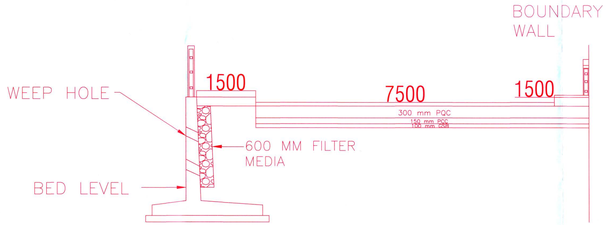
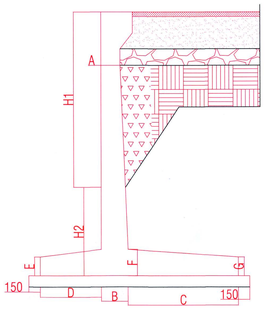


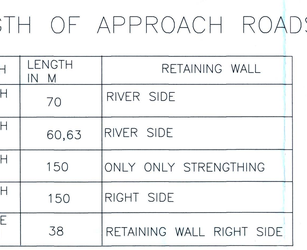
SEC–A–A



RETAINING WALL

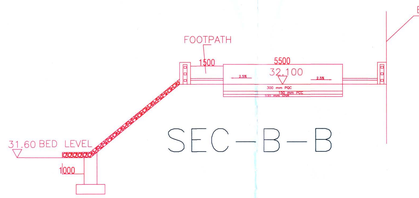
DETAIL OF RETAINING WALL

RETAINING WALL										
TYPE	A	B	C	D	E	F	G	H	H1	H2
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
TYPE–1	250	350	1450	800	250	550	250	750	2000	1500
TYPE–2	250	500	1900	1000	250	450	250	1100	3000	1500
TYPE–3	250	600	2400	1300	250	550	250	1600	4000	1500
TYPE–4	250	700	2750	1500	300	550	300	1950	5000	1650
TYPE–5	250	800	3200	1700	450	800	450	2200	6000	1850
TYPE–6	250	1000	3800	1900	500	1000	500	2750	7000	2050
TYPE–7	250	1100	4000	2100	600	1150	600	2750	8000	2150
TYPE–8	250	1200	4100	2200	700	2000	700	2750	9000	2150
TYPE–9	250	1400	4500	2200	800	2000	800	2750	10000	2500
TYPE–10	250	1700	5000	2650	800	2500	800	3000	11000	3000

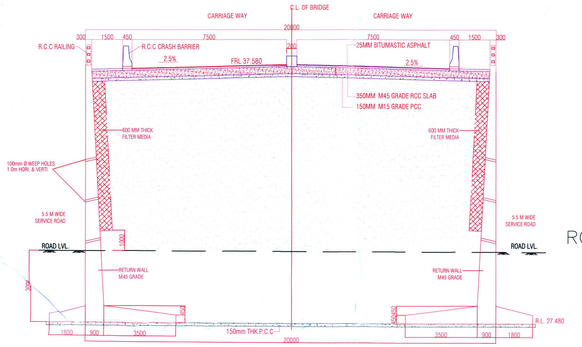


LENGTH OF APPROACH ROADS

SR. NO.	WIDTH OF ROAD	FOOTPATH	LENGTH IN M	RETAINING WALL
A	7.5M CC ROAD	1.5M BOTH SIDE	70	RIVER SIDE
B	5.5M CC ROAD	1.5M BOTH SIDE	60,63	RIVER SIDE
C	7.5M CC ROAD	1.5M BOTH SIDE	150	ONLY ONLY STRENGTHING
D	5.5M TO 20M	1.5M BOTH SIDE	150	RIGHT SIDE
E	20M CC ROAD MAIN BRIDGE	BOTH SIDE FOOTPATH	38	RETAINING WALL RIGHT SIDE

