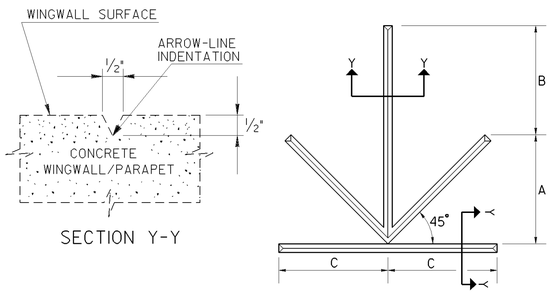
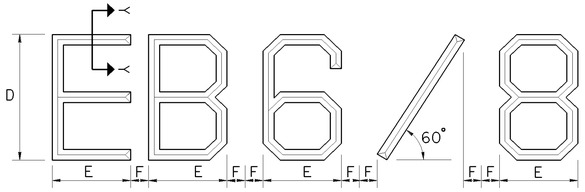
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	EDS-0000-00(346)	721	999



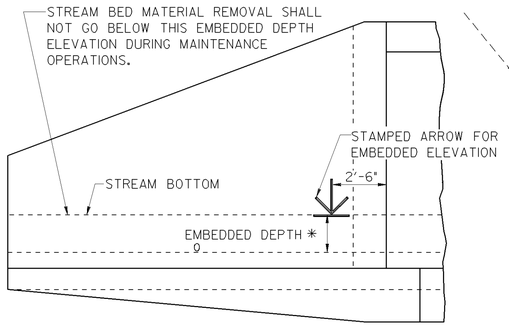
STAMPED ARROW DETAIL



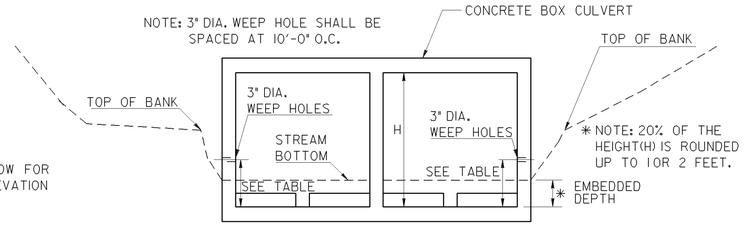
A	B	C	D	E	F
12	12	12	3.5	2.25	0.50

DIMENSIONS FOR STAMPED ARROW, LETTERS AND NUMBERS (INCHES)

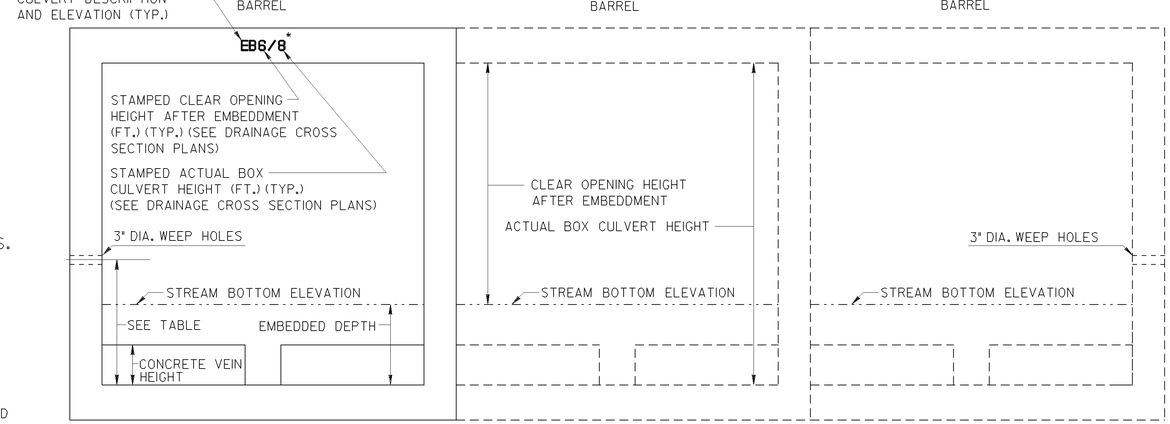
NOTE: SEE STANDARD 9031H FOR STAMPED NUMBER DETAILS AND DIMENSIONS.



