**IN THE BOARD OF COUNTY COMMISSIONERS, LANE COUNTY, OREGON**

| | | |
|---|---|---|
| | ) | IN THE MATTER OF AMENDING THE LANE |
| | ) | COUNTY RURAL COMPREHENSIVE PLAN TO |
| | ) | ADOPT AN UPDATED LANE COUNTY |
| | ) | TRANSPORTATION SYSTEM PLAN; TO |
| ORDINANCE NO. PA 1202 | ) | AMEND THE LANE COUNTY GENERAL |
| | ) | PLAN POLICIES (AN ELEMENT OF THE LANE |
| | ) | COUNTY RURAL COMPREHENSIVE PLAN) BY |
| | ) | REVISING GOAL 12 TRANSPORTATION |
| | ) | POLICY 4 TO COMPLY WITH STATEWIDE |
| | ) | PLANNING GOAL 12; AND ADOPTING |
| | ) | SAVINGS AND SEVERABILITY CLAUSES |

**WHEREAS,** The Board of County Commissioners of Lane County, through enactment of Ordinance No. 3-80, adopted a component of the Lane County Rural Comprehensive Plan entitled, "Lane County Transportation Plan and Master Road Plan 1980"; and

**WHEREAS,** the Board of County Commissioners of Lane County, through enactment of Ordinance PA 883, adopted the Lane County General Plan Policies which is a component of the Lane County Rural Comprehensive Plan; and

**WHEREAS,** it is necessary to update the Lane County Transportation Plan to comply with statewide planning Goal 12 and to address changing circumstances affecting the Lane County transportation system; and

**WHEREAS,** Lane Code 12.050 and 16.400 set forth procedures for amendments of components of the Comprehensive Plan; and

**WHEREAS,** the Lane County Planning Commission and the Lane County Roads Advisory Committee reviewed the proposal in a joint public hearing on September 9, 2003; and

**WHEREAS,** the Lane County Planning Commission recommended approval of the Transportation System Plan and General Plan Policies amendments on October 14, 2003, with revisions that have been incorporated into the proposal; and the Roads Advisory Committee recommended approval of the documents as revised by the Lane County Planning Commission, on October 29, 2003; and

**WHEREAS,** the evidence exists within the record indicating that the proposal meets the requirements of Lane Code Chapters 12 and 16, and the requirements of applicable state and local law; and

**WHEREAS;** the Board of County Commissioners has conducted a public hearing and is now ready to take action;

**NOW, THEREFORE,** the Board of County Commissioners of Lane County Ordains as follows:

Section 1. The Lane County Transportation Plan and Master Road Plan 1980 adopted by Ordinance No. 3-80, is further amended by its complete removal and substitution of an updated Lane County Transportation System Plan (March 2004) as set forth in Exhibit "A" attached and made a part of this ordinance by this reference.

Section 2. The Lane County General Plan Policies, Goal Twelve: Transportation, Policy 4, as adopted by Ordinance No. PA 883, is further amended by repeal of said Policy 4 and substitution of new Policy 4 for Goal 12 as set forth in Exhibit "B".

**FURTHER,** although not a part of this Ordinance, the Board of County Commissioners adopts findings in support of this action as set forth in the attached Exhibit "C".

The prior policies repealed by this Ordinance remain in full force and effect to authorize prosecution of persons in violation thereof prior to the effective date of this Ordinance.

If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

**ENACTED** this _____ day of _____ 2004.

_____
Bobby Green, Sr., Chair
Lane County Board of Commissioners

_____
Recording Secretary for this Meeting of the Board

APPROVED AS TO FORM

Date _____ Lane County

_____
OFFICE OF LEGAL COUNSEL

# ORDINANCE PA 1202, EXHIBIT "A": TSP

# LANE COUNTY
# TRANSPORTATION SYSTEM PLAN

## March 2004 Update

**Lane County Public Works**
**Engineering Division, Transportation Planning**
**3040 North Delta Highway**
**Eugene, OR 97408**

# Lane County Transportation System Plan Update
**March 2004**

**Board of County Commissioners**

Bobby Green, Sr., Chair, North Eugene
Don Hampton, Vice-Chair, East Lane
Anna Morrison, West Lane
Bill Dwyer, Springfield
Peter Sorenson, South Eugene

**Roads Advisory Committee**

Leo Stapleton, Chair
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**Lane County Planning Commission**

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Chris Clemow
Steve Dignam
Marion Esty
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**For More Information About This Document**

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# LANE COUNTY TRANSPORTATION SYSTEM PLAN

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# CHAPTER I: INTRODUCTION

## Purpose

The Lane County Transportation System Plan (TSP) updates the first Transportation Plan adopted by the County in 1980. The TSP is a 20-year planning document whose overall purpose is to facilitate orderly and efficient management of the County's transportation system. More specifically, the purpose of adopting a new Transportation System Plan and associated code amendments is to:

- comply with Oregon Revised Statutes (ORS 197.175) and the Transportation Planning Rule (TPR, OAR 660-012), which require the County to adopt an updated TSP to comply with new state requirements and changing circumstances.
- describe the existing transportation system, including the roads system, bicycle and pedestrian facilities, public transportation, rail, air, and water facilities, and pipelines;
- identify present and future transportation needs, and how these needs will be prioritized and paid for given the current and anticipated financial outlook;
- promote coordination between transportation system improvements and land use requirements;
- facilitate the multi-modal transportation needs of County citizens; and
- promote consistency and coordination between agencies with jurisdiction over components of the transportation network.

## Relationship of TSP to County Comprehensive Plan, City TSPs, and State Plans

The County Comprehensive Plan includes all City-adopted comprehensive plans within the County. The County TSP is a Special Purpose Plan that is a component of the Comprehensive Plan (refer to Lane County General Plan Chart, Appendix F).

Each of the twelve incorporated cities within Lane County has its own comprehensive plan, including a transportation element and/or a TSP. These plans are applicable to individual cities and the area outside the city limits and inside the corresponding urban growth boundary (UGB). For the Eugene-Springfield Metropolitan area, *TransPlan* is the adopted Transportation System Plan, and it applies within the adopted Metro Area General Plan boundary. Under the state TPR, TSPs must be consistent with each other and with State Transportation Plan components, including the Oregon Aviation Plan, Oregon Bicycle/Pedestrian Plan, Corridor Plans, Oregon Highway Plan, Oregon Public Transportation Plan, the Rail Freight Plan, and the Rail Passenger Policy and Plan.

While the County TSP looks to City TSPs when decisions are needed regarding transportation facilities within urban growth boundaries, the County TSP must also be consulted regarding County Roads within urban growth boundaries. Similarly, while state highways, and rail, air, port, and pipeline facilities within the County are described in the County TSP and provided for in goals and policies, the managing public or private agency of those facilities, and their applicable plan documents, must also be consulted in making decisions about those facilities.

To date, the following local jurisdictions within Lane County have completed and adopted TSPs:

- City of Coburg (adopted November 1999)
- City of Cottage Grove (adopted September 1998)
- City of Creswell (adopted October 1998)
- Eugene-Springfield (*TransPlan*, adopted October 2001, amended July 2002)
- Junction City (adopted November 2000)
- City of Oakridge (adopted January 2001)
- City of Veneta (adopted December 1998)

It is anticipated that Florence and the County will co-adopt a TSP as part of that city's comprehensive plan in 2003. City TSPs include projects for which Lane County is the lead agency. These projects are therefore also included in the County's project list, Chapter 6.4.

## On the Horizon: A Focus on Multi-Modal Transportation and Energy Conservation

For decades, the combination of thousands of miles of public roads, increasing per capita income, and affordable private vehicles has offered unprecedented freedom to travel. The automobile allowed mobility and choices as to cultural, social, and economic pursuits, including employment, purchasing decisions, and recreation. Undoubtedly the growth and increasing vitality of the United States since the early 1900s can be partially attributed to this unprecedented mobility.

With increased motorized travel comes traffic congestion and air pollution, and concerns about global warming and energy shortages. For many citizens in Lane County, where these problems have had a relatively minor impact on livability compared to other, more intensely urbanized areas, these issues seem distant and even irrelevant. However, initiatives and trends on the national level attest to broad recognition of their reality:

- The Securing America's Future Energy Act of 2002 (H.R. 4), if passed, would (in part) provide incentives for cleaner energy sources and alternative fueled vehicles.
- In the year 2000, Honda and Toyota each released "hybrid" cars that combine electricity and gasoline to obtain significant increases in miles per gallon over conventional cars. Other car manufacturers are following suit. Honda, General Motors, and Daimler Chrysler recently announced plans to market fuel cell cars powered by hydrogen by 2003.[1]
- Although stable, long term funding remains elusive for high-speed rail, support for it continues to grow. The High-Speed Rail Investment Act established 12 high-speed rail corridors around the country, and several regions are moving toward implementation. The Pacific Northwest Corridor between Eugene and Vancouver, B.C. is a first step toward realization of high-speed rail in this area. Virginia, North Carolina, South Carolina and Georgia have joined together and are working with the business communities in each state to implement high-speed rail in the Southeast. Californians are considering a general obligation bond to fund a high-speed train system, to begin construction in 2004. The Midwest High Speed Rail Coalition envisions connecting Wisconsin, Nebraska, Kansas, Illinois, and Ohio.

On a local level, communities are increasingly focusing efforts on transportation demand management concepts, such as Lane Transit District's Commuter Solutions Program and Bus Rapid Transit, and the Portland Metro area's limitation on downtown parking and light rail system, Max. Neotraditional land use planning models have also surged in popularity over the last decade, as communities struggle to deal with growth and sprawl. These models borrow from historical examples of urban development and typically promote mixed uses at a pedestrian scale. A principle goal of such development is to discourage auto trips and encourage trips that can be easily made by biking or walking.

Demographic trends also demand increased attention to alternative transportation modes. As in the nation as a whole, the county's population is aging. By 2020, the percentage of the population aged 65 or older is expected to increase from 12.8% (2000) to 16.4 % of the total population[2]. The 2000 Census indicates that Florence's population is already 38.2% 65 years of age or older, and in Dunes City, 27.3% of the population is also in this category. As people age, driving independently will be eliminated as a mobility option for many of them, yet they will continue to need transportation services.

## Coordination

The variety of transportation needs of County residents requires coordination among all governing agencies, particularly since County roads are the only transportation mode over which Lane County can exercise direct

[1] October 2002, Google World News Listings
[2] U.S. Department of Health and Human Services, October 2002

jurisdiction. Coordination is especially important given that the state Constitution requires that highway user fees be used for road-related purposes. Transit facilities and services, for instance, are not a legal use of these funds. However, by participating in multi-jurisdictional planning and development related to diversifying mobility options within and between Eugene-Springfield, Florence, and other cities, the County can contribute to transportation solutions for the citizens of these areas and also mitigate capacity problems and limit costly infrastructure investments. As transportation-related problems increase, the use of more flexible funding sources outside of the Road Fund may become necessary to enable more comprehensive multi-modal transportation investments.

Fostering an expanded multi-modal transportation system is most successful within cities, where bicycle, pedestrian, and transit facilities are most necessary and feasible. Beyond city boundaries, however, the County TSP is an important component of the overall transportation planning framework. The County contributes by:

- Coordinating with state and local agencies that manage the transportation network, and providing policy support for efficient integration. This includes working with Oregon Department of Transportation and city governments within Lane County to ensure intersecting roads in multiple jurisdictions function at optimal levels; coordinating with Lane Transit District in the location of bus stops and development of new routes; and providing policy support for Port of Siuslaw and rail operations.
- Considering the needs of pedestrians and cyclists for all County road improvement projects through the construction of marked bike lanes and sidewalks in urban areas, and wider shoulders for rural pedestrian and bicycle use.
- Implementing statewide land use goals that limit development in outlying rural areas, thereby reducing vehicle miles traveled for commute trips and delivery of goods and services that would potentially result.
- The County plays a key role in contributing to integration between rail, port, and road facilities for the movement of goods and services. Ensuring the maintenance and operation of the county's road system, and coordinating with ODOT where state and county roads intersect, is crucial to provide for efficient movement of goods and services within and through the County and between transportation modes.

## Plan Development and Public Involvement

The effort to update the County's TSP initially began in the mid-1990's. Several public meetings were held around the County in 1995 to disseminate information about the planning process and to gather feedback about transportation issues. A questionnaire was widely distributed, and 18 responses were submitted. A summary of 1995 public comments is included in Appendix E.2.

Since then, County planning and engineering staff developed a road inventory, a detailed needs assessment, and road design standards. Based upon established engineering practices and county procedures, the standards were fine-tuned for county roadways. In the late 1990s, the TSP effort was delayed due to reallocation of county resources to other projects, including co-adoption of the six small city Transportation System Plans, and adoption of *TransPlan* for the Eugene-Springfield Metropolitan area. Lane County re-energized its efforts to move forward on the TSP adoption effort again during 2001.

This draft represents a culmination of all of these past efforts. As part of an overall package to comply with the TPR the County also developed land use regulations to implement the TSP. In addition, Lane Code and Lane Manual Chapters 15, which contain provisions for roads, are being updated.

Upon completion of the TSP draft, and before beginning a formal hearing and adoption process, a second round of public meetings was held in February 2003 throughout the County. Proposed Lane Code and Lane Manual updates were released for public comment in July 2003. Draft materials were also made available on the internet. In addition, notices of availability of the drafts were mailed to a list of over 500 public and private sector individuals. A copy of the Public Involvement Plan as approved by the Lane County Planning Commission in February 2002 is included in Appendix E.1.

# CHAPTER 2: DEFINITIONS

The following definitions shall apply in interpreting and implementing the Lane County Transportation System Plan:

(1) Access. Subject to adopted policies and standards, the means by which a lot, parcel, area or tract directly obtains safe, adequate and usable ingress and egress.

(2) Access Management. The regulation of vehicular access to streets, roads and highways from public and private roads and driveways to reduce potential conflicts and promote safety as well as to preserve the capacity, speed, and traffic flow for which the road system was planned for and designed. These measures may include, but are not limited to, policies and spacing standards for access to roadways, and use of physical controls such as channelization and raised medians.

(3) Approach (Road Approach, Driveway Approach). The area of intersection of an approaching road or driveway with a road.

(4) Capacity.
  (a) The maximum number of vehicles that can reasonably be expected to traverse a point or segment of road under prevailing conditions and during a specified period of time.
  (b) The structural capacity of a roadway, or the ability of the pavement structure, bridges, or other cross-sectional elements to carry loads created by traffic or the dead-load of the elements themselves.

(5) Capital Improvement Program (CIP). A short range financial plan that programs construction project funding for the County Road Fund. Lane County maintains an annually updated CIP for transportation improvement projects.

(6) Demand Management. Actions that are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods may include but are not limited to the use of alternative modes, ride-sharing and vanpool programs, and trip-reduction ordinances.

(7) Egress. A means or place of leaving a property.

(8) Final Design. An engineering design which specifies in detail the location and alignment of a planned transportation facility or improvement that has been approved by the County Board of Commissioners. See also Preliminary Design.

(9) Functional Class. The classification of a road according to its expected level of service and function. The following functional class definitions apply to County Roads as defined under Roads in this section:
  (a) Principal Arterial. A road which provides for through traffic between major centers of human activity in urban, suburban and rural areas.
  (b) Minor Arterial. A road which provides for intracommunity traffic flow to principal arterials and within urban areas. In rural areas, minor arterials serve as a direct connection between communities and also bring traffic to principal arterials.
  (c) Major Collector. A road or street which is used primarily to channel traffic from neighborhoods to arterials, and to commercial or industrial districts in urban areas. In rural areas, major collectors provide connections from outlying areas to the arterial system (primarily state highways).
  (d) Minor Collector. A road or street which gathers traffic within the neighborhood and directs it to a major collector or arterial.
  (e) Local Road or Street. A road intended solely for the purpose of providing access to adjacent properties. A local road may terminate in a cul-de-sac or be part of a larger network. Roads

functionally classified as Local Roads are County-maintained roads and do not include Public Roads that have not been accepted by the Board as County Roads, or Local Access Roads.

(10) Ingress. A means or place of entering a property.

(11) Land Use Decision. As defined in Lane Code 14.015.

(12) Land Use Regulation. As defined in Lane Code 14.015.

(13) Modernization. Road improvement projects to accommodate existing traffic and/or projected traffic growth consistent with adopted state, regional, county, or other local Transportation System Plans. County modernization projects are typically included in the General Construction project list of the County Capital Improvements Program. Modernization projects include, but are not limited to: reconstruction of roads; realignment of roads; addition of paved shoulders, curb and gutter, sidewalks, or other pedestrian and bicycle facilities; reconstruction of slopes, embankments, or ditches to provide improved safety and drainage; addition of travel lanes; widening of bridges; passing and climbing lanes; median turn lanes, acceleration and deceleration lanes, other channelization as defined in this section; new alignments, new safety rest areas, grade separations, intersection improvements, intermodal connectors, high-occupancy vehicle lanes, and off system improvements.

(14) New Road. Construction of a Public Road or road segment that is not a reconstruction, modification, or realignment of an existing road or road segment.

(15) Operation, maintenance, and/or repair. Routine activities necessary to operate and maintain the road system. These activities include, but are not limited to, signing, pavement marking, traffic signals, pavement surface maintenance and repair; pothole patching, culvert pipe and ditch grading, maintenance, or repair; dust control, vegetation control, and litter and animal carcass cleanup. These activities and minor transportation system improvements associated with them are not listed as projects in the Transportation System Plan or Capital Improvement Program. These activities provide for increased efficiency and safer traffic operations and reliability. Activities may include some aspects of preservation as defined in this section. Pavement surface maintenance does not include additional pavement structure needed as a result of a change in or intensification of a use of a property.

(16) Preliminary Design. An engineering design which specifies in detail the proposed location and alignment of a planned transportation facility or improvement. Preliminary design is normally specified as part of the Capital Improvement Program public involvement process when a project is being readied to be sent out to bid for construction. See also Final Design.

(17) Preservation. Activities that rebuild or extend the service life of existing transportation facilities. Road preservation projects add useful life to the road. Preservation includes but is not limited to reconstruction, pavement rehabilitation, pavement resurfacing, and minor safety and bridge improvements.

