STATE	PROJECT NO.
MISS.	

HOLE OPENING

ROUND RCP		OPENING			ARCH RCP		OPENING		
		INCHES		CONCRETE* DEDUCTION PER OPENING (C.Y.)			INCHES		CONCRETE* DEDUCTION PER OPENING (C.Y.)
SIZE	T	HO	OP		SIZE	T	HO	OP	
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
12	2	20	4	0.017	-	-	-	-	-
15	2.25	24	4.5	0.032	18x11	2.25	28.5x18.5	1.5	0.015
18	2.5	26	4	0.045	22x13	2.5	30x21	1.5	0.045
21	2.75	28	3.5	0.060	-	-	-	-	-
24	3	32	4	0.078	29x18	3	38x27	1.5	0.073
27	3.25	40	6.5	0.096	-	-	-	-	-
30	3.5	40	6	0.116	36x23	3.5	48x33	1.5	0.108

* BASED ON 6" WALL THICKNESS; FOR 3 1/2" WALL, MULTIPLY BY 0.694

MINIMUM PIPE DEPTH TOP OF COVER TO PIPE INVERT

ROUND RCP SIZE	DEPTH INCHES	ARCH RCP SIZE	DEPTH INCHES
-	-	-	-
-	-	-	-
12	27	-	-
15	30.5	18x11	23.5
18	33	22x13	25.5
21	35.5	-	-
24	40	29x18	30.5
27	44.5	-	-
30	46	36x23	35.5

MAXIMUM PIPE SIZE

INLET OR JUNCTION BOX	ROUND RCP		ARCH RCP	
	IW SIDE	IL SIDE	IW SIDE	IL SIDE
2X2	12	18	NONE	18X11
2X3	12	24	NONE	22x13
3X5	24	30	22x13	36x23

CONCRETE QUANTITIES

INLET OR JUNCTION BOX	BOTTOM C.Y.	RISER C.Y./FT	COVER C.Y.
2X2	0.074	0.099	0.123
2X3	0.111	0.181	0.201
3X5	0.279	0.278	0.266

NOTE: CONCRETE CUBIC YARDS PER INLET/JUNCTION BOX = BOTTOM + (TOTAL RISER HEIGHT (FT) x C.Y./FT) + (COVER - GRATE OPENING) - ANY HOLE OPENINGS

GENERAL DATA

INLET OR JUNCTION BOX SIZE	WALL THICKNESS	INSIDE DIMENSION		OUTSIDE DIMENSION		BASE HEIGHT	RISER HEIGHT	WEIGHTS		
	WT	IW	IL	OW	OL	B	R	BOTTOM	BASE/RISER	COVER
FEET	INCHES	INCHES		INCHES		3" INCREMENTS		LB	LB/FT	LB
2 X 2	3 1/2	24	24	31	31	24-54	18-48	300	401	600
2 X 3	6	24	36	34	46	24-54	18-48	450	735	816
3 X 5	6	36	60	46	70	24-54	18-48	1125	1114	1077

2' x 2' WALL REINFORCEMENT (SQ. IN. PER LIN. FT.)

DEPTH OF INSTALLATION	BASE		TOP RISER		INTERIOR RISER #1		INTERIOR RISER #2		INTERIOR RISER #3		INTERIOR RISER #4	
FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT
0-4	0.07	3.942	-	-	-	-	-	-	-	-	-	-
0-8	0.13	5.862	0.07	3.942	-	-	-	-	-	-	-	-
0-12	0.20	7.786	0.07	3.942	0.13	5.862	-	-	-	-	-	-

2' x 3' WALL REINFORCEMENT (SQ. IN. PER LIN. FT.)

