Details of Structural drawings

Details of Small Culverts

CONTENTS

Road Name: Pasighat - Pangin road
(Package-IV)
(SMALL CULVERTS)

LEVEL DETAILS OF PROPOSED CULVERTS

Road Name: Pasighat - Pangin road (Package-IV - 57km to 71.5967 km)

Sl No	Chainage (in Km)	Type of Structure	Final Culverts Size (m x m)	Finish Road Level (in m)	Natural Ground Level.(in m)
1	57.432	Box culvert (Single)	2 x 2	270.4566	268.780
2	57.644	Box culvert (Single)	2 x 2	279.6388	278.399
3	57.959	Box culvert (Single)	2 x 2	289.6794	289.212
4	58.533	Box culvert (Single)	2 x 2	291.2122	289.384
5	58.765	Box culvert (Single)	2 x 2	276.69	276.558
6	59.019	Box culvert (Single)	2 x 2	276.118	275.497
7	59.125	Box culvert (Single)	2 x 3	276.789	274.630
8	59.368	Box culvert (Single)	2 x 2	278.851	277.974
9	59.800	Box culvert (Single)	2 x 2	293.391	292.118
10	59.975	Box culvert (Single)	2 x 3	304.921	302.287
11	60.566	Box culvert (Single)	2 x 3	344.2678	341.328
12	60.667	Box culvert (Single)	2 x 2	350.2574	351.616
13	60.800	Box culvert (Single)	2 x 2	358.855	358.022
14	60.929	Box culvert (Single)	2 x 2	367.6276	367.590
15	61.091	Box culvert (Single)	3 x 4	377.8888	374.079
16	61.422	Box culvert (Single)	2 x 2	388.6544	390.322
17	61.625	Box culvert (Single)	2 x 2	401.045	400.372
18	61.836	Box culvert (Single)	2 x 3	412.309	409.371
19	62.461	Box culvert (Single)	4 x 7	439.132	432.539
20	63.137	Box culvert (Single)	2 x 2	472.824	473.006
21	63.211	Box culvert (Single)	2 x 2	473.115	471.038
22	63.472	Box culvert (Single)	2 x 2	471.922	473.866
23	63.504	Box culvert (Single)	2 x 2	471.424	472.117
24	63.690	Box culvert (Single)	2 x 2	464.327	462.680
25	63.803	Box culvert (Single)	3 x 4	464.867	461.412

Sl No	Chainage (in Km)	Type of Structure	Final Culverts Size (m x m)	Finish Road Level (in m)	Natural Ground Level.(in m)
26	64.010	Box culvert (Single)	2 x 2	451.099	451.691
27	64.155	Box culvert (Single)	2 x 3	450.382	447.894
28	64.550	Box culvert (Single)	2 x 2	454.995	454.570
29	64.975	Box culvert (Single)	2 x 2	455.108	453.999
30	65.038	Box culvert (Single)	2 x 2	454.952	455.496
31	65.108	Box culvert (Single)	2 x 2	456.431	456.012
32	65.230	Box culvert (Single)	2 x 2	458.320	458.223
33	65.352	Box culvert (Single)	2 x 2	459.707	459.040
34	65.600	Box culvert (Single)	2 x 3	454.509	451.869
35	66.317	Box culvert (Single)	2 x 2	463.003	463.823
36	66.740	Box culvert (Single)	3 x 4	479.975	476.774
37	67.611	Box culvert (Single)	3 x 4	475.438	471.978
38	68.016	Box culvert (Single)	2 x 3	453.906	450.727
39	68.150	Box culvert (Single)	3 x 4	444.878	440.994
40	68.316	Box culvert (Single)	2 x 3	434.239	431.821
41	68.530	Box culvert (Single)	2 x 3	421.544	419.421
42	69.025	Box culvert (Single)	2 x 2	387.796	386.141
43	69.091	Box culvert (Single)	2 x 2	383.307	382.884
44	69.190	Box culvert (Single)	2 x 2	376.514	374.734
45	69.415	Box culvert (Single)	4 x 5	361.279	356.367
46	69.900	Box culvert (Single)	2 x 3	338.555	336.209
47	70.050	Box culvert (Single)	4 x 5	333.388	328.211
48	70.237	Box culvert (Single)	2 x 2	321.436	319.765
49	71.235	Box culvert (Single)	2 x 2	264.661	263.848
50	71.385	Box culvert (Single)	2 x 2	254.589	254.596
51	71.548	Box culvert (Single)	2 x 2	250.565	250.419

(A) GENERAL

1. These notes are applicable for the Standard Drawings of R.C.C. Box Cell Structures with earth cushion (3m, 4m & 5m) and without earth cushions. For intermediate heights immediately higher value of earth cushion can be taken for standard drgs.

2. These drawings are applicable for right crossings with overall width. of 12m for the roadway on top.

3. All dimensions are in millimeters unless otherwise mentioned. Only written dimensions are to be followed. No drawing shall be scaled.

4. Box cell designation i.e. Nc/ab/Ec stands for No. of cells/Clear width - Clear height/Height of earth cushion.

5. Design criteria:
   I. The design is according to the following codes:
   (a) I R C : 5-1985
   (b) I R C: 6 -1966 (1985 reprint)
   (c) I RC : 21- 1987(1997 reprint)
   (d) I R C : 78 - 1985

   II. The following loads have been considered in the design:
   (a) One lane of IRC class 70R or two lanes of class A on carriage way, whichever governs.
   (b) Wearing coat load of 3 KN/sq.m.

   III. The design are applicable for 'MODERATE' AND 'SEVER' conditions of exposure.

6. Wearing coat shall consist of the following for Box Cell Structures without earth cushions.

I.a A coat of mastic asphalt 6 mm thick with a prime coat over the top of deck is to be provided before the wear ing coat is laid.

I.b 50 mm thick asphaltic concrete wearing coat as per Clause 512 of MOST's Specifications for Roads and Bridge Works
(Third Revision - 199S).

II. In case of isolated construction of Box Cell Structures located in remote areas where provision of mastic and asphaltic concrete wearing coat is not practicable, Engineer-in-charge may permit provision of 75mm thick cement concrete wearing coat in M30 grade concrete with maximum water cement ratio as 0.40. The rienforcement shall be consist of 8mmØ High Yield Strength. Deformed bars @ 200mm centers in both direction over a strip of 300mm near the expansion joint Reinforcement shall be pl aced at the centre of the centre of the wearing coat, wearing coat shall be discontinued at expansion joint locations. Joint filters shall extend upto the top of wearing coat.

III. For Box Cell Structures with earth cushion, no wearing coat shall be provided.

7. Type/position of return walls, railings, guards, posts, ramp, etc. in approach portion shall be decided by the Engineer-in-charge.

8. Lowest point in the proposed Box Cell plan area is assumed as Natural Ground level.

9. Invert level of Top surface of Bottom Slab is assumed as Bed Level.

(B) MATERIAL SPECIFICATIONS

CONCRETE

1. Concrete shall be design mix and shall have minimum 28 days characteristics strength on 150 mm cubes for all elements of structures as indicated below :

Element	Concrete grade		Characteristics strength (MPa)	
	Moderate condition of exposure	Saving condition of exposure	Moderate condition of exposure	Saving condition of exposure
(a) Box Cell Structure	M 20	M 25	20	25
(b) Wing Walls	M 20	M 20	20	20
(c) Return Walls	M 25	M 25	25	25
(d) Curtain Wall	M 15	M 20	15	20
(e) Levelling Course	M 15	M 15	15	15

2. High strength ordinary Portland cement conforming to IS:8112 or ordinary Portland cement conforming to IS:269' capable of achiving the required design concrete strength shall only be used.

3. The minimum cement concrete and water cement ratio in the concrete design mix shall be 310 kg per cu.m and 0.45 respectively for 'MODERATE' conditions of exposure. The minimum cement content and maximum water cement ratio in the concrete design mix shall be 400 Kg/cu.m and 0.40 respectively for 'SEVERE' conditions of exposure.

4. The total chloride contents and Sulfuric anhydride (503) of all concrete as a percentage of mass of cement in mix shall be limited to 0.3% and 4% respectively.

5. The slump of concrete shall be checked as per 15:516, Concrete should have the slump of 50 -75mm.

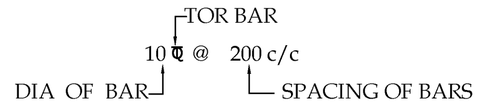
6. Use of admixtures such as super plasticisers for concrete may be made with the approval of the engineer -in-charge.

7. Aggregate shall confirm to CL 302.3 of IRC:21 – 1987 (1997 reprint) and maximum aggregate size should not exceed 40mm.

REINFORCEMENT

1. All reinforcement shall be High Yield Strength Deformed bars (Grade designation S 415) conforming to 15:1786.

2. Unless otherwise shown on the drawings, bars are marked in numerical numbers (as (1), (2) or (3)) and corresponding information is provided in bar bending schedule. Bars configuration is shown as –



3. Spacing given for all reinforcement is perpendicular to bar unless otherwise shown on drawings.

EARTH FILL / EMBANKMENT

Back filling material should confirm to CL 305.2 of MOST Specification and earth cushion embankment should be constructed in accordance to section 300 of MOST specification (THIRD REVISION 1995).

WATER

Water to be used in concreting and curing shall be conforming to be Clause 302.4 of IRC 21 –1987.

EXPANSION JOINT

1. The asphalt plug expansion joint shall be provided in accordance with MOST specification and shall be procured from manufactures as approved by MOST

(C) WORKMANSHIP / DETAILING

1. Minimum clear cover to any reinforcement including stirrups shall be 50 mm' unless otherwise shown in the drawings.

2. Construction Joints:

I. The location and provision of construction joints shall be approved by Engineer-in charge suggested location of construction joints in the direction parallel to the direction of water flow is shown in the General Arrangement drawings of Box Cell Structures. The concreting operation shall be carried out continuous upto the construction joints.

II. The concrete surface at the joint shall be brushed with a stiff brush after casting while the concrete is still fresh and it has only slightly hardened.

III. Before new concrete is poured the surface of old concrete shall be prepared as under:

(a) For hardened concrete, the surface shall be thoroughly cleaned to remove debris/laitance and made rough so that 1/4 of the size of the aggregate is exposed.

(b) Forpartially hardened concrete, the surface shall be treated by wire brush followed by an air jet.

(3) The old surface shall be soaked with water without leaving puddles immediately, before starting concreting to prevent the absorption of water' from new concrete.

