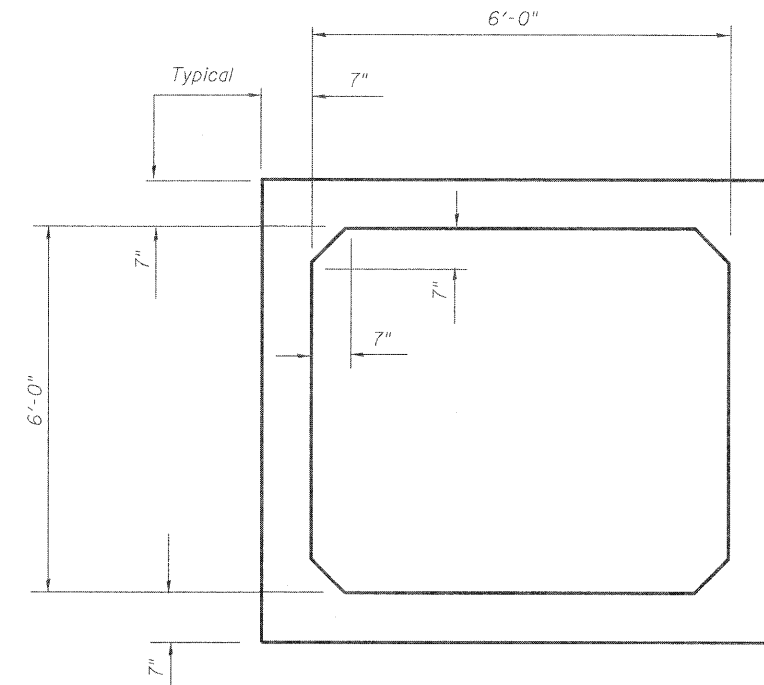


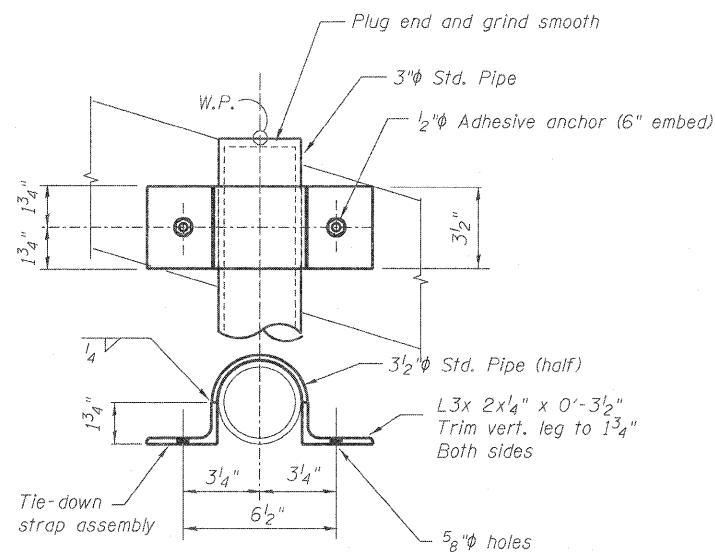
PIPE GRATE DETAIL

BILL OF MATERIAL
(For information only)
Included in Concrete Box Culverts

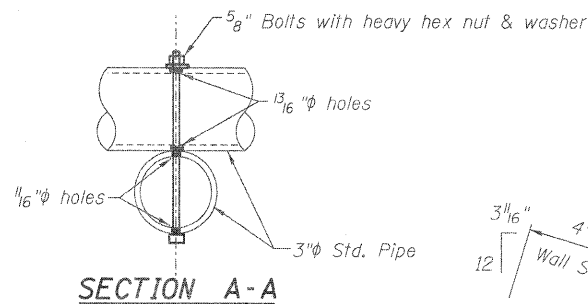
ITEM	UNIT	TOTAL
3" Galv. Steel Pipe x 7'-9 1/8"	Each	2
3" Galv. Steel Pipe x 9'-1 1/4"	Each	2
R 5x 1/2" x 0'-5"	Each	4
R 4x 1/2" x 1'-0"	Each	4
R 7x 1/2" x 0'-10"	Each	2
Tie-down strap assembly	Each	2
5/8" φ x 0'-9" bolts w/ heavy hex nuts & washers	Each	4
1/2" φ Adhesive anchors w/ hex nuts & washers	Each	16



