

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO SPECIFICATIONS, 1983 EDITION.

DESIGN LOADING: HS20-44

UNIT STRESSES: CONCRETE GRADE 4.0 (AE) $f'_c = 4,000$ psi
REINFORCING STEEL $f_y = 60,000$ psi

CONCRETE: GRADE 4.0 (AE) CONCRETE SHALL BE USED THROUGHOUT THE STRUCTURE. MINIMUM CLEARANCE TO REINFORCING SHALL BE 1 1/2", EXCEPT WHERE NOTED OTHERWISE. BEVEL ALL EXPOSED EDGES WITH A 3/4" TRIANGULAR MOULDING.

EXCAVATION: EXCAVATION FOR CULVERTS LESS THAN BRIDGE LENGTH SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE SUBSIDIARY TO GRADE 4.0 CONCRETE. EXCAVATION FOR RCB BRIDGES SHALL BE PAID FOR AS CLASS III EXCAVATION.

SEAL COURSE: A SEAL COURSE MAY BE REQUIRED BY THE ENGINEER. THE SEAL COURSE SHALL BE UNREINFORCED CONCRETE (COMMERCIAL GRADE) TO A MINIMUM DEPTH OF 3 INCHES OR AS DETERMINED BY THE ENGINEER. CONCRETE SHALL BE PAID FOR AT THE UNIT PRICE SET FOR SAID ITEM.

FOUNDATION STABILIZATION: FOUNDATION STABILIZATION MAY BE REQUIRED BY THE ENGINEER. THE DEPTH OF FOUNDATION STABILIZATION SHALL BE DETERMINED BY THE ENGINEER. FOUNDATION STABILIZATION SHALL BE PAID FOR AT THE UNIT PRICE SET FOR SAID ITEM. SEE "RCB AUXILIARY DETAILS".

QUANTITIES: THE QUANTITIES SHOWN IN THE CULVERT SUMMARY INCLUDE APRON QUANTITIES WHEN THEIR CONSTRUCTION IS REQUIRED BY THE PLANS. PAYMENT FOR ADDITIONAL QUANTITIES THAT RESULT FROM INCLUDING A SEAL COURSE AND/OR FLOATING APRON, AS A CHANGE IN ORIGINAL PLANS, SHALL BE MADE AT THE UNIT PRICE BID FOR THE VARIOUS ITEMS INVOLVED. ITEMS NOT LISTED SEPARATELY IN THE SUMMARY OF QUANTITIES ARE SUBSIDIARY TO OTHER ITEMS IN THE PROPOSAL.

FOUNDATION AND BACKFILL MATERIAL: SOILS JUDGED AS HIGH PLASTICITY CLAYS, FAT CLAYS, EXPANSIVE CLAYS OR ORGANIC CLAYS ARE NOT SUITABLE FOR FOUNDATION AND/OR BACKFILL MATERIAL FOR WINGWALLS AND SHALL NOT BE USED.