IV. New concrete shall be thoroughly compacted in the region of the joint.

3. Welding of reinforcement bars shall not be permitted.

4. Laps in reinforcement:

I. Minimum lap length of reinforcement shall be decided as per the reinforcement arrangement based on the clause 304.6.6 of IRC:21-1987.
II. Not more than 50% of reinforcement shall be lapped at anyone location.

5. Bending of reinforcement bars shall be as per IS: 2502.

6. Supporting chairs of 12 mm diameter shall be provided at suitable intervals as per IS : 2502.

7. Concrete shall be produced in a mechanical mixer of capacity not less than 200 Its having integral weigh botching facility and automatic water measuring and dispensing device.

8. Proper compaction of concrete shall be ensured by use of full width screed vibrators for concrete.

9. Properly braced steel plates shall be used as shuttering.

10. Sharp edges of concrete shall be chamfered.

11. Filter media should be provided in accordance to clause 2504.2.2 of MOST specifications (THIRD REV.1995).

12. In presence of soil with aggressive soil condition the concrete faces in contact with earth shall be protected with approved bituminous paint or coating as decided by the Engineer-in-charge.

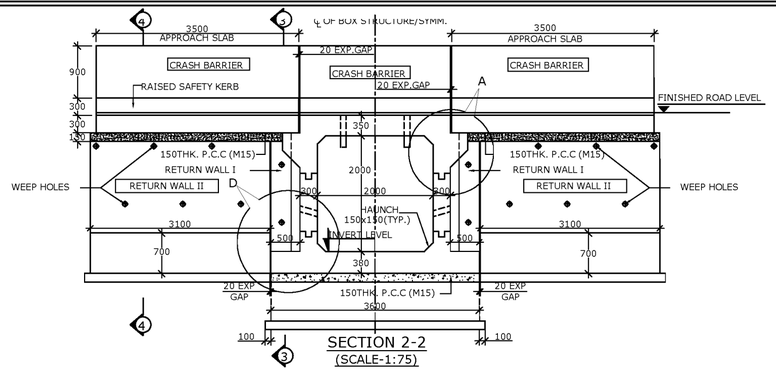
(D) GENERAL SPECIFICATIONS

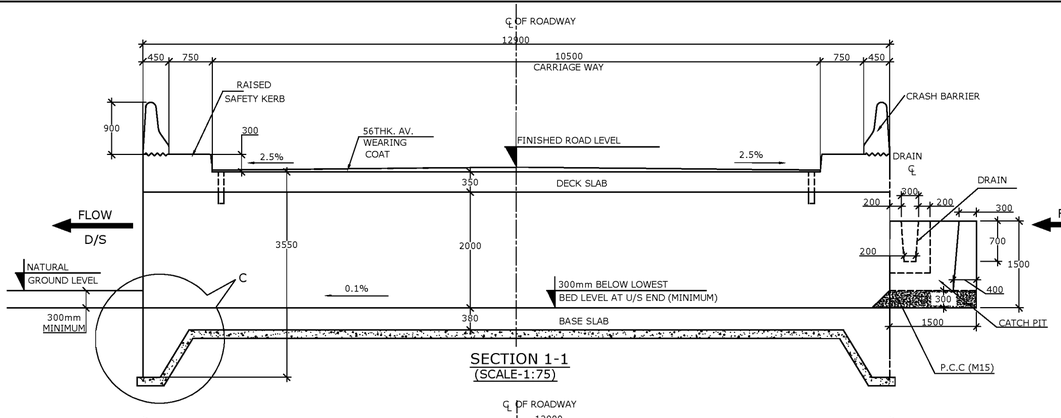
1. The work shall be executed in accordance with MOST's Specification for Road and Bridge Works (Third Revision, 1994) except wherever otherwise mentioned.

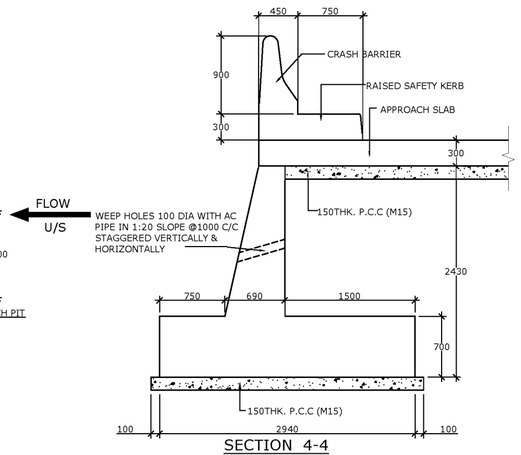
DESIGN CONSULTANT: Cetest — C.E. TESTING COMPANY PVT. LTD. 124A,N.S.C. BOSE ROAD KOLKATA — 700092 INDIA (An IS/ISO 9001:2000 CERTIFIED COMPANY)	SCALE: AS DRAWN	CLIENT: PUBLIC WORKS DEPARTMENT GOVT. OF ARUNACHAL PRADESH PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV (57KM-71.5967KM)	GENERAL NOTES FOR BOX CULVERT FROM STANDARD DRAWING (MoRT&H) ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

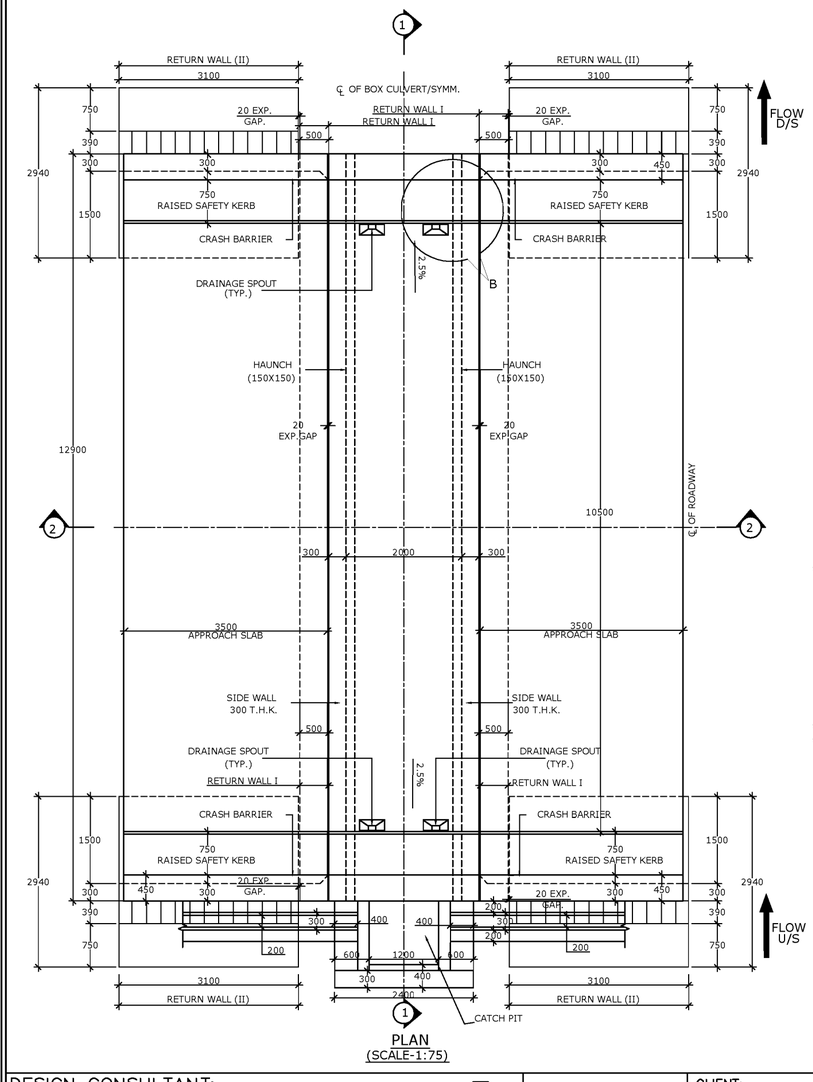
DRG. NO. CET/2010/2364/PKG–IV/BC/GENERAL NOTES
DATE : MARCH, 2010

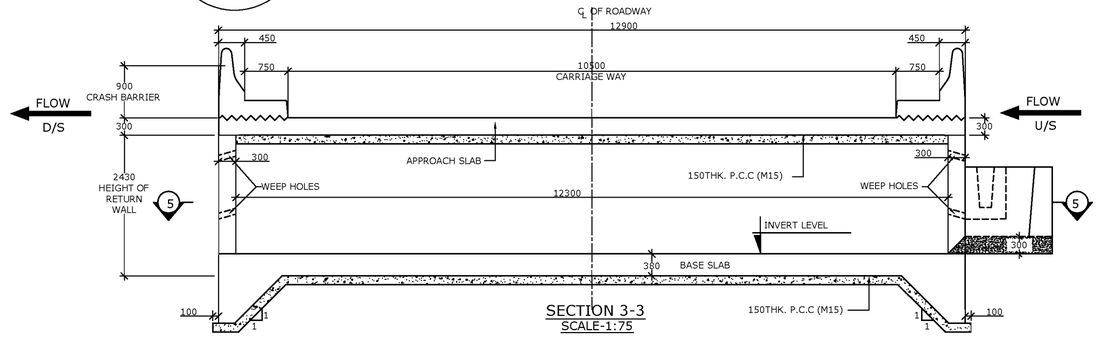
DRAWN BY	CHECKED BY	APPROVED BY
P.D.	S.T	D.M.N

