has been developed that prioritizes improvements to the existing bicycle and pedestrian infrastructure and the upgrading of existing roadways to conform with recommended standards. All future roadway improvements should be constructed when new properties develop or existing properties redevelop within the Winston urban area.

RECOMMENDED IMPLEMENTATION SCHEDULE

The following improvement schedule has been developed to prioritize future transportation system improvements, shown in Figure 1, necessary to serve the needs of the existing and future cyclists, pedestrians, and motorists in Winston.
0 - 5 Years

- Install Traffic Signal at the Lookingglass Road / Highway 42 Intersection.
- Re-stripe Glenhart Road to include Bicycle Lanes
- Construct sidewalks and bicycle lanes on Safari Road
- Construct an off-street bicycle/pedestrian path between Cary Street and Civil Bend
- Construct Sidewalks on Cary Street
- Improve Lookingglass Road to include sidewalks and bicycle lanes

5 - 10 Years

- Improve Highway 42 to include sidewalks and bicycle lanes
- Improve County Road 387 to include sidewalks and bicycle lanes
- Improve Sherry Street to include sidewalks
- Improve Rose Avenue to include sidewalks
- Extend Tokay Street to Winston Section Road
- Upgrade Existing Section of Tokay Street
- Extend Edwards Street to Grape Street
- Improve Winston Section Road between Highway 42 and Thompson Road to Collector Standards
- Upgrade Brosi Orchard Road to include sidewalks and bicycle lanes
- Extend Newton Drive to Oak Street
- Re-build Oak Street
- Add sidewalks and bicycle lanes to existing section of Newton Drive

10 - 20 Years

- Extend Ronald Avenue to Darlene / Brosi Orchard Road
- Extend Darlene Street to Highway 42 / Lookingglass Road
- Extend Thiele Street to Ford Street
- Add sidewalks and parking lane to existing section of Thiele Street
- Extend Civil Bend to Newton Drive
- Extend Tumlin Avenue to Midway Street
- Extend Suksdorf Street to Highway 42 / 99
- Upgrade existing section of Suksdorf Street
As Properties Develop

- Extend Johnson Street to Winston Section Road
- Extend Abraham to Brockway Road
- Extend North-South Collector to Abraham

TRANSPORTATION FINANCING

Tables 1, 2, 3, and 4 summarize planning level cost estimates for each of the roadway improvements identified in the prioritized implementation schedule.

Table 1
Planning Level Cost Estimates\(^1\)\(^2\)
0 - 5 Years

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Length</th>
<th>Width</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve Safari Road to include Sidewalks and Bicycle Lanes (to UGB)</td>
<td>3,200 ft.</td>
<td>20 ft.</td>
<td>$520,000</td>
</tr>
<tr>
<td>Construct Off-Street Bike Path between Cary and Civil Bend</td>
<td>650 ft.</td>
<td>8 ft.</td>
<td>$2,000</td>
</tr>
<tr>
<td>Improve Cary Street to include Sidewalks</td>
<td>2,100 ft.</td>
<td>10 ft.</td>
<td>$50,000</td>
</tr>
<tr>
<td>Improve Lookingglass Road to include Sidewalks and Bicycle Lanes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highway 42 - Cary</td>
<td>3,700 ft.</td>
<td>20 ft.</td>
<td>$600,000</td>
</tr>
<tr>
<td>Cary - Bremner Lane</td>
<td>3,200 ft.</td>
<td>20 ft.</td>
<td>$520,000</td>
</tr>
<tr>
<td>Bremner - Brockway Road</td>
<td>2,100 ft.</td>
<td>20 ft.</td>
<td>$340,000</td>
</tr>
</tbody>
</table>

Total Cost: 0 - 5 Year Improvements

$2,182,500

\(^1\) Cost estimates do not include Right-of-Way Acquisition

\(^2\) Cost estimates assume $8 / sq. ft. for Roadway construction (including paving, curb & gutter, sidewalks, and drainage) and $20 / sq. yd. for sidewalk construction.
## Table 2
Planning Level Cost Estimates
5 - 10 Years

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Length</th>
<th>Width</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve Highway 42 to include Sidewalks and Bicycle lanes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lookingglass Rd. - Co. Rd. 387</td>
<td>2,650 ft.</td>
<td>20 ft.</td>
<td>$430,000</td>
</tr>
<tr>
<td>Co. Rd. 387 - Glenhart</td>
<td>1,000 ft.</td>
<td>20 ft.</td>
<td>$160,000</td>
</tr>
<tr>
<td>Glenhart - Cary</td>
<td>1,200 ft.</td>
<td>20 ft.</td>
<td>$200,000</td>
</tr>
<tr>
<td>Cary - Lookingglass Creek</td>
<td>2,250 ft.</td>
<td>20 ft.</td>
<td>$360,000</td>
</tr>
<tr>
<td>Lookingglass Creek - Brockway (Excluding Cost of New Bridge)</td>
<td>4,200 ft.</td>
<td>20 ft.</td>
<td>$680,000</td>
</tr>
<tr>
<td>Improve County Road 387 to include Sidewalks and Bicycle lanes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2,500 ft.</td>
<td>20 ft.</td>
<td>$400,000</td>
</tr>
<tr>
<td>Improve Sherry to include Sidewalks</td>
<td>600 ft.</td>
<td>10 ft.</td>
<td>$14,000</td>
</tr>
<tr>
<td>Improve Rose to include Sidewalks</td>
<td>1,100 ft.</td>
<td>10 ft.</td>
<td>$25,000</td>
</tr>
<tr>
<td>Extend Tokay to Winston Section Road</td>
<td>1,700 ft.</td>
<td>44 ft.</td>
<td>$600,000</td>
</tr>
<tr>
<td>Upgrade existing section of Tokay (As part of Tokay Extension)</td>
<td>650 ft.</td>
<td>20 ft.</td>
<td>$110,000</td>
</tr>
<tr>
<td>Extend Edwards to Grape</td>
<td>1,150 ft.</td>
<td>40 ft.</td>
<td>$370,000</td>
</tr>
<tr>
<td>Re-Build Winston Section Road to Collector Standards</td>
<td>8,100 ft.</td>
<td>44 ft.</td>
<td>$2,850,000</td>
</tr>
<tr>
<td>Add Bicycle Lanes and Sidewalks to Brosi Orchard</td>
<td>3,200 ft.</td>
<td>20 ft.</td>
<td>$520,000</td>
</tr>
<tr>
<td>Extend Newton Drive to Oak (Collector)</td>
<td>1,300 ft.</td>
<td>44 ft.</td>
<td>$60,000</td>
</tr>
<tr>
<td>Re-build Oak (As part of Newton Drive Extension)</td>
<td>450 ft.</td>
<td>44 ft.</td>
<td>$160,000</td>
</tr>
<tr>
<td>Add sidewalks and bike lanes to existing section of Newton Drive (As part Newton Drive extension)</td>
<td>1,500 ft.</td>
<td>20 ft.</td>
<td>$240,000</td>
</tr>
<tr>
<td><strong>Total Cost: 5 -10 Year Improvements</strong></td>
<td></td>
<td></td>
<td><strong>$7,179,000</strong></td>
</tr>
</tbody>
</table>
Table 3
Planning Level Cost Estimates
10 - 20 Years

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Length</th>
<th>Width</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extend Ronald to Darlene</td>
<td>1,050</td>
<td>44 ft.</td>
<td>$370,000</td>
</tr>
<tr>
<td>Extend Darlene to Lookingglass</td>
<td>900 ft.</td>
<td>44 ft.</td>
<td>$320,000</td>
</tr>
<tr>
<td>Extend Thiele to Ford</td>
<td>450 ft.</td>
<td>40 ft.</td>
<td>$150,000</td>
</tr>
<tr>
<td>Add sidewalks and 8' parking lane to Thiele</td>
<td>300 ft.</td>
<td>18 ft.</td>
<td>$50,000</td>
</tr>
<tr>
<td>Extend Civil Bend to Newton Drive</td>
<td>400 ft.</td>
<td>40 ft.</td>
<td>$130,000</td>
</tr>
<tr>
<td>Extend Tumlin to Midway</td>
<td>650 ft.</td>
<td>40 ft.</td>
<td>$210,000</td>
</tr>
<tr>
<td>Extend Suksdorf to Main Street</td>
<td>500 ft.</td>
<td>44 ft.</td>
<td>$180,000</td>
</tr>
<tr>
<td>Upgrade existing section of Suksdorf</td>
<td>1,450</td>
<td>20 ft.</td>
<td>$240,000</td>
</tr>
</tbody>
</table>

Total Cost: 10 - 20 Years $1,650,000

Table 4
Planning Level Cost Estimates
As Properties Develop

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Length</th>
<th>Width</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extend Johnson to Winston Section Road</td>
<td>2,550 ft.</td>
<td>44 ft.</td>
<td>$900,000</td>
</tr>
<tr>
<td>Extend Abraham to Brockway Road</td>
<td>2,050 ft.</td>
<td>44 ft.</td>
<td>$730,000</td>
</tr>
<tr>
<td>Extend North-South Route to Abraham</td>
<td>1,100 ft.</td>
<td>44 ft.</td>
<td>$390,000</td>
</tr>
</tbody>
</table>

Total Cost: As Properties Develop $2,020,000
Greater Roseburg Area Transportation Study

Final Report

May 1, 1996

KITTELSON & ASSOCIATES, INC.
Transportation Planning/Traffic Engineering

In Association With:
McKeever/Morris, Inc.
CH2M HILL, Inc.
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</tr>
</tbody>
</table>

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*Kittelson & Associates, Inc.*
The Greater Roseburg Area Transportation Study (GRATS), a joint venture between the Umpqua Regional Council of Governments, the City of Roseburg, the City of Winston, Douglas County, and the Oregon Department of Transportation, is a regional framework study that includes multimodal strategies to manage growth and the communities' transportation needs during the next 20 years.

GRATS was developed to reflect the local needs of the area's residents. As such, the participating jurisdictions undertook a planning process with a strong commitment to active community participation and agency coordination. The public involvement approach was founded on the following principles:

- Provide opportunities for meaningful involvement from all interested parties from the beginning to the end of the GRATS process;
- Stress opportunities for two-way communication to ensure that project participants, benefit from the analytical work of the project team, and that members of the consulting team are well grounded in local knowledge and values; and
- Commit to sound public involvement that should increase both the technical quality of the final product and the chances that a public consensus will coalesce around the project recommendations.

Throughout the GRATS process, six mechanisms were used to solicit input and provide information to the public: open houses, newsletters, scoping interviews, speakers bureau, workshops, and briefings with key parties. In addition, regular meetings were held with the Management Team and Advisory Committee to maximize the potential for consensus.

The GRATS Advisory Committee, with significant input from the public and the Management Team, developed the following list of goals to guide the course of the study:

1. Provide accessibility.
2. Provide mobility.
3. Be economical and affordable for the users and for the community to construct and maintain.
4. Be safe.
5. Provide flexibility through options.
6. Provide connectivity between transportation options and to locations outside the study area.
7. Promote quality of life in existing and new neighborhoods.
8. Provide a transportation system that attracts people to live and work in the area and supports and enhances the local economy, including the recreation and tourism industry.
9. Provide reliability and certainty in the time it takes to reach destinations.
10. Provide adequate mobility and access for emergency services.
11. Be supportive of, and integrated with, the land use system.

12. Be supportive of, and integrated with, local, regional, state, and federal goals, policies, standards, benchmarks, and other relevant documents.

13. Be flexible and adaptable to changing future conditions.

In development of these goals, consideration was given to assure opportunities for active citizen involvement. A goal of the GRATS Management Team and Advisory Committee members was to promote citizen involvement through town hall meetings, Development Commissions, Planning Advisory Committees, and other public participation opportunities.

At the same time the goals were established, a companion list of measurement objectives were developed, including measurement criteria, performance range, monitoring indicators, and related Oregon Benchmarks.

Based on an assessment of the existing transportation and land use system, the formulation of a set of goals and objectives to guide the course of the study, significant public input, and the results of an expert panel workshop, several strategies and options were formulated and considered. One of the primary objectives of the formulation of these strategies was to evaluate methods of reducing reliance on the automobile and providing additional multimodal opportunities in the study area. The evaluation of these strategies showed that merely building new roadways would be ineffective and expensive; therefore, several travel demand management strategies were evaluated in combination with roadway improvements. A combination of the strategies and options were then presented as three “alternative packages.”

Based on comments from a public open house, meetings with the Advisory Committee and Management Team, and meetings with the planning commissions and city councils in the study area, a preferred alternative was selected. Substantial consideration was given to the region-wide advantages and disadvantages offered by each alternative package, as well as the feasibility of implementation.

A summary of the strategies included in the Preferred Alternative follows.

RAIL

Currently, RAILTEX is performing switching operations outside of downtown Roseburg; however, the potential exists for long delays to motorists, emergency vehicles, cyclists, and pedestrians as long as the rail switching yards remain in Roseburg. Therefore, the rail switching yards should be relocated from downtown Roseburg. This will minimize the potential for delays experienced by autos, emergency vehicles, pedestrians, and cyclists in the downtown caused by switching operations, improve opportunities for intermodal transfer and access to Interstate 5 (I-5) and the industrial areas, and remove the visual barrier in the downtown created by the existing location of the switching yards.

A detailed study should be conducted to determine the economic, environmental, and transportation-related impacts and benefits of relocating the switching yards to Green or to another location outside of Roseburg. This study should be completed when there is a need to relocate the switching operations back to Roseburg.
TRUCK

To better accommodate truck traffic today and in the future, several strategies should be implemented that ensure the safe and efficient movement of traffic (including auto, truck, pedestrian and bicycle) along truck routes in the study area, including improved geometric design at key intersections along truck routes and the construction of the Roberts Creek - Dixonville bypass between the North Umpqua Highway and Highway 42 at Kelly's Corner in Green.

The improved geometric design at key intersections along truck routes should be completed in the near-term to address existing deficiencies; the bypass is needed to provide relief to the regional transportation system in the long-term future (10 - 15 years). In the short-term, a comprehensive study of the Roberts Creek - Dixonville bypass should be completed to address ODOT bypass criteria and the evaluation of the design, cost, and environmental impacts of specific alignment alternatives.

AIRPORT

Several improvements can be made to preserve and enhance the current operations and maintain the important role that the Roseburg Regional Airport plays in the area. These include providing a Differential Global Positioning System, limiting land use conflicts adjacent to the airport as properties redevelop, increasing noise control standards, and partnering with a full-service airport, such as Eugene or Medford. Specific improvements needed to increase the efficiency of and accessibility at the airport are identified in the Roseburg Regional Master Plan Update (January 1996).

LAND USE

Travel demand management (TDM) land use strategies should be implemented to focus growth in six nodal areas throughout the region: West Roseburg, Diamond Lake, Downtown Roseburg, Green, North Roseburg, and Winston (See Appendix G, Figures 1 - 6). These TDM strategies support a pattern of land uses that will enhance community orientation and provide the greatest potential for local non-auto activity by residents and workers.

In Winston, strategies should be implemented that result in a balanced ratio of jobs to housing. In addition, employment should be focused in the core area at the intersection of Highway 42 and County Road 387. In Green, strategies should be implemented to increase local employment opportunities and maintain housing affordability. In downtown Roseburg, additional multi-family housing should be created to provide a residential base within walking distance of downtown jobs. In North Roseburg strategies should be implemented to increase freeway- and airport-dependent commercial activity and to maintain housing affordability. In Diamond Lake, strategies should be implemented that reduce destination-oriented travel. Development within the area west of the current city limits and south of Garden Valley Road (TAZ No.95) should be coordinated with sound land use, transportation, and utility planning.
PEDESTRIAN/BICYCLE

Pedestrian and bicycle strategies should be implemented that focus on safety improvements to the existing system, establish a continuous system throughout the study area, and promote non-auto commuting.

Safety improvements that need to be implemented on the existing pedestrian and bicycle system include: improving sidewalks to meet Americans with Disabilities Act (ADA) standards, improving pedestrian and bicycle facilities near the interchanges and on overpasses, educating the public regarding bicycle and pedestrian rights and responsibilities and enforcing existing regulations, improving signing on existing bicycle routes, and improving rail crossings.

To establish a continuous system integrated with the land uses throughout the study area, regional coordination of the bicycle and pedestrian systems is required. Throughout the study area, emphasis should be placed on constructing continuous bicycle and pedestrian facilities that connect residential areas with schools and shopping areas. Specific improvements that are necessary to establish a continuous system include providing bicycle and pedestrian facilities on the Winchester Bridge, providing a bicycle and pedestrian path that follows the railroad right-of-way or I-5 between Roseburg and Green, providing a pedestrian and bicycle bridge in the vicinity of Portland Avenue, and implementing the recommendations from the Roseburg Bicycle Master Plan and the Douglas County Bikeway Master Plan.

In addition to providing a continuous and coordinated bicycle and pedestrian system, measures such as employer incentive programs need to be implemented to promote non-auto commuting.

TRANSIT

A single dispatch point should be created to coordinate transit service in the study area. All of the services currently being offered by special providers and the demonstration project should be retained and coordinated through this dispatch point. An endowment fund should also be created to sustain the services provided by the demonstration project beyond the 3-year demonstration period.

Fixed-route service should be provided in the vicinity of “The Box” (the area bounded by Harvard Avenue, Stewart Parkway, Garden Valley Boulevard, and NE Stephens Street). This system should be integrated with the current demonstration project. A dial-a-ride van service and dispatchers should be established with a route deviation service so that the vans operate on fairly predictable routes that connect with the fixed-route line. The vans also should make five or ten designated stops in the residential areas to allow pedestrians to connect to the main transit line.

To accommodate a fixed-route transit service to serve “The Box,” the City of Roseburg may need to modify site design codes to provide for building setbacks, access spacing, sidewalk and bicycle provision requirements, the provision of bus pull-outs, and other amenities to make the area transit and pedestrian-friendly.

In addition, the Umpqua Regional Council of Governments, under a Transportation and Growth Management Grant from ODOT and the Oregon Department of Land Conservation and Development, is currently conducting an in-depth study of specific transit alternatives for the Greater Roseburg Area. The study will also address the feasibility of providing fixed-route service inside and outside of “The Box” in Roseburg.
FREEWAY AND ARTERIAL

To address future roadway deficiencies, three types of freeway and arterial strategies can be implemented: construction of new roadways and the improvement of existing roadways; and the development and implementation of a signal systems management plan.

Roadway Improvements

Because the Preferred Alternative relies on improving the existing roadways and signal systems, integrating a fixed-route transit system, and creating a continuous pedestrian and bicycle system to address future capacity deficiencies and circulation needs, construction of new facilities is minimized.

Several roadway system improvements were identified that can address future capacity deficiencies and circulation needs of the regional transportation system. Local and collector street improvements needed to address local circulation needs will be identified by the individual jurisdictions’ Transportation System Plans. Roadway improvements that can provide long-term regional benefits to the transportation system include:

- The improvement of Vine Street from Garden Valley Boulevard to NE Stephens at the intersection with the new east-west facility that connects to the North Roseburg Interchange;
- The addition of an auxiliary lane on I-5 in the northbound direction between the Harvard Avenue and Garden Valley Boulevard Interchanges;
- The widening and realignment of Troost Street to West Roseburg;
- The realignment and widening of the Stewart Parkway overpass across I-5;
- The reconfiguration of the I-5 interchange at Highway 42 and the I-5 interchange at Highway 99;
- The widening of Highway 42 between Winston and Green;
- The extension of Calkins to Stewart Parkway; and
- The construction of a new collector facility between Diamond Lake Boulevard and NE Stephens.

Additionally, a project that was discussed in concept but not listed on specific tasks was the Roberts Creek - Dixonville bypass. The bypass may provide an alternative that addresses long-term roadway deficiencies in downtown Roseburg. The exact location of the bypass has not been fixed and could only be determined after a specific alignment analysis has been conducted.

