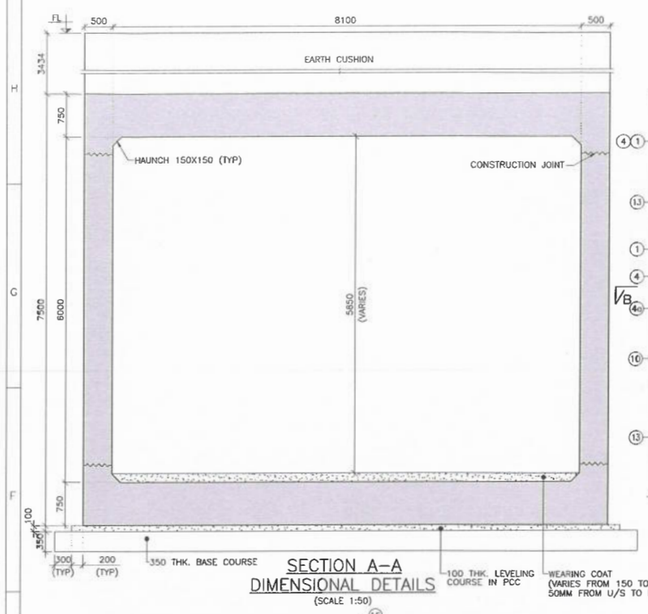
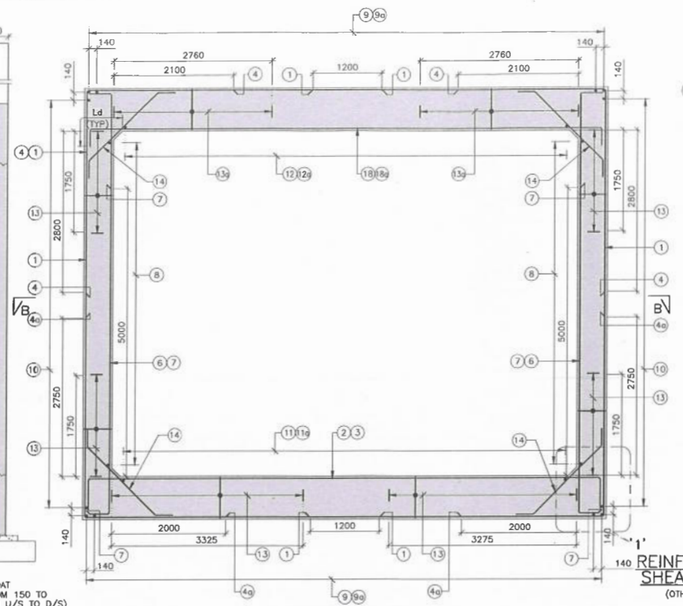


SECTION A–A
DIMENSIONAL DETAILS
(SCALE 1:50)

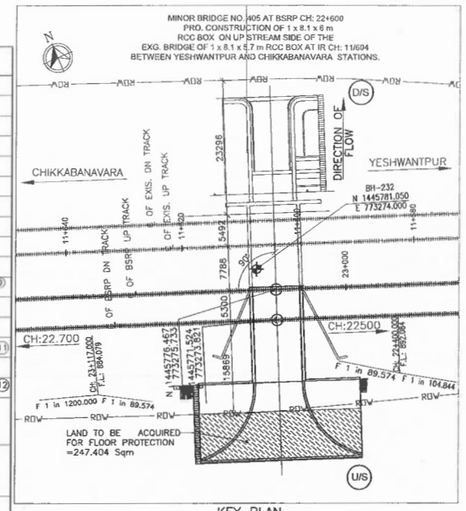


SECTION A–A
REINFORCEMENT DETAILS
(SCALE 1:50)

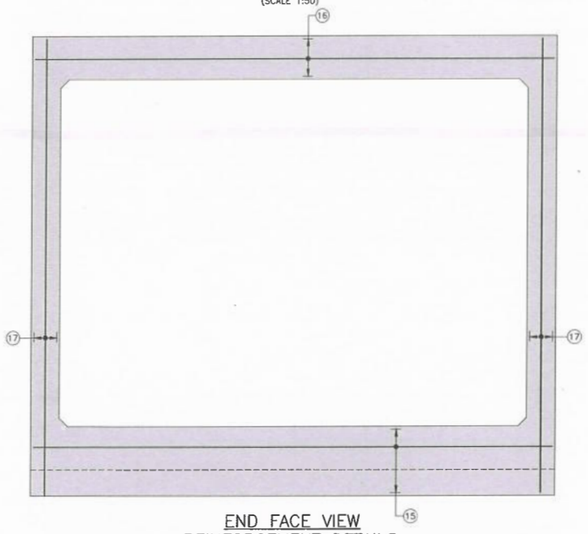
REINFORCEMENT DETAILS OF
SHEAR KEY AT BASE SLAB
(OTHER REINF. NOT SHOWN FOR CLARITY)
(SCALE 1:50)