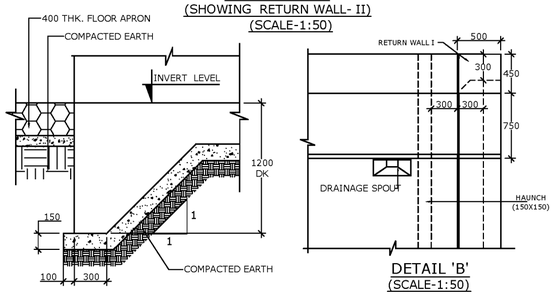


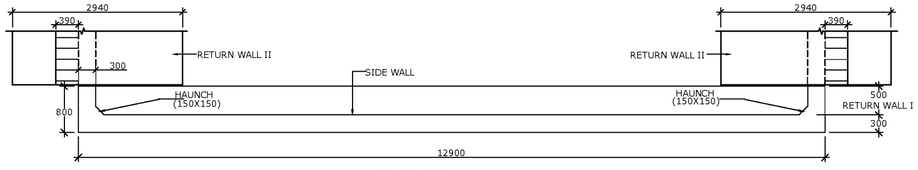


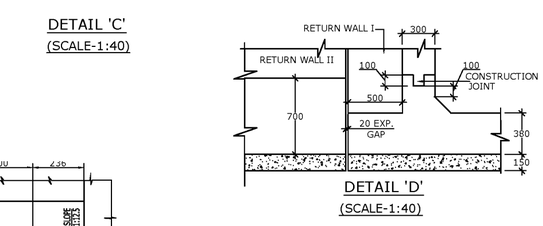


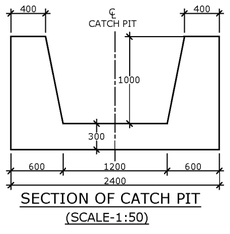


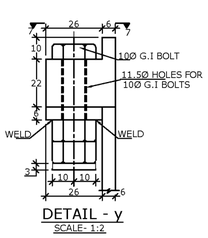


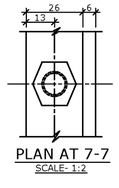


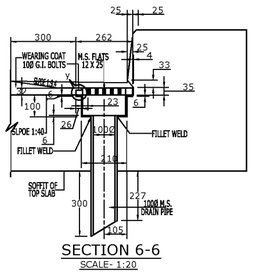


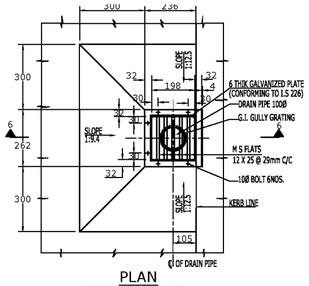


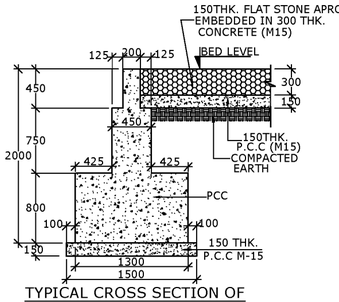


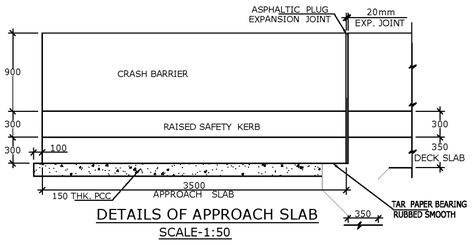


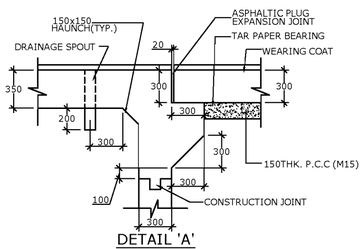


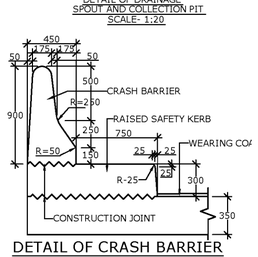












NOTES :

1. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANNULAR FILLS WITH LAYERS NOT EXCEEDING 300mm.
2. THIS DRAWING HAS BEEN PREPARED BASED ON STANDARD DRAWINGS FOR BOX CULVERT PUBLISHED BY MoRT&H.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BC/2X2-1/RCC-01

DESIGN CONSULTANT:

Cetest

An IS/ISO 9001:2000 CERTIFIED COMPANY

C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV (57KM-71.5967KM)

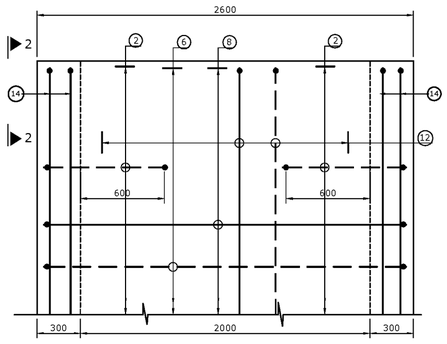
GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT(2.0M X 2.0M)WITH CATCH PIT

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

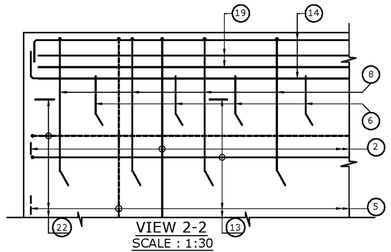
DRG. NO. CET/2010/2364/PKG–IV/BC/2X2–1/GA–01

DATE : MARCH, 2010

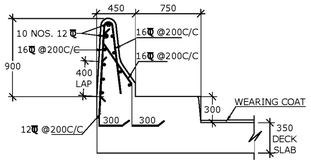
DRAWN	CHECKED	APPROVED	REV.
P.D	S.T	D.M.N	0



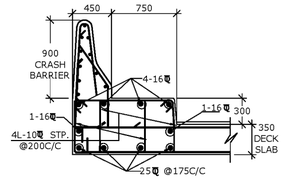
TOP SLAB R/F PLAN
SCALE : 1:30
(BAR MARK (5), (19), KERB, BRACKET & HAUNCH LINES NOT SHOWN IN PLAN)



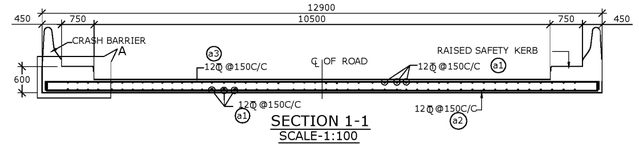
VIEW 2-2
SCALE : 1:30



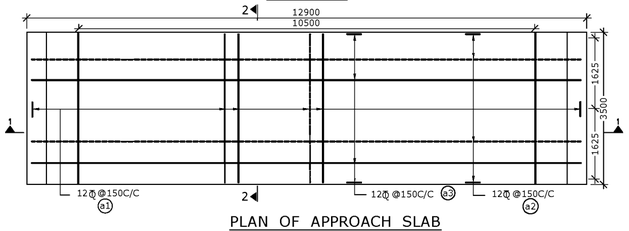
DETAIL OF CRASH BARRIER
(FOR REINFORCEMENT ONLY)
SCALE-1:50



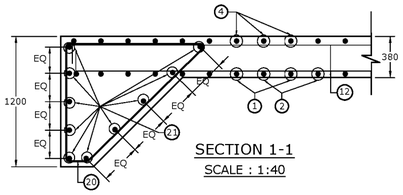
DETAIL OF RAISED SAFTY KERB
(FOR REINFORCEMENT ONLY)
SCALE-1:50



SECTION 1-1
SCALE-1:100



PLAN OF APPROACH SLAB
SCALE 1:100



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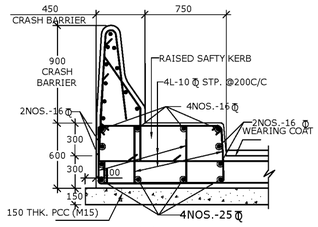
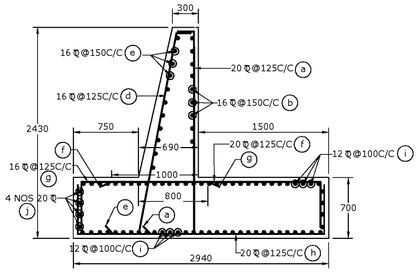
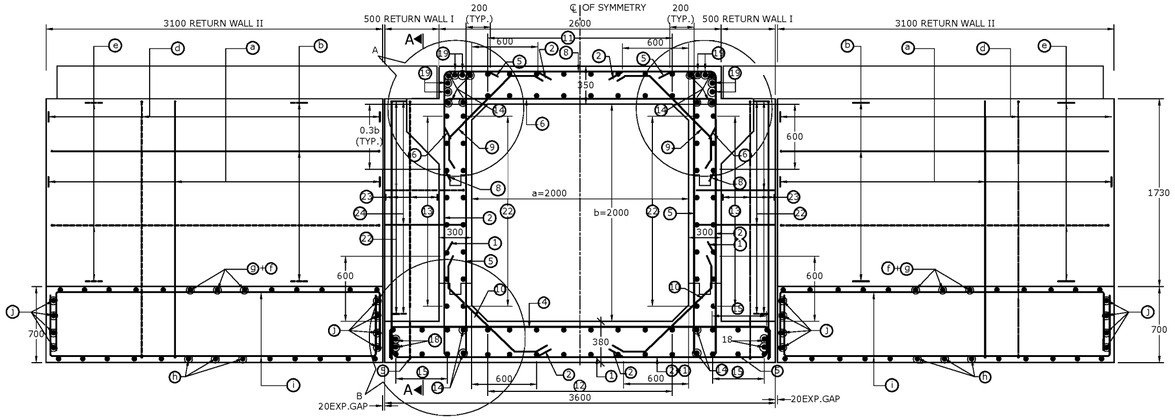


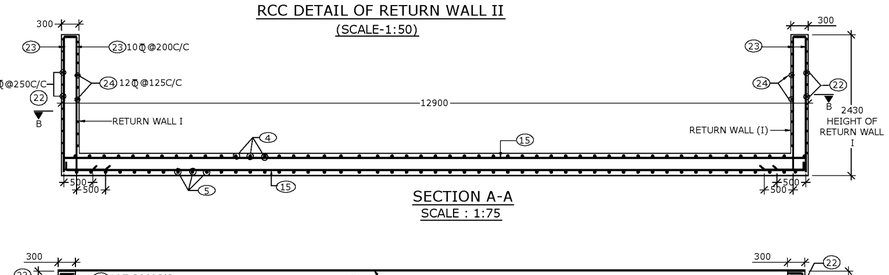
DETAIL - A
(FOR REINFORCEMENT DETAIL)
SCALE-1:40



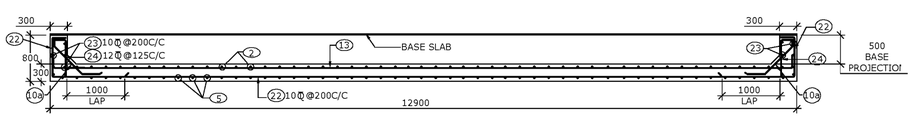
RCC DETAIL OF RETURN WALL II
(SCALE-1:50)



