

ROADWAYS

The County's road system permits the movement of goods and people between communities and regions, using any of a variety of modes of travel. Roads provide access to virtually all property. They support established communities and serve new development. They connect rural communities and urban neighborhoods. Roads give structure to our urban form, define our commuting patterns and influence our perceptions of what is far away or close at hand.

Creating and maintaining a safe, continuous County-wide road system, which accommodates movement by all travel modes, means setting standards for development of new roads and redevelopment of existing roads, including design and access standards for urban and rural roads. To ensure roads continue to meet the transportation demands of the County, a method to measure the ongoing performance of the system is essential. In response to new technologies and financial constraints, recent changes have been made to these standards on the state and regional levels. These changes are reflected in this TSP.

5.O. Functional Classification and Design Policies

- 5.O.1 Designate and develop roadways according to the functional classifications and guidelines illustrated in the County Road Typical Cross Sections (Figures 5-1a through 5-1f, and Figures 5-2a through 5-2f) while allowing flexibility to accommodate characteristics of terrain, scenic qualities, environmental constraints, existing development, and adopted Special Transportation Plans.
- 5.O.2 Designate freeways, arterials, collectors and connectors as shown on Map 5-4a and Map 5-4b. Roadways that do not presently exist but are shown on these maps are shown in approximate locations.
- 5.O.3 Maintain and improve roads consistent with their functional classification, and reclassify roads as appropriate to reflect function and use.
- 5.O.4 Require changes in Comprehensive Plan designation and zoning designation to comply with the Transportation Planning Rule (OAR 660-12). Evaluations of the transportation system for this purpose shall rely on existing transportation facilities and on planned facilities found in the 20-Year Capital Projects list (Table 5-3a). State transportation facilities shall be evaluated according to the Oregon Highway Plan, Regional Transportation Plan, Transportation Planning Rule, and other applicable state requirements.
- 5.O.5 Develop and implement traffic calming strategies, appropriate for the road functional classification, that will improve the safety and convenience of travel by all modes, particularly in areas with high crash rates or high rates of bicycle and/or pedestrian activity.
- 5.O.6 **Urban** Consider the Metro Regional Street Design Classifications when designing new county roads or redesigning existing county roads, prior to construction or reconstruction. Map 5-5 shows which roads are designated by each Design Classification.

- 5.O.7 **Urban** Minimize impacts of managing storm water by allowing for Metro’s alternative street standards, such as “green streets,” as design alternatives.
- 5.O.8 **Urban** Design arterials and collectors to allow safe and convenient passage of buses, bicycles, and pedestrians.
- 5.O.9 **Urban** Streets, alleys, bikeways, pedestrian facilities, multi-use paths, trails and transit stops are allowed uses in all urban zoning districts. Consider all state and County policies relating to these facilities when widening, improving or constructing new transportation infrastructure.
- 5.O.10 **Rural** Plan to support the existing development pattern and through traffic needs of the rural communities, and not to support or promote urbanization.
- 5.O.11 **Rural** Consistent with ORS 215.283(3) and OAR 660, Division 12, County road capital improvement projects may be designed and constructed to improve safety and bring roads up to county standards outside the UGB. If the road capital improvement project is not otherwise allowed and would require expansion of right-of-way exceeding the road improvements allowed in the Agriculture or Forest districts, a goal exception would be required for such a project, as provided for in ORS 215.283(3).
- 5.O.12 **Rural** Streets, alleys, bikeways, pedestrian facilities, multi-use paths, trails and transit stops are allowed uses in all rural zoning districts with the exception of Agricultural and Forest Districts in which they are conditionally allowed by ORS 215.213, 215.283 or OAR Chapter 660, Division 6 (Forest Lands).
- 5.O.13 **Rural** Recognize the importance of resource-related uses such as agriculture and forestry to the local economy, and the need to maintain a transportation system that provides opportunities to harvest agricultural and forest products and deliver them to market.
- 5.O.14 **Rural** Design, construct and reconstruct rural arterials and collectors to allow safe and convenient passage of trucks, buses, pedestrians and bicyclists.
- 5.O.15 **Rural** Support the safe movement of agricultural equipment in rural areas by improving existing roads to county standards and considering design features such as signs, pull-outs for slow-moving vehicles, reduced speeds, and limiting curbs where equipment may move to the shoulder or out of the right-of-way.