DEPTH OF INSTALLATION	BASE		TOP RISER		INTERIOR RISER #1		INTERIOR RISER #2		INTERIOR RISER #3		INTERIOR RISER #4	
FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT
0-4	0.10	5.840	-	-	-	-	-	-	-	-	-	-
0-8	0.20	9.928	0.10	5.840	-	-	-	-	-	-	-	-
0-12	0.25	8.848	0.10	5.840	0.20	9.928	-	-	-	-	-	-

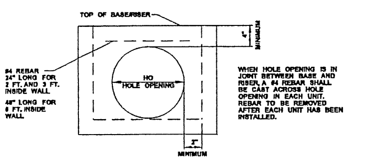
3' x 5' WALL REINFORCEMENT (SQ. IN. PER LIN. FT.)

DEPTH OF INSTALLATION	BASE		TOP RISER		INTERIOR RISER #1		INTERIOR RISER #2		INTERIOR RISER #3		INTERIOR RISER #4	
FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT
0-8	0.30	21.039	0.24	17.3264	-	-	-	-	-	-	-	-
0-12	0.74	53.670	0.24	17.3264	0.60	43.318	-	-	-	-	-	-
0-16	0.88	61.528	0.24	17.3264	0.60	43.318	0.74	53.670	-	-	-	-
0-20	1.14	78.146	0.24	17.3264	0.60	43.318	0.74	53.670	1.02	70.013	-	-
0-24	1.44	98.654	0.24	17.3264	0.60	43.318	0.74	53.670	1.02	70.013	1.20	82.035

COVER/BOTTOM REINFORCEMENT

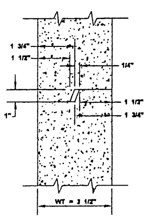
INLET OR JUNCTION BOX	COVER	LBS/STEEL	BOTTOM	LBS/STEEL
2X2	#4 @ 8" EW	12.247	WWF-W8.0 X W8.0 - 3 X 3	10.569
2X3	#4 @ 8" EW	17.869	WWF-W8.0 X W8.0 - 3 X 3	16.602
3X5	#4 @ 8" EW	36.741	WWF-W8.0 X W8.0 - 3 X 3	37.208

NOTE: REINFORCEMENT STEEL (LBS PER INLET/JUNCTION BOX) = BOTTOM + TOTAL FOR EACH RISER (TOP PLUS ANY INTERIOR RISERS) (BASE HEIGHT + TOTAL HEIGHT OF RISER) + COVER; HOLE AND GRATE OPENINGS NOT DEDUCTED

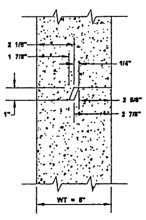


WHEN HOLE OPENING IS IN JOINT BETWEEN BASE AND RISER, A #4 REBAR SHALL BE CAST ACROSS HOLE OPENING IN EACH UNIT. REBAR TO BE REMOVED AFTER EACH UNIT HAS BEEN INSTALLED.