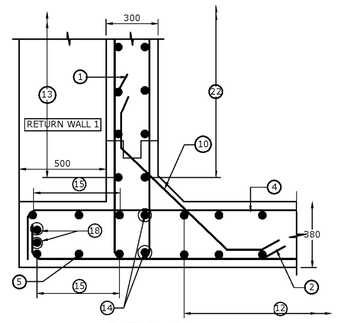
REINFORCE DETAIL OF SINGLE CELL BOX CULVERT
SCALE : 1:40



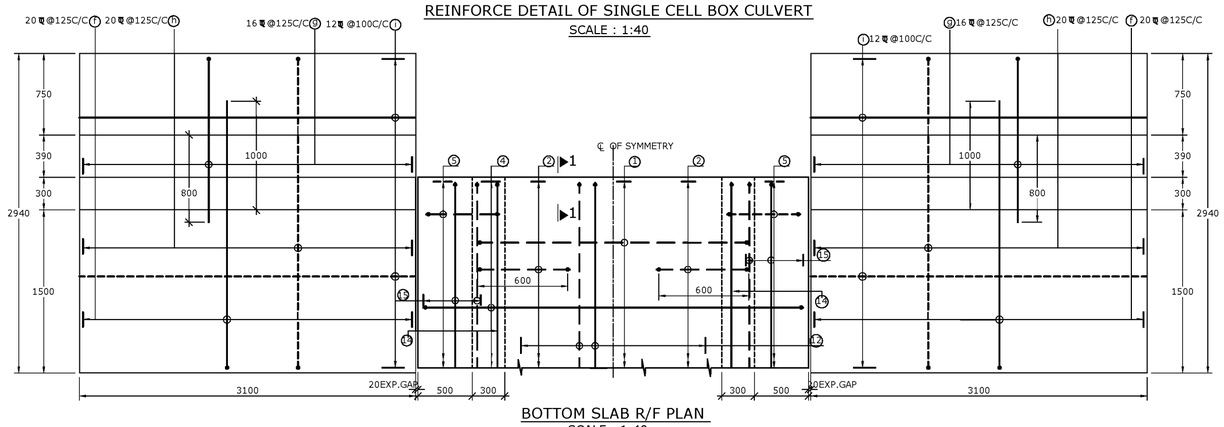
SECTION A-A
SCALE : 1:75



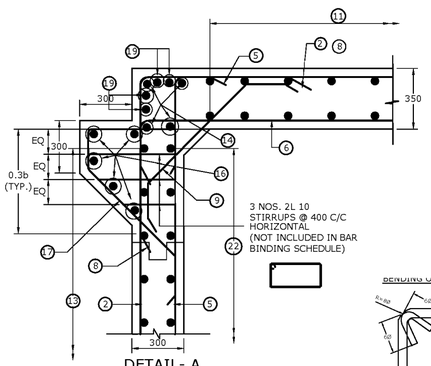
SECTIONAL PLAN B-B
SCALE : 1:75



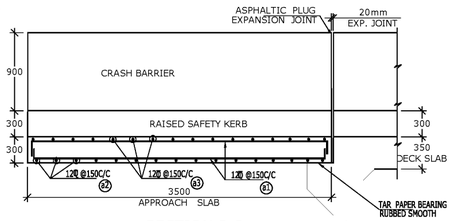
DETAIL- B
SCALE : 1:25



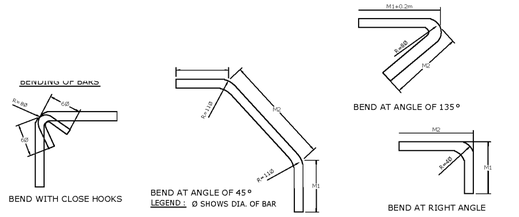
BOTTOM SLAB R/F PLAN
SCALE : 1:40
(HAUNCH LINE NOT SHOWN IN PLAN)



DETAIL- A
SCALE : 1:25



SECTION 2-2
(FOR REINFORCEMENT DETAIL)
SCALE-1:50



LEGEND

TOP FACE BARS / FRONT FACE BARS

BOTTOM FACE BARS / REAR FACE BARS

SCHEDULE OF REINFORCEMENT

BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
1	10	250
2	16	250
4	16	250
5	16	250
6	16	250
8	10	250
9	10	250
10	12	250
10a	12	250
11	10	250
12	10	250

BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
13	10	250
14	10	-
15	10	250
16	12	-
17	12	250
18	10	-
19	10	-
20	10	150
21	10	-
22	10	250
23	10	200
24	12	125

NOTES :
1. **THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BC/2X2-1/GA-01**

DESIGN CONSULTANT:
Cetest
An IS/ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV (57KM-71.5967KM)

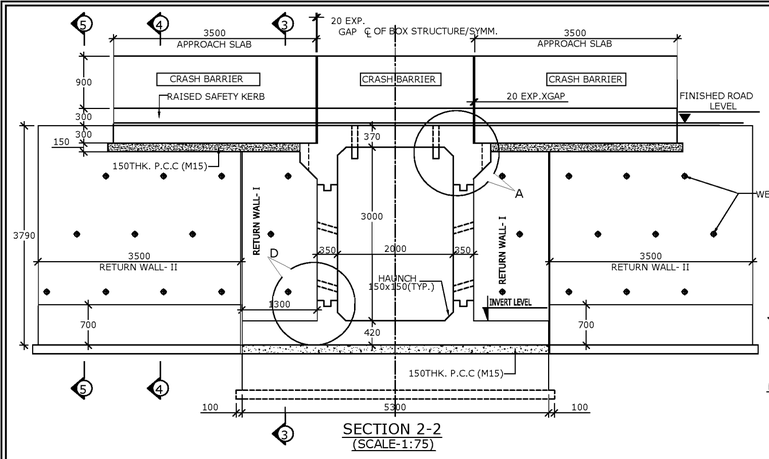
REINFORCEMENT DETAIL OF SINGLE CELL BOX CULVERT(2.0M X 2.0M)WITH CATCH PIT

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

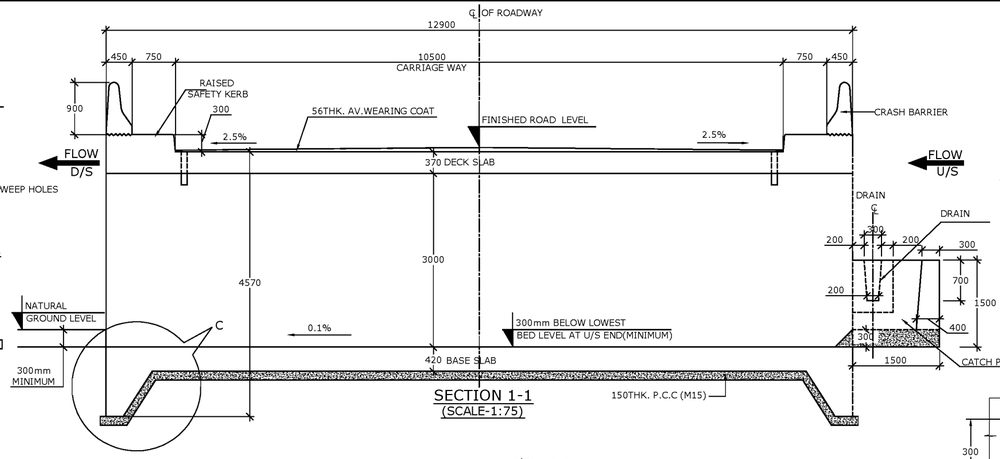
DRG. NO. CET/2010/2364/PKG-IV/BC/2X2-1/RCC-01

DATE : MARCH, 2010

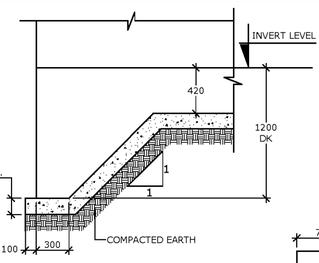
DRAWN	CHECKED	APPROVED	REV.
P.D	S.T	D.M.N	0



SECTION 2-2
(SCALE-1:75)

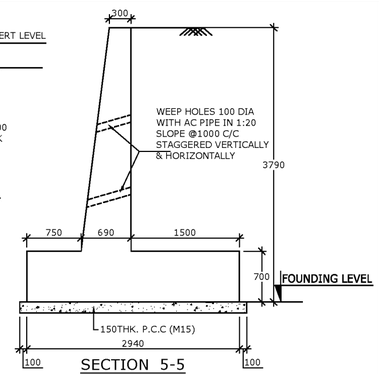


SECTION 1-1
(SCALE-1:75)

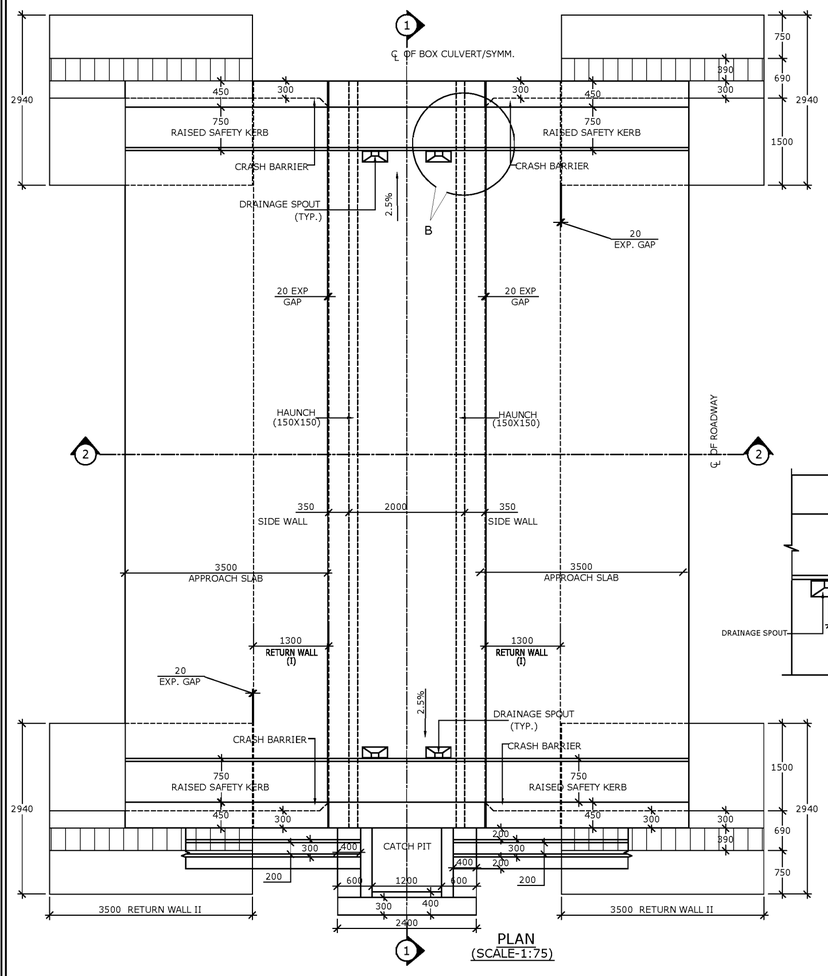


DETAIL 'C'
(SCALE-1:40)

