



# **PUBLIC WORKS DEPARTMENT** **(Government of Meghalaya)**

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**CONSULTANCY SERVICES FOR DETAILED PROJECT REPORT FOR UPGRADATION  
TO TWO LANE OF STATE ROAD STRETCHES FROM NONGSTOIN - DOMIASIAT VIA  
WAHKAJI ( TENTATIVE LENGTH - 66.00 KMS ) IN THE STATE OF MEGHALAYA UNDER  
PHASE B OF SARDP-NE**

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## **FINAL DETAILED PROJECT REPORT** **(BRIDGES & CULVERTS)**

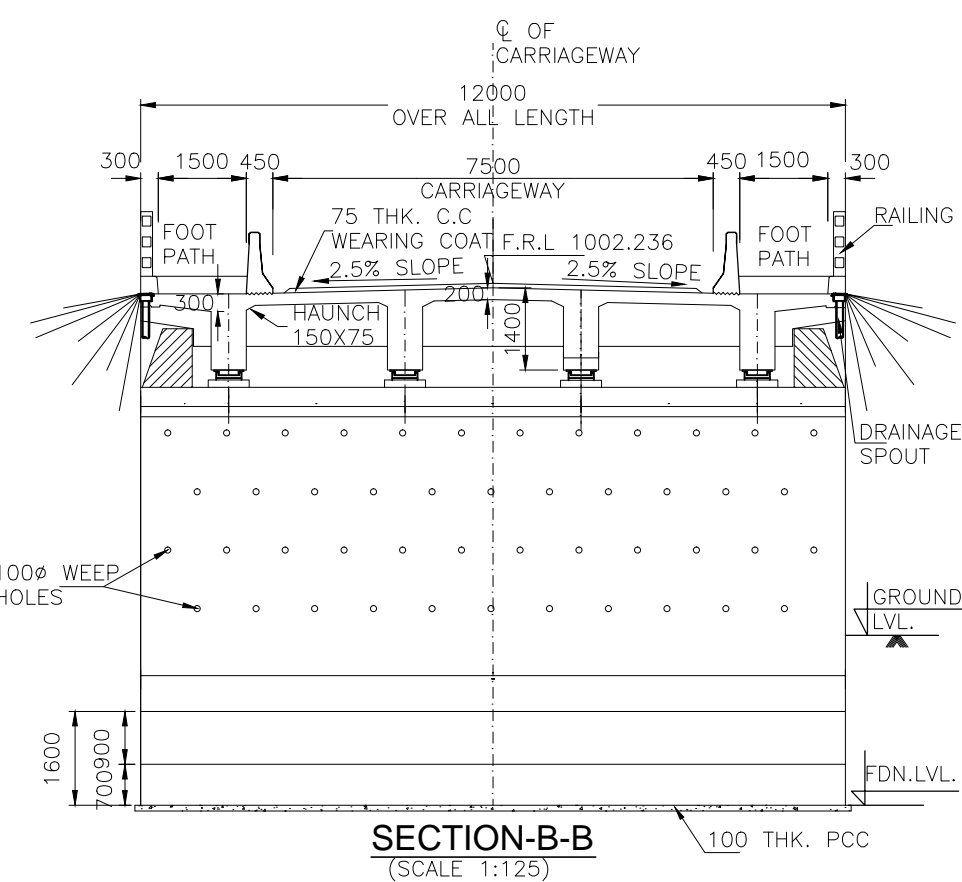
**JULY 2013**



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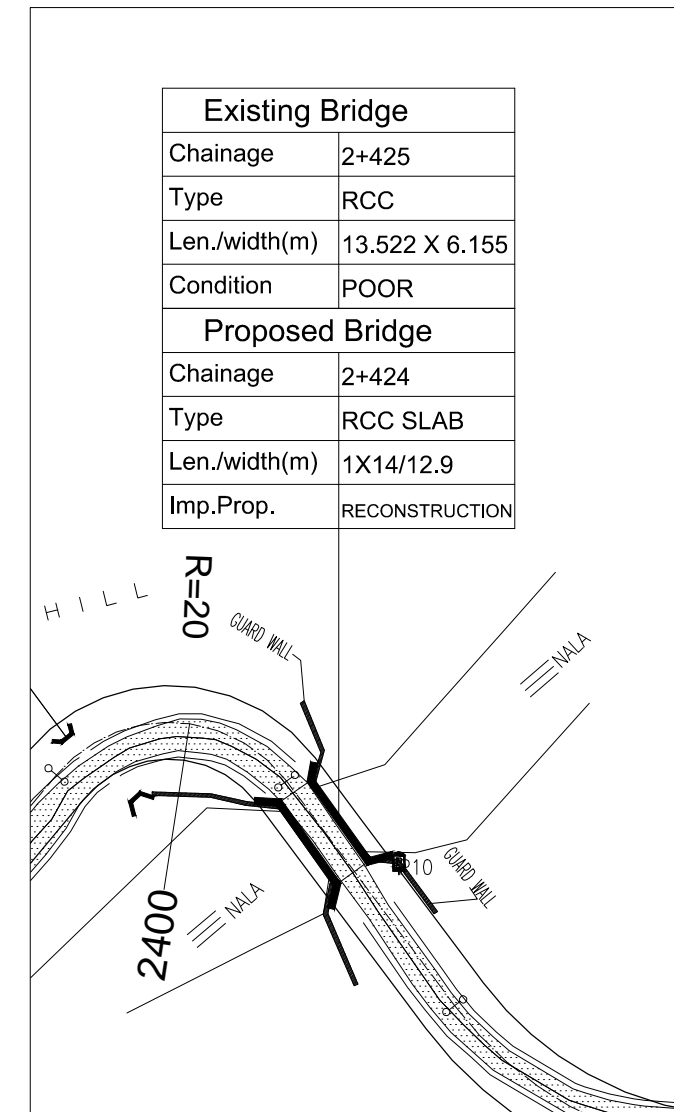
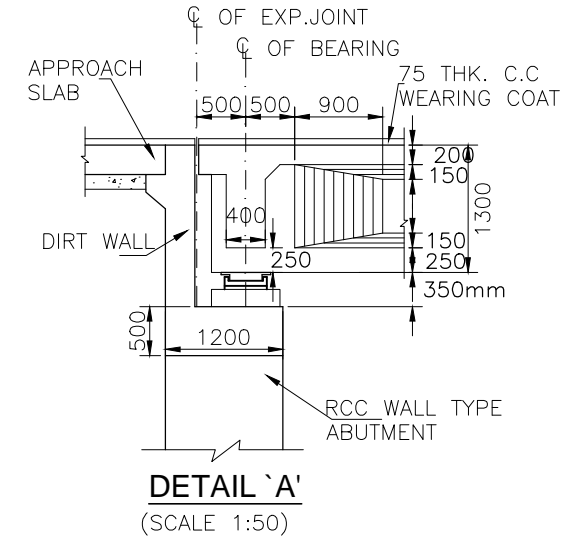
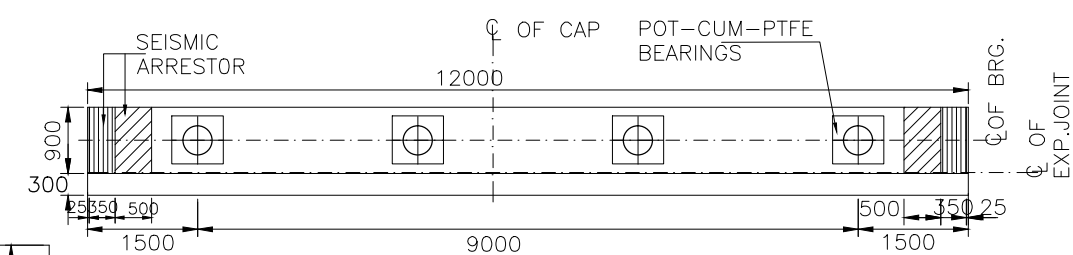
**Chaitanya Projects Consultancy Pvt. Ltd**  
**C-5, 2ND FLOOR, R.K.TOWER PLOT NO.- 21-22,**  
**SECTOR-4, VAISHALI, GHAZIABAD**  
**PH.: 0120-3223419, 4120472, FAX: 0120-4110472**  
**Email:- [chaitanya.projects@gmail.com](mailto:chaitanya.projects@gmail.com)**

BRIDGE AT CH. 2+424



N VALUE (RECORDED)	SYMBOLIC REPRESENTATION	DESCRIPTION OF SOIL WITH U.S. CLASSIFICATION
36	2.00	MEDIUM BROWNISH GREY SILTY SAND MIXED WITH KANKARS
100	4.50	DENSE TO VERY DENSE BROWNISH GREY SILTY SAND MIXED WITH COARSE SAND & RUSTY IRON SPOTS
100	10.00	BROWNISH GREY/ GRAYISH HIGHLY WEATHERED ROCK WITH STONE FRAGMENTRUSTY BROWN PATCHES & COARSE SAND

**BORE HOLES (BH-1)**



**NOTES:-**

1. ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE IN SCALED.
2. THE PROPOSED 2 LANE BRIDGE HAS BEEN DESIGNED FOR SINGLE LANE OF IRC CLASS 70R OR TWO LANES OF IRC CLASS A LOADING, WHICHEVER GOVERNS.
3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED BELOW:-

PCC LEVELLING COURSE	:	M-15
SUPERSTRUCTURE	:	M-35
SUBSTRUCTURE	:	M-35
CRASH BARRIER	:	M-40
APPROACH SLAB	:	M-30
RETURN/WING WALLS	:	M-35
SEISMIC ARRESTOR	:	M-40
4. GRADE OF STEEL SHALL BE Fe-500 CONFORMING TO IS:1786.
5. BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX : 6 OF IRC:78-2000 HAVING PROPERTIES  $C=0$ ,  $\phi=30^\circ$   
 $\delta=20^\circ$  &  $\gamma_s = 18 \text{ KN/m}^3$
6. LAYING COMPACTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX : 6 OF IRC : 78-2000
7. WEEP HOLES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALL FROM GROUND TO H.F.L.
8. 75mm THK. C.C. WEARING COURSE SECTION 500 OF MORTH SPECIFICATIONS M-30 GRADE.
9. SAFE BEARING CAPACITY CONSIDERED FOR DESIGN OF FOUNDATION IS  $250 \text{ KN/m}^2$ , SAFETY OF THE EXISTING STRUCTURE SHALL BE ENSURED DURING THE EXECUTION OF NEW BRIDGE
10. FOUNDATION SIZE AND DEPTH SHALL BE VERIFIED AFTER CONFORMATORY BORING HOLES.
11. WATER TO BE USED IN CONCRETING, GROUTING AND CURING SHALL CONFORM TO CLAUSE 302.4 OF IRC-21-2000
12. (i) CLEAR COVER TO OUTER MOST STEEL IS 50mm FOR ALL COMPONENTS EXCEPT FOUNDATIONS.  
(ii) CLEAR COVER TO OUTER MOST STEEL IS 75mm FOR FOUNDATION.

LEGENDS:-			
FR	FREE BEARING		
FX	FIXED BEARING		
ARRANGEMENT DRAWING (CH. 2+424)	DRG. NO. CPC/P-073/DPR/KM2+424/GAD-101		REV. NO.
	DATE:- JULY 2013	DRAWN	VIKAS
UPGRADATION TO TWO LANE WAHKAJI (TENTATIVE ASE B OF SARDP-NE	DESIGNED	CHECKED	APPROVED
	P.NEGI	P.V.M	V.P.S

[illegible]

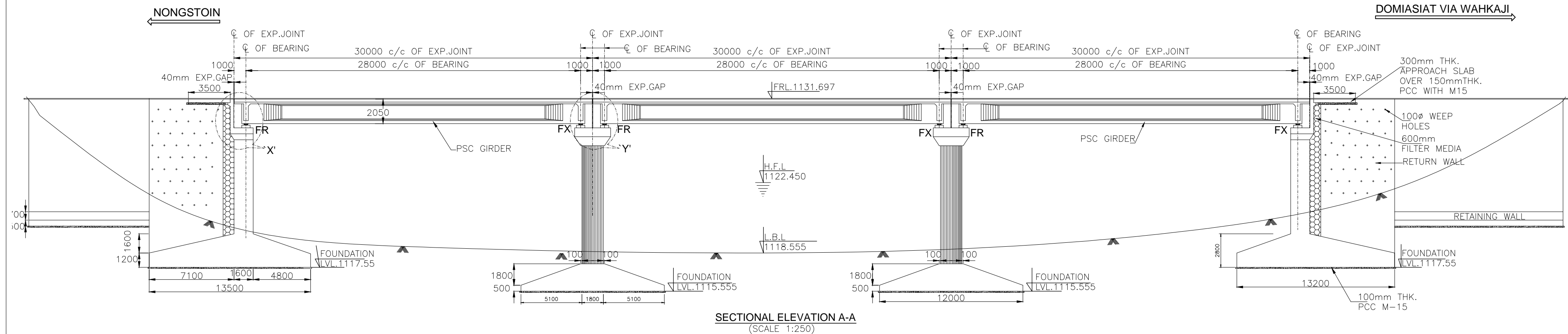
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AS SHOWN