The construction of a bridge at the west end of Harvard Avenue and the widening and realignment of Troost Street will provide access and address the circulation needs for properties that develop in West Roseburg in the future.
Signal Systems Management

A signal systems management plan should be implemented that is based on the planning, design, operation, and maintenance of the traffic signals system within the context of the overall transportation system. Key elements of the signal systems management strategies are described below.

- **Planning.** No new traffic signal should be installed without first evaluating likely upstream and downstream effects. To determine these effects, area transportation authorities should require an analysis of installation warrants as well as a quantitative analysis of the effects of such an installation on overall progression characteristics.

- **Design.** When new traffic signals are installed, they should be interconnected with all adjacent traffic signals as soon as possible. With the possible exception of the downtown Roseburg grid, all new and upgraded signalized intersections should be equipped with an eight-phase controller capable of operating in a fully-actuated mode.

- **Operation.** Transportation authorities should be aggressive in testing and implementing innovative signal timing and operating strategies as appropriate, and also in implementing coordinated arterial signal systems. Additionally, signal timing and phasing parameters should be reviewed regularly (at least every 3 to 5 years) at each signalized intersection. Multiple timing plans should be developed to accommodate, at a minimum, weekday peak hour, weekday off-peak, and weekend traffic flow conditions. Consideration should be given to late-night flashing operation of arterial signals, and to the use of both permitted-only and protected-permitted left-turn phasing.

- **Maintenance.** Regular preventive maintenance, together with prompt identification and correction of occasional signal system failures will substantially enhance both the safety and operational effectiveness of the signal system.

The feasibility of installing and operating an area-wide computerized traffic signal control system should be considered.

**ELECTRONIC COMMUNICATIONS AS AN ALTERNATIVE TRAVEL MODE**

The next century promises to be one in which information access will help define continued success and economic vitality. The greater Roseburg area should be planning now the means by which it will accommodate the needs of its residents and businesses for this access. Such access is not only important to the continued economic vitality of the region, but it can also have a significant effect on transportation, air quality, and infrastructure investment decisions that will need to be made by the community.
CONTINGENCY PLAN

A clear finding of this study was that the entire study area will benefit from significant increases in residential and employment densities in the Green District. This is because concentrated mixed use development in Green will reduce trips to and from Roseburg, Winston and other portions of the study area.

Green currently is an acknowledged urban exception area under Statewide Land Use Goal 14. Many urban services currently are provided in Green (e.g., water, sewer, fire, police). The area operates under an acknowledged land use plan. It is possible that to realize the development densities in the preferred alternative, the level of urban services may need to be expanded (e.g., water currently is a limiting factor, but supply options are being explored). The existing land use plan and implementing ordinances may also need to be amended. Finally, it is possible that at some point, the affected jurisdictions, citizens and businesses may want to examine whether changes to the existing governance structure are warranted. One inevitable question as the population increases is whether the area should be annexed to Winston or Roseburg, incorporated into a new City, or continue as urban unincorporated land.

THE NEXT STEP(S)

To successfully implement the strategies outlined in this study, the City of Roseburg, the City of Winston, Douglas County, and the Oregon Department of Transportation must strive for regional coordination of infrastructure improvements. Currently, the residents in the study area rely on the retail, service, and industrial services provided in each of the communities; the jurisdictions should use these relationships to establish policy coordination of infrastructure and land use that includes the flexibility that is necessary to allow each community to retain its unique value to the region. Several measures can be implemented that encourage regional coordination, including:

- Regular meetings of the agency representatives;
- Continuation of the GRATS Management Team as an Advisory Committee on regional transportation issues to the region's governing bodies;
- Joint presentations to potential funding agencies; and
- Individual transportation system plans tailored to consider these recommendations.
City of Winston
Transportation System Plan

prepared for
City of Winston, Oregon

February 1999
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INTRODUCTION

Background

In 1995 the Transportation Planning Rule (TPR) was passed through the Oregon Legislature with significant changes that impact local communities and how they plan for transportation services. The TPR requires that cities practice multi-modal transportation planning and, through ordinance and policy changes, reduce principle reliance on the automobile. In adoption of a TSP (Transportation System Plan) the city must develop:

- a road plan for a network of arterial and collector streets
- a public transportation element
- bicycle and pedestrian plans
- air, rail, water, and pipeline plans
- policies and land use regulations (ordinance level detail) for implementing the TSP

In addition, the TPR requires local jurisdictions to adopt land use and subdivision ordinances to protect existing roadway capacity, establish bicycle and pedestrian connections between activity centers and residences, and establish standards that minimize pavement and right-of-way width for local streets. The TPR mandates that these take place with an appropriate amount of notice and coordination with State and regional agencies and plans.

To meet these requirements, the City of Winston, with the Umpqua Regional Council of Governments (URCOG) and the Oregon Department of Transportation (ODOT) entered into an agreement in 1994 to develop the Winston Local Street Network Plan in 1994. This document goes a long way in providing the background information and delineating the community issues that form the backbone of this TSP.

Purpose

The purpose of this report is to describe the existing transportation system in Winston and present policies that are consistent with statewide land-use and transportation policies. Specifically this report:

- Presents an inventory of existing transportation facilities in the Winston Urban Growth Boundary (UGB) including roads, bicycle and pedestrian routes, public transportation facilities, and air, rail, and pipeline facilities.
- Analyzes transportation needs.
- Presents policies and land-use regulations for implementing the TSP that are consistent with the state and local transportation goals.
- Presents a Transportation Improvement Plan that outlines specific transportation improvements, the timing of the improvements, estimated costs, and potential funding sources.
The Transportation Planning Rule implements statewide planning goal 12 (transportation) and explains how local governments and state agencies responsible for transportation planning demonstrate compliance with other statewide planning goals. It sets the requirements for coordination among affected levels of government for preparation, adoption, refinement, implementation, and amendment of transportation system plans. Transportation plans adopted pursuant to the TPR fulfill the requirements for public facilities planning required under ORS 197.712 (2)(e), goal 11, and OAR Chapter 660, Division 11, as they relate to transportation facilities. The TPR is provided in its entirety in the Appendix.

The TPR requires ODOT to adopt a state TSP that identifies a system of transportation facilities and services adequate to meet state transportation needs. The state TSP includes the state transportation policy plan, modal system plans including the State highway plan, and transportation facilities plans. State transportation project plans must be consistent with acknowledged comprehensive plans.

Cities and counties are required to adopt local TSPs that establish a system of transportation facilities and services adequate to meet identified local needs and must be consistent with regional TSPs and adopted elements of the State TSP.

The primary issues of consistency with the TPR, related to the Winston Transportation Plan, occur between the City's policy and regulation and the implementation requirements of the Transportation Planning Rule (660-12-045). The TSP must involve revisions to local policy and regulation, as well as identification of necessary improvement projects. Identification of needed improvement has resulted largely from previous plans, including the local street network plan that produced an inventory of existing conditions that was updated for the TSP, and an analysis of the transportation system and traffic circulation, which was confirmed by this TSP. Once the documentation of this TSP is completed, the City must revise their local land use development ordinance to reflect the findings of the TSP and the requirements in the Transportation Planning Rule 660-12-045 (2), (3), and (7).
The plan and supporting information have been divided into four sections that document the process followed to reach the final Transportation System Plan. The sections correspond to the major elements of the work program.

Section 1
Inventory of Existing Transportation System. This section describes the existing transportation system in Winston and various characteristics of the system. The inventory exposes existing system deficiencies and acts as a baseline from which to measure system changes.

Section 2
Previous Plan Efforts and Findings. This section identifies existing documents that establish policies, regulations, and planning standards that relate to Winston's transportation system. The report includes a review of city, county, and state documents.

Section 3
Financial Tools and Information. The transportation finance plan presented in this section includes cost estimates of major improvements and a discussion of existing funding mechanisms and potential new mechanisms to fund the improvements.

Section 4
Transportation Plan. The final section establishes a program for development and conservation of Winston's transportation system for the next twenty years. The plan includes all elements of the transportation system.
CITY OF WINSTON

COMPREHENSIVE PLAN

Adopted March, 1983
Includes Amendments

Periodic Review - 1988-89
Prepared by URCOG
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PUBLIC FACILITIES AND SERVICES
Goals and Policies

A. GOAL: TO PROVIDE AN ADEQUATE, YEAR-ROUND WATER SUPPLY TO WINSTON'S RESIDENTS.

POLICIES:

1. The City shall coordinate the Comprehensive Plan, Public Facilities Plan, implementing ordinances, development reviews, and capital improvements as necessary with the Winston-Dillard Water District.

2. The Winston-Dillard Water District shall coordinate with the City of Winston when making repairs in their water lines to insure all street repairs are made to City standards.

3. Encourage the construction of more dams on the South Umpqua watershed to improve the City's potential water supply.

4. Encourage the extension of water services to areas within Winston-Dillard Water District before considering annexation of other parcels into this water district.

5. Water service to new development above the 680' contour should not be encouraged.

6. The city shall encourage the Winston-Dillard Water District to continue contracts to purchase water from Ben Irving Reservoir for periods of low flow.

7. New extension of services should be carefully evaluated to determine its impact on the distribution systems, as outlined in the Public Facilities Plan.

8. Long range water service plans should be to construct a looped distribution system within the Urban Growth Boundary.

B. GOAL: TO PROVIDE ADEQUATE SANITARY AND STORM SEWER SERVICE FOR WINSTON RESIDENTS.

POLICIES:

1. Continue the agreement with the Green Sanitary District, which is: The regional sewage treatment plant will be shared with Green on a first come-first serve basis until it reaches 85% of capacity. At that point, the Green Sanitary district and the City of Winston will meet to agree on a method to finance plant expansion. If no agreement can be reached, arrangements will be made for allocating the remaining plant capacity, and for imposing a sewer hook-up moratorium when capacity is reached.

2. The City should continue its policy of requiring annexations (or agreements to annex when contiguous) for extensions of sanitary sewer service outside the existing city limits.

3. The City shall develop a Capital Improvement Program which incorporates the needs of the sewer distribution system. Specifically, the sewer distribution system needs to be systematically overhauled as it approaches the end of its estimated useful life.

4. The City shall continue to work on the Infiltration/Inflow problem, as recommended in the Public Facilities Plan.

5. The City should determine areas where drainage problems exist and prioritize them for inclusion in a storm sewer
network.

6. The City shall coordinate provision of solid waste disposal sites with Douglas County to accommodate current and future needs.

C. **GOAL: TO IMPROVE WINSTON’S STREET SYSTEM, IN ORDER TO PROVIDE A SMOOTHER TRAFFIC FLOW AND INCREASED SAFETY.**

**POLICIES:**

1. Upgrade the City streets below, as funds become available, in the following order of priority: 1) Sherry Street; 2) Suksdorf-Gregory-Baker; 3) Grape Street; 4) Edwards Street.

2. The City shall work with the Oregon State Department of Transportation and Douglas County to improve the transportation system in the City consistent with the goals and policies of this plan and the Public Facilities Plan in regard to projects planned within the city limits or the Urban Growth Boundary.

3. Encourage Douglas County and Oregon Department of Transportation to improve the streets below, as soon as funds become available in the following order of priority: 1) Highway 42 west from Glenhart; 2) Lookingglass Road; 3) Winston Section Road 4) County Road 387 south of the city limits through Dillard.

4. Limit access points to arterial streets from adjoining property to better define and channel traffic movement.

5. Initiate studies to develop a plan for improving access to the area east of Highway 42 in Winston.

D. **GOAL: TO PROMOTE ENERGY CONSERVATION BY ENCOURAGING ALTERNATIVE FORMS OF TRANSPORTATION, AND BY DEVELOPING MASS TRANSIT.**

**POLICIES:**

1. Support the establishment of a bike route through the center of the City to connect the two existing paths.

2. Encourage the placement of sidewalks along arterials and collectors as funds become available.

3. Foster the development of an areawide pedestrian/bicycle path network to provide and alternative circulation system to the existing street network.

4. Advocate transit services to and within the Winston-Dillard area.

5. Promote car pooling or van pooling to Roseburg and other job centers, and provide adequate off-street parking for users of this service.

6. Promote the possibility for a “dial-a-ride” minibus to serve the Winston-Dillard- Green area, oriented toward people unable to drive themselves.
1995 COMPREHENSIVE PLAN AMENDMENTS AND ZONING ORDINANCE AMENDMENTS
25. Page 37, the following Goals and Policies should be added to the Public Facilities and Services chapter of the City of Winston Comprehensive Plan:

"E. GOAL: TO PROMOTE CONTINUED AND IMPROVED COOPERATION WITH AGENCIES PROVIDING PUBLIC SERVICES TO WINSTON'S RESIDENTS.

POLICIES:

1. Support the efforts of the Winston-Dillard School District to maintain its existing educational facilities and services and to expand its facilities and services to accommodate future needs.

F. GOAL: TO PROVIDE RECREATIONAL FACILITIES AND SERVICES WHICH WILL SATISFY THE NEEDS OF WINSTON'S RESIDENTS AND VISITORS.

POLICIES:

1. Support the development of a golf course in Winston.

2. Pursue the development of park facilities, particularly on the west side of Winston.

3. Encourage the development of a riverfront park that will provide boat access, fishing, picnicking, and walking trails."

26. Pages 38-39, the Existing Land Use section of the Land Use and Urbanization chapter of the City of Winston Comprehensive Plan currently reads as follows:

"In 1977, a land-use survey was conducted to first determine the pattern of existing land uses and the amount of land devoted to each use. During the City's first periodic review in 1988-89, the land-use survey from 1977 was updated in conjunction with a building permit review. The new data indicated Winston had little new construction starts other than residential construction during this ten year period between surveys. In light of the new information, the land-use statistics for residential development were then reevaluated. It was determined the 1977 land use statistics for all other land uses other than residential would not be revised.

In conjunction with the building permit review, a review of all annexations occurring between 1978 and 1989 was undertaken. From this annexation review, it was determined the City annexed approximately 121.6 acres in this period. The vast
Public Facilities Plan
for
The City of Winston

PREPARED BY
UMPQUA REGIONAL COUNCIL OF GOVERNMENTS
OCTOBER 1989
# WINSTON PUBLIC FACILITY PLAN

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TRANSPORTATION

The circulation and transportation systems of a small city like Winston are relatively simple, yet they have a great deal to do with how a community has developed and will develop in the future. The availability of various modes of transportation is a key factor in determining the density of development. Early urban forms tended to be of a higher density, because movement was by foot, horse, or mass transit. More, recently the advent and the extensive use of the automobile has meant that cities have become more spread out. The current energy situation of the early 70's was a major factor to influencing urban form. In order not to close off any alternatives for the future, considered in this study was the total transportation system and all potentially usable means of circulation.

Though all aspects of the transportation system need to be analyzed, the street system of a small city is by far the most important element. Street and their rights-of-ways are, at the present, the only circulatory system in Winston. They bring people and goods into the city, and provide the means for them to be distributed. The street pattern should facilitate movement, making it as easy as possible for people to travel within the community to shopping, schools, and other activity centers. The purpose in this study will be to inventory the street network, make observations on its condition, and look at standards for maintaining or improving that network.

Classification of Streets

The street network can be divided into three classifications. The principal streets are the ARTERIAL. Their main function is to move large volumes of traffic, and they should be designed adequately to perform that function. Rights-of-way for arterial are usually 68-100 feet wide, with a pavement width of at least 48 feet (this standard may be adjusted where traffic volumes are not high). There should be limited or controlled access to an arterial
and no on-street parking to avoid dangerous traffic patterns.
COLLECTOR streets perform the function of funneling local traffic onto the arterial streets. Their rights-of-way are generally 60-6 feet wide and the pavement 38-64 feet wide. As a general rule, property access from collectors should be a secondary function and on-street parking should be discouraged. The principal purpose for local streets is to provide access to abutting property. Their secondary function is to move local traffic to a collector. Through traffic, especially buses and heavy trucks, should be strongly discouraged. The standard right-of-way for new local streets can be 50-60 feet, with a pavement width of 26-48 feet. Some of the most functional and charming older streets are somewhat narrower. All streets serve the added function of being an easement for utilities.

Winston's Subdivision Ordinance provides for standards in street width which are well within the criteria listed above. Minimum right-of-way and road surface widths are as follows:

<table>
<thead>
<tr>
<th>Right-of-Way</th>
<th>Roadway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial</td>
<td>80 ft.</td>
</tr>
<tr>
<td>Collector</td>
<td>60</td>
</tr>
<tr>
<td>Local</td>
<td>60</td>
</tr>
<tr>
<td>Cul-de-sac radius</td>
<td>50</td>
</tr>
<tr>
<td>Alley</td>
<td>20</td>
</tr>
</tbody>
</table>

There is no requirement that streets be paved, or have concrete curbs and gutters. Sidewalks can be required, which would automatically mean that curbing should be provided. There also are no requirements for street lights, signs, and fire hydrants. Underground utilities, such as telephone and electricity, are not required. All of these features may be considered for inclusion in a revised subdivision ordinance, in order to give the City a mechanism to control the quality of streets.
Street Rating

In order to evaluate the condition of existing streets and other circulation paths, a visual survey was made in April, 1978 and reviewed in 1988. Streets were judged according to their function (arterial, collector, or local), and were given one of five ratings. A GOOD rating indicates that the street is serving its primary function well, has asphalt (or concrete) paving with no significant deterioration, and provides adequate drainage by curb and gutter or proper ditches. A FAIR rating indicates that the street has an improved, paved surface suffering from one, or a combination of the following: surface defects, inadequate width to handle that amount of traffic using the street, or inadequate drainage. Streets rated POOR have improved surfaces with a combination of the following factors: major defects in, or general deterioration of the surface; inadequate width; and poor or nonexistent drainage. Any unimproved street open for traffic falls into the GRAVEL OR DIRT category. An UNDEVELOPED street is one that has been platted, but which has not been improved or used as travelway.

Information gathered during the 1978 survey is presented on the Circulation System and Street Condition Maps. Traffic counts from the State Highway Department and County Public Works Department were also tabulated for the major roads in the study area. These counts are shown in the Transportation section of the Support Document and the conditions maps are in the Map Appendix.

Street Inventory

In 1988 the city had approximately 9.03 miles of improved/semi-improved streets. They range from new streets with curb and gutters, and sidewalks, such as Glenhart Street, to very narrow streets with oil mat surface and no storm drains such, as Grape Street. Approximately 3.70 miles of streets are curbed and guttered, while the remaining 5.96 miles are substandard, light overlay/oil mat streets.
The following is an inventory of the existing city streets:

### Curb and Gutter

<table>
<thead>
<tr>
<th>Street</th>
<th>Length</th>
<th>Classification</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apollo Ct.</td>
<td>140</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Carroll St.</td>
<td>660</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Cary St.</td>
<td>2100</td>
<td>collector</td>
<td>good</td>
</tr>
<tr>
<td>Center St. (south)</td>
<td>450</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Dawna Ct.</td>
<td>160</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Deerwood Ct.</td>
<td>350</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Division St.</td>
<td>413</td>
<td>local</td>
<td>fair</td>
</tr>
<tr>
<td>Edgewood St.</td>
<td>475</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Elizabeth Ave</td>
<td>430</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Ford Dr.</td>
<td>650</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Galaxy Dr.</td>
<td>1070</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Garden Way</td>
<td>510</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Glen Ct.</td>
<td>100</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
<td>Glenhart Ave</td>
<td>2100</td>
<td>arterial</td>
<td>good</td>
</tr>
<tr>
<td>Hart St.</td>
<td>750</td>
<td>collector</td>
<td>good</td>
</tr>
<tr>
<td>Heidi Ave.</td>
<td>330</td>
<td>local</td>
<td>good</td>
</tr>
<tr>
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<td>Thompson St.</td>
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### Light Overlay, Oil Mat, etc.

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<td>Rose Ave.</td>
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<tr>
<td>Sherry St.</td>
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<td>Snow Ave.</td>
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<tr>
<td>Suksdorf St.</td>
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<td>&quot;T&quot; Street</td>
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<td>Thiele St.</td>
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<td>Tokey</td>
<td>650</td>
<td>local</td>
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<tr>
<td>Tower St.</td>
<td>560</td>
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<tr>
<td>Tumlin Ave.</td>
<td>720</td>
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### UNIMPROVED, GRAVEL, DIRT, ETC.