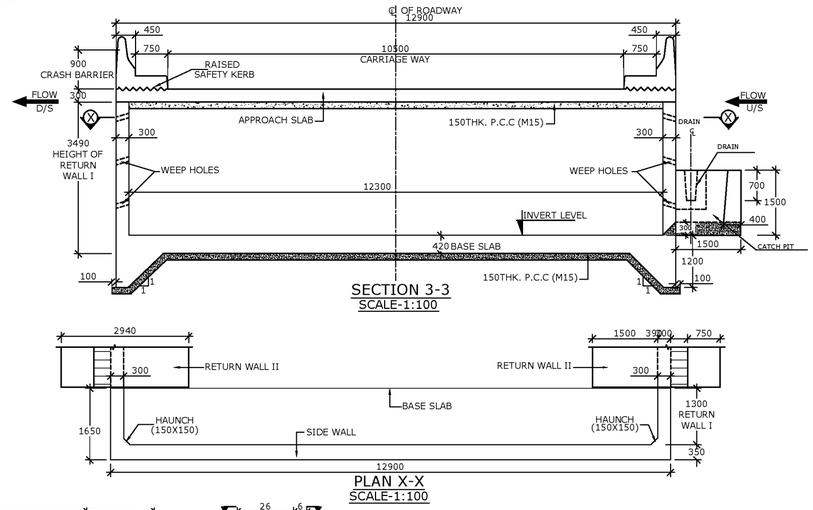
DK= DEPTH OF KEY



SECTION 5-5
(SHOWING RETURN WALL- II)
(SCALE-1:60)

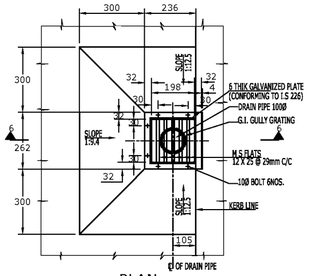


PLAN
(SCALE-1:75)

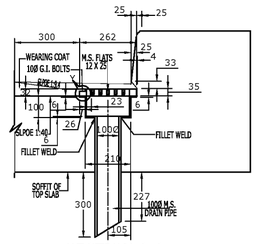


SECTION 3-3
SCALE-1:100

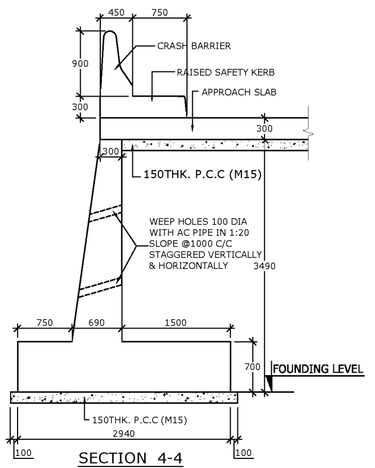
PLAN X-X
SCALE-1:100



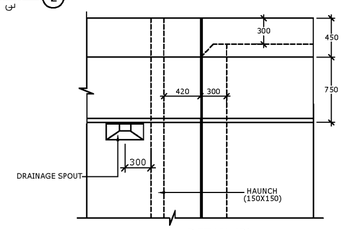
PLAN
DETAIL OF DRAINAGE SPOUT AND COLLECTION PIT
SCALE- 1:20



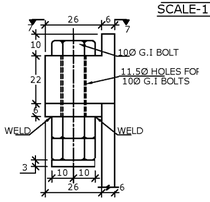
SECTION 6-6
SCALE- 1:20



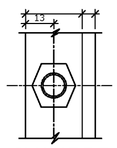
SECTION 4-4
(SHOWING RETURN WALL- II)
(SCALE-1:60)



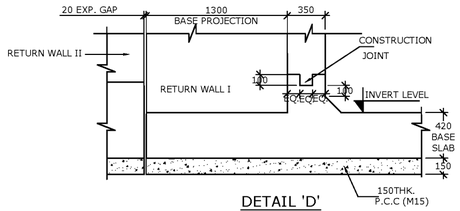
DETAIL 'B'
(SCALE-1:40)



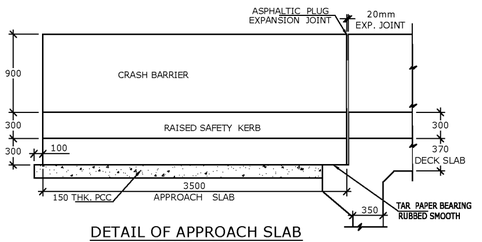
DETAIL - Y
SCALE- 1:2



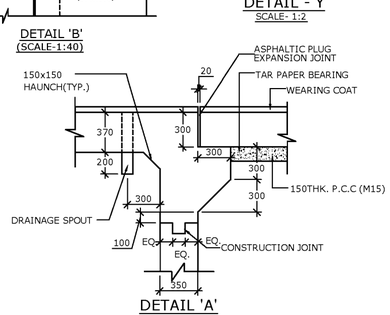
PLAN AT 7-7
SCALE- 1:2



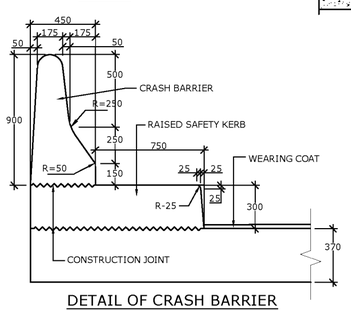
DETAIL 'D'
(SCALE-1:40)



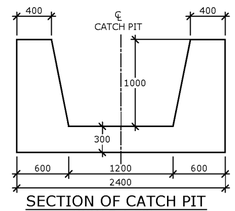
DETAIL OF APPROACH SLAB
SCALE-1:50



DETAIL 'A'
(SCALE-1:40)



DETAIL OF CRASH BARRIER
(SCALE-1:30)



SECTION OF CATCH PIT
(SCALE-1:50)

NOTES :

1. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANNULAR FILLS WITH LAYERS NOT EXCEEDING 300mm.
2. THIS DRAWING HAS BEEN PREPARED BASED ON STANDARD DRAWINGS FOR BOX CULVERT PUBLISHED BY MoRT&H.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BC/2X3-1/RCC-01

DESIGN CONSULTANT:

Cetest

An IS/ISO 9001:2000 CERTIFIED COMPANY

C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT:
PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT:
DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV (57KM-71.5967KM)

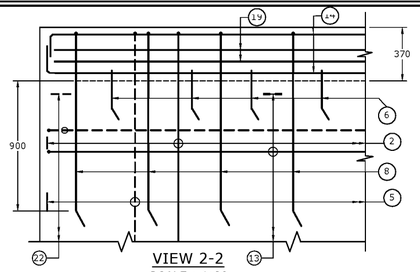
GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (2.0M X3.0M) WITH CATCH PIT

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

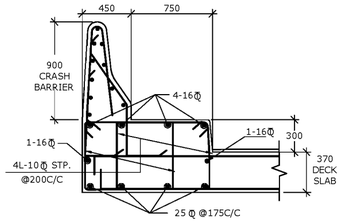
DRG. NO.
CET/2010/2364/PKG–IV/BC/2X3–1/GA–01

DATE : MARCH, 2010

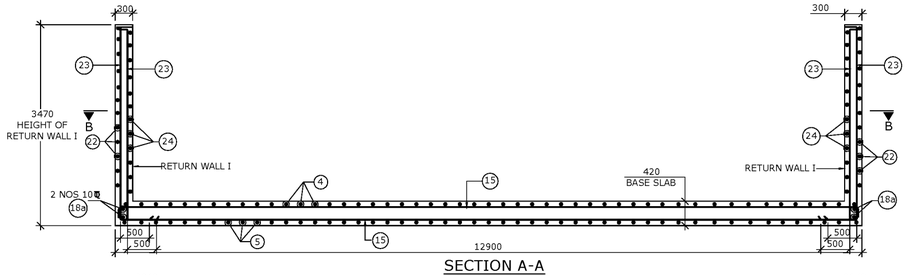
DRAWN	CHECKED	APPROVED	REV.
P.D	S.T	D.M.N	0



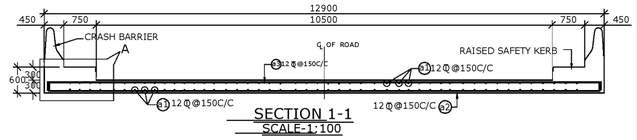
VIEW 2-2
SCALE : 1:30



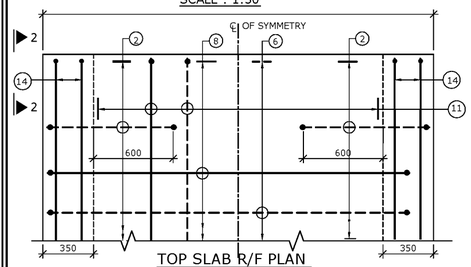
DETAIL OF RAISED SAFTY KERB
(FOR REINFORCEMENT ONLY)
SCALE-1:40



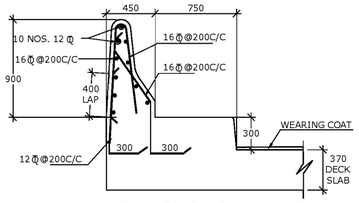
SECTION A-A
SCALE : 1:75



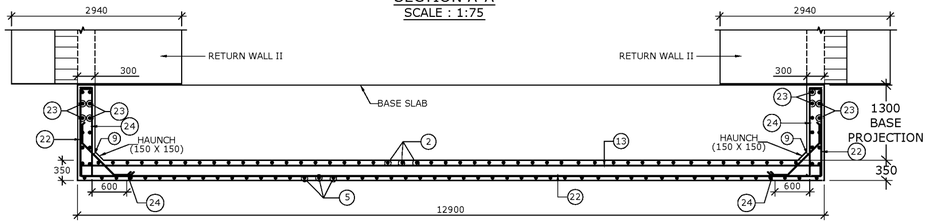
SECTION 1-1
SCALE-1:100



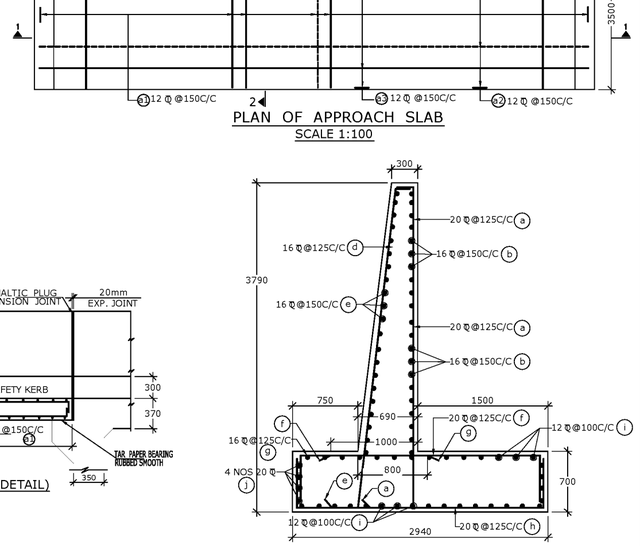
TOP SLAB R/F PLAN
SCALE : 1:30
(BAR MARK ⑤ ,⑲), KERB, BRACKET & HAUNCH LINES NOT SHOWN IN PLAN)



