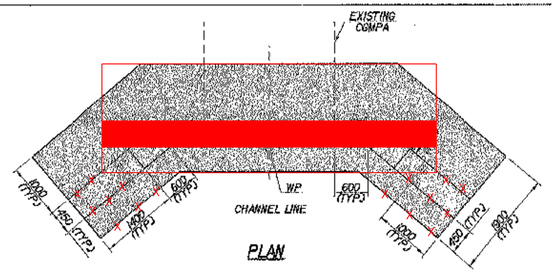
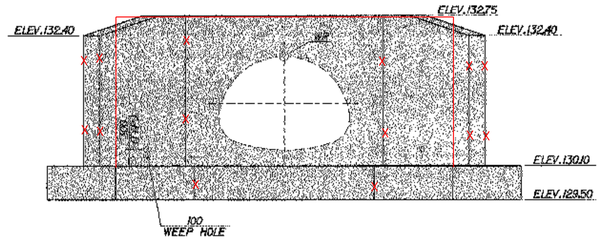
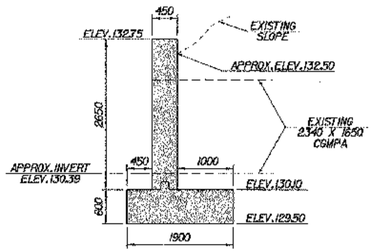


PLAN

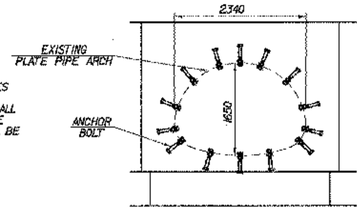
* CHANGE TO STRAIGHTEN HEADWALL BECAUSE OF WATERLINE CONFLICT



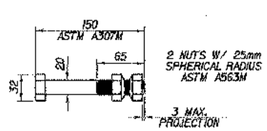
ELEVATION



SECTION @ C CGMPA AND MIDPOINT OF HEADWALL



1-ROW GALVANIZED ANCHOR BOLTS SPACED IN ALTERNATE CIRCUMFERENTIAL SEAM HOLES (ACTUAL ANCHOR BOLT SPACING TO BE DETERMINED IN THE FIELD). THE COST OF ALL WORK AND MATERIALS ASSOCIATED WITH THE INSTALLATION OF THE ANCHOR BOLTS SHALL BE INCLUDED IN THE COST OF CONCRETE, HIGH PERFORMANCE CLASS B.



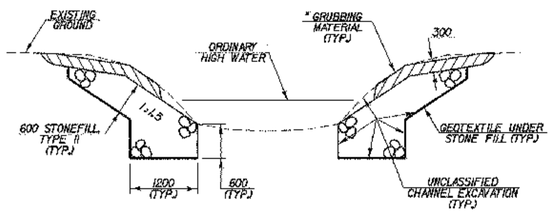
ANCHOR BOLT DETAIL

(NOT TO SCALE)

HEADWALL DETAILS

0 1 2 3 4 5

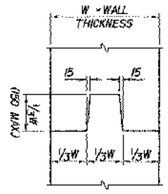
SCALE = 1:50



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

* GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL FROM THE END WINGWALLS TO CGMPA INLET. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



TYPICAL CONCRETE CONSTRUCTION JOINT

NOT TO SCALE

HYDRAULIC DATA

DRAINAGE AREA = 360 HA	DESIGN FLOW = Q25	
DESIGN TAILWATER DEPTH = 1.6 M	ELEVATION = 132.0	
ORDINARY HIGH WATER DEPTH = 0.5 M +/-		
Q 2.33 FLOW = 2.1 CM/S	HEADWATER ELEVATION = 131.3	
Q 10 FLOW = 4.1 CM/S	HEADWATER ELEVATION = 131.7	
Q 25 FLOW = 5.2 CM/S	HEADWATER ELEVATION = 132.0	
Q 50 FLOW = 6.4 CM/S	HEADWATER ELEVATION = 132.2	
Q100 FLOW = 7.2 CM/S	HEADWATER ELEVATION = 132.4	
COMMENTS: DEPTHS ARE APPROXIMATE BASED ON INLET CONTROL ANALYSIS.		

