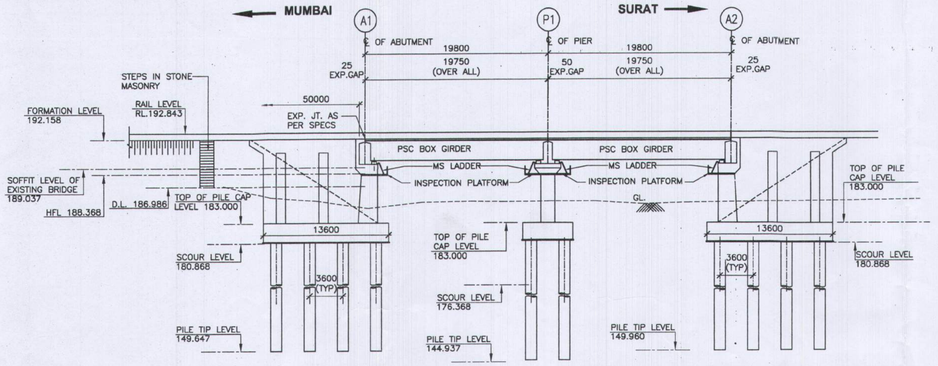
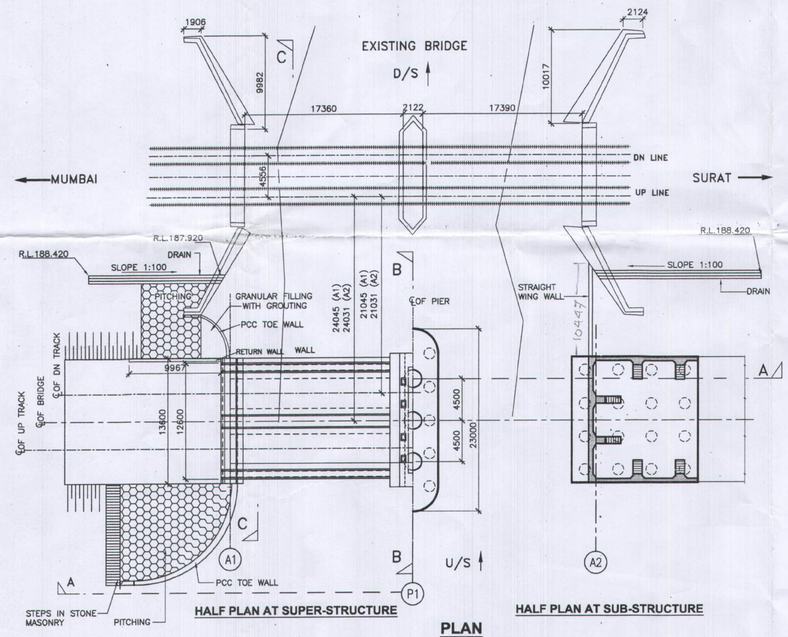
DFCC DRG. NO.: /DFC/D/WC-ST/MB- 190 /2012



FORMATION LEVEL (m)				192.158				192.158				192.158	192.158	192.158	192.158	192.158
GROUND LEVEL	185.128	185.389	185.428	184.083	185.327	185.267	184.899	184.580	184.837	184.631	184.96	185.163	184.891	184.891	184.945	184.937	184.881
CHAINAGES	-35.000	-30.000	-25.000	-19.800	-15.000	-10.000	-5.000	0.000	5.000	10.000	15.000	19.800	24.800	29.800	34.800	39.800	

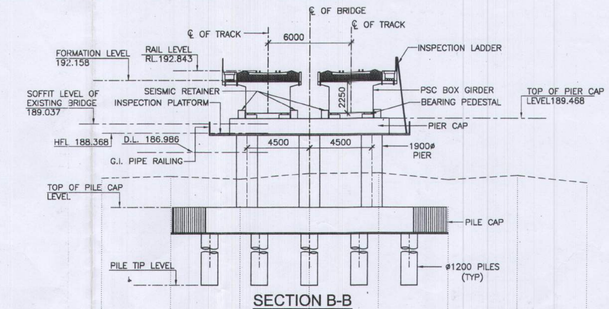
LONGITUDINAL ELEVATION A-A
SCALE 1:300



HALF PLAN AT SUPER-STRUCTURE

HALF PLAN AT SUB-STRUCTURE

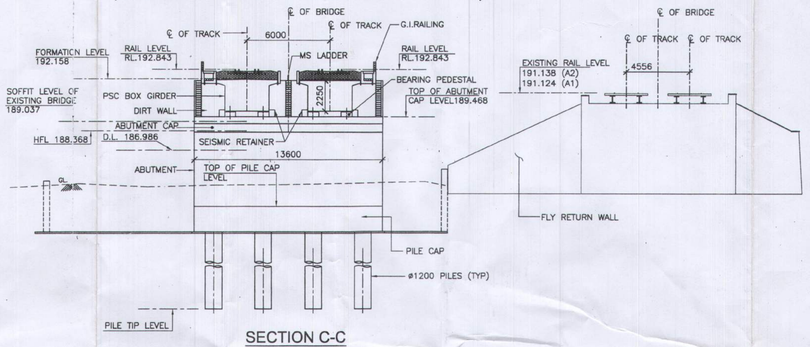
PLAN
SCALE 1:300



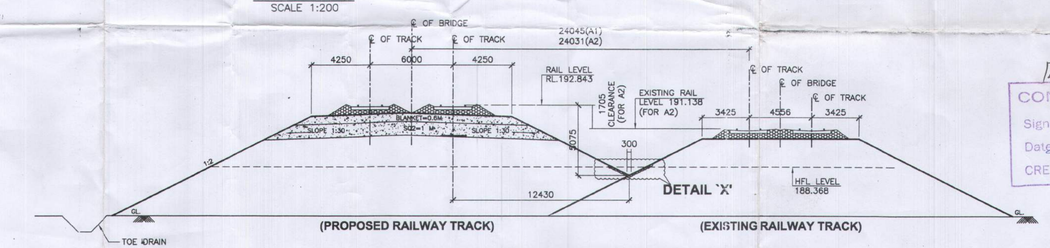
SECTION B-B
SCALE 1:200

DISTANCE	15.00	10.00	5.00	0.00	5.00	10.00	15.00	20.00
GROUND LEVEL	185.123	185.240	184.040	185.460	184.496	185.000	185.293	184.756

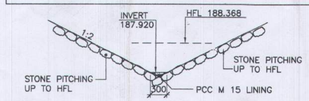
(NOTE:- GROUND LEVEL APPLICABLE ON PIER 'P1' ONLY)



SECTION C-C
SCALE 1:200



TYPICAL SECTION OF APPROACH EMBANKMENT
SCALE 1:200



DETAIL 'X'
SCALE 1:50

COMPARISION TABLE

SL. NO.	DESCRIPTION	EXISTING	PROPOSED
1.	RAIL LEVEL	191.138	192.843
2.	FORMATION LEVEL	190.453	192.158
3.	SOFFIT LEVEL	189.037	189.868
4.	H.F.L.	188.368	188.368
5.	CLEARANCE	0.669	1.500
6.	FREE BOARD	2.085	3.790
7.	LINEAR WATER WAY	34.720	35.350
8.	NO. OF SPANS	2	2
9.	BED LEVEL	VARYING	VARYING
10.	LOADING STANDARDS	MBG	DFCC
11.	INVERT LEVEL OF DRAIN	–	187.920
12.	DANGER LEVEL	186.986	186.986
13.	REFERENCE BENCH MARK AS TAKEN @A1	–	–
14.	PILE CAP TO LEVEL A1	MASS.CC. ABUTMENT	183.000
15.	PILE CAP TO LEVEL P1	EMBEDDED CI. PILES	183.000
16.	PILE CAP TO LEVEL A2	MASS.C.C. ABUTMENT	183.000

411/189/05
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Date
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CPM

THE LEVELS ARE CORRECTED AS PER SURVEY PLAN RECEIVED FROM SITE. REF-DRG: SOMA-DFCC-411-2001.
- BASE RAILL LEVEL ON EXISTING BRIDGE –UP TRACK – AT ABUTMENT A2 –191.138m
- EXISTING RAIL LEVEL TO HFL – 2.77m
- PROPOSED RAIL LEVEL –192.843m
- CLEARANCE ABOVE HFL – 1.5m
- DISCHARGE– 1072 M^3/SEC
- EXISTING BRIDGE SOFFIT LVL. – 189.037M

DESIGN CRITERIA :
I.R.S. BRIDGE RULES
I.R.S. CONCRETE BRIDGE CODE.
I.R.S. BRIDGE SUB-STRUCTURE AND FOUNDATION CODE.
I.R.S. SCHEDULE OF DIMENTIONS FOR DEDICATED FREIGHT CORRIDOR.
MANUAL ON THE DESIGN AND CONSTRUCTION OF WELL AND PILE FOUNDATIONS.
LOADING STANDERED: DFCC LOADING 2007
I.R.S. BRIDGE MANUAL.

TYPICAL NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER. ALL DIMENSIONS ARE TO BE READ AND NOT MEASURED.
2. SHOWN DIMENSIONS ARE TENTATIVE AND MAY CHANGE AFTER FINAL STRUCTURAL DESIGN.
3. THIS DRAWING IS BASED ON TOPOGRAPHIC, HYDROGRAPHIC SURVEY (AS APPROVED BY CPM/SURAT) AND GEOTECHNICAL INVESTIGATION CARRIED OUT AT SITE BY M/s. SOMA ENTERPRISE.
4. DELETED.
5. THE DRAWING AND DESIGN IS AS PER EMPLOYER'S REQUIREMENTS & SPECIFICATIONS AS CONTAINED IN THE CONTRACT AGREEMENT NO. HQ / EN / WC / BRIDGES / D&B /1 /SOMA AND THERE IS NO CHANGE.
6. SAFETY AND PROTECTION OF THE PROPOSED WORK AND SAFETY AND PROTECTION FOR THE RUNNING TRAINS ON THE EXISTING LINES IS TO BE ENSURED BY THE CONTRACTOR.
7. EXCAVATION/DISMANTLING OF ANY PORTION OF THE EXISTING BRIDGE OR IN ITS VICINITY OR ANY ELEMENT OF EXISTING PERMANENT WAY OR ANY WORK AFFECTING SAFETY OF THE EXISTING BRIDGE /PERMANENT WAY OR SAFETY OF THE RUNNING TRAINS WILL REQUIRE APPROVAL OF THE CONCERNED ZONAL RAILWAY AND COMPLIANCE OF THE SAFETY REQUIREMENT AS DIRECTED BY THE CONCERNED ZONAL RAILWAY.
8. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE DRAWING APPROVING AUTHORITY BEFORE EXECUTION OF WORK AT SITE.
9. FOUNDATION DEPTH AS SHOWN IN THE GAD IS TENTATIVE & MAY BE ALTERED AS PER DESIGN, REQUIREMENT; FINAL DEPTH SHALL BE INDICATED IN THE STRUCTURAL DRAWING, ANY ALTERATION / MODIFICATION REQUIRED DURING CONSTRUCTION STAGE WILL REQUIRE PRIOR APPROVAL OF DESIGN APPROVING AUTHORITY.
10. WEEP HOLE TO BE PROVIDED IN WING WALL/RETURNS AS PER IRS SUB-STRUCTURE CODE AND IRS CONCRETE BRIDGE CODE (MINIMUM 120ø PVC PIPES @1.5m SPACING BOTH WAYS) REF. CL. NO. 3.6 OF SPECIFICATIONS VOL-III.
11. EARTH FILLING BETWEEN THE EXISTING RAILWAY FORMATION AND PROPOSED DFCC FORMATION AS MARKED 'X' IN THE DRAWING TO BE KEPT ABOVE HFL.
12. EARTH WORK ON APPROACHES ON THE BRIDGES SHALL BE AS PER DFCC's SPECIFICATION REF. CL. NO. 2.1 TO 2.20 VOL-III
13. FOR BANK HEIGHT MORE THAN 5 M ADEQUACY OF BANK IS TO BE CHECKED BY DOING APPROPRIATE SLOPE STUDY ANALYSIS AND PROVIDE SUITABLE STRENGTHENING OR OTHER ARRANGEMENT TO MAKE BASE STRUCTURALLY SAFE.
14. PROPER BENCHING ON EXISTING FORMATION TO BE DONE BEFORE EXECUTION OF EARTHWORK FOR DFCC'S FORMATION.
15. BEHIND ABUTMENTS, WING WALLS AND RETURN WALLS BACK FILL MATERIAL SHALL BE PROVIDED AS PER DFCC's SPECIFICATION REF CL NO 3.5.7 AND 3.5.8 OF SPECIFICATIONS VOL –III & WITH MINIMUM Ø VALUE OF 35°
16. STONE PITCHING ON SLOPES OF BANK ON APPROACHES OF BRIDGE SHALL BE PROVIDED UPTO 300 MM ABOVE HFL DEPENDING UPON THE SITE CONDITION.
17. FOR TRANSITION SYSTEM ON APPROACH OF BRIDGES REFER SEPARATE DRG.
18. FOR BORE HOLE DETAILS REFER: SOMA/DFCC/548.
19. DELETED.
20. BEARING CAPACITY TO BE ASCERTAINED BY CONDUCTING INITIAL LOAD TEST AND WORKING LOAD TEST AT EACH SUB STRUCTURE LOCATION AND REPORTS SUBMITTED TO DESIGN CELL FOR APPROVAL BEFORE TAKING UP CONSTRUCTION.
21. FORMATION LEVEL/GROUND LEVEL/HFL/ DISCHARGE/ VERTICAL CLEARANCE/FREEBOARD/C.L. DISTANCE OF BRIDGES AS CERTIFIED BY CPM/SURAT.
22. CONSTRUCTION METHODOLOGY STATEMENT IN TERMS OF CLAUSE 4.2 (d) (VI) OF EMPLOYERS REQUIREMENT SHOULD BE PREPARED AND SUBMITTED FOR APPROVAL BEFORE EXECUTION OF WORKS.
23. WORK WILL BE EXECUTED AS PER EMPLOYERS REQUIREMENT AND SPECIFICATION CONTAINED IN THE CONTRACT AGREEMENT.
24. MINIMUM GRADE OF CONCRETE :
a. SUBSTRUCTURE – M40 b. FOUNDATION – M40
c. SUPER STRUCTURE – M50 d. WEARING COURSE – M35
25. THE OUTER SURFACE OF LINERS FOR TOP PORTION OF 10 M SHALL BE PAINTED WITH COAT TAR EPOXY PAINT WITH TOTAL DFT OF 140 MICRONS AS PER S.NO. 12 OF CLAUSE 8.3.1 OF EMPLOYER'S REQUIREMENTS FUNCTIONAL AND OUTLINE DESIGN.
26. NO. OF PILES SHOWN IN THIS GAD ARE TENTATIVE FOR DETAIL REFER RELEVANT STRUCTURAL DRAWING.

	SR.DEN(CN)W.RLY	DY. CE (CD) W. RLY.	CBE. W. RLY
	BCT	CCCC	CCCC

REV.	PARTICULARS	DRN.	CHD.	VER.	DATE
R5	COMPARISON TABLE MODIFIED	CJJ	HSG	NG	12.01.12
R4	BLOCK REMOVED	CJJ	HSG	NG	23.08.11
R3	MODIFIED AS PER DISCUSSION HELD IN DFCC OFFICE ON 21st & 22nd JULY-2011	KAMAL	HSG	NG	26.07.11
R2	MODIFIED AS PER M/S STUP LETTER NO. 13/E/6554/PB/MKM/1144 DATED 04.07.2011	CJJ	HSG	NG	07.07.11
R1	MODIFIED AS PER 'DBR-7' DTD. 16.02.2011	KAMAL	HSG	NG	22.03.11

CONTRACTOR REVISION NO.

THIS DRAWING IS THE PROPERTY OF DEDICATED FREIGHT CORRIDOR CORPORATION

CONTRACTOR : SOMA ENTERPRISE LTD.
SOMA MERIT, 9, VENKATESWAMY NAIDU STREET, TASKER TOWN, SHIVAJI NAGAR, BANGALORE - 560 051, KARNATAKA, INDIA.
TEL. NO. : +91-80-4025 4545, FAX NO. : +91-80-2286 4545
E-mail : smabir@somaenterprise.com

CONSULTANTS : TANDON CONSULTANTS PVT. LTD.
17, LINK ROAD, JANGPURA EXTN. NEW DELHI - 110014.
Tel : 24317684, 24310509, 24319288 Fax : 24310057
E-mail : tandon@tcpl.com & tcpl_123@yahoo.com

PROOF CONSULTANTS : STUP Consultants Pvt. Ltd.

OFFICE OF ORIGIN

PM/Dy. CPM	CPM	TCPL	PMC	SEL
			23.01.2012	

DRAWN BY: KAMAL
CHECKED BY: HSG
VERIFIED BY: NG
DATE OF ISSUE: 30.08.2010

CLIENT: DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.

PROJECT : WESTERN FREIGHT CORRIDOR : MAJOR BRIDGES BETWEEN VAITARNA AND UTRAN ON VASAI - BHARUCH SECTION

BRIDGE NO. : BRIDGE NO. 176 OF SURAT UNIT (EXT BRIDGE NO.411)

DRAWING TITLE : GENERAL ARRANGEMENT DRAWING OF 2x19.8 PSC BOX GIRDER BRIDGE AT KM 242/17-19 ON SAGARA RIVER

DRG.NO. SOMA-DFCC-411-C-1001 | REV. 5 | SCALE : AS SHOWN | STATUS : APPROVAL

STRUCTURAL

Jan 21, 2012 - 12:53pm

\\Komal\VOL1B-255 DFCC\Working Drawings\Bridge No.-411\SOMA-DFCC-411-C-1001-R5.dwg

USER: KAMAL P/SCALE: 1:1 (A1)