(18) Realignment. Constructing or rebuilding an existing roadway on a new alignment where the new centerline shifts outside of the existing right-of-way, and where the existing road surface is either removed, maintained as an access road, or maintained as a connection between the realigned roadway and a road that intersects the original alignment. The realignment may include channelization, and may increase capacity, but shall maintain the function of the existing road segment being realigned unless specified in adopted state, regional, county, or other local Transportation System Plans.

(19) Reconstruction or modification. Rebuilding an existing road in the same general location, either within the existing right-of-way or by acquiring new right-of-way. May or may not include realignment and/or the addition of turn lanes or other channelization. Reconstruction or modification may increase capacity.

(20) Rehabilitation. Road resurfacing, sealing, paving, and restoration, over and above routine maintenance, to repair deteriorating road surfaces and to address safety concerns.

(21) Right-of-Way (ROW, R/W).
(a) Includes the land or any interest in land acquired for public rights of passage, construction of facilities, motorists, cyclists, pedestrians, and utilities.
(b) The customary or legal right of a person or vehicle to pass before another.

(22) Road. The terms road, street, or highway shall be considered synonymous and shall include the entire area and all lawful improvements between the right-of-way lines of any public or private way that is created to provide ingress or egress to land. "Road" includes but is not limited to:
(a) Arterials, collectors, and local roads as in the functional classes defined above under Functional Class;
(b) Road related structures that are in the right-of-way such as drainage conveyance facilities;
(c) Other structures in the right-of-way that provide for the continuity and stability of the right-of-way including tunnels, retaining walls, and bridges;
(d) Underground and/or overhead utilities and utility easements that are within the right-of-way.
(e) Roads are further defined as follows:
(i) County Road. As defined in ORS 368. A Public Road which is part of the County Road system and has been assigned a County Road number pursuant to ORS 368.016. The Department is responsible for maintenance. A description of each County Road is kept in the Master Road Files in the Lane County Surveyor's office. See also Functional Class definitions.
(ii) Expressway. Two-lane and multi-lane highways that provide for safe and efficient high speed and high volume traffic movements. Their primary function is to provide for interurban travel and connections to ports and major recreation areas with minimum interruptions. A secondary function is to provide for long distance intra-urban travel in metropolitan areas. In urban areas, speeds are moderate to high. In rural areas, speeds are high. Usually there are no pedestrian facilities and bicycle facilities may be separated from the roadway. Private access is discouraged and Public Road connections are highly controlled.
(iii) Freeway. Arterial roadways with full control of access. Preference is given to through traffic by providing access connections with selected public streets only and by prohibiting crossings at grade and direct private driveway connections. They are intended to provide for high levels of service in the movement of large volumes of traffic at high speeds.
(iv) Frontage Road. A road that is parallel and adjacent to an arterial or other limited access road or railroad right-of-way and which provides access to abutting properties. The primary purpose of a frontage road is to reduce direct access to an arterial or other limited access road or railway right-of-way.
(v) Local Access Road. A Public Road that is not a County Road, state highway, or federal road. Pursuant to ORS 368, the County and its officers, employees and/or agents, is not liable for failure to improve Local Access Roads and is not liable to keep Local Access Roads in repair. The County shall spend County moneys on Local Access Roads only if it determines that the work is an emergency or if:
(aa) the Director recommends the expenditure; and
(bb) the public use of the road justifies the expenditure proposed; and
(cc) the Board enacts an order or resolution authorizing the work and designating the work to be either a single project or a continuing program.
(vi) Private Access Easement, Private Road. A private, nonpossessory interest in the land of another which entitles the holder(s) of the interest to use the roadway for access and to pass across another's land. A private road is intended to provide for ingress and egress to land and may include that portion of a panhandle or flag lot or parcel that is used for access purposes or an access road in which the underlying fee belongs to two or more persons, association, corporation, firm, club, partnership or other similar entity having the right of administration and/or ownership thereof.

(vii) Public Road. A road over which the public has a right of use that is a matter of record. For purposes of the Transportation System Plan, a Public Road is a road that has been dedicated for use by the public for road purposes either by good and sufficient deed presented to and accepted by the Board, or by a partition map and plat or subdivision plat presented to and accepted by the Board. Once accepted and placed on record, Public Roads are held in trust for the public by the County, and shall specifically exclude private roads, private ways, Private Access Easements or agreements, Forest Service roads, Bureau of Land Management roads, any Gateway or Way of Necessity as defined by ORS Chapter 376 and any other road which has nominally or judicially gained a "public character" by prescriptive or adverse use. A Public Road is not normally maintained by the County unless it has been accepted by the Board as a County Road as defined in this section, but the County may regulate its use. Common terms for this type of road are "Dedicated Public Road" and "Local Access Road".

(viii) Rural Road. A road or portion of a road that is not within an urban growth boundary.

(ix) Stubbed Road. A road having only one outlet, and which is intended to be extended or continued to serve future development on adjacent lands. A stubbed road that is part of the County Road system is functionally classified as a Local Road. This can include a cul-de-sac or hammerhead turnaround area intended to be extended in the future.

(x) Turnaround (Cul-de-sac or Hammerhead). The area located at the terminus of a road and developed to the standards for Turnarounds in Lane Code Chapter 15, the purpose of which is to allow motor vehicles to safely and efficiently reverse direction.

(xi) Urban Road. A road or portion of a road that is within an urban growth boundary.

(23) Transportation Facility. A physical system, including any portion thereof, that moves or assists in the transport of people, animals, or goods, including roads, bicycle, pedestrian, and equestrian paths, rail lines, airport facilities, port facilities, and pipelines, and excluding electricity, water and sewerage systems.

(24) Transportation Project Development. Implementing the Transportation System Plan (TSP) by determining the precise location, alignment, and preliminary design of improvements included in the TSP based on site-specific engineering and environmental studies.

# CHAPTER 3: GOALS AND POLICIES

For convenience, all goals and policies found in the remainder of the document are consolidated in this chapter.

Goals are broad statements of philosophy describing a vision for the future. Goals are organized by topic area. Policies are statements that provide a more specific course of action to move toward goals. Policies have the force of law. Transportation improvements, land development, and other actions affecting the County's transportation network must be consistent with adopted policies. Once adopted, the goals and policies will become a part of the County's General Plan.

## Goals And Policies

### *ROADS*

**Goal 1: Maintain the safety, physical integrity and function of the county road network through the routine maintenance program, the Capital Improvement Program, and the consistent application of road design standards.**

Policy 1-a: Road operations, maintenance, repair, and preservation activities shall be a priority of the Public Works Operations budget and shall be routinely carried out to protect the public investment in, and to ensure adequate functioning of the county road network.

Policy 1-b: Continue to implement the Capital Improvement Program including yearly adoption to address changing conditions, modified project schedules, the addition of new projects, and project completion.

Policy 1-c: Safety shall be the first priority in making decisions for the Capital Improvement Program and for roadway operations, maintenance, and repair.

Policy 1-d: The requirements of Lane Code 15 shall be consistently applied to all public and private road improvement projects. In the absence of a county-adopted standard for a particular design element, the edition specified in Lane Manual 15.450 of the following primary documents shall be the basis for road design, construction, signing and marking decisions:

(i) The following documents, published by the American Association of State Highway and Transportation Officials (AASHTO):
  (a) *A Policy on Geometric Design of Highways and Streets*;
  (b) *Roadside Design Guide*;
  (c) *Geometric Design of Very Low Volume Local Roads (ADT $\leq$ 400);* and
  (d) *Guide for Design of Pavement Structures*.

(ii) The *Manual on Uniform Traffic Control Devices (MUTCD)* published by the Federal Highway Administration.

(iii) The following additional documents published by the Oregon Department of Transportation (ODOT) and the American Public Works Association (APWA), Oregon Chapter:
  (a) *Oregon Standard Specifications for Construction* (ODOT & APWA);
  (b) *Oregon Standard Drawings* (ODOT & APWA);
  (c) ODOT *Highway Design Manual*;
  (d) ODOT *Hydraulics Manual*;
  (e) ODOT *Hydraulics Manual, Volume 2* (Erosion and Sediment Control);
  (f) *Oregon Bicycle and Pedestrian Plan* (ODOT, 1995); and
  (g) *1999 Oregon Highway Plan* (ODOT).

(iv) The *Highway Capacity Manual 2000* published by the Transportation Research Board.

(v) The *Trip Generation, 7th Edition* manual published by the Institute of Traffic Engineers.

Policy 1-e: Road improvement projects shall consider and, as financially and legally feasible, integrate improvements for alternative transportation modes such as sidewalks, bike lanes, and bus stop turnouts, consistent with adopted road design standards.

Policy 1-f: Maintain county arterial and collector roads sufficiently for the safe and efficient movement of freight, consistent with applicable traffic impact analysis, design policies and standards and land use regulations.

Policy 1-g: Maintain and improve roads consistent with their functional classification. Reclassify roads as appropriate to reflect function and use.

Policy 1-h: City standards shall apply to county roads functionally classified as local roads within urban growth boundaries. In the absence of city standards, the county's road design standards shall apply.

**Goal 2: Promote a safe and efficient state highway system through the State Transportation Improvement Program and support of ODOT capital improvement projects.**

Policy 2-a: Safe movement of vehicles on the state system and, where allowed, bicyclists and pedestrians shall be a priority. Lane County supports development and implementation of ODOT projects that improve the safety, operation, and structural characteristics of the state highway and bridge system, provided they are consistent with the TSP and applicable federal, state, and local regulations.

Policy 2-b: The County shall coordinate, as appropriate, with ODOT in:
(i) plan development;
(ii) managing the existing state system; and
(iii) designing and developing facility improvements on the state system in Lane County.

Policy 2-c: The County supports the preservation of the natural, historic, cultural, and recreational values of federally designated Scenic Byway routes maintained by ODOT.

Policy 2-d: ODOT safety, preservation and modernization projects on the state system shall be consistent with Policies 2a-c above, and need not be identified in the Lane County TSP 20-year Project List.

**Goal 3: Promote a safe and efficient road network through access management.**

Policy 3-a: Access decisions will be made in a manner consistent with the functional classification of the roadway.

Policy 3-b: Access Management policies and spacing standards found herein and in Lane Code 15.130-15.139 shall apply to all new development, changes of use, and road and driveway approach locations within county road rights-of-way. For state facilities, the Oregon Department of Transportation controls access pursuant to Oregon Administrative Rules 734, Division 51.

Policy 3-c: Development within a County Road right-of-way, including but not limited to excavation, clearing, grading, utility placement, culvert placement or replacement, other stormwater facilities, and construction or reconstruction of road or driveway approaches, is allowed only upon approval of a facility permit.

Policy 3-d: Properties adjacent to County Roads shall be granted reasonable access subject to access management and other applicable policies and standards herein and in Lane Code. Where access is available from more than one road, access shall be taken from the road with the lower functional classification as defined in Lane Code 15.020(2), unless otherwise approved by the County Engineer or designee.

Policy 3-e: Decisions regarding placement, location, relocation, and spacing of traffic control devices, including but not limited to traffic signals, turn lanes, and medians shall be based upon accepted engineering practices as provided for in the edition specified in Lane Manual 15.450 of the following documents: The Federal Highway Administration (FHWA) *Manual on Uniform Traffic Control Devices (MUTCD),* the *Oregon Standard Drawings* published by the Oregon Department of Transportation (ODOT) and American Public Works Association (APWA), and *A Policy on Geometric Design of Highways and Streets* published by the American Association of State Highway and Transportation Officials (AASHTO).

Policy 3-f: New development shall accommodate on-site traffic circulation on the site and not by circulating on and off the site through multiple access points using the public road system. "Backing out" maneuvers should be avoided for new driveways on all urban arterials and rural major collectors.

**Goal 4: Maintain acceptable road performance levels.**

Policy 4-a: The performance standard on county-maintained roads shall be as represented in the following peak hour volume to capacity ratio (v/c) table from Lane Code 15.696. Given adequate funding for public road improvements and as a secondary priority to safety improvements, this standard should be maintained in making decisions about public road improvement projects or implementation of other programs and strategies that mitigate traffic.

**(Table 6 from Chapter 4.1.): Maximum Volume to Capacity Ratios for Peak Hour Operating Conditions, Lane County Roads**

| Roadway Category | Location/Speed Limits | | | | |
|---|---|---|---|---|---|
| | Inside Urban Growth Boundary | | | Outside Urban Growth Boundary | |
| | Eugene-Springfield Metro Area | Outside Eugene-Springfield Metro area where speed limit <45 mph | Outside Eugene-Springfield Metro area where speed ≥ 45 mph | Within Unincorporated Communities | Outside Unincorporated Communities |
| Freeways and Expressways | 0.80 | n/a | n/a | n/a | n/a |
| Other County Roads | 0.85 | 0.85 | 0.75 | 0.80 | 0.70 |

Policy 4-b: In analyzing arterial or collector streets, peak hour level of service analysis methods may be appropriate. Level of service "D", using the analytical approaches in the Transportation Research Board *Highway Capacity Manual* is the standard of performance to be achieved or maintained, and not exceeded. Not exceeding LOS "D" means achieving or maintaining LOS "A", "B", "C", or "D". When such analysis is required, both the v/c standard in Lane Code 15.696 and LOS D must be met. The standards and procedures to be used in a particular study shall be approved in advance by Lane County Public Works, according to the procedures in the Traffic Impact Analysis Guidelines of the Public Works Engineering Division.

Policy 4-c: A traffic impact analysis shall be required as part of a complete land use application based upon the requirements of Lane Code 15.697, for any of the following:

(i) any development proposal that, if approved, will result in an increase in peak hour traffic flow of 50 or more automobile trips outside an urban growth boundary, or 100 or more automobile trips inside an urban growth boundary. The increase in number of

trips shall be calculated based upon the methodology in the Institute of Traffic Engineers' *Trip Generation* manual for the year of publication specified in Lane Manual Chapter 15.450 and associated handbook and user's guide;

(ii) development proposals that will affect county roads where congestion or safety problems have been identified by previous traffic engineering analysis;

(iii) any plan amendment proposal, unless waived by the County Engineer as specified below;

(iv) proposed development that will generate or receive traffic by single or combination vehicles with gross weights greater than 26,000 pounds as part of their daily operations. "Daily operations" includes delivery to or from the site of materials or products manufactured, processed, or sold by the business on the site. "Daily operations" does not include routine services provided to the site by others, such as mail delivery, solid waste pickup, or bus service.

The County Engineer or designee may waive traffic impact analysis requirements specified above, when:

(i) Previous analysis has determined that the development proposal will not result in congestion, safety, or pavement structure impacts that exceed the standards of the agency that operates the affected transportation facilities; or

(ii) In the case of a plan amendment or zone change, the scale and size of the proposal is insignificant, eliminating the need for detailed traffic analysis of the performance of roadway facilities for the 20-year planning horizon. Whether the scale and size of a proposal may be considered insignificant may depend on the existing level of service on affected roadways. Generally, a waiver to Traffic Impact Analysis will be approved when:

  (a) the plan designation or zoning that results will be entirely a resource designation; or

  (b) the plan designation or zoning that results will be entirely residential and the allowed density is not likely to result in creation of more than 50 lots; and

  (c) there is adequate information for the County Engineer or designee to determine that a transportation facility is not significantly affected as defined in Policy 20-d.

Policy 4-d: When a traffic impact analysis is required,

(i) it shall evaluate all affected county road facilities where direct access is proposed, including proposed access points and nearby intersections.

(ii) it shall be prepared by an Oregon-certified engineer with expertise in traffic and road construction engineering.

(iii) it shall document compliance with the Road Design Standards in Lane Code 15.700-15.708.

(iv) it shall document compliance with the goals and policies of the applicable Transportation System Plan.

(v) the County Engineer may alter the study requirements based upon the anticipated impact of the proposal. For example, a queue length analysis (based upon 95% probability) may be required.

(vi) the traffic impact analysis requirements shall be coordinated with other affected jurisdictions and agencies, such as the Oregon Department of Transportation or a city.

(vii) traffic engineers preparing traffic impact analyses shall request approval of the scope of the analysis before proceeding with the analysis, as specified in the Traffic Impact Analysis Guidelines of the Public Works Engineering Division.

Policy 4-e: When a traffic impact analysis is required,

(i) for plan amendments, it shall demonstrate that the performance standard in Policy 4-b for the affected county road will not be exceeded within 20 years from the date the

analysis is completed as a result of approval of the plan amendment or zone change. If the performance standards are already exceeded at a location affected by the plan amendment, the standard shall be to avoid further degradation of conditions;

(ii) for other proposed land use development, it shall demonstrate that the performance standard in Lane Code 15.696 for the affected county road will not be exceeded immediately and for the next five years.

(iii) if the analysis must include an evaluation of the impacts of heavy vehicles pursuant to Policy 4-c (iv), it shall be based upon the procedures for pavement structure analysis in Lane Code 15.707.

(iv) Traffic impact analyses, and mitigation for traffic impacts on transportation facilities shall comply with adopted plans and codes of the agency with jurisdiction for the affected facility.

(v) If the performance standard in Policy 4-b cannot be achieved or maintained as specified in (i) or (ii) above, the traffic impact analysis shall propose road dedications and improvements for capacity increases, implementation of demand management strategies, or other mitigation measures. The proposal shall include a description of how and when the improvements or measures will be implemented. Any proposed road improvements shall be consistent with applicable state and local policies and standards. Examples of mitigation actions are in Chapter 4.1 in the *Level of Service and System Performance* subsection. Conditions may be assigned to ensure such improvements or measures will be implemented.

Any requirements by the County resulting from an approved traffic impact analysis shall be the responsibility of the applicant unless otherwise approved by the County.

Policy 4-f: The Transportation Research Board's *Highway Capacity Manual*, for the year of publication specified in LM 15.450, is the standard of practice for traffic impact analyses. The Highway Capacity Software (HCS) published by McTrans Center for Microcomputers in Transportation, or other approved software, may also be used. SIGCAP published by ODOT, or other ODOT-approved software is acceptable when analysis of both state and county facilities is required.