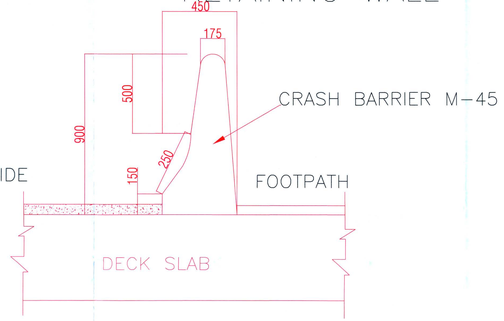


SEC–B–B

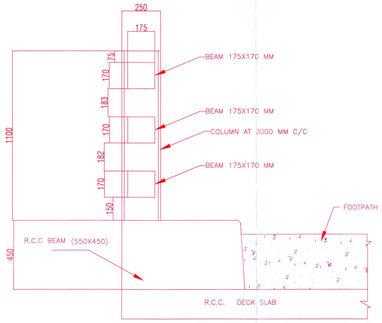


TYPICAL CROSS SECTION OF RETAINING WALL

SCALE:-1:100



ANTI CRASH BARRIER



R.C.C PARAPET

1) GENERAL
A) ALL DIMENSIONS ARE IN MILLIMETER & LEVELS ARE IN METER UNLESS OTHERWISE SPECIFIED.
B) FIGURED DIMENSIONS SHALL NOT BE SCALED FROM THE DRAWING.
C) DESIGN CRITERIA
THE DESIGN IS ACCORDING TO THE FOLLOWING CODES.
a. IRC 6-2014
b. IRC 21-2004
c. IRC 5-2017
d. IRC 112-2020
e. IRC SP-20 (PART-III)
f. IRC SP-114-2019
D) THE BRIDGE ARE APPLICABLE FOR " SEVERE " EXPOSURE CONDITIONS & SEISMIC ZONE IV
E) WIND LOAD DETAILS CONSIDERED IN DESIGN:
a. BASIC WIND SPEED :- 39 m/s
b. TYPE OF TERRAIN :- PLAIN TERRAIN
2) CONCRETE
A) CEMENT SHALL BE OF OPC 53 GRADE WITH CSA CONTENT FROM 5% TO 8% AS PER NOTE NO(6) UNDER CLAUSE 14.4.2 OF IRC:112-2020 & CONFORMING TO IS:12269 CAPABLE OF ACHIEVING THE REQUIRED DESIGN CONCRETE STRENGTH SHALL ONLY BE USED.
B) TO IMPROVE WORKABILITY OF CONCRETE, ADMIXTURE CONCRETE FORMING TO IS:9925 AND IS:9103 MAY BE USED WITH PRIOR APPROVAL OF ENGINEER-IN-CHARGE. CHLORIDE PROVEN USE, ADMIXTURES GENERATING HYDROGEN, NITROGEN ETC. SHOULD NOT BE USED.
3) REINFORCEMENT
A) GRADE: Fe500D CONFORMING TO IS:1786-2008.
B) EPOXY COATED (ENDED) EPOXY COATED STEEL SHALL BE USED)
4) WATER
A) WATER TO BE USED IN CONCRETING AND CURING SHALL CONFIRM TO CLAUSE 10.4.3 OF IRC 112-2020.
5) BEARING
A) ELASTOMERIC BEARING SHALL BE USED.
6) WORKMANSHIP DETAILING
A) FOR OBSERVING PROPER COVER OF CONCRETE TO REINFORCEMENT SPECIALLY MADE POLYMER COVER BLOCKS OF 50 MM SHALL BE USED.
B) CONCRETE GRADE

SR. NO.	DESCRIPTION	GRADE OF CONCRETE	BARS COVERS	GRADE OF STEEL
01	RETAINING WALL	M35	50mm	Fe500D
02	CRASH BARRIER	M45	50mm	CONFORMING TO IS:1786-2008

C) LAPS IN REINFORCEMENT
1) FOR CLOSELY SPACED BARS LAPPING MAY BE AVOIDED BY PROVIDING SUITABLE TYPE OF MECHANICAL SPLICES.
2) PLACING OF REINFORCEMENT BARS SHALL BE AS PER IS:2502.
D) PROPER COMPACTION OF CONCRETE SHALL BE ENSURED BY USE OF FORM AND/OR NEEDLE VIBRATORS. USE OF FULL WIDTH ACROSS VIBRATORS FOR COMPACTION OF CONCRETE IN DECK SLAB SHALL BE ENSURED.
E) SUITABLE OPENINGS SHALL BE PROVIDED IN FORMWORK TO ENABLE THE COMPACTION BY FORM VIBRATORS.
F) SHARP EDGES OF CONCRETE SHALL BE CHAMFERED.
G) BACKFILL MATERIAL BEHIND END WALL SHALL BE SELECTED SOIL HAVING PROPERTIES AS: C=0 kg/Sq. ft. ϕ = 30°, DENSITY OF EARTH FILL γ = 1916 KG/M³ TO 2000 KG/M³ (I SHALL BE CONFIRM WITH IRC:78:2014.
7) SPECIFICATION
A) THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH MORTH (5TH REV.) SPECIFICATION FOR ROAD & BRIDGE WORKS.
B) IF ANY DISCREPANCY IS FOUND BETWEEN BORE HOLE DATA OF SOIL INVESTIGATION REPORT AND SITE,SAME SHALL BE IMMEDIATELY NOTIFIED TO ENGINEER-IN-CHARGE.
C) IN CASE OF LEVELS, SHOULD BE CHECKED WITH GAD BEFORE EXECUTION AT SITE. IF ANY DISCREPANCY FOUND, IMMEDIATELY BROUGHT IT TO THE NOTICE OF DESIGN ENGINEER FOR NECESSARY MODIFICATION IN THE DRAWING.
D) IF ANY CHANGES WILL BE SUBJECTED TO CORRESPONDING CHANGES IN APPROVED PLAN & PROFILE DRAWING.
E) SIZE OF RETURN WALL AND RETAINING WALL IN THIS DRG. ARE TENTATIVE, AND ARE SUBJECTED TO MODIFICATION AS PER SITE CONDITIONS AT THE TIME OF EXECUTION.
F) WEEP HOLES SHALL BE 100mm Ø PVC @1500mm C/C IN STAGGERED FASHION.

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Email- kotecha.prabbi@gmail.com

CLIENT:- EXECUTIVE ENGINEER, DEVBHOOMI -DWARKA R&B DIVISION,KHAMBALIYA

NAME OF WORK:-
CONSTRUCTION OF MAJOR BRIDGE NEAR KHAMNATH BRIDGE IN PLACE OF DAMAGED BRIDGE ON RIVER GHEE ON KHAMBALIYA PORBANDAR ROAD IN KHAMBALIYA NAGAR PALIKA LIMIT ON NEW ALIGNMENT. (MAJOR BRIDGE PORTION ONLY)
GENERAL ARRANGEMENT DRAWING

TITLE:-.GENERAL ARRANGEMENT DRAWING OF APPROACH OF MAJOR BRIDGE 6X21.40m SPAN

DEPUTY EXECUTIVE ENGINEER
R. & B. SUB DIVISION
JAM-KHAMBHALIA.

Executive Engineer
Dev. Bhumi Dwarka(R&B)Division
Khambhalia