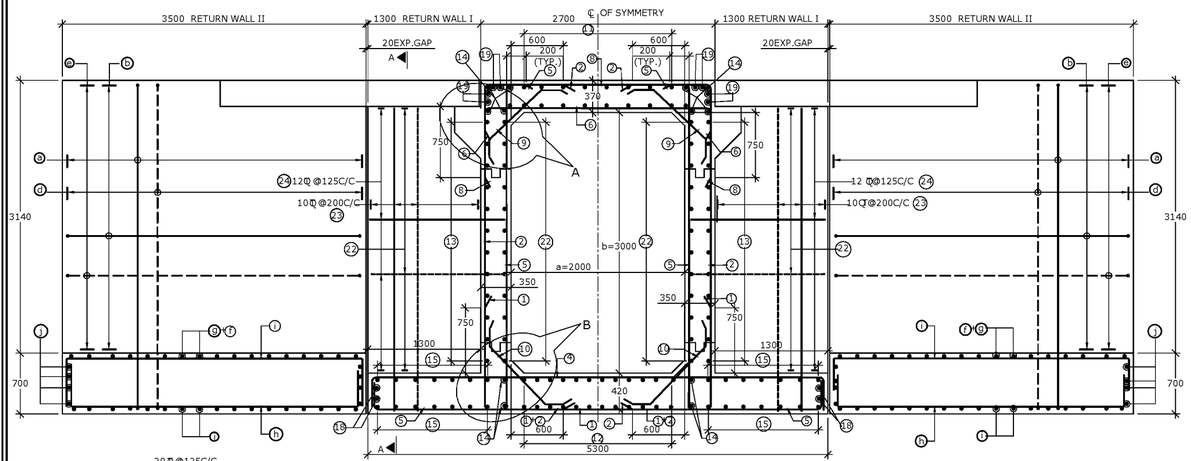
DETAIL OF CRASH BARRIER
(FOR REINFORCEMENT ONLY)
SCALE-1:40

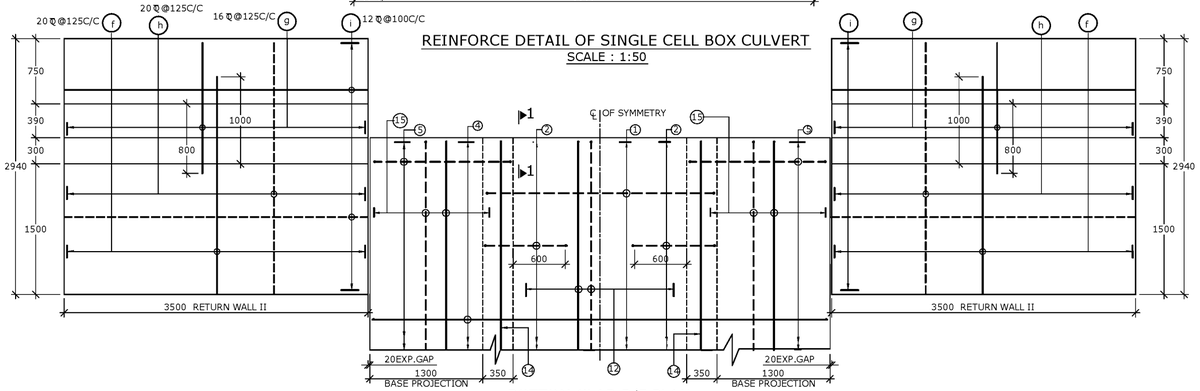


SECTIONAL PLAN B-B
SCALE : 1:75



PLAN OF APPROACH SLAB
SCALE 1:100

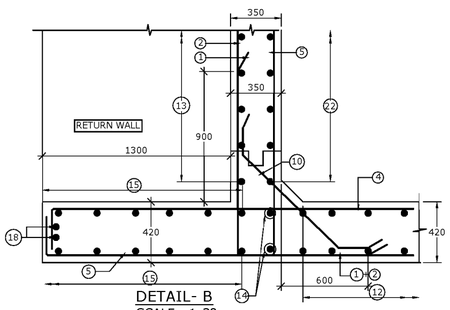




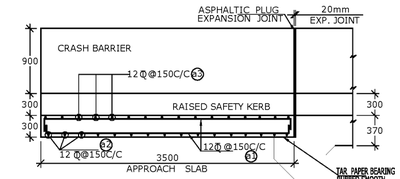
REINFORCE DETAIL OF SINGLE CELL BOX CULVERT
SCALE : 1:50

BOTTOM SLAB R/F PLAN
SCALE : 1:50
(HAUNCH LINE NOT SHOWN IN PLAN)

LEGEND
TOP FACE BARS / FRONT FACE BARS
BOTTOM FACE BARS / REAR FACE BARS

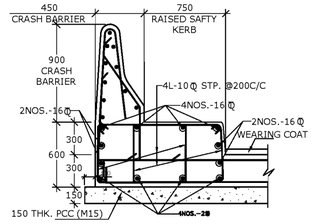


DETAIL- B
SCALE : 1:30

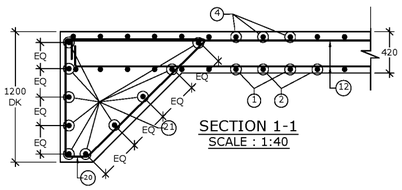


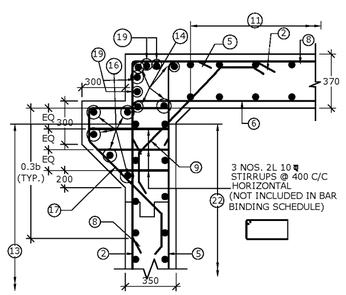
SECTION 2-2
(FOR REINFORCEMENT DETAIL)
SCALE-1:60

RCC DETAIL OF RETURN WALL II
(SCALE-1:50)



DETAIL - A
(FOR REINFORCEMENT DETAIL)
SCALE-1:40





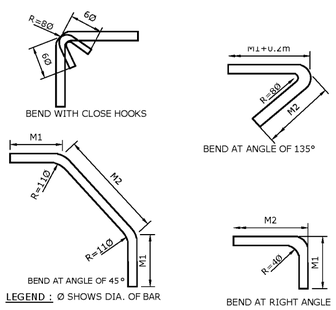
DETAIL- A
SCALE : 1:30

SCHEDULE OF REINFORCEMENT

BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
①	16	225
②	16	225
④	16	200
⑤	16	175
⑥	16	250
⑧	16	225
⑨	10	250
⑩	12	250
⑪	10	250
⑫	10	150

BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
⑬	10	250
⑭	10	-
⑮	16	150
⑯	12	-
⑰	12	250
⑱	10	-
⑱a	10	-
⑲	10	-
⑳	10	150
㉑	10	-
㉒	10	250
㉓	10	200
㉔	12	125

BENDING OF BARS



LEGEND : Ø SHOWS DIA. OF BAR

NOTES :
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BC/2X3-1/GA-01

DESIGN CONSULTANT:
Cetest
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124A,N.S.C. BOSE ROAD
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INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV (57KM-71.5967KM)

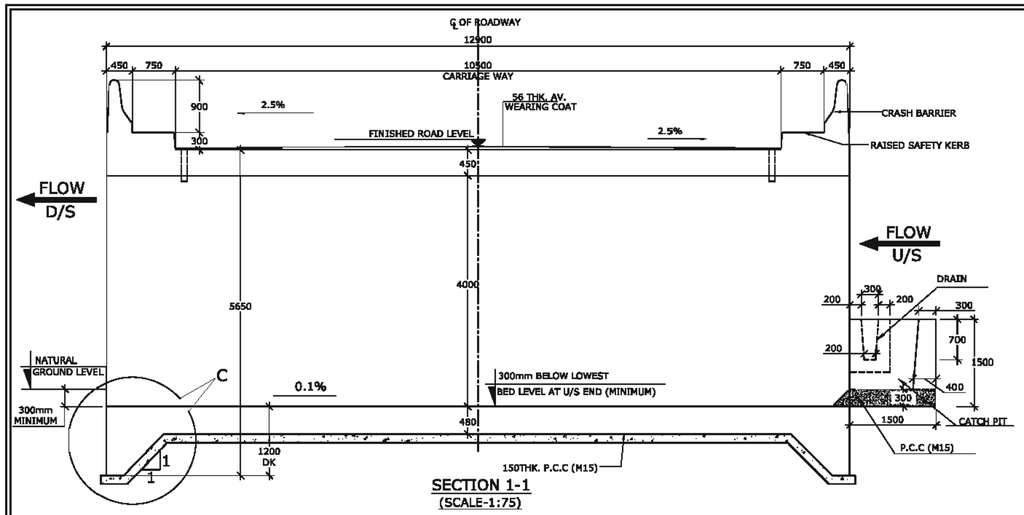
REINFORCEMENT DETAIL OF SINGLE CELL R.C.C BOX CULVERT (2.0M X3.0M) WITH CATCH PIT

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

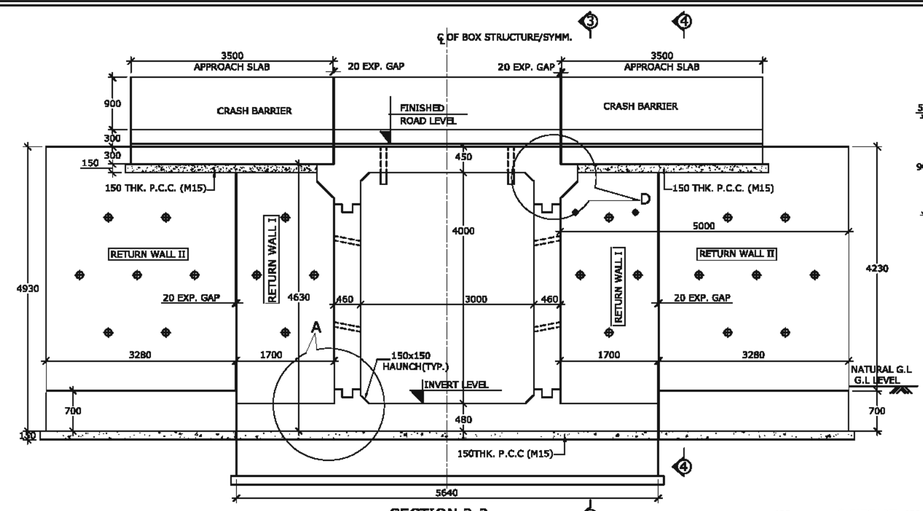
DRG. NO. CET/2010/2364/PKG-IV/BC/2X3-1/RCC-01

DATE : MARCH, 2010

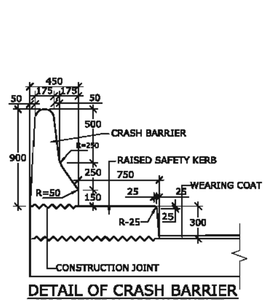
DRAWN	CHECKED	APPROVED	REV.
S.C	S.T	D.M.N	0



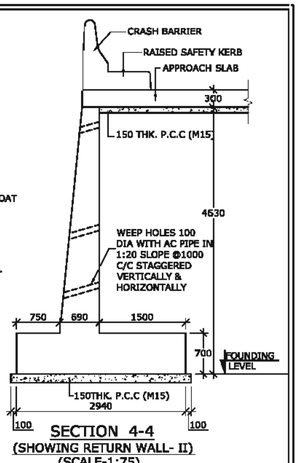
SECTION 1-1
(SCALE-1:75)



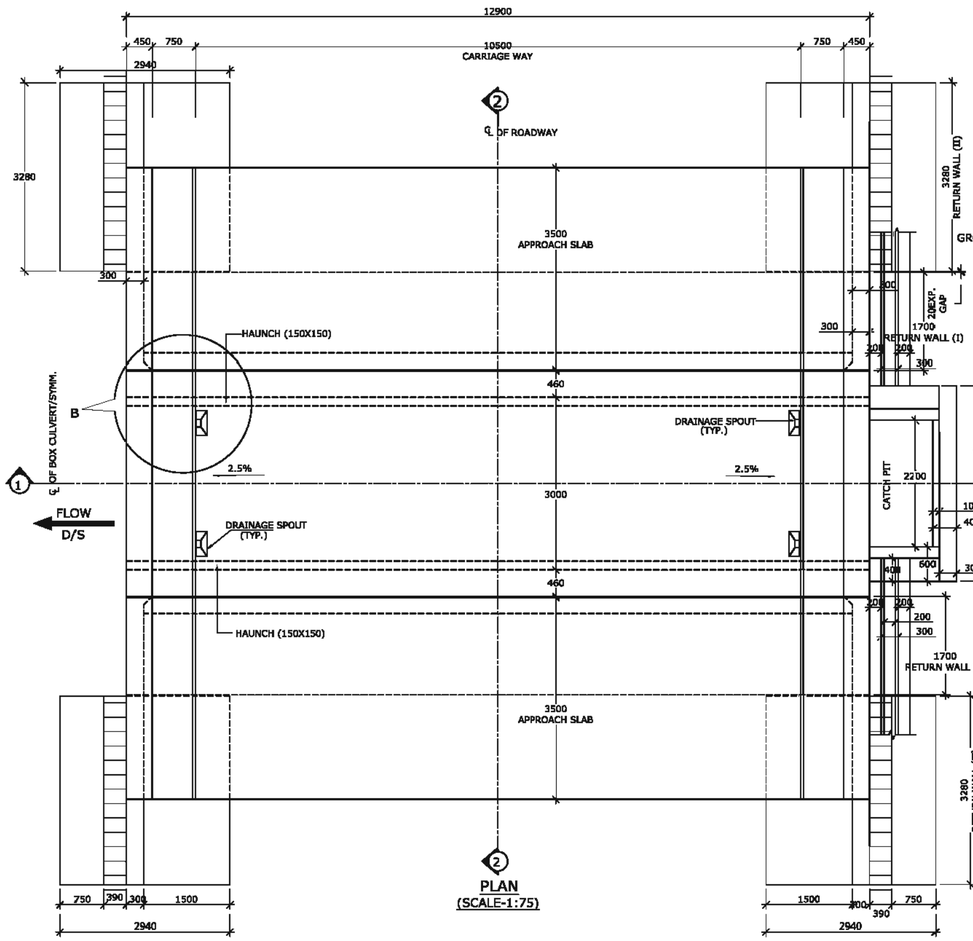
SECTION 2-2
(SCALE-1:75)



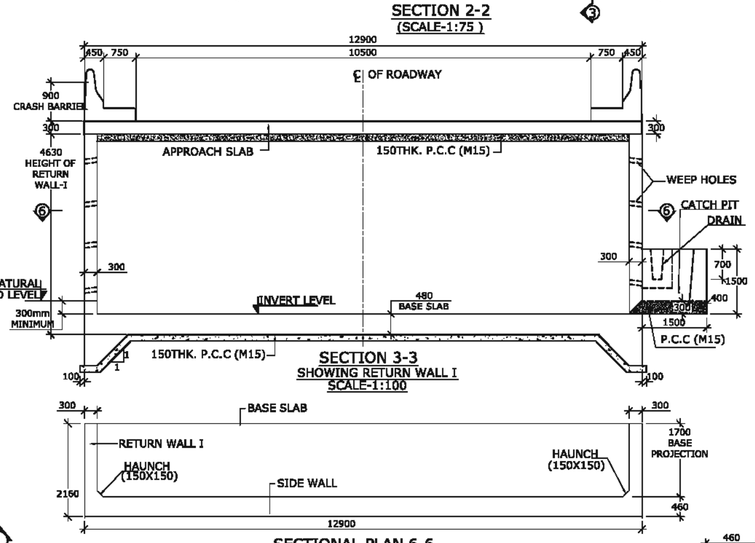
DETAIL OF CRASH BARRIER
(FOR GENERAL ARRANGEMENT)
(SCALE-1:40)



SECTION 4-4
(SHOWING RETURN WALL- II)
(SCALE-1:75)

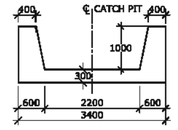


PLAN
(SCALE-1:75)

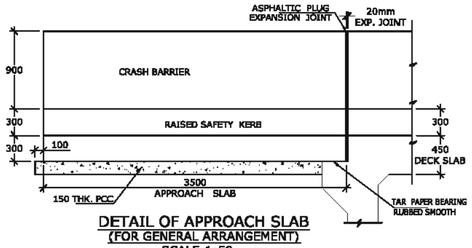


SECTION 3-3
SHOWING RETURN WALL I
SCALE-1:100

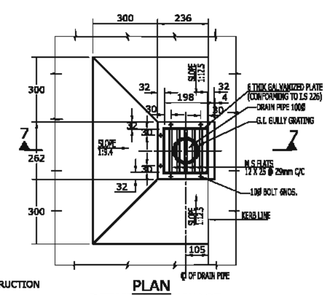
SECTIONAL PLAN 6-6
SCALE-1:100



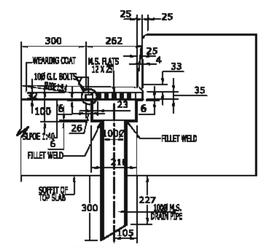
SECTION OF CATCH PIT
(SCALE-1:100)



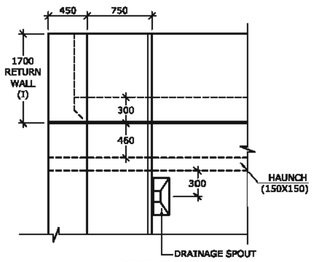
DETAIL OF APPROACH SLAB
(FOR GENERAL ARRANGEMENT)
SCALE-1:50



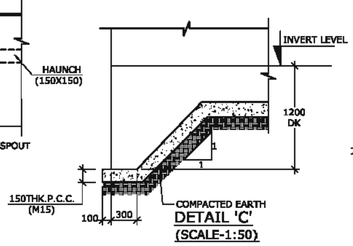
PLAN
DETAIL OF DRAINAGE SPOUT AND COLLECTION PIT
SCALE- 1:20



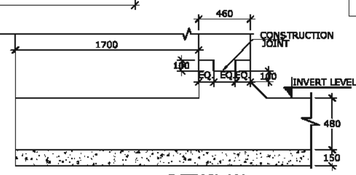
SECTION 7-7
SCALE- 1:20



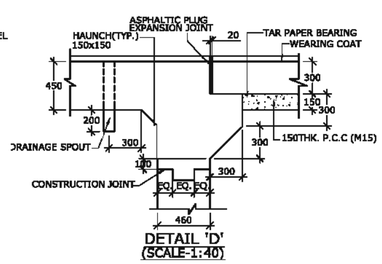
DETAIL 'B'
(SCALE-1:50)



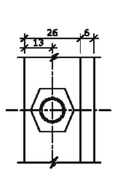
DETAIL 'C'
(SCALE-1:50)



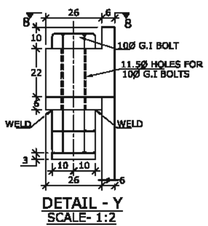
DETAIL 'A'
(SCALE-1:40)



DETAIL 'D'
(SCALE-1:40)