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<td>Hall</td>
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<td>poor</td>
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<tr>
<td>Hillside</td>
<td>310</td>
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<td>good</td>
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<tr>
<td>Lenore Ave</td>
<td>310</td>
<td>local</td>
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<tr>
<td>Lillie Ave</td>
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<td>Thelma</td>
<td>570</td>
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<td>poor</td>
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<td>Timber Terrace</td>
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<td>good</td>
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<tr>
<td>Shigley</td>
<td>410</td>
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### UNDEVELOPED

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<td>Johnson St.</td>
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<tr>
<td>Redd Dr.</td>
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### UNDEVELOPED, PLOTTED

<table>
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<td>Cloada Ct</td>
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<td>Sunrise Lane</td>
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<tr>
<td>Locust Ct.</td>
<td>315</td>
<td>Tokay (east)</td>
<td>650</td>
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<tr>
<td>Rockwood Ct.</td>
<td>270</td>
<td>View Point</td>
<td>560</td>
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<tr>
<td>Sunnyside Dr.</td>
<td>690</td>
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As indicated in the summary chart, the condition of Winston's streets is fairly good (40%). A large percentage of the local streets were rated fair (32%). The arterial and collectors, for the most part, were rated good. There are problem areas, however. Highway 42 west of Glenhart Avenue should be widened to allow for a left hand turn lane at least. Lookingglass Road, functions as both an arterial and a local street, and is dangerous when heavily used. Visibility for turning on and off Lookingglass is limited in places and needs to be improved.

There will be problems on the east side of the city if much growth occurs there. Thompson Avenue is the only direct collector which can funnel traffic out of this area. At present, traffic is also using the circuitous route which ends at Baker Street as a collector. These streets should all be LOCAL, as they were never intended for use by large numbers of cars. So far they do not show any major signs of deterioration, probably because they were well graded and paved to begin with. Conflict between pedestrian and auto uses could become much worse if the volume of traffic increases. When new development takes place to the east, the existing network will need substantial upgrading to better define the street network.

The circulation system as it extends out into the study area also need improvements. Highway 42 carries a substantial amount of traffic away from and into the city and, though there is not much cross traffic, the road can still be quite dangerous.
387 south from the city limits, past Roseburg Lumber, also carries a substantial amount of traffic. This situation is worsened by the large number of log trucks using the road, the residential traffic in Dillard, and people stopping at roadside businesses. Together, these factors create a hazardous traffic situation. Winston Section Drive and Winston Road may eventually need to be upgraded as well, as new residential areas are developed on the east side of the city.

Street Network

The main elements of the street network are the arterial and collectors. Their location is of primary importance since they will carry greater traffic loads and must expedite through traffic. This section will describe the routed designated in the transportation plan. Their location will be determined when individual applications for subdivision or development projects are reviewed.

Arterials planned for the Winston urban area include:

a. County Road 387, its entire length inside the Urban Growth Area.
b. Highway 42 from its intersection with County Road 387 southwest to the Urban Growth Boundary.

Collectors are designated for the following:

a. Cary Street, Glenhart Avenue, and Thompson Avenue
b. A combination route of Baker Street to Gregory Drive to Suksdorf Street to Grape Avenue and south on Grape to Thompson Avenue
c. Brosi Orchard Road from Highway 42, east to the Urban Growth Boundary
d. Winston Section Road from Thompson, north to the Urban Growth Boundary
e. A new collector road from Highway 42 north of town, southeast along the sewer interceptor for about 600 feet, then due south for about 1300 feet, then generally southeast to the intersection of Winston Section Road and Tokay Street
f. Wildlife Safari Road from Lookingglass Road, north to the Urban Growth Boundary
g. A new collector from Brockway Road, starting at approximately 1200 feet south of Lookingglass Road, eastward along the floodplain, turning southeast to join Highway 42 at point approximately 700 feet northeast of the Lookingglass Creek Bridge.
The following are recommended as future connecting streets to improve circulation:

a. From Cary Street at a point approximately 1200 feet north of Highway 42, due eastward to Civil Bend Avenue
b. An extension of Thiele Street eastward to Ford Street
c. From Gregory Drive at a point about 950 feet south of Suksdorf Street, eastward to Darrell Avenue. Filbert Avenue to be extended northward to intersect this connector.

These proposed routes are shown on the Future Land Use Map.

OTHER TRANSPORTATION

The only collectors or arterial which have sidewalks at present are County Road 387 and Highway 42, Glenhart Avenue, and Thompson Avenue, all recently improved. Grape Street, since it functions as collector street, should also have sidewalks. Local streets can often do without them, but once a street begins to carry through traffic, it becomes necessary to provide a place for people to walk safely.

The bicycle and pedestrian path connecting the city with Douglas High School is a valuable start of an areawide network. Other planned parts of the network include:

a. Along Thompson Avenue from County Road 387 east to the regional sewer line, then along the sewer line corridor northward to rejoin at County Road 387 north of town.
b. From Thompson Avenue south directly to the river.
c. From Highway 42 near the mouth of Lookingglass Creek through the proposed park site, then eastward along the river to County Road 387.
d. From Highway 42 west along Lookingglass Road to the Brockway Road, then south to Highway 42, then east on Highway 42 to the high school.
e. From the high school east along Highway 42 to Rose Street, then north on Rose to Jorgens, then east to Highway 42, then north to the Lookingglass Road intersection.
f. From Suksdorf Street, east to Ronald Street, then north on Ronald to Brosi Orchard Road, then east to the sewer line easement.
g. Along a proposed COLLECTOR street from Brockway Road to Highway 42 on the north side of Lookingglass Creek.

Other transportation means include bus, rail, air, and truck systems. The Greyhound Bus stops daily in Roseburg. The nearest railhead is Green for freight (Dillard handles Roseburg Lumber
Company only), and Eugene for passenger service. Roseburg has the nearest airport, and the closest truck freight carriers are also in Roseburg.

EMERGENCY SERVICES
Fire Protection

Fire protection services consists of building and fire code preparation, enforcement, inspection, fire detection, firefighting. Fire protection service in the Winston urban area is provided by the Winston-Dillard Fire District. The District, established in 1962, is a special service district administrated by a five member Board of Directors.

The district operates a 24-hour manned fire station on S.E. Main Street in the City of Winston and a nightly manned substation at the south end of Dillard, along Co. Rd. 387. The substation is operated on a call-back alarm during the day. The district employs fifteen full-time fire personnel, which include a Chief, one assistant chief, 12 firemen, one secretary, and ten volunteers. Six fire fighters are certified Emergency Medical Technicians (EMT) II's, and seven are Paramedics. Fire fighters must have a minimum of 256 hours of training and 210 hours of additional training are needed to reach the Paramedic level. Advance life support ground ambulance and helicopter air rescue is also available. The district has a mutual aid agreement with Douglas County, Coos-Curry County, Douglas County Fire District #2, and Myrtle Creek Fire District. The agreement provides that, upon request, these districts will provide assistance to each other.

Equipment

The equipment owned by the district and its condition is as follows:

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<th>Capacity (GPM)</th>
<th>Condition</th>
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<tr>
<td>3-pumpers</td>
<td>1971 Ford</td>
<td>1250</td>
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<tr>
<td></td>
<td>1975 Ford</td>
<td>1250</td>
<td>excellent</td>
</tr>
<tr>
<td></td>
<td>1988 Spartan</td>
<td>1250</td>
<td>excellent</td>
</tr>
<tr>
<td>1-Tanker</td>
<td>1975 Freightliner</td>
<td>1000</td>
<td>excellent</td>
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Corridor Plans
For the OR 38 and OR 42 Corridors
Volume 1

OR 38-Reedsport to Interstate 5

OR 42-Coos Bay to Roseburg

Oregon Department of Transportation Region 6

June 2001
Corridor Plans
OR 38—Reedsport to Interstate 5
OR 42—Coos Bay to Roseburg
Volume 1

An element of the Oregon Transportation Plan
Adopted by the Oregon Transportation Commission

Implementation of these corridor plans depends on the availability of funding. Adoption of the plan by the Oregon Transportation Commission does not guarantee adequate financial resources to carry out the projects nor can the Commission commit the financial resources of other agencies or public bodies.

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This project was funded in part by the Federal Highway Administration U.S. D.O.T.

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FAX: (541) 597-3547
Acknowledgements

Oregon Transportation Commission
Steven Corey, Chair
Stuart Foster
John Russell
Gail Achterman
Randy C. Papé

ODOT appreciates the efforts of the Corridor Plan Management Team in helping to create the OR 38 and OR 42 Corridor Plans.

Corridor Plan Management Team

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<tr>
<td>City of Drain</td>
<td>Brad Borigo, Carl Patenode</td>
<td>Cow Creek Band of Umpqua Indians</td>
</tr>
<tr>
<td>City of Elkton</td>
<td>Linda Higgins, Alfred Tyson</td>
<td>Coos County</td>
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<tr>
<td>City of Reedsport</td>
<td>Jeff McIlvenna</td>
<td>Douglas County</td>
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<tr>
<td>Confederated Tribes of Coos, Lower Umpqua, Sluslaw</td>
<td>Gregory Norton</td>
<td>URCOG</td>
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<tr>
<td>City of Coquille</td>
<td>Terrence O'Conor</td>
<td>Coquille Indian Tribe</td>
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<tr>
<td>City of Myrtle Point</td>
<td>Arthur Schmidt</td>
<td>BLM</td>
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<td>City of Powers</td>
<td>Terry North</td>
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<tr>
<td>City of Winston</td>
<td>Bruce Kelly, Jim McClellan</td>
<td>City of North Bend</td>
</tr>
<tr>
<td>City of Roseburg</td>
<td>Dan Huff</td>
<td>Oregon Int'l Port of Coos Bay</td>
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Consultants for Initial Plan Elements

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Graham Carey
Don Galligan

Jeanné Lawson Associates
Jamie Damon

Oregon Department of Transportation Staff

Region 3 Planning Unit
Ken Norton
Rick Williams
Mark Leedom

Statewide Corridor Planning Manager
Dick Reynolds
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<td>1.3 Overview of the Corridor Plan Documents</td>
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<td>2.4 General Traffic Trends</td>
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<td>4.3 Regional Connectivity</td>
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<td>4.5 Roadway Conditions and Safety</td>
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<td>4.6 Environmental Impacts</td>
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<td>4.7 Land Use Impacts</td>
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<td>4.9 Proposed Improvement Projects on OR 38</td>
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<td>5.4 Congestion</td>
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<td>5.5 Roadway Conditions and Safety</td>
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<td>5.9 Proposed Improvement Projects on OR 42</td>
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This document contains both the adopted OR 38 and OR 42 corridor plans, including a summary of background data, general management objectives for both corridors, and identified needs and prioritized solutions for each corridor. A second volume is available for each corridor which contains a detailed discussion of existing conditions and corridor resources and a more complete discussion of issues and policy relating to various plan topics. These Supporting Documentation volumes are adopted by reference and contain more detailed discussions of the corridor solutions. Please consult the supporting documentation for all data and analysis.
Executive Summary

Introduction to Corridor Planning

Purpose and Scope of the OR 38 and OR 42 Corridor Plans

The OR 38 and OR 42 Corridor Plans are the product of a cooperative effort between the Oregon Department of Transportation (ODOT), local and regional governments, other agencies and interest groups, and the general public. The purpose of the plans is to outline how ODOT will manage each highway over a twenty-year period. The plans also discuss how non-ODOT services and facilities can be improved to coordinate with the overall corridor transportation system.

Because the OR 38 and OR 42 highways serve much the same role and essentially the same region, this summary addresses conditions, policy, and proposed projects for both corridors.

The Corridor Plans are based on:

- A description of current and future conditions on each corridor, as they relate to the function of the highway, including several transportation modes, roadway conditions, environmental factors, and land use concerns;
- A summary of existing state and local policy direction;
- An implementation program of planned (funded) and other recommended (unfunded) projects and general goals and objectives for management of each corridor; and
- Mapping for roadway conditions and identified improvement projects.

The basis for solutions included in the corridor plans is a review and analysis of relevant conditions and state and local policy. This analysis, conducted at a general planning level, provides an initial accounting of needs and potential solutions along each corridor. However, this level of analysis does not provide sufficient detail to fully commit to construction of all projects. In other words, adoption of the corridor plans does not ensure that the identified projects will be constructed. The plan does, however, identify and prioritize the most appropriate solutions to meet the identified long-term needs of the corridor. The plan provides the initial planning level analysis for getting solutions realized by minimizing and possibly avoiding environmental and land use conflicts later when the project is being designed.

In all cases, funding constraints will determine whether a solution will be implemented. ODOT funding is committed through relatively short timeframes (e.g., the four-year Statewide Transportation Improvement Program, or STIP, which is updated every two years), and cannot realistically be used to identify projects identified through a 20-year plan. While we can indicate through the planning analysis which projects are likely to
be needed in the future and what their relative priorities are, we cannot say with certainty which will be constructed.

For projects not programmed into the STIP, the corridor plan provides a list of prioritized solutions which are based on factors such as anticipated travel projections, roadway deficiencies, pavement conditions, etc. and which are likely to be needed to ensure that transportation facilities and services will continue to function properly into the future. The projects have been given a "High", "Medium", or "Low" ranking to indicate an initial priority and to establish which projects should be pursued first.

At this level, ODOT will work toward implementation of these projects. However, in most cases, before ODOT can commit to funding these projects, they will require additional analysis to validate their appropriateness and/or to consider conditions that have changed since the corridor plan analysis was completed. As a result, these unfunded projects cannot be considered planned projects until they are programmed into a transportation improvement program such as the STIP, an ODOT District Maintenance budget, or local Comprehensive Plan and cannot be used as mitigation for land use actions or development until that time. All Modernization projects must be amended into the appropriate local Transportation System Plan or Capital Improvement Program before being considered for the STIP.

Overview of the Corridor Planning Process

The corridor plans were developed through the identification of general issues and specific needs on each corridor. These were analyzed in light of existing state and local policy and existing and future conditions and needs. Specific management objectives were identified and incorporated into the plans. The Corridor Plan Management Team (CPMT), made up of representatives from local jurisdictions, regional Indian tribes, and the BLM, provided initial input on issues relevant to the corridors.

Based on the analysis of existing conditions, ODOT identified a general list of improvement needs on each corridor. Potential projects were evaluated in terms of safety, capacity, travel times, environmental constraints, and whether current standards are met. As projects were identified, they were expected to (a) address an identified need or deficiency; (b) meet conditions or minimums established by state and local plans and the various ODOT Management Systems; and (c) implement the corridor plan goals of safety, efficient operation, and local access. As the plans were developed, the CPMT provided input on the analysis, the management objectives, and the implementation projects.

The corridor plan has been reviewed by staff of each jurisdiction on the corridor and is supported by each of the jurisdictions along the corridor, both Coos and Douglas counties, and the major economic centers of Coos Bay, North Bend, and Roseburg.

Through adoption of the Volume I document, the Oregon Transportation Commission (OTC) has adopted both the OR 38 Corridor Plan and the OR 42 Corridor Plan. The OR 38 Corridor Plan Supporting Documentation and the OR 42 Supporting Documentation are both adopted by reference through the adoption of Volume I. (Note: This statement will be placed in Normal text once the plan is adopted.)
Overview of the Corridor Region

A Regional Perspective

Both OR 38 and OR 42 play an important role in the communities of Coos and Douglas Counties. These highways work together with Interstate 5, US 101 and a number of other state and local roads to form a regional transportation system that serves both personal and freight travel. Just as importantly, OR 38 and OR 42 support one another, serving as alternative routes through the coast range when travel along the other is hindered by construction or natural disaster. Both routes are designated as Statewide Freight Routes on the National Highway System as they serve an important economic role in terms of freight movement between the coast and Interstate 5.

OR 38 is generally considered a good route for all types of travel through the Coast Range because it is relatively flat with only two small hills to negotiate, and with the exception of the section between Reedsport and Scottsburg, provides many passing opportunities. While OR 42 has historically been considered a slow, winding route that can be difficult to negotiate. Improvements to the highway over the last 25 years have helped to widen and straighten the highway, provide safe shoulders, and provide passing opportunities, making it a much safer and faster route over the Coast Range.

Future Traffic Trends

As in the past, regional changes in population and the economy will affect traffic on both corridors. In general, the counties that make up the Corridor Region (Coos and Douglas) have experienced slow population growth over the last 20 years (less than two percent per year). This relatively low growth rate is expected to continue over the next 20 years.

The region's employment base has historically been tied to natural resources, such as timber and fisheries, and to recreational uses. Because of declines in resource-dependent industries, the economy of the corridor region has been outpaced by the state of Oregon as a whole. The economy of Coos County in particular has been slow when compared to the state, or even the counties of southwestern Oregon. This trend is expected to continue over the next 20 years, with overall employment growing slowly, but manufacturing employment continuing to decline or remain stagnant in both counties. These trends will likely be reflected in traffic volumes on both highways.

Tables E-1 and E-2 show expected traffic volumes on OR 38 and OR 42, respectively. In general, traffic volumes on OR 38 are expected to remain at low to moderate levels, averaging between 3,300 and 7,900 vehicles each day. Expected increases in Average Daily Traffic (ADT) is not expected to significantly impact the highway overall in terms of congestion or safety. Growth on OR 42 is expected to effect the operation of

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1 The expected growth rate has been established by ODOT's Transportation Planning Analysis Unit (TPAU) and is based on differing expectations for each counter location.
the highway in some locations, with volumes reaching 25,000-30,000 on the eastern end. However, the majority of the corridor will continue to see moderate traffic volumes. With the exception of the Winston to Interstate 5 segment and a short segment west of Coquille, increases in traffic on the highway are not expected to be beyond acceptable congestion or safety standards.

Table E-1
Projected Average Daily Traffic on OR 38, 1998-2020

<table>
<thead>
<tr>
<th>Location</th>
<th>MP</th>
<th>1998</th>
<th>Projected 2020</th>
<th>Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>East of US 101 (Reedsport)</td>
<td>0.01</td>
<td>7,000</td>
<td>7,874</td>
<td>1</td>
</tr>
<tr>
<td>Reedsport City Limits (east)</td>
<td>1.62</td>
<td>4,400</td>
<td>5,499</td>
<td>1</td>
</tr>
<tr>
<td>Loon Lake Road (east)</td>
<td>13.21</td>
<td>3,400</td>
<td>3,825</td>
<td>1</td>
</tr>
<tr>
<td>Scottsburg Automatic Traffic Recorder</td>
<td>23.65</td>
<td>3,700</td>
<td>5,673</td>
<td>2</td>
</tr>
<tr>
<td>Elton City Limits (east)</td>
<td>35.87</td>
<td>4,300</td>
<td>6,593</td>
<td>2</td>
</tr>
<tr>
<td>Parker Creek</td>
<td>43.78</td>
<td>2,400</td>
<td>3,342</td>
<td>3</td>
</tr>
<tr>
<td>Drain City Limits (west)</td>
<td>50.20</td>
<td>4,200</td>
<td>5,014</td>
<td>3</td>
</tr>
<tr>
<td>Drain downtown (B Ave.)</td>
<td>50.41</td>
<td>5,300</td>
<td>6,328</td>
<td>4</td>
</tr>
<tr>
<td>West of Interstate 5</td>
<td>56.83</td>
<td>4,200</td>
<td>5,014</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: ODOT Traffic Volume Tables, 1998; ODOT Transportation Planning Analysis Unit projections to 2017 extrapolated to 2020

Table E-2
Projected Average Daily Traffic on OR 42, 1998-2020

<table>
<thead>
<tr>
<th>Location</th>
<th>MP</th>
<th>1998</th>
<th>Projected 2020</th>
<th>Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.70 mile south of Oregon Coast Highway (US 101)</td>
<td>0.70</td>
<td>9,700</td>
<td>11,821</td>
<td>1</td>
</tr>
<tr>
<td>South city limits of Coquille</td>
<td>12.80</td>
<td>8,900</td>
<td>14,845</td>
<td>1</td>
</tr>
<tr>
<td>South city limits of Myrtle Point</td>
<td>21.83</td>
<td>5,100</td>
<td>6,697</td>
<td>1</td>
</tr>
<tr>
<td>Myrtle Creek Road</td>
<td>30.49</td>
<td>4,400</td>
<td>6,545</td>
<td>2</td>
</tr>
<tr>
<td>Coos-Douglas County Line</td>
<td>44.95</td>
<td>3,800</td>
<td>5,953</td>
<td>2</td>
</tr>
<tr>
<td>East Camas Road</td>
<td>56.10</td>
<td>4,400</td>
<td>5,784</td>
<td>3</td>
</tr>
<tr>
<td>Brockway Automatic Traffic Recorder</td>
<td>70.51</td>
<td>6,100</td>
<td>8,658</td>
<td>3</td>
</tr>
<tr>
<td>Dillard Road (OR 99)</td>
<td>73.47</td>
<td>16,700</td>
<td>20,626</td>
<td>4</td>
</tr>
<tr>
<td>S. W. Camas Road (Kelley's Korner)</td>
<td>75.71</td>
<td>20,800</td>
<td>31,650</td>
<td>4</td>
</tr>
<tr>
<td>0.25 mile southwest of I-5</td>
<td>76.40</td>
<td>17,100</td>
<td>28,559</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: ODOT Traffic Volume Tables, 1998; ODOT Transportation Planning Analysis Unit projections to 2017 extrapolated to 2020
Implications for the OR 38 and OR 42 Corridors

In short, both OR 38 and OR 42 serve both personal and freight traffic well. With the exception of only a few locations on OR 42, both highways operate well within acceptable capacity standards. Similarly, with a few notable exceptions, the number of accidents and accident rates occurring on each highway is lower than the average for similar non-interstate highways in Oregon. These trends are expected to continue into the future and both highways will provide relatively safe and efficient access between the coast and Interstate 5.

