Design Assumptions for Nebraska Base Drawing NE100-30-005 Anti-Vortex Canopy Hood Inlet for 8”, 10”, 12” and 15” Dia. Corrugated Metal Pipe

Revised: 5/6/09 Replaces: 5001-61

Anti-Vortex Canopy Hood Inlet for 8”, 10”, 12” and 15” Dia. Corrugated Metal Pipe

The pipe gauge is determined by criteria contained in Table 3, FOTG, Pond 378.

Coating requirements criteria is contained in FOTG Pond (378) Standard.

Corrosion control design procedures contained in EFH NB 6-34a-h.

The coating requirements are determined by criteria contained in EFH NB6-34b for corrosion resistance. Installations of this type may cause negative pressures within the pipe so watertightness as outlined in Standard 378, Page 8, is required for all applications, with over 15 ft. of head.

If the PI of the soil in the embankment is less than 15, the inlet area will be armor coated or have a concrete apron.

This structure does not allow drawdown of the permanent pool.

Where a Nebraska Department of Water Resources (DWR) Water Right Permit is required, consult with the Lead Engineer.

Instructions for
Nebraska Base Drawing NE100-30-005
Anti-Vortex Plate and Hood Inlet for 8”, 10”, 12” and 15” Dia. Corrugated Metal Pipe

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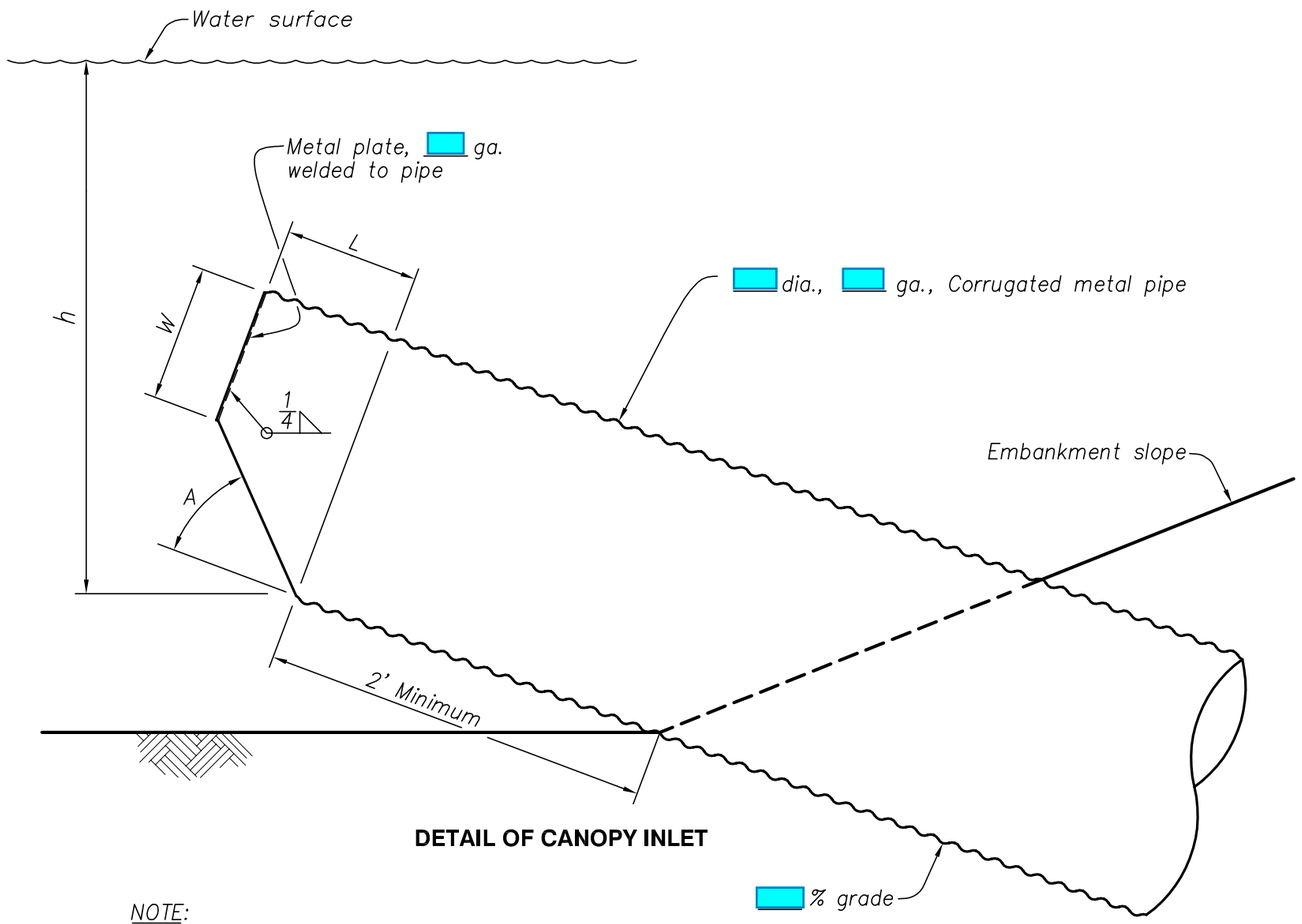