Policy 4-g: ODOT policies and mobility standards shall be applied to decisions affecting state highways in Lane County. Applicable standards from city Transportation System Plans (TSPs) shall be applied to decisions about city streets.

Policy 4-h: Traffic impact analyses shall be based on proposed access points consistent with county access management policies and standards specified herein and in Lane Code 15.130-15.139. Traffic impact analyses shall also consider the safe operation of affected driveways and public street intersections. Proposals requiring traffic impact analysis shall include a review of consistency with Access Management policies and standards as part of the approval of the scope of the analysis.

Policy 4-i: When analyzing signalized intersections, locations where signal warrants may be met, or intersections with all-way stop control (AWSC), the primary objective is to maintain the performance of the overall intersection. The overall intersection v/c ratio must meet the applicable standard. If level of service analysis is required, the level of service standard must also be met. At unsignalized intersections and road approaches with two-way stop control (TWSC), the object is to achieve or maintain the v/c ratios specified in Policy 4-a for the approaches that are not stopped. Approaches at which traffic must stop, or otherwise yield the right of way, shall be operated to maintain safe operation of the intersection and all its approaches and shall not exceed a v/c ratio of 0.95 within urban growth boundaries and a v/c ratio of 0.80 outside of urban growth boundaries. If public side streets or private driveways are predicted to exceed the standards, mitigation measures shall be recommended. If side

street or driveway performance is predicted to exceed standards in order to maintain flow on the major street, adequate space for vehicle queuing (based upon 95% probability) must be maintained on the side street or driveway. At the intersection of a county road and a state highway, state highway standards must be maintained for the state highway.

**Goal 5: Promote a safe, functional, and well-maintained bridge network in Lane County.**

Policy 5-a: Conduct bridge inspections in compliance with Federal Highway Administration and Oregon Department of Transportation requirements.

Policy 5-b Maintain an inventory of all county structures including inspection records showing load ratings, general condition, and sufficiency ratings.

Policy 5-c: Consider the inclusion of bridges in the Capital Improvement Program if they are structurally or functionally deficient based upon bridge general condition ratings, roadway width, bike/pedestrian passage, load capacity, safety, and operating conditions.

Policy 5-d: Conduct routine maintenance and repair to ensure bridge integrity over the duration of its design life.

Policy 5-e: Consider the needs of the trucking industry when maintaining, building, or reconstructing bridges.

Policy 5-f: Maintain and restore Lane County covered bridges for their historic, aesthetic and cultural value as feasible, through budget allocations to the Capital Improvement Program or other funding sources.

## *BICYCLE AND PEDESTRIAN FACILITIES*

**Goal 6: Provide safe and convenient opportunities for bicycle and pedestrian travel throughout Lane County.**

Policy 6-a: Marked bicycle lanes are required on urban arterial and collector streets when those streets are newly constructed, are reconstructed to urban standards, or are widened to provide additional vehicular capacity.

Policy 6-b: Sidewalks or paved pathways accompanying public streets and roads are necessary wherever significant conflicts with motor vehicle traffic jeopardize the health, safety and welfare of pedestrians and bicyclists.

(i) Generally, sidewalks are not provided along rural county roads (outside of urban growth boundaries) although they may be provided where there is a demonstrated need in unincorporated communities and in other areas of concentrated commercial, industrial, residential, or institutional development. This will be determined on a case by case basis.

(ii) County arterial and collector roads within urban growth boundaries shall include sidewalks and the cost shall be assessed to the abutting property owners, unless the assessment is waived by the Board of County Commissioners.

(iii) Sidewalks on new or reconstructed county roads functionally classified as local roads within urban growth boundaries shall be required as provided for in city development standards. In the absence of city standards, sidewalks are required for new roads or reconstructed roads with existing sidewalks. Sidewalks shall also be required for reconstructed urban local roads without existing sidewalks, except if the cost would be excessively disproportionate to the need or probable use, or if sparsity of population, other available ways or other factors indicate an absence of any need

for sidewalks. Sidewalks shall be constructed at the expense of the developer or adjacent property owners.

(iv) Roads which do not have curbs and gutters and which are not scheduled to be rebuilt, but which do have a significant need for sidewalks, may be provided with temporary asphalt walkways.

Policy 6-c: Public Works staff should work with school district personnel to establish school route plans. Based on these plans, Lane County will install appropriate traffic control devices, such as signs, crosswalks or other markings, or other devices as approved by the Traffic Engineer.

Policy 6-d: New development subject to Site Review and Land Division requirements shall provide adequately for safe bicycle and pedestrian on-site circulation and off-site transportation connections. Development shall provide for safe and convenient on-site circulation with respect to the location and dimensions of vehicular, bicycle, and pedestrian entrances, exits, drives, and walkways in relation to each other and to buildings and other facilities. Consideration shall be given to the need for lighting, sidewalks, widening and improving abutting streets, bus stop access, and bicycle lane and pedestrian path connections, consistent with adopted access management, road and driveway spacing standards, road design standards, and other requirements in Lane Code 15.

Policy 6-e: All new development within urban growth boundaries, when adjacent to County-maintained road rights-of-way, shall include bicycle and pedestrian facilities as specified in the Road Design Standards for Urban Roads in Lane Code 15.

Policy 6-f: The County generally will support State projects that include bicycle and pedestrian facilities.

**Goal 7: Promote logical and efficient bicycle and pedestrian connections within the Lane County transportation system and between the County's and other jurisdictions' transportation systems.**

Policy 7-a: In planning and implementing transportation system improvements, Lane County will coordinate with other affected jurisdictions to maximize bicycle and pedestrian route connectivity.

Policy 7-b: The County will look for opportunities to partner with ODOT and City agencies on bicycle and pedestrian facilities when roads of different jurisdictions intersect, in order to provide adequately for bicycle and pedestrians travel to local destinations.

**Goal 8: Promote connectivity between non-motorized and other transportation modes.**

Policy 8-a: In the design and construction of transportation facilities, barriers to foot and bicycle travel should be avoided.

**Goal 9: Encourage and support the development of recreational bicycling and hiking facilities, recognizing these activities as important to community livability and to the tourism sector of the local and state economy.**

Policy 9-a: Road maintenance decisions will strive to balance the need for controlling long term pavement maintenance costs with consideration for providing improved road surfaces for cycling.

Policy 9-b: Road improvement projects identified on the TSP Project List shall incorporate shoulders and sidewalks adequate for pedestrian use, consistent with other TSP policies and with road design standards to be adopted concurrently with the TSP.

Policy 9-c: Within statutory road fund limitations, the county will consider opportunities to participate in off-road bicycle trail and footpath development and promotion, when there is adequate demand and as economically feasible.

Policy 9-d: On a case-by-case basis, and within statutory road fund limitations, the county will consider the feasibility of establishing or maintaining access ways, paths, or trails prior to the vacation of any public easement or right-of-way.

## *PUBLIC TRANSPORTATION*

**Goal 10: Support and encourage improved public transportation services and alternatives to single occupancy vehicle travel between the Eugene-Springfield Metropolitan Area and outlying communities.**

Policy 10-a: Continue to assist in coordinating public transportation and multi-modal transportation initiatives by providing technical support and otherwise participating in technical advisory committees, task forces and working groups, such as the regional Commuter Solutions (Transportation Demand Management) program.

Policy 10-b: County road construction and reconstruction projects shall include consultation with LTD and shall, as feasible, accommodate transit stops, bus pullouts and shelters along existing or planned bus routes as permitted under statutory requirements for road fund expenditures. Unless otherwise authorized by the Board of County Commissioners, transit stop amenities with the exception of bus pullouts will typically be funded by LTD or other non-county sources.

Policy 10-c: The County will support efforts to develop public transit facilities such as park-n-ride lots and shelters in rural areas when they are consistent with land use, zoning, and other applicable regulations.

Policy 10-d: The County will investigate the possibility of providing free or discounted bus transportation services for County employees as part of LTD's Group Pass Program.

**Goal 11: Support efforts to maintain rail transportation and to promote high speed rail development.**

Policy 11-a: As feasible, Lane County will participate in efforts to plan, develop, and maintain rail-related infrastructure improvements for high-speed and other passenger rail service.

Policy 11-b: Lane County will coordinate with and support state efforts to comply with federal and state rail transportation requirements by consulting adopted versions of the Oregon Transportation Plan and Rail Plan when making transportation or land use decisions involving rail facilities.

**Goal 12: Support initiatives to develop improved transportation services for county citizens with special needs.**

Policy 12-a: As feasible and as opportunities arise, Lane County will support public and private efforts to meet special transportation service needs for county residents, giving priority to rural residents.

## *RAIL TRANSPORTATION*

**Goal 13: Promote railway and highway safety at and near road and railway intersections.**

Policy 13-a: Lane County's Engineering Division shall notify railroad companies of all road improvement projects within 500 feet of railways.

Policy 13-b: Road improvement projects will give consideration to upgrading existing railroad crossings and protective devices, grade-separated crossings, elimination of existing railroad crossings, and to the extent possible, will minimize new railroad crossings.

## *AIR TRANSPORTATION*

**Goal 14: Coordinate transportation system improvement decisions with airport facility needs.**

Policy 14-a: Road improvements on major airport access routes shall be consistent with the Eugene Airport Master Plan and with other Airport Plans adopted by cities where airports are located.

Policy 14-b: Consistent with the 2000 Eugene Airport Master Plan, Lane County Public Works Engineering will coordinate with the Eugene Airport Authority to improve ground access to the airport. As opportunities arise, transportation system projects will incorporate improvements to access routes to other public airports in the county.

Policy 14-c: Road improvement design decisions affecting access routes serving public airports in the county will consider the needs of motor vehicles associated with existing and contemplated air freight and air passenger businesses serving the airports.

Policy 14-d: All county road improvements near airports will be coordinated with federal, state, and local agencies responsible for airport air space.

**Goal 15: Coordinate land use decisions with airport facility needs.**

Policy 15-a: Lane County shall review all proposed airport expansion plans and provide comment as appropriate regarding land use compatibility, consistency with zoning, and impacts on the county's transportation system.

Policy 15-b: Lane County shall review all proposed land use outside urban growth boundaries and in the vicinity of an airport regarding compatibility with the airport. Airport airspace shall be protected from inappropriate development through the implementation of land use and zoning regulations.

**Goal 16: Support multi-modal transportation services to and from the airport.**

Policy 16-a: As possible, Lane County shall participate in planning and other efforts to improve public as well as private, multi-occupancy vehicle transportation services to and from the Eugene Airport.

## *WATER TRANSPORTATION*

**Goal 17: Support Port of Siuslaw development efforts and recognize the Port as important to the state and local economy.**

Policy 17-a: Road improvement projects affecting facilities that support or are operated by the Port of Siuslaw shall be coordinated with the Port and with the Oregon Department of Transportation. Lane County will seek concurrence for all development in the Siuslaw River and adjacent to the navigable waterway.

Policy 17-b: Lane County shall review proposed Port of Siuslaw expansion plans when they involve lands and/or roads in the county's jurisdiction, and provide comment as appropriate regarding land use compatibility, consistency with zoning, and impacts on the county's transportation system.

Policy 17-c: Lane County shall support Port of Siuslaw in its efforts to improve navigability of the river and promotion of the local fishing industry, consistent with state and local land use and zoning laws.

**Goal 18: Protect the long term ecological health of the Siuslaw River.**

Policy 18-a: Development in and near the Siuslaw River in areas of county land use jurisdiction shall comply with the Lane County Coastal Resources Management Plan and with federal and state regulations.

## *PIPELINES*

**Goal 19: Protect pipelines as conveyances and for public safety.**

Policy 19-a: Lane County shall coordinate with pipeline providers on matters of mutual concern, such as road maintenance activities and road improvement projects to protect public safety and maintain the viability of both modes of transportation.

Policy 19-b: Lane County shall review all proposed pipeline expansion plans and provide comment as appropriate regarding land use compatibility, consistency with zoning, and impacts on the county's transportation system.

## *TRANSPORTATION AND LAND USE*

**Goal 20: Ensure that transportation projects comply with state land use requirements regarding urban and rural land uses, and other federal, state, and local land use requirements.**

Policy 20-a: Transportation projects, facilities, services and improvements as identified in Oregon Administrative Rules 660-012-0065 and as implemented in Lane Code may be permitted on rural lands consistent with statewide land use Goals 3, 4, 11, and 14 without a goal exception.

Policy 20-b: The following transportation facility improvements do not require an amendment to the TSP unless an exception to state land use laws or a TSP amendment is otherwise required.

(i) Channelization
(ii) Operation, maintenance, and repair
(iii) Preservation
(iv) Reconstruction
(v) Rehabilitation
(vi) Intersection improvements
(vii) Realignment
(viii) Modernization
(ix) Transportation facilities, services and improvements serving local travel needs. The travel capacity and level of service of facilities and improvements serving local travel needs shall be limited to that necessary to support rural land uses identified in the acknowledged comprehensive plan or to provide adequate emergency access.

Policy 20-c: Plan amendments, zone changes, and other land use decisions shall consider impacts on the county transportation system, including federal, state, county, and other local roads; bicycle and pedestrian paths; public transit facilities; and air, rail, port, and pipeline facilities.

Policy 20-d: Amendments to the comprehensive plan or any of its adopted components and sub-plans, which significantly affect a transportation facility, shall ensure that allowed land uses are consistent with road function, capacity, level of service, and other adopted performance standards. This may be accomplished by:

(i) limiting land uses to the existing road capacity or level of service;
(ii) amending the TSP pursuant to Lane Code 16.400(9), to provide adequate facilities;
(iii) altering the land use designation, densities, or design requirements to reduce demand for auto travel and meeting travel needs through other modes, or
(iv) amend the TSP, pursuant to LC 16.400(9), 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 multimodal travel choices are provided. If a TSP amendment is required, it shall not be initiated unless the requirements of LC 16.400(9) have been met.

A plan or land use regulation amendment significantly affects a transportation facility, if it:

(i) Changes the functional class of an existing or planned facility, or will result in the roadway facility no longer meeting the functional class definition;
(ii) Changes standards that implement the functional class, except that approval of an exception or variance to standards does not in itself significantly affect a transportation facility;
(iii) Allows types or levels of land uses that would result in levels of travel or access that are inconsistent with the functional class; or
(iv) Would reduce the performance standards of the facility below the minimum acceptable level identified in the TSP.

Determinations under this policy shall be coordinated with affected transportation facility and service providers and other affected local governments.

Policy 20-e: The presence of a transportation facility or improvement shall not be a basis for an exception under OAR 660-012, OAR 660-004-0022 or OAR 660-004-0028, to allow residential, commercial, institutional or industrial development on rural lands.

Policy 20-f: When an exception to statewide land use goals and/or a plan amendment is required for a transportation facility, the approval process should be consolidated with other public hearings and approvals required for the project before the Roads Advisory Committee, the Planning Commission, and the County Board of Commissioners.

Policy 20-g: Amendments to the county Transportation System Plan shall be processed according to applicable state law requirements, the provisions set forth in Lane Code Chapter 12, and Lane Code 16.400.

Policy 20-h: Road improvement projects shall comply with federal, state, and local land use regulations.

**Goal 21: Provide for coordinated land use review when making decisions about transportation facilities.**

Policy 21-a: It is the county's intent that the Transportation System Plan be consistent with state Transportation System Plans, with *TransPlan* (the Eugene-Springfield Transportation System Plan applicable inside the Eugene-Springfield Metropolitan Area General Plan boundary), and with the Transportation System Plans of other cities within the county.

Policy 21-b: County TSP goals and policies apply to:

(i) all roads in the County that have been dedicated to and formally accepted by the Board of County Commissioners, unless and until such roads are subsequently accepted or annexed by an incorporated community; and

(ii) all other transportation facilities and services, including road, air, rail, pipeline and port facilities, located outside of urban growth boundaries or outside of the Eugene-Springfield Metropolitan Area General Plan boundary.

Policy 21-c: Where inconsistencies exist between the County TSP and other TSPs applicable within the County, or between road design standards of the County and other jurisdictions within the County, the following guidelines shall be used in making decisions about road improvements and services. If the inconsistency involves:

(i) a state highway, state transportation system plans and design standards shall prevail;

(ii) a public or private road outside of an urban growth boundary, the County TSP and road design standards shall prevail;

(iii) a public or private road functionally classified as a local road within an urban growth boundary, the City TSP and applicable road design standards shall prevail;

(iv) a road defined as a County Road pursuant to Lane Code 15.010 and functionally classified as a collector or arterial road, the County TSP and road design standards shall prevail;

(v) a public or private road functionally classified as a local road or primarily used to provide local access to abutting properties within the Eugene-Springfield Metropolitan Area General Plan boundary, *TransPlan* and the respective applicable Eugene or Springfield road design standards shall prevail within the urban growth boundary and the applicable County Road design standards shall apply outside the urban growth boundary;

(vi) an intersection or roads in more than one jurisdiction's ownership or control, the TSP goals and road design standards of the agency having ultimate maintenance responsibility shall prevail.

Decisions about road improvements may follow different guidelines than those above upon agreement of the elected officials of the involved jurisdictions or their designees, or if other recorded inter-jurisdictional agreements exist that supersede the above guidelines.

**Goal 22: Encourage adequate road improvements for new development.**

Policy 22-a: The dedication of adequate right-of-way and construction of road improvements may be required to serve traffic that will be generated due to the development.

Policy 22-b: The County will consider opportunities to purchase land for extensions of right-of-way where connectivity between collector and arterial roads is needed to promote efficient traffic flow.

Policy 22-c: The County encourages and will facilitate the formation of Local Improvement (special assessment) Districts to address road improvement needs on sub-standards roads.

Policy 22-d: Road vacations proposed as part of lot or parcel reconfigurations or property line adjustments, that will result in loss of connectivity between Public and/or County Roads as defined in LC 15.010(35) shall require approval of a replat of all subdivision lots and partition parcels adjacent to the road to be vacated. As part of the replat process, the County may require dedication of right-of-way or the creation of private easements, and road improvements, to ensure previously existing connectivity between Public or County Roads is maintained.