5.P. Project Development Policies

- 5.P.1 Before building new roads or adding capacity to existing roads, consider Transportation System Management (TSM) strategies for using the existing road system, including associated pedestrian and bicycle facilities, and system capacity most efficiently.

TSM strategies include:

- 1. Access Management;
- 2. Alternative/Modified Standards (Performance and/or Design Standards);
- 3. Intelligent Transportation System (ITS) applications;

4. Operational Improvements;
5. Parking Standards;
6. Enhanced Bicycle and Pedestrian Facilities; and,
7. Road Diet (*For example, restriping a low volume, 4-lane road to a 3-lane configuration with bicycle and pedestrian facilities*).

5.Q. Access Standard Policies

- 5.Q.1 Ensure safe and convenient access for bicyclists, pedestrians, and transit users for land uses that are open to the public. Apply access management in a flexible manner to allow reasonable access and balance the needs of all roadway users.
- 5.Q.2 Improve multimodal operations and safety by ensuring that Interchange Management Areas and other access plans and projects are coordinated with multimodal connectivity standards and are designed to support safe and convenient access and travel for all modes, when appropriate.
- 5.Q.3 Support the implementation of state access management standards (OAR Chapter 734, Division 51, as amended, and the Oregon Highway Plan) on state highway facilities and within Interchange Management Areas. Coordinate with the Oregon Department of Transportation for access control on state highways.
- 5.Q.4 If feasible, allow only collectors, connectors, or other arterials to intersect arterials.
- 5.Q.5 Access Standards shall be implemented through the Zoning and Development Ordinance and the County Roadway Standards. Where access management standards are adopted by the County in Special Transportation Plans, those standards shall apply.
- 5.Q.6 Developments should be designed to place driveway accesses on streets with the lowest functional classification or the lowest traffic volume.

5.R. Policies on Improvements to Serve Development

- 5.R.1 Require new development to be served by adequate transportation facilities and access points that are designed and constructed to safely accommodate all modes of travel.
- 5.R.2 For new developments and land divisions, require right-of-way dedication, on-site frontage improvements to the applicable standards as shown in the roadway Cross Sections (Figures 5-1a through 5-1f and Figures 5-2a through 5-2f) and the County Roadway Standards, and off-site improvements necessary to safely handle expected traffic generated by the development and travel by active modes. Where roadway standards are adopted by the County in Special Transportation Plans, those standards shall apply.
- 5.R.3 Assess anticipated off-site traffic impacts caused by new developments. The developer may be required to participate financially or otherwise in the provision of off-site improvements, dedications or other requirements.

- 5.R.4 For new development proposed on a site identified on Map 5-6 (*Potentially Buildable Residential Sites >5 Acres in UGB*), require a conceptual street plan that is consistent with requirements of this section and provides for full street connections at intervals of no more than 530 feet, where feasible.
- 5.R.5 Require new development that will require construction of new streets to provide full street connections at intervals of no more than 530 feet, where feasible. If full street connections are not feasible at such intervals, require accessways for pedestrians, bicyclists or emergency vehicles at intervals of no more than 330 feet. Exceptions may be made where there are barriers, including topography, railroads, freeways, pre-existing development, existing easements, or environmental constraints such as streams and wetlands.
- 5.R.6 New development shall accommodate on-site traffic circulation within the boundaries of the site, not by circulating vehicles on and off the site through multiple access points using the public road system. Internal circulation plans should avoid relying on "backing out" maneuvers for new driveways onto all rural arterials and collectors.
- 5.R.7 **Urban** Require implementation of a road network for undeveloped sites illustrated on Map 5-6. Existing roads shall be extended to provide a direct, connected system.
- 5.R.8 **Urban** Where appropriate, develop and implement neighborhood traffic circulation plans for all modes intended to improve circulation while minimizing safety concerns and exposure to air and noise pollution.
- 5.R.9 **Urban** Discourage motor vehicle through-trips on local, connector and collector roads, and encourage bicycle and pedestrian travel on these roads.
- 5.R.10 **Urban** Allow flexible criteria and standards for local streets that are less than 200 feet in length, are expected to carry very low traffic volumes, and are not capable of being extended.
- 5.R.11 **Urban** Private streets may be appropriate in areas with topographic constraints that make construction of a road to County standards not feasible. Private roads are not classified as local roads and are not maintained by the County.
- 5.R.12 **Urban** Require that changes to Comprehensive Plan land use designations within the Interchange Management Areas identified on Map 5-7 be consistent with Oregon Administrative Rules 660-012-0060. If the land uses allowed by the new Comprehensive Plan land use designation would cause the interchange mobility standards to be exceeded, either the change shall be denied or improvements shall be made such that the mobility standards are met.
- 5.R.13 **Rural** Discourage through trips on rural local roadways.