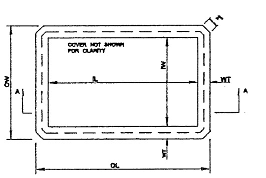
DETAIL FOR HOLE OPENING



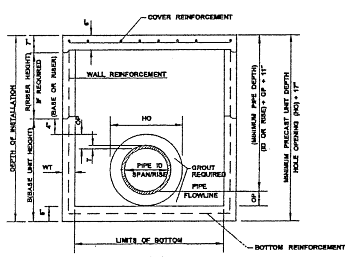
2 X 2 JOINT DETAIL



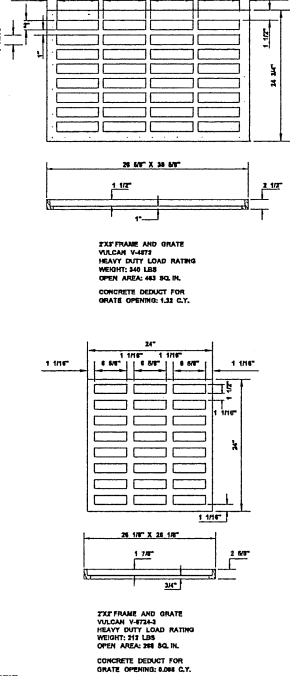
2 X 3 & 3 X 5 JOINT DETAIL



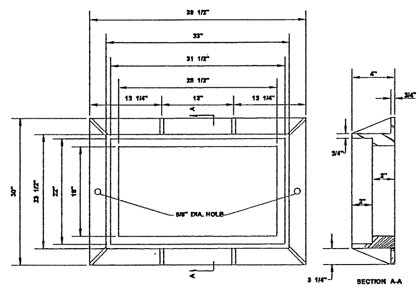
PLAN FOR BASE/RISER INLET/JUNCTION BOX

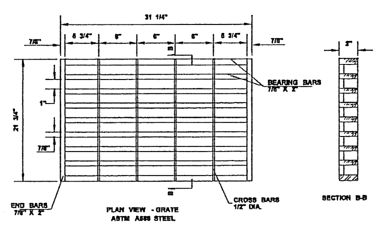


SECTION A-A



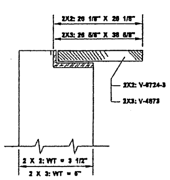
GRATE DETAILS





MDOT SS-3 GRATE
HEAVY DUTY LOAD RATING
FRAME WEIGHT: 244 LBS
GRATE WEIGHT: 200 LBS
OPENING: 324.6 SQ. IN.

CONCRETE DEDUCT FOR GRATE OPENING: 0.079 C.Y.

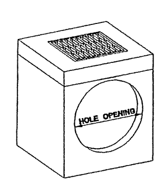


2 X 2 & 2 X 3 DROP INLET WALL DETAIL WHEN FRAME AND GRATE IS USED WITHOUT COVER

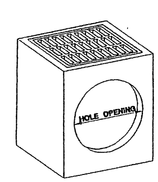
GENERAL NOTES:

1. CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 4000 PSI MINUMUM AT 28 DAYS.
2. REINFORCING FOR BOTTOM AND WALLS SHALL BE WELDED WIRE FABRIC, ASTM A-185, AND OF THE AREA AS SHOWN IN TABLE.
3. REINFORCING FOR COVER SHALL BE WITH DEFORMED BARS, ASTM A615/A AND OF THE SIZE AS SHOWN IN TABLE.
4. JOINT TO BE SEALED WITH PREFORMED JOINT COMPOUND, AASHTO SPECIFICATION M-198.
5. 2 1/2" LIFTING HOLES TO BE LOCATED ON EACH SIDE OF BOX SECTIONS FOR HANDLING.
6. GROUT FOR JOINING PIPE TO PRECAST UNITS WILL BE A COMMERCIAL MASONRY GROUT MEETING SPECIFICATIONS.
7. WHEN INTERIOR RISER UNITS ARE REQUIRED, UNITS SHALL BE MARKED TO IDENTIFY EACH UNIT.
8. CONCRETE & REINFORCING STEEL FOR PRE-CAST INLETS AND JUNCTION BOXES SHALL BE PAID FOR AS THE CALCULATED QUANTITY SHOWN ON THE RE-CAP SHEET FOR CAST-IN-PLACE INLETS & JUCTION BOXES

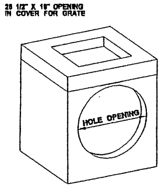
28 1/2" X 18" OPENING IN COVER FOR GRATE



DROP INLET FRAME AND GRATE IN COVER 2 X 2, 2 X 3, 3 X 5



DROP INLET FRAME AND GRATE IN WALL WITHOUT COVER 2 X 2, 2 X 3



TYPE SS-3 INLET 3 X 5

DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

PRECAST UNITS
JUNCTION BOX, TYPE SS-3, AND DROP PRECAST INLET
(30" CONCRETE ROUND PIPE AND UNDER)
(36" x 23" CONCRETE ARCH PIPE AND UNDER)

WORKING NUMBER PCU-1
SHEET NUMBER

FILENAME: dgns\precast1bl.dgn
DESIGN TEAM ____ CHECKED ____ DATE 01/04/05

ROADWAY DESIGN DIVISION C.A.D.D. SECTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION