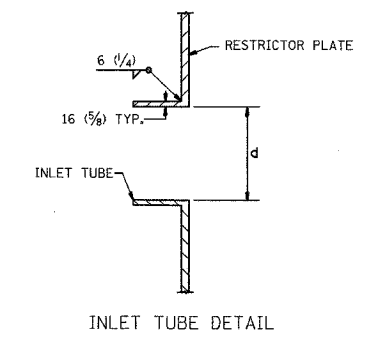
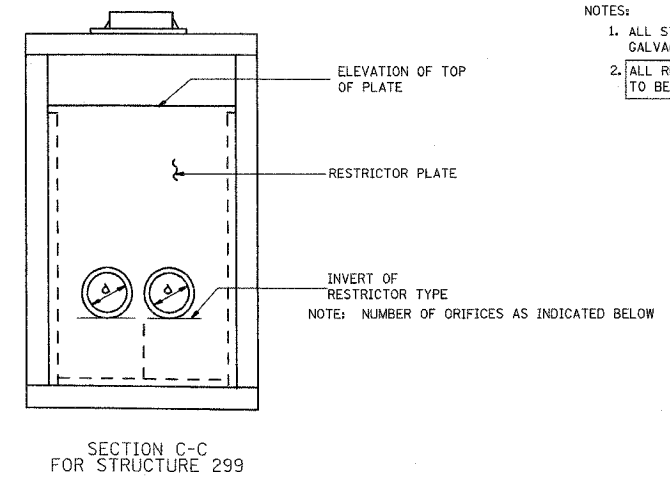
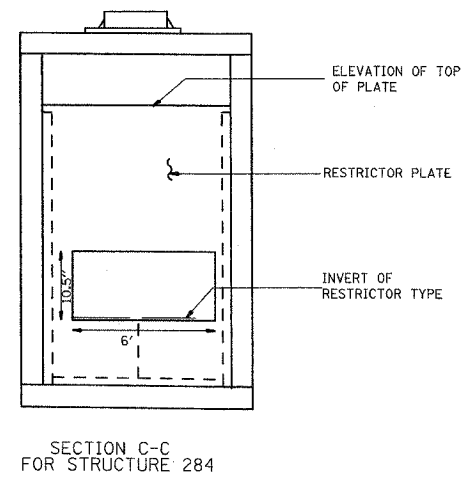
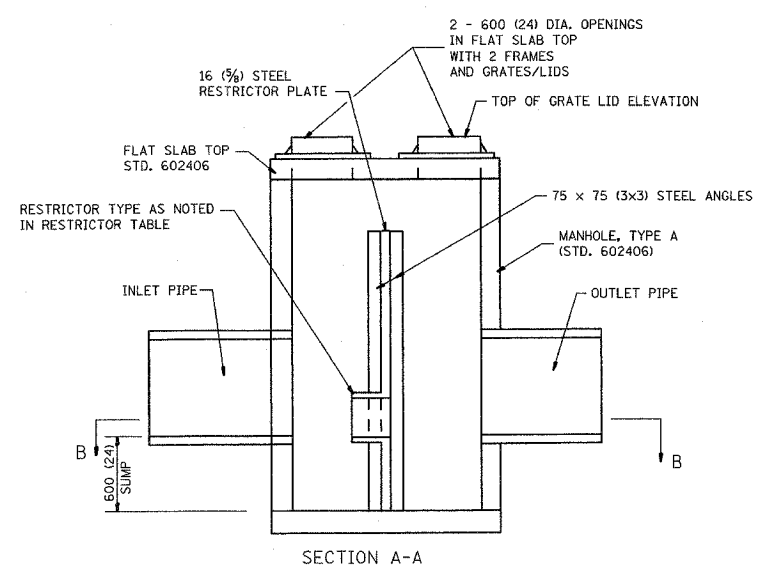
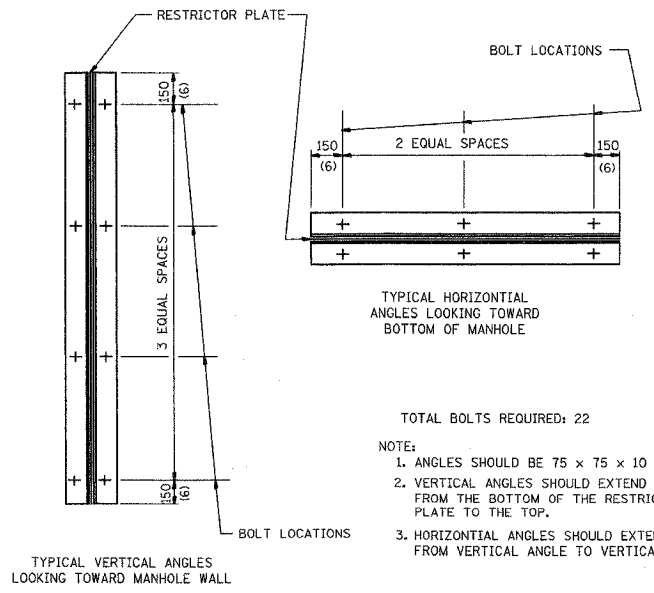


- NOTES:
1. ALL STEEL ANGLES AND PLATES TO BE GALVANIZED AFTER FABRICATION.
 2. ALL RESTRICTOR PLATES, ANGLES AND HARDWARE TO BE INCLUDED IN THE COST OF THE MANHOLE.



STRUCTURE NUMBER	STATION	MANHOLE DIAMETER	FRAME AND GRATE	RIM ELEVATION	INSIDE RESTRICTOR TYPE DIAMETER mm (In.) (d)	INVERT OF RESTRICTOR TYPE	ELEVATION OF TOP OF PLATE OVERFLOW
				621.61 (LT)			
299	848+80	8X5	T 20 F&G	621.02 (RT)	3 @ 18"	616.59	618.34
284	841+82	8X5	T 20 F&G	619.59 (RT)	6'x10.5" RECTANGLE	615.53	617.09
				620.32 (LT)			

BASIS OF PAYMENT: DRAINAGE STRUCTURES, TYPE 1 (SPECIAL) WITH TWO TYPE 20 FRAME AND GRATES



- TOTAL BOLTS REQUIRED: 22
- NOTE:
1. ANGLES SHOULD BE 75 x 75 x 10 (3x3x3/8)
 2. VERTICAL ANGLES SHOULD EXTEND FROM THE BOTTOM OF THE RESTRICTOR PLATE TO THE TOP.
 3. HORIZONTAL ANGLES SHOULD EXTEND FROM VERTICAL ANGLE TO VERTICAL ANGLE.

RESTRICTOR TYPE					
1	2	3	4	5	6
RE-ENTRANT TUBE	SHARP EDGED	SQUARE EDGED	RE-ENTRANT TUBE	SQUARE EDGED	ROUNDED
LENGTH: 1/2 TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-1/2 DIA.	LENGTH: 2-1/2 DIA.	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

PD PARSONS BRINCKERHOFF

SMITH ENGINEERING CONSULTANTS, INC.
www.smithengineering.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55
143RD STREET TO WEBER ROAD

DRAINAGE DETAILS

11
DRAINAGE STRUCTURES, TYPE 1 (SPECIAL)
WITH TWO TYPE 20 FRAME AND GRATES

SCALE: 1" = 50'
DATE: 02/23/2007

DRAWN BY JRM
CHECKED BY TEH