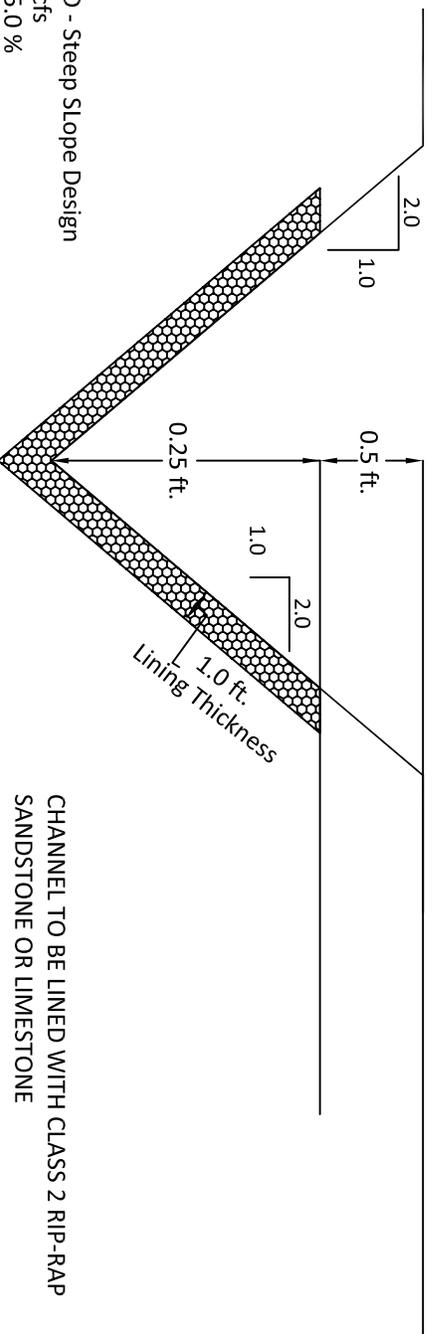


TYPICAL ROAD DITCH 10.0% – 15.0%
 RIP-RAP CHANNEL CROSS-SECTION



SIMONS/OSM METHOD - Steep Slope Design
 Design Discharge: 3.0 cfs
 10.0% 15.0%
 Depth: 0.21 ft. 0.16 ft.
 Depth w/ Freeboard: 0.71 ft. 0.66 ft.
 Top Width: 0.82 ft. 0.64 ft.
 Top Width w/Freeboard: 2.82 ft. 10.11 ft.
 VELOCITY: ** **
 X-SECTION AREA: 0.08 sq. ft. 0.05 sq. ft.
 HYDRAULIC RADIUS: 0.092 0.072
 FROUDE NUMBER: ** **
 MANNING'S N: ** **
 Dmin: 4.00 in. 4.00 in.
 D50: 12.00 in. 12.00 in.
 Dmax: 15.00 in. 15.00 in.

Velocity and Manning's n calculations may not apply for this method.