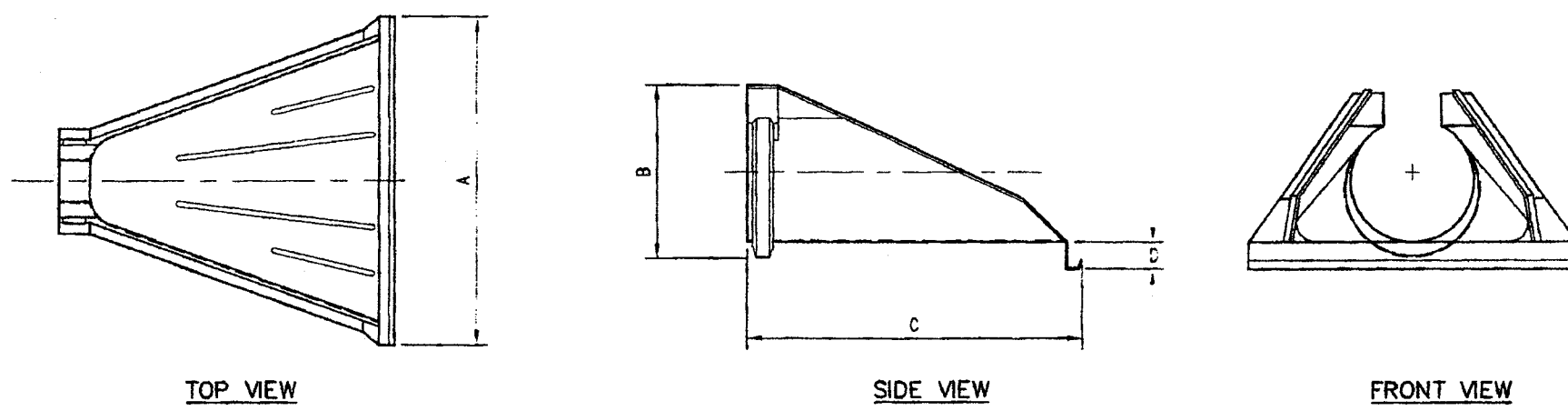


STORM SEWER TRENCH/PIPE BEDDING DETAIL FOR HIGH DENSITY POLYETHYLENE PIPE (HDPE)
N.T.S.



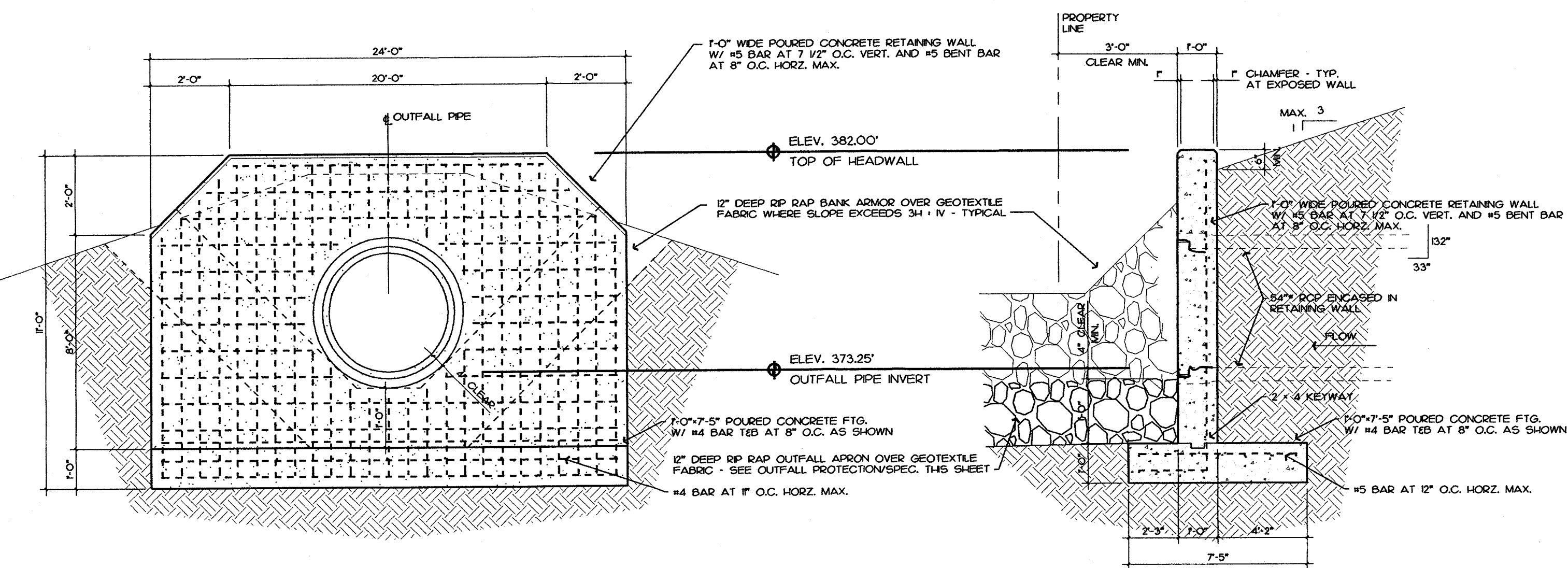
DIMENSION	PIPE DIAMETER, (IN.)					
	10/12	15	18	24	30	36
A	42	4	48	59.5	88	88
B	14.5	19	22	28	36	43
C	33	34	43	48	63.5	66.5
D	6	6	6	6	6	6

