

NOTES AND SPECIFICATIONS

- ALL DIMENSIONS ARE IN MILLIMETRES AND THE LEVELS ARE IN METRES.
- DO NOT SCALE THE DRAWING. ONLY FIGURED DIMENSIONS SHALL BE FOLLOWED.
- THE SPECIFICATIONS PROPOSED FOR THE VARIOUS COMPONENTS OF THE STRUCTURE ARE AS FOLLOWS:

Sl.No	DETAILS OF COMPONENTS	GRADE OF CONCRETE	MAX. SIZE OF C.A
1	SEALING COAT OVER CANAL BOX	CC M25	20 MM
2	BOX UNDER CANAL TROUGH, HEAD WALL & EARTH BANK	RCC M20	20 MM
3	APRON FLOOR, CUTOFF WALL OF APRON	CC M15	40 MM
4	WEARING COAT OVER APRON FLOOR	CC M20	20 MM
5	HEAD WALL, WING & RETURNS	CC M15	40 MM
6	CANAL LINING	CC M10	20 MM
7	FOUNDATION CONCRETE OF WINGS, RETURNS & RETURN WALL CUT OFF	CC M15	40 MM
8	LEVELLING COURSE BELOW BOX	CC M10	40 MM
9	TOE WALL	CC M15	40 MM

REFERENCE CODES

- IS : 456 - 2000
- IS : 383
- IS : 7784 (PART I & II)
- IS : 3370 (PART I, II)
- IS : 1783 - 1985

HYDRAULIC PARTICULARS OF CANAL

S.NO	DESCRIPTION OF ITEMS	QUANTITY & UNITS
1	DISCHARGE REQUIRED	95.460 CUMEC'S
2	DISCHARGE DESIGNED	97.046 CUMEC'S
3	BED WIDTH	10.000 M
4	FULL SUPPLY DEPTH	4.70 M
5	VELOCITY	1.211 M/SEC
6	BED FALL	1/8000
7	SIDE SLOPES (H:V:SOILS)	1.5:1
8	COEFFICIENT OF RUGOSITY	0.018
9	TOP WIDTH OF BANKS (L/R)	8.925 / 5.00 M
10	BED LEVEL	+438.773 M
11	FULL SUPPLY LEVEL	+443.473 M
12	TOP OF BANK LEVEL	+444.373 M
13	VENT SIZE	2.80 M x 1.60 M - 3 No.S

HYDRAULIC PARTICULARS OF DRAIN

S.NO	DESCRIPTION OF ITEMS	QUANTITY & UNITS
1	CATCHMENT AREA	3.130 SQ KMS
2	MAXIMUM FLOOD DISCHARGE	39.299 CUMEC'S
3	DRAIN BED LEVEL	+440.044 M

SPECIAL NOTES:-

- THE PROJECT AUTHORITIES SHOULD SATISFY WHETHER THE DESIGN PROPOSALS COMPLY WITH TECHNICAL SPECIFICATIONS AS STIPULATED IN AGREEMENT CONDITIONS. ANY DEVIATIONS NOTICED MAY BE REFERRED TO CDD FOR NECESSARY MODIFICATIONS BEFORE EXECUTION.
- THE PROJECT AUTHORITIES SHOULD VERIFY THE SUITABILITY OF THE STRUCTURE AS PER APPROVED HYDRAULIC PARTICULARS BEFORE EXECUTION OF WORK.
- PLATE BEARING TEST TO BE CONDUCTED FOR CONFIRMING THE DESIGNED S.B.C BEFORE LAYING FOUNDATION CONCRETE.
- NECESSARY BUNDS MAY BE FORMED ALONG THE DRAIN ON ITS UPTO TBL +442.000 AS GROUND LEVELS ARE +440.000 TO AVOID SPREADING OF WATER ON TO THE LANDS & TO DIRECT THE WATER INTO U.T.