SCHEDULE OF REINFORCEMENT

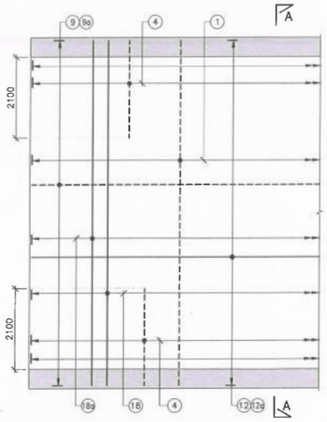
ITEM	BAR MARK	BAR DIA.	SHAPE	TOTAL NOS./ SPACINGS	REMARKS
	1	ϕ16		@ 115 c/c	
	2	ϕ20		@ 115 c/c	
	3	ϕ20		@ 115 c/c	BUNDLE WITH 2
	4	ϕ32		@ 115 c/c	BUNDLE WITH 1
	4a	ϕ25		@ 115 c/c	BUNDLE WITH 1
	5				NOT USED
	6	ϕ12		@ 115 c/c	
	7	ϕ10		@ 115 c/c	BUNDLE WITH 6
	8	ϕ10		@ 140 c/c	M = 350
	9	ϕ10		@ 140 c/c	
	9a	ϕ10		@ 280 c/c	ALT. BUNDLE WITH 9
	10	ϕ10		@ 140 c/c	M = 350
	11	ϕ10		@ 140 c/c	
	11a	ϕ10		@ 280 c/c	ALT. BUNDLE WITH 11
	12	ϕ10		@ 140 c/c	M = 600
	12a	ϕ10		@ 280 c/c	ALT. BUNDLE WITH 12 M = 600
	13	ϕ8		@ 115 c/c ACROSS RAIL DIRECTION @ 140 c/c ALONG RAIL DIRECTION	
	13a	ϕ10		@ 115 c/c ACROSS RAIL DIRECTION @ 280 c/c ALONG RAIL DIRECTION	
	14	ϕ10		@ 115 c/c	HAUNCH BAR
	15	ϕ12		@ 170 c/c	
	16	ϕ10		2x3 NOS.	EACH FACE
	17	ϕ10		2x2x3 NOS.	EACH FACE
	18	ϕ16		@ 115 c/c	
	18a	ϕ25		@ 115 c/c	BUNDLE WITH 18



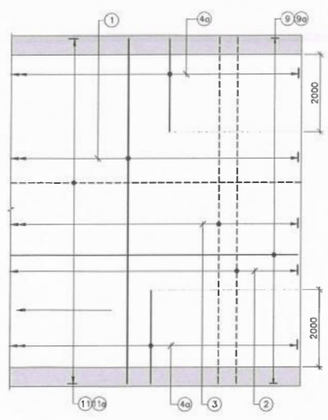
KEY PLAN
(SCALE 1:500)



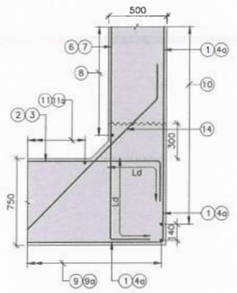
END FACE VIEW
REINFORCEMENT DETAILS
(OTHER REIN. NOT SHOWN FOR CLARITY)
(SCALE 1:50)



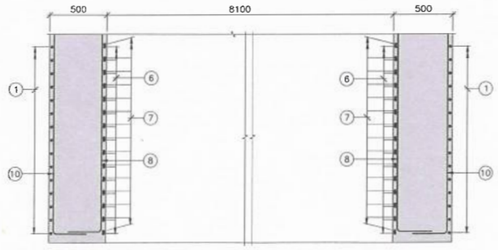
PLAN SHOWING TOP
SLAB REINFORCEMENT
(ONLY TOP SLAB REINFORCEMENT SHOWN FOR CLARITY)
(BAR MARK 13a & 14 NOT SHOWN FOR CALRITY)
(SCALE 1:75)



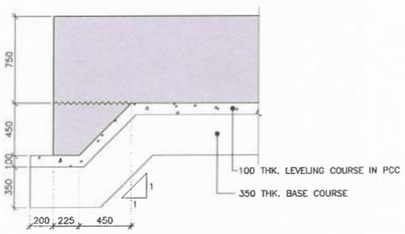
PLAN SHOWING BOTTOM
SLAB REINFORCEMENT
(ONLY BOTTOM SLAB REINFORCEMENT SHOWN FOR CLARITY)
(BAR MARK 13 & 14 NOT SHOWN FOR CALRITY)
(SCALE 1:75)



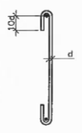
DETAIL – 1 (TYP)
(SCALE 1:25)



PART SECTIONAL PLAN B–B
(SCALE 1:25)



DIMENSIONAL DETAILS OF
SHEAR KEY AT BASE SLAB
(SCALE 1:25)



TYPICAL DETAILS OF
HOOK FOR LINKS
(d – DIAMETER OF LINKS)
(SCALE 1:20)

STUP CONSULTANTS PVT. LTD. * BANGALORE *

Structural Design Proof - Checked and Found Satisfactory

Dr. A. MEHER PRASAD
Professor
Department of Civil Engineering
Indian Institute of Technology Madras
Chennai - 600 036, India

MAXIMUM BASE PRESSURE=24 T/M²
SAFE BEARING CAPACITY=40 T/m²

SI NO	ALTERATION NO	DESCRIPTION	SIGNATURE OF OFFICER

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES. LEVELS AND CHAINAGE ARE IN METRES UNLESS SPECIFIED OTHERWISE.
2. FOLLOW FIGURED DIMENSIONS ONLY DO NOT SCALE THE DRAWING.
3. GRADE OF CONCRETE SHALL BE – M35.
4. GRADE OF STEEL SHALL BE Fe–500 CONFORMING TO IS:1786–2008.
5. MINIMUM CLEAR COVER TO REINFORCEMENT SHALL BE 50MM
6. DEVELOPMENT LENGTH REPRESENTED BY Ld SHALL BE EQUAL TO 52 TIMES THE DIA OF BAR
7. LAP LENGTH SHALL BE EQUAL TO 72 TIMES THE DIA OF BAR.
8. LAPPING OF BARS SHALL BE SUITABLY STAGGERED AND IN NO CASE MORE THAN 50% BARS SHALL BE LAPPED AT ANY SECTION.
9. PARAMETERS CONSIDERED FOR DESIGN:–
   a) ANGLE OF INTERNAL BACKFILL — ϕ = 30°
   b) COHESION OF BACKFILL — C = 0
   c) WALL FRICTION ANGLE — δ = 10°
   d) SATURATED DENSITY OF BACKFILL — γ = 20kN/m³
   e) FRICTION COEFFICIENT BETWEEN SOIL AND CONCRETE — μ = TAN ϕ
   f) DESIGNED FOR 25T AXIAL LOAD 2008 – STD
10. SBC SHOULD BE ENSURED AT SITE BEFORE EXECUTION.

LEGEND:

THK. — THICKNESS
PCC — PLAIN CEMENT CONCRET
TYP — TYPICAL
℄ — CENTER LINE
FL — FORMATION LEVEL
– – – TOP REINFORCEMENT
——— BOTTOM REINFORCEMENT

REFERENCE:

1. DESIGN DOCUMENT NO :– DOC–BSRP–CR2–AC–DGN–BR–20–1567
2. GENERAL ARRANGEMENT DRAWING No :– 022077–BSRP–CR2–C–NB–0–20–1210.
3. GIR No :– DOC–BSRP–CR2–AC–DGN–GB–10–1164

EMPLOYER :
RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED

GENERAL CONSULTANTS:
EGIS AECOM WSP EGIS–AECOM–WSP

CONTRACTOR :
L&T CONSTRUCTION

PROOF COUNSULTANT :
INDIAN INSTITUTE OF TECHNOLOGY MADRAS
IIT P.O., Chennai 600 036, INDIA

DETAILED DESIGN CONSULTANT (DDC) :
L&T CONSTRUCTION
EDRC–SPECIAL BRIDGES – TIIC

STUP Consultants Pvt. Ltd.
JP & Devi Jambukeshwar Arcade
66, 4th Floor,
Millers Road, Bengaluru-560052.
Tel.: 080-40297879
Email : bangalore@assystem.com
www.assystem.com

LOADING STANDARD
A) PRO.BRIDGE:25T–AXLE LOAD 2008 STD

DIMENSIONAL AND REINFORCEMENT DETAILS

BENGALURU SUBURBAN RAILWAY PROJECT(BSRP)
BETWEEN STATIONS BENNIGANAHALLI AND CHIKKABANAVARA

PRO. CONSTRUCTION OF MINOR BRIDGE No.405
AT CH: 22+600 OF 1 x 8.1 x 6 m
[3.452 EARTH CUSHION]

HQ.DRG.NO:

SCALE - AS SHOWN | O22077-BSRP-CR2-C-NB-0-20-1211-E

DETAILED DESIGN CONSULTANT (DDC)		
PREPARED BY	CHECKED BY	APPROVED BY
VJK	BYM	ADR

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SrDEN/SBC	Sri.RAJIVE SHARMA
ADRM/T/SBC	Sri.LAKSHMAN SINGH
DRM/SBC	Sri.SHYAM SINGH

DESIGN DIRECTOR (L&T)	
PROJECT MANAGER (L&T)	
PROJECT DIRECTOR (GC)	
Add.GM/Civil/PROJECTS (K RIDE)	
GM/CIVIL/PROJECTS (K RIDE)	

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