


ORIGINATION FORM

Proposed Revisions to a Standard Plans Index
(Please provide all information – Incomplete forms will be returned)

Contact Information:

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Standard Plans:

Index Number: 430-012
Sheet Number (s): 1 of 1
Index Title: U-Type Concrete Endwall - Energy Dissipator -
30" to 72" Pipe 

Summary of the changes:

Added sheet, Reorganized Index, and Updated Bar notations.

Commentary / Background:

Callouts for reinforcing bars changed to provide similar naming conventions to other Indexes.

Other Affected Offices / Documents: (Provide name of responsible personnel)

- | Yes | No | |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Standard Plans – |
| <input type="checkbox"/> | <input type="checkbox"/> | FDOT Design Manual – |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Basis of Estimates Manual – Melissa Hollis |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Standard Specifications – |
| <input type="checkbox"/> | <input type="checkbox"/> | Approved Product List – |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Construction – Jason Russell |
| <input type="checkbox"/> | <input type="checkbox"/> | Maintenance – |

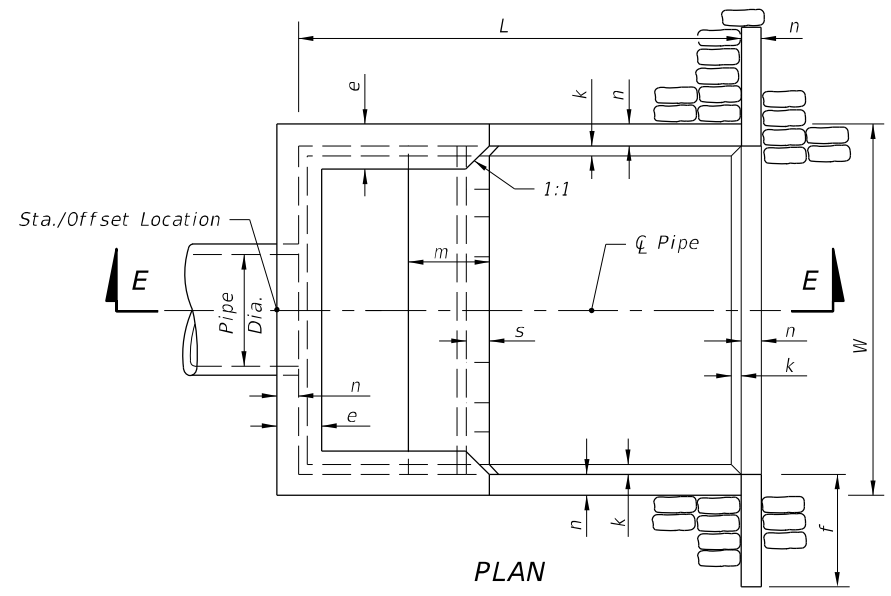
Origination Package Includes: (Email or hand deliver package to Derwood Sheppard)

- | Yes | N/A | |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups |
| <input type="checkbox"/> | <input type="checkbox"/> | Proposed Standard Plan Instructions (SPI) |
| <input type="checkbox"/> | <input type="checkbox"/> | Revised SPI |
| <input type="checkbox"/> | <input type="checkbox"/> | Other Support Documents |

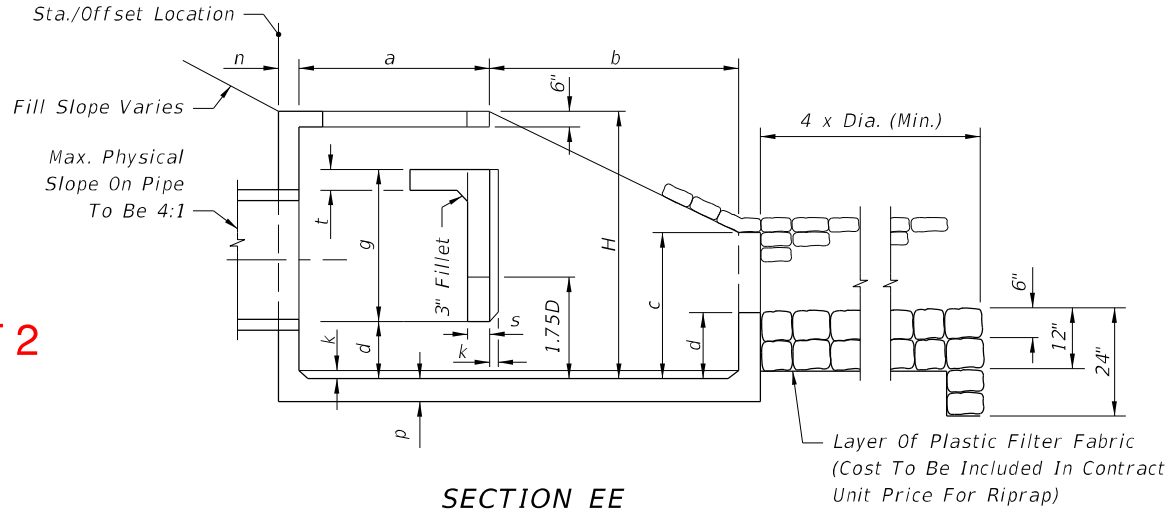
Implementation:

- Design Bulletin (Interim) DCE Memo Program Mgmt. Bulletin FY-Standard Plans (Next Release)