Policy 22-e: Roads that were dedicated to the County but were never accepted shall be subject to goals, policies, and standards applicable to private roads and easements, unless otherwise specified.

## *FINANCING AND RECOMMENDED IMPROVEMENTS*

**Goal 23: Maintain long-term County Road Fund stability by making annual budget adjustments and following adopted priorities.**

Policy 23-a: Adjust operating and capital expenditures through the annual budget process to maintain long term County Road Fund viability. Maintain a "prudent person" County Road Fund reserve. An appropriate "prudent person" reserve is generally considered to be 10% to 15% of gross receipts.

Policy 23-b: Identify and consider additional potential funding sources and strategies, such as a local option gas tax or vehicle registration fee, in the event of loss or reduction of existing funding sources.

**Goal 24: Use the County Road Fund effectively by following the priorities established in the 1991 Road Fund Financial Plan (updated 1995).**

Policy 24-a: As a first priority (Core Program), maintain and preserve the County Road and bridge system.

Policy 24-b: As a first priority (Core Program), provide a safe roadside environment for the traveling public on the County Road System.

Policy 24-c: As a second priority (Enhanced Program) and as funding allows, improve the County Road System to meet modern County design and safety standards.

Policy 24-d: As a second priority (Enhanced Program) and as funding allows, share timber receipt payments from the County Road Fund with Cities for general street purposes and maintenance of City street systems.

Policy 24-e: As a third priority (Assistance Program) and as funding allows, provide economic development road infrastructure financing to assist in economic development.

Policy 24-f: As a third priority (Assistance Program) and as funding allows, share timber receipt payments from the County Road Fund, through the CIP process, with cities and ODOT for City or ODOT roadway projects of mutual interest.

**Goal 25: Maintain effective partnering relationships with cities and the Oregon Department of Transportation (ODOT).**

Policy 25-a: Review annually County-City road partnership agreements to maintain road fund viability and to assist cities in providing road services to urban residents in Lane County.

Policy 25-b: Evaluate existing road project funding agreements with incorporated cities, and make necessary amendments to allocate an appropriate share of system development charges (SDCs) to the County to cover the cost of improvements on County Roads generated by new development.

Policy 25-c: Engage ODOT in continuing discussions regarding jurisdiction of roadways; partnerships in funding programs; response to ODOT policy initiatives; and partnerships for a seamless service delivery system through sharing of resources, collocation of facilities, or consolidation of functions.

# CHAPTER 4: TRANSPORTATION SYSTEM FACILITIES

## 4.1. ROADS

## Description Of The Road Network

The principal and most extensive component of the County's transportation infrastructure is the road system. Within Lane County there are a number of different agencies responsible for roads. They include the Oregon Department of Transportation, Lane County, incorporated cities, the U.S. Forest Service, and U.S. Bureau of Land Management.

While the automobile is clearly the predominant mode of transportation served by the county road system, the road right-of-way accommodates multiple modes of transportation, including freight, cars, buses, bicyclists, and pedestrians. As appropriate, and when legally and financially feasible, county road improvement projects facilitate alternative modes with sidewalks, marked bike lanes, wider shoulders, and bus stop turn-outs.

This chapter describes county-maintained roads, state highways, and roads other than city streets in Lane County. City street networks are discussed in city Transportation System Plans. Following the road network descriptions are sections regarding Access Management, Level of Service and Roadway Performance, Design Standards, and associated goals and policies.

### County Roads

County roads are those that are maintained by the county after undergoing a formal process of dedication and acceptance by the county Board of Commissioners. There are approximately 1,436 miles of roadway maintained in the county road system. The county rarely accepts new roads into the county road system unless there is a clear public benefit and justification for expenditures on maintenance. Decisions about road acceptance are intended to protect the public investment already made in the road system and to make optimum use of available road revenues for the maintenance and improvement of the system. Lane Manual Chapter 15 specifies road dedication and acceptance requirements. New roads must also comply with state land use goals.

The county Road Management Information System (RMIS) provides a variety of data about county roads, including length, beginning and ending mileposts, status (existing, constructed, or proposed), jurisdiction, agency responsible for maintenance, functional class and maintenance zones. A complete inventory of the county road system is in Appendix B.

#### Functional Classifications

Functional classification provides an organizational mechanism for developing roadway design standards, establishing traffic speeds, controlling access, designing intersections, and allocating monies for maintenance and improvements. Roads are categorized in a functional class hierarchy based upon the character and level of service they contribute to the overall transportation system. The hierarchy consists of many smaller roads feeding into a fewer number of major roads. Arterials are major roads designed to move large amounts of traffic at high speeds, with minimal interruption from intersecting roads. Collector roads "collect" traffic from local road systems and connect to the arterial network. Smaller, local roads feed into the collectors and arterials, and are designed to provide access to individual properties, such as private residences, and to discourage through traffic use. A road cannot function on opposite ends of the hierarchy (that is, high volumes and speeds with many intersecting roads and access points) without severely comprising safety and efficiency.

Lane County has established a system of functional classifications for the county road system. Arterial and collector classifications are identified in Lane Code 15.020. In addition, the County maintains a complete roadway functional classifications inventory.

Lane Code 15.010 defines the various functional classifications as follows:

- Principal Arterials provide for through traffic between major centers of human activity in urban, suburban and rural areas.
- Minor Arterials provide for intra-community traffic flow to principal arterials and within urban areas. In rural areas, minor arterials serve as a direct connection between communities and also bring traffic to principal arterials.
- Major Collectors are used primarily to channel traffic from neighborhoods to arterials, and to commercial or industrial districts in urban areas. In rural areas, major collectors provide connections from outlying areas to the arterial system (primarily state highways).
- Minor Collectors gather traffic within the neighborhood and direct it to major collectors or arterials.
- Local Roads are intended solely for the purpose of providing access to adjacent properties. They may terminate in a cul-de-sac or be part of a larger network.

Table 1 shows the number of miles for each functional class of road maintained by the county:

**Table 1: County Functional Classes**

| Functional Class | Miles |
|---|---|
| 1 – Rural Local | 569 |
| 2 – Rural Minor Collector | 349 |
| 3 – Rural Major Collector | 152 |
| 4 – Rural Major Collector (Federal Aid) | 211 |
| 5 – Rural Minor Arterial | 0 |
| 6 – Urban Local | 104 |
| 7 – Urban Minor Collector | 15 |
| 8 – Urban Minor Arterial | 19 |
| 9 – Urban Principal Arterial | 7 |
| 10 – Urban Major Collector | 20 |
| **Total** | **1,446** |

*[Note: adoption of the TSP will result in mileage changes for each functional class for the following reasons. (1) Some roads were incorrectly classified as urban or rural. Corrections have been made so that roads within urban growth boundaries are designated as urban, and all those outside of urban growth boundaries are rural. (2) In addition, some roadways are proposed for changes in functional classification, including the addition of a new functional class – Rural Minor Arterial. See Functional Class maps for proposed changes.]*

## Bridges

Lane County has numerous lakes, rivers, creeks and other water bodies. As a result the Lane County road network includes 413 county-maintained bridges. Lane County has made substantial investment in this system over the past several decades to modernize the system. The Capital Improvement Program has focused on the replacement of structures with wood components. Typically, these wood component bridges were built during the 1960's and 1970's, although some are much older. Replacement of these wooden structures is nearing completion, so that currently approximately 95% of Lane County's bridges are either all concrete or concrete and steel. All concrete means that both the bridge superstructure and substructure are steel-reinforced concrete. Concrete and steel usually means that the bridge superstructure is steel-reinforced concrete and the substructure is, at least in part, steel piling and/or pile caps.

Generally speaking, Lane County bridges are in good condition at this time. 91% of the system is rated in fair or better condition. With an adequate schedule of preventive maintenance, all should have many years of remaining life. Fifty years is the commonly accepted standard for the life of a concrete or concrete and steel bridge. Table 2 below shows the number and construction type of county bridges, including those with posted load limitations.

Table 2: Bridge Statistics

| Bridge Construction Type | Quantity | Percent of System | Structures requiring posted load limits | Percent of System |
|---|---|---|---|---|
| All Concrete or Concrete/Steel | 391 | 94.7% | 1 | 0.2% |
| All Timber | 2 | 0.5% | 2 | 0.5% |
| Concrete/Wood | 17 | 4.1% | 9 | 2.2% |
| Steel/Wood | 1 | 0.2% | | |
| Steel/Wood/Concrete | 2 | 0.5% | | |
| Totals | 413 | 100.0% | 12 | 2.9% |

## Overview of Bridge Investment Issues

There are several issues that Lane County will have to address over the life of the TSP that will be summarized here. More detail is available in the bridge section of the Needs Assessment in Chapter 6.3.

The Oregon Department of Transportation (ODOT) along with local agencies has been developing a seismic vulnerability inventory and retrofit prioritization program. Recent seismic activity has confirmed that there is a real risk for earthquakes in Oregon. The forces expected now are greater than previously thought. Hence, design codes have been modified to account for the greater forces expected during an earthquake in Oregon. However, many of the bridges currently in service were not designed with the more recent specifications. Retrofitting many of the smaller bridges on the Lane County system will probably be done over time as a major maintenance and preservation activity. Investments in some of the larger structures in Lane County may be required through the Capital Improvement Program (CIP).

Recent inspections have noted two other bridge condition problems that may require substantial capital investment as well. Twenty-four bridges, mostly constructed in the 1950's and 1960's and built with "poured-in-place" reinforced concrete girders, have recently been identified as having a potential for cracking problems. The extent of this cracking and the extent to which it reduces the structural capacity of the bridges is currently under discussion. Recent inspections have also identified a potential problem with steel piling. Some of these pilings have experienced corrosion near the contact point with streams, or "section loss", which reduces load carrying capacity. This may require major maintenance or it may lead to increased investment through the CIP.

There are other reasons for bridge modernization. As traffic demand increases, it becomes necessary to replace one-way bridges with wider structures that can accommodate two-way traffic, bicycles and pedestrians. Newer roadway design standards may call for increased roadway and shoulder width. In that case, it may become necessary to modernize some bridges to meet the new design standards. Bridge replacement or modernization typically addresses safety issues for all modes of transportation. Newer structures are designed with adequate width to accommodate vehicular traffic, bicycles and pedestrians. Greater clearance for sight distance at overpasses and underpasses is also provided. Guardrail flares are tapered to reduce the severity of collisions with the structure. Adequate drainage is also a consideration in bridge design.

### Covered Bridges

There are 20 covered bridges in Lane County, giving the County the distinction of having more covered bridges than any other county west of the Mississippi. Fourteen of these bridges are maintained by Lane County, and with the exception of the Lake Creek Bridge, thirteen of these are listed on the National Register of Historic Places. Covered bridges are similar in design to steel truss bridges, however, the shortage of steel during World War I contributed to the use of wood as bridge building material, which allowed for their unique design. Covered bridges were constructed of high quality timber, to withstand heavy rains and salty sea air. House-type structures over the bridges protect the wood trusses and floor planking from the elements and more than double their life expectancy. As early as 1918, plans for covered bridges had become standardized to include open windows for light and ventilation together with such features as laminated floors and interior whitewashing. The covered bridges still standing represent many hours of skilled hand labor.

Over time, some of Lane County's covered bridges have become inadequate for modern traffic levels and commercial loads. In some cases, new bridges have been built adjacent to existing covered bridges to accommodate modern traffic needs. At the same time, this historical and cultural resource is a priority, and a Covered Bridge Fund is included as an item in the Capital Improvement Program in order to preserve this important contribution to Lane County's heritage.

There are fourteen covered bridges on county-maintained roads that still serve vehicular traffic. These bridges and the year they were constructed follow.

Belknap Bridge (1966)
Deadwood Bridge (1932)
Earnest Bridge (1938)
Lake Creek Bridge (1945)
Office Bridge (1944)
Pengra Bridge (1938)
Wendling Bridge (1938)
Coyote Creek Bridge (1922)
Dorena Bridge (1949)
Goodpasture Bridge (1938)
Mosby Creek Bridge (1920)
Parvin Bridge (1921)
Unity Bridge (1936)
Wildcat Bridge (1925)

The remaining six bridges are either under city jurisdiction or are no longer in use. Their status is as follows:

Cannon Street Bridge (1988, not in service, City of Lowell)
Centennial Bridge (1987, bikes and pedestrians only, City of Cottage Grove)
Chambers Bridge (1925, former railroad bridge not in service, City of Cottage Grove)
Currin Bridge (1925, not in service, Lane County)
Lowell Bridge (1928, not in service, Lane County)
Stewart Bridge (1930, bikes and pedestrians only, Lane County)

### Operations, Maintenance, and Safety on the County Road System

The Public Works Operations budget provides for county road operational maintenance, including repairs, light-duty rehabilitation, and minor improvements. Operations, maintenance, and preservation are routine activities that are generally not listed as individual projects. Examples of operations and maintenance activities are surface and shoulder maintenance, drainage work, vegetation control, guardrail repair, signing, striping, pavement marking, and signal maintenance. Preservation activities include pavement overlays or chip seals (a less expensive surface treatment than pavement overlay) to extend the useful life of the road. Major pavement preservation work (pavement overlay or reconstruction) is contracted out and is funded through the Public Works Capital Improvement Program (CIP).

## Lane County Capital Improvement Program (CIP)

The Capital Improvement Program (CIP) is the planning, funding, and implementation mechanism through which the county improves the county road network, usually through private sector contracts, for major maintenance and modernization. The CIP is updated and adopted each year. The overall purpose of the CIP is to improve and maintain the county road network by increasing its safety, utility, and efficiency; to accommodate growth in traffic volumes; reduce maintenance costs, conserve fuel, accommodate alternative transportation modes; and promote community economic development.

Capital improvements are individually listed modernization projects that include such activities as adding capacity, intersection upgrades, bringing roads and bridges up to standards, adding shoulders, and paving gravel roads. The most recently adopted CIP, as well as previous year versions, is available from the Lane County Public Works Department. The CIP publication includes a project list, an explanation of revenues and costs, and a description of the process for annual adoption. Projects in the CIP will be derived from the TSP Project List.

### Relationship of the CIP to the TSP

The Transportation Planning Rule (TPR) differentiates between planning and project development. It states that "Transportation system planning establishes land use controls and a network of facilities and services to meet overall transportation needs," while "Transportation project development implements the TSP by determining the precise location, alignment, and preliminary design of improvements included in the TSP."[3]

The TSP provides the overall planning framework for a 20-year horizon. It promotes the coordination of all transportation facilities within the county, including those managed by other jurisdictions and agencies. County road improvement projects are placed on the TSP 20-year project list based upon the needs assessment criteria described in Chapter 6.3. The TSP project list provides the long range planning foundation for updates to the CIP.

Once a road improvement project is included in the CIP, the project advances to construction through "project development" as defined in the TPR, using the process outlined in Lane Manual Chapter 15.575-15.580.

Not all road improvements under County jurisdiction are identified as part of the Chapter 6.3 Needs Assessment and listed as individual projects on the 20-year project list in the TSP or in the CIP 5-year list. Minor pavement repairs and intersection improvements such as turn lanes, turning radius improvements, and embankment and slide repairs are typically performed by county forces on an as needed basis, and are not usually identified as individual projects. In addition, some projects may be listed in the CIP without being included on the TSP project list. For example, pavement rehabilitation and reconstruction work, and traffic signal installation work, is usually consolidated by geographic area, then contracted out to the private sector through the Pavement Fund or Safety Improvements Fund. Moreover, analysis of county bridges was not part of the TSP Needs Assessment and therefore not included in the project list. The TSP relies on the Bridge Inspection and Load Rating Report and other sources as the assessment tools for bridge project identification and incorporation in the CIP. All of the above projects may proceed as long as they are otherwise consistent with federal, state, and local law, including the TSP and statewide planning goal requirements.

## Other Roads

In addition to county-maintained roads there are numerous other public roads in the county under other jurisdictions, and still others that are not maintained or regulated. The following is a general description of these roads.

### Federal Roads

There are many miles of federal roads generally constructed for resource management purposes (such as timber production) that are regulated by the U.S. Forest Service and Bureau of Land Management. In addition, Interstate 5 and Highway 101 travel through multiple states. While these highways are part of the national road network, they are managed by ODOT within the boundaries of Oregon.

### Other Public Roads

Public roads that are not maintained by the county, and are not federal, state, or city roads/streets, are usually older roads that were constructed by private individuals for access to property. In many cases, these roads were created before the establishment of state land division laws, or before road improvements became a standard requirement for land divisions. Such roads were dedicated to the county, although many were never formally accepted. They are commonly known as "local access roads", which is defined under ORS 368 as "a public road that is not a county road, state highway or federal road." State law restricts the expenditure of county moneys and also limits the county's liability for these roads.

[3] Oregon Administrative Rules 660-012-0010(1)

### Private Roads

Private roads are easements over private land, constructed for private access purposes. New roads created within land divisions are generally required to be private, unless there is a clear need for their acceptance into the county road system.

## State Facilities

The state highway classification system, signifying level of importance, consists of interstate, statewide, regional, and district highways. Interstate Highways and Statewide Highways are part of the National Highway System (NHS). In Lane County, there are 438 miles of state-maintained highways of local, regional, and national significance, as shown in Table 3. The corresponding functional classification is also shown. While there is no solid rule for determining functional class based on the state classification, this column indicates the general relationship between the two classification systems.