APPROVED  
Sd/- (Dt 24.11.2006)  
(I.S.N. RAJU)  
CHIEF ENGINEER  
CENTRAL DESIGNS ORGANISATION  
HYDERABAD

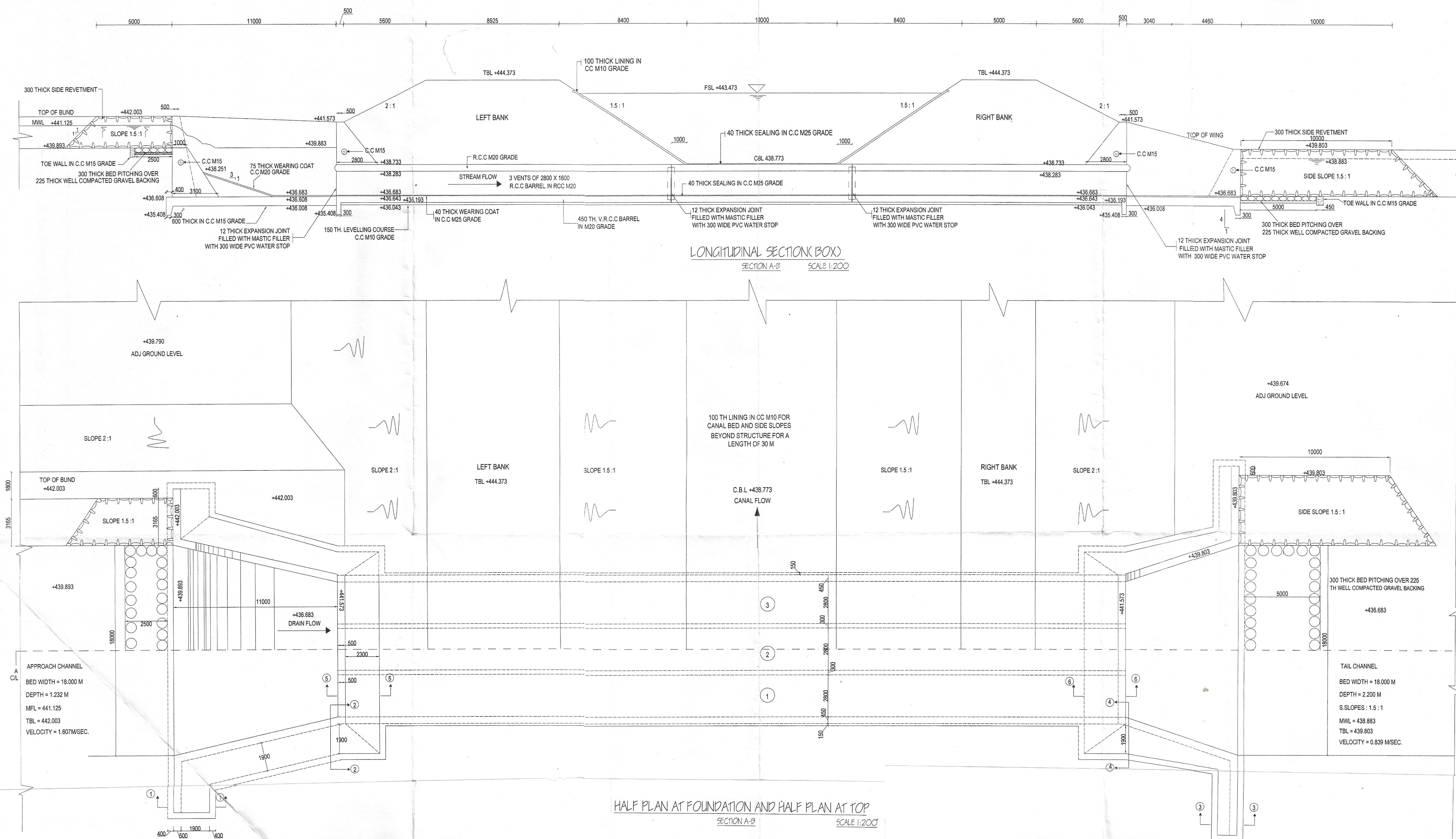
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EXECUTIVE ENGINEER  
CANALS - II DIVISION  
CENTRAL DESIGNS ORGANISATION  
HYDERABAD

REFERENCE DRAWINGS

- DRAWING NO. HN55/BB/UT/156.200/002/2006 - HEAD WALLS, WINGS, RETURNS & DROP WALLS
- DRAWING NO. HN55/BB/UT/156.200/003/2006 - R.C.C. DETAILS OF BOX

REVISION NO.	DRAWN	CHECKED	APPROVED	DATE
CLIENT	GOVERNMENT OF ANDHRA PRADESH IRRIGATION & CAD DEPARTMENT			
PROJECT	HANDRI NEEVA SUJALA SRAVANTI PROJECT MAIN CANAL			
TITLE	UNDER TUNNEL AT CH. 156.200 KM. GENERAL PLAN & SECTIONAL ELEVATION			
CONTRACTORS	BACKBONE PROJECTS LIMITED HYDERABAD			
DRAWING NO.	SCALE	DATE		
HN55/BB/UT/156.200 /001/2006	AS INDICATED			