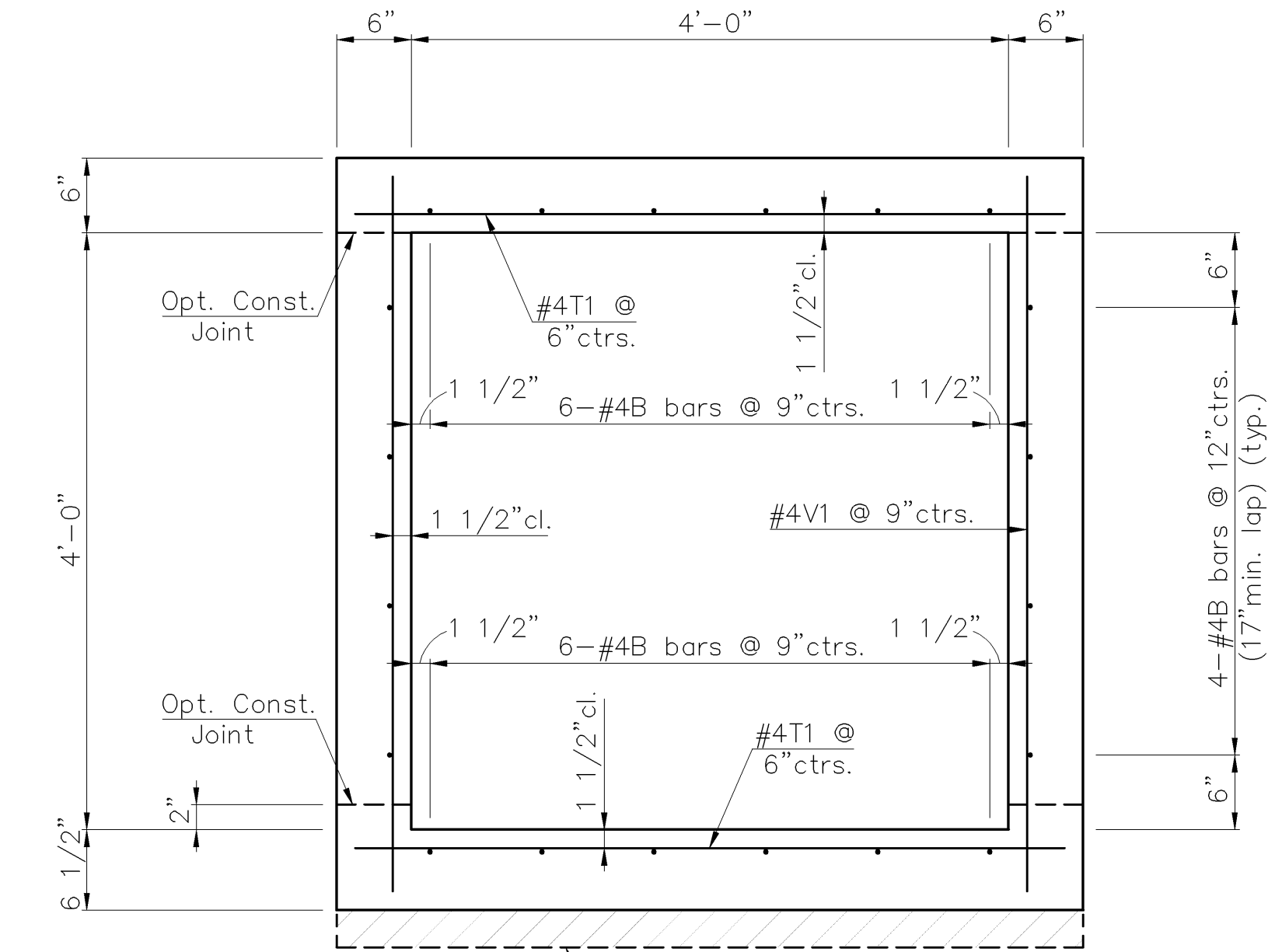
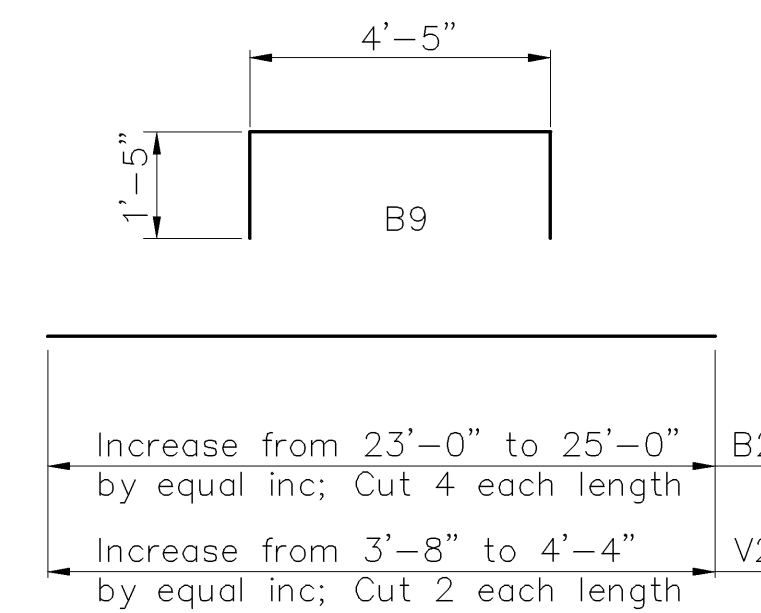
WEEPHOLES: FREE DRAINING GRANULAR MATERIAL SHALL BE PLACED BEHIND ALL WEEPHOLES. PAYMENT FOR PLACEMENT OF THE FREE DRAINING GRANULAR MATERIAL BEHIND THE WEEPHOLES SHALL NOT BE MADE DIRECTLY, BUT SHALL BE SUBSIDIARY TO OTHER ITEMS IN THE PROPOSAL.

TRANSVERSE JOINTS: PLACE NO REINFORCING THROUGH TRANSVERSE CONSTRUCTION JOINTS EXCEPT THE DESIGNATED D1 BARS AT SPECIFIED DOWELLED JOINT LOCATIONS.

