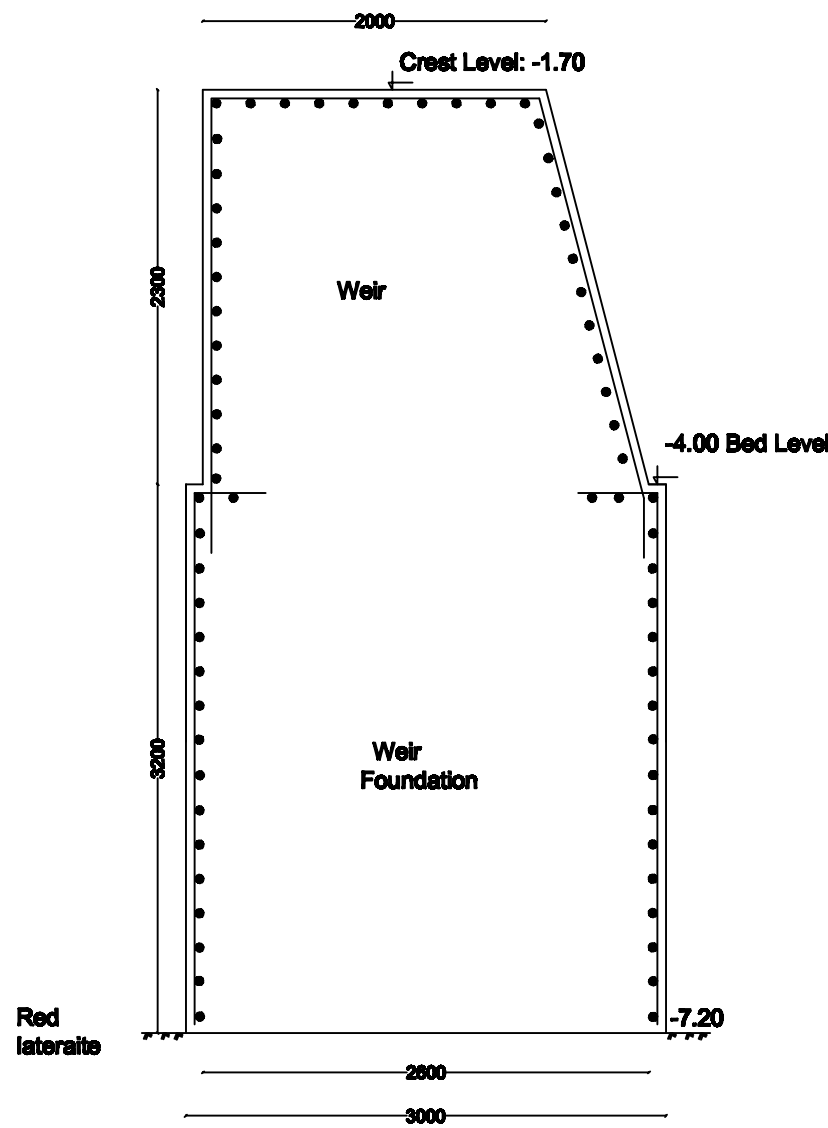


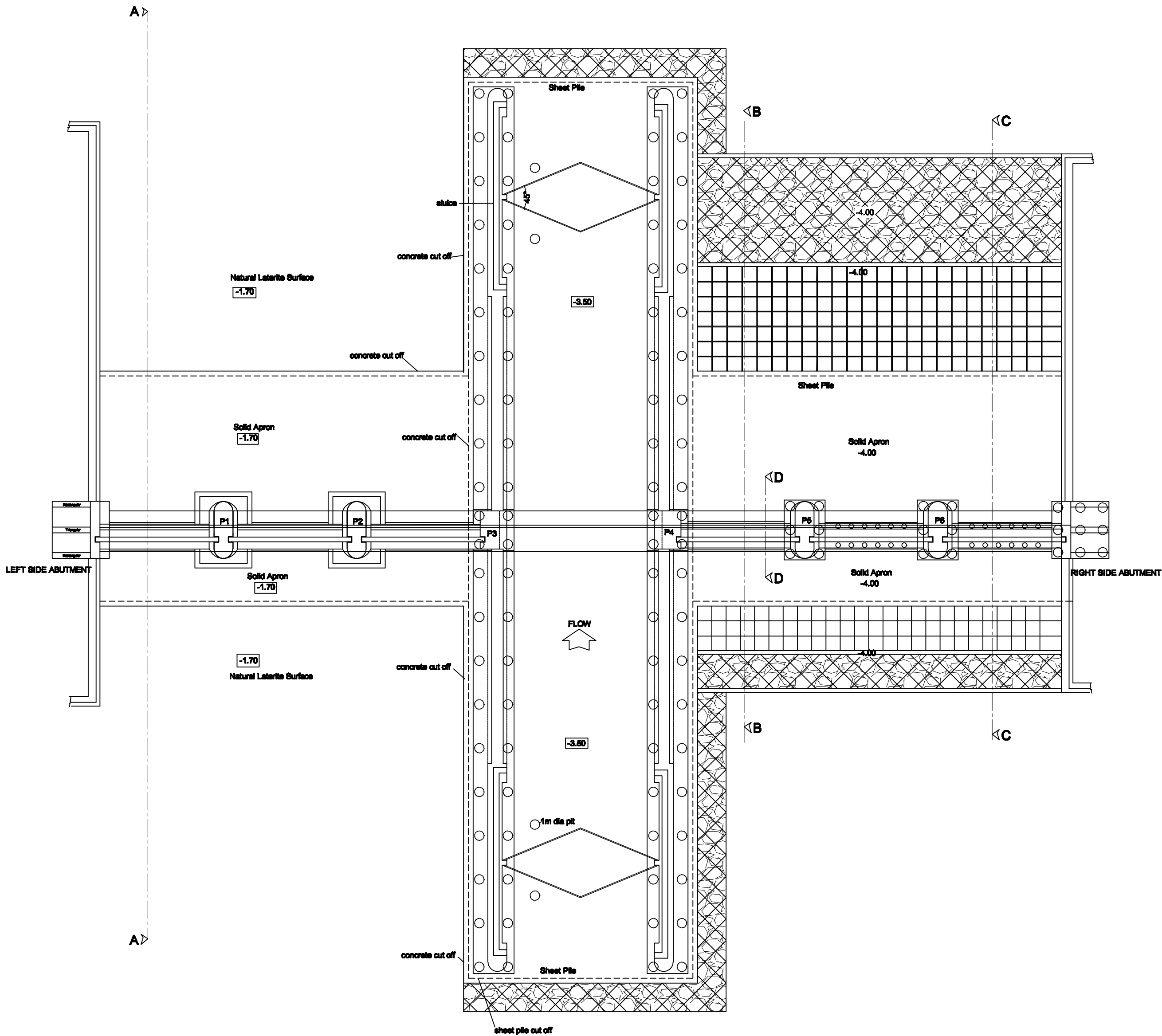
Ground Level	+1.48	-0.42	-0.87	-2.38	-3.83	-3.57	-4.50	-2.63	+0.65
Chainage	0.00	13.00	27.00	41.00	56.00	69.00	83.00	97.00	106.00
Laterite Level	-0.02	-1.82	-0.87	-2.38	-0.83	-0.87	—	-10.13	—
Hard Rock Level	BH 1 -17.87	BH 2 -14.17	BH 3 -14.62	BH 4 -14.11	BH 5 -16.16	BH 6 -14.32	BH 7 -18.25	BH 8 -13.63	BH 9 -17.80