General increases in population in the corridor region will result in a natural increase in traffic on both highways. As the regional population increases, traffic volumes will increase, both in terms of through-traffic, as well as in local traffic on the highway. However, significant changes in traffic volume along the corridors will be tied to economic changes in the Corridor Region, most likely in the Coos Bay/North Bend area. If major employers move into the region, traffic volumes may see a noticeable increase. If the region’s economy remains relatively stable, or experiences smaller, occasional increases in economic activity over the 20-year planning horizon, traffic volumes will see only slow, steady increases. Non-manufacturing industries, such as those tied to tourism, will have less of an impact on the highway both in terms of number of trips generated and in the type of vehicles using the highway.

OR 38 serves as a route for tourist traffic traveling to the Oregon Coast, as well as to fishing and water recreation opportunities on the Umpqua River and at Loon Lake. OR 42 also serves tourist traffic, although the percentage of such traffic is not believed to be as high as on OR 38. However, because neither route is the only or even the primary tourist route to the region and, in the case of OR 38, does not directly access an interior population center, it is likely that tourism traffic will not increase rapidly on either corridor.

In conclusion, based on historic and expected trends in population and employment, traffic on the OR 38 Corridor will not increase significantly over the next 20 years. Residents in the urban areas may notice some increase in traffic volumes at local intersections over time, but this is not expected to cause any capacity problems in the future.

Growth in traffic volume on OR 42 will not be significant in the rural areas. Growth in Coquille and Myrtle Point may be noticed by residents, but is not expected to overwhelm the system. Growth in the Winston/Green area may negatively impact the highway. A number of intersections in the eastern portion of the corridor are expected to become congested by the year 2020.

Corridor Management Direction

ODOT Corridor Plans are designed to support the Oregon Transportation Plan and related modal and topic plans. In general, the management direction for the corridors must come from these guiding documents and other state facility guidelines. To a large extent, the corridor plan objectives summarize existing statewide policy and, as appropriate, provide more specific management direction. At the same time, the plans
are consistent with local Comprehensive Plans or Transportation System Plans (TSPs), as well as other local, regional, or mode-specific transportation plans, including special district or public agency plans. The CPMT has played an important role in ensuring that local policy is accurately reflected in the Corridor Plans.

The general management direction outlined below summarizes the overall goals ODOT and the local communities hope to meet in maintaining and improving both the OR 38 and the OR 42 corridors. In general, both the overall management direction and the specific management objectives are similar for these two corridors; only in a few cases are they different. More detailed management objectives for each topic area are presented in the combined corridor plan document.

General Management Direction

The OR 38 and OR 42 corridors serve two primary roles:

1. As the primary routes for personal and freight/business travel between Interstate 5 and Coos County and the South Coast; and

2. As Main Street for the cities of Reedsport, Elkton, Drain, and Winston. The highways also serve as the primary arterials for the cities of Coquille and Myrtle Point and for the unincorporated communities of Scottsburg, Wells Creek, Camas Valley, and the Green Unincorporated Urban Area.

The overall management direction for each corridor seeks to balance these competing needs through these management goals. These are summarized in the statements below.

- **Safety.** ODOT is charged with ensuring the traveling public is provided a safe and efficient transportation system.

- **Freight movements and economic development.** As Statewide Freight Routes, both highways serve as a primary link between the South Coast and the I-5 corridor. As a result, the freight function of the OR 38 and OR 42 Corridors must be protected and enhanced. Specifically, maintaining travel times and highway capacity will ensure efficient freight movement and therefore support the regional economy.

- **Local Transportation Needs.** The highways will continue to serve as primary arterials in the cities along the Corridor. Providing access to local land uses and adequate pedestrian facilities will continue to be a consideration in the operation of both facilities.

These goals are to be met through a number of facility improvements and by managing accesses throughout the Corridor. Access management strategies have been shown to increase safety while improving travel times and conditions for both through- and local traffic.

Land uses along both corridors will continue to be important to the development of the transportation system, both in terms of ensuring that future development can be adequately served and that development does not overwhelm the existing and planned transportation system. Local Comprehensive Plans and state land use planning goals rather than the corridor plans will guide land use decisions. ODOT will continue to work with jurisdictions as appropriate to address development along the highways.
At the same time, ODOT can designate certain highway segments as Special Transportation Areas (STA) to help balance local access with through-movement on the highway. The designation is intended to allow less restrictive access spacing and capacity performance standards on the highway within the STA, in conjunction with tighter controls outside of the designated area.

Currently, the city of Reedsport has been identified as a potential STA and will work with ODOT to determine if the benefits of an STA are great enough to move ahead with the designation. This work will be completed in conjunction with the completion of the city’s Transportation System Plan (TSP). The city of Drain has also been designated as a potential STA. ODOT and the city will refine this designation in the future and will outline specific issues to be addressed through a cooperative STA agreement.

The Urban Business Area (UBA) designation, may be appropriate for a segment of the city of Winston. The UBA designation provides less benefit to the community but also does not require stricter standards outside of the designated area which accompany the STA. ODOT and the city of Winston will refine this UBA in conjunction with completion of the city’s TSP.

An additional designation established through the OHP is the Expressway, which is applied to highway segments that must be maintained for high-speed through-traffic. Local access is a secondary consideration within an Expressway segment.

No segments of OR 38 have been designated as an Expressway. The following sections of OR 42 have been designated as Expressways by the OTC:

- OR 42, US 101 to W. Central in Coquille (mile points 0.00 to 9.97);
- OR 42, Filter Plant Road, Coquille to Ash Street, Myrtle Point (mile points 13.19 to 20.53); and
- OR 42, Lookingglass Road to Interstate 5 Exit 119 (mile points 73.88 to 77.17).

In addition, the section of US 101 between OR 42 and Bunker Hill, south of Coos Bay (mile points 239.89 to 244.27), has also been designated as an Expressway segment. A management plan will be developed for these segments in FY 2003.

While both corridors will continue to be dominated by the automobile, the OR 38 and OR 42 corridor plans contain objectives encourage opportunities for additional use of alternative modes. In particular, continued rail freight service to both the Bay Area and to the Roseburg/Winston area are important to the overall transportation. Transit, bicycling and pedestrian modes can play a role in the Corridor urban areas by providing options for the transportation disadvantaged, low-income, and those who prefer to use other modes for their transportation.
Improvement of OR 38 and OR 42

Introduction
As mentioned above, both OR 38 and OR 42 currently serve both personal and freight travel effectively and are expected to continue to do so through the next 20 years. This does not mean, however, that improvements are not needed. Focusing on improving the safety and efficiency of travel on the highway, as well as on mobility and access, a number of potential improvements have been identified through the planning process.

A key step in developing the corridor plans was to examine existing and anticipated needs and identify potential improvement projects that will address those needs. However, while ODOT can generate general revenue projections, no accurate forecast of funding for a given highway can be made. This makes it difficult to prioritize projects beyond funding identified in the current STIP and perhaps a few years beyond. As a result, only those projects in the corridor plans that are programmed into the STIP can be considered “planned” projects and therefore be used for mitigation for future land use actions or development. All Modernization projects must be amended into the appropriate local Transportation System Plan or Capital Improvement Program before being considered for the STIP. The various Management Systems within ODOT are responsible for forwarding other project types to the STIP.

Inclusion of a project in the corridor plan does not ensure that it will be forwarded to the STIP, nor does it represent a commitment by ODOT or any local government to fund, allow, or construct that project. Further, it is important to remember that while ODOT has committed funds to construct projects that are in the STIP, changing project budgets or unanticipated conditions such as environmental constraints may cause some projects to be altered or cancelled.

Project Funding
ODOT funding is divided up into several categories, each having specific definitions of qualifying projects and limits on how the funds can be spent. Below is an overview of the primary types of ODOT highway projects. Projects recommended in the corridor plans fall within one of these categories, although at times it is possible to use two or more types of funding to address a problem location.

Modernization projects are designed to add capacity to the highway system to facilitate existing traffic and/or accommodate projected traffic growth. These projects center on the addition or widening of travel lanes, bridge widening, etc.

Preservation includes improvements to extend the life of existing facilities without increasing its capacity. Preservation projects include work such as paving, striping, and reconstruction of the highway without widening.

Bridge projects include bridge reconstruction or replacement, painting, seismic retrofitting, and overpass screening, as well as major work on tunnels and large culverts.
Maintenance projects cover many areas relating to the appearance and functionality of the highway system, including surface repairs, drainage work, vegetation removal, minor structural work, etc.

Operations projects increase the efficiency of the highway system, leading to safer travel and greater system reliability. Operations programs include interconnected traffic signal systems, new traffic signals, signs, Intelligent Transportation System features, and rock fall and slide repairs.

Safety focuses on investments that address priority hazardous highway locations and corridors, in order to reduce the number of fatal and serious injury crashes. Projects funded through this program must meet strict benefit/cost criteria. Safety projects may include access management features, intersection realignment, guardrails, illumination, signing, rumble strips, and railroad crossing improvements.

Expected Funding
The needs identified through the corridor plans far exceed even generous revenue projections. For example, over the last two STIP periods, the Southwest Area has received about $5.8 million each 4-year funding cycle for Modernization improvements. Not accounting for inflation or declining revenues, this would result in about $29 million over 20 years for Modernization, for the entire Southwest Area. However, funding for Modernization projects is not allocated directly to each highway. Instead, a target budget is established for the Southwest Area of Region 3, which includes all of Coos, Curry, and Douglas counties. These Modernization funds must address needs on US 101, OR 38, OR 42, OR 138, and some needs associated with Interstate 5.

At the same time, the OR 38 and OR 42 corridor plans identify $56.4 million in Modernization needs over 20 years, far beyond the amount available for the entire Southwest Area. Put another way, it would require all of the Modernization funding that is currently received for the entire Southwest Area over the next 20 years to meet the needs identified on just OR 42.

Other project types, such as Bridge, Safety, Operations, and Preservation, are funded through ODOT's Management Systems, at either the Region or Statewide level. Again, funding levels for these projects are not established beyond the current STIP and historical spending is not an accurate indicator of what funding will be available in the future. Further, project priorities are established every two years in conjunction with the STIP and then updated as needed in the interim. The corridor plan cannot show all of the projects that may be funded through these Management Systems; nor will the corridor plans be updated on a regular basis to reflect changing priorities.

Table E-3 shows the total cost of projects in the current STIP and for projects proposed in the draft STIP for both OR 38 and OR 42. Approximately $6.5 million have been committed to OR 38 improvements and $7.4 million on OR 42 during the current STIP.
Table E-3
OR 38 and OR 42 Corridor Plans

<table>
<thead>
<tr>
<th>Funding Commitment</th>
<th>OR 38 Total</th>
<th>OR 42 Total</th>
<th>Total for Both Corridors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2003 STIP</td>
<td>$6,453,000</td>
<td>$7,436,000</td>
<td>$13,889,000</td>
</tr>
<tr>
<td>Draft 2002-2005 STIP</td>
<td>$2,348,000</td>
<td>$1,496,000</td>
<td>$3,844,000</td>
</tr>
</tbody>
</table>

Table E-4 shows the total cost of all unfunded projects identified in the OR 38 and OR 42 corridor plans. The cost of addressing the needs identified in the two plans far exceeds even generous estimates of future revenues for the Region. A total of $71.5 million in projects are identified for OR 38 over the 20-year planning horizon, while nearly $64 million in improvements are identified for OR 42.

Table E-4
Estimated Costs for Unfunded Projects, 2000-2020
OR 38 and OR 42 Corridor Plans

<table>
<thead>
<tr>
<th>Funding Type</th>
<th>OR 38 Total</th>
<th>OR 42 Total</th>
<th>Total for Both Corridors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modernization</td>
<td>$25,600,000</td>
<td>$29,850,000</td>
<td>$55,450,000</td>
</tr>
<tr>
<td>Safety</td>
<td>$27,520,000</td>
<td>$10,775,000</td>
<td>$38,295,000</td>
</tr>
<tr>
<td>Bridge</td>
<td>$15,600,000</td>
<td>$2,000,000</td>
<td>$17,600,000</td>
</tr>
<tr>
<td>Operations</td>
<td>$750,000</td>
<td>$12,732,000</td>
<td>$13,482,000</td>
</tr>
<tr>
<td>Preservation</td>
<td>$750,000</td>
<td></td>
<td>$750,000</td>
</tr>
<tr>
<td>Bike and Pedestrian</td>
<td>$1,050,000</td>
<td>$505,000</td>
<td>$1,555,000</td>
</tr>
<tr>
<td>Maintenance</td>
<td>$0</td>
<td>$425,000</td>
<td>$425,000</td>
</tr>
<tr>
<td>Local Projects</td>
<td>$0</td>
<td>$7,550,000</td>
<td>$7,550,000</td>
</tr>
<tr>
<td>Planning</td>
<td>$280,000</td>
<td>$350,000</td>
<td>$630,000</td>
</tr>
<tr>
<td>Total</td>
<td>$71,550,000</td>
<td>$64,187,000</td>
<td>$135,737,000</td>
</tr>
</tbody>
</table>

Source: ODOT Region 3 Planning, 2000
Note: Costs shown do not include STIP or draft-STIP projects

Project Prioritization
Projects in the plan have been given a "High", "Medium", or "Low" priority ranking based on existing and expected needs, as well as the seriousness of the need or deficiency. Projects are only prioritized within each funding type. For example, the Modernization projects are prioritized only within that group; Safety projects are prioritized as a group; and so on.

Priorities in the plans are only relevant to each particular highway and only represent a "snapshot" of conditions at the current time. These priorities do not necessarily reflect...
priorities for the entire Southwest Area or for Region 3. Further, changing roadway conditions and revenue streams may cause plan priorities to change in the future. The project lists will primarily serve as a first cut analysis of need that will be forwarded for additional analysis when the SWACT or the Management Systems are evaluating projects for future funding. The project list for each corridor is supported by the CPMT.

**Description of Corridor Projects**

Tables E-5 lists projects for OR 38 and Table E-6 presents proposed projects for OR 42. Both lists show project locations, a brief description, estimated costs, and project priorities. Detail regarding the modes affected by each improvement, and the general types of benefits to be gained if the project is built can be found in the combined OR 38/OR 42 Corridor Plans document, as well as in the Supporting Documentation for each corridor.
### Table E-6
OR 42 List of Planned and Recommended Projects Priorities by Funding Type

<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Begin MP</th>
<th>End MP</th>
<th>Description</th>
<th>Problem Definition/Justification</th>
<th>Estimated Total Cost</th>
<th>Project Type</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Overland Road to China Creek Rd.</td>
<td>4.00</td>
<td>7.80</td>
<td>Overlay, widen shoulders, left turn lane, guardrail and bridge transitions</td>
<td>Pavement deteriorating</td>
<td>$2,934,000</td>
<td>Preservation</td>
<td>2002</td>
</tr>
<tr>
<td>13</td>
<td>Georgia-Pacific Mill Site</td>
<td>11.29</td>
<td>12.37</td>
<td>Provide access to mill site for commercial development</td>
<td>Local Street Network Project</td>
<td>$1,000,000</td>
<td>Local Street Network</td>
<td>2002</td>
</tr>
<tr>
<td>23</td>
<td>Middle Fork Coquille River Bridge</td>
<td>23.40</td>
<td>30.00</td>
<td>Grind and Inlay + full width overlay; Replace guardrail and bridge connections</td>
<td>Pavement deteriorating</td>
<td>$2,048,000</td>
<td>Preservation</td>
<td>2003</td>
</tr>
<tr>
<td>62</td>
<td>Winston to I-5</td>
<td>73.20</td>
<td>77.20</td>
<td>Grind full width and overlay, replace guardrail and bridge connections</td>
<td>Pavement deteriorating</td>
<td>$1,454,000</td>
<td>Preservation</td>
<td>2003</td>
</tr>
</tbody>
</table>

**Total Cost STIP Projects** $7,436,000

<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Begin MP</th>
<th>End MP</th>
<th>Description</th>
<th>Problem Definition/Justification</th>
<th>Estimated Total Cost</th>
<th>Project Type</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Glen Alken Cr. to N. Fork Coquille River Bridge</td>
<td>15.15</td>
<td>19.34</td>
<td>Grind and inlay, seal pavement</td>
<td>Pavement deteriorating</td>
<td>$836,000</td>
<td>Preservation</td>
<td>2004</td>
</tr>
<tr>
<td>42</td>
<td>Bear Creek - BLM Road Rockfall</td>
<td>48.80</td>
<td>49.00</td>
<td>Repair rockfall</td>
<td>Rockfall repair needed</td>
<td>$660,000</td>
<td>Slide</td>
<td>2004</td>
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**Total Cost Draft STIP Projects** $1,496,000

<table>
<thead>
<tr>
<th>#</th>
<th>Location</th>
<th>Begin MP</th>
<th>End MP</th>
<th>Description</th>
<th>Problem Definition/Justification</th>
<th>Estimated Total Cost</th>
<th>Project Type</th>
<th>Year</th>
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<tbody>
<tr>
<td>7</td>
<td>Chrome Plant to Cedar Point</td>
<td>7.25</td>
<td>9.92</td>
<td>Widen highway to 4 lanes with left turn refuges; provide adequate shoulders</td>
<td>Only section between Myrtle Point and Coos Bay limited to 2 lanes; widening would facilitate freight movement and improve safety; Some work has already been completed, RW already owned; EA already completed.</td>
<td>$12,000,000</td>
<td>High</td>
<td>ODOT</td>
</tr>
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</table>

