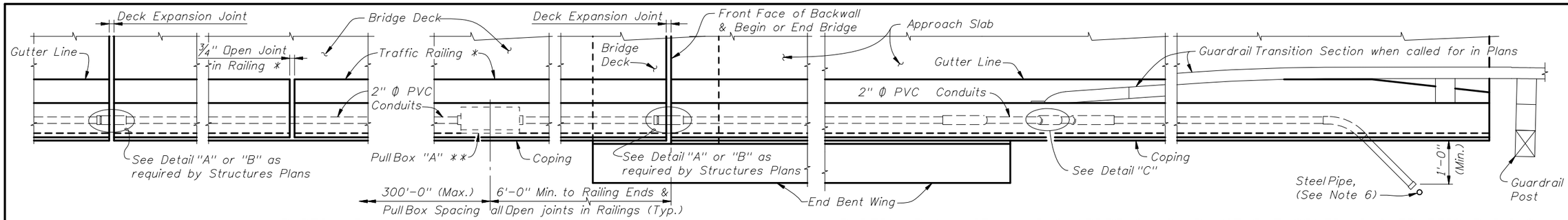
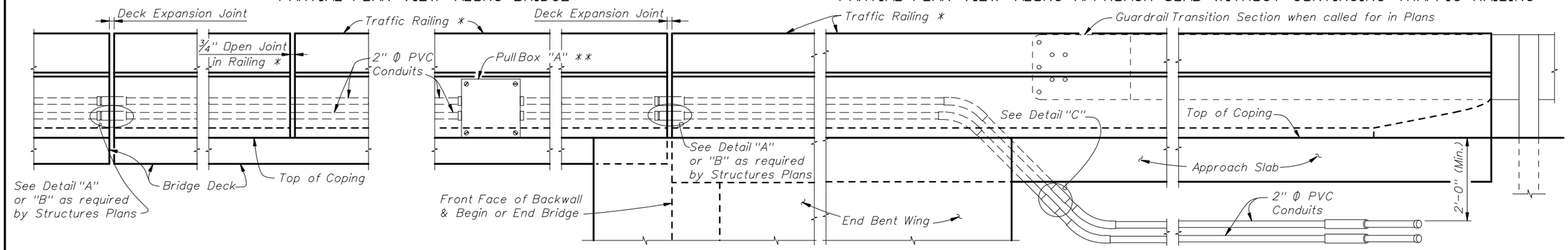