ELEVATION

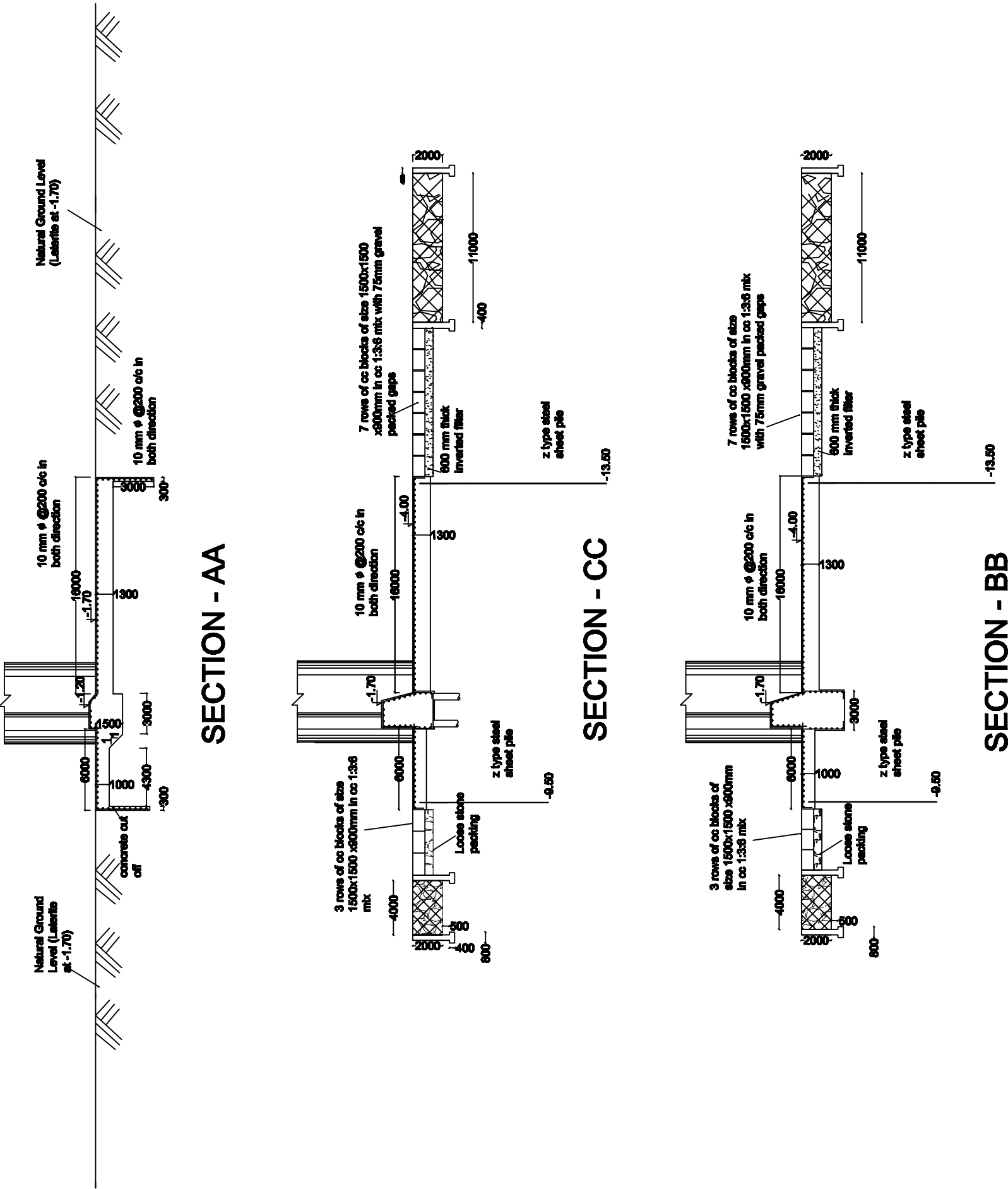


SECTION - DD
Scale 1:15

TABLE			
Pier No	Distance from Abutment A1	Bottom level of footbridge	Top Level of Pier
A1	0.00	6.780	7.81
P1	12.00	7.252	8.302
P2	26.00	7.826	8.876
P3	40.00	8.400	9.450
P4	56.80	8.400	9.450
P5	71.60	7.626	8.876
P6	85.60	7.252	8.302
A2	99.60	6.780	7.81



