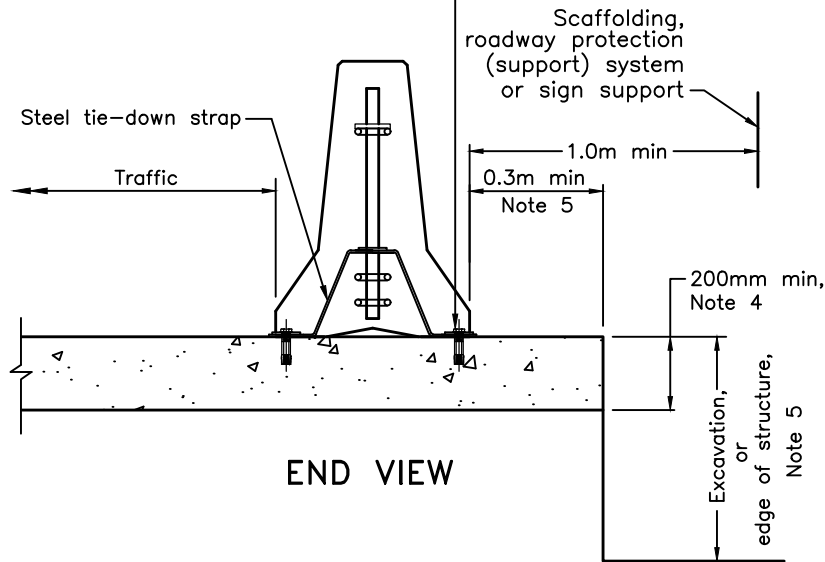
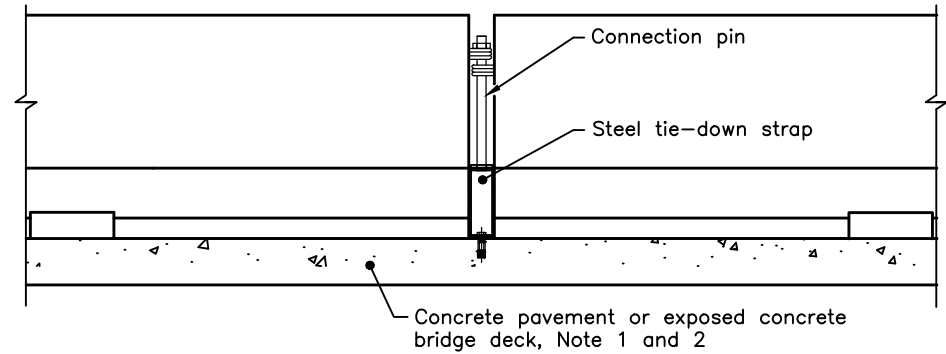


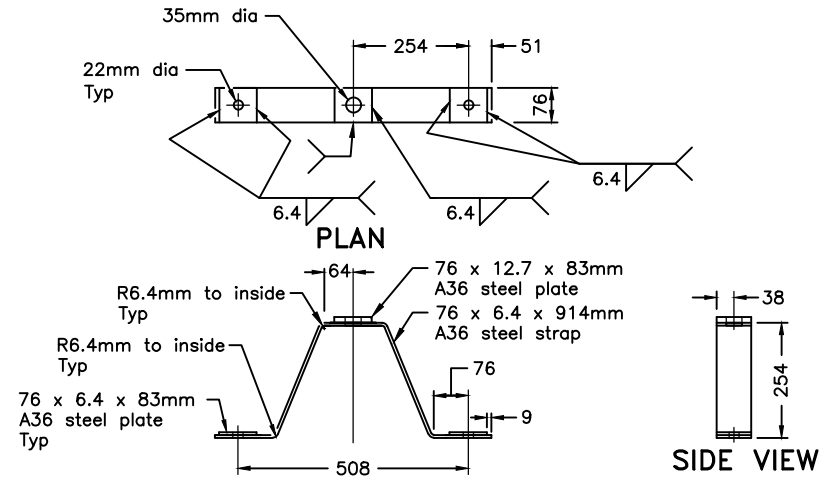
Two 3/4" dia x 1 3/4" SAE Grade 2 bolts into Hilti HDI 3/4" drop-in anchors with 81mm min embedment or two 19mm dia x 57mm long ISO Class 8.8 bolts into Red Head 19mm dia drop-in anchors with 81mm min embedment, Note 3



END VIEW



ELEVATION




ELEVATION

STEEL TIE-DOWN STRAP

NOTES:

- 1 This OPSD shall not be used when asphalt layer over concrete exists.
- 2 This OPSD shall not be used on bridge superstructures that contain post tensioned tendons within the concrete deck or bridge superstructures with longitudinally prestressed, transversally post tensioned, solid or voided concrete slab units.
- 3 Anchors shall be installed according to manufacturer's specifications by an installer certified by the manufacturer's direct representative.
- 4 Minimum concrete strength shall be 27MPa.
- 5 When the level area between the back of the barrier and the upper edge of an excavation is less than one metre, use of this standard requires the Owner to have a signed and sealed memorandum from an Engineer for each installation used during construction according to Ontario Regulation 213/91.

- A This OPSD shall be read in conjunction with OPSD 911.160 and 911.171.
- B System configuration meets NCHRP Report 350 TL-3.
- C Welds shall be according to CSA W59.
- D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2021	Rev	1	
GUIDE RAIL SYSTEM, CONCRETE BARRIER TYPE M CONNECTION	-----			
INSTALLATION - TEMPORARY RESTRAINT SYSTEM STRAPPED TO CONCRETE	-----			
OPSD 911.163				