



Standard Drawing Report

Date: February 18, 2022

Technical Owner: Civil – John Wilson, PE

Standard Drawing No. P-540 **Calculation Book No.** n/a

Drawing Title: Curbs



Expires 06/30/2022

Background Information, Including Reference Material:

The standard curb, standard curb median island, 18” and 24” curb and gutter, and low-profile mountable curb are based on the Oregon Department of Transportation standard curb, mountable curb, curb and gutter, and low-profile mountable curb respectively. See ODOT baseline report for RD700 on history of curbs.

The standard curb, 18” and 24” curb and gutter have been in use since at least the 1960’s. The 12” curb and gutter was developed around 2002 for use next to a bike lane. The thickened curb and gutter were developed around 2000 in response to the adoption of a stormwater manual. One method to treat storm runoff was to construct water quality facilities behind the curb.

Assumption Made:

No major assumptions were made.

Design Narrative:

The 12" and 18" thickened curb and gutter were developed to prevent potential overturning of the curb and gutter into water quality facilities located behind the curb and gutter. Besides providing extra weight to resist overturning, the thickened section minimized the chance of water in the water quality facility from eroding under the curb and gutter. The modified curb and gutter detail was developed to provide a wider area for a passenger to step out of a vehicle without stepping into a water quality facility and crushing the plantings.

The low-profile mountable curb from ODOT drawing RD700 was modified with a 2 inch shelf to help keep the sidewalk from settling or pulling away from the low-profile mountable curb. The low-profile curb is used primarily in cul-de-sacs to make it possible to construct a smaller radius and still allow fire equipment to turn around by mounting the curb and use the sidewalk. It also has been used around landscaped traffic circles in the middle of the street at intersections.

In situations where a street is constructed with a valley profile without curb and sidewalk, use the valley gutter on ODOT drawing RD700.

The 6:1 batter for the curb face is designed to prevent damaging the curb when roller compaction equipment is working next to the curb.

Note that the width designation for curb and gutter do not reflect industry nomenclature. Industry designation for the size of the curb and gutter includes the 6-inch curb.

The curb exposure has changed over time. From at least the 1970's to around 2000 the curb exposure was typically 7 inches. This allowed for a future 1-inch overlay without adversely impacting curb exposure. During a project in downtown Portland, the transit agency (TriMet) noted at locations with new curb construction where turning movements required the front bumper of the bus to go over the sidewalk, there was scraping of the sidewalk. At the same time, it was discovered that there were many claims from the public about scraping the sidewalk when opening their vehicle door next to the curb. So, the decision was made to reduce the standard curb exposure down to 6 inches. However, note that within 50 feet of the safe stopping distance from a railroad crossing, different rules apply for curb exposure. ODOT Rail requires the curb exposure to comply with ODOT drawing RD700 which states that ODOT standard curb exposure is 7 inches.

Update: February 18, 2022

In response to a revision request to modify standard drawings for curb ramps, construction notes related to gutter pans were modified to refer to P-549 for gutter pans at curb ramps. Details for specific sizes of curb and gutter were consolidated for clarity and to allow for variable gutter widths. For both the Curb and Gutter and the Modified Curb and Gutter, a dimension between the top of the gutter and bottom of the gutter was added to represent the 1:6 batter.