

Design Assumptions for Nebraska Base Drawing NE100-10-007 Metal Base Pipe Riser and Flange Drawdown Facility

Revised: 5/6/09 Replaces: 5001-42

Metal Base Pipe Riser and Flange Drawdown Facility

The riser gage is determined by criteria contained in Table 3, Standard 378.

The coating requirements are determined by criteria contained in E.F.M. NB6-34 for corrosion resistance. The need for watertight band is outlined in Standard 378.

This installation is to be used where the riser is surrounded by embankment to protect it from ice action and buoyancy. A minimum 10 foot square berm at the riser crest elevation is required with this installation.

This type of drawdown should not be installed where there is a need to open it on a regular basis.

The inlet to the drawdown should be placed below an anticipated ice depth to protect it from ice action.

NEM NE501.80 states the requirements and criteria of drawdown installations with reference to Department of Water Resources (Surface Water Chapter 46).

Corrugation size (3x1) and (5x1) are only available in 36" dia. pipe and larger.

Instructions for
Nebraska Base Drawing NE100-10-007
Metal Base Pipe Riser and Flange Drawdown Facility

Fill in the following data fields to automatically fill in the necessary data fields on the drawing.

Title block

Title line(s)

Subtitle line

County, State

Sheet number of

Who / When

Designed

Drawn

Checked

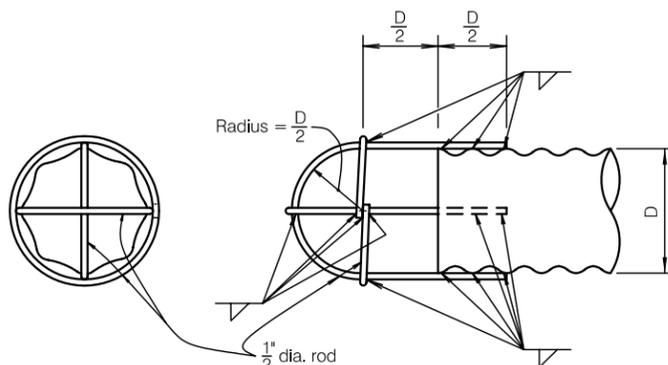
Enter directly on drawing

Left click on yellow boxes on drawing to mark with X as required.
Left click data blue data fields to enter required information.

