

# City of Tigard Engineering Division Public Improvement Design Standards

## D. STREET AND ROADWAY REQUIREMENTS

The following sections replace those in the currently adopted Public Improvement Design Standards as noted.

### 1. General

The Tigard Transportation System Plan establishes the functional classification of each roadway. Figure D-1 summarizes the improvement standards for each roadway functional classification. NOTE: Minimum Pavement Section has been updated from D-1 and included below.

See below for Minimum Pavement Sections:

CLASSIFICATION	(MIN.) PAVEMENT SECTION			
	AC WEARING COURSE	AC BASE COURSE	AGGREGATE BASE COURSE	AGGREGATE SUB BASE COURSE
ARTERIAL	2.0"	9.0"	5.0"	18.0"
COLLECTOR	2.0"	8.0"	5.0"	16.0"
NEIGHBORHOOD ROUTE	2.0"	6.0"	5.0"	12.0"
LOCAL (COMMERCIAL & INDUSTRIAL)	2.0"	6.0"	5.0"	12.0"
LOCAL (RESIDENTIAL)	2.0"	3.0"	4.0"	12.0"

The volume of traffic shall determine the number of travel lanes for arterial and major collector roads. The City may require additional turning lanes as a result of a traffic analysis. Additional pavement and right-of-way width may be required to accommodate turning lanes, parking, bike lanes, or other features specified in the approved cross-sections.

Street-specific pavement design can be submitted in lieu of using the updated table thicknesses, except for Local roadways. The pavement design will be based on AASHTO and/or the ODOT Pavement Design Guide requirements for a 40-year design life for new or reconstructed pavements, and a 20-year design life for rehabilitated pavement.

Pavement designs will be stamped by an engineer licensed in the state of Oregon and should include design inputs for ESAL loadings based on actual and/or projected traffic. Existing aggregate base (rehabilitation only) and subgrade layer resilient moduli should be

based on field measurements. Structural layer coefficients, reliability, serviceability and standard deviation inputs should be as recommended in the AASHTO and/or ODOT Pavement Design Guide.

## **12. Soil Testing**

Soil testing to obtain the strength characteristics of the soil is required for all roads for analysis and design of the road structural section. Soil tests shall be taken from undisturbed samples of the subgrade materials that are expected to be within three (3) feet of the planned subgrade elevation. One sample is needed for each one thousand (1,000) feet of roadway and for each visually observed soil type. Soil tests are required for a minimum of two (2) locations. Test results shall be correlated to the resilient modulus for asphalt pavement design. Recommendations for both summer and winter construction shall be included. Both sections shall be included in the construction plans.

For Portland Cement Concrete: the selected design structural strength of the soil shall be consistent with the subgrade compaction requirements. That is, the strength and compaction moisture content at optimum to slightly over optimum needs to be specified. The soils report shall address subgrade drainage and ground water considerations for year-round conditions. Portland Cement Concrete pavement sections require approval of the City Engineer.

## **13. Final Lift of Pavement**

The top 2" lift of asphalt concrete pavement on a newly constructed local residential street will not be permitted to be installed during the initial paving of the street. The top lift shall be placed within one year of the conditional acceptance of the roadway and no later than when 90 percent of the structures in the new development are completed. NOTE: The City may require the full thickness of the asphalt concrete section to be placed immediately.