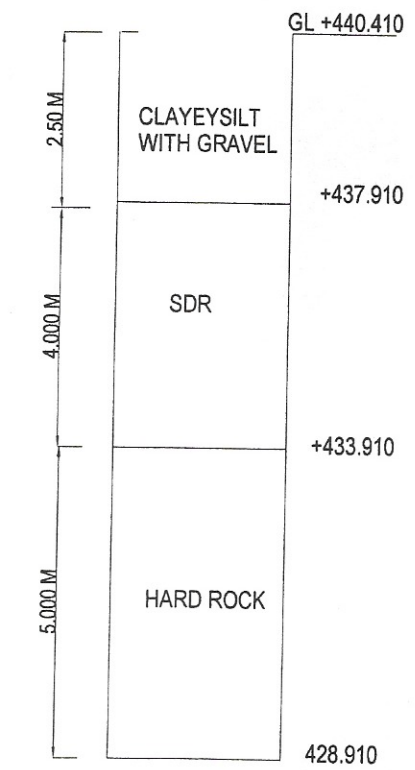


NOTES AND SPECIFICATIONS (CONTINUED):-

- 12MM THICK EXPANSION JOINTS WITH 300MM WIDE STOPPER SHALL BE PROVIDED AS SHOWN IN THE DRAWING.
- THE QUALITY AND WORKMANSHIP OF CONCRETE SHALL CONFIRM TO IS 456-2000.
- 100MM THICK LINING ON SIDES & BED OF CANAL IN C.C M10 GRADE SHALL PROVIDED FOR A LENGTH AS MENTIONED IN AGREEMENT ON EITHER SIDE OF THE STRUCTURE LOCATION.
- THE APRONS IN TRANSITIONS BOTH US & DS OF THE DRAIN SHALL BE AS SHOWN IN THE DRAWING.
- WEEP HOLES OF SIZE 75MM DIA WITH INVERTED FILTERS ON REAR SIDE ARE TO BE PROVIDED AT 1500MM C/C BOTHWAYS AND STAGGERED IN WINGS AND RETURNS ABOVE MWL.
- THE BED PITCHING AND SIDE REVETMENT SHALL BE PROVIDED IN THE DRAIN AT THE EXIT AND ENTRANCE OF THE STRUCTURE AS SHOWN IN THE DRAWING. THE WEIGHT OF STONE PROTECTION WORK SHALL NOT BE LESS THAN 40KGS.
- THE SKIN REINFORCEMENT OF 5KG/SQM MAY BE PROVIDED ON EXPOSED FACE OF WINGS & RETURN WALLS.
- IF THE STRATA MET WITH AT FOUNDATION LEVEL DURING THE EXECUTION IS DIFFERENT FROM WHAT IS CONSIDERED IN THE DESIGN AND NOT CAPABLE OF TAKING STRESSES (SHOWN IN THE STRESS TABLE) THE FIELD OFFICERS INCHARGE OF EXECUTION SHALL REPORT THE ACTUAL STRATA ENCOUNTERED TO THE "CDD" FOR REVIEW AND REDISIGN IF NECESSARY.
- THE BOX SHALL BE CAST MONOLITHICALLY IN RCC M20 GRADE CONFIRMING TO IS 456 AND THE CONCRETE SHALL BE LAID WITH PROPER VIBRATION.
- SPLICING OF MAIN REINFORCEMENT SHALL BE AVOIDED AS FAR AS POSSIBLE WHEREVER NECESSARY LAPS SHALL BE PROVIDED CONFIRMING TO IS 456-2000.
- THE QUALITY & GRADING OF AGGREGATES SHALL CONFIRM TO IS 383-1970.
- REINFORCEMENT SHALL BE OF HYSD BARS CONFIRMING TO IS 1786.
- 300 THICK CC CUTOFF WALL TO BE TAKEN TO +435.408 (US) AND (DS) IN CONTINUATION WITH C.C APRON.
- THE HEAD WALLS, WING WALLS & RETURN WALLS ARE DESIGNED FOR EARTH PRESSURE BASED ON T.V.A PROCEDURE WITH BACKFILL SOILS OF NON-COHESIVE NATURE AND ANGLE OF INTERNAL FRICTION  $\phi = 28^\circ$  AND WITH UNIT WEIGHT OF SATURATED EARTH 2.1 TONNE/CCM. THE BACK FILLING OF THESE WALLS SHALL BE WITH SOILS HAVING THE PROPERTIES AS ABOVE AND PROPERLY COMPACTED TO 98% PROCTORS DENSITY AT OMC AND SHALL BE DONE SIMULTANEOUSLY WITH RAISING OF STRUCTURE.
- THE TAIL CHANNEL HAS TO BE REGRADED TILL IT MEETS THE NATURAL DRAIN BED LEVEL.

-/ TRUE COPY/-

21/10/07  
Deputy Superintending Engineer  
H.N.S.S. Circle, ANANTAPUR.



1.P.PARTICULARS  
AT KM 156.200