



MAXIMUM BASE PRESSURE=19.4 T/m²
SAFE BEARING CAPACITY=20.6 T/m²

SCHEDULE OF REINFORCEMENT

ITEM	BAR MARK	BAR DIA.	SHAPE	TOTAL NOS./ SPACINGS	REMARKS
1	1	16		140 c/c	
2	2	20		140 c/c	
3	3	25		140 c/c	BUNDLE WITH 2
4	4	10		140 c/c	BUNDLE WITH 1
4a	4a	12		140 c/c	BUNDLE WITH 1
5	5	20		140 c/c	BUNDLE WITH 1
6	6	12		140 c/c	
7	7	10		280 c/c	ALT. BUNDLE WITH 6
8	8	10		140 c/c	M = 200
9	9	10		140 c/c	M = 200
9a	9a	10		280 c/c	ALT. BUNDLE WITH 9
10	10	10		140 c/c	M = 200
11	11	10		140 c/c	
11a	11a	10		280 c/c	ALT. BUNDLE WITH 11
12	12	10		140 c/c	
12a	12a	10		280 c/c	ALT. BUNDLE WITH 12
13	13	12		140 c/c ACROSS RAIL DIRECTION 280 c/c ALONG RAIL DIRECTION	
14	14	10		140 c/c	HAUNCH BAR
15	15	12		170 c/c	
16	16	10		2x3 NOS.	EACH FACE
17	17	10		2x2x3 NOS.	EACH FACE

Structural Design Proof-checked and Found Satisfactor

RUPEN GOSWAMI

Professor

Dept. of Civil Engineering
I.I.T. Madras, Chennai 600033

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES. LEVELS AND CHAINAGE ARE IN METRES UNLESS SPECIFIED OTHERWISE.
- FOLLOW FIGURED DIMENSIONS ONLY DO NOT SCALE THE DRAWING.
- GRADE OF CONCRETE SHALL BE - M35.
- GRADE OF STEEL SHALL BE Fe-500 CONFORMING TO IS:1786-2008.
- MINIMUM CLEAR COVER TO REINFORCEMENT SHALL BE 50MM.
- DEVELOPMENT LENGTH REPRESENTED BY L_d SHALL BE EQUAL TO 52 TIMES THE DIA OF BAR.
- LAP LENGTH SHALL BE EQUAL TO 72 TIMES THE DIA OF BAR.
- LAPPING OF BARS SHALL BE SUITABLY STAGGERED AND IN NO CASE MORE THAN 50% BARS SHALL BE LAPPED AT ANY SECTION.
- PARAMETERS CONSIDERED FOR DESIGN:-
 - a) ANGLE OF INTERNAL BACKFILL $\phi = 30^\circ$
 - b) COHESION OF BACKFILL $c = 0$
 - c) WALL FRICTION ANGLE $\delta = 10^\circ$
 - d) SATURATED DENSITY OF BACKFILL $\gamma = 20kN/m^3$
 - e) FRICTION COEFFICIENT BETWEEN SOIL AND CONCRETE $\mu = \tan \phi$
 - f) DESIGNED FOR 25T AXIAL LOAD 2008 - STD
- SBC SHOULD BE ENSURED AT SITE BEFORE EXECUTION.
- IF ANY AMBIGUITY IS FOUND IN DRAWINGS OR AT SITE, THE SAME SHALL BE BROUGHT TO ENGINEER'S DESIGNERS NOTICE BEFORE EXECUTION.

LEGEND:

- THK. -- THICKNESS
PCC -- PLAIN CEMENT CONCRET
TYP -- TYPICAL
CL -- CENTER LINE
FL -- FORMATION LEVEL
---- TOP REINFORCEMENT
---- BOTTOM REINFORCEMENT

REFERENCE:

- DESIGN DOCUMENT NO. :- DOC-BSRP-CR2-AG-DGN-BR-20-1569
- GENERAL ARRANGEMENT DRAWING No. :- 022077-BSRP-CR2-C-NB-0-20-1216.
- GIR NO. :- DOC-BSRP-CR2-AG-DGN-GB-10-1166

EMPLOYER :

RAIL INFRASTRUCTURE DEVELOPMENT
COMPANY (KARNATAKA) LIMITED

GENERAL CONSULTANTS:

AECOM EGIS-AECDM-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 Jambukesthar Arcade
69, 4th Floor,
Mylas Road, Bengaluru-560052
Tel: 080-40387979
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 YESHWANTPUR AND CHIKKABANAVARA

PRO. CONSTRUCTION OF MINOR BRIDGE No.404
AT CH: 23.670 OF 1x8.2x3.05m
[2.906 EARTH CUSHION]

HQ.DRG.NO:

SCALE - AS SHOWN

O22077-BSRP-CR2-C-NB-0-20-1217-D



DETAILED DESIGN CONSULTANT (DDC)

PREPARED BY VJK
CHECKED BY BYM
APPROVED BY ADR

HQ/SWR/UBL	
JE/BRIDGE/HQ	
AXEN/BRIDGE/HQ	
Dy.CE/BR/HQ	
CBE/SWR	

SBC DIVISION	
Sr.DEN/N/SBC	Sr.PUSHPENDRA KUMAR
Sr.DEN/SBC	Sr.RAJIVE SHARMA
ADRM/T/SBC	Sr.LAKSHMAN SINGH
DRM/SBC	Sr.SHYAM SINGH

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