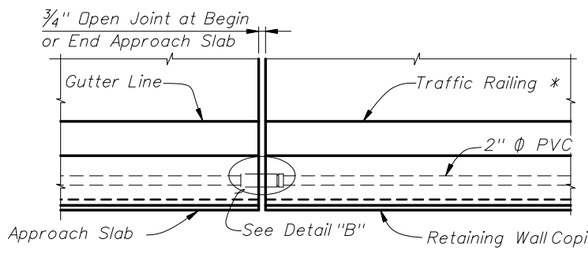
PARTIAL PLAN VIEW ALONG BRIDGE

PARTIAL PLAN VIEW ALONG APPROACH SLAB WITHOUT CONTINUING TRAFFIC RAILING

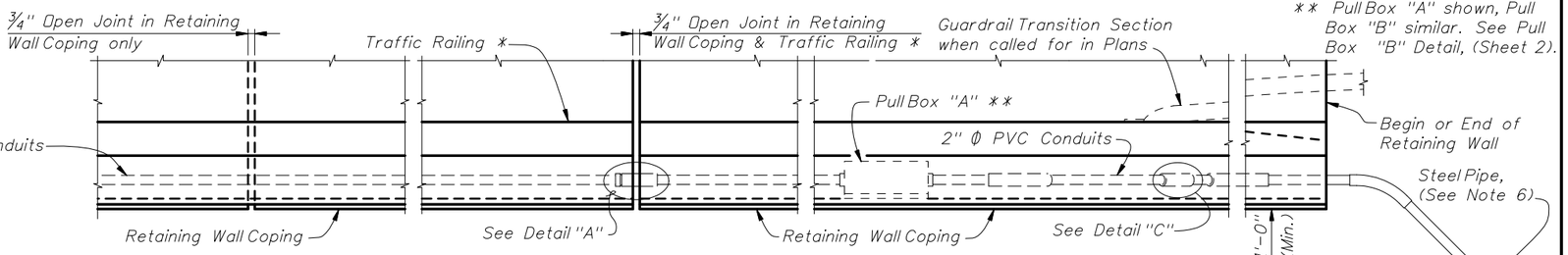


PARTIAL ELEVATION VIEW ALONG BRIDGE

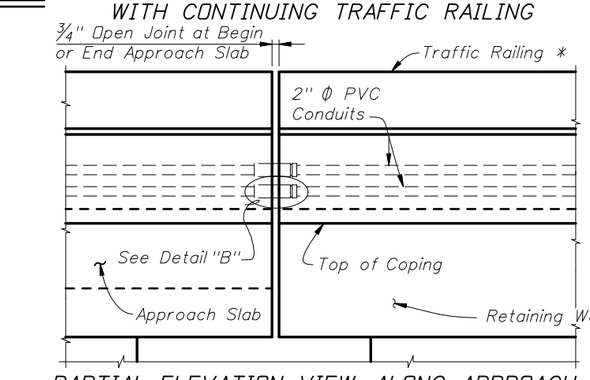
PARTIAL ELEVATION VIEW ALONG APPROACH SLAB WITHOUT CONTINUING TRAFFIC RAILING



PARTIAL PLAN VIEW ALONG APPROACH SLAB WITH CONTINUING TRAFFIC RAILING

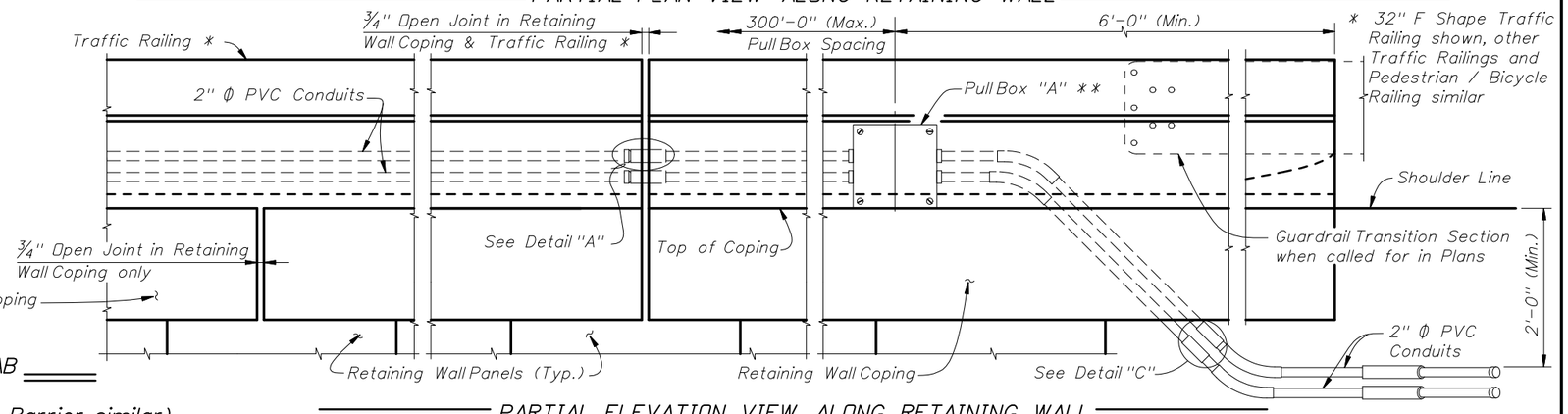


PARTIAL PLAN VIEW ALONG RETAINING WALL



PARTIAL ELEVATION VIEW ALONG APPROACH SLAB WITH CONTINUING TRAFFIC RAILING

(Retaining Wall Mounted Traffic Railing shown, Roadway Concrete Barrier similar)