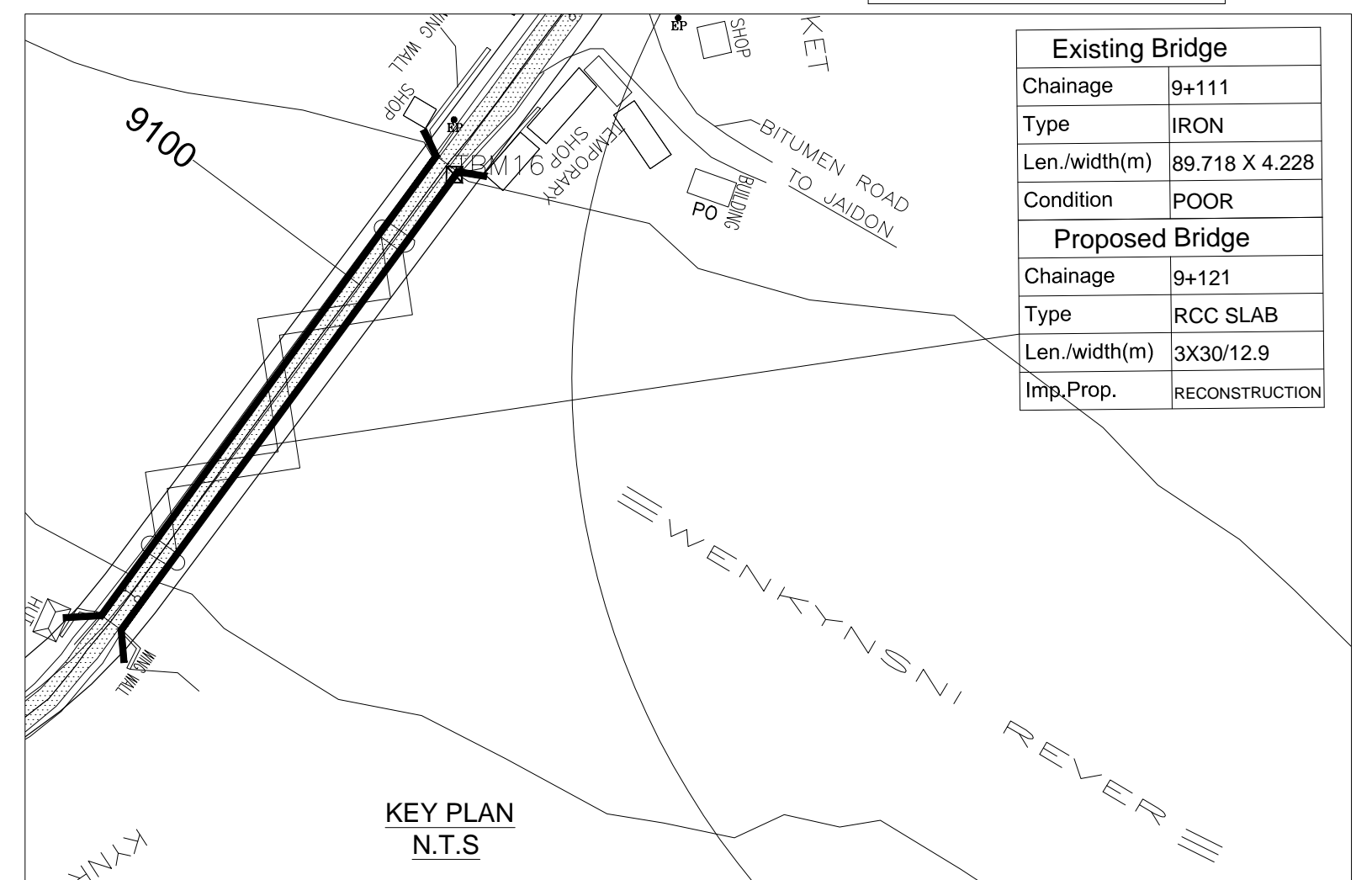
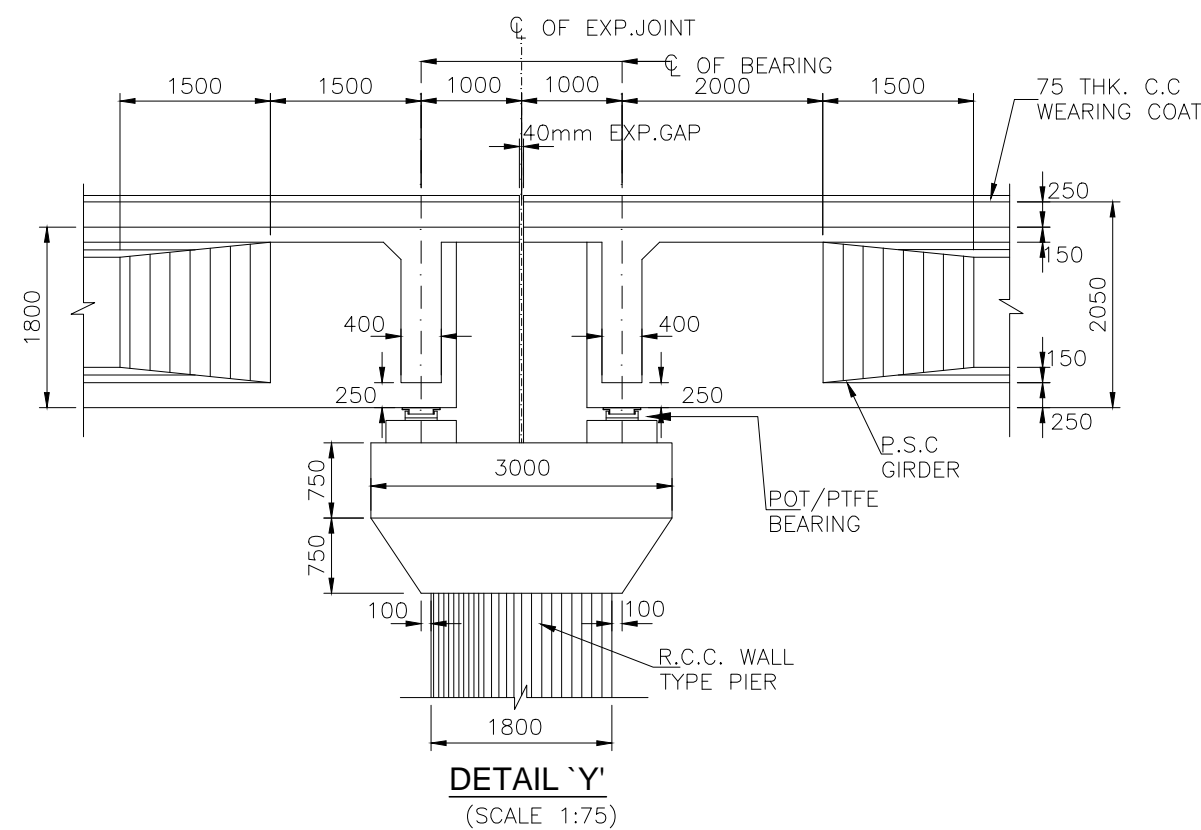
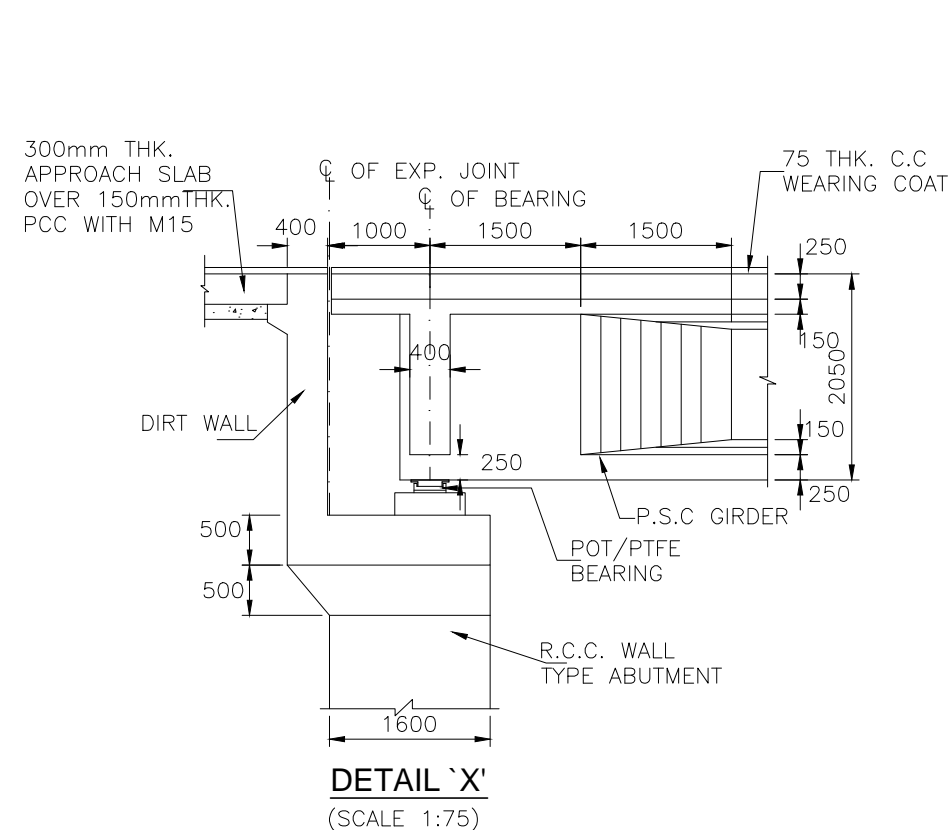
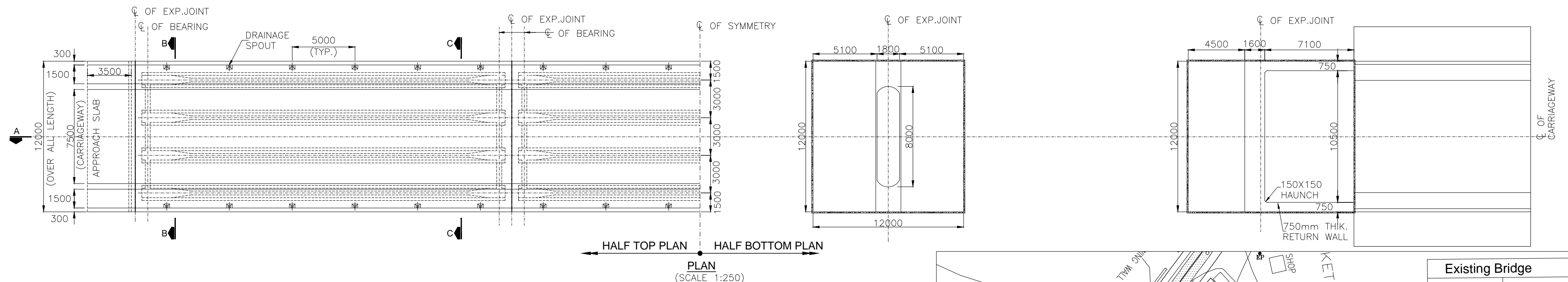
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PROJECT:	CONSULTANCY SERVICES FOR DETAILED PROJECT REPORT FOR UPGRADATION TO TWO LANE OF STATE ROAD STRETCHES FROM NONGSTOIN - DOMIASTI VIA WAHKAJI ( TENTATIVE LENGTH - 66.00 KMS ) IN THE STATE OF MEGHALAYA UNDER PHASE B OF SARDP-NE	

BRIDGE AT CH. 9+121





FORMATION LEVEL	1131.697	1131.697	1131.697	1131.697
GROUND LEVEL	1120.548	1118.678	1118.896	1121.738
CHAINAGE	9+055	9+085	9+115	9+145



Existing Bridge	
Chainage	9+111
Type	IRON
Len./width(m)	89.718 X 4.228
Condition	POOR
Proposed Bridge	
Chainage	9+121
Type	RCC SLAB
Len./width(m)	3X30/12.9
Imp.Prop.	RECONSTRUCTION

REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
			A B C D



Consultant:  
CHAITANYA PROJECTS CONSULTANCY PVT. LTD.  
C-5, 2ND FLOOR, R.K.TOWER  
PLOT NO.- 21-22, SECTOR-4, VAISHALI, GHAZIABAD  
PH.: 0120-3223419, 4120472, FAX: 0120-4110472

SCALE:-  
AS SHOWN

CLIENT THE CHIEF ENGINEER (NH)  
PUBLIC WORKS DEPARTMENT  
(Government of Meghalaya)

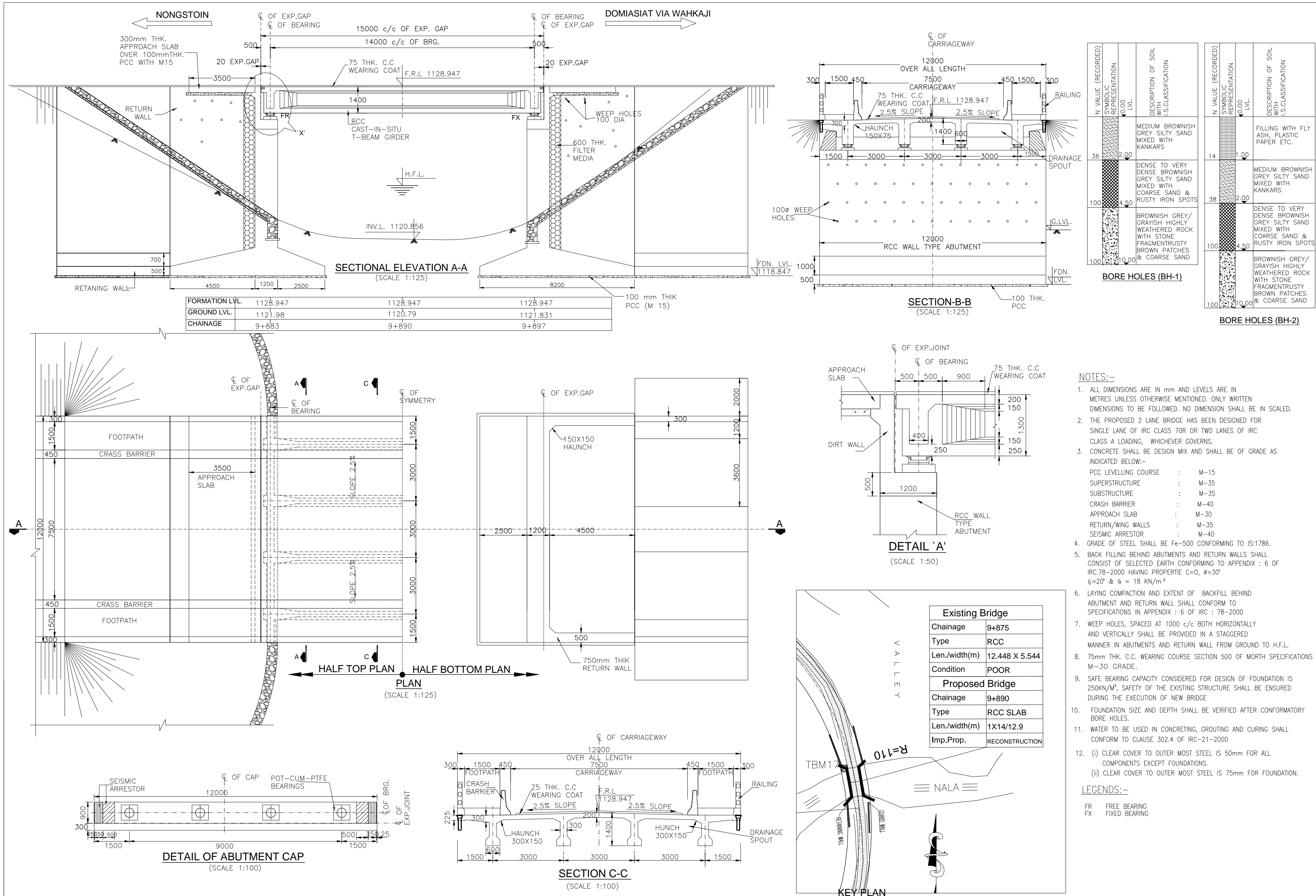
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GERNAL ARRANGEMENT DRAWING  
(CH. 9+121)

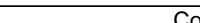
PROJECT:  
CONSULTANCY SERVICES FOR DETAILED PROJECT REPORT FOR UPGRADATION TO TWO LANE  
OF STATE ROAD STRETCHES FROM NONGSTOIN - DOMIASIAT VIA WAHKAJI ( TENTATIVE  
LENGTH - 66.00 KMS ) IN THE STATE OF MEGHALAYA UNDER PHASE B OF SARDP-NE

DRG. NO.	DATE	DESIGNED	CHECKED	APPROVED
CPC\IP-073\DPR\KM9+121\GAD101(01 OF 02)	JULY 2013	P.NEGI	P.V.M	V.P.S

REV.  
R0

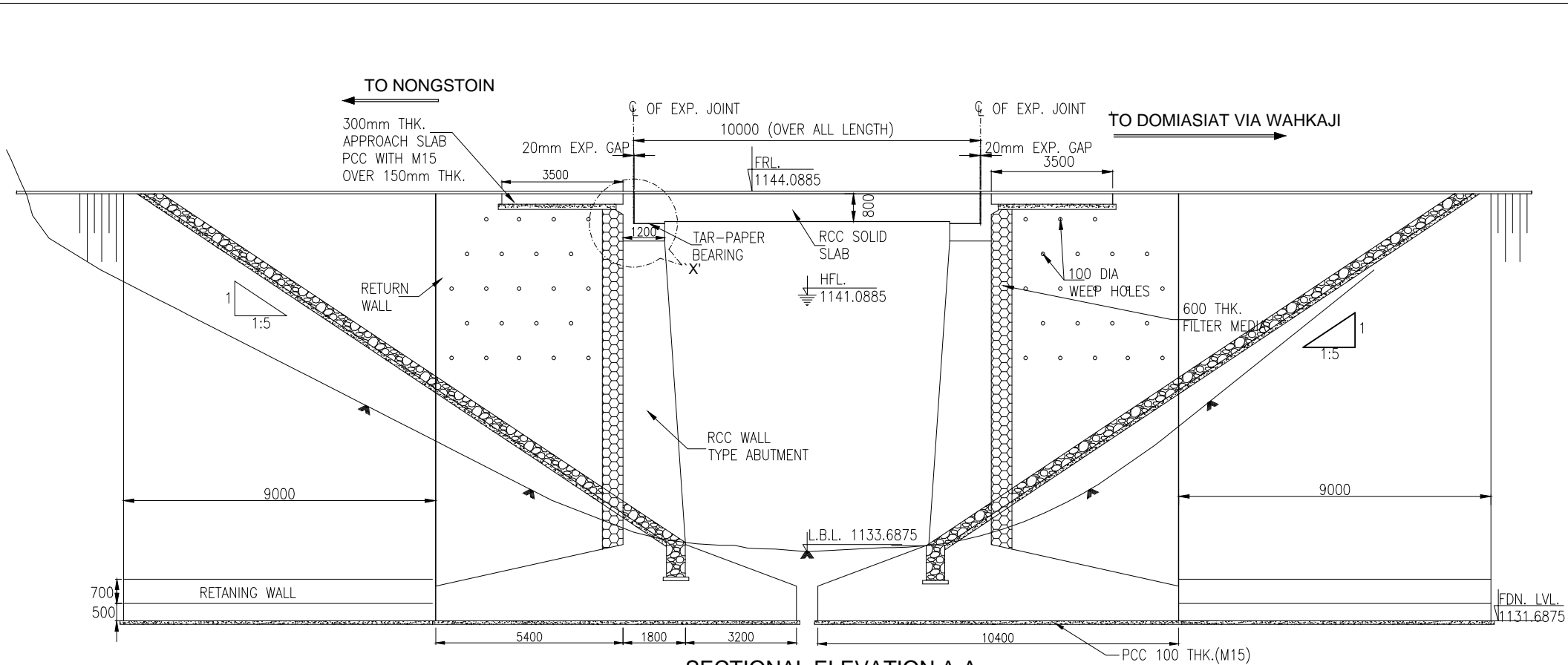
BRIDGE AT CH. 9+890



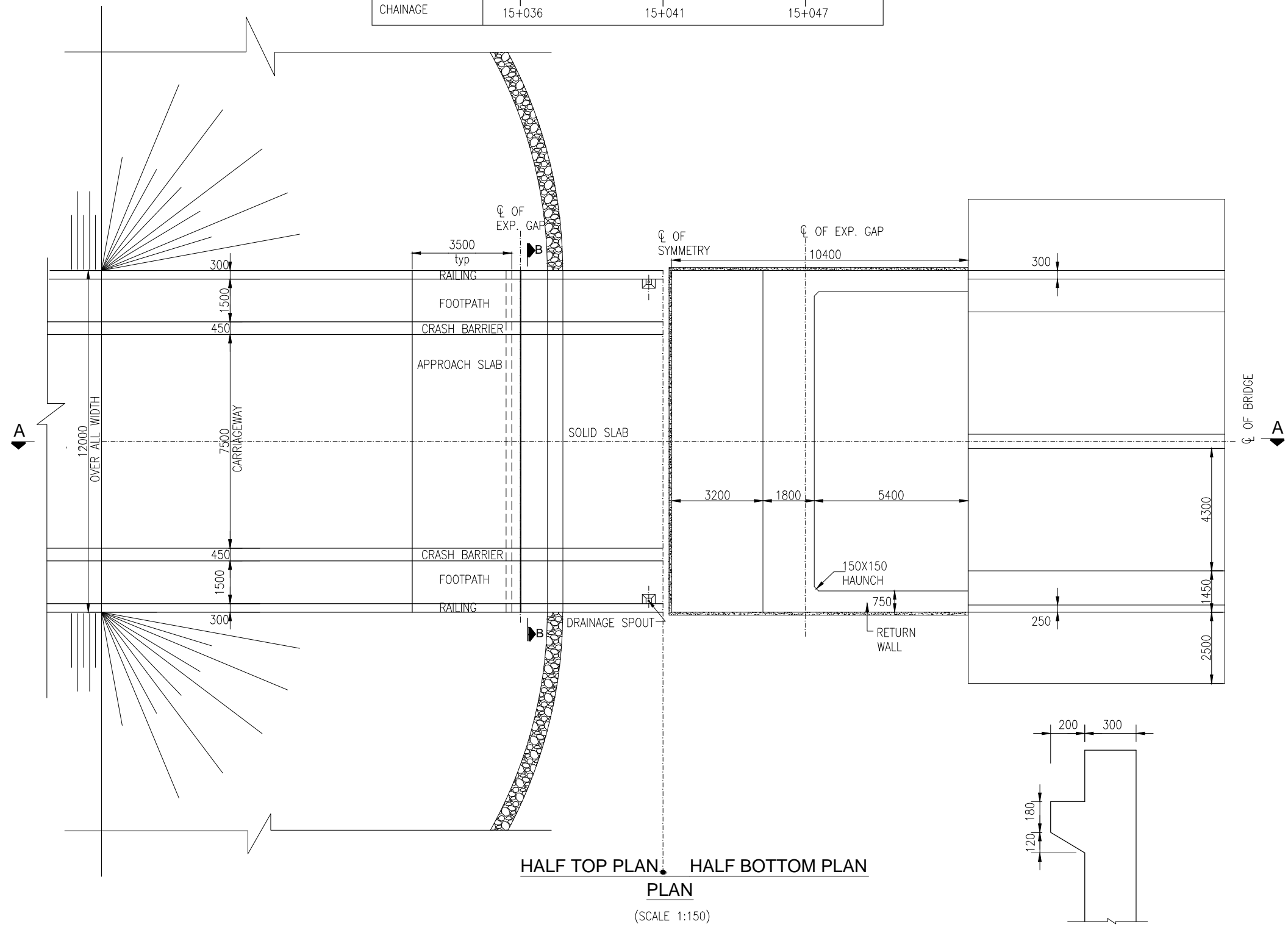
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							CHAITANYA PROJECTS CONSULTANCY PVT. LTD.								DATE	JANUARY 2013	DRAWN	VIKAS	
							C-5, 2ND FLOOR, R.K.TOWER												
							PLOT NO.- 21-22, SECTOR-4, VAISHALI, GHAZIABAD												
							PH.: 0120-3223419, 4120472, FAX: 0120-4110472												
REV	DATE	DESCRIPTION OF REVISIONS	INITIALS									PROJECT:	CONSULTANCY SERVICES FOR DETAILED PROJECT REPORT FOR UPGRADATION TO TWO LANE OF STATE ROAD STRETCHES FROM NONGSTOIN - DOMIASIAT VIA WAHKAJI ( TENTATIVE LENGTH - 66.00 KMS ) IN THE STATE OF MEGHALAYA UNDER PHASE B OF SARDP-NE			DESIGNED	CHECKED	APPROVED	

BRIDGE AT CH. 15+041

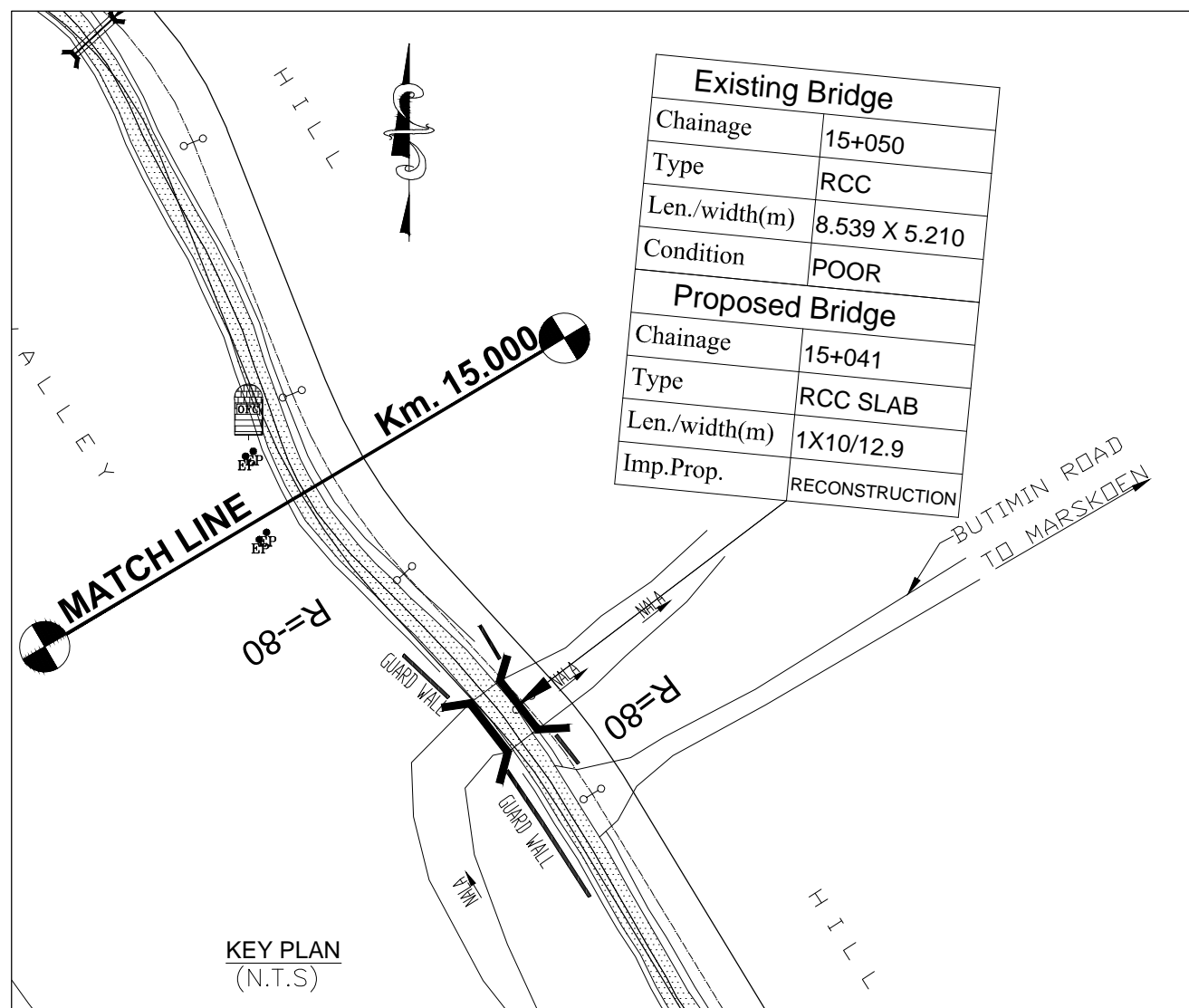
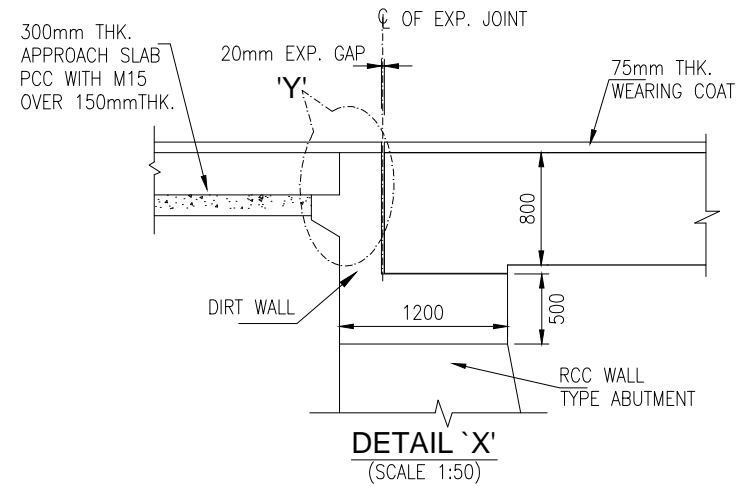
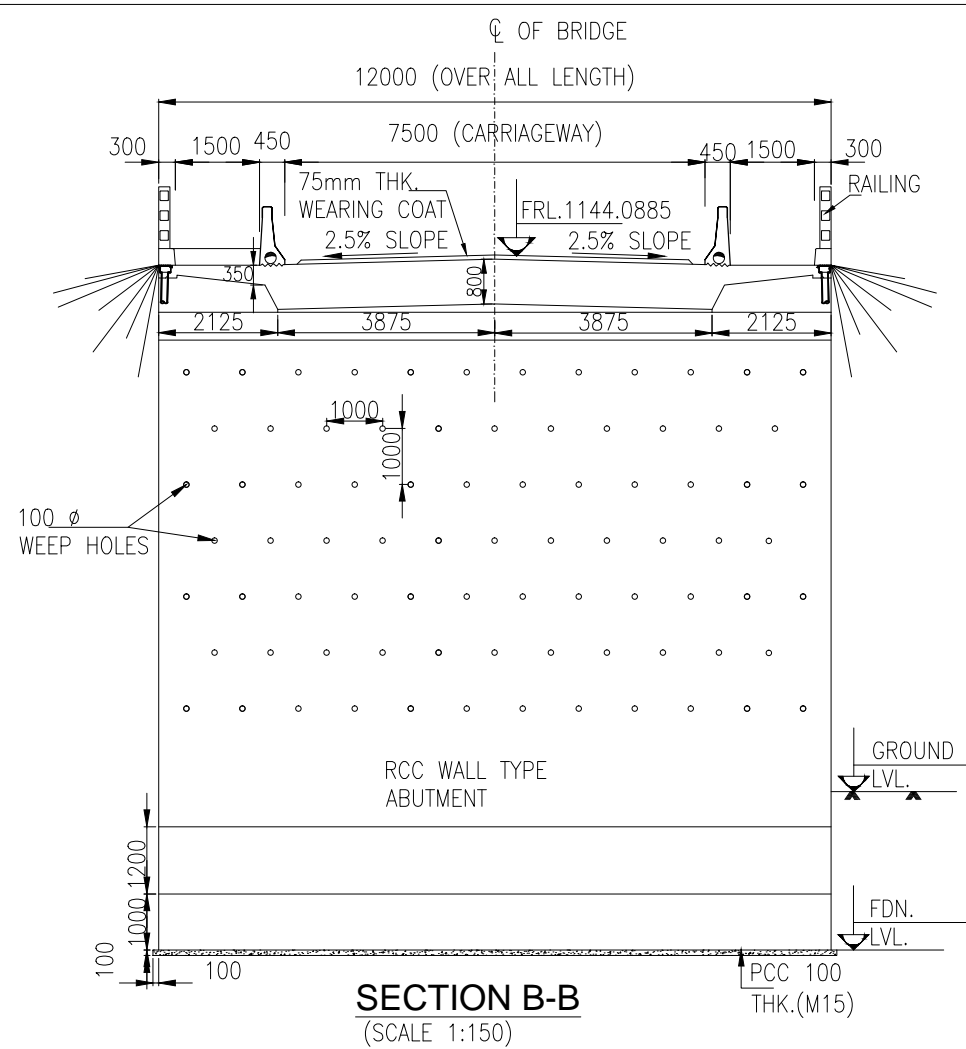




FORMATION LEVEL	1144.0885	1144.0885	1144.0885
GROUND LEVEL	1134.2415	1133.6875	1134.1415
CHAINAGE	15+036	15+041	15+047



BRACKET DETAIL 'Y'  
(SCALE 1:25)



- NOTES:-**
- ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE IN SCALED.
  - THE PROPOSED 2 LANE BRIDGE HAS BEEN DESIGNED FOR SINGLE LANE OF IRC CLASS 70R OR TWO LANES OF IRC CLASS A LOADING, WHICHEVER GOVERNS.
  - CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED BELOW:-  
PCC LEVELLING COURSE : M-15  
SUPERSTRUCTURE : M-35  
SUBSTRUCTURE : M-35  
CRASH BARRIER : M-40  
APPROACH SLAB : M-30  
RETURN/WING WALLS : M-35
  - GRADE OF STEEL SHALL BE Fe-500 CONFORMING TO IS:1786.
  - BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX : 6 OF IRC:78-2000 HAVING PROPERTIES  $C=0$ ,  $\phi=30^\circ$ ,  $\gamma=20^\circ$  &  $\gamma_s = 18 \text{ KN/m}^3$
  - LAYING COMPACTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX : 6 OF IRC : 78-2000
  - WEEP HOLES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALL FROM GROUND TO H.F.L.
  - 75mm THK. C.C. WEARING COURSE SECTION 500 OF MORTH SPECIFICATIONS M-30 GRADE.
  - SAFE BEARING CAPACITY ASSUMED FOR DESIGN OF FOUNDATION IS 350KN/M<sup>2</sup>, SAFETY OF THE EXISTING STRUCTURE SHALL BE ENSURED DURING THE EXECUTION OF NEW BRIDGE
  - FOUNDATION DEPTH SHALL BE VERIFIED AFTER CONFORMATORY BORE HOLES.
  - WATER TO BE USED IN CONCRETING, GROUTING AND CURING SHALL CONFORM TO CLAUSE 302.4 OF IRC-21-2000
  - (i) CLEAR COVER TO OUTER MOST STEEL IS 50mm FOR ALL COMPONENTS EXCEPT FOUNDATIONS.  
(ii) CLEAR COVER TO OUTER MOST STEEL IS 75mm FOR FOUNDATION.

BORE HOLES (BH-1)		
N VALUE (RECORDED)	SYMBOLIC REPRESENTATION	DESCRIPTION OF SOIL WITH I.S. CLASSIFICATION
10	2.00	MEDIUM BROWNISH GREY SILTY CLAYEY / CLAYEY SILT MIXED WITH LITTLE SAND & KANKAR
100	6.00	STIFF BROWNISH GREY SILTY CLAYEY / CLAYEY SILT MIXED WITH LITTLE SAND & KANKAR
100	10.00	BROWNISH GREY HIGHLY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY BROWN PATCHES & COARSE SAND

BORE HOLES (BH-2)		
N VALUE (RECORDED)	SYMBOLIC REPRESENTATION	DESCRIPTION OF SOIL WITH I.S. CLASSIFICATION
10	2.00	MEDIUM BROWNISH GREY SILTY CLAYEY / CLAYEY SILT MIXED WITH LITTLE SAND & KANKAR
100	6.00	STIFF BROWNISH GREY SILTY CLAYEY / CLAYEY SILT MIXED WITH LITTLE SAND & KANKAR
100	10.00	BROWNISH GREY HIGHLY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY BROWN PATCHES & COARSE SAND

REV	DATE	DESCRIPTION OF REVISIONS	INITIALS



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CHAITANYA PROJECTS CONSULTANCY PVT. LTD.  
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PLOT NO.- 21-22, SECTOR-4, VAISHALI, GHAZIABAD  
PH.: 0120-3223419, 4120472, FAX: 0120-4110472

SCALE:-  
AS SHOWN

CLIENT  
THE CHIEF ENGINEER (NH)  
PUBLIC WORKS DEPARTMENT  
(Government of Meghalaya)

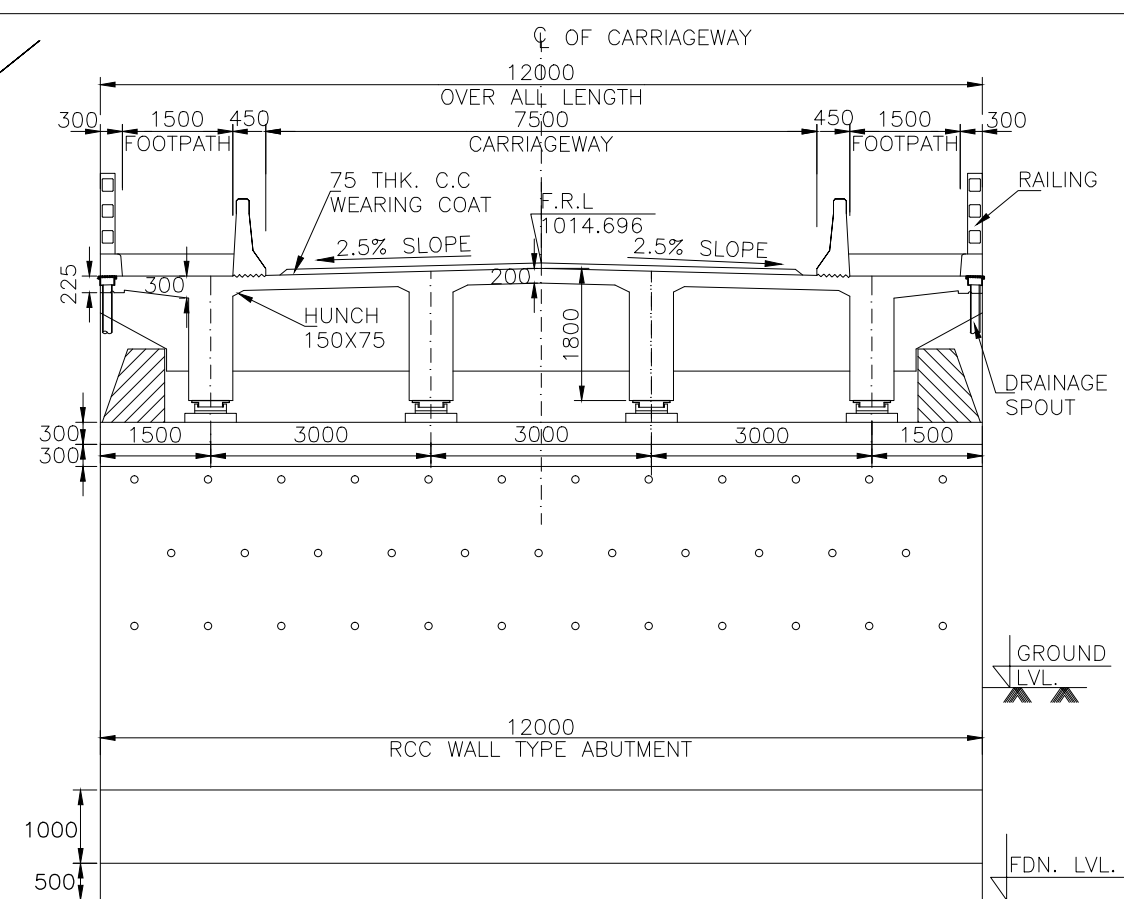
PROJECT:  
CONSULTANCY SERVICES FOR DETAILED PROJECT REPORT FOR UPGRADATION TO TWO LANE OF STATE ROAD STRETCHES FROM NONGSTOIN - DOMIASIAT VIA WAKHAJI ( TENTATIVE LENGTH - 66.00 KMS ) IN THE STATE OF MEGHALAYA UNDER PHASE B OF SARDP-NE




DWG TITLE:  
GERNAL ARRANGEMENT DRAWING  
(CH. 15+041)

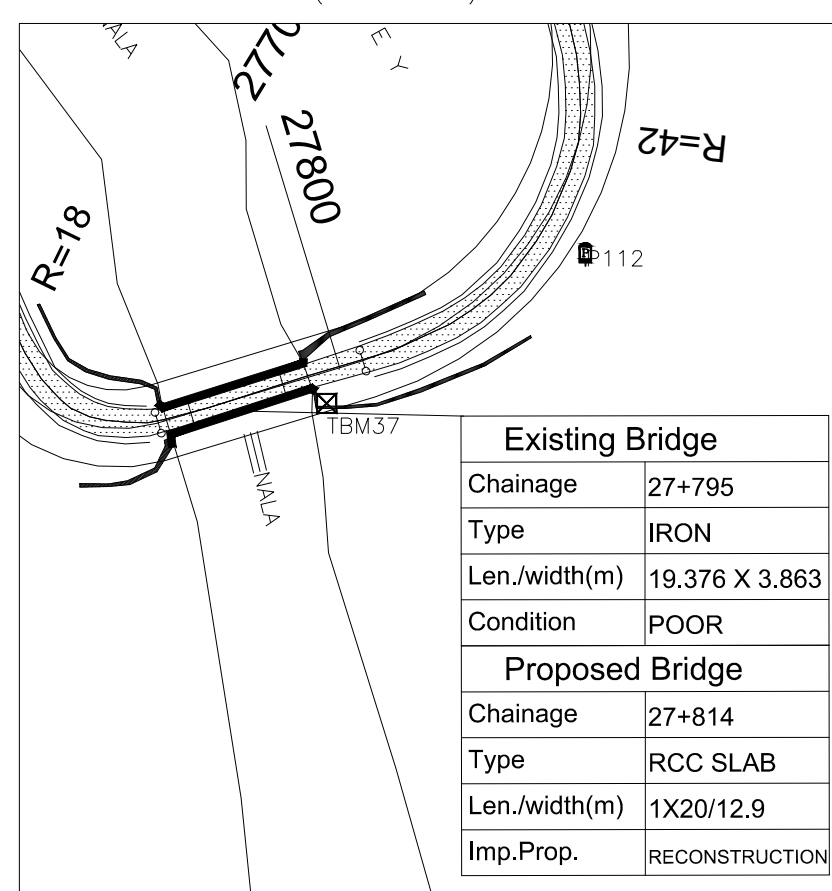
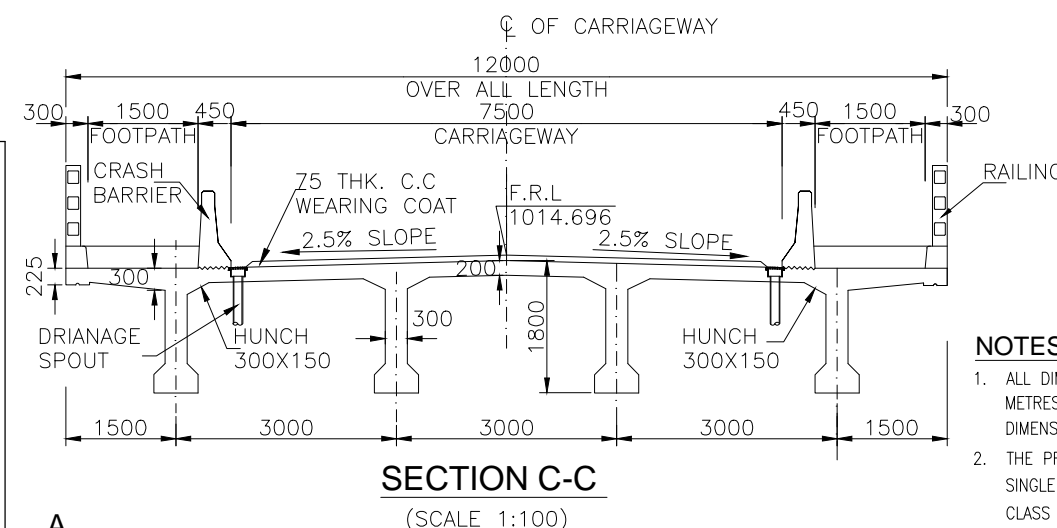
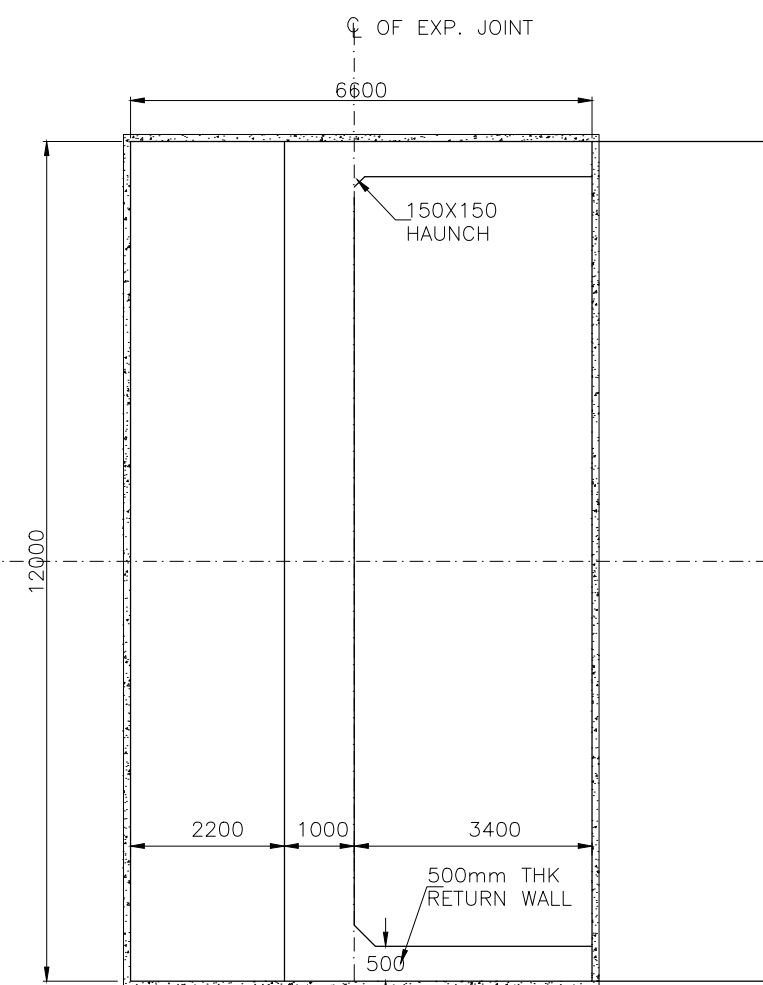
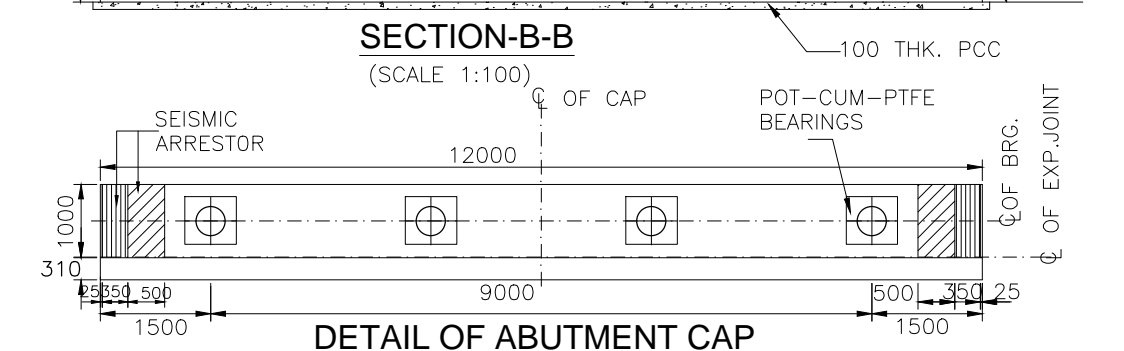
DRG. NO.  
CPC/P-073/DPR/KM15+041/GAD-101  
DATE JULY 2013  
DRAWN VIKAS

DESIGNED  
P.NEGI  
CHECKED  
P.V.M  
APPROVED  
V.P.S

BRIDGE AT CH. 27+814



N. VALUE (RECORDED)	SYMBOLIC REPRESENTATION	DESCRIPTION OF SOIL WITH U.S. CLASSIFICATION
100		MEDIUM DENSE TO VERY DENSE BROWNISH GREY SILTY SAND MIXED WITH MICA
100		LIGHT GREY TO BLACKISH GREY HIGHLY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY PATCHES & COARSE SAND
100		LIGHT GREY TO BLACKISH GREY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY PATCHES,



Existing Bridge	
Chainage	27+795
Type	IRON
Len./width(m)	19.376 X 3.863
Condition	POOR
Proposed Bridge	
Chainage	27+814
Type	RCC SLAB
Len./width(m)	1X20/12.9
Imp.Prop.	RECONSTRUCTION

- NOTES:-**
1. ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE IN SCALED.
  2. THE PROPOSED 2 LANE BRIDGE HAS BEEN DESIGNED FOR SINGLE LANE OF IRC CLASS 70R OR TWO LANES OF IRC CLASS A LOADING, WHICHEVER GOVERNS.
  3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED BELOW:-
 

PCC LEVELLING COURSE	:	M-15
SUPERSTRUCTURE	:	M-35
SUBSTRUCTURE	:	M-35
CRASH BARRIER	:	M-40
APPROACH SLAB	:	M-30
RETURN/WING WALLS	:	M-35
SEISMIC ARRESTOR	:	M-40
  4. GRADE OF STEEL SHALL BE Fe-500 CONFORMING TO IS:1786.
  5. BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX : 6 OF IRC:78-2000 ADOPTING PROPERTIES  $C=0$ ,  $\phi=30^\circ$   
 $s=20^\circ$  &  $q = 18 \text{ KN/m}^2$
  6. LAYING COMPACTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX : 6 OF IRC : 78-2000
  7. WEEP HOLES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALL FROM GROUND TO H.F.L.
  8. 75mm THK. C.C. WEARING COURSE SECTION 500 OF MORTH SPECIFICATIONS M-30 GRADE.
  9. SAFE BEARING CAPACITY CONSIDERED FOR DESIGN OF FOUNDATION IS  $250\text{KN/M}^2$ , SAFETY OF THE EXISTING STRUCTURE SHALL BE ENSURED DURING THE EXECUTION OF NEW BRIDGE
  10. FOUNDATION SIZE AND DEPTH SHALL BE VERIFIED AFTER CONFORMATORY BORE HOLES.
  11. WATER TO BE USED IN CONCRETING, GROUTING AND CURING SHALL CONFORM TO CLAUSE 302.4 OF IRC-21-2000
  12. (i) CLEAR COVER TO OUTER MOST STEEL IS 50mm FOR ALL COMPONENTS EXCEPT FOUNDATIONS.  
 (ii) CLEAR COVER TO OUTER MOST STEEL IS 75mm FOR FOUNDATION.

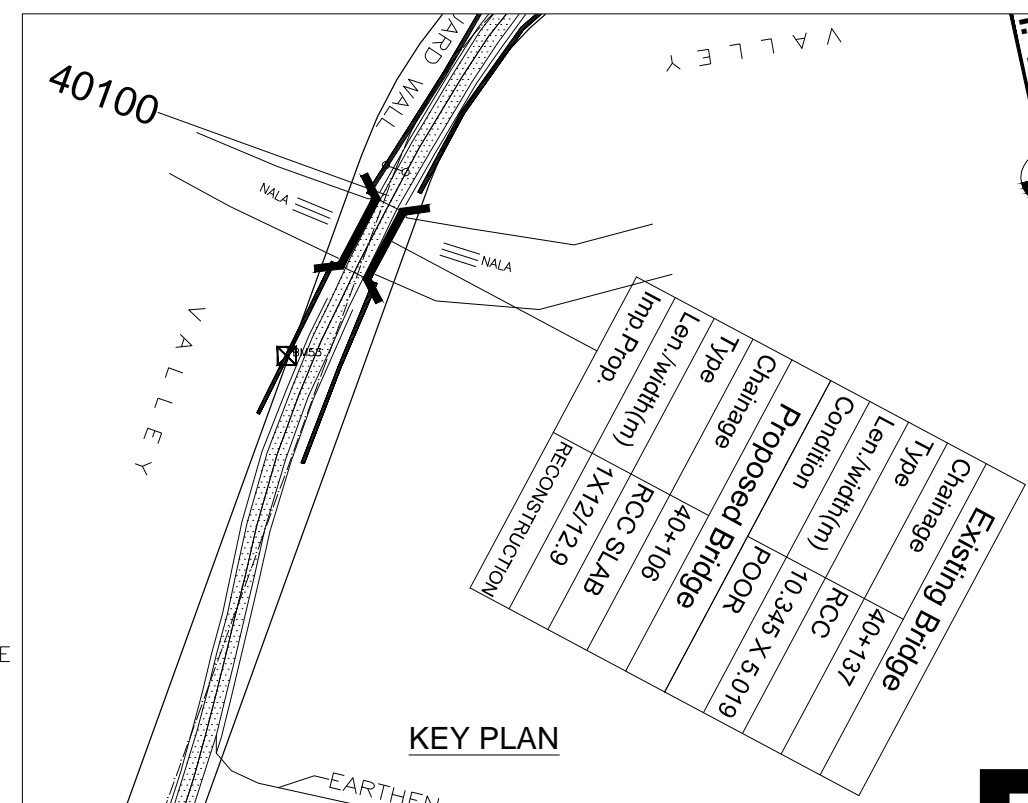
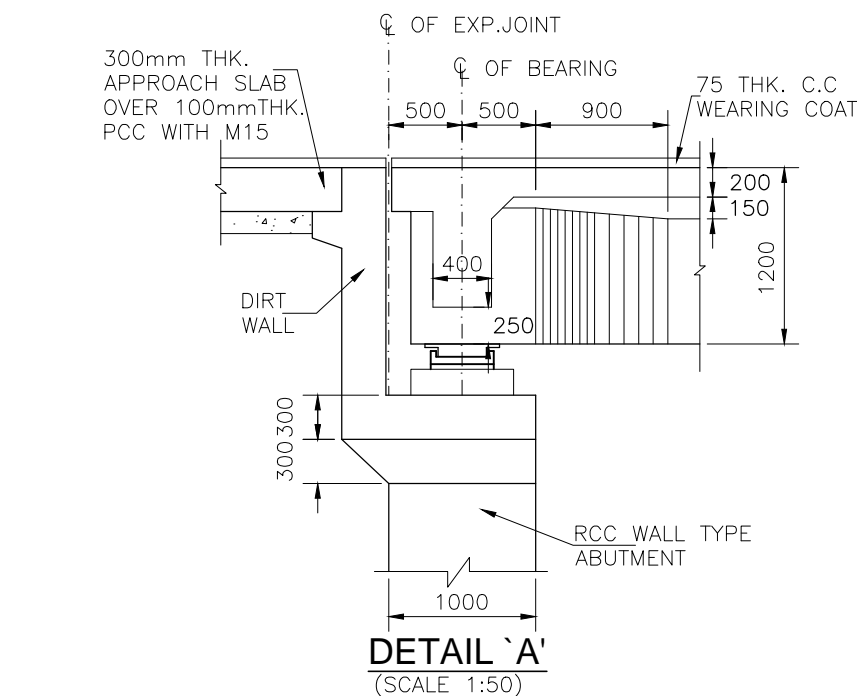
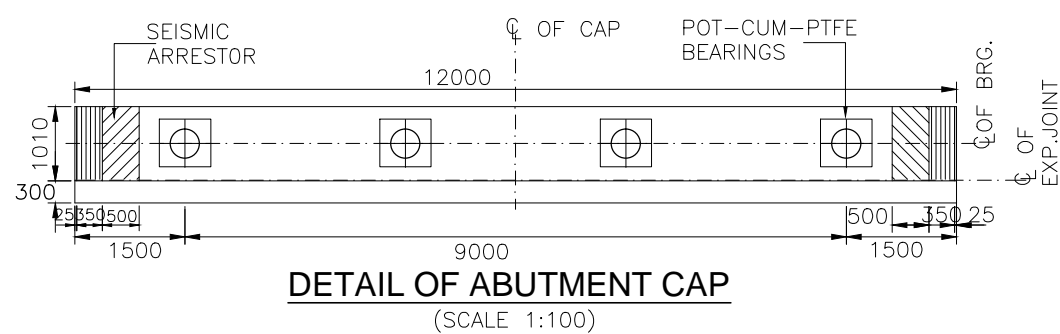
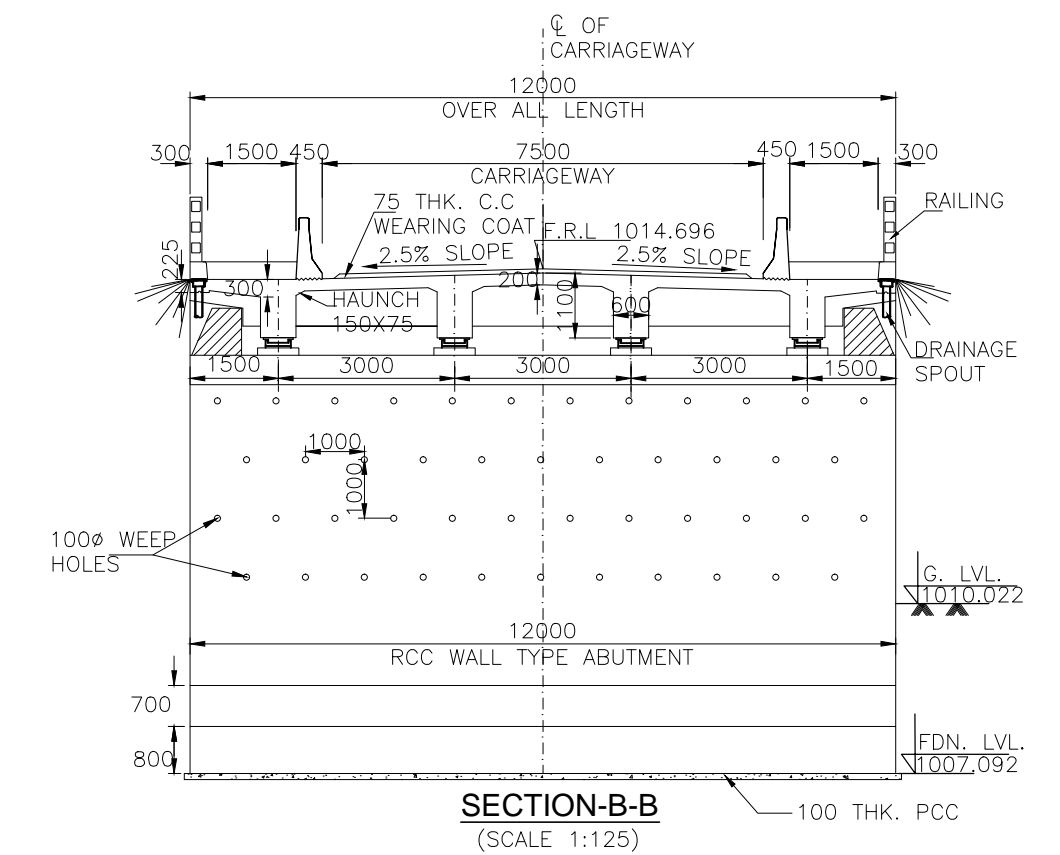
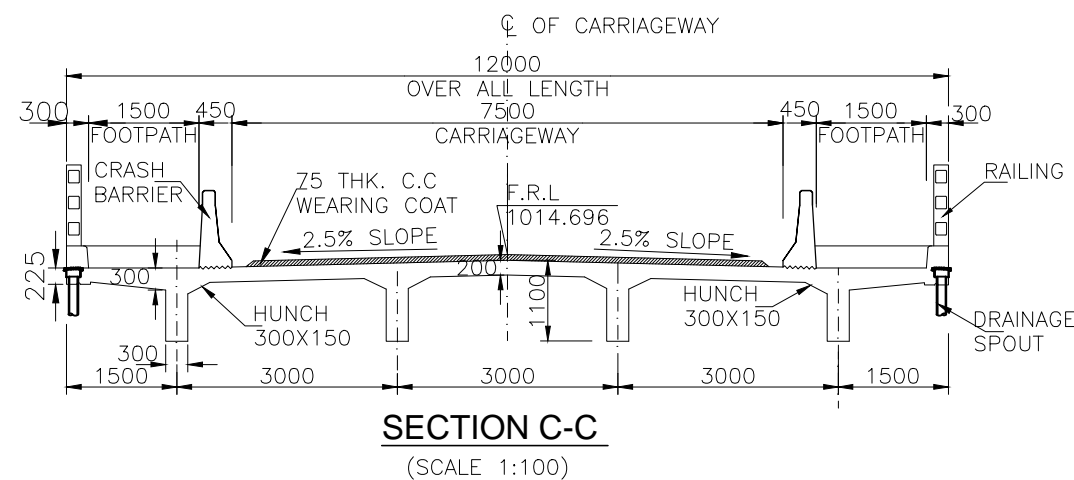
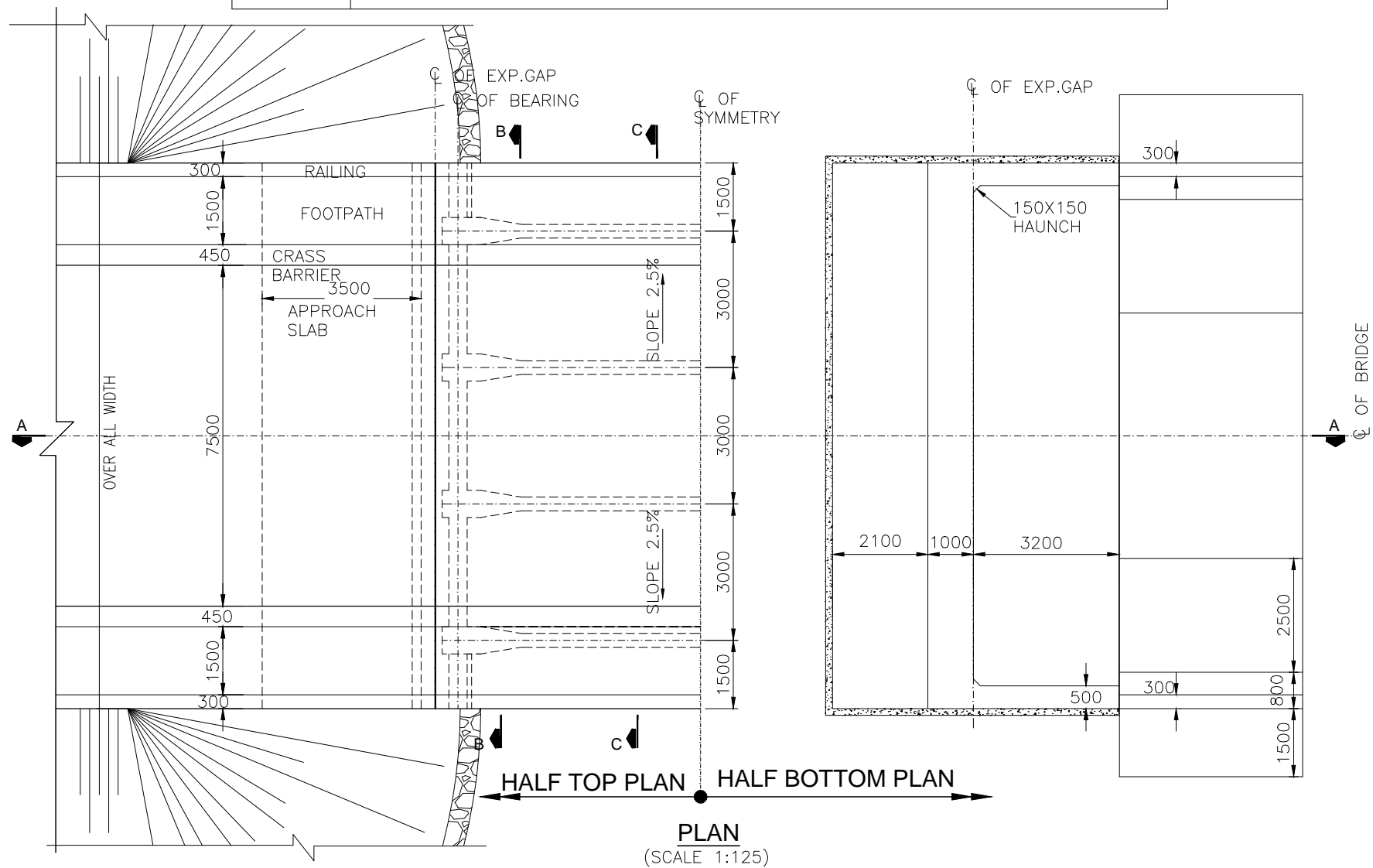
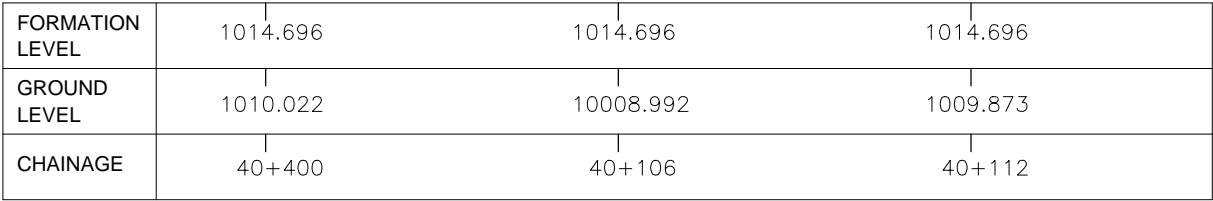
**LEGENDS:-**





FR	FREE BEARING
FX	FIXED BEARING

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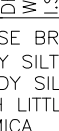
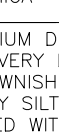
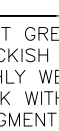
BRIDGE AT CH. 40+106





N VALUE (RECORDED)	SYMBOLIC REPRESENTATION	DESCRIPTION OF SOIL WITH I.S. CLASSIFICATION
10		LOOSE BROWNISH GREY SILTY SAND/ SANDY SILT MIXED WITH LITTLE CLAY & MICA
100		MEDIUM DENSE TO VERY DENSE BROWNISH GREY SILTY SAND MIXED WITH MICA
100		LIGHT GREY TO BLACKISH GREY HIGHLY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY PATCHES & COARSE SAND
100		LIGHT GREY TO BLACKISH GREY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY PATCHES.

**BORE HOLES (BH-1)**

N VALUE (RECORDED)	SYMBOLIC REPRESENTATION	DESCRIPTION OF SOIL WITH I.S. CLASSIFICATION
14		LOOSE BROWNISH GREY SILTY SAND/ SANDY SILT MIXED WITH LITTLE CLAY & MICA
100		MEDIUM DENSE TO VERY DENSE BROWNISH GREY SILTY SAND MIXED WITH MICA
100		LIGHT GREY TO BLACKISH GREY HIGHLY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY PATCHES & COARSE SAND
100		LIGHT GREY TO BLACKISH GREY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY PATCHES.

**BORE HOLES (BH-2)**

1. ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE IN SCALED.
2. THE PROPOSED 2 LANE BRIDGE HAS BEEN DESIGNED FOR SINGLE LANE OF IRC CLASS 70R OR TWO LANES OF IRC CLASS A LOADING, WHICHEVER GOVERNS.
3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED BELOW:-

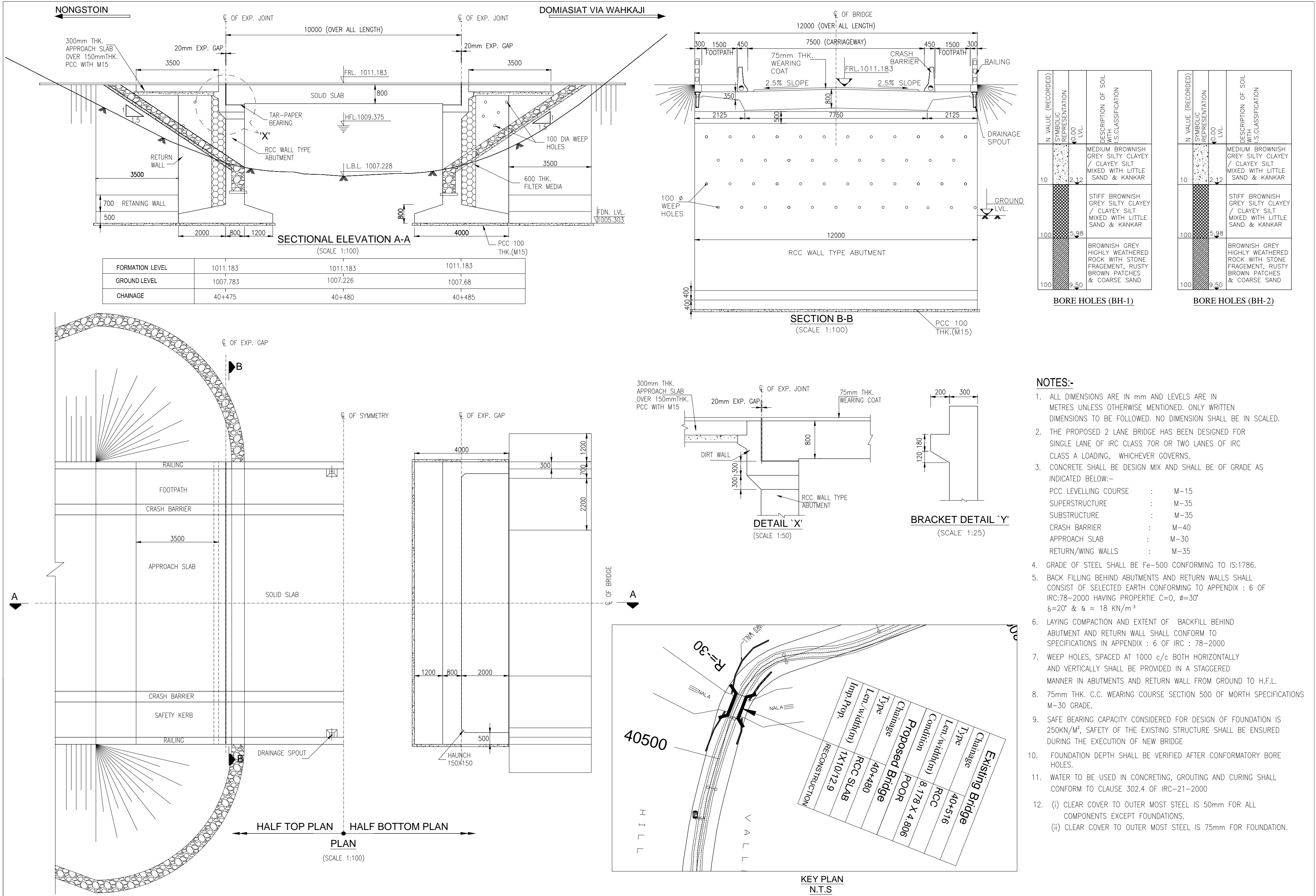
PCC LEVELLING COURSE	:	M-15
SUPERSTRUCTURE	:	M-35
SUBSTRUCTURE	:	M-35
CRASH BARRIER	:	M-40
APPROACH SLAB	:	M-30
RETURN/WING WALLS	:	M-35
SEISMIC ARRESTOR	:	M-40
4. GRADE OF STEEL SHALL BE Fe-500 CONFORMING TO IS:1786.
5. BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX : 6 OF IRC:78-2000 HAVING PROPERTIES  $C=0$ ,  $\phi=30^\circ$   
 $\sigma_v=20^\circ$  &  $\tau_a = 18 \text{ KN/m}^2$
6. DURING COMPACTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX : 6 OF IRC : 78-2000
7. WEEP HOLES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALL FROM GROUND TO H.F.L.
8. 75mm THK. C.C. WEARING COURSE SECTION 500 OF MORTH SPECIFICATIONS M-30 GRADE.
9. SAFE BEARING CAPACITY CONSIDERED FOR DESIGN OF FOUNDATION IS  $250\text{KN/m}^2$ , SAFETY OF THE EXISTING STRUCTURE SHALL BE ENSURED DURING THE EXECUTION OF NEW BRIDGE
10. FOUNDATION SIZE AND DEPTH SHALL BE VERIFIED AFTER CONFORMATORY BORE HOLES.
11. WATER TO BE USED IN CONCRETING, GROUTING AND CURING SHALL CONFORM TO CLAUSE 302.4 OF IRC-21-2000
12. (i) CLEAR COVER TO OUTER MOST STEEL IS 50mm FOR ALL COMPONENTS EXCEPT FOUNDATIONS.  
(ii) CLEAR COVER TO OUTER MOST STEEL IS 75mm FOR FOUNDATION.

FR	FREE BEARING
FX	FIXED BEARING

[illegible]

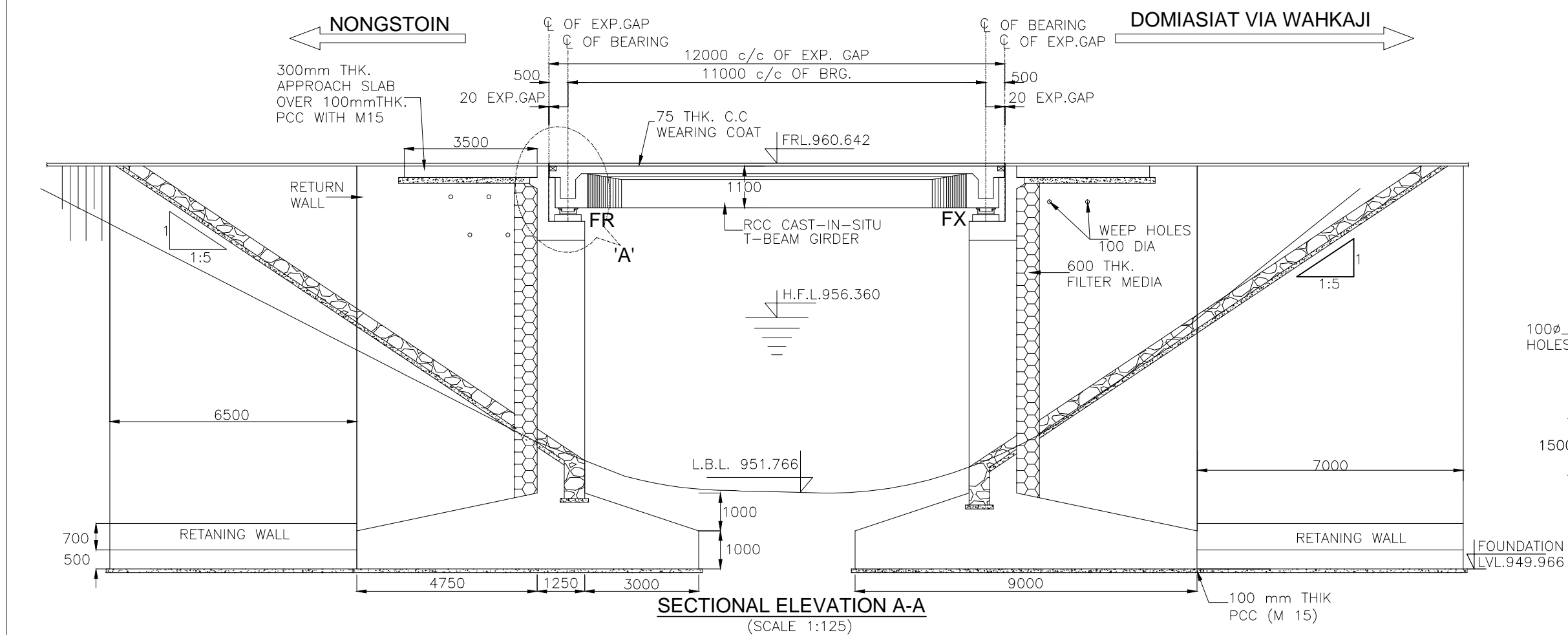


BRIDGE AT CH. 40+480

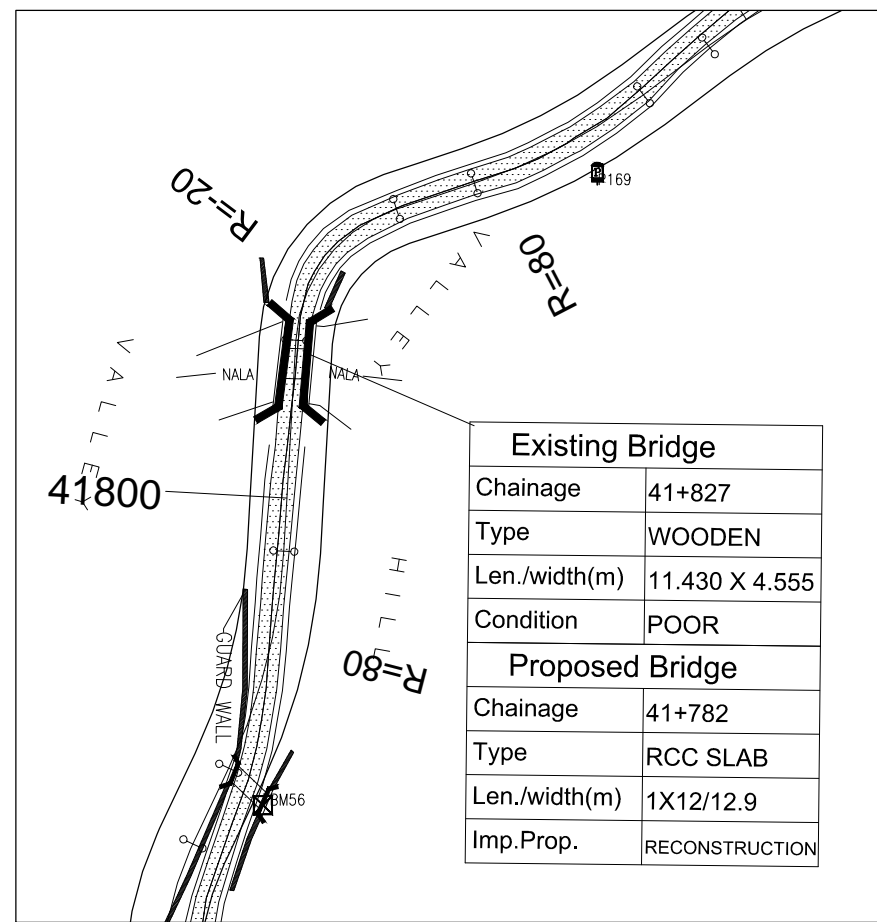
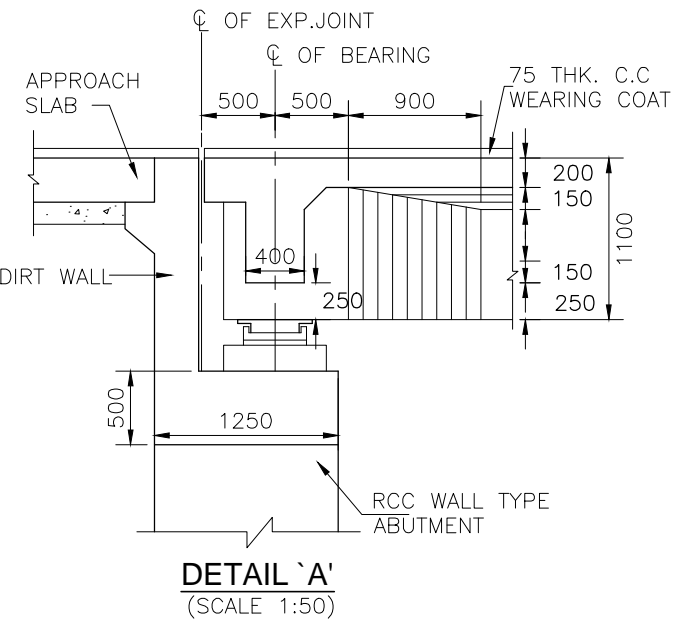
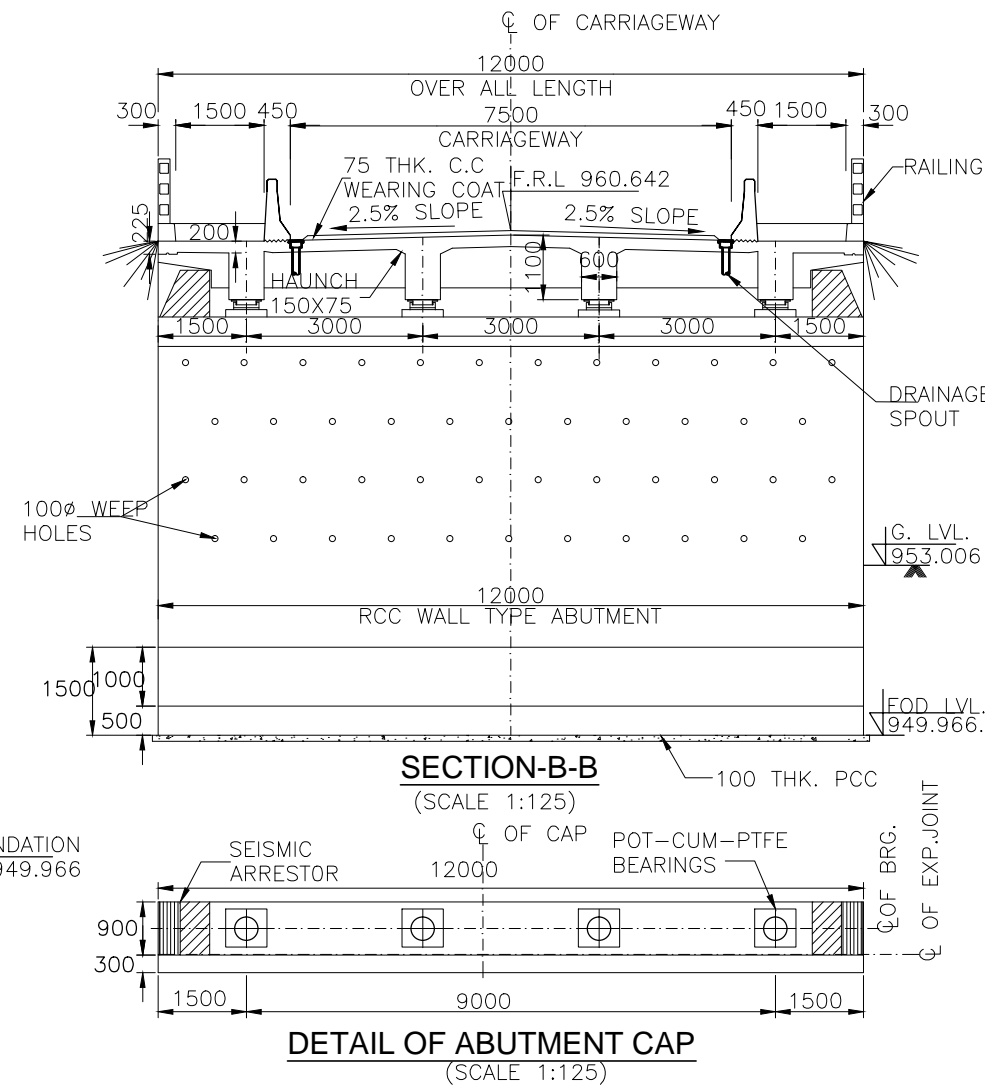
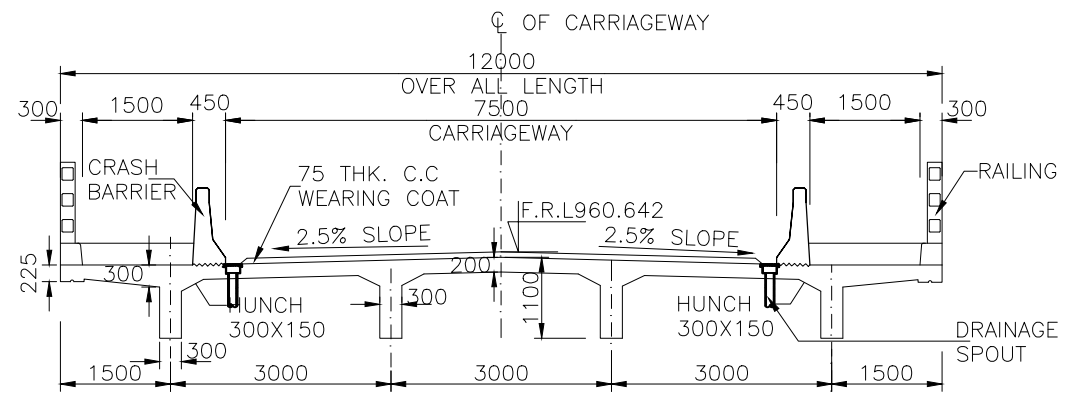
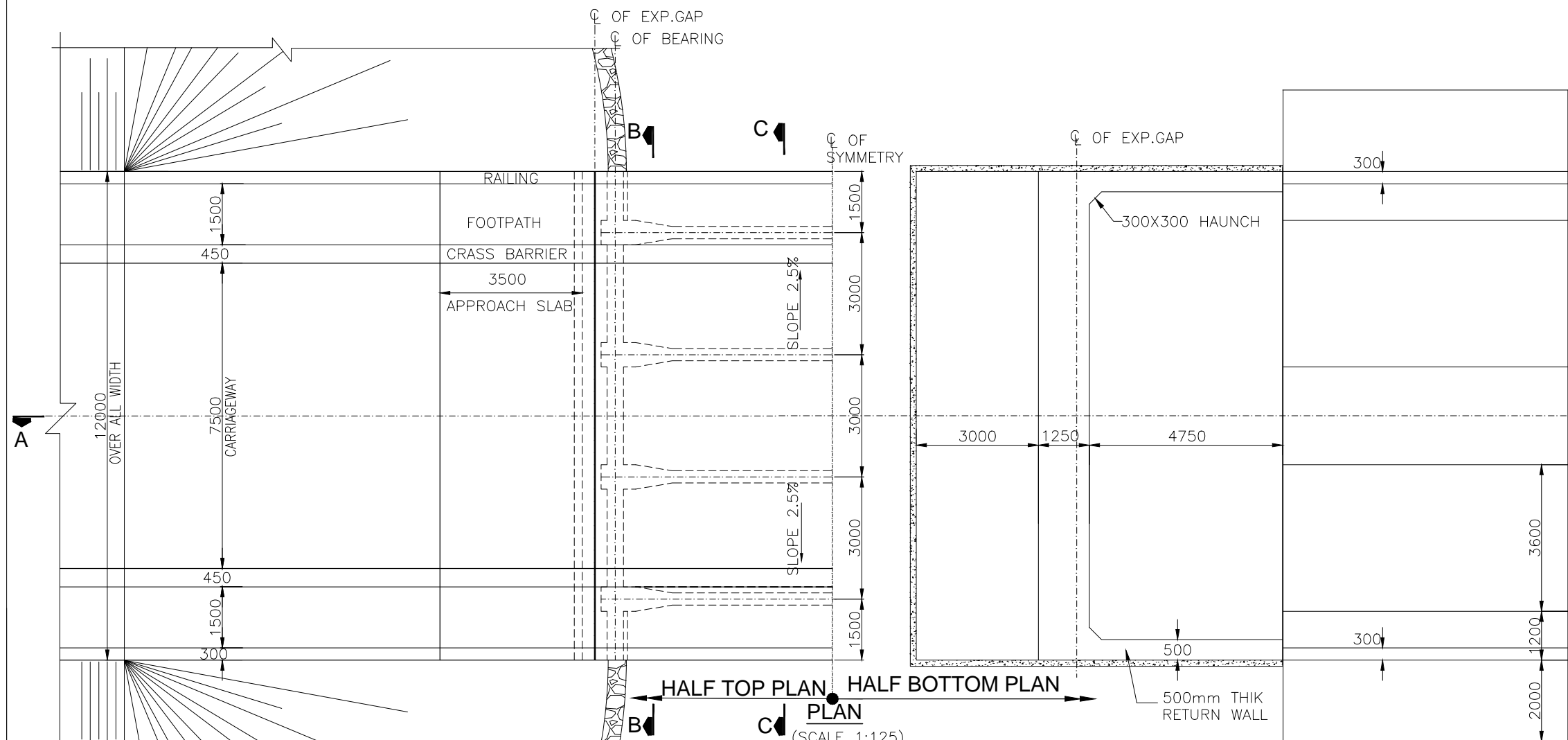


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BRIDGE AT CH. 41+782



FORMATION LEVEL	960.642	960.642	960.642
GROUND LEVEL	953.006	951.999	952.899
CHAINAGE	41+776	41+782	41+788



N VALUE (RECORDED)	SYMBOLIC REPRESENTATION	DESCRIPTION OF SOIL WITH I.S. CLASSIFICATION
10		LOOSE BROWNISH GREY SILTY SAND/ SANDY SILT MIXED WITH LITTLE CLAY & MICA
100		MEDIUM DENSE TO VERY DENSE BROWNISH GREY SILTY SAND MIXED WITH MICA
100		LIGHT GREY TO BLACKISH GREY HIGHLY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY PATCHES & COARSE SAND
100		LIGHT GREY TO BLACKISH GREY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY PATCHES.

BORE HOLES (BH-1)

N VALUE (RECORDED)	SYMBOLIC REPRESENTATION	DESCRIPTION OF SOIL WITH I.S. CLASSIFICATION
14		LOOSE BROWNISH GREY SILTY SAND/ SANDY SILT MIXED WITH LITTLE CLAY & MICA
100		MEDIUM DENSE TO VERY DENSE BROWNISH GREY SILTY SAND MIXED WITH MICA
100		LIGHT GREY TO BLACKISH GREY HIGHLY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY PATCHES & COARSE SAND
100		LIGHT GREY TO BLACKISH GREY WEATHERED ROCK WITH STONE FRAGMENT, RUSTY PATCHES.

BORE HOLES (BH-2)

- NOTES:-
- ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE IN SCALED.
  - THE PROPOSED 2 LANE BRIDGE HAS BEEN DESIGNED FOR SINGLE LANE OF IRC CLASS 70R OR TWO LANES OF IRC CLASS A LOADING, WHICHEVER GOVERNS.
  - CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED BELOW:-  
PCC LEVELLING COURSE : M-15  
SUPERSTRUCTURE : M-35  
SUBSTRUCTURE : M-35  
CRASH BARRIER : M-40  
APPROACH SLAB : M-30  
RETURN/WING WALLS : M-35  
SEISMIC ARRESTOR : M-40
  - GRADE OF STEEL SHALL BE Fe-500 CONFORMING TO IS:1786.
  - BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX : 6 OF IRC:78-2000 HAVING PROPERTIES  $C=0$ ,  $\phi=30^\circ$ ,  $\delta=20^\circ$  &  $u=18 \text{ KN/m}^3$
  - LAYING COMPACTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX : 6 OF IRC : 78-2000
  - WEAP HOLES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALL FROM GROUND TO H.F.L.
  - 75mm THK. C.C. WEARING COURSE SECTION 500 OF NORTH SPECIFICATIONS M-30 GRADE.
  - SAFE BEARING CAPACITY CONSIDERED FOR DESIGN OF FOUNDATION IS  $250 \text{ KN/M}^2$ , SAFETY OF THE EXISTING STRUCTURE SHALL BE ENSURED DURING THE EXECUTION OF NEW BRIDGE
  - FOUNDATION SIZE AND DEPTH SHALL BE VERIFIED AFTER CONFORMATORY BORE HOLES.
  - WATER TO BE USED IN CONCRETING, GROUTING AND CURING SHALL CONFORM TO CLAUSE 302.4 OF IRC-21-2000
  - (i) CLEAR COVER TO OUTER MOST STEEL IS 50mm FOR ALL COMPONENTS EXCEPT FOUNDATIONS.  
(ii) CLEAR COVER TO OUTER MOST STEEL IS 75mm FOR FOUNDATION.

LEGENDS:-

FR FREE BEARING  
FX FIXED BEARING

REV	DATE	DESCRIPTION OF REVISIONS	INITIALS
			A B C D



Consultant:  
CHAITANYA PROJECTS CONSULTANCY PVT. LTD.  
C-5, 2ND FLOOR, R.K.TOWER  
PLOT NO.- 21-22, SECTOR-4, VAISHALI, GHAZIABAD  
PH.: 0120-3223419, 4120472, FAX: 0120-4110472

SCALE:-  
AS SHOWN

CLIENT : THE CHIEF ENGINEER (NH)  
PUBLIC WORKS DEPARTMENT  
(Government of Meghalaya)

DWG TITLE:  
GENERAL ARRANGEMENT DRAWING  
(CH. 41+782)

PROJECT:  
CONSULTANCY SERVICES FOR DETAILED PROJECT REPORT FOR UPGRADATION TO TWO LANE OF STATE ROAD STRETCHES FROM NONGSTOIN - DOMIASIAT VIA WAHKAJI ( TENTATIVE LENGTH - 66.00 KMS ) IN THE STATE OF MEGHALAYA UNDER PHASE B OF SARDP-NE

DRG. NO. CPC\P-073\DPR\KM41+782\GAD-101		REV. R0
DATE JULY 2013	DRAWN VIKAS	
DESIGNED P.NEGI	CHECKED P.V.M	APPROVED V.P.S