Continued...
<table>
<thead>
<tr>
<th>Project</th>
<th>Location</th>
<th>Begin MP</th>
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<th>Description</th>
<th>Problem/Definition/Justification</th>
<th>Estimated Total Cost</th>
<th>Priority</th>
<th>Sponsor</th>
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</thead>
<tbody>
<tr>
<td>29</td>
<td>East of Bridge - Passing lanes</td>
<td>31.20</td>
<td>32.80</td>
<td>Add westbound and eastbound passing lanes; straighten curve at mile point 32.10</td>
<td>Lack of passing opportunities through corridor slows travel times; addition of passing lanes would aid freight movements. Currently, distance between passing lanes in this segment do not meet Highway Design Manual recommendations</td>
<td>$2,900,000</td>
<td>High</td>
<td>ODOT</td>
</tr>
</tbody>
</table>
| 48      | Slater Creek passing lane | 45.64    | 46.54  | Add westbound passing lane and straighten curves | Distance between eastbound passing lanes greater than preferred standard from Highway Design Manual. 
resulting in long traffic queues. Passing lane would improve safety and shorten travel times. | $1,950,000 | High | ODOT |
| 60      | Lower Lookingglass Creek to Glenhart Ave | 72.52    | 73.20  | Construct 3-lane roadway from Lower Lookingglass Cr. to Glenhart Ave.; add sidewalks on south side from Snow to Glenhart and eliminate ditches; improve sidewalk on north side. Examine accesses to be consolidated or closed to improve safety. | V/C ratio expected reach 0.90 by year 2020 resulting in congestion; Highway does not match urban character, lacks sidewalks. Open drainage ditch on south side of highway. Numerous poorly-located accesses. | $2,500,000 | High | ODOT |
| 9       | Cedar Point Passing lane | 8.25     | 9.10   | Extend existing westbound passing lane to the west | Passing lane shorter than preferred standard in Highway Design Manual; 
Implement if Chromepaint section not widened to 4 lanes within 15-20 years. | $500,000 | Medium | ODOT |
| 21      | Coffee Cup Curve | 21.10    | 21.60  | Address poor vertical and horizontal geometry on new alignment; Solution should be combined with Maryland/B St. intersection alignment to the west | Curves are too severe, causing accidents and speeds of less than 30 MPH. | $5,000,000 | Medium | ODOT |
| 43      | Ireland Rd. to Benedict Rd. passing lane | 62.12    | 63.70  | Realign vertical curves and add eastbound passing lane; widen shoulders through section; improve drainage between MP 63.00 and 63.70 and secure drainage easements as needed. | Distance between eastbound passing lanes greater than preferred standard from Highway Design Manual, slowing travel times. Poor sight distances due to vertical and horizontal curve; shoulders are too narrow; drainage inadequate. | $2,000,000 | Medium | ODOT |

Continued...
<table>
<thead>
<tr>
<th>Proj</th>
<th>Location</th>
<th>Begin MP</th>
<th>End MP</th>
<th>Description</th>
<th>Problem Definition/Justification</th>
<th>Estimated Total Cost</th>
<th>Priority Within ODOT</th>
<th>Project Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>Brockway Road to Lookingglass Creek</td>
<td>71.73</td>
<td>72.52</td>
<td>Widen 2-lane roadway from Brockway Rd. to Lookingglass Creek, including Bridge #00805C; add left turn pockets at High School and others as needed; improve drainage.</td>
<td>Highway does not match urban character. Increased traffic in future years will lead to need for redesign and access management.</td>
<td>$3,000,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>56</td>
<td>Brockway Road intersection</td>
<td>71.73</td>
<td>71.73</td>
<td>Add left and right turn lanes on highway and local roads; signalize when warrants are met</td>
<td>Important freight intersection expected to fall below V/C standards; existing eastbound right turn lane is on private property; Per existing agreement, City of Winston will provide improvements in response to development north and south of the highway.</td>
<td>$600,000</td>
<td>High</td>
<td>ODOT</td>
</tr>
<tr>
<td>65</td>
<td>Lookingglass Rd. Intersection right turn</td>
<td>73.88</td>
<td>73.88</td>
<td>Create westbound right turn refuge to keep slowing vehicles from being overtaken in travel lane.</td>
<td>Westbound right-turning vehicles in 45 MPH travel lane.</td>
<td>$100,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>74</td>
<td>Kelly's Corner</td>
<td>75.72</td>
<td>75.72</td>
<td>Replace signal hardware &amp; adjust phasing; add left turn lanes on local roads, right turn lanes from 42 to local roads; improve vertical curve on local legs; move signs; consolidate accesses on local roads; replace intersection asphalt with concrete</td>
<td>Top 10 SPIS site; expected to fall below V/C standards in future; poor signal phasing and lack of turn lanes on local roads contribute to number of crashes; asphalt wears rapidly in high traffic location; poor accesses contribute to congestion</td>
<td>$750,000</td>
<td>High</td>
<td>ODOT</td>
</tr>
<tr>
<td>15</td>
<td>South Coquille business access</td>
<td>12.23</td>
<td>12.38</td>
<td>Create frontage road and consolidate accesses on north side of the highway; resolve parking and sign placement issues relating to R/W</td>
<td>Accesses poorly defined, poor drainage, no shoulder, poor pedestrian facilities, business signs and parking are on R/W.</td>
<td>$450,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>26</td>
<td>McMullen Curve</td>
<td>28.50</td>
<td>28.64</td>
<td>Realign curve; remove rock hazard on north side of highway</td>
<td>Severe curve signed at 40 MPH; rock wall creates rockfall hazard.</td>
<td>$1,000,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>27</td>
<td>Myrtle Creek Road west of Bridge</td>
<td>30.50</td>
<td>30.50</td>
<td>Add eastbound deceleration lane</td>
<td>Vehicles must slow for right turn in eastbound 55 MPH travel lane.</td>
<td>$150,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>30</td>
<td>Small Creek curve - east of Bridge</td>
<td>32.00</td>
<td>32.25</td>
<td>Realign curves; complete apart from Proj. #29 if latter is not built within planning horizon.</td>
<td>Severe curve signed for 35 MPH; Location has accident history.</td>
<td>$1,300,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>46</td>
<td>Reston Road Intersection</td>
<td>64.20</td>
<td>64.20</td>
<td>Realign Intersection</td>
<td>Intersection not at 90 degrees and poorly defined; accident history.</td>
<td>$250,000</td>
<td>Medium</td>
<td>ODOT</td>
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Total Cost Modernization Projects $29,850,000
<table>
<thead>
<tr>
<th>Proj #</th>
<th>Location</th>
<th>Begin Mile</th>
<th>End Mile</th>
<th>Description</th>
<th>Problem Definition/Justification</th>
<th>Estimated Total Cost</th>
<th>Priority within Project Type</th>
<th>Project Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>Hoover Hill Road curve</td>
<td>69.52</td>
<td>70.00</td>
<td>Strain the curve east of Hoover Hill Road</td>
<td>Vehicles must slow below 45 MPH.</td>
<td>$1,000,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>73</td>
<td>Grange Road Access</td>
<td>75.63</td>
<td>75.63</td>
<td>Delineate left and right turn lanes on local street; add right turn lanes from 42 onto local street; in future evaluate closing access and improving connections between Grange Rd. and Roberts Creek Rd. and Rolling Hills Rd.</td>
<td>High accident location—primarily rear-end on OR 42 or involve left-turn and through traffic on local street. Traffic growth on OR 42 likely lead to need to close intersection and construct alternative routes.</td>
<td>$750,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>1</td>
<td>Wall Gulch to Coos County Speedway</td>
<td>0.99</td>
<td>2.31</td>
<td>Realign horizontal curve and decrease grade separation at Wall Gulch; Remove overhead utilities from clear zone, widen shoulders, and reduce grade separation throughout</td>
<td>Sharp curve causes traffic to slow to 35 MPH &amp; is constrained by RR and slough on north and grade on south. Shoulders very narrow through section; utility poles in clear zone.</td>
<td>$2,500,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>4</td>
<td>Beaver Creek/Overland Road access</td>
<td>4.81</td>
<td>5.20</td>
<td>Close Overland Road access at MP 4.81 and close leg to Overland Road at MP 4.99; Realign south Beaver Creek Rd. access at MP 5.15</td>
<td>Only one access is needed to Beaver Creek Rd. Overland Rd is skewed and located on curve, leg to Overland is narrow and poorly defined.</td>
<td>$175,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>6</td>
<td>North Bank Road Intersection</td>
<td>6.65</td>
<td>6.76</td>
<td>Improve sight distances for westbound lanes and widen shoulders</td>
<td>Sight distances limited for westbound traffic traveling around sweeping curve. School busses stop partially on highway on curve, unseen by traffic. Wider shoulders would improve safety.</td>
<td>$300,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>20</td>
<td>Maryland Ave. Intersection</td>
<td>21.09</td>
<td>21.09</td>
<td>Realign intersection and close either Maryland or B St. Intersection; may be constructed in conjunction with Proj. #21 (Coffee Cup Curve)</td>
<td>Poorly designed intersection with two local streets accessing highway in close proximity; Maryland intersects at poor angle.</td>
<td>$250,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>28</td>
<td>Bridge intersection</td>
<td>30.69</td>
<td>30.69</td>
<td>Construct left turn pockets</td>
<td>Residents must cross highway to access school and local services.</td>
<td>$200,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>44</td>
<td>Benedict Road</td>
<td>63.74</td>
<td>63.74</td>
<td>Relocate Benedict road intersection approx. 0.02 miles to the west for better sight distance.</td>
<td>Move intersection to west to top of vertical curve and away from horizontal curves that limit sight distances.</td>
<td>$250,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>69</td>
<td>Helweg Rd. Intersection</td>
<td>74.34</td>
<td>74.34</td>
<td>Close Helweg Rd. Intersection; create frontage road connecting with OR 42 across from Pepsi Rd.</td>
<td>Sight distances from Helweg Rd. limited by South Umpqua River bridge. Move intersection to the west to provide safer access.</td>
<td>$750,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
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**Total Cost Safety Projects**: $10,775,000
<table>
<thead>
<tr>
<th>Project</th>
<th>Location</th>
<th>Begin MP</th>
<th>End MP</th>
<th>Description</th>
<th>Problem Definition/Justification</th>
<th>Estimated Total Cost</th>
<th>Priority</th>
<th>Project Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>Passing area west of Coos-Douglas county line - MP 44.00</td>
<td>43.84</td>
<td>44.09</td>
<td>Address accidents through area used for passing; improve sight distances on roadway and from wide shoulder area at MP 44.00</td>
<td>Section is used for passing although roadway is not straight and is constrained by river and steep slopes. Sharp curves located at each end of section require passing vehicles to slow suddenly. Accident history highest at MP 43.85 and at pull-out at MP 44.00</td>
<td>$1,000,000</td>
<td>High</td>
<td>ODOT</td>
</tr>
<tr>
<td>40</td>
<td>Curves west of Slater Creek Road - MP 46.00</td>
<td>45.90</td>
<td>46.60</td>
<td>Realign curves and widen roadway to address accidents and geologic hazards</td>
<td>Poor horizontal alignment; curves cause slowing to 30-40 MPH; cause accidents and slow travel times.</td>
<td>$1,500,000</td>
<td>High</td>
<td>ODOT</td>
</tr>
<tr>
<td>19</td>
<td>Spruce &amp; Harris Streets, Myrtle Point</td>
<td>20.58</td>
<td>20.77</td>
<td>Signal replacement and ADA requirements</td>
<td>Inadequate signal hardware and sidewalks. Latter need ADA improvements. Removed from current STIP due to funding constraints.</td>
<td>$657,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>33</td>
<td>Curves near Upper Rock Creek Rd.</td>
<td>41.00</td>
<td>43.85</td>
<td>Realign curve and widen roadway to address accidents and geologic hazards</td>
<td>Curves on section cause slowing to 25-30 MPH.</td>
<td>$3,700,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>37</td>
<td>Curves west of Coos-Douglas county line - MP 44.60</td>
<td>44.46</td>
<td>44.88</td>
<td>Realign curves and widen roadway to address accidents and geologic hazards</td>
<td>Sharp curves, particularly at MP 44.55 - 44.71 signed at 25-35 MPH; cause accidents and slows travel times.</td>
<td>$1,300,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>38</td>
<td>Curves at Coos-Douglas county line - MP 45.20</td>
<td>45.00</td>
<td>45.57</td>
<td>Realign curves and widen roadway to address accidents and geologic hazards</td>
<td>High accident location; curves signed at 25-35 MPH, slowing travel times; shoulders are inadequate; several rockfall locations; poor drainage causes roadway damage.</td>
<td>$1,900,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>63</td>
<td>OR 99 (Main St.)/OR 42 Intersection</td>
<td>73.37</td>
<td>73.37</td>
<td>Create left turn refuge from OR 42 to Cheetah Junction; provide signal control for traffic leaving Cheetah Junction; concrete intersection.</td>
<td>Right turn lane required through IGA between City and ODOT; access to Cheetah Junction is confusing--vehicles entering intersection from the east have no signal control; asphalt deteriorates rapidly through intersection</td>
<td>$500,000</td>
<td>Medium</td>
<td>ODOT</td>
</tr>
<tr>
<td>22</td>
<td>Myrtle Point Weigh Station</td>
<td>21.62</td>
<td>21.80</td>
<td>Move weigh station east of present location; If cannot be moved, provide better warning that approach is not a travel lane. Close or consolidate accesses located on approach</td>
<td>Approach to weigh station appears to be travel lane, causing hazard for drivers and those at weigh station; private accesses intersect approach.</td>
<td>$350,000</td>
<td>Low</td>
<td>ODOT</td>
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<table>
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<tr>
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<th>Priority</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>31</td>
<td>Sandy Creek rest area</td>
<td>37.45</td>
<td>37.45</td>
<td>Work with Coos County to improve Sandy Creek Rest Area to provide adequate restroom, water, and recreation facilities</td>
<td>No other rest areas exist on the corridor; existing facilities only provide portable restrooms; no water.</td>
<td>$175,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>39</td>
<td>Curves east of county line - MP 45.70</td>
<td>45.65</td>
<td>45.87</td>
<td>Realign curves and widen roadway to address accidents and geologic hazards</td>
<td>Poor horizontal alignment; curves cause slowing to 30-40 MPH; cause accidents and slow travel times.</td>
<td>$1,000,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>54</td>
<td>ODOT Weigh Station at Brackway</td>
<td>71.22</td>
<td>71.22</td>
<td>Realign and upgrade station entrances; provide separation from travel lane with guardrail</td>
<td>Substandard scale property.</td>
<td>$100,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>76</td>
<td>Grant Smith Road Intersection</td>
<td>76.22</td>
<td>76.22</td>
<td>Add additional left turn lane from OR 42 to Grant Smith Road at full development of surrounding area</td>
<td>Traffic Impact Study for new signal indicated need for additional left turn lane at full buildout.</td>
<td>$250,000</td>
<td>Low</td>
<td>ODOT</td>
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</table>

**Total Cost for Operations Projects**: $12,732,000

<table>
<thead>
<tr>
<th>Bridge</th>
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<th>Estimated Total Cost</th>
<th>Priority</th>
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<tbody>
<tr>
<td>12</td>
<td>Cunningham Creek Bridges</td>
<td>$250,000</td>
<td>Medium</td>
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<tr>
<td>5</td>
<td>Coaledo Bridge</td>
<td>$1,250,000</td>
<td>Low</td>
</tr>
<tr>
<td>25</td>
<td>Big Creek Rd. Intersection/Bridge #08936</td>
<td>$500,000</td>
<td>Low</td>
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</table>

**Total Cost for Bridge Projects**: $2,000,000

<table>
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<th>Maintenance</th>
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<th>Priority</th>
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</thead>
<tbody>
<tr>
<td>11</td>
<td>Cedar Point log ponds</td>
<td>$200,000</td>
<td>Medium</td>
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</table>

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<table>
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<tr>
<th>Project</th>
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<th>Description</th>
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<th>Priority</th>
<th>Priority Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Cedar Point Road</td>
<td>9.59</td>
<td>9.62</td>
<td>Improve sight distances to the west. Will be addressed in conjunction with Project #7 if built.</td>
<td>Primary access to mill; sight distance limited by vertical and horizontal curves to the west. Private accesses in vicinity add to difficulty of turning movement when several vehicles try to enter at same time.</td>
<td>$175,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
<tr>
<td>67</td>
<td>Lookingglass Rd. to I-5</td>
<td>73.89</td>
<td>76.50</td>
<td>Plant trees along OR 42 between Winston and I-5 to enhance aesthetics; right-of-way width provides space to plant trees away from roadway</td>
<td>Wide right-of-way and scattered development are unattractive. Trees would help delineate corridor and improve aesthetics</td>
<td>$50,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
</tbody>
</table>

**Total Cost Maintenance Projects**: $425,000

### Bicycle/Pedestrian

<table>
<thead>
<tr>
<th>Project</th>
<th>Location</th>
<th>Begin MP</th>
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<th>Description</th>
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<th>Estimated Total Cost</th>
<th>Priority</th>
<th>Priority Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Myrtle Point sidewalks</td>
<td>20.58</td>
<td>20.85</td>
<td>Improve and repair sidewalks between Spruce St. and Bothwick St. and from Maryland to Kinchloe.; Improvements should address surface condition, ADA requirements, and poor drainage.</td>
<td>Sidewalks in this section are in poor condition and portions flood during rainy season.</td>
<td>$200,000</td>
<td>High</td>
<td>Myrtle Point</td>
</tr>
<tr>
<td>59</td>
<td>West Winston multi-use path</td>
<td>72.10</td>
<td>72.30</td>
<td>Extend Winston multi-use path to Douglas High School</td>
<td>Multi-use path from residential areas of Winston does not extend to the high school. Extension will improve safety.</td>
<td>$120,000</td>
<td>High</td>
<td>Winston</td>
</tr>
<tr>
<td>14</td>
<td>Downtown Coquille to So. Coquille commercial area</td>
<td>12.15</td>
<td>12.37</td>
<td>Extend existing sidewalks on north side of highway from downtown to south commercial area</td>
<td>Portion of segment has older walks, portion near commercial uses has no walks. Sidewalks are warranted in this area and will improve pedestrian safety.</td>
<td>$100,000</td>
<td>Medium</td>
<td>Coquille</td>
</tr>
<tr>
<td>41</td>
<td>Camas Valley sidewalk</td>
<td>54.65</td>
<td>54.90</td>
<td>Upgrade and pave sidewalk on south side of highway</td>
<td>Gravel sidewalk makes walking difficult; does not accommodate wheelchairs or strollers.</td>
<td>$85,000</td>
<td>Low</td>
<td>ODOT</td>
</tr>
</tbody>
</table>

**Total Cost Bicycle/Pedestrian Projects**: $505,000

### Local Coordination

<table>
<thead>
<tr>
<th>Project</th>
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<th>Begin MP</th>
<th>End MP</th>
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<th>Priority</th>
<th>Priority Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>67</td>
<td>Winston Section Road and Pepsi Road intersections</td>
<td>74.19</td>
<td>74.35</td>
<td>Close Winston Section Rd. intersection and divert traffic to Pepsi Rd.; improve Pepsi Rd. to handle additional traffic</td>
<td>Sight distances limited to east by South Umpqua River bridge making turns from the local road onto the highway hazardous.</td>
<td>$350,000</td>
<td>High</td>
<td>ODOT</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Project</th>
<th>Location</th>
<th>Begin MP</th>
<th>End MP</th>
<th>Description</th>
<th>Problem Definition/Justification</th>
<th>Estimated Total Cost</th>
<th>Priority within Proj Type</th>
<th>Source</th>
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<tr>
<td>71</td>
<td>Rolling Hills Rd. intersection and off-system improvements</td>
<td>74.77</td>
<td>75.42</td>
<td>Extend Rolling Hills north to Happy Valley Rd.; Create frontage road between Rolling Hills Rd. and Jackie Ave. and close all accesses between Rolling Hills and Landers; Signalize intersection once warranted and when local roads are built</td>
<td>Development in area expected to cause V/C to fall near acceptable standard in future. Closure of Jackie Ave. and private accesses are needed to improve operation of hwy, but will increase congestion at Rolling Hills.</td>
<td>$2,700,000</td>
<td>High</td>
<td>Douglas County</td>
</tr>
<tr>
<td>61</td>
<td>Abraham Avenue Intersection</td>
<td>72.65</td>
<td>72.65</td>
<td>Provide left and right turn lanes at Abraham; City of Winston responsible for improvements as development occurs which affects highway</td>
<td>Development north and south of intersection may cause operation of intersection to deteriorate. Improvements will maintain safety and capacity.</td>
<td>$500,000</td>
<td>Medium</td>
<td>Winston</td>
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<tr>
<td>64</td>
<td>Winston off-system improvements - West and East side connections</td>
<td>72.65</td>
<td>74.88</td>
<td>Improve off-system connections from Lookingglass Road and OR 42 to encourage local traffic away from the highway; Improve connection between east Winston and Winston Section Road</td>
<td>Improved local street connections would lessen pressure of local traffic on OR 42; would improve safety on state facility and provide more direct local connections</td>
<td>$4,000,000</td>
<td>Low</td>
<td>Winston</td>
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**Total Cost Local Coordination Projects**: $7,550,000

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<tr>
<td>75</td>
<td>Transit connections in eastern portion of corridor</td>
<td>99.99</td>
<td>99.99</td>
<td>Update of transit feasibility study for Winston/Green/Roseburg area</td>
<td>Existing transit study does not contain forecast of demand or plan for transit in the area.</td>
<td>$50,000</td>
<td>High</td>
<td>Umpqua Public Transit</td>
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<td>77</td>
<td>OR 42 Expressway Plans</td>
<td>99.99</td>
<td>99.99</td>
<td>Create Expressway management plans for east and west Expressway segments</td>
<td>LOS, access, and safety concerns on US 101 must be balanced with freight, tourism, and local access functions</td>
<td>$150,000</td>
<td>High</td>
<td>ODOT</td>
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<tr>
<td>76</td>
<td>US 101: Management Plan</td>
<td>99.99</td>
<td>99.99</td>
<td>Examine capacity, safety, and function concerns on US 101 between OR 38 and OR 42</td>
<td>Management plans are required for segment of OR 42 designated as an Expressway</td>
<td>$150,000</td>
<td>High</td>
<td>ODOT</td>
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**Total Cost Planning Projects**: $350,000

**Total STIP & Draft STIP Projects**: $8,932,000

**Total Cost Non-STIP Projects**: $64,187,000

**Total Cost All Projects**: $73,119,000

Source: ODOT Region 3 Planning, 2000
1999
OREGON HIGHWAY PLAN

An Element of the Oregon Transportation Plan
Governor Kitzhaber and Citizens of Oregon

The Oregon Transportation Commission presents the 1999 Oregon Highway Plan, an innovative plan that will guide how the state highways are developed and managed over the next 20 years. The Plan reflects the work and ideas of hundreds of people including state legislators, representatives of cities, counties, state agencies, user groups and environmental organizations, and citizens.