Metric

GENERAL NOTES

1) ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2001, AND THE LATEST AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

2) THE APPROXIMATE HORIZONTAL LOCATION OF AN EXISTING FRANKLIN VILLAGE WATERLINE IS SHOWN ON THE PLANS WITHIN THE PROPOSED CONSTRUCTION AREA OF THE HEADWALL. THERE HAS BEEN NO VERIFICATION OF THE LOCATION, EITHER HORIZONTALLY OR VERTICALLY, ASSOCIATED WITH THIS WATERLINE CROSSING AND IT HAS BEEN ASSUMED THERE WILL BE NO CONFLICT WITH THE PROPOSED FOOTING ELEVATION. IF DURING CONSTRUCTION IT IS FOUND THIS ASSUMPTION IS INCORRECT THE PROJECT MANAGER SHALL BE CONTACTED IMMEDIATELY WITH ALL PERTINENT DETAILS TO DETERMINE AN APPROPRIATE COURSE OF ACTION. ITEMS HAVE BEEN INCLUDED ON THE CONTRACT TO RELOCATE THE WATERLINE IF RELOCATION IS DETERMINED TO BE THE ONLY VIABLE OPTION.

3) IN-STREAM CONSTRUCTION SHALL BE RESTRICTED TO JUNE 1 TO OCTOBER 1, UNLESS THE CONTRACTOR OBTAINS WRITTEN PERMISSION FROM THE AGENCY OF NATURAL RESOURCES TO DO WORK OUTSIDE OF THAT TIME FRAME.

4) THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION, ESPECIALLY THE DISCHARGE OF RAW CONCRETE, INTO ANY BROOK, STREAM, OR RIVER.

5) WHEN CONSTRUCTION MACINERY IS WORKING OVER THE EXISTING PIPE, THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF 1000 mm OF COMPACTED MATERIAL.

6) LIMITS OF THE COFFERDAM SHALL BE DETERMINED BY THE CONTRACTOR. PAY LIMITS FOR COFFERDAM EXCAVATION, EARTH AND COFFERDAM EXCAVATION, ROCK SHALL BE 600 mm OUTSIDE THE PERIMETER OF THE FOOTING. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM EXCAVATION PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.

7) ITEM 208.30, COFFERDAM SHALL INCLUDE ALL NECESSARY WORK REQUIRED TO SAFELY CONSTRUCT THE FOUNDATION, FOOTING HEADWALL, AND WINGWALLS IN THE DRY. ANY AND ALL WORK ASSOCIATED WITH THE TEMPORARY WATER DIVERSION REQUIRED DURING CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THIS ITEM. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SEQUENCE AND EROSION CONTROL PLAN BEFORE WORK MAY BEGIN.

8) THE FOLLOWING TABLE OF ALLOWABLE STRESSES AND WEIGHTS APPLY TO THESE PLANS FOR DESIGN PURPOSES:

CONCRETE, HIGH PERFORMANCE CLASS B: f'c = 25 MPa fc = 10 MPa

REINFORCING STEEL: Ft = 166 MPa GRADE 420
SOIL UNIT WEIGHT: 2250 kg/m3

DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL: 190 KPa

9) THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT, ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

10) ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25mm BY 25mm.

11) JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

12) ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).

REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING +/- 25 mm
CLEARANCE +/- 5 MM

13) MINIMUM COVER FOR REINFORCING STEEL SHALL BE FIFTY (50) MILLIMETERS ALONG THE BACK FACES OF WALLS AGAINST EARTH, AND EIGHTY (80) MILLIMETERS ELSEWHERE, UNLESS OTHERWISE NOTED.

14) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN THE FIELD ALL EXISTING DIMENSIONS IN THE PLANS. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES CELSIUS UNLESS OTHERWISE NOTED.

ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL
203.27	UNCLASSIFIED CHANNEL EXCAVATION	CM	10	23
204.30	GRANULAR BACKFILL FOR STRUCTURES	CM	55	43.1
208.30	COFFERDAM EXCAVATION, EARTH	CM	70	52
208.35	COFFERDAM EXCAVATION, ROCK	CM	5	4.5
208.40	COFFERDAM	LS	1	1
501.34	CONCRETE, HIGH PERFORMANCE CLASS B	CM	18	15.13
507.15	REINFORCING STEEL	KG	1300	1266
514.10	WATER REPELLENT	L	6	6
613.11	STONE FILL, TYPE II	CM	21	23
649.31	GEOTEXTILE UNDER STONE FILL	SM	40	38
651.40	GRUBBING MATERIAL	SM	25	25

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: /str/85c060/s85c060ww.dgn
PROJECT LEADER: S. FARNSWORTH
DESIGNED BY: M. FOWLER
sc060ww15282.1

PLOT DATE: 21-MAR-2003
DRAWN BY: R. PELLETT
CHECKED BY: G. SPILAK
SHEET 25 OF 60