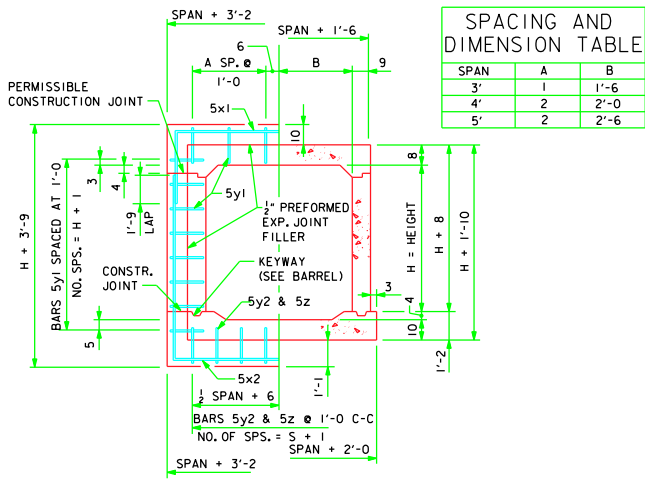
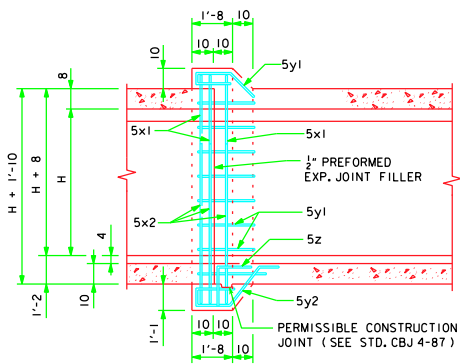


CORRECTION 03-08 - LAP CORRECTED ON JOINT DETAIL SECTION THRU BARREL. ENGLISH IN SINGLE CULVERT.DGN - CBJ 1-87

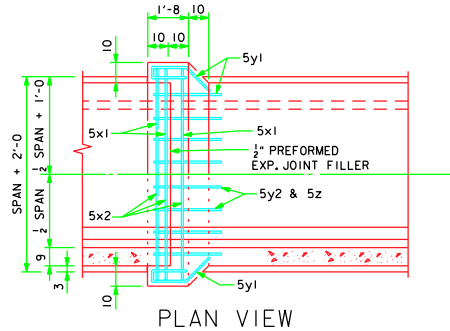


SPAN	A	B
3'	1	1'-6
4'	2	2'-0
5'	2	2'-6

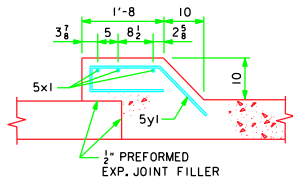
JOINT DETAIL SECTION THRU BARREL



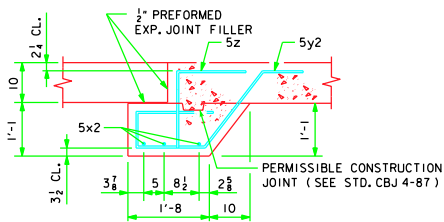
LONGITUDINAL SECTION



PLAN VIEW



TOP & SIDES - BARS 5y1



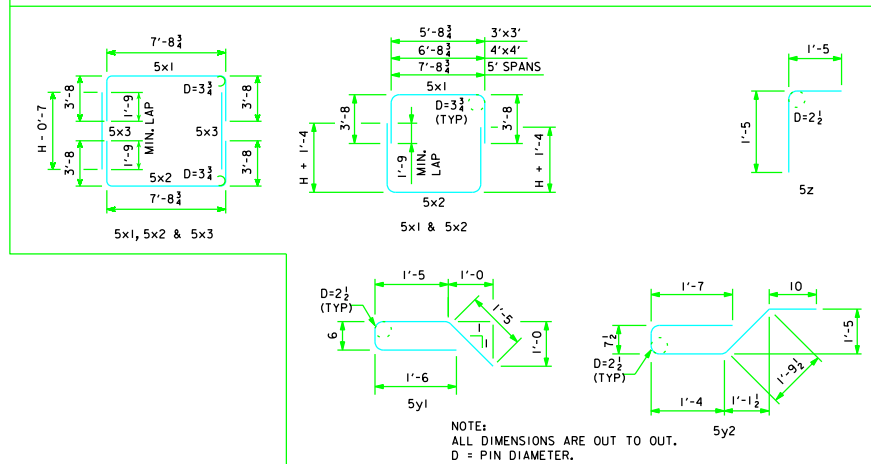
BOTTOM BARS - 5y2 & 5z

SIZE	FOOTING	WALLS	SLAB
3' x 3'	.656	.343	.518
4' x 4'	.740	.472	.584
5' x 4'	.823	.343	.647
5' x 4'	.823	.472	.647
5' x 5'	.823	.600	.647
5' x 6'	.823	.729	.647

ESTIMATE OF QUANTITIES - ONE JOINT - 3', 4', & 5' SPAN

MARK	LOCATION	SHAPE	3' x 3'		4' x 4'		5' x 3'		5' x 4'		5' x 5'		5' x 6'							
			NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT			
5x1	SLAB AND WALLS		3	13'-1	41	3	14'-1	44	3	15'-1	47	3	15'-1	47	3	15'-1	47			
5x2	FLOOR AND WALLS		3	14'-5	45	3	17'-5	54	3	16'-5	51	3	18'-5	58	3	15'-1	47			
5x3	WALLS		—	—	—	—	—	—	—	—	—	—	—	—	6	4'-5	28			
5y1	TOP AND SIDES		14	4'-10	71	18	4'-10	91	16	4'-10	81	18	4'-10	91	20	4'-10	101			
5y2	BOTTOM		5	6'-2	32	6	6'-2	39	7	6'-2	44	7	6'-2	44	7	6'-2	44			
5z	BOTTOM & FLOOR		5	2'-10	15	6	2'-10	18	7	2'-10	21	7	2'-10	21	7	2'-10	21			
TOTAL WEIGHT (LBS.)			204			246			244			261			288			304		
TOTAL CONCRETE			1.5 cu. yds.			1.8 cu. yds.			1.8 cu. yds.			1.9 cu. yds.			2.1 cu. yds.			2.2 cu. yds.		

BENT BAR DETAILS



NOTE:
ALL DIMENSIONS ARE OUT TO OUT.
D = PIN DIAMETER.

NOTES:

- DIMENSIONS AND QUANTITIES SHOWN BASED ON SLAB THICKNESS OF 8", WALL = 9", AND FLOOR = 10".
- CHANGE LENGTHS OF BARS 5x1, 5x2, 5z, AND ADJUST REINFORCING STEEL AND CONCRETE QUANTITIES ACCORDINGLY FOR SLAB, WALL, AND FLOOR THICKNESSES OTHER THAN SHOWN.
- ALL BAR LENGTHS ARE ESTIMATED WITH A 2" CLEARANCE FROM CONCRETE EDGE TO OUTSIDE OF BAR, EXCEPT AS NOTED.
- MATERIAL AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS OF I.D.O.T.
- SEE DRAWING RCB-GI-87 FOR GENERAL INFORMATION, SPECIFICATIONS, AND DESIGN STRESSES.
- BARREL FLOOR BARS 5z ARE TO BE SHORTENED 6" AT BELL JOINTS.

LATEST REVISION DATE :
03-08

APPROVED BY :
Thomas C. McQuinn

STANDARD DESIGN
CULVERT BELL JOINTS
FOR
REINFORCED CONCRETE BOX CULVERTS
3', 4' & 5' SPAN

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
MAY, 1987
CBJ 1-87