HDPE END SECTION DETAIL
N.T.S.

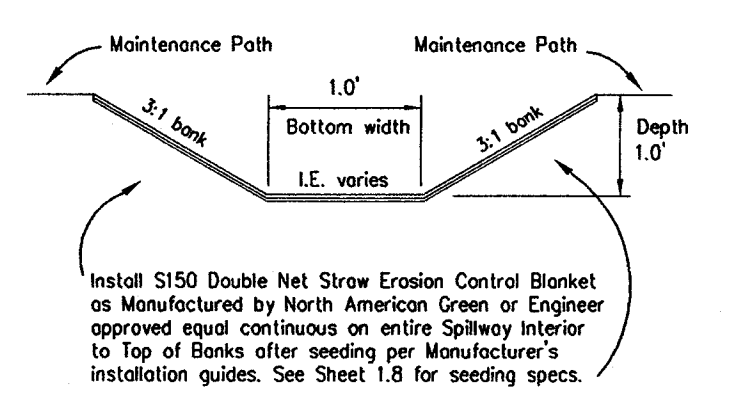
NOTE:
STRUCTURES 4 AND 25 TO INCLUDE FLAP GUARD TO PREVENT BACKFLOW. MODELS AS APPROPRIATE FOR END SECTION MODEL INSTALLED PER MANUFACTURER'S STANDARDS

DEFLECTION TESTING FLEXIBLE PIPE

- All storm sewer constructed of flexible pipe, including pipe manufactured from Polyvinyl Chloride (PVC), High Density Polyethylene (HDPE), and Compacted Metal Pipe (CMP), shall be inspected or tested for deflection in accordance with the following:
 - Pipes sized thirty-six (36) inches or smaller in diameter, which cannot be inspected and measured for deflection with video cameras, visual inspection, or manual measurement to the satisfaction of the County Engineer to determine less than five percent (5%) deflection, shall be tested using a mandrel.
 - The mandrel shall be pulled by hand without mechanical assistance, and the mandrel test shall be a "pin-point" procedure.
 - The mandrel shall be approved by the County Engineer or his or her authorized representative prior to use to certify that the mandrel is rigid, nonadjustable, has an odd number of legs not less than nine (9), and has a length not less than its nominal diameter.
 - The diameter of the mandrel at any point shall not be less than the allowed percentage of deflection of the certified actual mean inside diameter of the pipe being tested.
- The mandrel shall be fabricated of metal, filled with pulling rings at each end, stamped or engraved on some segment other than a runner with the nominal pipe size and the mandrel's outside diameter.
- For any vertical or horizontal deflection test, pipe failure shall be defined as five percent (5%) or greater deflection of the tested pipe's internal diameter.
- The Project Site Owner/Operator shall perform, or shall cause to be performed, all required deflection tests no sooner than thirty (30) days after final backfill has been placed over the pipe to be tested.
- Pipe inspection and test methods, procedures, and equipment, whether Engineer or his or her authorized representative.
- The pipe inspection and test results must be reviewed and certified by the County Engineer or his or her authorized representative prior to final acceptance or release of the storm sewer facilities and applicable portion of the letter of credit covering the storm sewer and associated improvements.
- All flexible pipe failing the deflection test within the warranty period shall be replaced or caused to be replaced by the project site owner or operator at no cost to the County.