**Table 3: State Highway Facilities and Miles in Lane County**

| Name | State Highway Classification | Corresponding Functional Classification | Miles |
|---|---|---|---|
| Interstate 5 | Interstate | Interstate | 36 |
| I-105 Eugene-Springfield | Interstate | Interstate | 2.5 |
| OR 126 Eugene-Springfield | Statewide, Expressway | Principal Arterial | 10 |
| OR 69 Beltline Highway | Statewide | Principal Arterial | 13 |
| OR 58 Willamette Highway | Statewide | Principal Arterial | 62 |
| OR 126 Florence-Eugene | Statewide | Principal Arterial | 53 |
| OR 126 McKenzie Highway | Statewide | Principal Arterial | 76 |
| OR 126 Clear Lake-Belknap Springs | Statewide | Principal Arterial | 7 |
| US 101 Oregon Coast Highway | Statewide | Principal Arterial | 31 |
| OR 99W Pacific Highway West | Statewide, Regional | Principal Arterial, Minor Arterial | 22 |
| OR 99E Albany-Junction City | Regional | Minor Arterial | 3 |
| McVay Highway | District | Minor Arterial or Major/Minor Collector | 3 |
| OR 99 Goshen-Divide | District | Minor Arterial or Major/Minor Collector | 20 |
| OR 36 Mapleton-Junction City | District | Minor Arterial or Major/Minor Collector | 50 |
| Springfield-Creswell Highway | District | Minor Arterial or Major/Minor Collector | 11 |
| Springfield Highway | District | Minor Arterial or Major/Minor Collector | 1 |
| Territorial Highway | District | Minor Arterial or Major/Minor Collector | 40 |

These highways accommodate freight and other higher-speed, higher-volume travel, and interface with many county-maintained roads. They are used for daily commutes and local trips as well as cross-state movements.

The Oregon Department of Transportation (ODOT) has operation, maintenance, and planning jurisdiction over state and interstate highways. Facility improvements are administered through the Statewide Transportation Improvement Program (STIP), and planning for the state system includes both modal and area-specific planning analysis. Modal plans address automobiles, trucks, freight rail, aviation, bicycles and pedestrians, and intermodal facilities, in addition to a transportation safety action plan. Together, modal and area plans provide the basis for update of the STIP and the prioritization of state project development and resources.

### Freight Routes

As noted in the *1999 Oregon Highway Plan*, a primary function of state highways, and in particular the National Highway System, is to support economic development by linking producers, shippers, markets, and transportation

facilities. While County arterial and collector roads regularly serve freight transportation, the National Highway System is particularly important for providing intermodal freight access, such as to airports with freight service and to the Port of Siuslaw. And while freight moves via many transportation modes, trucks handle the bulk of freight movements in Oregon.

### Scenic Routes

Under the National Scenic Byways Program, the U.S. Secretary of Transportation recognizes certain roads based on their archaeological, cultural, historic, natural, recreational and scenic qualities. The program was established in Oregon in 1989 by a multi-agency committee, and is administered by the Department of Transportation.

Three Scenic Byways over four state highways extend into Lane County:

- The Pacific Coast National Scenic Byway, along Highway 101 on the Oregon coast, also designated as an All-American Road;
- The McKenzie Pass-Santiam Pass Scenic Byway beginning on the McKenzie Highway (Highway 126) near the McKenzie Bridge Ranger Station, extending east along Highway 242 to Sisters and looping back along Highway 20/126; and
- Aufderheide Drive, a U.S. Forest Service road extending north from Westfir to just east of Blue River, forming a part of the West Cascades Scenic Byway that travels north to Estacada.

Additional information regarding long range state highway planning is included in the TSP Needs Assessment section.

## Access Management

### Spacing Of Intersections And Driveways On County Roads

Access management generally means managing the location and number of access points on County Roads. It involves the appropriate location, design, and number of road and driveway intersections to allow connectivity between major and minor roads and to allow access to private property, while promoting safety and efficiency in the overall road network.

Any intersection introduces a number of potentially conflicting vehicular movements. Effective access management limits where and how often these conflicts occur. Generally, a higher level of access management is appropriate on collector and arterial roads, where there are higher traffic volumes and speeds. Implementation of access management techniques produces a more constant traffic flow, helping to improve safety, while reducing congestion, fuel consumption and air pollution. As a method for protecting the performance of existing facilities, access management helps to stabilize capacity-related public expenditures for roads and highways.

Access management includes decisions about design elements such as the location of turn lanes, medians, and traffic control devices such as signals and signs. A variety of factors contribute to these decisions. For example, turn lanes may or may not be continuous, and medians may or may not be provided, depending on the functional class of the road, the level of traffic and speed, as well as state land use restrictions and neighborhood preferences. Ultimately, balancing these factors should err on the side of public safety.

Lane County manages access to County Roads through the review of land divisions and other proposed development, and through the issuance of "facility permits", which are required for any construction (such as a new road intersection or driveway approach) within a County Road right-of-way. Access to state highways is governed by Oregon Administrative Rules (OAR) 734, Division 51. Construction within state rights-of-way requires a road approach permit from the Department of Transportation. Cities have authority to manage access to City roads and streets. Since these different systems connect to one another, access management often requires coordination and agreement between transportation agencies. In addition to access management goals and policies included in this chapter, Road and Driveway Spacing Standards in Lane Code Chapter 15.138 regulate access onto the County Road system.

## Level Of Service And System Performance

Roadway performance in Oregon is typically measured using "level of service" (LOS) or "volume to capacity (v/c) ratio" analysis. Level of service (LOS), or mobility[4] is a transportation engineering concept used to evaluate traffic flow (congestion) and to describe the quality of the operating conditions of a roadway. Each road segment has a capacity, or the number of vehicles it can serve over a designated period of time. As traffic volumes approach the road's capacity limit, drivers begin to experience congestion. This results in increased travel time, pollution, and driver aggravation. Various analytical methods are used to evaluate this dynamic to help determine whether roadway improvements or other strategies are needed to achieve or maintain the performance standard adopted by the agency. The analysis may be part of an overall needs assessment for public road improvements, or may be required as part of a traffic impact analysis for a land use development proposal that is expected to result in significant additional traffic.

The *Highway Capacity Manual*, produced by the Transportation Research Board of the National Research Council, Washington, D.C., provides internationally recognized methods for evaluating the performance of various road types. Such analyses may be highly complicated because of the multiple factors that contribute to a road's performance. This section provides a general, simplified overview of approaches used by the state and Lane County.

The Oregon Department of Transportation (ODOT) measures state highway performance based upon the "volume to capacity ratio" (v/c). The v/c ratio is the peak hour traffic volume (vehicles/hour) on a highway section divided by the maximum volume that the highway section can handle (*1999 Oregon Highway Plan*, page 72). A v/c ratio of 1 or more indicates the road segment is at or above capacity.

ODOT standards must be applied to decisions involving state highways in Lane County. Currently, the maximum acceptable v/c ratio for state highways varies between 0.70 and 0.95, as shown in the following table taken from the *1999 Oregon Highway Plan.* Users of the County TSP should check with ODOT to obtain the most current ODOT standards.

**Table 4: Maximum volume to capacity ratios for peak hour operating conditions through a planning horizon for state highway sections located outside the Portland metropolitan area urban growth boundary**

| Highway Category | Land Use Type/Speed Limits | | | | | |
|---|---|---|---|---|---|---|
| | Inside Urban Growth Boundary | | | | Outside Urban Growth Boundary | |
| | STAs | MPO | Non-MPO outside of STAs where non-freeway speed limit <45 mph | Non-MPO where non-freeway speed limit >= 45 mph | Unincorporated Communities | Rural Lands |
| Interstate Highways and Statewide (NHS) Expressways | N/A | 0.80 | 0.70 | 0.70 | 0.70 | 0.70 |
| Statewide (NHS) Freight Routes | 0.85 | 0.80 | 0.75 | 0.70 | 0.70 | 0.70 |
| Statewide (NHS) Non-Freight Routes and Regional or District Expressways | 0.90 | 0.85 | 0.80 | 0.75 | 0.75 | 0.70 |
| Regional Highways | 0.95 | 0.85 | 0.80 | 0.75 | 0.75 | 0.70 |
| District/Local Interest Roads | 0.95 | 0.90 | 0.85 | 0.80 | 0.80 | 0.75 |

Notes:

- Interstates and Expressways shall not be identified as Special Transportation Areas (STAs).
- For the purposes of this policy, the peak hour shall be the 30th highest annual hour. This approximates weekday peak hour traffic in larger urban areas.

[4] The TSP uses the traditional "Level-of-Service" terminology because of broad familiarity with the term. The *Oregon Highway Plan* uses the more recent term "Mobility". Their meaning is the same and may be used interchangeably.

- The MPO category includes areas within the planning boundaries of the Eugene/Springfield, Medford and Salem/Keizer Metropolitan Planning Organizations, and any other MPO areas that are designated after the adoption of this plan.

Source: *1999 Oregon Highway Plan*, page 80 (see the *Oregon Highway Plan* for additional explanation of this table)

Level of service is expressed as a letter grade. The Transportation Research Board provides the industry's standard definitions for each letter grade, as in Table 5.

**Table 5: Level of Service Letter Grades and Descriptions**

| Level of Service | General character of traffic flow conditions |
|---|---|
| A | Free flow |
| B | Stable flow |
| C | Stable flow with more restrictions on maneuverability |
| D | High density and marginally unstable flow |
| E | Operating conditions at or near capacity |
| F | Conditions beyond capacity with poor mobility and congestion |

Source: *Highway Capacity Manual*, Transportation Research Board, National Research Council (2000)

The *Highway Capacity Manual* provides detailed, technical guidance for determining level of service letter grades and for other road performance analyses. Some of the methods for measuring level of service in the *Highway Capacity Manual* are based upon v/c ratios, and some use other measures. Level of service in a given area should include nearby intersections (signalized and unsignalized), road approaches, and/or highway ramps.

Lane County completed a performance assessment for its rural road system in 1997. Levels of service were calculated for two-lane rural collector segments based upon methodology in the 1994 *Highway Capacity Manual*. An overview of the results is presented in the Needs Assessment chapter, and a detailed explanation of the methodology is in Appendix D. Performance of the urban system is addressed in individual city TSPs.

Lane Code 15.696 provides peak hour performance standards, and Lane Code 15.697 provides traffic impact analysis requirements. Traffic impact analyses, when required for proposed plan amendments, zone changes, or land developments, must demonstrate that the maximum volume to capacity ratios specified in Lane Code 15.696 will not be exceeded. Level of service calculations may also be useful in completing the analysis, and may be required by the county. The minimum peak hour level of service standard for Lane County is "LOS D." Where level of service analysis is required, both the v/c ratio standard and LOS D must be achieved or maintained. Achieving or maintaining the v/c standard means the v/c ratio is numerically equal to or less than the v/c ratio in the table in Lane Code (see below). Achieving or maintaining LOS D means the level of service is "D" or better, i.e. "A","B","C", or "D". Failure to meet the standard, or "exceedence" of the standard means that the predicted level of service is "E" or "F". The v/c ratio standards shown below are taken from Lane Code 15.696 and are provided for informational purposes only.

**Table 6: Maximum Volume to Capacity Ratios for Peak Hour Operating Conditions on Lane County Roads**

| Roadway Category | Location/Speed Limits | | | | |
|---|---|---|---|---|---|
| | Inside Urban Growth Boundary | | | Outside Urban Growth Boundary | |
| | Eugene-Springfield Metro Area | Outside Eugene-Springfield Metro area where speed limit <45 mph | Outside Eugene-Springfield Metro area where speed ≥45 mph | Within Unincorporated Communities | Outside Unincorporated Communities |
| Freeways and Expressways | 0.80 | N/a | N/a | n/a | n/a |
| Other County Roads | 0.85 | 0.85 | 0.75 | 0.80 | 0.70 |

As mentioned above, other analytical methods are sometimes appropriate as part of a traffic impact analysis (TIA). For example, in analyzing urban arterial or collector streets where congestion is more likely to occur, "delay-based" or "queue length" analysis methods may be appropriate. The standards allow for alternative approaches to be used for county facilities, as long as they are approved in advance by Lane County.

While analysis of roadway performance assists in identifying roadway system deficiencies, it does not determine what actions should be taken to address the deficiencies. Examples of actions that might improve performance include the following:

a. Reconfigure roadway and side-street accesses to minimize traffic conflicts at intersections;
b. Limit parking near signalized intersections to increase intersection capacity;
c. Coordinate and operate traffic signals to improve traffic progression;
d. Relocate driveways and improve local road connections to direct traffic away from overburdened intersections and intersections where side-street capacity is limited in order to optimize traffic progression on the county road;
e. Improve turning-radii at intersections that are heavily used by trucks to avoid lane blockages;
f. Install raised medians to reduce traffic conflicts;
g. Improve accesses so that traffic can enter or exit the roadway with minimal disruptions of flow;
h. Implement other transportation demand management or transportation system management measures to use existing capacity of the roadway more efficiently.

## Design Standards

New road design standards are being adopted to implement the TSP and to update County road standards in compliance with the Transportation Planning Rule. The new standards, found in Lane Code Chapter 15.700, will guide the design of County road improvement projects, as well as road improvements constructed to serve private development. The standards apply to all county-maintained roads, all other public roads that are not federal, state, or city roads/streets, and private roads. The exception is that city standards may apply to county roads classified as local roads within urban growth boundaries, such as for subdivisions that will later be annexed.

The new Lane County standards are derived from the following publications:

Publications of the American Association of State Highway and Transportation Officials (AASHTO):

- the *2001 Fourth Edition – A Policy on Geometric Design of Highways and Streets*;
- *Roadside Design Guide;* and
- *2001 Geometric Design of Very Low Volume Local Roads (ADT ≤ 400)*

Oregon Department of Transportation (ODOT) documents:

- The *Oregon Bicycle and Pedestrian Plan* (1995)
- The *1999 Oregon Highway Plan*
- The *1998 Highway Design Manual*

The *Eugene Arterial and Collector Street Plan* (November 1999) was also used in developing the design standards.

The following documents will primarily continue to guide engineering decisions for county roads in the absence of specific design policies and standards:

- *A Policy on Geometric Design of Highways and Streets,* the *Road Design Guide,* and the *Geometric Design of Very Low Volume Local Roads (ADT ≤ 400)* published by AASHTO will continue to be the guide for design elements that are not specified in adopted county standards.
- Decisions about traffic control devices, including traffic signals, pavement markings, signing, and crosswalk marking, will be guided by the Federal Highway Administration's *Manual on Uniform Traffic Control Devices.*
- The *Oregon Standard Specifications for Construction* provides construction specifications standard for Lane County. *Oregon Standard Drawings* provides standard drawings to accompany the specifications. These publications were jointly developed and adopted by ODOT and the American Public Works Association (APWA), Oregon Chapter.

- AASHTO's *Guide for Design of Pavement Structures* provide Lane County's standards and procedures for pavement structure analysis and pavement structure design.

The edition and publication year of all documents is cited in Lane Manual Chapter 15.450.

The treatment of roundabouts deserves discussion in this section. Several of the documents above discuss the design and marking of roundabouts. Roundabouts are one possible way to design intersections and control traffic movements at intersections. The construction and use of roundabouts as an intersection control is a relatively new strategy in Oregon and Lane County. There are a few locations where roundabouts are currently in use. Lane County will consider their use on a case-by-case basis where appropriate. If a decision is made to construct a roundabout, it will be designed in accordance with the best current information available regarding the design and application of roundabout concepts. The Federal Highway Administration currently provides guidance in *Roundabouts: An Informational Guide (FHWA-RD-00-067).* Roundabouts, when used, will be signed and marked in accordance with the *Manual on Uniform Traffic Control Devices.*

The design standards are organized by functional classification, and then according to urban or rural road locations. Urban roads serving denser populations and land uses incorporate provisions for multiple transportation modes, including sidewalks and marked bike lanes. Curbs and gutters are required to handle relatively larger quantities of storm drainage, and to provide space for sidewalk construction and landscaping.

Rural roads with relatively low average daily traffic counts (ADTs) are less likely to serve as commuting routes for walkers and bicyclists, but recreational bicycling is an increasingly popular use of these roads. On these roads the design standards accommodate biking and walking via striped and paved shoulder areas or shared roadways. Ditches adjacent to rural roads provide for drainage and are required to be included in the road right-of-way area.

The County's topography ranges from level to mountainous, and the population varies from an assortment of urban densities in small cities and the Eugene-Springfield area, to relatively sparse settlements in outlying, rural communities. It is typical to find a number of combinations of terrain and ADT on county roads, and the design standards attempt to address these variations. For example, road width standards on mountainous roads are narrower than those on level terrain because the amount of traffic served is usually less and the costs and environmental impacts of construction are typically higher in these areas.

There are large variations in traffic volume on the county road system. The design standards take this into account by specifying wider shoulders on higher volume roads while low volume roads have lower minimum width requirements. ADT variations are taken into account in width standards for rural collectors and arterials, as well as urban and rural local roads.

While ADT counts provide information about the amount of traffic on a road segment, they do not indicate the type of traffic. Some roads receive a large amount of heavy truck traffic, which can hasten the breakdown of the road structure. Pavement structure requirements must therefore consider truck traffic as a percentage of total ADT, as well as soil types. Minimum pavement structure standards are designed to take these factors into consideration to preserve the long-term structural integrity of County roadways.

Finally, unique circumstances may arise making it difficult or impossible to meet a given design requirement. As such, Design Standard provisions include procedures to request approval to deviate from the standards. It is important to note that the review of requests for deviations to the standards does not apply to land use decisions as defined in Lane Code chapter 14.015 or ORS 197.015.

## Goals And Policies: Roads

**Goal 1: Maintain the safety, physical integrity and function of the county road network through the routine maintenance program, the Capital Improvement Program, and the consistent application of road design standards.**

Policy 1-a: Road operations, maintenance, repair, and preservation activities shall be a priority of the Public Works Operations budget and shall be routinely carried out to protect the public investment in, and to ensure adequate functioning of the county road network.

Policy 1-b: Continue to implement the Capital Improvement Program including yearly adoption to address changing conditions, modified project schedules, the addition of new projects, and project completion.

Policy 1-c: Safety shall be the first priority in making decisions for the Capital Improvement Program and for roadway operations, maintenance, and repair.

Policy 1-d: The requirements of Lane Code 15 shall be consistently applied to all public and private road improvement projects. In the absence of a county-adopted standard for a particular design element, the edition specified in Lane Manual 15.450 [**]of the following primary documents shall be the basis for road design, construction, signing and marking decisions:

(i) The following documents, published by the American Association of State Highway and Transportation Officials (AASHTO):
  (a) *A Policy on Geometric Design of Highways and Streets*;
  (b) *Roadside Design Guide*;
  (c) *Geometric Design of Very Low Volume Local Roads (ADT $\leq$ 400)*; and
  (d) *Guide for Design of Pavement Structures*.