PLAN



True copy
Joint Director Dams

Notes

- This drawing is prepared based on the indent received on 19/03/2018 and vide letter No. D1-1093/2017 dated 09/04 /2018 of the Executive Engineer M.I. Division Kannur and letter No. DB-11/2017 dated 16/05 /2018 of the Deputy Director Instrumentation Division, KERI, Peechi.
- All dimensions are in millimetres and levels are in metres.
- No dimension shall be scaled off, only written dimensions to be followed.
- All specifications shall be strictly in accordance with latest editions of relevant IS codes & I.R.C Sections I, II, III & VII.
- Hydraulic Particulars
 - Maximum Flood Level = + 2.40
 - Maximum Flood Discharge = 1075 m³/sec
 - Width of river = 99.60 m
 - Shutter Top Level = +1.80
 - High Tide Level = +1.170
 - Low Tide Level = -0.450
 - Low water level = -0.455
- Concrete Mix adopted
 - Apron, Weir foundation & Weir,Pier - CC M20
 - Foot bridge - M20
 - Pier cap, Abutment Cap, Abutment - M25
 - Lock wall, Pile cap - M30
 - Pile - M35
 - Maximum nominal size of aggregate - 20 mm
- The chainages and levels are based on the cross section details received through indent. Any variation in levels should be reported to this office.
- Cover for all reinforcement shall be as per standards. High yield strength deformed bars conforming to IS 1786-79 of grade 415 should be used.
- Gabion blocks shall be provided for a length of 4.00 m in the Up-Stream and 11.00 m in the Down Stream.
- The Gabion boxes of size 2m x 1m x 1m shall be made of mechanically woven double twisted wire mesh of PVC coated galvanized steel of diameter 2.7mm / 3.7 mm (ID /OD) as per IS 16014-2012. Each box shall be tied up to the adjacent boxes to form a mat.
- The Gabion boxes shall be filled before placing in the required location and the stones shall be larger than the mesh openings and of more or less uniform size. The basket shall be full and not bulging.
- Bank connection and side protection shall be provided as per site conditions.
- Proper drainage arrangements (Weep holes along with filter materials) shall be provided to the down stream side of the abutments. Filling materials behind abutment should be as per appendix VI of IRC 78-1983.
- Suitable bed protection shall be done during execution to prevent excessive erosion of bed materials.
- Operating platform , hoisting arrangements of shutter shall be provided suitably in consultation with the Mechanical wing of Irrigation Department.
- Abutments and wing walls shall be constructed monolithically.
- Expansion joints and construction joints shall be provided at suitable intervals and shall be in accordance with standard .
- All embedded parts required for fixing the gate should be fixed simultaneously with concreting of pier and abutments.
- The groove size provided 600 x 600 mm is tentative and can be fixed in consultation with the Mechanical wing of Irrigation Department. "C" Groove may be provided upto +2.70 & thereafter "L" Groove may be provided. The groove portion in the lock gate shutter pier should also be fixed in consultation with the Mechanical wing before construction.
- For more details refer sheet No.2 / 5, 3 / 5, 4 / 5 & 5 / 5 of this drawing.
- It should be ensured that the founding strata below the apron should have a safe bearing capacity of 60tonne/m² in submerged condition.
- Concrete cutoff should be provided in the laterite portions and should go to a depth of 3m and in the clayey strata sheet piles should be used. Grouting should be done in the laterite portion to seal the fissures and cracks in the laterite. The cutoff provided along the length of Lock-wall should be strictly connected with that provided along the cross section.
- Hot rolled Z- sheet piles conforming to IS 2314 / 1986 with thickness 8.5mm and specification as per circular No.15/92IDRB/CS (Vol - 9) dated 25 /03 /2015 shall be strictly followed. The circulars are published in web-site of Irrigation Department.
- Vibro- sinkers / drop hammers of suitable capacity as specified in IS 11150/1993 shall be used for driving sheet piles.
- Cut-offs should suitably extended into the bank as per clause 17.1 of IS 6966-1989
- As the new structure is aligned 18m upstream of the existing one care should be taken to avoid any obstructions in the alignment of cut-off as improper cut-offs may leads to seepage. The existing structure should be demolished and the pile foundation along the alignment of Lock-wall should be removed as it may cause obstruction to the new foundation.
- The adequacy of the various provisions in the drawing shall be verified in detail with the site conditions. Changes if any shall be reported to this office before the execution of the work & revised design shall be obtained.
- Before taking up the project,technical feasibility and financial viability of the proposal as a whole shall be examined at site by the Chief Engineer, Irrigation & Administration and fully satisfied by himself to ensure the overall and long term safety of the structure.
- Two holes of 1m dia deep may be provided in the apron of the lock portion for de watering
- Weir is founded on red late rite with a safe bearing capacity more than 25 t/m².If the depth of founding level of weir is more than 3.2 m from ground level it shall be reported to this office and revised design shall be obtained.
- 3 shutters of size 12x3 m on left side and 3 shutters of 12x3.5 m on right side and lock shutter (diamond type)of height 5.30 m are provided.

Special Note
Shutters shall be fully opened before the commencement of the rainy season.

IRRIGATION DEPARTMENT, KERALA IRRIGATION DESIGN AND RESEARCH BOARD				
REV. No.	FILE No.	CONSTRUCTION OF REGULATOR AT PARAPRAM ACROSS ANJARAKKANDY RIVER IN PINARAYI GRAMA PANCHAYATH IN KANNUR DISTRICT. GENERAL DRAWING		
		DESIGN	CHD	REC'D
		ASSISTANT DIRECTOR	DEPUTY DIRECTOR	DIRECTOR
		K.R.BANTHOSH	REWD	APPD
		DIAMAN	JOINT DIRECTOR	CHIEF ENGINEER
		FILE NO: DAMS AD - 922917-IDRB	THIRUVANANTHAPURAM DATE 13/08/ 2018	DRG. NO. 28/2018 SHEET NO.1/5