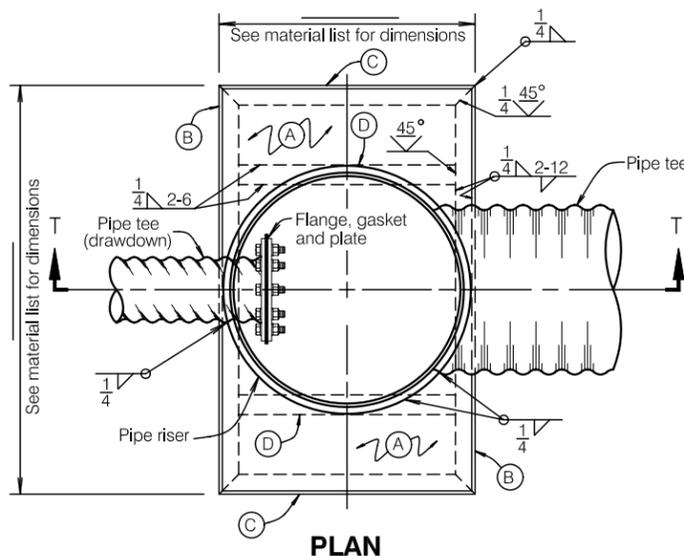
DRAWDOWN TRASH RACK ROD LENGTHS

PIPE DIA. INCHES	* ROD LENGTH INCHES	** CIRCULAR ROD LENGTH-INCHES
8	30	35
10	37	41
12	44	47
15	54	57

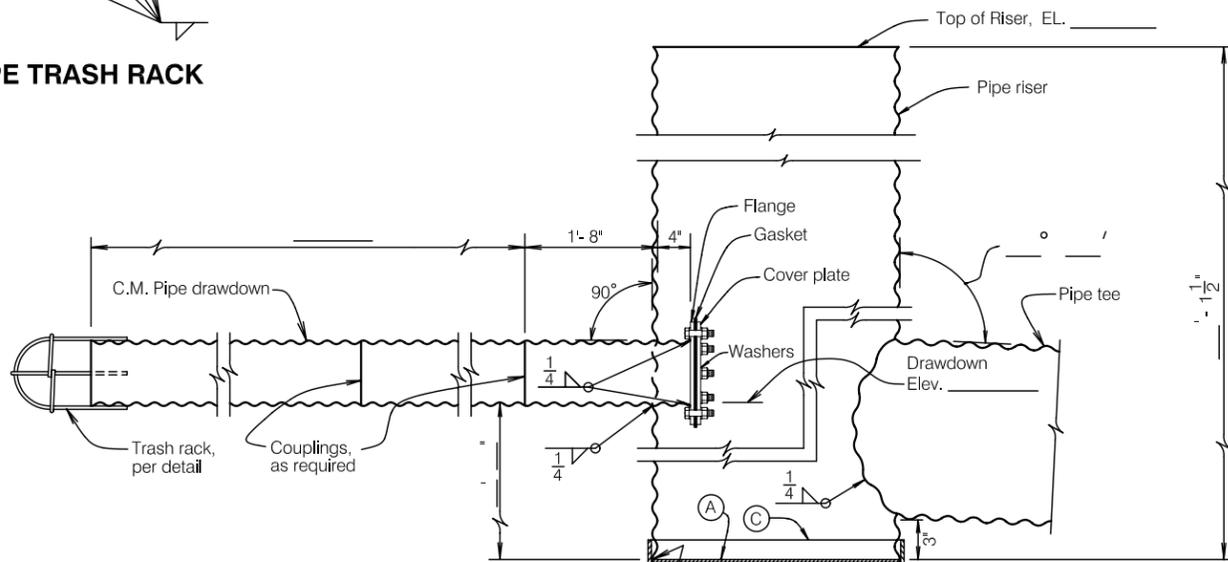
* 2 RODS REQUIRED.
 ** APPROXIMATE 2" LAP.
 RODS TO BE ZINC COATED OR PAINTED ACCORDING TO SPECIFICATIONS.
 1/2" DIA. ROD = 0.668 LB./FT.



DRAWDOWN PIPE TRASH RACK

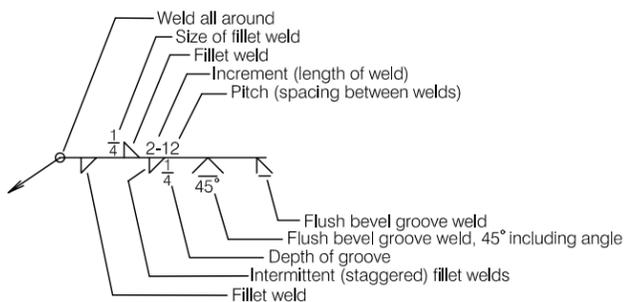


PLAN



SECTIONAL ELEVATION T-T RISER DETAIL

WELD SYMBOLS



NOTE:
 Weld symbol above line indicates weld is on opposite side of joint to which arrow points.
 Weld symbol below line indicates weld is on side of joint to which arrow points.
 2-12 indicates making a 2 inch weld every 12 inches.
 If fillet weld size is omitted, use standard shop practice.

MATERIAL LIST AND TABLE OF QUANTITIES FOR RISER BASE

	MARK	ITEM	24" DIA. RISER	30" DIA. RISER	UNIT	QUANTITY
MATERIAL LIST	A	10 GAUGE GALVANIZED METAL SHEET	25" x 48"	31" x 54"	EACH	1
	B	ANGLES, 3" x 3" x 1/4"	4' - 1"	4' - 7"	EACH	2
	C	ANGLES, 3" x 3" x 1/4"	2' - 2"	2' - 8"	EACH	2
	D	STEEL FLATS, 3" x 1/4"	1' - 8"	2' - 2"	EACH	2
TABLE OF QUANTITIES		10 GAUGE GALVANIZED METAL SHEET (LBS.)	48.2	67.2		
		STRUCTURAL STEEL (LBS.)	69.7	82.1		
		TOTAL WEIGHT OF STEEL BASE (LBS.)	117.9	149.3		

REQUIREMENT TABLE

IN BOX INDICATES THE REQUIREMENTS THAT APPLY TO STRUCTURE INDICATES - NOT APPLICABLE

CONCRETE: CLASS 3000 3000M 4000 _____ CU.YD.
 REINFORCING STEEL: _____ LB.