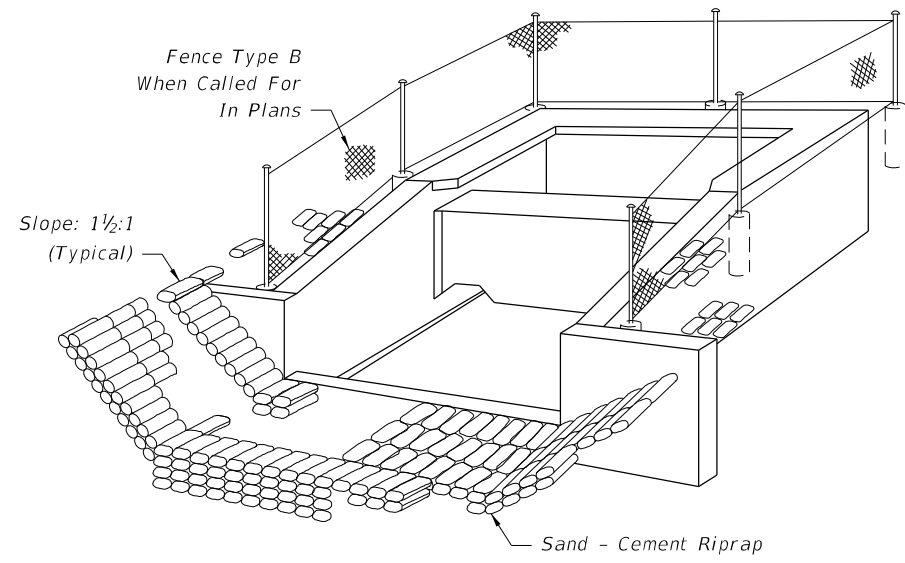
Contact the Roadway Design Office for assistance in completing this form



PLAN



SECTION EE



PERSPECTIVE

SHEET 1

GENERAL NOTES

1. U-type concrete endwall energy dissipators are intended for use outside the clear zone.
2. Chamfer all exposed edges $\frac{3}{4}$ ".
3. Concrete shall be Class I, except ASTM C478 (4000 psi) concrete may be substituted for precast items manufactured in plants meeting the requirements of Section 449 of the Specifications.
4. Reinforcing steel shall have 2" min. cover.
5. Endwall to be paid for under the contract unit price for Class I Concrete (Endwalls), CY and Reinforcing Steel (Roadway), LB. Riprap to be paid for under the contract unit price for Riprap (Sand-Cement) (Roadway), CY. Cost of plastic filter fabric to be included in the contract unit price for riprap.
6. Fencing, when called for in the plans, to be paid for under the contract unit price for Fencing, Type B, LF. See Index 550-002 for details of Type B fencing.

