



**DISTRIBUTION CONSTRUCTION STANDARD**  
 EUGENE WATER & ELECTRIC BOARD - EUGENE, OREGON

**TYPICAL 7' 11" X 13' X 8' 7" CONCRETE MANHOLE VAULT INSTALLATION REQUIREMENTS**

Approved June 01, 2015

**GC5-2.9000**

**REV 2**

## 1.0 CONSTRUCTION NOTES:

- 1.1 For all new construction, a 36" minimum depth is preferred above the highest corner of the manhole vault top slab to final grade. Refer to Distribution Engineer when a 36" depth cannot be achieved.
- 1.2 For maintenance only, a 6" minimum asphalt cover is required over the highest corner of the manhole vault lid.
- 1.3 The frame and cover shall be brought to final grade by installing a 36" diameter steel manhole riser tube.
- 1.4 Install 4" - 6" of a stiff mixture of 3,000 psi Portland Cement Concrete (PCC) around steel manhole riser tube at top of manhole.
- 1.5 Base for vault shall be compacted  $\frac{3}{4}$ " minus crushed rock. Excavated area around vault shall be compacted and backfilled to final grade with  $\frac{3}{4}$ " minus crushed rock. The required compaction for backfill in paved public or private roads shall be at least 95% maximum density, unless more stringent requirements are outlined by the local governing agency. In Non-paved streets outside of public street right-a-ways, compaction shall be at least 90% of maximum density.
- 1.6 Install 3,000 psi Rapid Set Concrete or Portland Cement Concrete depending on time constraints, under the manhole frame, 3" - 4" high to 6" horizontally out from manhole frame.
- 1.7 Conduits shall enter and exit vaults in the positions indicated on the Construction Drawing, level and perpendicular to the vault and shall be grouted to provide a watertight seal with a smooth finish. Grout to be Redline "Speedcrete" or equivalent.
- 1.8 Conduits shall extend into the vault  $1\frac{1}{2}" \pm \frac{1}{2}"$ , cut off square, chamfered, free of any sharp edges and temporarily sealed to prevent rocks or other materials from entering them after mandreling.
- 1.9 Vaults shall be clean and free of rocks, dirt and debris prior to final inspection.
- 1.10 No adhesive anchors shall be installed in vault lid. Mechanical anchors shall only be installed in a vault lid with prior approval from a Distribution Engineer.

## 2.0 DESIGN NOTES:

- 2.1 Preferred conduit entry location shall be the upper vault section starting with the bottom knockout level working upward (see Page 1). Duct rollers require additional space between

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conduits entering the vault, each knockout level will accommodate either (2) - 5" or (3) - 3" conduits.

### 3.0 REFERENCE STANDARDS:

- A Refer to GC5-2.2600 for 7' 11" x 13' x 8' 7" concrete manhole vault with 2' 10" opening.
- B Refer to EC5-3.1700 for Grounding detail.
- C Refer to EC5-3.2000 for Grounding wire detail, 7' 11" x 13' x 8' 7" switch vault.
- D Refer to EC5-2.8000 for Solid and steel manhole vault riser tubes.
- E Refer to EC5-2.8500 for Manhole vault frame and covers.
- F Refer to GC5-2.8500 for temporary steel plating, core cut and manhole vault frame and cover adjustment requirements for traffic area grade changes.

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