RETAINING WALL OUTFALL STRUCTURE - STR 48
N.T.S.

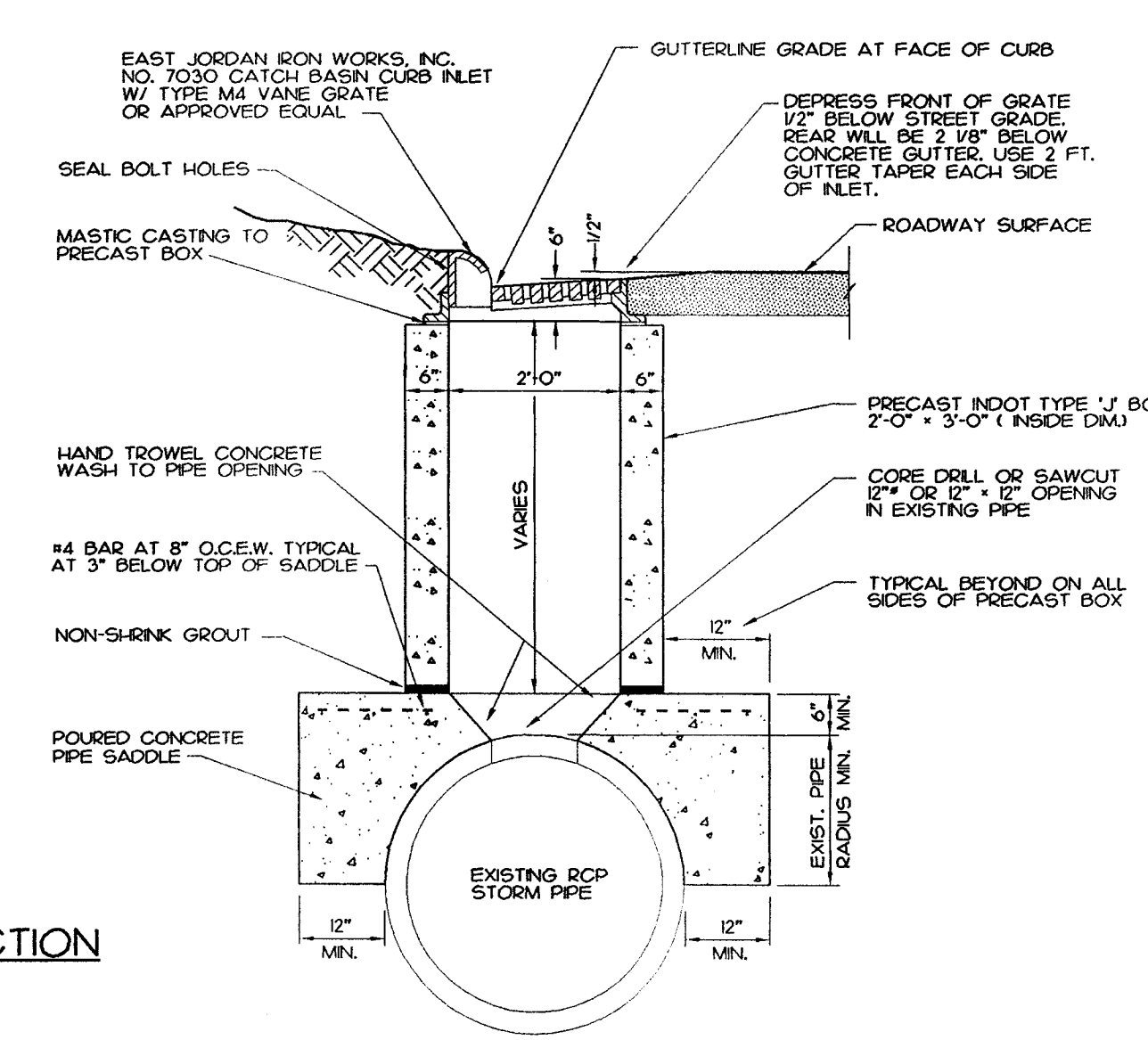
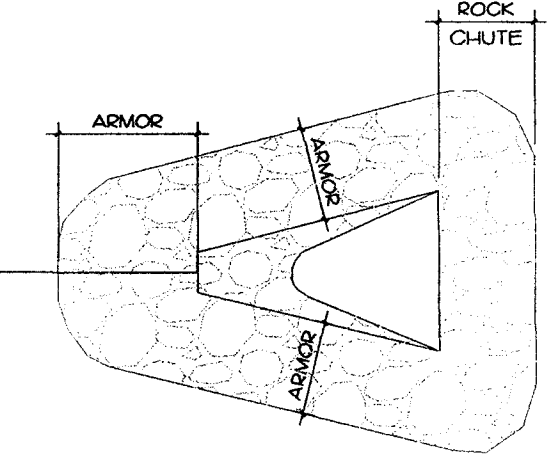