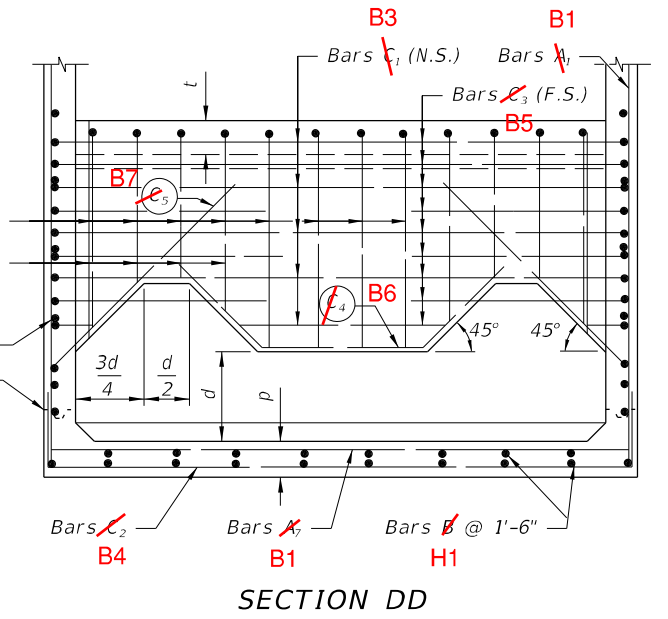
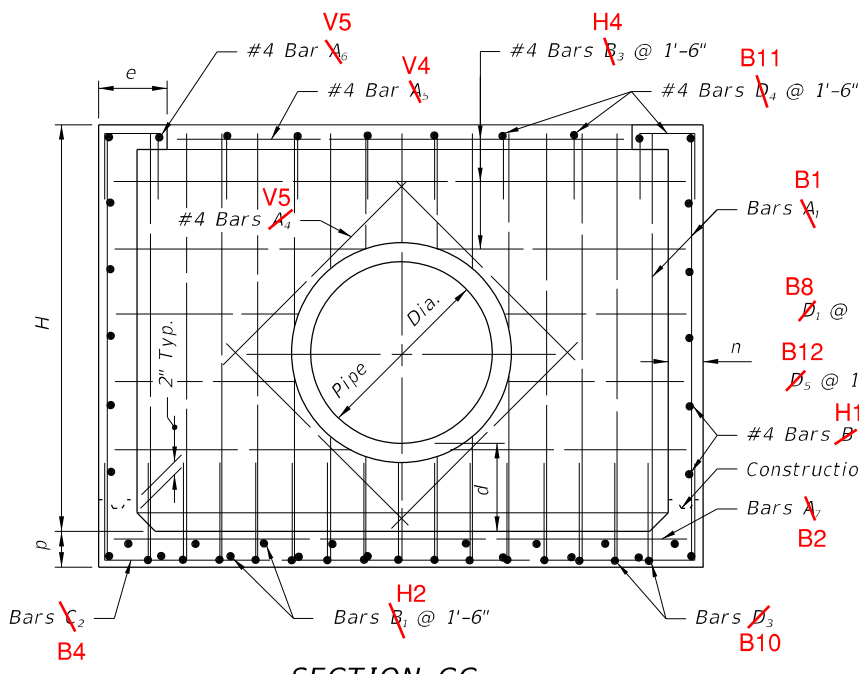
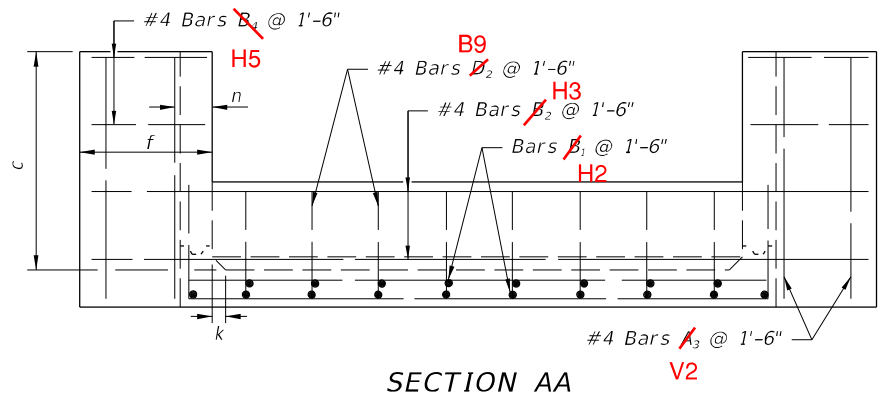
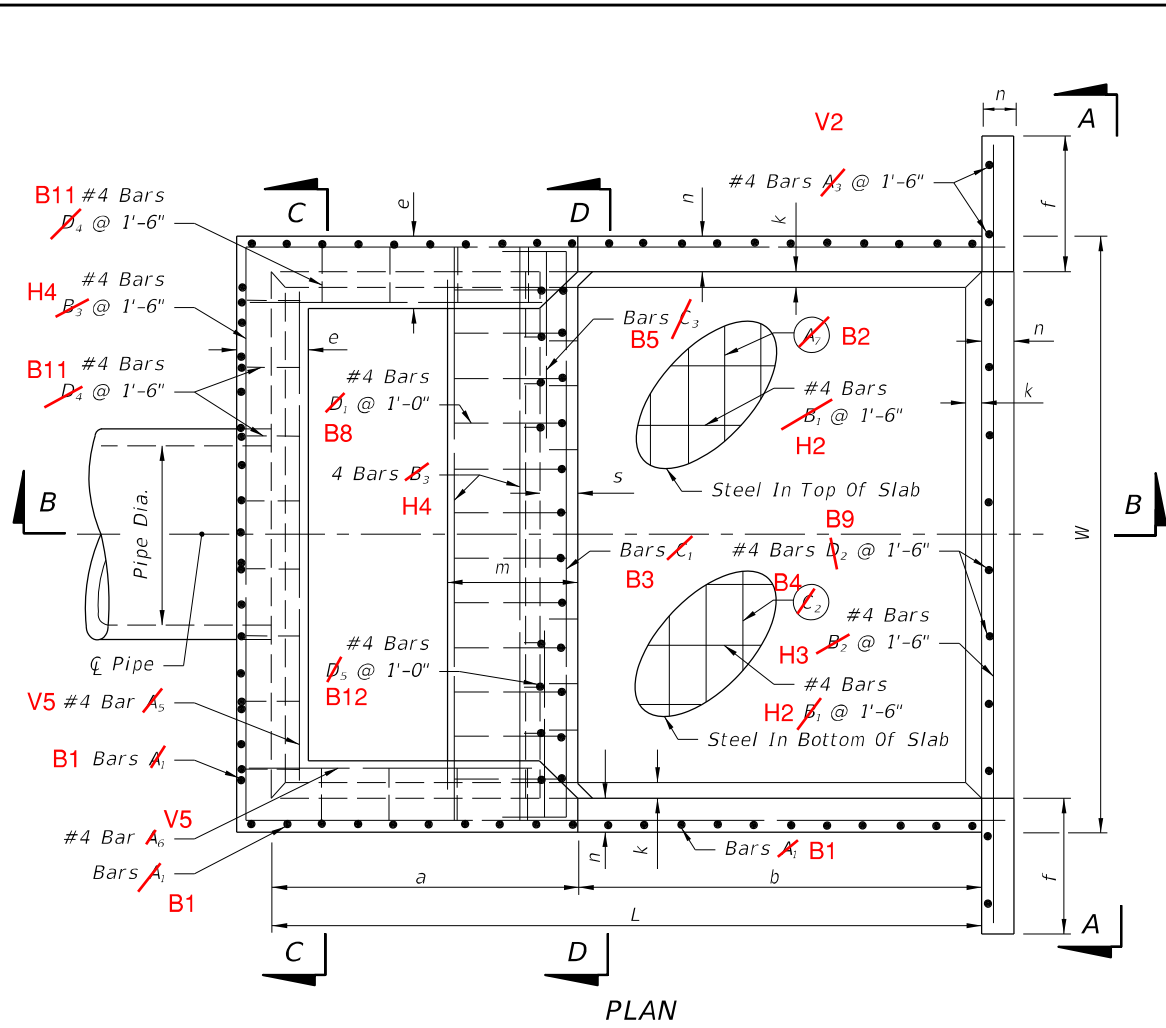
Specifications

SHEET 2

Pipe Size		Q (Max) (cfs)	Dimensions																Concrete Class I (CY)	Reinf. Steel (lb)	Sand-Cement Riprap (Nom.) (CY)
Dia. (in)	Area (SF)		Feet - Inches												Inches						
			W	H	L	a	b	c	d	e	f	g	m	n	p	s	t	k			
30	4.91	59	9-0	6-3	10-8	4-7	6-1	3-4	1-4	1-2	2-6	3-0	1-11	6	6½	7	7	3	6.72	736	10.6
36	7.07	85	10-5	7-3	12-4	5-3	7-1	3-10	1-7	1-3	3-0	3-6	2-3	7	7½	8	8	3	10.34	1,072	13.6
42	9.62	115	11-10	8-0	14-0	6-0	8-0	4-5	1-9	1-6	3-0	3-11	2-6	8	8½	9	8	4	14.82	1,429	17.5
48	12.57	151	13-3	9-0	15-8	6-9	8-11	4-11	2-0	1-7	3-0	4-5	2-10	9	9½	10	8	4	20.36	2,000	22.1
54	15.90	191	14-8	9-9	17-4	7-4	10-0	5-5	2-2	1-10	3-0	4-11	3-0	10	10½	10	8	4	27.19	2,659	27.2
60	13.63	236	16-1	10-9	19-0	8-0	11-0	5-11	2-5	1-11	3-0	5-4	3-4	11	11½	11	8	6	34.49	3,552	32.5
66	23.76	285	17-3	11-6	20-6	8-8	11-10	6-5	2-7	2-1	3-0	5-9	3-7	12	12½	12	8	6	42.82	4,472	38.3
72	28.27	339	18-6	12-3	22-0	9-3	12-9	6-11	2-9	2-3	3-0	6-2	3-9	12	12½	12	8	6	50.68	5,426	44.5

