

**Transmission & Distribution
Material & Installation Specification**

4' X 4' Pull Box

I. General

DESCRIPTION

A. The 4' X 4' Pull Box shall consist of a precast concrete design rated for H20 loading.

QUALITY ASSURANCE

- A. Manufacturer Qualifications: The chosen manufacturer shall have at least 5 years' experience in precast concrete structures. The manufacturer of the pull boxes shall be completely and solely responsible for the performance of the structure.
- B. The manufacturer shall furnish certification of ratings and detailed fabrication drawings and installation instructions.
- C. The 4' X 4' pull box shall comply with requirements of the latest revisions of applicable industry standards.

DELIVERY, STORAGE, AND HANDLING

- A. 4' X 4' pull boxes shall be shipped to destination on a self-unloading truck.
- B. The contractor, if applicable, shall handle, transfer, and move the 4' X 4' pull boxes in accordance with manufacturer's recommendations.

II. Product

4' X 4' PULL BOX CONFIGURATION

- A. Each pull box shall be equipped with four (4) lifting provisions cast into the structure.
- B. Each pull box shall be configured as shown on Drawing TDMIS-1012.

4' X 4' PULL BOX CONSTRUCTION

- A. All reinforcing bars shall conform to ASTM-A-615 grade 60 steel.
- B. All reinforcing bars shall be cut and formed to the dimensional tolerances specified in ACI-315 or ACI-318 except as noted on drawings.
- C. All bars shall be bent cold. Bars with kinks and bends not indicated shall not be used. Heating and re-bending of bars shall not be permitted.
- D. Radii of bends for the following bars shall be:

<u>Bar Size</u>	<u>Minimum Radius</u>	<u>Maximum Radius</u>
5 through 6	2 ½"	3 ½"
- E. All reinforcing cover, 1 ½ times bar diameter or as noted.
- F. Concrete, 5000 pound – 28-day strength – Air – 6%, +- 2%.
- G. Design per ASTM-C-857.
- H. Manufacture and inspection per ASTM-C-858.
- I. Installation per ASTM-C-891.
- J. Joint sealant – CS101 by Concrete Sealants Co. or Engineer approved equal.
- K. Cast iron covers - 37" manhole lid, Neenah R-1578, with "MELP" cast into cover, or approved equal.
- L. 37" top opening with sill to accept standard riser rings.
- M. Structure shown designed for AASHTO-H20 with 2' burial. See design calculation for other applications.
- N. Pulling irons are to be cast-in opposite each window.

DESIGN LOADINGS

- A. H20 Loading.

CITY OF COLUMBUS DEPT. OF PUBLIC UTILITIES – DIVISION OF POWER 4' X 4' PULL BOX		
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	SHEET 1 of 3	

CONDUIT ENTRANCES

- A. Windows as shown on drawings and/or as specified on submittals.
- B. Knockout sizes and locations will be specified when ordering.

III. Installation

- A. Installation shall include all receiving, hauling, loading, and unloading, rigging, rollers, anchoring leveling and mounting of accessories as required for a complete and operational 4' X 4' pull box.
- B. Pull box shall be installed on a 12" leveling course of #8 crushed limestone.

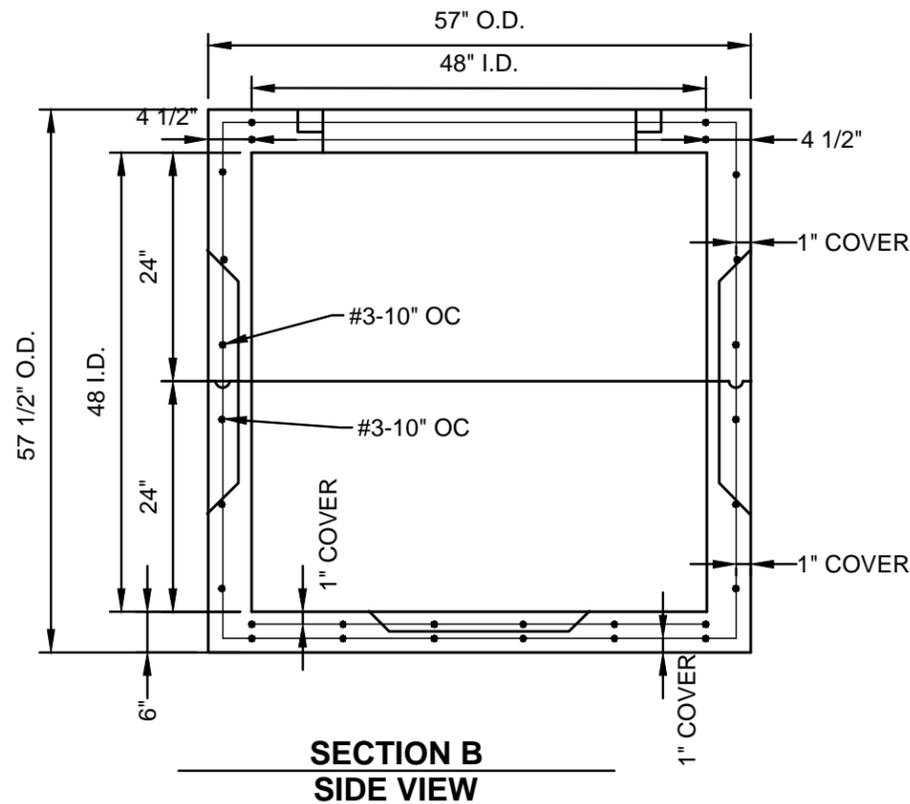
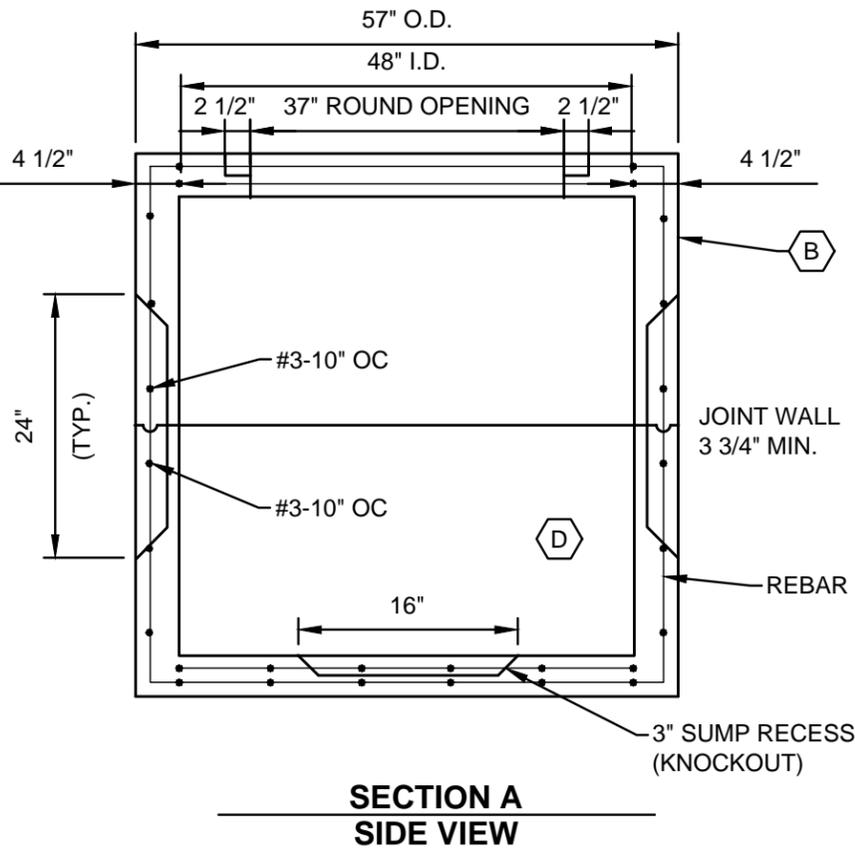
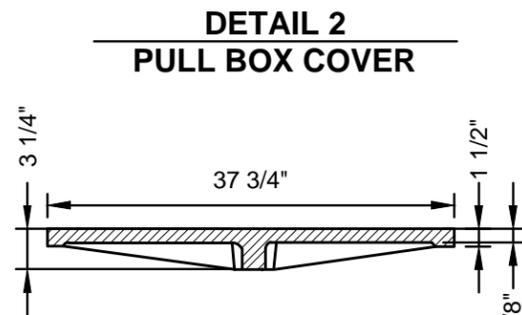
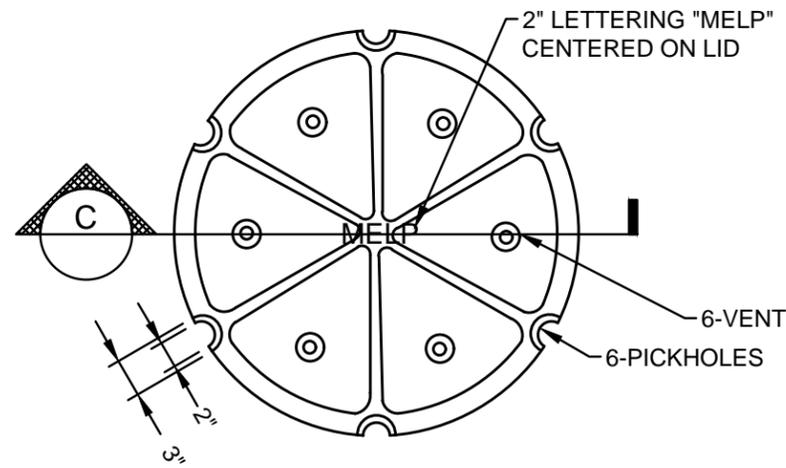
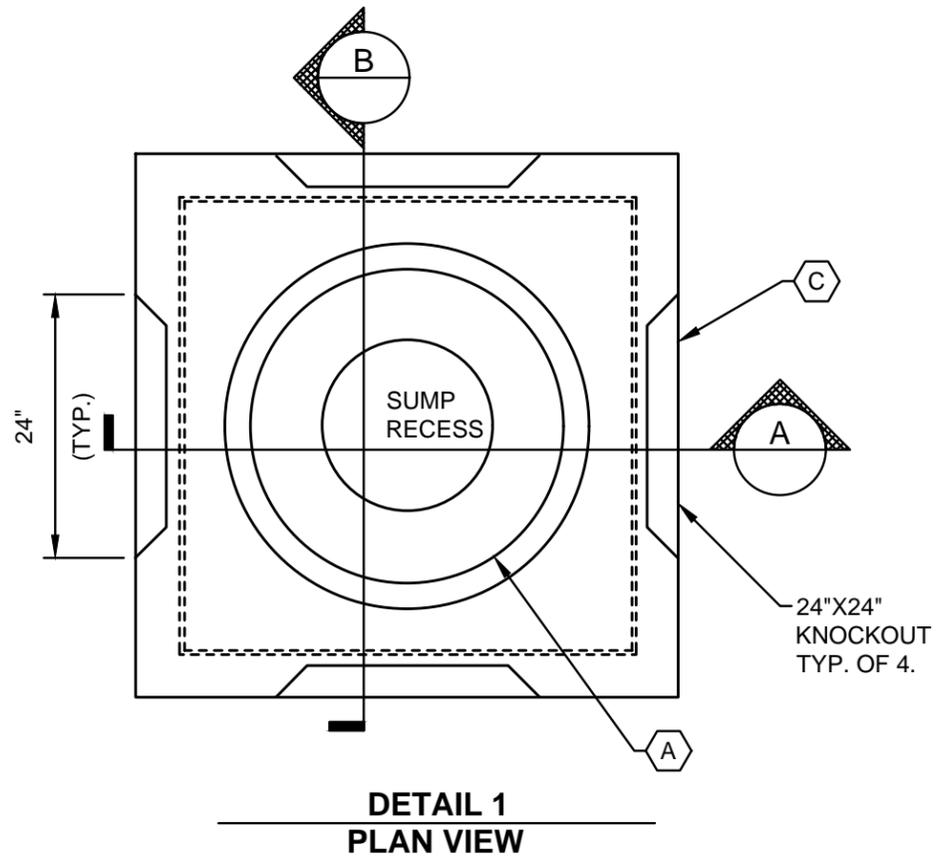
IV. Method of measurement

Shall be for each completed and operational pull box as specified herein.

V. Basis of payment

Items	Unit	Description
TDMIS-1012	Each	4' X 4' pull box

CITY OF COLUMBUS DEPT. OF PUBLIC UTILITIES – DIVISION OF POWER 4' X 4' PULL BOX		
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	SHEET 2 of 3	



CODED NOTES:

- A** 37" TOP OPENING FURNISHED WITH SILL TO ACCEPT STANDARD RISER RINGS.
- B** STRUCTURE SHOWN DESIGNED FOR AASHTO-H20 WITH 2'-0" BURIAL. SEE DESIGN CALCULATIONS FOR OTHER APPLICATIONS.
- C** KNOCKOUT SIZES AND LOCATIONS WILL BE SPECIFIED WHEN ORDERING.
- D** PULLING IRONS ARE TO BE OPPOSITE EACH WINDOW.

GENERAL NOTES:

1. ALL REINFORCING BARS SHALL CONFORM TO ASTM-A-615 GRADE 60 STEEL.
2. ALL REINFORCING BARS SHALL BE CUT AND FORMED TO THE DIMENSIONAL TOLERANCES SPECIFIED IN ACI-315 OR ACI-318 EXCEPT WHERE NOTED ON DRAWING.
3. ALL BARS SHALL BE BENT COLD. BARS WITH KINKS AND BENDS NOT INDICATED SHALL NOT BE USED. HEATING AND REBENDING OF BARS IS NOT PERMITTED.
4. RADII OF BENDS FOR THE FOLLOWING BARS SHALL BE:

BAR SIZE	MIN. RAD.	MAX RAD.
#5 THRU #6	2-1/2"	3-1/2"
5. ALL REINFORCING COVER 1 1/2 TIMES BAR DIAMETER OR AS NOTED.
6. CONCRETE 5000 PSI - 28 STRENGTH - AIR %6 ± %2.
7. DESIGN PER ASTM-C-857, MANUFACTURER AND INSPECTION PER ASTM-C-858 INSTALLATION SHOULD BE PER ASTM-C-891
8. JOINT SEALANT-CS101 BY CONCRETE SEALANTS CO.

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4'X4' PULL BOX	
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SCALE: NTS	SHEET: 3 OF 3

TDMIS-1012