SECTION THRU TYPICAL SWALE
N.T.S.

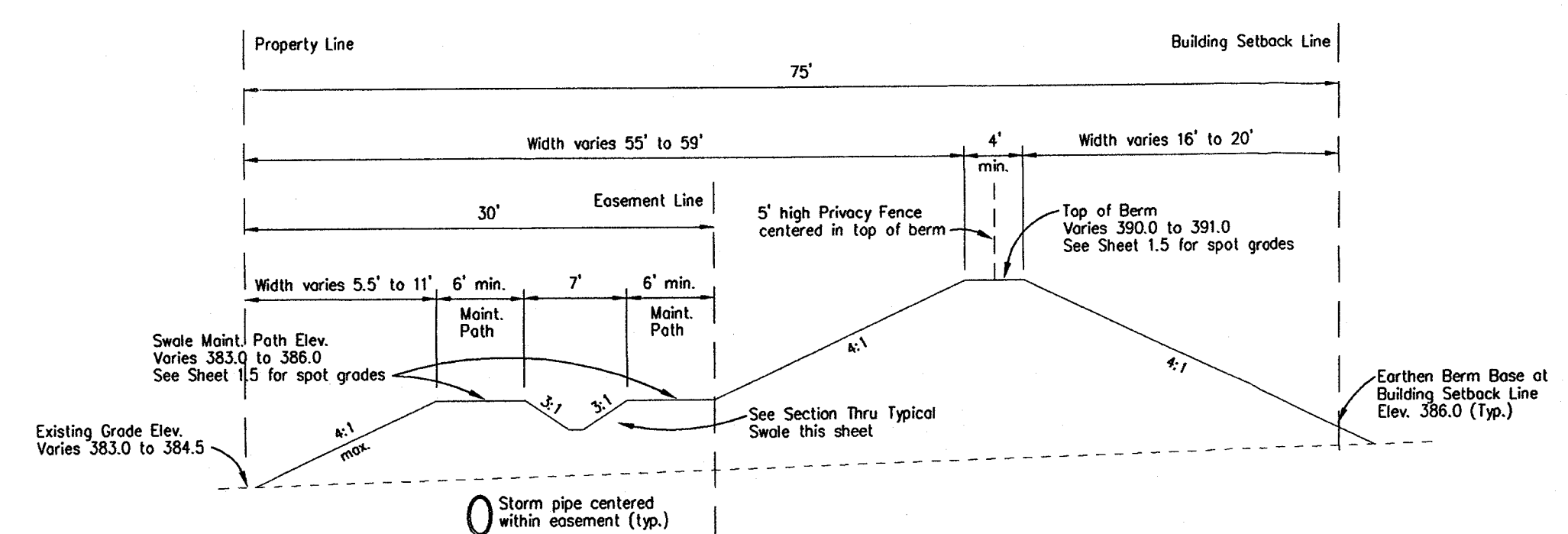
STR #	SYD	BANK ARMOR	ROCK CHUTE	COMMENTS
4	1	1'-0"	2'-0"	
16	1	2'-0"	3'-0"	
17	1	1'-0"	2'-0"	
25	1	1'-0"	2'-0"	
39	1	2'-0"	3'-0"	
40	5	1'-0"	2'-0"	
48	35	5'-0"	5'-0"	SEE DETAIL THIS SHEET