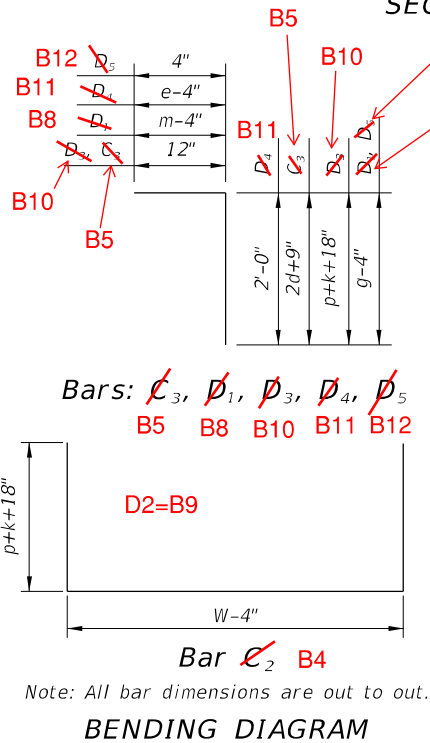
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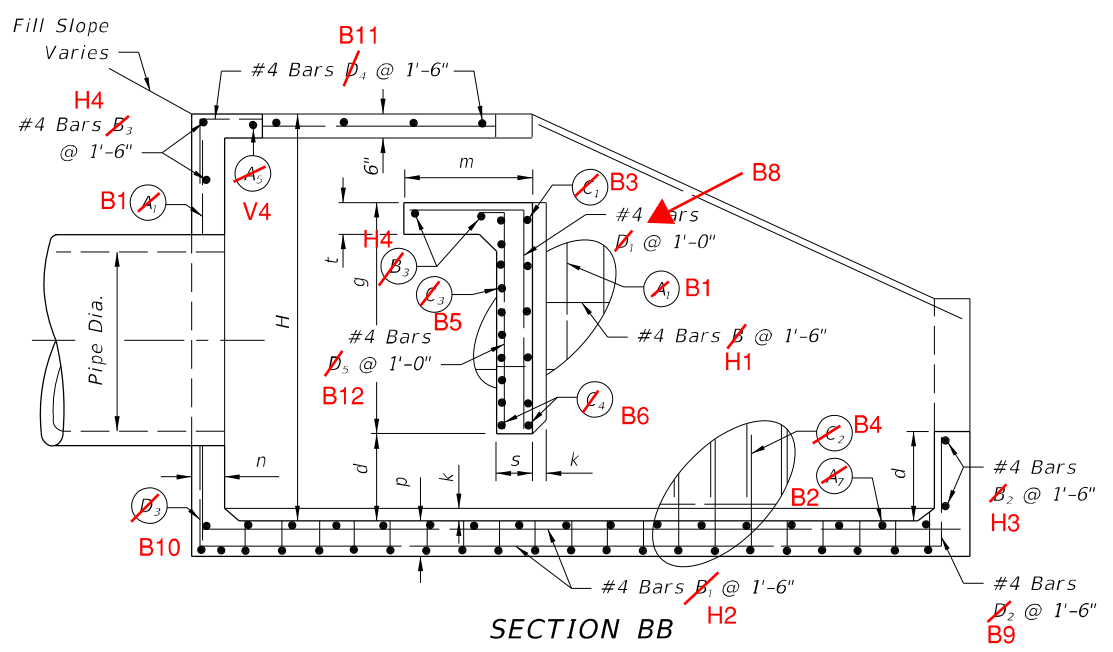
B6 B7
 Note: Bars \cancel{C}_1 & \cancel{C}_2 (N.S. & F.S.)
 equivalent in size to \cancel{C}_3 B5
 (cut and bend as required)

SHEET 3



Pipe Size	A ₁ B1		A ₂ B2		C ₁ B3		C ₂ B4		C ₃ B5		D ₃ B10	
	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)
30"	4	0-9½	4	1-6	5	0-11	4	0-9½	5	0-5½	4	0-9½
36"	5	1-0	4	1-6	5	0-10	5	1-0	5	0-5	5	1-0
42"	5	0-11	4	1-6	6	1-1	5	0-11	6	0-6½	5	0-11
48"	5	0-9½	4	1-0	6	1-0	5	0-9½	6	0-6	5	0-9½
54"	5	0-8½	4	0-10	7	1-1	5	0-8½	7	0-6½	5	0-8½
60"	6	0-10	5	1-1	7	1-0	6	0-10	7	0-6	6	0-10
66"	6	0-8½	5	0-11½	7	0-11	6	0-8½	7	0-5½	6	0-8½
72"	6	0-7½	5	0-10	7	0-10	6	0-7½	7	0-5	6	0-7½

Note: Bars A₁, A₂, A₃, A₄, A₅, A₆, B₁, B₂, B₃, B₄, B₅ are straight bars.