PARTIAL ELEVATION VIEW ALONG RETAINING WALL

2008 FDOT Design Standards

UTILITY CONDUIT DETAILS

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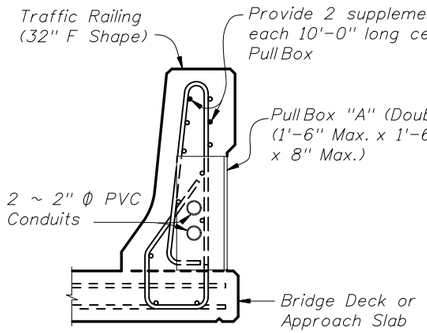
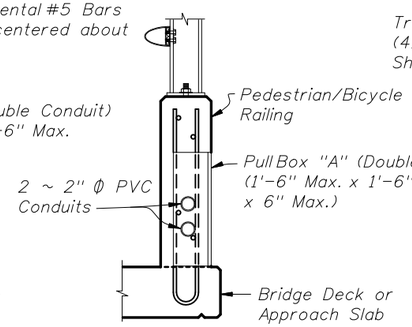
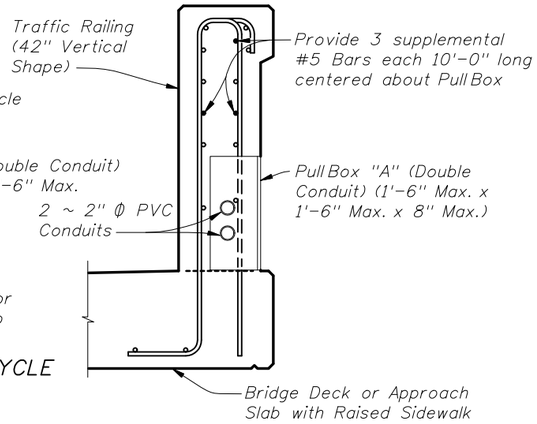


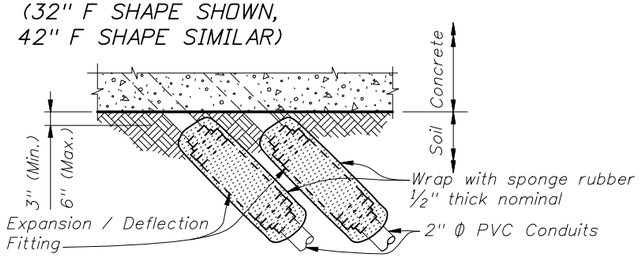
SECTION THRU TRAFFIC RAILING AT PULL BOX
(32" F SHAPE SHOWN,
42" F SHAPE SIMILAR)



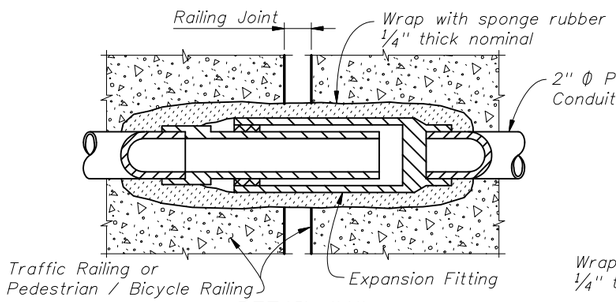
SECTION THRU PEDESTRIAN / BICYCLE RAILING AT PULL BOX



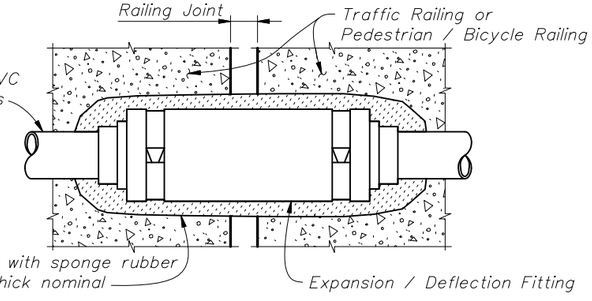
SECTION THRU TRAFFIC RAILING AT PULL BOX
(42" VERTICAL SHAPE SHOWN,
32" VERTICAL SHAPE SIMILAR)



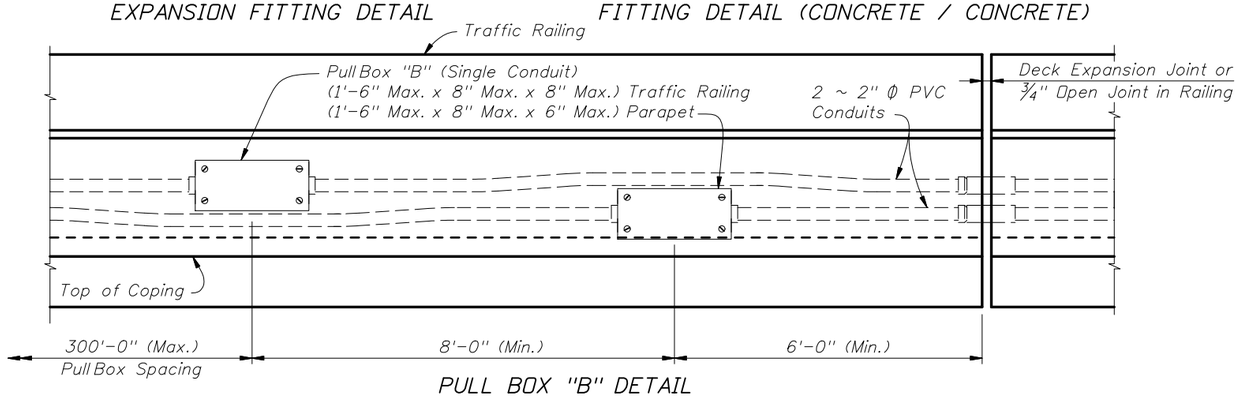
DETAIL "C" EXPANSION / DEFLECTION FITTING DETAIL (CONCRETE / SOIL)