ALL END SECTION / OUTFALL / BANK PROTECTION 12" MIN. DIA. OF HARD ANGULAR RCP RAP 12" DEEP OVER GEOTEXTILE FABRIC STABILIZATION AND FILTRATION WITH BANK ARMOR ABOVE AND EACH SIDE OF END SECTION AS PER SCHEDULE. ROCK CHUTE TO EXTEND 2' MIN. BELOW PERMANENT POOL LINE FOR ALL END SECTION STRUCTURES WITH SCHEDULE VALUES FOR END SECTIONS FLOWING INTO BASINS.

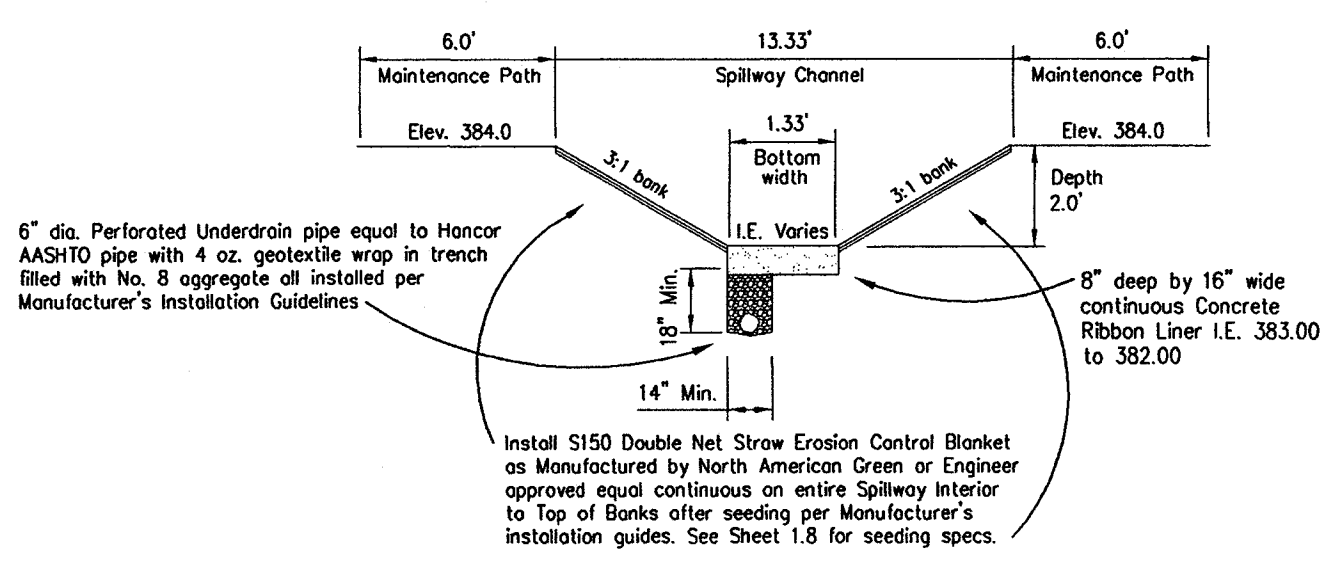
END SECTION / OUTFALL / BASIN BANK PROTECTION
N.T.S.



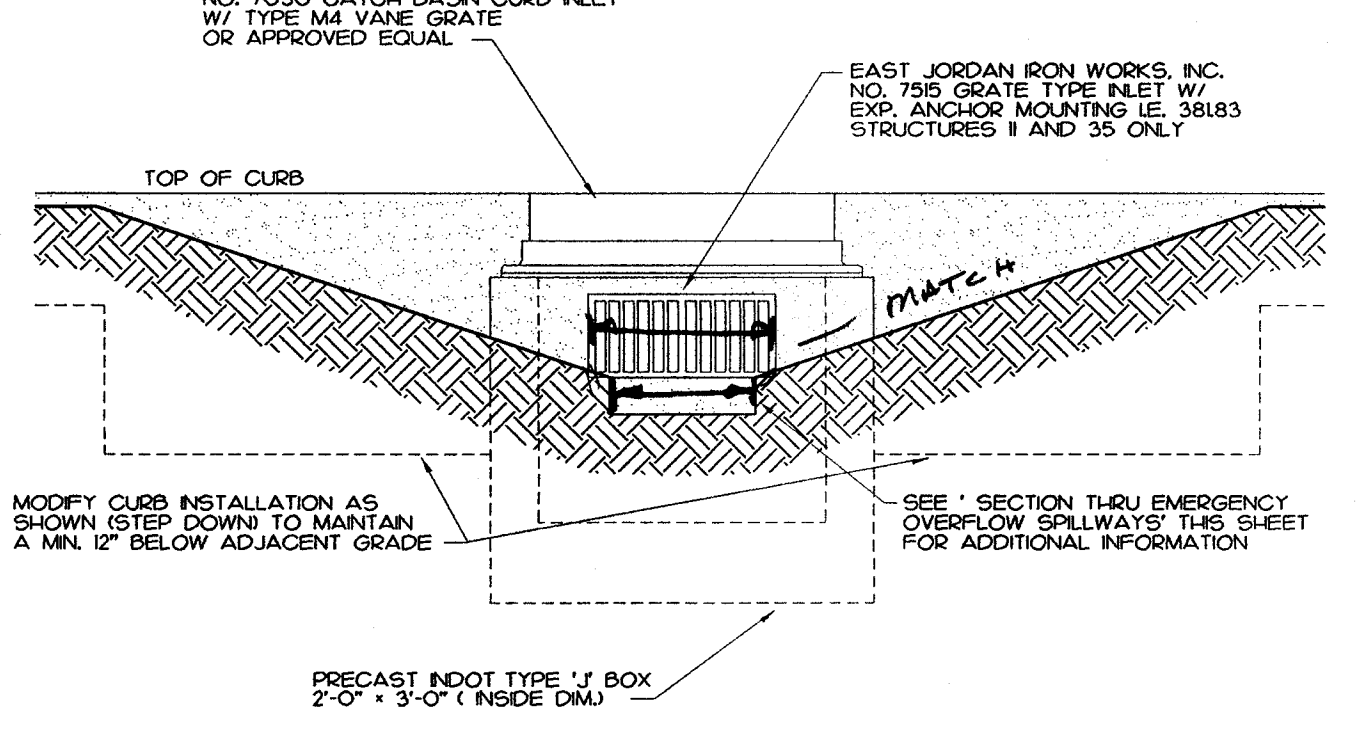
CURB INLET SADDLE BOX DETAIL
N.T.S.



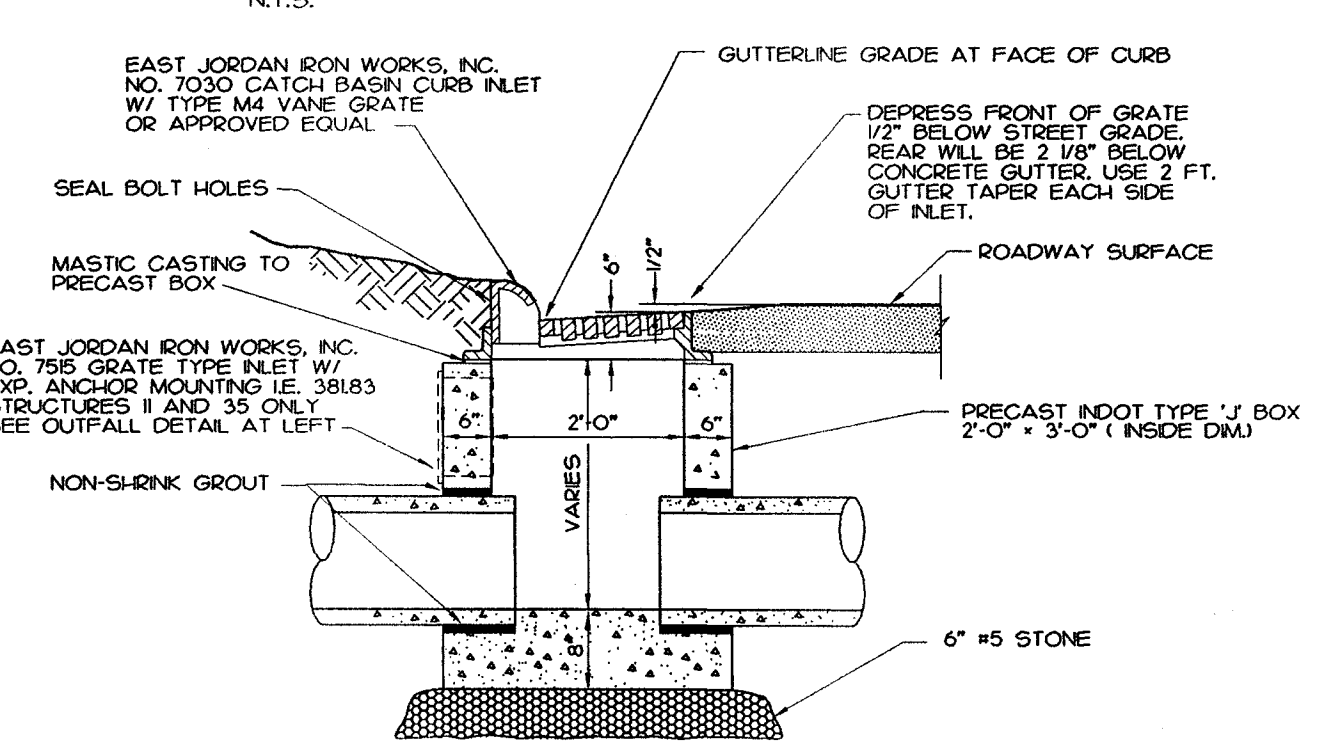
SECTION THRU EARTHEN BERM AND SWALE LOOKING NORTH
N.T.S.



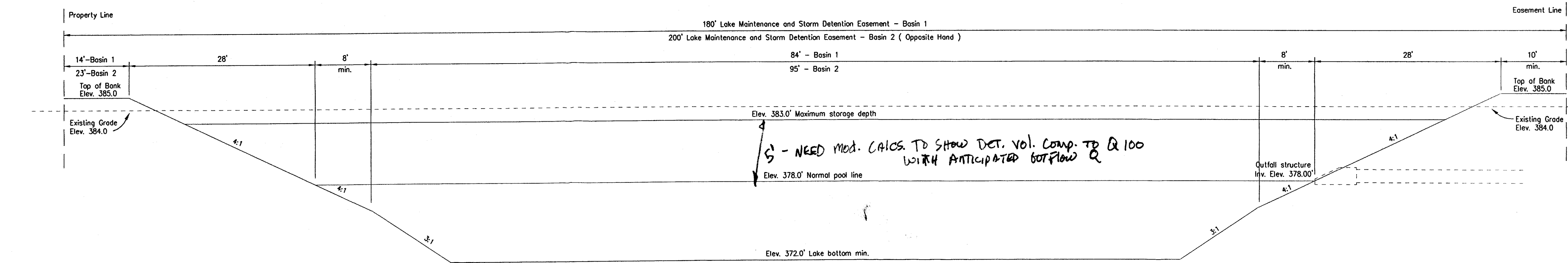
SECTION THRU EMERGENCY OVERFLOW SPILLWAYS
N.T.S.