Note: All bar dimensions are out to out.
BENDING DIAGRAM

RENUMBERED
 V1 V2 V3 V4 V5 H2 H3 H4 H5 H1

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LAST REVISION	DESCRIPTION:
11/01/17	11/01/19



FY 2019-20
 STANDARD PLANS

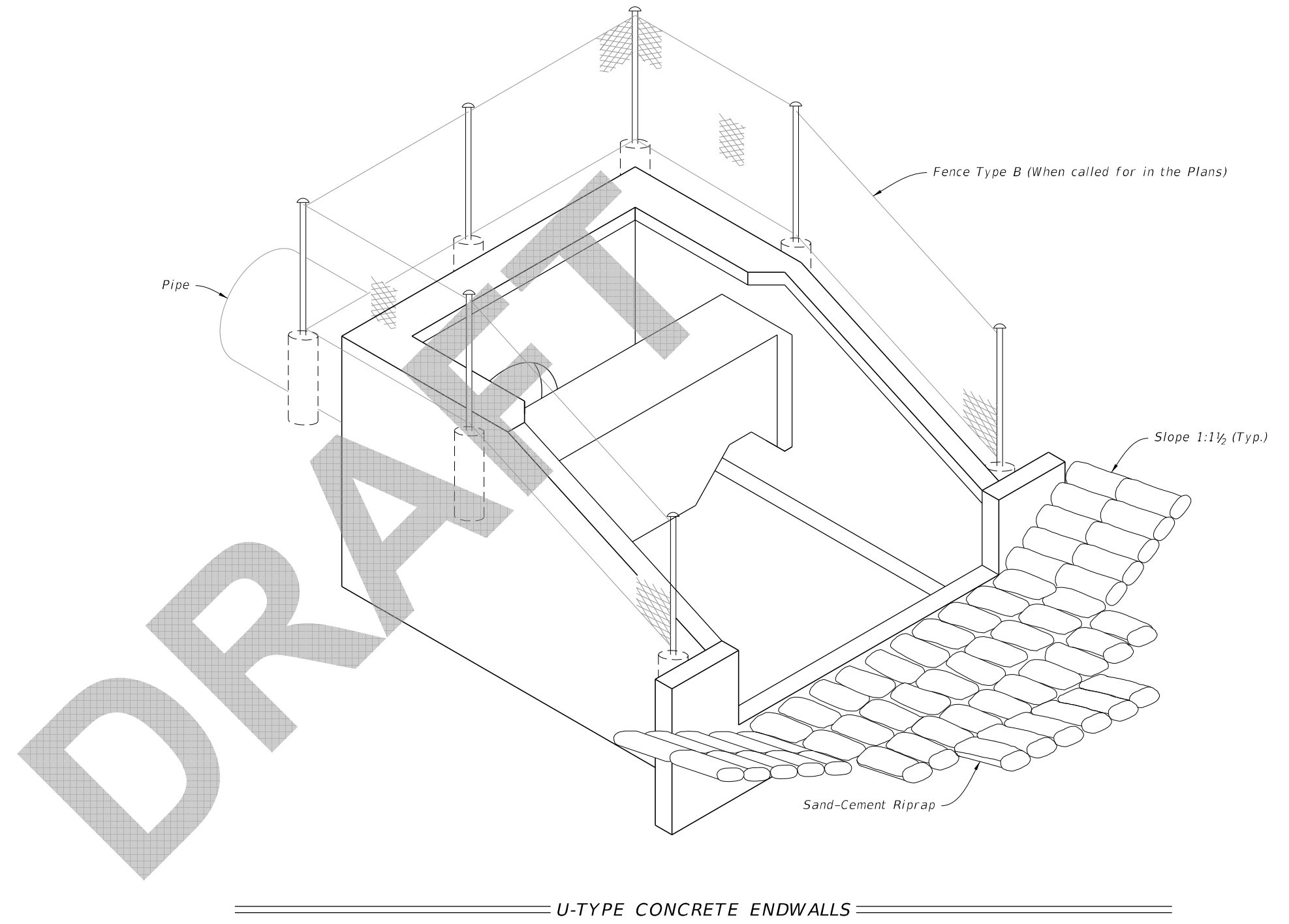
U-TYPE CONCRETE ENDWALL
 ENERGY DISSIPATOR 30" TO 72" PIPE

INDEX	SHEET
430-012	2 of 2

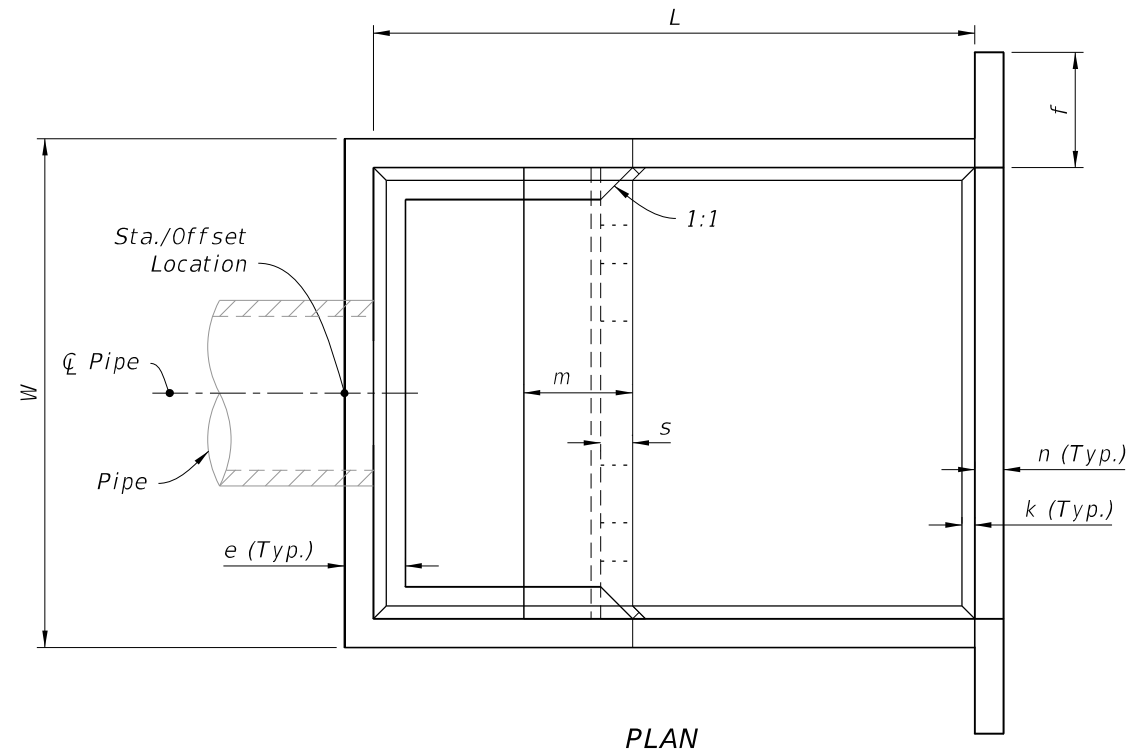
GENERAL NOTES:

1. Use Class I concrete.
2. Chamfer all exposed edges $\frac{3}{4}$ ".
3. See Index 550-002 for details of Type B fencing.
4. Quantities shown are for estimating purposes only.

TABLE OF CONTENTS:	
Sheet	Description
1	General Notes and Contents
2	Dimensional Details
3	Reinforcing Details and Bending Diagram

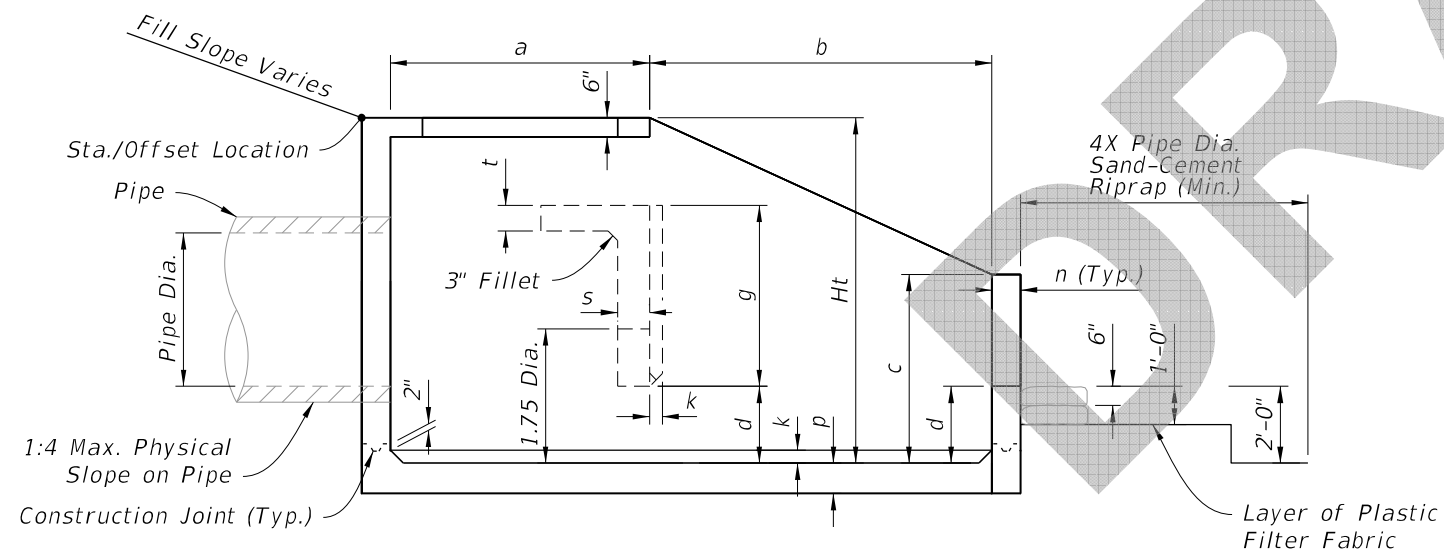


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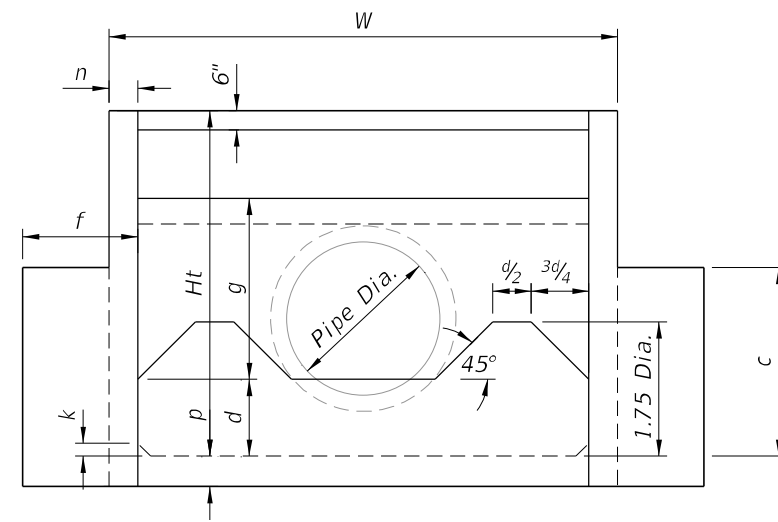


PLAN

Pipe		DIMENSION TABLE																Concrete (CY)	Reinf. Steel (lb)	Sand-Cement Riprap (Nom.) (CY)
Dia.	Area (SF)	Feet - Inches										Inches								
		W	Ht	L	a	b	c	d	e	f	g	m	n	p	s	t	k			
30"	4.91	9-0	6-3	10-8	4-7	6-1	3-4	1-4	1-2	2-6	3-0	1-11	6	6½	7	7	3	6.72	736	10.6
36"	7.07	10-5	7-3	12-4	5-3	7-1	3-10	1-7	1-3	3-0	3-6	2-3	7	7½	8	8	3	10.34	1,072	13.6
42"	9.62	11-10	8-0	14-0	6-0	8-0	4-5	1-9	1-6	3-0	3-11	2-6	8	8½	9	8	4	14.82	1,429	17.5
48"	12.57	13-3	9-0	15-8	6-9	8-11	4-11	2-0	1-7	3-0	4-5	2-10	9	9½	10	8	4	20.36	2,000	22.1
54"	15.90	14-8	9-9	17-4	7-4	10-0	5-5	2-2	1-10	3-0	4-11	3-0	10	10½	10	8	4	27.19	2,659	27.2
60"	13.63	16-1	10-9	19-0	8-0	11-0	5-11	2-5	1-11	3-0	5-4	3-4	11	11½	11	8	6	34.49	3,552	32.5
66"	23.76	17-3	11-6	20-6	8-8	11-10	6-5	2-7	2-1	3-0	5-9	3-7	12	12½	12	8	6	42.82	4,472	38.3
72"	28.27	18-6	12-3	22-0	9-3	12-9	6-11	2-9	2-3	3-0	6-2	3-9	12	12½	12	8	6	50.68	5,426	44.5



ELEVATION



FRONT VIEW

DIMENSIONAL DETAILS

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DIMENSIONAL DETAILS

LAST REVISION 11/01/19	DESCRIPTION:		FY 2020-21 STANDARD PLANS	U-TYPE CONCRETE ENDWALL ENERGY DISSIPATOR 30" TO 72" PIPE	INDEX	SHEET
					430-012	2 of 3

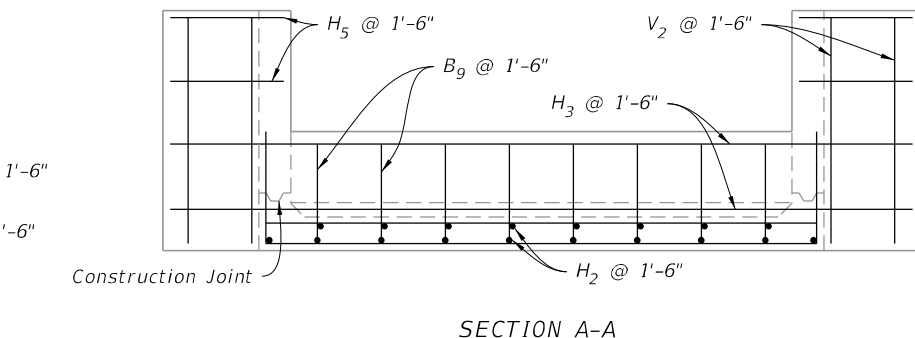
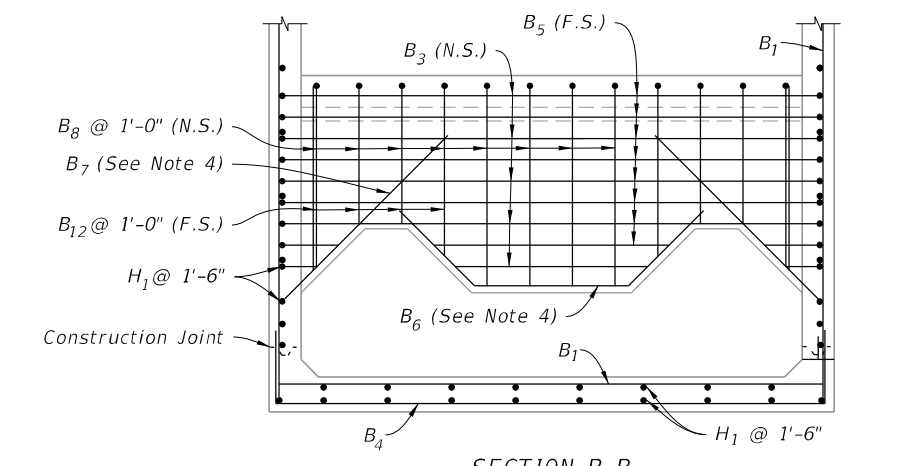
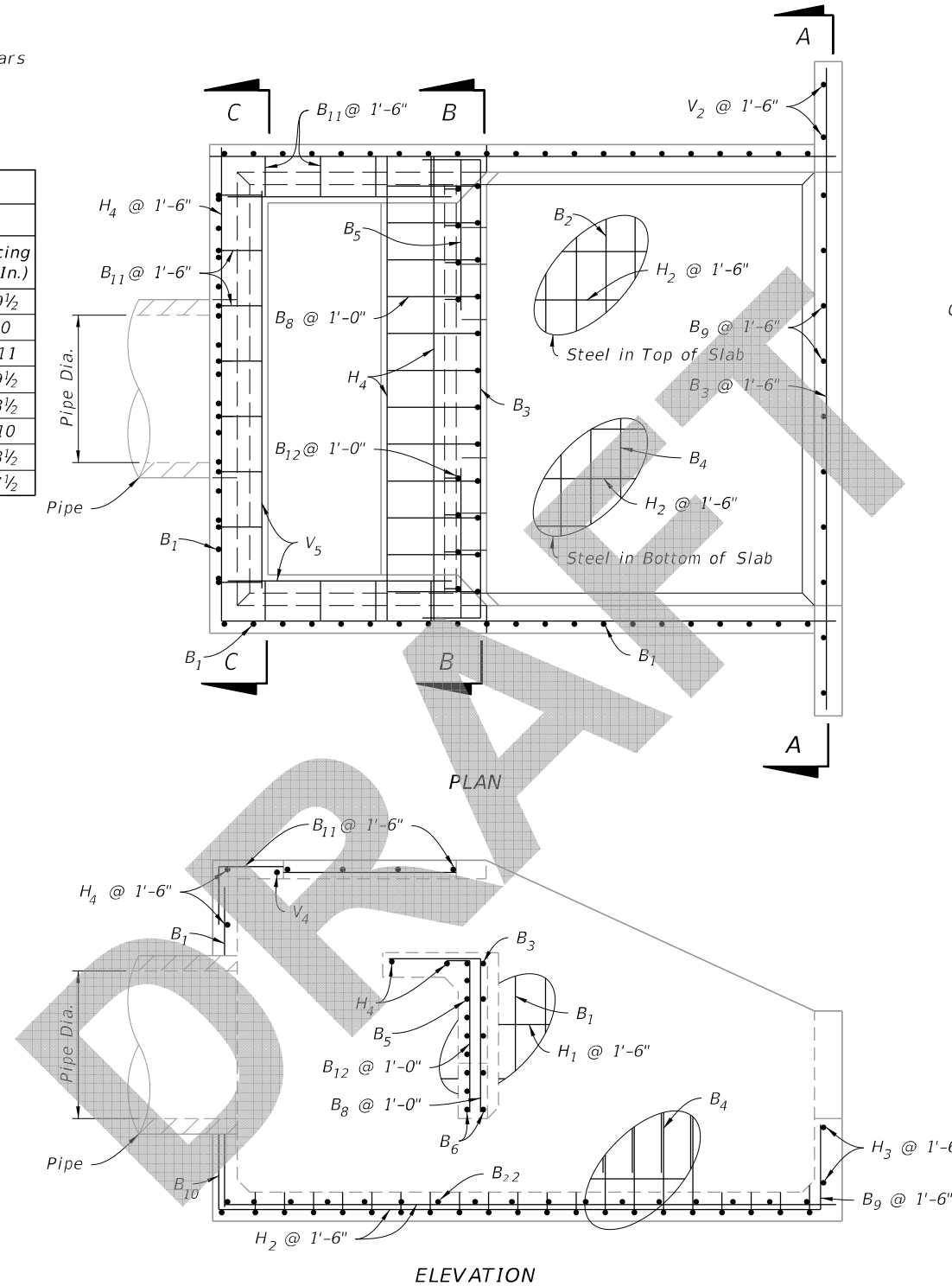
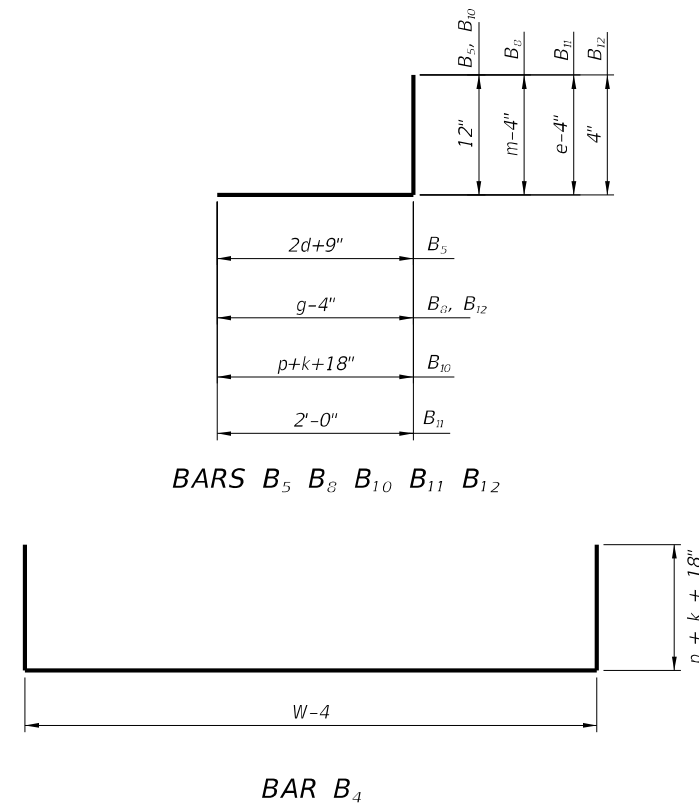
NOTES:

1. All bar dimensions are measured out to out.
2. All Bars are size #4 unless otherwise noted.
3. Install reinforcing steel with a minimum of 2" cover.
4. Bars B_6 and B_7 (N.S. and F.S.) equivalent in size to B_5 (cut and bend as required)
5. Bars $V_1, V_2, V_3, V_4, V_5, H_1, H_2, H_3, H_4,$ and H_5 are straight bars.

LEGEND:

- H = Horizontal Bars
- V = Vertical Bars
- B = Bent Bars
- D = Dowels or Diagonal Bars

BENT BARS TABLE												
Pipe	B_1		B_2		B_3		B_4		B_5		B_{10}	
	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)
30"	4	0-9½	4	1-6	5	0-11	4	0-9½	5	0-5½	4	0-9½
36"	5	1-0	4	1-6	5	0-10	5	1-0	5	0-5	5	1-0
42"	5	0-11	4	1-6	6	1-1	5	0-11	6	0-6½	5	0-11
48"	5	0-9½	4	1-0	6	1-0	5	0-9½	6	0-6	5	0-9½
54"	5	0-8½	4	0-10	7	1-1	5	0-8½	7	0-6½	5	0-8½
60"	6	0-10	5	1-1	7	1-0	6	0-10	7	0-6	6	0-10
66"	6	0-8½	5	0-11½	7	0-11	6	0-8½	7	0-5½	6	0-8½
72"	6	0-7½	5	0-10	7	0-10	6	0-7½	7	0-5	6	0-7½



BENDING DIAGRAM

REINFORCING DETAILS

REINFORCING DETAILS AND BENDING DIAGRAM

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LAST REVISION 11/01/19	DESCRIPTION:	FDOT	FY 2020-21 STANDARD PLANS	U-TYPE CONCRETE ENDWALL ENERGY DISSIPATOR 30" TO 72" PIPE	INDEX 430-012	SHEET 3 of 3
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