The challenge facing Oregon is to develop and use the highway system successfully in the face of major population growth and limited resources. The Plan responds to the challenge by emphasizing:

- investments consistent with state and local community priorities;
- efficient management of the system to increase safety and extend its capacity;
- partnerships with other agencies and local governments;
- closer links between land use and transportation;
- closer links with other transportation modes; and
- use of new techniques to improve road safety and capacity.

The investment policy places the highest priority on safety and managing and preserving the physical infrastructure. With improved funding, the state would improve bridge and pavement conditions and decrease traffic congestion.

The Plan affects plans, programs and projects of the Oregon Department of Transportation and regional and local governments. The Transportation Planning Rule requires regional and local transportation system plans to be consistent with the Highway Plan. Highway mobility standards and access management standards became effective upon adoption of the Plan on March 18, 1999. Local transportation system plans adopted after January 1, 2000, must be consistent with the new standards.

The Transportation Commission thanks the members of the advisory committees who developed the goals and policies and all those who attended meetings on the Highway Plan or shared their comments in writing. The result is a major step toward meeting the challenges facing the state highway system.

Henry Haggblom
Chair
Oregon Transportation Commission
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This project was funded in part by the Federal Highway Administration, U.S. Department of Transportation.

Graphic Design provided by Mark Falby, ODOT Reprographic and Design Services
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Executive Summary

Oregon's state highways are a critical component of the state's transportation network. Oregonians rely on highways to go between the state's widespread cities, towns, parks, forests, and businesses. Oregon's industries, including agriculture, timber, tourism, and technology, all depend on highways.

The Oregon Department of Transportation owns, operates, and maintains 7,483 miles (12,040 kilometers) of roads in every corner of Oregon. The state highway system is as diverse as Oregon itself—ranging from six-lane, limited access freeways with metered ramp entrances in the Portland area to the gravel road from Prineville to Brothers.

The challenge facing Oregon is to efficiently and effectively guide this diverse highway system into the next millennium. Oregon will continue to grow. Forecasts predict that the state will have 1.2 million new residents by 2020. About 72 percent of these new Oregonians will live in the Willamette Valley, placing additional stress on already overloaded highways, streets, and bridges. Oregon's population will get older as well, requiring creative solutions to ensure mobility for the older population. With limited funding, intelligent investment strategies must be devised to help Oregon meet its long-term goals.

The 1992 Oregon Transportation Plan created policies and investment strategies for Oregon's multimodal transportation system. The statewide plan called for a transportation system marked by modal balance, efficiency, accessibility, environmental responsibility, connectivity among places, connectivity among modes and carriers, safety, and financial stability.

The 1999 Oregon Highway Plan applies these general directives to the state highway system. The plan emphasizes:

- Efficient management of the system to increase safety, preserve the system and extend its capacity;
- Increased partnerships, particularly with regional and local governments;
- Links between land use and transportation;
- Access management;
- Links with other transportation modes; and
- Environmental and scenic resources.
The plan has three main elements: the Vision, the Policy Element, and the System Element.

The Vision

The Vision presents a vision of the state highway system in the future, summarizes the impacts of economic and demographic forecasts and technologies on highway transportation, and defines the policy and legal context. Oregon's population will grow during the next 20 years, and the total number of vehicle miles traveled will increase with population; however, the rise in vehicle miles traveled per capita which occurred in the 1980s has been moderating as employment growth has moderated and automobile ownership approaches saturation.

As more vehicles crowd the roads, new technologies will change how the transportation system operates. These technologies involve increased fuel efficiency, alternative fuels, "smart cars," and automated highways.

The Highway Plan operates in the context of the federal Transportation Equity Act for the 21st Century, the statewide land use planning goals, the Transportation Planning Rule and the State Agency Coordination Program. Its policies and investments support the Oregon Benchmarks and the Governor's Quality Development Objectives. The Highway Plan carries out the Oregon Transportation Plan and its policies and will be reflected in transportation corridor plans. Under the Transportation Planning Rule, regional and local transportation system plans must be consistent with the state transportation system plan, including the Highway Plan.

Policy Element

The Policy Element contains policies and actions under goals for System Definition, System Management, Access Management, Travel Alternatives, and Environmental and Scenic Resources.

- Goal 1. System Definition: To maintain and improve the safe and efficient movement of people and goods, and contribute to the health of Oregon's local, regional, and statewide economies and livability of its communities.

The System Definition policies define a classification system for the state highways to guide management and investment decisions. The state highway classification system divides state highways into five categories based on function: Interstate, Statewide, Regional, District, and Local Interest Roads. Expressways are a subset of these. Supplementing this base are four special purpose classifications that address land use, the movement of trucks, the Scenic Byway designation, and significance as a lifeline or emergency response route.
Specifically, the Land Use and Transportation Policy addresses the relationship between the highway and patterns of development both on and off the highway. It emphasizes development patterns that maintain state highways for regional and intercity mobility outside communities and compact development patterns in communities. It recognizes that state highways are the main streets of many communities and strives to maintain a balance between serving these main streets and the through traveler. The policy enables ODOT and local governments to treat main streets, community centers and commercial centers with special highway standards.

The Highway Mobility Standards Policy sets standards for mobility based on volume to capacity ratios that vary according to highway classification and urban and rural land use types. The Major Improvements Policy calls for improving system efficiency and management before adding capacity through new lanes, new highways or bypasses.

- **Goal 2. System Management:** To work with local jurisdictions and federal agencies to create an increasingly seamless transportation system with respect to the development, operation, and maintenance of the highway and road system that:
  - Safeguards the state highway system by maintaining functionality and integrity;
  - Ensures that local mobility and accessibility needs are met; and
  - Enhances system efficiency and safety.

The focus of the System Management policies is on making the highway system operate more efficiently and safely through public and private partnerships, intelligent transportation systems, better traffic safety, and rail-highway compatibility. The policies recognize that state and local partnerships can save resources; that the most cost-effective way to achieve improvements to the state highway system may be by assisting with off-system improvements; and that state and local governments should make interjurisdictional transfers to reflect the appropriate functional classification of a particular roadway. The Traffic Safety Policy calls for the state to continually improve safety for all users of the highway system and to address safety problems with treatments involving engineering, education, enforcement, and emergency medical services.

- **Goal 3. Access Management:** To employ access management strategies to ensure safe and efficient highways consistent with their determined function, ensure the statewide movement of goods and services, enhance community livability and support planned development patterns, while recognizing the needs of motor vehicles, transit, pedestrians and bicyclists.
Access management balances access to developed land with ensuring movement of traffic in a safe and efficient manner. Implementation of access management is essential if the safety, efficiency and investment of existing and planned state highways are to be protected. Implementation of access management techniques produces a more constant traffic flow, which helps to reduce congestion, fuel consumption and air pollution. The Highway Plan policies manage access through freeway interchange placement and design, driveway and road spacing and design, traffic signal location, median design and spacing of openings, connectivity and the use of turn lanes. The Access Management Policies set standards for these elements and outline a process for deviations and appeals.

- Goal 4. Travel Alternatives: To optimize the overall efficiency and utility of the state highway system through the use of alternative modes and travel demand management strategies.

Maintaining and improving the performance of the highway system requires that it function as part of a well-coordinated and integrated multimodal system. Intermodal connections for people and goods must be efficient, and appropriate alternative mode choices must be available to allow users to take advantage of the efficiencies inherent in each mode.

Alternative passenger modes, transportation demand management, and other programs can help reduce the single-occupant vehicle demand on the highway system, thus maintaining performance while increasing the person-carrying capacity of the system. Alternative freight modes and related strategies that strive for more efficient commercial vehicle operation will help the overall reliability and performance of the goods movement networks.

The Travel Alternatives Policies focus on reducing barriers to efficient freight movement, using alternative modes and High Occupancy Vehicle facilities to reduce congestion and expand capacity, and reducing demand through transportation demand management, including park-and-ride facilities.

- Goal 5. Environmental and Scenic Resources: To protect and enhance the natural and built environment throughout the process of constructing, operating, and maintaining the state highway system.

The Oregon Transportation Plan mandated “a transportation system that is environmentally responsible and encourages conservation of natural resources” (Policy 1D). The Environmental and Scenic Resources Policies recognize ODOT’s responsibilities for maintaining and enhancing environmental and scenic resources in highway planning, construction, operation, and maintenance.
System Element

The System Element begins with an analysis of 20-year state highway needs. It lays out investment strategies for taking care of highway needs and describes an implementation plan for the Highway Plan's goals, policies and actions.

Needs Analysis

Oregon's ability to implement highway programs in the future is grounded on the current condition of state highways, projected use of the system and projected transportation revenues.

Pavements and bridges form the basic infrastructure of the highway system. ODOT's goal is to maintain the infrastructure in good condition. To maintain the 7,483 miles (12,040 kilometers) of highways most cost-effectively, ODOT's goal is to have 90 percent of the highway pavements in "fair or better" condition. There are 2,551 bridges on the state highway system, with most built in the 1950s and 1960s. Over the 20-year planning period of the Highway Plan, the state must perform 1,553 major bridge replacement and rehabilitation projects to keep state-owned bridges at current conditions.

During the next 20 years, traffic volumes will increase with population increases, and more state highways will reach capacity during all or part of the day, affecting safety, livability and economic activity. Based on projected traffic volumes, ODOT has identified highway segments that need added lanes, new alignments, bypasses, and other major improvements. These capacity needs as well as needs for pavement preservation, bridges, operations, maintenance and other highway-related programs form the basis for the estimates of "feasible" needs. Feasible needs do not include improvements that are not possible for environmental, topographical, or financial reasons. Table A on page 6 summarizes the 20-year feasible needs analysis.

Revenue Projections

Although future revenues are difficult to project accurately, the Highway Plan makes general estimates so that investment strategies can be discussed. State highway funding comes from both state and federal taxes and fees.

State road user revenues provide approximately 65 percent of state transportation revenues. Oregon's State Highway Fund, which is constitutionally dedicated to highways, derives most of its revenue from three highway user taxes: vehicle registration fees, motor vehicle fuel taxes, and motor carrier fees (the weight-mile tax). If there are no rate increases, state highway revenues from these sources are expected to average approximately $424 million annually over the next 20 years, for a total of $8.1 billion.

Oregon also receives highway revenues from the federal highway program financed with proceeds from the federal fuel tax and other transportation-related user taxes and fees.
The Transportation Equity Act for the 21st Century (1998) will provide over $246 million annually for Oregon state highways for fiscal years 1998-2003. After this point, the revenue analysis assumes a gradual rise in federal highway funds that reflects an upper limit of what may be achievable under fixed tax rates. Using this assumption, federal highway funds for Oregon are estimated at a total of $5.8 billion over the next 20 years.
If revenues remain at current rates, there will be a shortfall of at least $15.2 billion over the 20-year planning period of the 1999 Highway Plan (Figure A, page 6). This means that all state highway needs will not be met unless highway funding rises.

Investment Policies and Scenarios

ODOT has developed policies and scenarios to use in planning and prioritizing programs at a range of potential funding levels—from no increases in current state fees supporting the highway system up to a level of funding that can support those highway needs which are feasible to implement.

At the lowest funding levels, the emphasis is on doing as much as possible to operate the highway system safely and efficiently and to preserve what already is in place, although conditions are likely to continue to deteriorate under such a strategy. With higher than minimum funding, infrastructure conditions could be stabilized or improved, and attention and resources could begin to be devoted to a wider range of goals. All analyses have shown that conditions and system performance improve rapidly as more resources above the current levels are added for any of the program categories.

To operate the highway system as efficiently as possible with limited abilities to expand the infrastructure, the Plan's investment policies emphasize capacity-adding programs that are not as costly as traditional modernization projects. These include interconnected traffic signal systems and other operational changes, Intelligent Transportation System technologies, access management, off-system improvements, and HOV lanes.

Safety is an element in all the major programs. For example, new extended freeway ramps in the modernization program ensure that traffic does not extend from an off-ramp of an interchange onto the freeway. The preservation program overlays rutted pavement that may cause drivers to lose control. The operations program installs traffic signals at dangerous intersections. The maintenance program fills potholes and replaces signs and illumination devices. The safety program addresses problems in priority hazardous locations and corridors.

The Highway Plan recognizes that it is critical to maintain alternate modes in order to limit or reduce demand on the highway system in congested areas. At the lowest funding levels, if highway conditions can only be maintained at status quo, it is in the State's interest to maintain at least status quo conditions for alternate modes.

Investment Policy and Priorities

It is the policy of the State of Oregon to place the highest priority for making investments in the state highway system on safety and managing and preserving the physical infrastructure.
ODOT's funding priorities will change according to changes in available revenues. The following scenarios establish funding priorities for highway-related plans and programs at four general funding levels; the first applies at the 1998 funding level. With increases in funding, ODOT will progress toward the fourth funding scenario.

1. With funding that does not increase with inflation and subject to statutory requirements and regional equity, address critical safety issues and manage and preserve existing infrastructure at 77 percent fair or better before adding capacity, as explained below:

   - Focus safety expenditures where the greatest number of people are being killed or seriously injured.
   - Fund modernization only to meet statutory requirements.
   - Preserve pavement conditions at 77 percent fair or better on all roads except for certain Regional and District Highways.
   - Do critical bridge rehabilitation and replace bridges only when rehabilitation is not feasible.
   - Fund operations to maintain existing facilities and services and extend the capacity of the system.

2. Invest to improve infrastructure conditions and to add new facilities or capacity to address critical safety problems, critical levels of congestion, and/or desirable economic development.

   - Address the highest priority modernization projects.
   - Move toward pavement conditions of an average 78 percent fair or better on all state highways.
   - Maintain Bridge Value Index (percentage of total replacement value) at 86 percent.

3. When critical infrastructure preservation, safety and congestion needs are met, pursue a balanced program of additional high priority modernization projects and preservation of infrastructure.

   - Move toward modernization funding to meet 55 percent of feasible needs.
   - Bring pavement conditions up to an average 84 percent fair or better level on all state highways.
• Maintain bridge conditions at 87 percent of total replacement value and address the critical 1/3 of seismic retrofit needs.

4. With significant funding increases, develop feasible modernization projects, address long-term bridge needs and upgrade pavements to a more cost-effective condition.

• Move toward modernization funding to meet 100 percent of feasible needs.

• Bring pavement conditions up to an average 90 percent fair or better level on all state highways.

• Begin to replace 850 aging bridges and increase the Bridge Value Index (percentage of total replacement value) to 91 percent.

Funding for specific programs will follow these priorities:

Modernization

• Give priority to modernization projects that improve livability and/or address critical safety problems and high levels of congestion.

Preservation

• Give priority to Interstate pavement condition.

• Maintain Statewide Highways at a higher condition than Regional and District Highways, and invest in thicker pavement on designated freight routes.

• Preserve other highways at lower pavement conditions according to their classification. Preserve District Highways at 60 percent fair or better or higher.

• With no increase in state funding, consider the option of a maintain only policy for certain Regional/District Highways.

• With increased funding, increase pavement condition level toward an optimal level.

• With significantly increased funding, maintain pavement conditions to an optimal level of fair or better (90 percent fair or better).

Bridge

• At declining funding due to inflation, do critical bridge rehabilitation and replace critical bridges when rehabilitation is not feasible. Do seismic retrofit projects only to maintain the functionality of major river crossings on Interstate 5 and Interstate 84.
Executive Summary

- At increased funding, preserve bridge value at the present state, but ignore most seismic retrofit needs.

- With more funding, maintain the Bridge Value Index (percentage of total replacement value) and address the most critical one-third of the seismic retrofit needs.

- With significant funding increases, address the long-term problems of replacing the 850 bridges built in the 1950s and 1960s.

Safety

- Focus expenditures where the greatest number of people are being killed or seriously injured.¹

- Allow for a reduced number of safety upgrades in preservation projects on highway segments with little or no crash history to increase dollars available for highway preservation.

- Make safety investments based on benefit/cost analysis. The first priority is on preservation projects with a high risk segment. The second priority is stand-alone projects on priority safety segments or spot locations.

Operations

- Maintain the existing facilities and services.

- Increase funding for Intelligent Transportation Systems and other operations to increase safety, increase travel time reliability, and relieve congestion, especially in congested metropolitan areas.

- With increased funding, take advantage of technological devices to increase safety, decrease travel time, and relieve congestion throughout the state.

Maintenance

- With existing funding, focus on maintenance of features critical to keeping roads open and safe for travel.

- With increased funding, begin to move toward desired levels of service for those features critical to keeping roads open and safe for travel.

¹ These priorities are reflected in the Safety Investment Program used to select safety projects for the Statewide Transportation Improvement Program. The Program identifies where the most people are being killed and seriously injured on the state highway system and applies the most cost-effective measures to reduce the number of crashes.
• With significantly increased funding, invest in high initial cost solutions that improve service to travelers and minimize long-term spending. Examples range from upgrading substandard guardrails to major culvert and ditch upgrades and include improvements such as durable pavement marking.

Special Programs

• Scenic Byways: Position the state and local entities to be able to fund national and state Scenic Byway improvements and facilities mainly through federal funding.

• Salmon Recovery: Implement the Oregon Plan for Salmon and Watersheds as directed under the Governor’s Executive Order. Fund at appropriate levels.

• Transportation/Growth Management: Fund transportation plans and projects in local jurisdictions to support livability and economic opportunity.

• Bicycle/Pedestrian Program: Focus the program on identifying simple, low-cost projects on urban highways to improve pedestrian and bicyclist access.