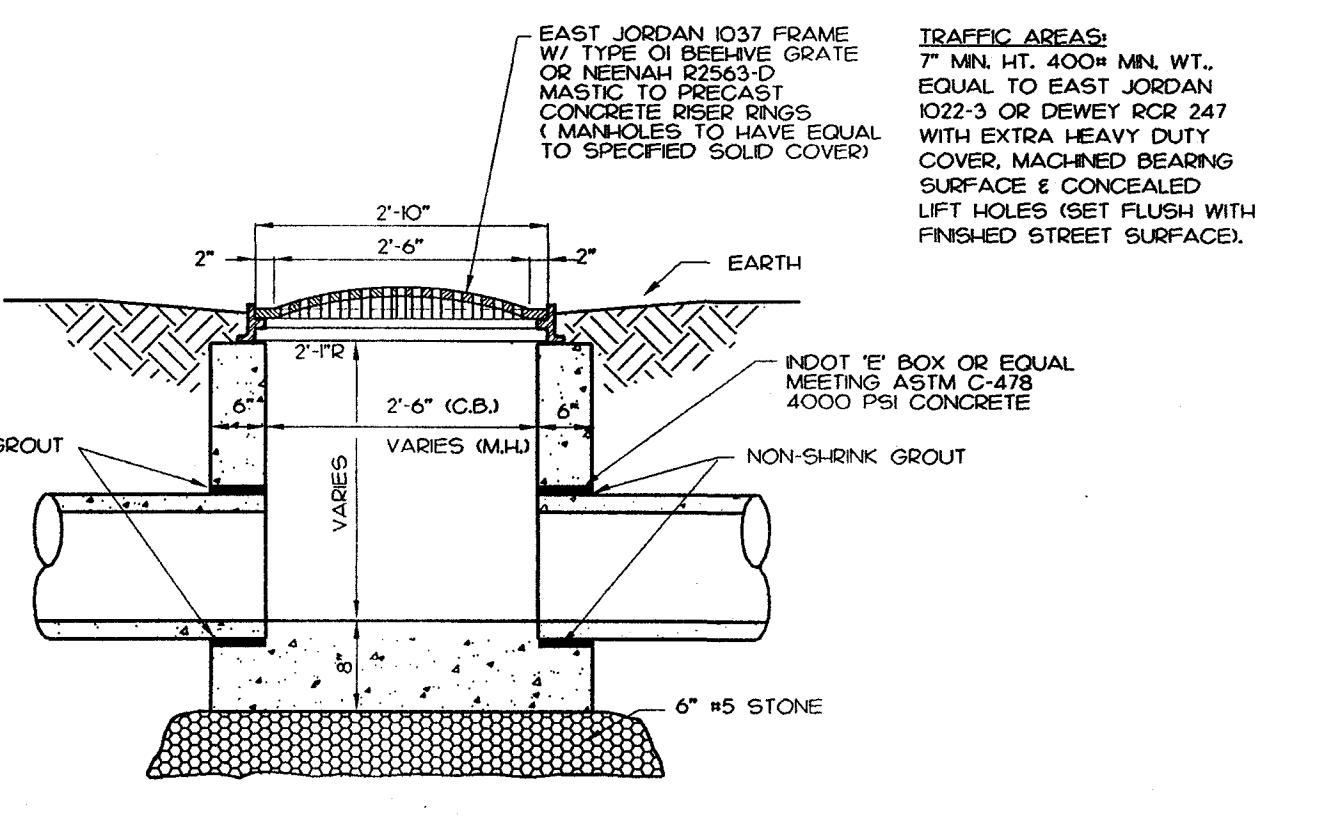
EMERGENCY OVERFLOW SPILLWAYS OUTFALL DETAIL
N.T.S.



CURB INLET DETAIL
N.T.S.



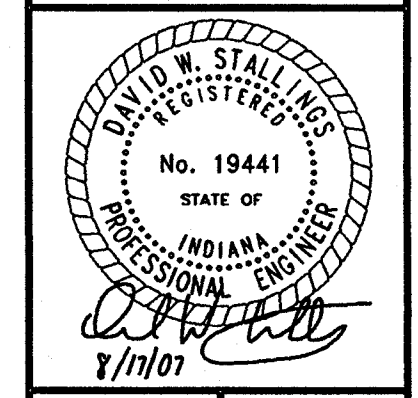
SECTION THRU DETENTION BASINS LOOKING EAST
N.T.S.



CATCH BASIN / MANHOLE DETAIL
N.T.S.

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REVISIONS	
NO.	DESCRIPTION



DRAWN BY: DET
DATE: 8-17-07
DRAWING NUMBER: 16