APPENDIX

H. SHOULDER GUTTER TRANSITION SLOPE AT BRIDGES

H. SHOULDER GUTTER TRANSITION SLOPE AT BRIDGES

H.1 SLOPE CREATED BY THE SHOULDER/GUTTER TRANSITION

If the profile grade line (PGL) of the road is flat, there will be a slope away from the bridge created by the shoulder/gutter transition. The degree of slope will depend on the width of the shoulder and the cross slopes of the bridge deck and the roadway shoulder. Figure H.1 shows a transition with a 10-foot shoulder and standard cross slopes for the bridge deck and roadway shoulder.

The drop from the edge of the travel lane to the bottom of the gutter at the end of the bridge barrier wall is:

0.02 (10.33) = 0.206 feet

- 10.33 → Distance from edge of travel lane to bottom of gutter
- 0.02 → Shoulder cross slope

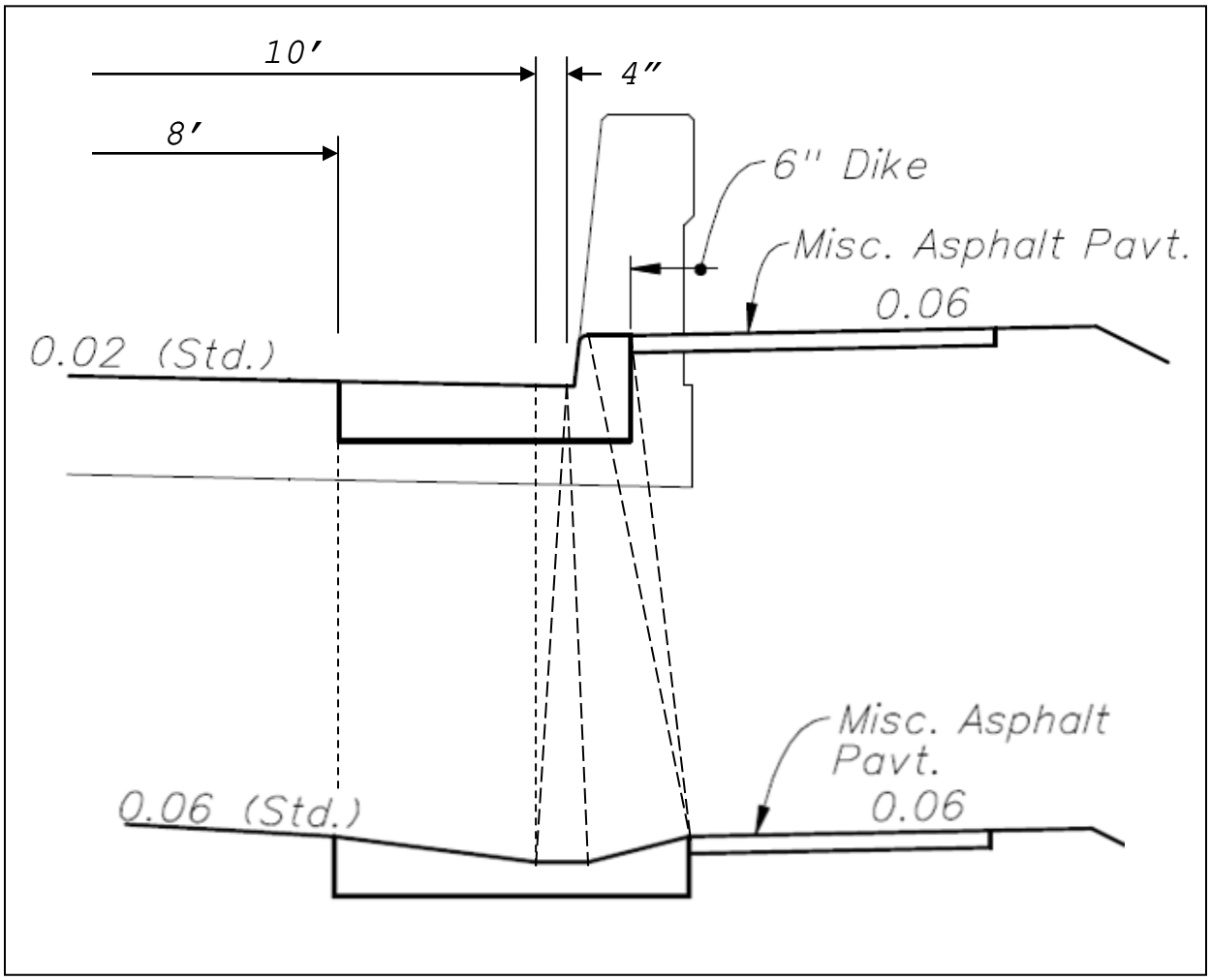

Figure H-1: Shoulder/Gutter Transition at Bridge End

The drop from the edge of the travel lane to the bottom of the gutter at the end of the transition is:

0.06 (8) + 0.25 = 0.730 feet

- 0.25 → 3-inch drop from lip of gutter to bottom of gutter
- 8 → Distance from edge of travel lane to lip of gutter
- 0.06 → Shoulder cross slope

The drop of the gutter bottom in the transition is 0.730 – 0.206 = 0.524 feet. The length of the transition is 25 feet. The slope of the bottom of the gutter is 0.524/25 = 0.0210, or 2.10%.