DETAIL "A"
EXPANSION FITTING DETAIL



DETAIL "B" EXPANSION / DEFLECTION FITTING DETAIL (CONCRETE / CONCRETE)



PULL BOX "B" DETAIL

UTILITY CONDUIT GENERAL NOTES:

1. Furnish and install approved Conduits and Fittings in accordance with the Specifications, this Standard, the National Electric Code (NEC) and as directed by the Engineer.

2. Furnish Schedule 80 PVC Rigid Nonmetallic Conduits in accordance with NEMA TC-2 and UL Standard 651 and Fittings in accordance with NEMA TC-3 and UL Standard 514b. Furnish conduit and fittings with UL labels: Conduit - on each 10 foot length; Fittings - stamped or molded on each fitting. Connect Conduit and Fittings using solvent cement in accordance with manufacturer's recommendations.

3. Furnish and install NEMA Type 4X non-metallic or galvanized steel Pull Boxes sized in accordance with NEC requirements and the maximum limits shown. Provide gasketed weatherproof covers for the Pull Boxes. Permanently label the covers of the Pull Boxes to indicate the utility contained within. Letters and symbols shall be a minimum of 0.5" tall and may be stamped or molded into Pull Box covers. Install Pull Boxes adjacent to Begin and End Bridges, Begin and End Retaining Walls and at additional locations as required. Omit Pull Boxes at Begin or End Retaining Walls adjacent to bridges. Position Pull Box openings as shown, do not place Pull Box openings on the traffic face of Traffic Railings.

4. Furnish and install Expansion Fittings at locations shown in the Plans. Certify that Expansion Fittings used at a given location are rated to accommodate the anticipated movement at that location: along bridge decks - see Structures Plans, Expansion Joint Data Table; along retaining walls and other unspecified locations - 2" minimum.

5. Furnish and install Expansion / Deflection Fittings at locations shown in the Plans. Certify that Expansion / Deflection Fittings used at a given location are rated to accommodate a minimum rotation of 30 degrees and the anticipated movement at that location: along bridge decks - see Structures Plans, Expansion Joint Data Table; along retaining walls and other unspecified locations - 0.7" minimum.

6. Stub out and cap conduits and drive steel pipe to permanently locate ends as shown unless otherwise shown in Plans.

7. Shift vertical railing reinforcement symmetrically to provide 2" clearance to Pull Boxes. Space shifted vertical reinforcement at 3" centers minimum. Cut horizontal railing reinforcement to provide 2" clearance to Pull Boxes and provide supplemental reinforcement as shown. Shift a maximum of 1" but do not cut railing reinforcement to facilitate conduit, Expansion Fitting and Expansion / Deflection Fitting placement. Do not bundle conduits or conduits and horizontal reinforcement.

8. Unless otherwise shown in the Plans, include the cost of furnishing and installing Conduit, Pull Boxes, Expansion and Expansion / Deflection Fittings and all associated hardware required to complete the installation in the cost for the Traffic Railing or Pedestrian Railing (Parapet) that the conduit is installed in.

INSTRUCTIONS TO DESIGNER:

Verify the applicability of this Standard for a given project. Coordinate with the District Utility Coordinator to determine the present and future utility requirements at the project location. Provide supplemental designs, notes, details, wiring diagrams and wiring specifications in the Plans as required to complement this Standard.

Specify in the Structures Plans the type of Pull Boxes required: Pull Box "A" - multiple raceways; Pull Box "B" - single raceways. Generally, multiple raceway Pull Boxes can be used where utilities contained within individual raceways (conduits) can share a common Pull Box. Single raceway Pull Boxes should be used where it is desirable or required that utilities contained within individual raceways (conduits) be isolated from each other.

Specify the type of fittings required at Expansion Joint locations on bridges: Expansion Fittings or Expansion / Deflection Fittings. Generally, Expansion Fittings can be typically used for bridges on tangent or large radius curved alignments where little or no transverse movement is expected at Expansion Joints. Expansion / Deflection Fittings are typically required for bridges on curved alignments or combined curved and tangent alignments where transverse movement is expected at Expansion Joints.

For electrical service, specify the use of THWN or XHHW conductors only.