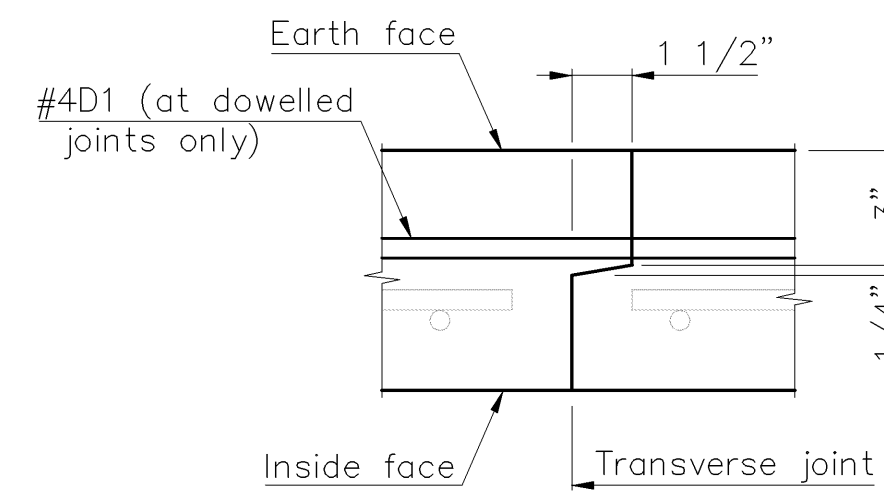
BILL OF REINFORCING STEEL							
STRAIGHT BARS				BENT BARS			
Mark	Size	No.	Length	Mark	Size	No.	Length
B1	#4	560	25'-7"	B9	#4	3	7'-3"
B2	#4	12	Varies				
B3	#4	8	25'-2"				
B4	#4	8	22'-10"				
B5	#4	20	35'-5"				
B6	#4	12	18'-3"				
B7	#4	2	16'-3"				
B8	#4	6	13'-5"				
D1	#4	180	2'-0"				
T1	#4	3,191	4'-9"				
V1	#4	2,134	4'-9"				
V2	#4	12	Varies				
V3	#4	6	3'-6"				