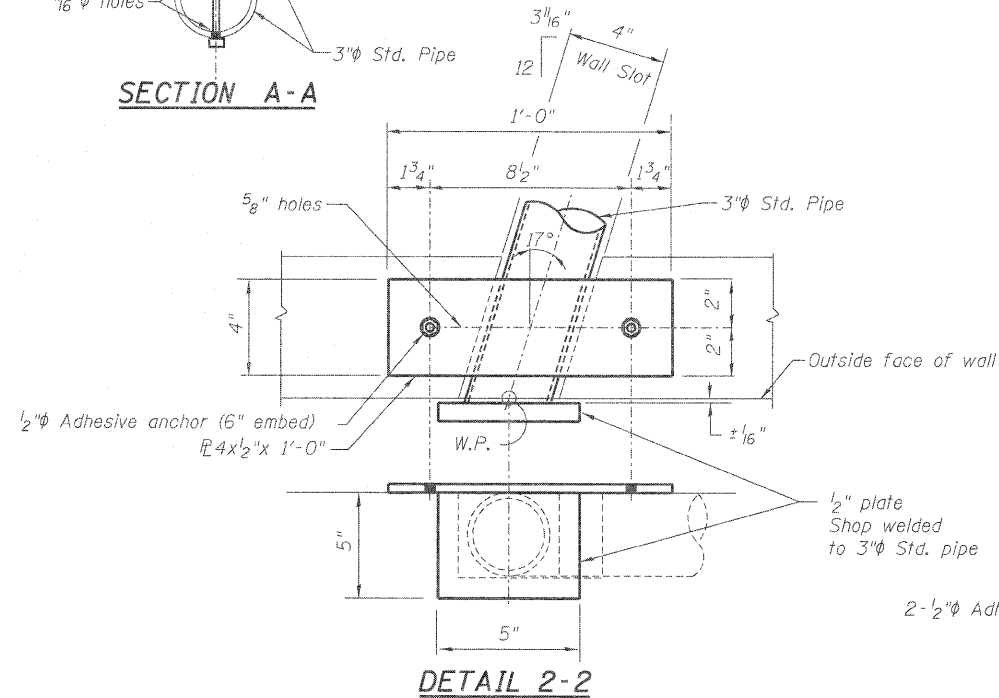
TYPICAL PRECAST SECTION



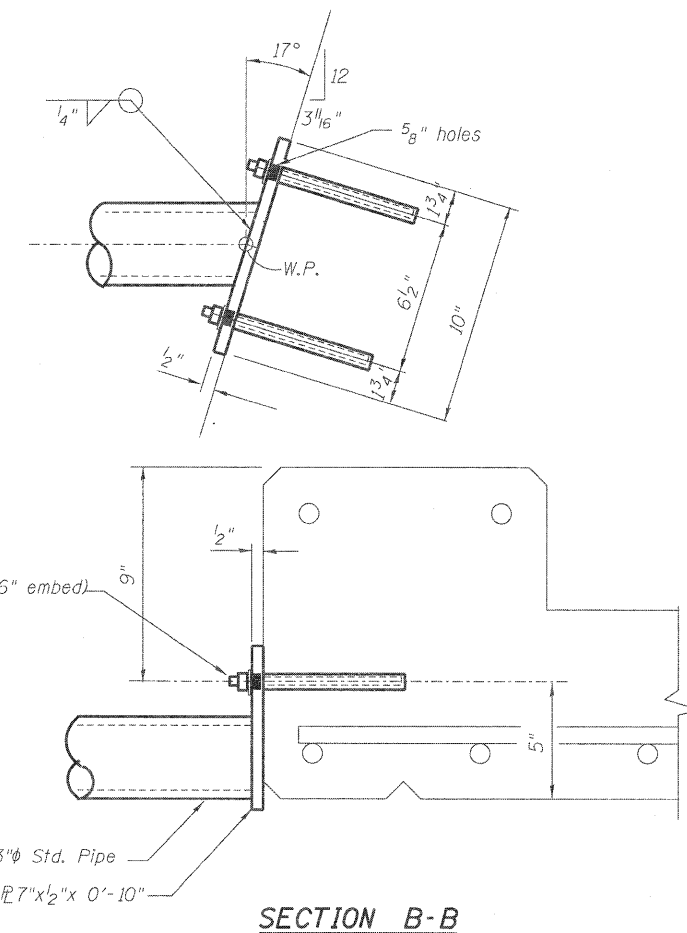
DETAIL 1-1



SECTION A-A



DETAIL 2-2



SECTION B-B

PIPE GRATE NOTES:

For the pipe grate shown on these plans, this work shall be included in the contract unit price per cu. yd. for Concrete Box Culverts.

Unless otherwise noted, all structural steel shall be hot-dipped galvanized after shop fabrication according to AASHTO M-111 (ASTM A-123).

Hollow steel pipe sections shall conform to the requirements of ASTM A-53.

All other steel shapes and plates shall conform to the requirements of AASHTO M-270, GRADE 36.

Anchors, bolts, nuts, and washers shall be galvanized according to the requirements of AASHTO M-232 (ASTM A-153).

FILE NAME: 1011332-64515-006-DET.dgn	USER NAME =	DESIGNED - MHM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS S.N. 101-1332	F.A. RTE. 742	SECTION 34R	COUNTY WINNEBAGO	TOTAL SHEETS 491	SHEET NO. 330
	PLOT SCALE =	CHECKED - JBF	REVISED -			CONTRACT NO. 64515				
	PLOT DATE =	DRAWN - RAP	REVISED -			ILLINOIS FED. AID PROJECT				
		CHECKED - JBF	REVISED -			SHEET NO. 6 OF 6 SHEETS				