5.S. Performance Evaluation Measure Policies

- 5.S.1 For County roads, establish the method of calculating roadway capacity and the impact of new development on that capacity in the County Roadway Standards.
- 5.S.2 Evaluate capacity needs for roadways within the urban area using the Regional Motor Vehicle Performance Measures shown in Table 5-2a, except as established below. All capital construction shall be designed not to exceed the maximum V/C ratio.

**Table 5-2a
PERFORMANCE EVALUATION MEASURES FOR THE URBAN AREA
Weekday Mid-day and Weekday PM Peak Periods**

Federal and State Principal Arterial Street Segments and Intersections	Maximum Volume to Capacity (V/C) Ratio		
	Mid-day One-Hour Peak	1 st Hour, PM Peak	2 nd Hour, PM Peak
OR 99E from OR 224 interchange north to county line	0.99	1.1	0.99
I-205 I-5 OR 212 OR 224 OR 213	0.90	0.99	0.99
County Street Segments and Intersections by Metro Urban Design Type <i>See Comprehensive Plan Map IV-8</i>			
Regional Centers Town Centers Main Streets Station Communities	0.99	1.1	0.99
Corridors Neighborhoods Employment Areas Industrial Areas Intermodal Facilities	0.90	0.99	0.99

- 5.S.3 Exceptions to the performance evaluation measures for review of development proposed on property within Metro’s boundary are established as follows:
 - 5.S.3.1 Within the Clackamas Industrial Area, no performance evaluation measures shall apply.
 - 5.S.3.2 For the intersections of SE Park Avenue/OR 99E, SE Park Avenue/SE Oatfield Road, and SE Park Avenue/SE 27th Street, performance evaluation measures of the Station Community Design Type shall apply.
- 5.S.4 Evaluate capacity needs for roadways in the rural area using the performance evaluation measures shown in Table 5-2b.

Table 5-2b
PERFORMANCE EVALUATION MEASURES FOR THE RURAL AREA
Weekday, AM and PM Peak Periods

County Roads and ODOT Facilities and Intersections based on posted speed and highway classification	Maximum Volume to Capacity (V/C) Ratio	
	1 st Hour, PM Peak Period	2 nd Hour, PM Peak Period
Inside city UGBs	0.80 to 0.95	0.80 to 0.95
Inside Unincorporated Communities	0.70 to 0.80	0.70 to 0.80
All other Rural areas	0.70 to 0.75	0.70 to 0.75
County rural road intersections and road segments outside of rural area cities	Minimum Level of Service (LOS) or Maximum Volume/Capacity Ratio; Weekday Peak Periods	
	AM Peak Hour	PM Peak Hour
Road segments and Unsignalized Intersections	LOS E	LOS E
Signalized and Roundabout Intersections	0.90	0.90

- 5.S.5 Exception to the performance evaluation measures for review of development proposed on property in the rural area is established as follows:
- 5.S.5.1 Within Government Camp Village, no performance evaluation operating standards shall apply.
- 5.S.6 The maximum volume to capacity ratio for the ramp terminals of interchange ramps shall be v/c 0.85. (1999 Oregon Highway Plan, OHP Policy 1F Revisions, Adopted by OTC: Dec. 21, 2011).
- 5.S.7 Where more than one performance measure would apply at an intersection, the measure allowing the higher level of congestion will be used, except for ramp terminal intersections.
- 5.S.8 Evaluate transitioning from transportation concurrency to safety analysis when a traffic impact study (TIS) is required of new development.
- 5.S.9 The County will work with Metro and ODOT over five years to develop Alternate Road Capacity Performance Standards, required by the Oregon Highway Plan Policy 1.F., to address the following five intersections. These intersections were forecast not to meet the Capacity Performance Standards adopted in the 2013 TSP and there were no projects identified that could make the intersections meet the standards.
- SE Harmony Road/SE Linwood Avenue
 - OR 212/SE 172nd Avenue – ODOT Intersection
 - OR 212/SE 282nd Avenue – ODOT Intersection
 - OR 213/S. Henrici Road – ODOT Intersection (traffic signal or roundabout)
 - OR 224/SE Lake Road/SE Webster Road – ODOT Intersection