BENDING DIAGRAMS

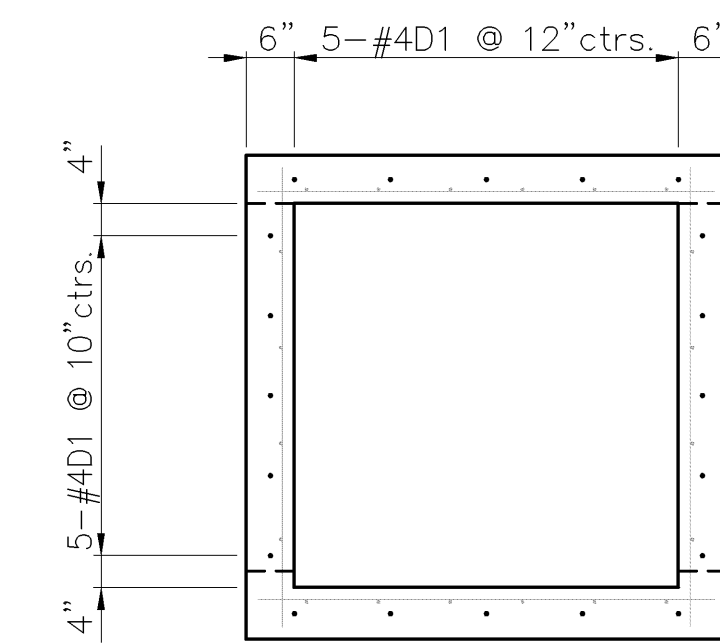
All dimensions are out to out of bars



TYPICAL SECTION THRU BARREL



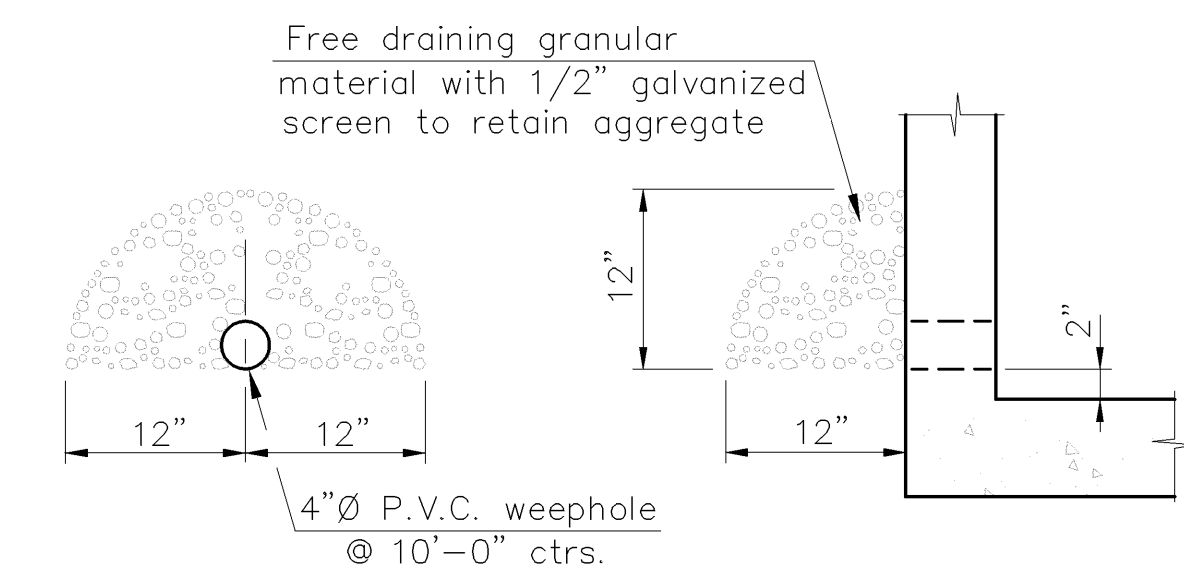
TYPICAL SECTION



DOWEL LOCATIONS

See "RCB Layout" sheet for location of dowelled joints. Center dowel bars on joint.

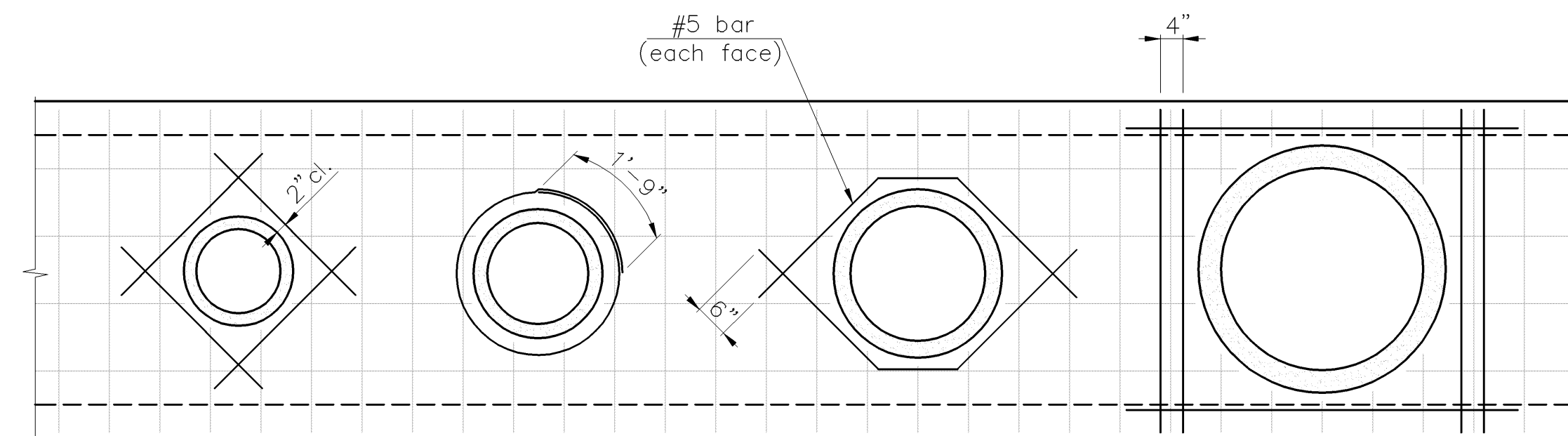
TRANSVERSE JOINT DETAILS



WEEPHOLE DETAIL

Weepholes shall be spaced a maximum of 10'-0" and placed no closer than 2'-0" to a joint between units. Typical both walls.

SUMMARY OF QUANTITIES	
GRADE 4.0 CONCRETE (AE)	272.9 CU. YDS.
REINFORCING STEEL (GR. 60)	27,910 LBS.
FOUNDATION STABILIZATION (SET)	1 CU. YDS.
CONCRETE FOR SEAL COURSE (SET)	1 CU. YDS.
STRUCTURAL STEEL	320 LBS.



PIPE OPENING DETAIL

(Showing suggested configurations of additional reinforcing)

The reinforcing shall be #5 bars in each face of the walls. Bend and place reinforcing to provide a minimum 2" clearance to the pipe. The additional reinforcing shall not be paid for directly, but shall be subsidiary to "Reinforcing Steel (Gr. 60)." No deductions in reinforcing steel or concrete quantities has been made for the pipe openings.

PROJECT NO. 87 N-0306-01

4' X 4' R.C.B.

29TH STREET NORTH

STA. 111+62.50 to 119+45

CITY OF WICHITA



DESIGNED	RSC	SCALE
DETAILED	DEG	DATE 9/1/05
QUANTITIES		SHEET 29 OF 111