• Immediate Opportunity Fund: Fund street, road or other transportation-related improvements needed to respond quickly to economic development opportunities and/or revitalize commercial and industrial centers.

Planning

• Maintain basic planning program needs, including region and central work on Transportation Planning Rule implementation, periodic reviews, plan amendments, development review, access management, corridor plans, and transportation system plan assistance. Adhere to funding priorities when developing corridor plans, facility plans and local transportation system plans.

• Maintain basic ODOT long-range planning to comply with statutory requirements for the Oregon Transportation Plan and related modal plans.

• Continue to assist in funding local transportation system planning.

• If not able to maintain the basic planning program, decrease or eliminate ODOT funding assistance for local planning.

Implementation Strategies

The Highway Plan’s implementation strategies include:

• Developing an Action Plan to define implementation responsibilities and actions;
Executive Summary

- Conducting a process for examining highway classifications, classifying Expressways and Special Transportation Areas;

- Developing a freight study;

- Developing an administrative rule for access management procedures; and

- Working with regional and local governments to carry out the Highway Plan policies.

Implementation of the Oregon Bicycle and Pedestrian Plan is dependent upon the availability of funding. Adoption of the plan by the Oregon Transportation Commission does not guarantee adequate financial resources to carry out the projects nor can the Commission commit the financial resources of other agencies or public bodies.
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Special thanks to the hundreds of people (the citizens of Oregon, local and ODOT staff) who contributed their ideas and recommendations regarding bicycle and pedestrian transportation.
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PREFACE

PURPOSE OF THE PLAN

Bicycling and walking are important components of Oregon's multimodal transportation mix. This plan is a tool Oregonians can use to increase their transportation choices.

The Oregon Department of Transportation has jurisdiction over approximately 12,000 km (7,500 mi) of highways. This plan does not propose specific projects on each section of highway, but offers the general principles and policies that ODOT follows to provide bikeways and walkways along state highways. It also provides the framework for cooperation between ODOT and local jurisdictions, and offers guidance to cities and counties for developing local bicycle and pedestrian plans.

This plan serves the following purposes:

1. To implement the Actions recommended by the Oregon Transportation Plan;
2. To guide ODOT, MPO's, the cities and counties of Oregon and other agencies in developing bikeway and walkway systems;
3. To explain the laws pertaining to the establishment of bikeways and walkways;
4. To provide information to citizens interested in bicycle and pedestrian transportation;
5. To fulfill the requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA), whereby each state must adopt a statewide bicycle and pedestrian plan;
6. To fulfill the requirements of Oregon Administrative Rule 660-12 (Transportation Planning Rule 12); and
7. To provide standards for planning, designing and maintaining bikeways and walkways.

ORGANIZATION OF THE PLAN

As there are similarities and differences between bicycling and walking; combining the two modes in one document ensures that both bicycling and walking receive full consideration as valid transportation options. Because bicyclists and pedestrians operate in different manners along the roadway, the design section of this plan addresses these differences.

This document consists of two sections and appendices:

- Section One, the POLICY & ACTION PLAN, contains background information, such as the importance of bicycling and walking, legal mandates and current conditions. This is followed by the goals, actions and implementation strategies ODOT proposes to improve bicycle and pedestrian transportation.
- Section Two, BIKEWAY & WALKWAY PLANNING, DESIGN, MAINTENANCE & SAFETY, will assist ODOT, cities and counties in designing, constructing and maintaining pedestrian and bicycle facilities. Design standards are recommended to ensure that a safe, attractive and convenient network of walkways and bikeways is established. The information on safety will assist law enforcement agencies, educators and others in developing programs to improve safety for all roadway users.
- The APPENDICES include a glossary, relevant statutes, sample forms, etc.

A pleasant walking environment enhances Oregon's quality of life.
OTHER RELATED PLANS

This plan considers bicycling and walking transportation along public rights-of-way.

Recreational bicycling and walking and trail issues are addressed in the “Oregon Recreational Trails Plan.” For information on this plan, contact:

Recreation Trails Coordinator
Oregon Parks and Recreation Department
1115 Commercial Street NE
Salem, OR 97310

Safety policies and programs are addressed in the “Transportation Safety Action Plan.” For information on this plan, contact:

Transportation Safety Program
Mill Creek Office Park
555 13th Street NE
Salem, OR 97310

THE BICYCLE & PEDESTRIAN PLAN & THE TRANSPORTATION PLANNING PROCESS

The Oregon Transportation Plan (OTP) drives all transportation planning in Oregon. The Modal Plans, including the Bicycle and Pedestrian Plan, are elements of the OTP.

Using the policies established in these documents, Corridor Plans, Metropolitan Planning Organization (MPO) plans and local government Transportation Systems Plans (TSP) are developed to provide recommendations for improvements. Projects, including bicycle and pedestrian improvements, are then programmed in either the State Transportation Improvement Program (STIP) for state projects, or in local TIP’s for local projects (See the diagram on page xi for an illustration of the interrelationship of the various phases of the planning process).

PUBLIC INVOLVEMENT

The recommended goals, actions and strategies of this plan were drafted in response to the following input from the public:

- The Oregon Bicycle and Pedestrian Advisory Committee (OBPAC), with Bicycle and Pedestrian Program staff, have held quarterly public meetings around the state since 1973.
- The Oregon Transportation Plan was developed with comprehensive public participation; the need for improved bicycle and pedestrian facilities was expressed as a high priority.
- In January 1994, input from cities, counties and interested citizens was sought via direct mailing and news releases.
- In August 1994, staff toured the state seeking input at public meetings.
- After review by ODOT staff, OBPAC and the Oregon Transportation Commission, a public review draft was circulated to all known interested parties from December 21, 1994 to February 10, 1995.
- A public hearing was held in January 1995 before adoption by the Oregon Transportation Commission on June 14, 1995.

PREVIOUS PLANS

ODOT has previously adopted three Bicycle Plans, in 1984, 1988 and 1992. The present document is the first Bicycle and Pedestrian Plan, and supersedes all previous Bicycle Plans.

OTHER RELATED DOCUMENTS

See Appendix B for a listing of other related documents, such as research studies and design manuals.
INTEGRATED TRANSPORTATION PLANNING

Oregon Transportation Plan

Mode/Topic Plans
- Aviation System
- Bicycle/Pedestrian
- Highway
- Intermodal Facilities & Connections
- Public Transportation
- Rail Freight
- Rail Passenger
- Transportation Safety Action
- Willamette Valley Strategy

Corridor Plan
- Corridor Strategy
- Improvement/Management Element
  - Mode choices
  - Corridor transportation needs
  - Facility function
  - Location & type of facility & service improvements
  - Facility management categories

State Transportation Improvement Program

Other Agency Programs

Solution Delivery
- Construction / Implementation
- Maintenance
- Operation
- System Management

The Transportation Planning Process
Oregonians enjoying an afternoon break on downtown benches

Riverfront path enjoyed by many users
EXECUTIVE SUMMARY

PURPOSE AND ORGANIZATION

The Oregon Bicycle and Pedestrian Plan is a modal element of the Oregon Transportation Plan. It provides direction to ODOT in establishing bicycle and pedestrian facilities on state highways. It also guides cities and counties, as well as other organizations and private citizens, in establishing facilities on local transportation systems.

The plan consists of two sections: one establishes policies and implementation strategies; the second presents design, maintenance and safety information. The appendices contain relevant statutes, proposed projects, sample forms, etc.

SECTION 1: POLICY AND ACTION PLAN

Vision: Oregon envisions a transportation system where walking and bicycling are safe and convenient transportation modes for urban trips.

Background Information: The importance of these modes is explained from environmental, economic and social perspectives. Bicycling and walking are often the only modes available to the “transportation disadvantaged” (the young, the elderly, the poor). Potential impacts of increased use of these modes are discussed. Many other factors, such as land use, influence walking and bicycling and are beyond the scope of this plan; their importance is mentioned to put the plan’s goals in context.

The plan focuses on existing street systems in urban areas, where short trips are more realistic and where most congestion problems occur. Renovating existing streets with bikeways and walkways is emphasized, because these streets are already in place and serve community needs.

State and Federal Laws: Laws that govern the establishment of bicycle and pedestrian facilities include ORS 366.514 (the “Bike Bill”), the Statewide Planning Goals, the Transportation Planning Rule and the Americans with Disabilities Act. The “Bike Bill” is interpreted in detail, to guide ODOT and as a recommendation for cities and counties.

Current Conditions for Pedestrians and Bicyclists: An overview of conditions on both the rural and urban highway systems: conditions are generally good for bicyclists on rural highways, not very good or poor for bicyclists and pedestrians on many urban highways. Local systems with good walking and bicycling conditions are highlighted as examples to emulate.

Policy, Goals and Actions: ODOT will provide appropriate pedestrian and bicycle facilities to meet the following goal and actions:

GOAL: To provide safe, accessible and convenient bicycling and walking facilities and to support and encourage increased levels of bicycling and walking.

• ACTION 1: Provide bikeway and walkway systems that are integrated with other transportation systems.
• ACTION 2: Create a safe, convenient and attractive bicycling and walking environment.
• ACTION 3: Develop education programs that improve bicycle and pedestrian safety.

Each action is refined with specific strategies.

Implementing the Actions: ODOT will cooperate with local jurisdictions in a comprehensive planning process, the results of which will be included in corridor plans for rural highways and in local Transportation System Plans for urban highways. After determining needs and priorities, bikeway and walkway systems will be established in the following ways:

Rural highways will have shoulders widened in the course of modernization projects, as well as on many preservation overlays, where warranted.
Urban Highways require a more complex implementation strategy:

- As part of modernization projects (bike lanes and sidewalks will be included);
- As part of preservation projects, where minor upgrades can be made;
- By restriping roads with bike lanes;
- With minor betterment projects, such as completing short missing segments of sidewalks;
- As bikeway or walkway modernization projects;
- By developers as part of permit conditions, where warranted.

Cost to Implement the Plan: The overall cost to retrofit the existing urban highway system with appropriate facilities is estimated at $150 to $200 million. This would require expending $7.5 to $10 million per year to accomplish the goal in 20 years; this doubles the current ODOT expenditures on pedestrian and bicycle facilities.

SECTION 2: DESIGN, MAINTENANCE AND SAFETY

This section establishes standards for safe and attractive bikeways and walkways; maintenance practices are recommended; safety considerations are explained to assist educators and law enforcement personnel in their duties.

High standards are established so facilities do more than just accommodate current walkers and bicyclists: the purpose is also to attract new users. Other considerations, such as traffic calming, bicycle boulevards, roundabouts, etc. are presented.

Planning Walkway and Bikeway Networks: The general principles of on-street networks are presented: the importance of arterials and the relationship with other planning considerations such as land use, public transit and access management. Appropriate types of facilities are explained, as well as techniques to overcome barriers to walking and biking (busy streets, freeway crossings, etc.).

Bikeway Design: The various types of bikeways (shared roadway, shoulder bikeway and bike lanes) are discussed, as well as special considerations such as railroad crossings.

Bicycle Parking: General recommendations for cities to use in their local ordinances.

Bike Lane Restriping Guidelines: An effective and inexpensive treatment for improving conditions for bicyclists on existing roads.

Walkway Design: The basic urban walkway is a sidewalk; standards are established to meet ADA requirements; other considerations such as bus stops and planting strips are presented.

Street Crossings: The greatest challenge to pedestrian mobility is crossing the street; improvements such as islands and curb extensions are presented.

Multi-Use Paths: Previously called “bike paths,” these serve pedestrians and other users. The opportunities and challenges associated with separated paths are presented.

Intersections and Interchanges: These present challenges to users and designers, since conflicts occur where paths cross; designs to improve bicycle and pedestrian safety are presented.

Signing: Standardized signs and markings are proposed for state and local systems.

Maintenance: Recommendations are presented that will enable ODOT, cities and counties to keep facilities in a usable condition.

Safety Considerations: The major causes of pedestrian and bicycle crashes are explored. Engineering, education and enforcement solutions are presented. The information contained in this section will be refined and used to develop safety programs.

Bicycle Maps: Standards are presented so that bicycle maps have uniform legends statewide.
COMPREHENSIVE SYSTEM ASSESSMENT AND ENHANCEMENT PLAN

Public Transit and Special Transportation

Douglas County, Oregon

-- ----, 2 001

Prepared by the Mid-Willamette Valley Council of Governments
Salem, Oregon

NOTE: This study was jointly funded by U. S. Department of Transportation, 49 U.S.C. 5311, Small City and Rural Areas Program [Federal Grant Number: OR186015], and the Oregon Department of Transportation, Special Transportation Discretionary Fund [State Grant Number: STG0001].
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plan and allow jurisdictions to assess the adequacy of existing and possible alternative
funding mechanisms. In addition to including rough cost estimates for each transportation
facility and major improvement, the transportation financing plan shall include a
discussion of the facility provider's existing funding mechanisms and the ability of these
and possible new mechanisms to fund the development of each transportation facility and
major improvement. These funding mechanisms may also be described in terms of
general guidelines or local policies.

(4) Anticipated timing and financing provisions in the transportation financing
program are not considered land use decisions as specified in ORS 197.712(2)(e) and,
therefore, cannot be the basis of appeal under ORS 197.610(1) and (2) or ORS
197.835(4).

(5) The transportation financing program shall provide for phasing of major
improvements to encourage infill and redevelopment of urban lands prior to facilities and
improvements which would cause premature development of urbanizable lands or
conversion of rural lands to urban uses.

Stat. Auth.: ORS 183 & ORS 197
Stats. Implemented: ORS 197.040
Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDC 4-1995, f. & cert. ef. 5-8-95;

660-012-0045
Implementation of the Transportation System Plan

(1) Each local government shall amend its land use regulations to implement the
TSP.

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

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

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

(C) Uses permitted outright under ORS 215.213(1)(m) through (p) and ORS
215.283(1)(k) through (n), consistent with the provisions of 660-012-0065; and

(D) Changes in the frequency of transit, rail and airport services.

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

(c) In the event that a transportation facility, service or improvement is determined
to have a significant impact on land use or to concern the application of a comprehensive
plan or land use regulation and to be subject to standards that require interpretation or the
exercise of factual, policy or legal judgment, the local government shall provide a review
and approval process that is consistent with 660-012-0050. To facilitate implementation
of the TSP, each local government shall amend its land use regulations to provide for
consolidated review of land use decisions required to permit a transportation project.
(2) Local governments shall adopt land use or subdivision ordinance regulations,
consistent with applicable federal and state requirements, to protect transportation
facilities, corridors and sites for their identified functions. Such regulations shall include:
(a) Access control measures, for example, driveway and public road spacing,
median control and signal spacing standards, which are consistent with the functional
classification of roads and consistent with limiting development on rural lands to rural
uses and densities;
(b) Standards to protect future operation of roads, transitways and major transit
corridors;
(c) Measures to protect public use airports by controlling land uses within airport
noise corridors and imaginary surfaces, and by limiting physical hazards to air navigation;
(d) A process for coordinated review of future land use decisions affecting
transportation facilities, corridors or sites;
(e) A process to apply conditions to development proposals in order to minimize
impacts and protect transportation facilities, corridors or sites;
(f) Regulations to provide notice to public agencies providing transportation
facilities and services, MPO’s, and ODOT of:
(A) Land use applications that require public hearings;
(B) Subdivision and partition applications;
(C) Other applications which affect private access to roads; and
(D) Other applications within airport noise corridors and imaginary surfaces
which affect airport operations.
(g) Regulations assuring that amendments to land use designations, densities, and
design standards are consistent with the functions, capacities and levels of service of
facilities identified in the TSP.
(3) Local governments shall adopt land use or subdivision regulations for urban
areas and rural communities as set forth below. The purposes of this section are to
provide for safe and convenient pedestrian, bicycle and vehicular circulation consistent
with access management standards and the function of affected streets, to ensure that new
development provides on-site streets and accessways that provide reasonably direct routes
for pedestrian and bicycle travel in areas where pedestrian and bicycle travel is likely if
connections are provided, and which avoids wherever possible levels of automobile
traffic which might interfere with or discourage pedestrian or bicycle travel.
(a) Bicycle parking facilities as part of new multi-family residential developments
of four units or more, new retail, office and institutional developments, and all transit
transfer stations and park-and-ride lots;
(b) On-site facilities shall be provided which accommodate safe and convenient
pedestrian and bicycle access from within new subdivisions, multi-family developments,
planned developments, shopping centers, and commercial districts to adjacent residential
areas and transit stops, and to neighborhood activity centers within one-half mile of the
development. Single-family residential developments shall generally include streets and
accessways. Pedestrian circulation through parking lots should generally be provided in the form of accessways.

(A) "Neighborhood activity centers" includes, but is not limited to, existing or planned schools, parks, shopping areas, transit stops or employment centers;

(B) Bikeways shall be required along arterials and major collectors. Sidewalks shall be required along arterials, collectors and most local streets in urban areas, except that sidewalks are not required along controlled access roadways, such as freeways;

(C) Cul-de-sacs and other dead-end streets may be used as part of a development plan, consistent with the purposes set forth in this section;

(D) Local governments shall establish their own standards or criteria for providing streets and accessways consistent with the purposes of this section. Such measures may include but are not limited to: standards for spacing of streets or accessways; and standards for excessive out-of-direction travel;

(E) Streets and accessways need not be required where one or more of the following conditions exist:

(i) Physical or topographic conditions make a street or accessway connection impracticable. Such conditions include but are not limited to freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided;

(ii) Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or

(iii) Where streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995 which preclude a required street or accessway connection.

(c) Where off-site road improvements are otherwise required as a condition of development approval, they shall include facilities accommodating convenient pedestrian and bicycle travel, including bicycle ways along arterials and major collectors;

(d) For purposes of subsection (b) "safe and convenient" means bicycle and pedestrian routes, facilities and improvements which:

(A) Are reasonably free from hazards, particularly types or levels of automobile traffic which would interfere with or discourage pedestrian or cycle travel for short trips;

(B) Provide a reasonably direct route of travel between destinations such as between a transit stop and a store; and

(C) Meet travel needs of cyclists and pedestrians considering destination and length of trip; and considering that the optimum trip length of pedestrians is generally 1/4 to 1/2 mile.

(e) Internal pedestrian circulation within new office parks and commercial developments shall be provided through clustering of buildings, construction of accessways, walkways and similar techniques.

(4) To support transit in urban areas containing a population greater than 25,000, where the area is already served by a public transit system or where a determination has been made that a public transit system is feasible, local governments shall adopt land use and subdivision regulations as provided in (a)-(f) below:
(a) Transit routes and transit facilities shall be designed to support transit use through provision of bus stops, pullouts and shelters, optimum road geometries, on-road parking restrictions and similar facilities, as appropriate;

(b) New retail, office and institutional buildings at or near major transit stops shall provide for convenient pedestrian access to transit through the measures listed in (A) and (B) below.

(A) Walkways shall be provided connecting building entrances and streets adjoining the site;

(B) Pedestrian connections to adjoining properties shall be provided except where such a connection is impracticable as provided for in OAR 660-012-0045(3)(b)(E).

Pedestrian connections shall connect the on site circulation system to existing or proposed streets, walkways, and driveways that abut the property. Where adjacent properties are undeveloped or have potential for redevelopment, streets, accessways and walkways on site shall be laid out or stubbed to allow for extension to the adjoining property;

(C) In addition to (A) and (B) above, on sites at major transit stops provide the following:

(i) Either locate buildings within 20 feet of the transit stop, a transit street or an intersecting street or provide a pedestrian plaza at the transit stop or a street intersection;

(ii) A reasonably direct pedestrian connection between the transit stop and building entrances on the site;

(iii) A transit passenger landing pad accessible to disabled persons;

(iv) An easement or dedication for a passenger shelter if requested by the transit provider; and

(v) Lighting at the transit stop.

(c) Local governments may implement 4(b)(A) and (B) above through the designation of pedestrian districts and adoption of appropriate implementing measures regulating development within pedestrian districts. Pedestrian districts must comply with the requirement of 4(b)(C) above;

(d) Designated employee parking areas in new developments shall provide preferential parking for carpools and vanpools;

(e) Existing development shall be allowed to redevelop a portion of existing parking areas for transit-oriented uses, including bus stops and pullouts, bus shelters, park and ride stations, transit-oriented developments, and similar facilities, where appropriate;

(f) Road systems for new development shall be provided that can be adequately served by transit, including provision of pedestrian access to existing and identified future transit routes. This shall include, where appropriate, separate accessways to minimize travel distances;

(g) Along existing or planned transit routes, designation of types and densities of land uses adequate to support transit.

(5) In MPO areas, local governments shall adopt land use and subdivision regulations to reduce reliance on the automobile which:

(a) Allow transit-oriented developments (TODs) on lands along transit routes;

(b) Implements a demand management program to meet the measurable standards set in the TSP in response to 660-012-0035(4);

(c) Implements a parking plan which:
(A) Achieves a 10% reduction in the number of parking spaces per capita in the MPO area over the planning period. This may be accomplished through a combination of restrictions on development of new parking spaces and requirements that existing parking spaces be redeveloped to other uses;

(B) Aids in achieving the measurable standards set in the TSP in response to OAR 660-012-0035(4);

(C) Includes land use and subdivision regulations setting minimum and maximum parking requirements in appropriate locations, such as downtowns, designated regional or community centers, and transit oriented-developments; and

(D) Is consistent with demand management programs, transit-oriented development requirements and planned transit service.

(d) As an alternative to (c) above, local governments in an MPO may instead revise ordinance requirements for parking as follows:

(A) Reduce minimum off-street parking requirements for all non-residential uses from 1990 levels;

(B) Allow provision of on-street parking, long-term lease parking, and shared parking to meet minimum off-street parking requirements;

(C) Establish off-street parking maximums in appropriate locations, such as downtowns, designated regional or community centers, and transit-oriented developments;

(D) Exempt structured parking and on-street parking from parking maximums;

(E) Require that parking lots over 3 acres in size provide street-like features along major driveways (including curbs, sidewalks, and street trees or planting strips); and

(F) Provide for designation of residential parking districts.

(e) Require all major industrial, institutional, retail and office developments to provide either a transit stop on site or connection to a transit stop along a transit trunk route when the transit operator requires such an improvement.

(6) In developing a bicycle and pedestrian circulation plan as required by 660-012-0020(2)(d), local governments shall identify improvements to facilitate bicycle and pedestrian trips to meet local travel needs in developed areas. Appropriate improvements should provide for more direct, convenient and safer bicycle or pedestrian travel within and between residential areas and neighborhood activity centers (i.e., schools, shopping, transit stops). Specific measures include, for example, constructing walkways between cul-de-sacs and adjacent roads, providing walkways between buildings, and providing direct access between adjacent uses.

(7) Local governments shall establish standards for local streets and accessways that minimize pavement width and total right-of-way consistent with the operational needs of the facility. The intent of this requirement is that local governments consider and reduce excessive standards for local streets and accessways in order to reduce the cost of construction, provide for more efficient use of urban land, provide for emergency vehicle access while discouraging inappropriate traffic volumes and speeds, and which accommodate convenient pedestrian and bicycle circulation. Not withstanding subsection (1) or (3) of this section, local street standards adopted to meet this requirement need not be adopted as land use regulations.

Stat. Auth.: ORS 183 & ORS 197
APPENDIX K
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### UNIMPROVED, GRAVEL, DIRT, ETC.

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### UNDEVELOPED

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### UNDEVELOPED, PLOTTED

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### CONDITION CATEGORY

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<td>TOTAL</td>
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MEMORANDUM

TO: Mayor Stevens and City Council
FROM: Bruce Kelly, City Administrator
FOR: City Council meeting of May 20, 2002
RE: Agenda Item VIII.D. Approve list of hazards or barriers hindering the walking to and from schools of students as required by HB 3712 and recommended by the Traffic Safety Commission

Following this memorandum is a memo from the Traffic Safety Commission which includes both excerpts from HB 3712 and the Traffic Safety Commission's recommendation. Following that is a very comprehensive report on the hazards and barriers with photographs.

We, the Traffic Safety Commission and I, are recommending that you approve (or adopt) the list of barriers as presented and direct that it be included in the Transportation System Plan. I believe they can be incorporated in the TSP by reference (or as an Attachment) without delaying the preparation of the TSP.

I do want to point out that this may be only the first step. We have identified the hazards, we've suggested how to eliminate or mitigate them, but we've not identified how to fund the required improvements. This I believe is a serious short coming of this project. I'd like to suggest that, after approving the list, you refer the matter back to the Traffic Safety Commission for the development of a funding plan for the improvements.

The appropriate action (to approve the list) is a motion to approve the list of hazards or barriers hindering the walking to and from schools of students as required by HB 3712 and recommended by the Traffic Safety Commission. [If you want them to work on the funding plan, you'll have to add something about referring the matter back to the Traffic Safety Committee for funding recommendations.]
## Table of Contents

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<thead>
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<tbody>
<tr>
<td>Douglas and Baker</td>
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</table>
Douglas and Abraham

Concern - When sidewalks are placed on Abraham the walks should be placed in a way that pedestrians do not have to walk on the road.

Committee Recommendation - Install curb around inside radius. Paint white fog line delineating the intersection so vehicles do not “cut the corner” as much. Do the same on west side of Abraham. Install a crosswalk across Abraham alongside Douglas Blvd.

Douglas and Cary Crosswalk

Concern - Note the ditches and the fact that from a hundred feet away you cannot distinguish the crosswalk.

Committee Recommendation - Place the new type sign showing an arrow on a flourescent background highlighting the crosswalk. Trim the tree back and get rid of the canopy effect.
Douglas - Cary Crosswalk

Concern - This is the crosswalk on Douglas at Cary looking north. Note that on the south side it ends in a gravel area by a driveway and "very" close to a deep ditch.

Committee Recommendation - The driveway apron should be paved. The ditches should be closed.

Douglas - Civil Bend Crosswalk

Concern - Crosswalk lines are hard to see.

Committee Recommendation: Place new arrow sign for crosswalks below crosswalk designation.
Douglas and Civil Bend Crosswalk

Concern - Note that on the north side of the crosswalk it does not have a cut for disabled and on the south side it leads into a gravel area. We do not have a pedestrian path on the south side.
Committee Recommendation - The sidewalk on the north side needs to be ADA compliant.

Douglas near Rose

Concern - This is the area between Winston Shopping Center and Grandway Shopping Center. It receives a great deal of pedestrian traffic. It is being considered for a safety refuge.
Committee Recommendation - Consider safety refuge for pedestrians.
Concern - New driveways, narrowing road and speed limit change?
Committee Recommendation - Transition speed zone change to 35 MPH until the south side of bridge.

Concern - Note the striping of the crosswalk, width of the road.
Committee Recommendation -
- Area should have a crossing guard during key times.
- Sign with arrow to designate the crosswalk
- Sidewalk needs to be ADA compliant on the east side.
- Painting should be lateral. (Ladder type)
- Safety Refuge
Concern - Better marking, width of road.

Committee Recommendation:

- Crosswalk lines painted laterally. (Ladder)
- Illumination on east side of crosswalk
- Needs to be ADA compliant on west side.
- Signs are worn and not close to crosswalk.

County Rd 387 near Edwards facing North

Committee Recommendation - No additional
County Rd. 387 and Douglas (S)

Committee Recommendation - No additional

County Rd. 387 and Douglas (N)

Committee Recommendation - No additional
Main and Baker

Concern - Heavy Pedestrian traffic, confusing traffic pattern
Committee Recommendation - Crosswalk if safety refuge is placed.

Lookinglass Rd and Main Street (N)

Concern - Ramp Placement
Committee Recommendation - Move ramp so that it does not conflict with traffic. Currently pedestrians walk behind and between vehicles to get to the other side.
Lookinglass Rd and Brockway just east of New School

Concern - Bike Path/Sidewalks/Signage when School is built.//Crosswalks
Committee Recommendation:
- Left turn lane and Brockway
- No Parking
- Fog lines to calm traffic
- Pedestrian Path or sidewalk.

Lookinglass Rd.

Concern - Sidewalks//Narrow Road
Committee Recommendation - Raised pedestrian path with curb.
Concern - Intermittent or no sidewalks

Committee Recommendation:

- Improve signage, make sure they are in compliance.
- Conduct Study on where children walk for placement of crosswalks. Use arrow with crosswalk sign to show crosswalk.
- Narrow the appearance of street by maintaining fog lines.
- Consider eliminating parking to reduce the need for children walking in the street.
- Sidewalks are needed.

Barbur

Concern - No sidewalks
Concern - Do we need a walkway from Trinity Hills?
Committee Recommendation - Continue to seek input from the school and developers as to the need for walking paths to the schools.

Concern - Lack of sidewalks.
Committee Recommendation - Placement of sidewalks or delineate bike path.
Committee Recommendation - (Skip) center line

Concern - Pedestrian Path needed to connect pedestrian flow from Civil bend to Cary Street.

Committee Recommendation - Obtain right of way and create a Pedestrian/Bike path.
Newton

Concern - No sidewalks
Committee Recommendation:
- Skip line down center
- Spread shoulder material to edge of pavement to avoid hazardous drop off for bikes and pedestrians.

Thiele extension

Concern - Lack of cross street and sidewalk housing project.
Committee Recommendation - Develop street and sidewalk or pedestrian path.
Concern - Need for sidewalks

Committee Recommendation:
- Center skip line and fog line.
- Placement of pedestrian path on both sides when road is resurfaced.
Brosi Rd

Concern - Narrow street without sidewalk or delineated pedestrian way.
Committee Recommendation - Widen street and add sidewalk or delineate pedestrian way.

Brosi Rd East

Concern - Pedestrian Path ends into ditch.
Committee Recommendation - Widen street and pedestrian path at least to end of curve to avoid sight distance problem.
Thompson Rd East

Concern - Lack of pedestrian paths on Thompson Rd. east of Edgewood.
Committee Recommendation - Develop sidewalk or pedestrian path.

Thompson Rd West

Concern - None
Gregory Street

Concern - Long streets without cross streets.
Committee recommendation - Attempt to develop pedestrian path between Darrell, Gregory and Grape.

Suksdorf Street

Concern - No sidewalks or pedestrian path
Committee Recommendation - Placement of sidewalks or pedestrian paths
Darrell Street

Concern - Long streets without pedestrian ways or sidewalks. Intermittent or no pedestrian ways along street or and few cross streets.
Committee Recommendation:
- Complete pedestrian path.
- Attempt to develop pedestrian paths between Darrell, Grape and Gregory when he opportunity arises.

Grape Street

Concern - No marked pedestrian way
Committee Recommendation - Delineate pedestrian way.
RESPONDING TO THE NEEDS OF THE COMMUNITY
## TABLE 1

**DESIGN STANDARDS FOR URBAN ROADWAYS**

<table>
<thead>
<tr>
<th>DESIGN FEATURES</th>
<th>PRINCIPAL HIGHWAY</th>
<th>ARTERIAL</th>
<th>COLLECTOR</th>
<th>LOCAL STREET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum right-of-way Width²</td>
<td>102'</td>
<td>102'</td>
<td>60' - 84'</td>
<td>56'</td>
</tr>
<tr>
<td>Travel Lane Width</td>
<td>12'</td>
<td>12'</td>
<td>12'</td>
<td>12'</td>
</tr>
<tr>
<td>Shoulder Width</td>
<td>10'</td>
<td>10'</td>
<td>8'</td>
<td>6'</td>
</tr>
<tr>
<td>Left Turn Lane Width³</td>
<td>14'</td>
<td>14'</td>
<td>14'</td>
<td>--</td>
</tr>
<tr>
<td>Recommended Number of Travel Lanes</td>
<td>4</td>
<td>4</td>
<td>2 - 4</td>
<td>2</td>
</tr>
<tr>
<td>Sidewalk Width</td>
<td>6'</td>
<td>6'</td>
<td>6'</td>
<td>5'</td>
</tr>
<tr>
<td>Median Width</td>
<td>14'</td>
<td>2' - 14'</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Parking On-Street: The provision for on-street parking will depend on traffic volumes, lane widths, design speeds, access control and land use.

**Recommended Standards**

<table>
<thead>
<tr>
<th></th>
<th>PRINCIPAL HIGHWAY</th>
<th>ARTERIAL</th>
<th>COLLECTOR</th>
<th>LOCAL STREET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stopping Sight Distance</td>
<td>Varies according to actual design speeds</td>
<td>Varies according to actual design speeds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horizontal Curve (Degree)</td>
<td>Varies according to actual design speeds</td>
<td>Varies according to actual design speeds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade, Gutter (Maximum)</td>
<td>4%</td>
<td>4 - 8%</td>
<td>8 - 10%</td>
<td>15-20%⁴</td>
</tr>
<tr>
<td>Grade, Gutter (Minimum)</td>
<td>0.4%</td>
<td>0.4%</td>
<td>0.4%</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

---

¹ Standards will vary according to terrain and usage.

² Minimum right-of-way may be increased by the Public Works Director in all instances where necessary to obtain one half the required right-of-way from the centerline of an existing road.

³ Where turn lanes are required, right-of-way and roadbed width must be increased.

⁴ Grades that exceed 15% shall not exceed 200 feet in length.
# TABLE 2

## DESIGN STANDARDS FOR RURAL ROADWAYS\(^5\)

<table>
<thead>
<tr>
<th>DESIGN FEATURES</th>
<th>Functional Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>PRINCIPAL HIGHWAY</strong></td>
</tr>
<tr>
<td>Minimum right-of-way Width(^6)</td>
<td>90'</td>
</tr>
<tr>
<td>Travel Lane Width</td>
<td>12'</td>
</tr>
<tr>
<td>Shoulder Width</td>
<td>5' - 11'</td>
</tr>
<tr>
<td>Left Turn Lane Width(^7)</td>
<td>14'</td>
</tr>
<tr>
<td>Recommended Number of Travel Lanes</td>
<td>2 - 4</td>
</tr>
<tr>
<td>Median Width</td>
<td>2' - 14'</td>
</tr>
</tbody>
</table>

**Parking On-Street:**

The provision for on-street parking will depend on traffic volumes, lane widths, design speeds, access control and land use.

### Recommended Standards

<table>
<thead>
<tr>
<th></th>
<th><strong>PRINCIPAL HIGHWAY</strong></th>
<th><strong>ARTERIAL</strong></th>
<th><strong>COLLECTOR</strong></th>
<th><strong>LOCAL STREET</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(KPH)</td>
<td>(56 - 90)</td>
<td>(56 - 90)</td>
<td>(56 - 90)</td>
<td>(40 - 56)</td>
</tr>
<tr>
<td>Stopping Sight Distance</td>
<td>Varies according to actual design speeds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passing Sight Distance</td>
<td>Varies according to actual design speeds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horizontal Curve (Degree)</td>
<td>Varies according to actual design speeds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade, Gutter (Maximum)</td>
<td>5%</td>
<td>5%</td>
<td>8 - 10%</td>
<td>15-20%(^8)</td>
</tr>
</tbody>
</table>

---

\(^5\) Standards will vary according to terrain and usage.

\(^6\) Minimum right-of-way may be increased by the Public Works Director in all instances where necessary to obtain one half the required right-of-way from the centerline of an existing road.

\(^7\) Where turn lanes are required, right-of-way and roadbed width must be increased.

\(^8\) Grades that exceed 15% shall not exceed 200 feet in length.
Figure 1

URBAN ROADWAY SECTIONS

NOTES:
1. WHERE ADDITIONAL LANES ARE REQUIRED, RIGHT OF WAY AND ROADBED MUST BE INCREASED.
2. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED DUE TO EXTENSIVE CUT AND FILL.
3. SIDEWALKS SHALL BE CONSTRUCTED WHEN REQUIRED.
4. SEE DOUGLAS COUNTY STANDARD DRAWINGS FOR SIDEWALK, CURB, AND ROADWAY DETAILS.
5. RIGHT OF WAY MAY BE INCREASED IN ALL INSTANCES BY THE PUBLIC WORKS DIRECTOR, WHERE NECESSARY TO OBTAIN ONE HALF OF THE REQUIRED RIGHT OF WAY WIDTH FROM THE CENTERLINE OF AN EXISTING ROAD.
**Figure 2**

**RURAL ROADWAY SECTIONS**

<table>
<thead>
<tr>
<th>TYPE OF ROAD</th>
<th>MIN. RIGHT OF WAY</th>
<th>ROADBED</th>
<th>TRAVELED WAY</th>
<th>SHOULDERS</th>
<th>MEDIAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRINCIPAL HIGHWAY</td>
<td>90'</td>
<td>36'-72'</td>
<td>12'/24'</td>
<td>4'-10'</td>
<td>1'</td>
</tr>
<tr>
<td>(LIMITED ACCESS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARTERIAL</td>
<td>90'</td>
<td>36'-72'</td>
<td>12'/24'</td>
<td>4'-10'</td>
<td>1'</td>
</tr>
<tr>
<td>MAJOR COLLECTOR</td>
<td>70'</td>
<td>34'-42'</td>
<td>12'</td>
<td>4'-8'</td>
<td>1'</td>
</tr>
<tr>
<td>MINOR COLLECTOR</td>
<td>60'</td>
<td>30'-34'</td>
<td>12'</td>
<td>2'-4'</td>
<td>1'</td>
</tr>
<tr>
<td>LOCAL</td>
<td>60'</td>
<td>28'</td>
<td>12'</td>
<td>1'</td>
<td>1'</td>
</tr>
</tbody>
</table>

**NOTES:**
1. RIGHT OF WAY IS TO EXTEND 5 FT. BEYOND TOP OF CUT & TOE OF FILL.
2. WHERE TURN LANES ARE REQUIRED, RIGHT OF WAY AND ROADBED MUST BE INCREASED.
3. ILLUSTRATED SLOPES OF CUT, FILL, AND DITCH BANKS ARE REQUIRED, BUT MAY VARY IF DICTATED BY LOCAL CONDITIONS. EXCEPTIONS MUST BE APPROVED BY DIRECTOR OF PUBLIC WORKS.
Figure 3
PRIVATE ROAD
TYPICAL CROSS-SECTION
(roads not designated as collectors or subcollector)

![Diagram of typical cross-section of private road with structural section as required]

Table 3 - Private and Public Road Standards

<table>
<thead>
<tr>
<th>Type of Road</th>
<th>Max No. of Lots</th>
<th>Responsibility Road Maintenance</th>
<th>Improvement Standard</th>
<th>Road Surface</th>
<th>Minimum Width of Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private (urban)</td>
<td>3</td>
<td>Private</td>
<td>N/A</td>
<td>N/A</td>
<td>25'</td>
</tr>
<tr>
<td>Private (rural)</td>
<td>3</td>
<td>Private</td>
<td>N/A</td>
<td>N/A</td>
<td>25'</td>
</tr>
<tr>
<td>Private (rural resource)</td>
<td>10</td>
<td>Private Maint. Agreement</td>
<td>4.420</td>
<td>12'</td>
<td>35'</td>
</tr>
<tr>
<td>Private (rural residential)</td>
<td>15</td>
<td>Private Maint. Agreement/Covenants</td>
<td>4.420</td>
<td>18'</td>
<td>60'</td>
</tr>
<tr>
<td>Private (rural residential)</td>
<td>50</td>
<td>Private Maint. Agreement/Covenants</td>
<td>4.425</td>
<td>22'</td>
<td>60'</td>
</tr>
<tr>
<td>Public Local Access</td>
<td>N/A</td>
<td>Private Maint. Agreement/Covenants</td>
<td>4.420</td>
<td>18'</td>
<td>N/A</td>
</tr>
<tr>
<td>Public</td>
<td>N/A</td>
<td>County</td>
<td>4.410</td>
<td>28'</td>
<td>60'</td>
</tr>
</tbody>
</table>

Note: When maximum number of lots, parcels or units of land exceed those shown above, the requirements shall conform to the appropriate public street or road standards as set forth in these improvement Standards.