(ii) The *Manual on Uniform Traffic Control Devices (MUTCD)* published by the Federal Highway Administration.

(iii) The following additional documents published by the Oregon Department of Transportation (ODOT) and the American Public Works Association (APWA), Oregon Chapter:
  (a) *Oregon Standard Specifications for Construction* (ODOT & APWA);
  (b) *Oregon Standard Drawings* (ODOT & APWA);
  (c) ODOT *Highway Design Manual*;
  (d) ODOT *Hydraulics Manual*;
  (e) ODOT *Hydraulics Manual, Volume 2* (Erosion and Sediment Control);
  (f) *Oregon Bicycle and Pedestrian Plan* (ODOT, 1995); and
  (g) *1999 Oregon Highway Plan* (ODOT).

(iv) The *Highway Capacity Manual 2000* published by the Transportation Research Board.

(v) The *Trip Generation, 7th Edition* manual published by the Institute of Traffic Engineers.

Policy 1-e: Road improvement projects shall consider and, as financially and legally feasible, integrate improvements for alternative transportation modes such as sidewalks, bike lanes, and bus stop turnouts, consistent with adopted road design standards.

Policy 1-f: Maintain county arterial and collector roads sufficiently for the safe and efficient movement of freight, consistent with applicable traffic impact analysis, design policies and standards and land use regulations.

Policy 1-g: Maintain and improve roads consistent with their functional classification. Reclassify roads as appropriate to reflect function and use.

Policy 1-h: City standards shall apply to county roads functionally classified as local roads within urban growth boundaries. In the absence of city standards, the county's road design standards shall apply.

**Goal 2: Promote a safe and efficient state highway system through the State Transportation Improvement Program and support of ODOT capital improvement projects.**

Policy 2-a: Safe movement of vehicles on the state system and, where allowed, bicyclists and pedestrians shall be a priority. Lane County supports development and implementation of ODOT projects that improve the safety, operation, and structural characteristics of the state highway and bridge system, provided they are consistent with the TSP and applicable federal, state, and local regulations.

Policy 2-b: The County shall coordinate, as appropriate, with ODOT in:

- plan development;
- managing the existing state system; and
- designing and developing facility improvements on the state system in Lane County.

Policy 2-c: The County supports the preservation of the natural, historic, cultural, and recreational values of federally designated Scenic Byway routes maintained by ODOT.

Policy 2-d: ODOT safety, preservation and modernization projects on the state system shall be consistent with Policies 2a-c above, and need not be identified in the Lane County TSP 20-year Project List.

**Goal 3: Promote a safe and efficient road network through access management.**

Policy 3-a: Access decisions will be made in a manner consistent with the functional classification of the roadway.

Policy 3-b: Access Management policies and spacing standards found herein and in Lane Code 15.130 shall apply to all new development, changes of use, and road and driveway approach locations within county road rights-of-way. For state facilities, the Oregon Department of Transportation controls access pursuant to Oregon Administrative Rules 734, Division 51.

Policy 3-c: Development within a County Road right-of-way, including but not limited to excavation, clearing, grading, utility placement, culvert placement or replacement, other stormwater facilities, and construction or reconstruction of road or driveway approaches, is allowed only upon approval of a facility permit.

Policy 3-d: Properties adjacent to County Roads shall be granted reasonable access subject to access management and other applicable policies and standards herein and in Lane Code. Where access is available from more than one road, access shall be taken from the road with the lower functional classification as defined in Lane Code 15.020(2), unless otherwise approved by the County Engineer or designee.

Policy 3-e: Decisions regarding placement, location, relocation, and spacing of traffic control devices, including but not limited to traffic signals, turn lanes, and medians shall be based upon accepted engineering practices as provided for in the edition specified in Lane Manual 15.450 of the following documents: The Federal Highway Administration (FHWA) *Manual on Uniform Traffic Control Devices (MUTCD),* the *Oregon Standard Drawings* published by the Oregon Department of Transportation (ODOT) and American Public Works Association (APWA), and *A Policy on Geometric Design of Highways and Streets* published by the American Association of State Highway and Transportation Officials (AASHTO).

Policy 3-f: New development shall accommodate on-site traffic circulation on the site and not by circulating on and off the site through multiple access points using the public road system.

"Backing out" maneuvers should be avoided for new driveways on all urban arterials and rural major collectors.

**Goal 4: Maintain acceptable road performance levels.**

Policy 4-a: The performance standard on county-maintained roads shall be as represented in the following peak hour volume to capacity ratio (v/c) table from Lane Code 15.696. Given adequate funding for public road improvements and as a secondary priority to safety improvements, this standard should be maintained in making decisions about public road improvement projects or implementation of other programs and strategies that mitigate traffic.

**Table 7: Maximum Volume to Capacity Ratios for Peak Hour Operating Conditions on Lane County Roads**

| Roadway Category | Location/Speed Limits | | | | |
|---|---|---|---|---|---|
| | Inside Urban Growth Boundary | | | Outside Urban Growth Boundary | |
| | Eugene-Springfield Metro Area | Outside Eugene-Springfield Metro area where speed limit <45 mph | Outside Eugene-Springfield Metro area where speed ≥ 45 mph | Within Unincorporated Communities | Outside Unincorporated Communities |
| Freeways and Expressways | 0.80 | n/a | n/a | n/a | n/a |
| Other County Roads | 0.85 | 0.85 | 0.75 | 0.80 | 0.70 |

Policy 4-b: In analyzing arterial or collector streets, peak hour level of service analysis methods may be appropriate. Level of service "D", using the analytical approaches in the Transportation Research Board *Highway Capacity Manual* is the standard of performance to be achieved or maintained, and not exceeded. Not exceeding LOS "D" means achieving or maintaining LOS "A", "B", "C", or "D". When such analysis is required, both the v/c standard in Lane Code 15.696 and LOS D must be met. The standards and procedures to be used in a particular study shall be approved in advance by Lane County Public Works according to the procedures in the Traffic Impact Analysis Guidelines of the Public Works Engineering Division.

Policy 4-c: A traffic impact analysis shall be required as part of a complete land use application based upon the requirements of Lane Code 15.697, for any of the following:

(i) any development proposal that, if approved, will result in an increase in peak hour traffic flow of 50 or more automobile trips outside an urban growth boundary, or 100 or more automobile trips inside an urban growth boundary. The increase in number of trips shall be calculated based upon the methodology in the Institute of Traffic Engineers' *Trip Generation* manual for the year of publication specified in Lane Manual Chapter 15.450 and associated handbook and user's guide;

(ii) development proposals that will affect county roads where congestion or safety problems have been identified by previous traffic engineering analysis;

(iii) any plan amendment proposal, unless waived by the County Engineer as specified below;

(iv) proposed development that will generate or receive traffic by single or combination vehicles with gross weights greater than 26,000 pounds as part of their daily operations. "Daily operations" includes delivery to or from the site of materials or products manufactured, processed, or sold by the business on the site. "Daily operations" does not include routine services provided to the site by others, such as mail delivery, solid waste pickup, or bus service.

The County Engineer or designee may waive traffic impact analysis requirements specified above, when:

(i) Previous analysis has determined that the development proposal will not result in congestion, safety, or pavement structure impacts that exceed the standards of the agency that operates the affected transportation facilities; or

(ii) In the case of a plan amendment or zone change, the scale and size of the proposal is insignificant, eliminating the need for detailed traffic analysis of the performance of roadway facilities for the 20-year planning horizon. Whether the scale and size of a proposal may be considered insignificant may depend on the existing level of service on affected roadways. Generally, a waiver to Traffic Impact Analysis will be approved when:

(a) the plan designation or zoning that results will be entirely a resource designation; or

(b) the plan designation or zoning that results will be entirely residential and the allowed density is not likely to result in creation of more than 50 lots; and

(c) there is adequate information for the County Engineer or designee to determine that a transportation facility is not significantly affected as defined in Policy 20-d.

Policy 4-d: When a traffic impact analysis is required,

(i) it shall evaluate all affected county road facilities where direct access is proposed, including proposed access points and nearby intersections.

(ii) it shall be prepared by an Oregon-certified engineer with expertise in traffic and road construction engineering.

(iii) it shall document compliance with the Road Design Standards in Lane Code 15.700-15.708.

(iv) it shall document compliance with the goals and policies of the applicable Transportation System Plan.

(v) the County Engineer may alter the study requirements based upon the anticipated impact of the proposal. For example, a queue length analysis (based upon 95% probability) may be required.

(vi) the traffic impact analysis requirements shall be coordinated with other affected jurisdictions and agencies, such as the Oregon Department of Transportation or a city.

(vii) traffic engineers preparing traffic impact analyses shall request approval of the scope of the analysis before proceeding with the analysis, as specified in the Traffic Impact Analysis Guidelines of the Public Works Engineering Division.

Policy 4-e: When a traffic impact analysis is required,

(i) for plan amendments, it shall demonstrate that the performance standard in Policy 4-b for the affected county road will not be exceeded within 20 years from the date the analysis is completed as a result of approval of the plan amendment or zone change. If the performance standards are already exceeded at a location affected by the plan amendment, the standard shall be to avoid further degradation of conditions;

(ii) for other proposed land use development, it shall demonstrate that the performance standard in Lane Code 15.696 for the affected county road will not be exceeded immediately and for the next five years.

(iii) if the analysis must include an evaluation of the impacts of heavy vehicles pursuant to Policy 4-c (iv), it shall be based upon the procedures for pavement structure analysis in Lane Code 15.707.

(iv) Traffic impact analyses, and mitigation for traffic impacts on transportation facilities shall comply with adopted plans and codes of the agency with jurisdiction for the affected facility.

(v) If the performance standard in Policy 4-b cannot be achieved or maintained as specified in (i) or (ii) above, the traffic impact analysis shall propose road dedications and improvements for capacity increases, implementation of demand management strategies, or other mitigation measures. The proposal shall include a description of

how and when the improvements or measures will be implemented. Any proposed road improvements shall be consistent with applicable state and local policies and standards. Examples of mitigation actions are in Chapter 4.1 in the *Level of Service and System Performance* subsection. Conditions may be assigned to ensure such improvements or measures will be implemented.

Any requirements by the County resulting from an approved traffic impact analysis shall be the responsibility of the applicant unless otherwise approved by the County.

Policy 4-f: The Transportation Research Board's *Highway Capacity Manual*, for the year of publication specified in Lane Manual 15.450, is the standard of practice for traffic impact analyses. The Highway Capacity Software (HCS) published by McTrans Center for Microcomputers in Transportation, or other approved software, may also be used. SIGCAP published by ODOT, or other ODOT-approved software is acceptable when analysis of both state and county facilities is required.

Policy 4-g: ODOT policies and mobility standards shall be applied to decisions affecting state highways in Lane County. Applicable standards from city Transportation System Plans (TSPs) shall be applied to decisions about city streets.

Policy 4-h: Traffic impact analyses shall be based on proposed access points consistent with county access management policies and standards specified herein and in Lane Code 15.130-15.139. Traffic impact analyses shall also consider the safe operation of affected driveways and public street intersections. Proposals requiring traffic impact analysis shall include a review of consistency with Access Management policies and standards as part of the approval of the scope of the analysis.

Policy 4-i: When analyzing signalized intersections, locations where signal warrants may be met, or intersections with all-way stop control (AWSC), the primary objective is to maintain the performance of the overall intersection. The overall intersection v/c ratio must meet the applicable standard. If level of service analysis is required, the level of service standard must also be met. At unsignalized intersections and road approaches with two-way stop control (TWSC), the object is to achieve or maintain the v/c ratios specified in Policy 4-a for the approaches that are not stopped. Approaches at which traffic must stop, or otherwise yield the right of way, shall be operated to maintain safe operation of the intersection and all its approaches and shall not exceed a v/c ratio of 0.95 within urban growth boundaries and a v/c ratio of 0.80 outside of urban growth boundaries. If public side streets or private driveways are predicted to exceed the standards, mitigation measures shall be recommended. If side street or driveway performance is predicted to exceed standards in order to maintain flow on the major street, adequate space for vehicle queuing (based upon 95% probability) must be maintained on the side street or driveway. At the intersection of a county road and a state highway, state highway standards must be maintained for the state highway.

**Goal 5: Promote a safe, functional, and well-maintained bridge network in Lane County.**

Policy 5-a: Conduct bridge inspections in compliance with Federal Highway Administration and Oregon Department of Transportation requirements.

Policy 5-b Maintain an inventory of all county structures including inspection records showing load ratings, general condition, and sufficiency ratings.

Policy 5-c: Consider the inclusion of bridges in the Capital Improvement Program if they are structurally or functionally deficient based upon bridge general condition ratings, roadway width, bike/pedestrian passage, load capacity, safety, and operating conditions.

Policy 5-d: Conduct routine maintenance and repair to ensure bridge integrity over the duration of its design life.

Policy 5-e: Consider the needs of the trucking industry when maintaining, building, or reconstructing bridges.

Policy 5-f: Maintain and restore Lane County covered bridges for their historic, aesthetic and cultural value as feasible, through budget allocations to the Capital Improvement Program or other funding sources.

## 4.2. BICYCLE AND PEDESTRIAN FACILITIES

Bicycle and Pedestrian facilities are most important within urban areas, where destinations are closer together and bicycling and walking are practical commuting modes. However, also providing these facilities in rural areas encourages bicycling and walking, especially to local destinations within ¼-½ mile, and for recreation and fitness. This section describes the bicycle and pedestrian facilities within Lane County. Chapter 6.3, Needs Assessment Methodology and Results, describes how bicycle and pedestrian facilities are provided for in road construction or reconstruction projects.

### Types of Bikeways

There are four types of on-road bicycle facilities in the Oregon Bicycle and Pedestrian Plan. Lane County generally uses the first three types on the county roadway network:

- Shared roadways - the travel lane is the same for motor vehicles and bicycles/pedestrians;
- (Rural) Paved shoulders - a portion of each paved travel lane is delineated by the fog line;
- Urban bicycle lanes are delineated by a thicker white line between the curb and the travel lane and typically include stenciling on the pavement and/or signage;
- Multi-Use Paths are separated off-street paths provided within road rights-of-way for a limited number of selected projects.

### Types of Walkways

There are three types of on-road walkway facilities in the Oregon Bicycle and Pedestrian Plan used by pedestrians and persons in wheelchairs:

- Sidewalks are constructed along roadways in conjunction with a curb and/or planting strip;
- Shoulders typically serve as pedestrian facilities along rural roadways;
- Multi-use off-street paths are provided within road rights-of-way for a limited number of selected projects.

Off-road bicycle and pedestrian paths also exist throughout Lane County. Information about Lane County's efforts with regard to recreational path development is included below in this chapter.

### Pedestrian and Bicycle Facilities within Urban Growth Boundaries

The road design standards to be adopted concurrently with the TSP were developed consistent with guidelines found in the 1995 Oregon Bicycle and Pedestrian Plan. Sidewalks and bicycle lanes are routinely required on all new or reconstructed arterial and collector county roads within urban growth boundaries. City comprehensive plans and development standards generally require sidewalks and bicycle lanes. Within urban growth boundaries, city standards apply to local roads, and in the absence of city standards, county standards for urban local roads apply. New urban local roads are required to include sidewalks. Sidewalks are included in reconstruction plans for existing urban local roads if there were already sidewalks along the road, or if there is a demonstrated need to add sidewalks. In these instances, the sidewalks shall be constructed at the expense of the abutting property owners. County standards for urban local roads allow shared roadways for bicycle use.

Bicycle and pedestrian facility needs on county roads inside urban growth boundaries are incorporated into the Transportation System Plans for the corresponding cities within Lane County. The Project List in Chapter 6.4 also includes these proposed bicycle and pedestrian facility improvements.

### Rural Lane County Bicycle and Pedestrian Facilities

In rural areas, bicycle and pedestrian travel is more likely to be recreation or fitness-oriented, due to the distance between origins and destinations. The combination of an extensive rural roadway system and relatively low traffic volumes encourages recreational cycling in Lane County. The county includes paved shoulders on new or reconstructed rural arterial and collector roads to accommodate non-motorized travel.

Generally, sidewalks are not provided along rural county roads although they may be provided where there is a demonstrated need in unincorporated communities and in other areas of concentrated commercial, industrial, residential, or institutional development. This will be determined on a case by case basis. Marked crosswalks are provided on county roads where there are signalized intersections and at school crossings.

Lane County's rural bikeway and pedestrian system includes bike lanes, paved shoulders, and shared roadways. Due to constitutional limitations on road funds, Lane County does not provide off-street multi-use paths in rural areas. All streets are part of the bicycle network unless bicyclists are prohibited by law from using a road or bridge. Some county roads have paved shoulders that bicyclists can use. However, most rural collector roadways have no paved shoulders and are therefore shared roadways. Appendix C is a map showing city, county, and state roads in the County's bicycle network. The map includes information about topography, road conditions, bicycle facilities, traffic levels, and recreational travel destinations and loops. The County Roads Inventory, Appendix C, indicates whether roads include shoulder area for bicycle and pedestrian use. The Needs Assessment in Chapter 6.3 indicates that many arterials and collectors do not meet minimum width standards. For newly constructed or reconstructed county rural arterial and collectors, the following lane widths for motorized travel, and shoulder widths to serve non-motorized needs, are required:

**Table 8: Required Lane and Shoulder Width on Lane County Rural Arterial and Collector Roads**

| Terrain | Lane Width (2) | Shoulder (2) | Total Pavement Width |
|---|---|---|---|
| **<250 Average Daily Traffic (ADT)** | | | |
| **Level** | 11 | 2 | 26 |
| **Rolling** | 11 | 0 | 22 |
| **Mountainous** | 10 | 0 | 20 |
| **250-400 ADT** | | | |
| **Level** | 11 | 4 | 30 |
| **Rolling** | 11 | 2 | 26 |
| **Mountainous** | 11 | 0 | 22 |
| **400-1500 ADT** | | | |
| **Level** | 11 | 6 | 34 |
| **Rolling** | 11 | 4 | 30 |
| **Mountainous** | 11 | 2 | 26 |
| **1500-10,000 ADT** | | | |
| **Level** | 12 | 6 | 36 |
| **Rolling** | 11 | 6 | 34 |
| **Mountainous** | 11 | 4 | 30 |
| **>10,000 ADT** | | | |
| **Level** | 12 | 8 | 40 |
| **Rolling** | 12 | 6 | 36 |
| **Mountainous** | 12 | 4 | 32 |

The Needs Assessment in Chapter 6.3 describes how bicycle and pedestrian needs were evaluated for developed areas outside of urban growth boundaries. The Project List in Chapter 6.4 includes proposed bicycle and pedestrian facility improvements for county roads.

Lane County also participates in off-road trail development, primarily for recreational users, through the county Parks Division. In the late 1990's, Lane County cooperated with several entities under the leadership of the Bureau of Land Management in the development of a segment of the Row River trail, a walking, bicycling, and equestrian trail, on an abandoned railroad bed. Lane County assisted in providing access to the trail from the county road system at several locations and to a public park that was under county management at that time. The County also improved the Dorena Covered Bridge and made it into a county rest area as a nearby asset of the trail. Another prominent area where the county promotes trail development and use is at Mount Pisgah/Buford Park. Mt Pisgah has over 16 miles of hiking/equestrian trails. It is also part of the Eugene to Pacific Crest Trail (EPCT) system which runs from Alton Baker Park to the Willamette National Forest near Oakridge. The county Parks Division has been working with the City of Eugene to develop a plan and future funding to connect the EPCT to Eugene's Ridgeline Trail and to the city's bike path that extends west of town to the county park system on Fern Ridge Reservoir.

## Goals And Policies: Bicycle And Pedestrian Facilities

**Goal 6: Provide safe and convenient opportunities for bicycle and pedestrian travel throughout Lane County.**

Policy 6-a: Marked bicycle lanes are required on urban arterial and collector streets when those streets are newly constructed, are reconstructed to urban standards, or are widened to provide additional vehicular capacity.

Policy 6-b: Sidewalks or paved pathways accompanying public streets and roads are necessary wherever significant conflicts with motor vehicle traffic jeopardize the health, safety and welfare of pedestrians and bicyclists.

i. Generally, sidewalks are not provided along rural county roads (outside of urban growth boundaries) although they may be provided where there is a demonstrated need in unincorporated communities and in other areas of concentrated commercial, industrial, residential, or institutional development. This will be determined on a case by case basis.

ii. County arterial and collector roads within urban growth boundaries shall include sidewalks and the cost shall be assessed to the abutting property owners, unless the assessment is waived by the Board of County Commissioners.

iii. Sidewalks on new or reconstructed county roads functionally classified as local roads within urban growth boundaries shall be required as provided for in city development standards. In the absence of city standards, sidewalks are required for new roads or reconstructed roads with existing sidewalks. Sidewalks shall also be required for reconstructed urban local roads without existing sidewalks, except if the cost would be excessively disproportionate to the need or probable use, or if sparsity of population, other available ways or other factors indicate an absence of any need for sidewalks. Sidewalks shall be constructed at the expense of the developer or adjacent property owners.

iv. Roads which do not have curbs and gutters and which are not scheduled to be rebuilt, but which do have a significant need for sidewalks, may be provided with temporary asphalt walkways.

Policy 6-c: Public Works staff should work with school district personnel to establish school route plans. Based on these plans, Lane County will install appropriate traffic control devices, such as signs, crosswalks or other markings, or other devices as approved by the Traffic Engineer.

Policy 6-d: New development subject to Site Review and Land Division requirements shall provide adequately for safe bicycle and pedestrian on-site circulation and off-site transportation connections. Development shall provide for safe and convenient on-site circulation with respect to the location and dimensions of vehicular, bicycle, and pedestrian entrances, exits, drives, and walkways in relation to each other and to buildings and other facilities. Consideration shall be given to the need for lighting, sidewalks, widening and improving abutting streets, bus stop access, and bicycle lane and pedestrian path connections, consistent with adopted access management, road and driveway spacing standards, road design standards, and other requirements in Lane Code 15.

Policy 6-e: All new development within urban growth boundaries, when adjacent to county-maintained road rights-of-way, shall include bicycle and pedestrian facilities as specified in the Road Design Standards for Urban Roads in Lane Code 15.

Policy 6-f: The County generally will support state projects that include bicycle and pedestrian facilities.

**Goal 7: Promote logical and efficient bicycle and pedestrian connections within the Lane County transportation system and between the county's and other jurisdictions' transportation systems.**

Policy 7-a: In planning and implementing transportation system improvements, Lane County will coordinate with other affected jurisdictions to maximize bicycle and pedestrian route connectivity.

Policy 7-b: The County will look for opportunities to partner with ODOT and city agencies on bicycle and pedestrian facilities when roads of different jurisdictions intersect, in order to provide adequately for bicycle and pedestrian travel to local destinations.

**Goal 8: Promote connectivity between non-motorized and other transportation modes.**

Policy 8-a: In the design and construction of transportation facilities, barriers to foot and bicycle travel should be avoided.

**Goal 9: Encourage and support the development of recreational bicycling and hiking facilities, recognizing these activities as important to community livability and to the tourism sector of the local and state economy.**

Policy 9-a: Road maintenance decisions will strive to balance the need for controlling long term pavement maintenance costs with consideration for providing improved road surfaces for cycling.

Policy 9-b: Road improvement projects identified on the TSP Project List shall incorporate shoulders and sidewalks adequate for pedestrian use, consistent with other TSP policies and with road design standards to be adopted concurrently with the TSP.

Policy 9-c: Within statutory road fund limitations, the county will consider opportunities to participate in off-road bicycle trail and footpath development and promotion, when there is adequate demand and as economically feasible.

Policy 9-d: On a case-by-case basis, and within statutory road fund limitations, the county will consider the feasibility of establishing or maintaining access ways, paths, or trails prior to the vacation of any public easement or right-of-way.

# 4.3. PUBLIC TRANSPORTATION

## Fixed Route Rural Transit Service (Lane Transit District)

Lane Transit District (LTD) was formed in 1970 and was authorized by the Oregon Legislative Assembly to serve all of Lane County. As of this publication, LTD operates 55 bus routes throughout the Eugene-Springfield Metro Area as well as providing rural service to and from the Eugene-Springfield area for the communities of McKenzie Bridge, Veneta, Junction City, Coburg, Cottage Grove and Lowell. Rural routes typically have a morning, midday and early evening run.

All buses have bicycle racks and are wheelchair accessible. LTD currently transports approximately 15,000 bicycles monthly.

Rural LTD routes all operate out of the downtown Eugene station, primarily on state highways and major collector and arterial roads. Following is general route information, subject to change by LTD.

**91 - McKenzie Bridge** travels along Highway 126 east, with four buses in each direction on weekdays and two buses on Saturdays and Sundays.

**92 - Lowell via Dexter, Pleasant Hill and Lane Community College** travels along Highway 58, with four buses from Eugene to Lowell and five buses returning, on weekdays only.

**93 - Veneta** operates on Highway 126, Territorial Road/Highway, Clear Lake Road, Fir Butte Road, Royal Avenue, and Green Hill Road with six buses in each direction on weekdays and two buses on Saturdays.

**95 - Junction City** travels generally on River Road and Highway 99, with six buses on weekdays in each direction and two buses on Saturdays.

**95x - Junction City Express** travels generally on Highway 99 with 4 buses in each direction on weekdays.

**96 - Coburg** travels generally along Coburg Road between Eugene and Coburg, including 8 stops, with six buses on weekdays.

**96x - Coburg Express** travels along I-105 and I-5 stopping only in Eugene and at Monaco Coach, with one bus in each direction.

**98 - Cottage Grove** travels generally on I-5 and also serves **Creswell**, with 7 weekday buses, 3 buses on Saturday, and 2 buses on Sunday.

**Diamond Express** began in March 2003 and offers weekday commuter van service between the City of **Oakridge** and downtown Eugene. It is operated by Special Mobility Services with the assistance of a one-year grant from the ODOT intercity grant program.

LTD staff indicate that the demand for rural transit is sufficient to warrant an increase in service. By increasing ridership on the bus system, there is an opportunity to reduce vehicle miles traveled.

It is in the County's interest to support and encourage the expansion of public transit and other alternative modes as a way to reduce vehicle miles traveled and thus demand on the road system. However, financial and legal obstacles constrain local efforts to increase rural fixed-route transit service levels. LTD operations are primarily funded by payroll taxes collected from the service area, and state law limits this rate to 0.06%. Furthermore,

payroll taxes are particularly sensitive to economic cycles. As a result, LTD is now experiencing budgetary shortfalls, and is implementing for a system-wide service reduction in late 2002. Although it is anticipated that there will be no reduction in rural route services, neither will there be an increase in the near term. Nor do rider fees cover all costs. Rural bus service is also dependent on the limited ability of businesses in outlying service areas to pay special tax assessments. The cities of Oakridge and Florence have chosen not to be annexed into the LTD service district and pay no special tax assessments. The lack of funds from these communities inhibits LTD's ability to provide services there.

The Oregon Constitution also limits the use of county, city, and ODOT highway user fees to road-related purposes. Transit operations, facilities, or capital improvements are not legal uses of these funds. Federal transportation and transit resources are generally available for capital improvements or fleet purchases, but not for transit operations. County or state general fund resources could be allocated to transit services, but other demands on the county's limited budget mean that the county looks to LTD to finance public transit operations.

### Commuter Solutions Program

Coordinating local government agencies to promote alternatives to the single occupant vehicle is the responsibility of the staff of the Commuter Solutions Program housed at Lane Transit District's offices. With funding assistance from ODOT, Commuter Solutions is the regional transportation demand management (TDM) program. Local agencies contribute staff time and the local grant match for the program's operating budget (approximately $200,000 for 2002). The county is a financial partner in the program and serves on its TDM Advisory Committee.

Alternative transportation educational programs, vanpooling, carpooling, and group discount transit passes are a few examples of the many Commuter Solutions services and programs available within the region. In the year 2000, Commuter Solutions introduced a vanpool between Eugene and Corvallis. That same year, Commuter Solutions coordinated with Oregon Cascades West Council of Governments and Mid-Valley Rideshare (Salem) to begin operation of Eugene-Salem and Eugene-Corvallis vanpools. The latest vanpool to begin operation is from Cottage Grove/Creswell to Eugene. Commuter Solutions staff is now embarking upon a vanpool program to service Oakridge and Highway 58 area residences and employees.

The Commuter Solutions program strategic goals for 2002-2005 are:

1. Increase participation in alternative modes
2. Consider the use of parking management strategies in selected areas
3. Implement TDM strategies at key congested locations
4. Create TMD Infrastructure Supported by Regional Jurisdictions

### Bus Rapid Transit

Perhaps the most anticipated and innovative new LTD program is Bus Rapid Transit (BRT), which uses a combination of bus lanes, guideways, and traffic priority measures to provide high frequency, fast bus service that emulates light rail. In 1998, Congress provided $8.8 million for development of BRT, and it emerged as the preferred strategy for reducing vehicle miles traveled as part of the *Eugene-Springfield Regional Transportation Plan* (*TransPlan*) update.

## Special Transportation Needs

LTD is the governing body for the receipt of state Special Transportation Funds for the Elderly and Disabled (STF). Through the Special Transportation Program LTD contracts with providers of curb-to-curb and door-to-door transportation services for people who are unable to use regular fixed-route buses due to a disability or because they reside in areas of Lane County without public transportation. In addition to funded programs, transportation to and from medical facilities using volunteer drivers is provided throughout Lane County with collaboration between LTD, Senior & Disabled Services Outreach Program (a division of the Lane Council of Governments), Lane Community College's Senior Companion Program, and volunteer citizens.

The following transportation services are available for elderly, disabled, and other residents with specialized transportation needs in the more populated areas of Lane County:

- **Ride*Source*** is a curb-to-curb transit service for eligible riders traveling within Eugene-Springfield, and the River Road area. Special Mobility Services (SMS) is a private non-profit agency that operates Ride*Source* and associated programs through a contract with Lane Transit District. Ride*Source* complies with federal Americans with Disabilities Act (ADA) requirements.

- The **Ride*Source* Shopper** is a once a week shopping service for elderly and disabled residents of Eugene, Springfield and Coburg that offers assistance with grocery and other purchases.

- Special Mobility Services also administers the **Ride*Source* Escort** program using their own volunteers and those associated with other cooperating agencies. Volunteers use their own vehicles and receive a mileage reimbursement to transport elderly and disabled residents to and from medical appointments. Areas served include Eugene, Springfield, the River Road area, Veneta, Cottage Grove, Creswell, Junction City and Florence. Whenever possible residents in other rural areas of the County are served.

- **South Lane Wheels** is a private non-profit organization providing dial-a-ride service to residents of Cottage Grove, Creswell, and nearby rural communities, and transporting the elderly and people with disabilities to and from medical appointments in Eugene-Springfield. Local dial-a-ride service is open to the general public.

- The **City of Oakridge** contracts with LTD to run a two van service for elderly and disabled residents for local travel needs, and for medical and shopping services in the Eugene-Springfield area.

- The **Rhody Express** operated by River Cities Taxi is a local shuttle serving Florence. It has evolved from a special transportation needs service to serving the city's general population. It runs Monday through Friday from 10:00 a.m. to 4:00 p.m. using a deviated route system. This is a flexible system that allows riders who have difficulty getting to bus stops to call and request to be picked up at home. Deviations are limited to three blocks within the defined service area. Rhody Express uses set time points and flag stops to create a fixed-route environment with curb-to-curb flexibility, and also meets ADA accessibility requirements.

- **Friends of Florence Van** is operated by volunteers who transport cancer patients between Florence and the Eugene Cancer Center Monday through Friday.

- **Medicaid** offers transportation services to qualifying persons requiring medical services.

- The **Oregon Health Plan** coordinates with service providers to fund medical-related transportation.

- **Senior and Disabled Services**, a division of Lane Council of Governments, coordinates volunteer medical rides.

- **Veteran's Transportation** assists veterans in the Florence area.

## Intercity And Interstate Bus Transportation

Greyhound Line and Porter Enterprises coordinate operations to provide intercity and interstate bus service from Eugene between bus terminals, to the Amtrak station in Eugene, and to points throughout the state. Greyhound Line travels generally north and south, and Porter operates out of Coos Bay, traveling up the coast through Florence, into Eugene, and to points east.

## Passenger And High Speed Rail Transportation

The National Railroad Passenger Corporation (Amtrak) provides intercity and interstate rail passenger service two to four times a day to points north and south. Since 1976, the U.S. Congress has required planning and provided funding for rail transportation through passage and reauthorization of a series of legislative acts. Most recently, in 1991, Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA), which greatly expanded the nation's focus on intermodal transportation and movement of people and goods. It provided federal funding for multimodal transportation, including passenger rail service and facility improvements, from both the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) to Metropolitan Planning Organizations (MPOs) and states.

In 1997, Congress passed a more flexible funding authorization package called the Transportation Efficiency Act for the 21st Century (TEA-21). Built upon the foundation of ISTEA, TEA-21 contained a number of changes that permitted increased opportunities for states to obtain funds for rail freight projects and intercity passenger service.

Road and air travel congestion, air pollution, and increased availability of federal funding have contributed to a revived interest in passenger rail travel. In Oregon and elsewhere, passenger rail transportation's recent emphasis is on high-speed rail. Although the cost of developing a high-speed rail system is substantial, interest nationwide at all levels of government to invest in and support high-speed rail continues to remain strong.

While funding continues to be an issue, past efforts have laid solid ground for continued high-speed rail development. There are 12 high-speed rail corridors nationally authorized under the High-Speed Rail Investment Act. The Pacific Northwest Corridor (Interstate 5 from Eugene to Vancouver, B.C.) was federally designated as a high priority corridor in 1998. High Priority Corridor status makes Oregon eligible to receive additional federal funds for high-speed rail projects along I-5.

In 1999, rail ridership along the Pacific Northwest corridor between Eugene and Vancouver, B.C. hit an all-time high of 570,000, a three percent increase over 1998. The increase is attributed in part to the introduction of the European-style Cascades *Talgo* train equipment that was custom-built for this region. That same year, the Oregon Legislature approved funding for a second daily train between Eugene and Portland (and on to Seattle). Cascades trains are designed for high-speed rail service; however, track and safety systems currently limit the trains to a top speed of 79 miles per hour. Incremental improvements to these systems, already underway, will allow speeds of 110 mph by the year 2018.

Amtrak's Eugene station is the southern terminus of the Pacific high-speed rail corridor. Major renovation plans for the train station are underway to expand its function to accommodate multi-modal transportation. In 1998, after passage of TEA-21, Congress contributed $2 million to help initiate this effort.

Information about rail freight transportation systems is provided in the next chapter on Rail, Air, Water, and Pipelines.

## Goals And Policies: Public Transportation

**Goal 10: Support and encourage improved public transportation services and alternatives to single occupancy vehicle travel between the Eugene-Springfield Metropolitan Area and outlying communities.**

Policy 10-a: Continue to assist in coordinating public transportation and multi-modal transportation initiatives by providing technical support and otherwise participating in technical advisory committees, task forces and working groups, such as the regional Commuter Solutions (Transportation Demand Management) program.

Policy 10-b: County road construction and reconstruction projects shall include consultation with LTD and shall, as feasible, accommodate transit stops, bus pullouts and shelters along existing or planned bus routes as permitted under statutory requirements for road fund expenditures. Unless otherwise authorized by the Board of County Commissioners, transit stop amenities with the exception of bus pullouts will typically be funded by LTD or other non-county sources.

Policy 10-c: The County will support efforts to develop public transit facilities such as park-n-ride lots and shelters in rural areas when they are consistent with land use, zoning, and other applicable regulations.

Policy 10-d: The County will investigate the possibility of providing free or discounted bus transportation services for County employees as part of LTD's Group Pass Program.

**Goal 11: Support efforts to maintain rail transportation and to promote high speed rail development.**

Policy 11-a: As feasible, Lane County will participate in efforts to plan, develop, and maintain rail-related infrastructure improvements for high-speed and other passenger rail service.