CONCRETE WINGWALL/PARAPET STAMPED ARROW LOCATION DETAIL

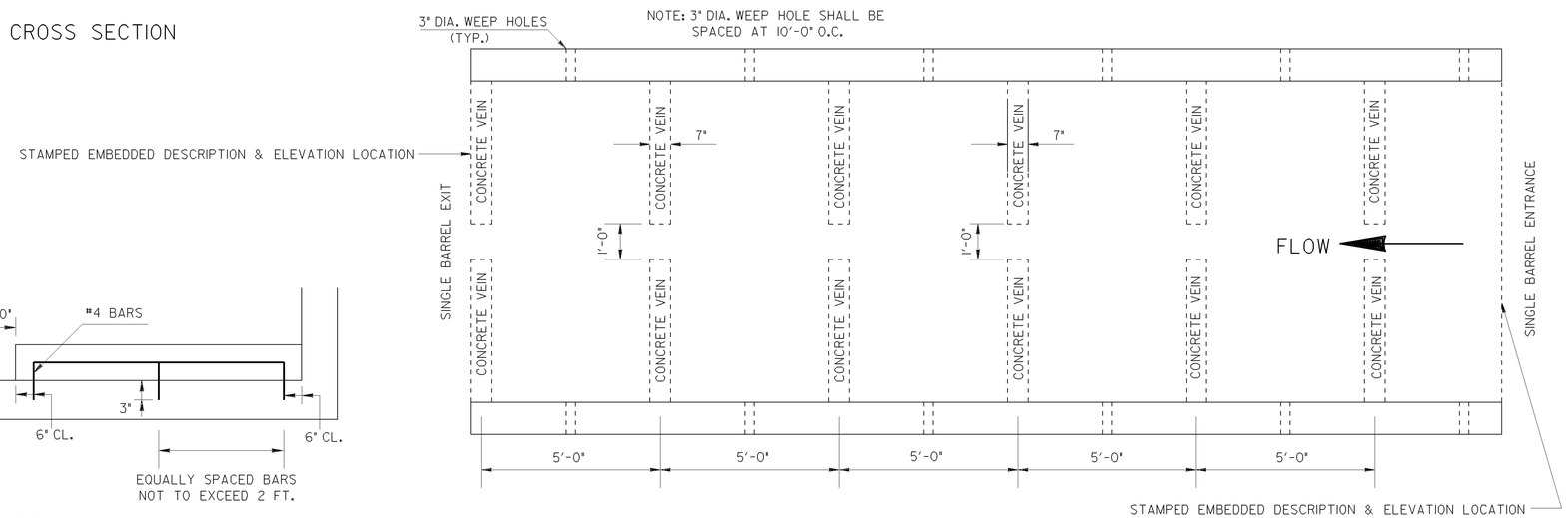


STREAM CROSS SECTION

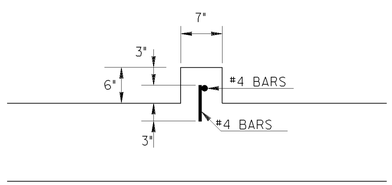


* NOTE: SEE DRAINAGE CROSS SECTION PLANS FOR STAMPED BOX CULVERT AND CLEAR OPENING HEIGHTS AFTER EMBEDDMENT.

CONCRETE BOX CULVERT BARREL ELEVATION



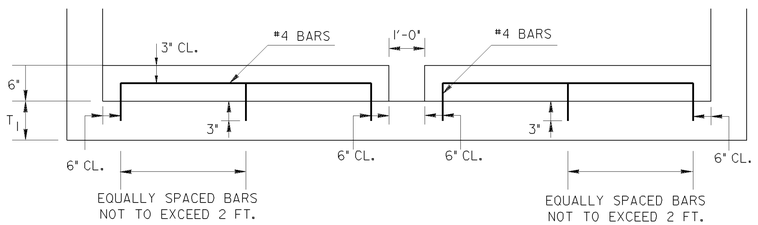
CONCRETE BOX CULVERT BARREL PLAN VIEW



NOTE: DRILL 7/8" ROUND HOLE 3" DEEP FOR DOWEL BARS. FILL WITH EPOXY ADHESIVE AND INSERT BARS.

SECTION

CONCRETE VEIN HEIGHT 6"

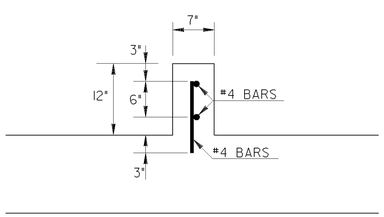


T_1 = CULVERT BOTTOM THICKNESS

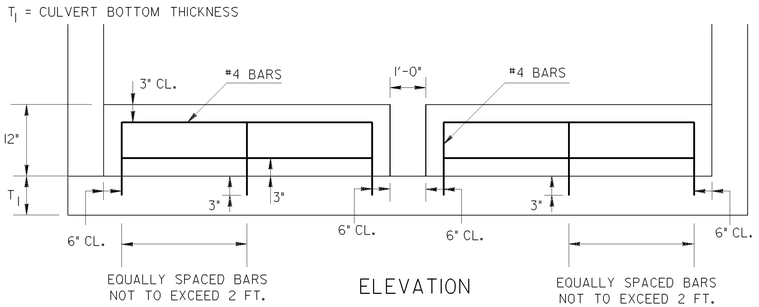
ELEVATION

CONCRETE VEIN HEIGHT 12"

T_1 = CULVERT BOTTOM THICKNESS



SECTION



ELEVATION

CONCRETE VEIN REINFORCEMENT DETAILS

EMBEDDED DEPTH	VEIN HEIGHT INCHES	WEEP HOLE LOCATION FEET-INCHES	QUANTITIES	
			CLASS A CONCRETE	REINFORCING STEEL
			CU. YDS. PER LIN. FT. OF VEIN	LBS. PER LIN. FT. OF VEIN
12" BURIED BOX	6"	2"-3"	0.0097	0.668
24" BURIED BOX	12"	3"-3"	0.0194	1.336

GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERETO.
2. ALL COSTS ASSOCIATED WITH THE INSTALLATION OF CONCRETE VEINS WILL BE INCLUDED IN THE OVERALL BID COST FOR CONCRETE AND BAR REINFORCING STEEL REQUIRED TO BUILD THE CULVERT.
3. CULVERT APRONS ARE REQUIRED FOR CULVERTS THAT ARE EMBEDDED.
4. THE CONTRACTOR WILL NOT PLACE STREAM BOTTOM MATERIAL IN THE CULVERT.

BY	REVISION	DATE
T.C.	ADDED CONCRETE STAMP DETAILS AND NOTES.	11-7-11
G.L.O.	ADDED WEEP HOLE NOTES, REV. REBAR SPACING, REV. BAFFLE TO VEIN	7-21-11

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAIL
FISH PASSAGE CULVERT
CONCRETE VEINS

NO SCALE

AUGUST 2008

NUMBER
D-48