RISER:
 CORRUGATED METAL PIPE RISER, ZINC COATED STEEL, _____" DIA., _____ GA., _____ FT. NOMINAL LENGTH WITH A _____" DIA., _____ GA., PIPE TEE, _____ FT. NOMINAL LENGTH WELDED TO IT 3" FROM THE LOWER END, AND A _____" DIA., _____ GA., PIPE TEE 2'-0" NOMINAL LENGTH WELDED TO IT _____" FROM THE LOWER END AND PIPE FLANGE.

DRAWDOWN:
 CORRUGATED METAL PIPE, ZINC COATED STEEL, _____" DIA., WITH COUPLING(S), AND TRASH RACK, PER DETAILS
 TOTAL LIN.FT. (EXCLUDING TEE) = _____

PIPE CLASSIFICATION	RISER	PIPE TEE	DRAWDOWN
TYPE I FULL CIRCULAR CROSS-SECTION FABRICATED WITH:			
<input type="checkbox"/> ANNULAR CORRUGATIONS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> CLOSE RIVETED OR <input type="checkbox"/> STANDARD RIVETED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> HELICAL CORRUGATIONS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CORRUGATION REQUIREMENTS			
NOMINAL SIZE (INCH)			
<input type="checkbox"/> 1 1/2 x 1/4 (AVAILABLE ONLY IN HELICALLY CORRUGATED PIPE)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 2 2/3 x 1/2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COATINGS AND FABRICATION			
SEE COUPLING BAND AND METAL PIPE REQUIREMENTS SHEET			

NOTE:

THE FOLLOWING DESIGNATIONS FOR PIPE CLASSIFICATIONS, CORRUGATIONS AND COATINGS WHEN REFERRED TO ON THE DRAWINGS ARE IN ACCORDANCE WITH CURRENT ASTM'S:

A760 STANDARD SPECIFICATION FOR CORRUGATED STEEL PIPE, METALLIC-COATED.

A761 STANDARD SPECIFICATION FOR STEEL, GALVANIZED CORRUGATED STRUCTURAL PLATES AND FASTENERS.

A762 STANDARD SPECIFICATION FOR CORRUGATED STEEL PIPE, POLYMER PRECOATED FOR SEWERS AND DRAINS.

A849 STANDARD SPECIFICATION FOR POST-COATED AND LINED CORRUGATED STEEL SEWER AND DRAINAGE PIPE (BITUMINOUS OR CONCRETE)

A885 STANDARD SPECIFICATION OF STEEL SHEET, ZINC AND ARAMID FIBER COMPOSITE-COATED FOR CORRUGATED STEEL SEWER, CULVERT AND UNDERDRAIN PIPE.

PIPE FLANGE NOTE:

USE 1/2" FLANGE ON _____" DIA. DRAWDOWN. FLANGE DIA., BOLT SIZE AND PATTERN SHALL BE ACCORDING TO AWWA C-207, CLASS B. PROVIDE A 1/4" THICK PLATE, SAME DIA. AS FLANGE WITH HOLES DRILLED TO MATCH HOLES IN FLANGE. PROVIDE NEOPRENE GASKET TO FIT BETWEEN PLATE AND FLANGE. FASTEN PLATE TO FLANGE WITH 8 - 1/2" DIA. x 2" GALVANIZED BOLTS AND WASHERS.

FABRICATION AND INSTALLATION NOTES:

FOR FABRICATION OF RISERS ON HELICAL PIPE A FILLER STRIP MAY BE USED TO INSURE A WATERTIGHT SEAL BETWEEN THE RISER AND TEE.