DETAIL OF CANOPY INLET

NOTE:

ALL SEAMS CUT, DUE TO FABRICATION IN HELICAL PIPE, SHALL BE WELDED FOR A LENGTH OF 1" FROM THE EDGE OF THE CUT AND TREATED ACCORDING TO SPECIFICATIONS.

REQUIREMENT TABLE

☒ IN BOX INDICATES ANTI–VORTEX CANOPY HOOD INLET REQUIREMENT

____GA. PLATE AND CANOPY INLET FOR ____DIA., ____GA. PIPE AT ____% GRADE WITH THE FOLLOWING PIPE REQUIREMENTS:

PIPE CLASSIFICATION

TYPE I FULL CIRCULAR CROSS–SECTION FABRICATED WITH:

☐ ANNULAR CORRUGATIONS
☐ CLOSE RIVETED OR ☐ STANDARD RIVETED
☐ HELICAL CORRUGATIONS

CORRUGATION REQUIREMENTS

NOMINAL SIZE (INCH)

☐ 1 1/2 x 1/4 (AVAILABLE ONLY IN HELICALLY CORRUGATED PIPE)
☐ 2 2/3 x 1/2
☐ 3 x 1

COATINGS AND FABRICATION

SEE METAL PIPE REQUIREMENTS AND COUPLING BAND 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 FOR SEWERS AND DRAINS.

A761 STANDARD SPECIFICATION FOR CORRUGATED STEEL STRUCTURAL PLATE, ZINC–COATED, FOR FIELD BOLTED PIPE, PIPE ARCHES, AND ARCHES.

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

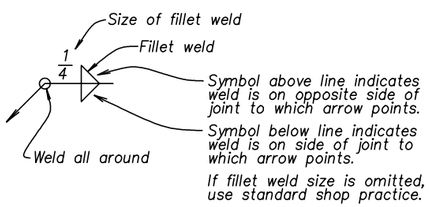
A849 STANDARD SPECIFICATION FOR POST–APPLIED COATINGS, PAVINGS, AND LININGS FOR CORRUGATED STEEL SEWER AND DRAINAGE PIPE.

DIMENSIONS FOR CANOPY

PIPE DIA. INCHES	GRADE %	W INCHES	L INCHES	A DEGREES	*h FEET
8	0–5	1 1/2	4 1/4	57	0.93
	6–15	1 5/8	6 3/8	45	1.00
	16–25	2 1/8	8 7/8	33	1.07
	26–32	2 7/8	10 3/8	26	1.13
10	0–5	1 7/8	5 3/8	56	1.17
	6–15	2	8	45	1.25
	16–25	2 3/4	11	33	1.33
	26–32	3 1/2	13	27	1.42
12	0–5	2 1/4	6 1/2	56	1.40
	6–15	2 3/8	9 5/8	45	1.50
	16–25	3 1/4	13 1/4	33	1.60
	26–32	4 1/4	15 5/8	26	1.70
15	0–5	2 7/8	8 1/8	56	1.75
	6–15	3	12	45	1.88
	16–25	4	16 1/2	33	2.00
	26–32	5 1/4	19 1/2	27	2.13

* MINIMUM "h" FOR FULL PIPE FLOW

WELD SYMBOLS



NOTE:

ALL WELDS AND HEAT AFFECTED AREAS TO BE TREATED IN ACCORDANCE WITH SPECIFICATIONS.

MATERIALS NOT COATED OR GALVANIZED SHALL BE PAINTED ACCORDING TO PAINT SYSTEM "C" OF PAINT SPECIFICATIONS.

Nebraska Standard Drawing
NE100-30-005 Revised 5/6/09 Replaces 5001-61

Date
Designed
Drawn
Checked
Approved

NRCS Natural Resources Conservation Service

File No.

CAD Dwg. NE100–30–005.dwg

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ANTI-VORTEX CANOPY HOOD INLET FOR 8", 10", 12" AND 15" DIA. CORRUGATED METAL PIPE