Policy 11-b: Lane County will coordinate with and support state efforts to comply with federal and state rail transportation requirements by consulting adopted versions of the Oregon Transportation Plan and Rail Plan when making transportation or land use decisions involving rail facilities.

**Goal 12: Support initiatives to develop improved transportation services for county citizens with special needs.**

Policy 12-a: As feasible and as opportunities arise, Lane County will support public and private efforts to meet special transportation service needs for county residents, giving priority to rural residents.

# 4.4. RAIL, AIR, WATER, AND PIPELINES

## Rail Transportation

Railways in Lane County are part of a state and federal network, providing both freight and passenger services. Passenger rail transportation is discussed in the previous chapter on Public Transportation.

### Freight Rail Transportation

There are 2,387 miles of railroad in Oregon. Slightly more than half are owned and operated by two major rail systems which pass through Lane County: the Union Pacific Railroad and the Burlington Northern Santa Fe Railway. Short line or small railroads operate the remainder.

Oregon's freight rail traffic totaled 63.5 million tons, handled to, from, within, and through the state in 1999. This figure represented an almost 18 percent increase over freight rail tonnage handled in 1992, the data year used for the 1994 *Oregon Freight Rail Plan*. Major commodities handled by the railroad in Oregon include lumber and forest products, automobiles and trucks, grain, fruits and manufactured products. The general characteristics of Oregon freight rail tonnage are similar to the characteristics of freight rail tonnage in Washington, i.e., more tons terminate in the state than originate here, and through traffic accounts for a major share of total tons. *(Executive Summary, Draft 2001 Oregon Rail Plan).*

**Union Pacific Railroad** follows the historic route of the Oregon Trail into the state over the Blue Mountains in northeast Oregon, along the south bank of the Columbia River to Portland, before traveling south into Eugene. The track continues southeast to Chemult, and then south to California. While Eugene is considered an important terminal on the route, in 1999, the railroad closed its Eugene yard and opened a new switchyard just north of Sacramento.

The **Burlington Northern Santa Fe Railway** enters Oregon along the north-south I-5 corridor in Western Oregon, and also from the northeast, sharing track with Union Pacific along the south banks of the Columbia River. BNSF operates a major Portland terminal. The main branch line terminates in Eugene, where it connects to the Central Oregon and Pacific Siskiyou short line. The line between Eugene and Portland was originally built by the Oregon Electric Railroad to provide passenger service between Eugene and Portland. Today it is used exclusively for freight.

**Central Oregon and Pacific** operates two short lines out of Eugene. The Siskiyou Line travels south to Black Butte, near Weed, California and the Coos Bay Line travels west from Eugene to Mapleton, then on to Coquille. Both of these lines are former Southern Pacific branches which were acquired in 1994 by the previous parent company, Railtex. CORP has been an independent operator since 1995.

## Goals And Policies: Rail Transportation

**Goal 13: Promote railway and highway safety at and near road and railway intersections.**

Policy 13-a: Lane County's Engineering Division shall notify railroad companies of all road improvement projects within 500 feet of railways.

Policy 13-b: Road improvement projects will give consideration to upgrading existing railroad crossings and protective devices, grade-separated crossings, elimination of existing railroad crossings, and to the extent possible, will minimize new railroad crossings.

## Air Transportation

The Eugene Airport is the major regional commercial airport for the county. There are also airports in Florence, Oakridge, Cottage Grove, Creswell, and McKenzie Bridge that generally serve smaller, private aircraft. Three of these are owned and operated by the Oregon Department of Aviation (ODA), in Cottage Grove, McKenzie Bridge, and Oakridge.

The Oregon Aviation Plan addresses public use airports. It establishes five categories of airports based upon their functional roles. Lane County includes one Category 1 airport (Eugene), three Category 4 airports, and three Category 5 airports. The Siltcoos Lake Seaplane Base is unrated due to its infrequent use. Category 1 airports accommodate scheduled major/national or regional/commuter commercial air carrier service. Category 4 airports accommodate general aviation users and local business activities. Category 5 airports accommodate limited general aviation use in smaller communities and remote areas, and function for emergency and recreational use.

Following are descriptions of public airports throughout the county. Number of annual operations (take off or landing) are based upon records kept by the state Department of Aviation and Federal Aviation Administration. Not listed in this section are the numerous private airports, such as those serving hospitals and other businesses.

### Eugene Airport

Eugene Airport is owned and operated by the City of Eugene, and is a Category 1 airport. Located approximately 10 miles northwest of Eugene's central business district, it is situated on approximately 2,500 acres of land. Ground access to the Airport is provided via Airport Road off of State Highway 99.

Originally named Mahlon Sweet Field after a local businessman who promoted its establishment, the Eugene Airport was dedicated in 1943. The area's general aviation activity was transferred to Mahlon Sweet Field upon the closure of the Eugene Air Park in 1956. The Eugene Airport is the fifth-largest airport in the Pacific Northwest, and the second busiest airport in the state. It is classified as a primary commercial service small hub airport in the National Plan of Integrated Airport Systems. It supports commercial service and general aviation activity. There are approximately 95,902 annual operations at this airport.

United, United Express, Horizon Air, and America West Express are the airlines that provide scheduled commercial service at this airport, although service is subject to change. In addition, two full-service fixed base operators (FBOs) and one limited service FBO operate at Eugene Airport, providing services such as repairs, fueling, maintenance, charter flights, agricultural spraying, aircraft sales and rentals, and flight instruction. The airfield consists of two runways.

### Creswell Airport - Hobby Field

The City of Creswell municipal airport, Hobby Field, is a Category 4 facility owned by the City and leased to a private operator. The airport is located 1 mile northeast of Creswell, between Interstate 5 and Dale Kuni Road. It is accessed from Melton Road off of Cloverdale Road. The 28-acre site includes a paved runway, a parallel taxiway, approximately 45 hangars and tie down spaces. Services include charter flights, flight instruction, two skydiving schools, aircraft rental, and fueling. There are approximately 38,500 annual operations at this airport.

### Cottage Grove Airport

Cottage Grove Airport, owned by the state Aeronautics Division, is 1 mile east of the City of Cottage Grove. It is a Category 4 airport. There are approximately 16,685 annual operations at this airport. Services provided by a private operator include fueling, aircraft maintenance, pilot lounge, a restaurant, and camping. In 1999, the state completed several runway safety improvements, including a new taxiway, expanding the tie-down apron, and installing lights and approach indicators. The Oregon Aviation Historical Society has operated the Oregon Aviation History Center on property leased at the airport since early 2000.

### Florence Municipal Airport
The Florence Municipal Airport, rated as Category 4 by the ODA, is located approximately 1 mile north of Florence, within the Florence Urban Growth Boundary. Fueling, aircraft rental, flight instruction, and tie-down facilities services are available. There are approximately 5,500 annual operations at this airport.

### Lake Woahink Seaplane Base
This Category 5 aircraft facility is approximately 4 miles south of Florence, and has two, unmarked water runways. Tiedown facilities and flight instruction is available. There is a potential for 3,000 operations at this facility, although there was no longer a full-time operator at the facility as of this writing.

### Siltcoos Lake Seaplane Base
This facility 6 miles south of Florence has two, unmarked water runways. There are approximately 100 operations per year from the facility. Tiedowns are available, and a private dock is nearby. The ODA has no Category rating for this seaplane base.

### Oakridge State Airport
The Oakridge State Airport is approximately one mile west of Oakridge, on Airport Road north of Highway 58. There are approximately 1,700 operations at this Category 5 facility per year. The U.S. Forest Service uses the airport as a staging area for fire fighting helicopter operations during the fire season.

### McKenzie Bridge State Airport
No aircraft are based at this small facility, which is essentially a take-off and landing area located 3 miles east of McKenzie Bridge on the south side of Highway 126, approximately 1 mile west of the Highway 242 intersection. There are two Forest Service helipads that are sometimes used during the fire season. The airport provides recreational access to the area, and serves as an emergency landing strip. Less than 1,000 operations occur here per year. This airport is one of nine state-owned "warning" airports. These airports do not meet normal dimensional standards and have conditions that require specific pilot knowledge. Pilots are advised to contact the ODA prior to use.

## Goals And Policies: Air Transportation

**Goal 14: Coordinate transportation system improvement decisions with airport facility needs.**

Policy 14-a: Road improvements on major airport access routes shall be consistent with the Eugene Airport Master Plan and with other Airport Plans adopted by cities where airports are located.

Policy 14-b: Consistent with the 2000 Eugene Airport Master Plan, Lane County Public Works Engineering will coordinate with the Eugene Airport Authority to improve ground access to the airport. As opportunities arise, transportation system projects will incorporate improvements to access routes to other public airports in the county.

Policy 14-c: Road improvement design decisions affecting access routes serving public airports in the county will consider the needs of motor vehicles associated with existing and contemplated air freight and air passenger businesses serving the airports.

Policy 14-d: All county road improvements near airports will be coordinated with federal, state, and local agencies responsible for airport air space.

**Goal 15: Coordinate land use decisions with airport facility needs.**

Policy 15-a: Lane County shall review all proposed airport expansion plans and provide comment as appropriate regarding land use compatibility, consistency with zoning, and impacts on the county's transportation system.

Policy 15-b: Lane County shall review all proposed land use outside urban growth boundaries and in the vicinity of an airport regarding compatibility with the airport. Airport airspace shall be protected from inappropriate development through the implementation of land use and zoning regulations.

**Goal 16: Support multi-modal transportation services to and from the airport.**

Policy 16-a: As possible, Lane County shall participate in planning and other efforts to improve public as well as private, multi-occupancy vehicle transportation services to and from the Eugene Airport.

## Water Transportation: Port Of Siuslaw

The Siuslaw River is a federally authorized navigable waterway for 16.5 miles from its mouth at the Pacific Ocean. Navigation maintenance is under U.S. Army Corps of Engineers (USACE) jurisdiction. The river and Port are also served by the U.S. Coast Guard Station Siuslaw.

The Port of Siuslaw is the oldest port on the Oregon coast. The overall project was originally authorized in 1890 with later modifications. As the only port serving Lane County and the Eugene/Springfield metro area, the Port is involved in a wide range of commercial enterprises and public services. Its principle functions are to facilitate commerce and create jobs. Port facilities include wharfage, commercial and recreation moorages, public boat ramps and docks, campground and parks, and commercial/industrial land and building leases. Facilities extend about 22 miles upstream to the unincorporated community of Mapleton.

The mouth of the river is protected by two jetties, one on the north and one on the south side of the river. The shallow draft channel is suitable for ocean-going tugs and barges, and commercial fishing vessels.
The principle economic drivers in the Port district are forest products, agriculture, tourism, fisheries and recreation. While the Port levies a property tax, revenues from enterprise activities account for over 75% of its operating budget.

Industrial activities on the navigable waterway include private industry shipping terminals at river miles 6.5, 7.5, and 16. U.S. Highway 101 crosses the navigable waterway by drawbridge at river mile 4.5, and the Central Oregon Pacific Railroad crosses the water by swing bridge at river mile 8.2.

Annual maintenance dredging is performed on the entrance bar with smaller amounts of dredging taking place on the upper channel at irregular intervals. In the recent past, maintenance dredging by the USACE has removed approximately 150,000 cubic yards of material annually from the main entrance channel at an average cost of about $600,000 but has not dredged the other sections of the river for almost 30 years. The USACE has recently been under pressure to recoup the cost of dredging and to consider cost effectiveness. As a result it is increasingly difficult for smaller ports to compete with larger ports for scarce dredging funds.

While the Port District has recently completed several facility renovations, many waterfront structures that were completed during 1960-1980 are still in need of rehabilitation or replacement, including piers, wharves and docks in Old Town Florence. Other needed work includes stabilizing sections of the shoreline to prevent further erosion. The Port office, shops and warehouses are in need of replacement. Recent renovations include partial bulkhead restoration, construction of a boardwalk, rehabilitation of the commercial marina and remediation of an old lumber mill site for future commercial development.

Industrial development on Port properties and other similarly zoned properties within the District boundaries remains dependent upon improving infrastructure. Water, sewer and electric utility service are adequate but telecommunications upgrade is needed if the Port is to expand its facilities. Current economic trends will

probably mean that the Port of Siuslaw will rely increasingly upon recreation and tourism revenues to provide internal financing for infrastructure and business development.

Efforts to promote recreational use of the Port of Siuslaw include the development of the Siuslaw Estuary Water Trail. Plans are to designate over 24 miles of water trail on the Siuslaw River from Mapleton to Florence, including installation, construction, or development of signage, access points, maps, campsites, and other water trail related infrastructure for paddling enthusiasts. A multi-party planning effort for the water trail was launched in 2003 with participants from the Port of Siuslaw, Siuslaw Watershed Council, National Park Service, City of Florence, and Florence Chamber of Commerce, as well as interested business people and residents.

## Goals And Policies: Water Transportation

**Goal 17: Support Port of Siuslaw development efforts and recognize the Port as important to the state and local economy.**

Policy 17-a: Road improvement projects affecting facilities that support or are operated by the Port of Siuslaw shall be coordinated with the Port and with the Oregon Department of Transportation. Lane County will seek concurrence for all development in the Siuslaw River and adjacent to the navigable waterway.

Policy 17-b: Lane County shall review proposed Port of Siuslaw expansion plans when they involve lands and/or roads in the county's jurisdiction, and provide comment as appropriate regarding land use compatibility, consistency with zoning, and impacts on the county's transportation system.

Policy 17-c: Lane County shall support Port of Siuslaw in its efforts to improve navigability of the river and promotion of the local fishing industry, consistent with state and local land use and zoning laws.

**Goal 18: Protect the long term ecological health of the Siuslaw River.**

Policy 18-a: Development in and near the Siuslaw River in areas of county land use jurisdiction shall comply with the Lane County Coastal Resources Management Plan and with federal and state regulations.

## Pipelines

Two major pipelines pass through Lane County. **Williams Company** transports natural gas. Their Northwest transmission system extends from the Canadian border at Sumas, Washington and serves seven states, including a line running south through Lane County to Grants Pass.

The **Kinder Morgan Energy Partners Pacific Pipeline** carries petroleum gas from Portland to Eugene. The pipeline is 8 inches in diameter and made of steel. It enters Lane County north of Junction City and terminates in Eugene at their Prairie Road railroad terminal.

The following contact information is provided for coordinating road improvement projects:

Williams Gas Pipeline West
295 Chipeta Way
Salt Lake City, UT 84158
801/583-8800
24-hour gas control: 800/972-7733

Kinder Morgan Eugene Terminal
1765 Prairie Rd.
Eugene, OR 97402
541/689-1545

## Goals And Policies: Pipelines

**Goal 19: Protect pipelines as conveyances and for public safety.**

Policy 19-a: Lane County shall coordinate with pipeline providers on matters of mutual concern, such as road maintenance activities and road improvement projects to protect public safety and maintain the viability of both modes of transportation.

Policy 19-b: Lane County shall review all proposed pipeline expansion plans and provide comment as appropriate regarding land use compatibility, consistency with zoning, and impacts on the county's transportation system.

# CHAPTER 5: TRANSPORTATION AND LAND USE

The TPR mandates that the county's Transportation System Plan describe how the county is implementing state land use Goal 12 to provide a network of facilities and services to meet overall transportation needs. Within that framework, one purpose of the TPR is to better integrate transportation system and land use planning.

Areas outside of UGBs are generally treated as "rural" areas under state land use laws. The TPR does not allow new arterial roads in rural areas, unless an "exception" to applicable statewide land use goals is taken. In other words, new arterial roads in the county require an amendment to the Transportation System Plan, following the state-specified exception process. The grounds for an exception cited in OAR 660-012-0070 require an analysis that demonstrates why the need cannot be met with an alternative mode of transportation, traffic management measures, or improvements to existing transportation facilities. Furthermore, it must be demonstrated that the proposed road improvement cannot be located within an area already committed to development. These requirements apply to both county and state roads. New local roads and collectors are permitted in developed and committed rural areas provided they are limited to two travel lanes and are otherwise limited to serving rural needs.

The TPR also specifies which transportation activities in rural areas do not require a land use decision (i.e., a special use permit or plan amendment requiring notice and opportunity to appeal), and which transportation activities are permitted outright in the underlying land use zone. Reconstruction and modernization of existing roads is generally permitted outright in all rural areas that are not in Exclusive Farm Use or Forest zones, where construction of additional travel lanes and in some cases, the acquisition of land for additional right-of-way, are treated as special uses.

Routine operation, maintenance, and preservation activities for roadways and other transportation facilities are permitted uses in rural zones. However, zoning is only one element of the numerous laws regulating road improvements or for that matter, any type of development. Road projects involving water crossings may require permits from and coordination with multiple federal, state, and local agencies responsible for administering floodplain, wetland, riparian and greenway regulations, and the Clean Water Act National Pollutant Discharge Elimination System (NPDES) program. Such permits typically impose a variety of performance measures to control and reduce flood hazards, erosion, water quality degradation, and to otherwise protect natural resources.

As described in the TSP Roadways Element, Chapter 4.1, the Capital Improvement Program (CIP) is the "project development" mechanism referenced in the TPR (OAR 660-012-0010(1)) that implements the TSP. CIP projects are adopted as part of a financial program that is updated each year. In addition, individual road project designs are subject to procedures specified in Lane Manual. Citizens have input into transportation planning and project development at multiple levels: the TSP adoption process, the annual CIP program adoption process, individual project design development, and through any required land use permit application process.

### Roads and Private Development

Private development has an impact on the transportation system. For instance, land divisions may result in significant traffic increases, and new commercial and industrial uses sometimes bring additional heavy equipment uses onto the road system.

Prior to 1949 there was no county land division ordinance. Consequently, many pre-1949 plats in the county include no, or substandard roads. Roads within these plats were dedicated to and, in most cases, accepted by the county. It is not uncommon for these "paper plats" to include no consideration of physical land limitations such as topography, wet areas, or physical obstructions. In addition, in past years, neither road improvements nor surveys were required prior to final plat approval. As a result, new roads constructed for private development were improperly located in the absence of a survey. Such circumstances present challenges in balancing public safety, access management, and equitable road improvement requirements as the platted lots develop over time on an individual basis.