PLAN AT 8-8
SCALE- 1:2



DETAIL - Y
SCALE- 1:2

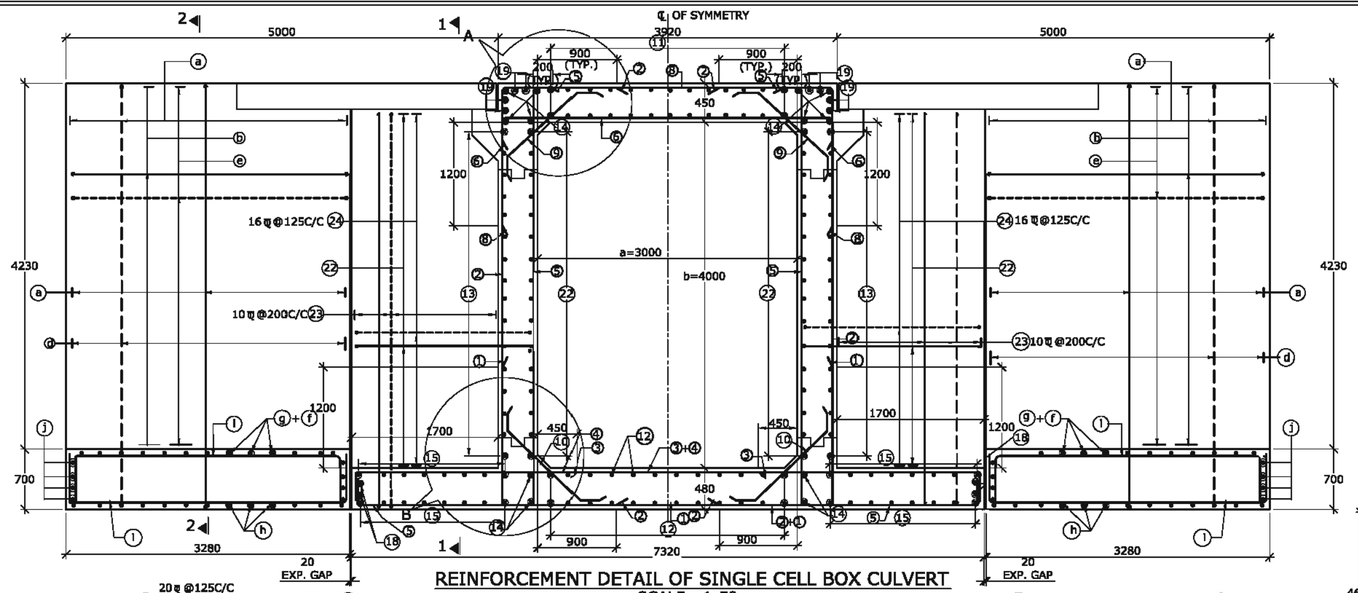
NOTES :

1. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANNULAR FILLS WITH LAYERS NOT EXCEEDING 300mm.
2. THIS DRAWING HAS BEEN PREPARED BASED ON STANDARD DRAWINGS FOR BOX CULVERT PUBLISHED BY MoRT&H.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BC/3X4-1/RCC-01

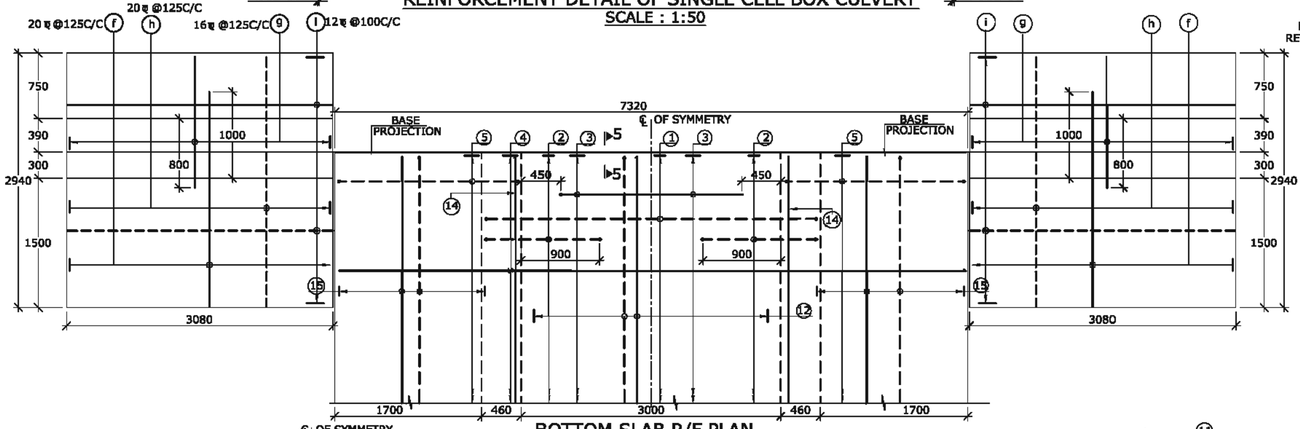
DESIGN CONSULTANT: Cetest C.E. TESTING COMPANY PVT. LTD. 124A,N.S.C. BOSE ROAD KOLKATA – 700092 INDIA	SCALE: AS DRAWN	CLIENT: PUBLIC WORKS DEPARTMENT GOVT. OF ARUNACHAL PRADESH PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV (57KM-71.5967KM)	GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (3.0M X 4.0M) WITH CATCH PIT ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

DRG. NO. CET/2010/2364/PKG-IV/BC/3X4-1/GA-01
DATE : MARCH, 2010

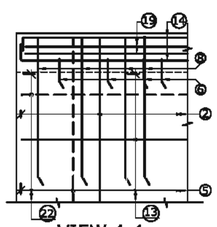
DRAWN	CHECKED	APPROVED	REV.
P.D	S.T.	DMN	0



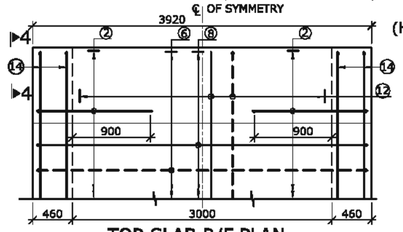
REINFORCEMENT DETAIL OF SINGLE CELL BOX CULVERT
SCALE : 1:50



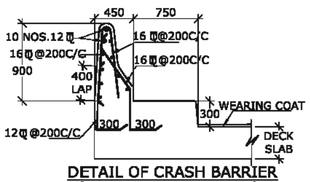
BOTTOM SLAB R/F PLAN
(HAUNCH LINE NOT SHOWN IN PLAN)
SCALE : 1:50



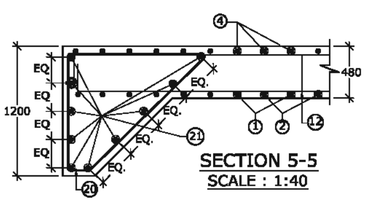
VIEW 4-4
SCALE : 1:50



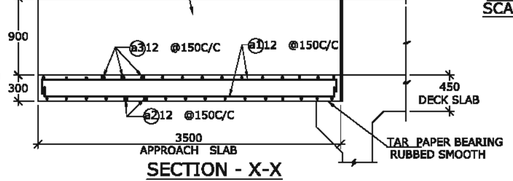
TOP SLAB R/F PLAN
(BAR MARK ⑤ ,⑲, KERB, BRACKET & HAUNCH LINES NOT SHOWN IN PLAN)
SCALE : 1:50



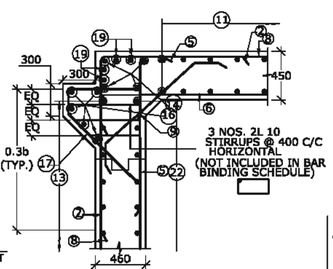
DETAIL OF CRASH BARRIER
(FOR REINFORCEMENT ONLY)
SCALE-1:50



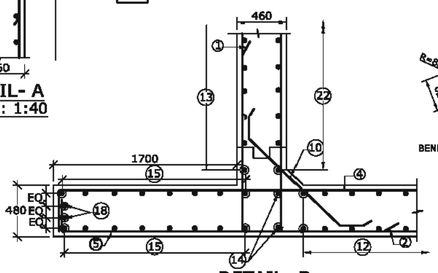
SECTION 5-5
SCALE : 1:40



SECTION - X-X
REINFORCEMENT DETAIL OF APPROACH SLAB
SCALE-1:50

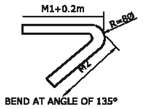


DETAIL- A
SCALE : 1:40

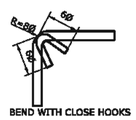


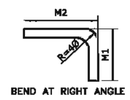
DETAIL- B
SCALE : 1:40

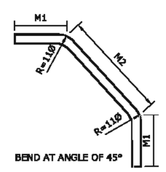
BENDING OF BARS



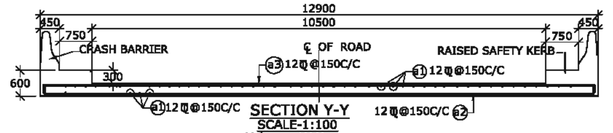
BEND AT ANGLE OF 135°



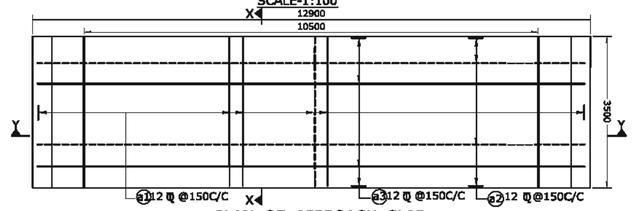




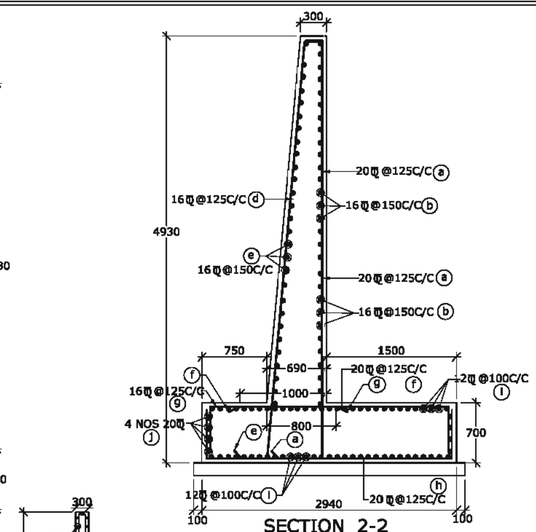
LEGEND : Ø SHOWS DIA. OF BAR



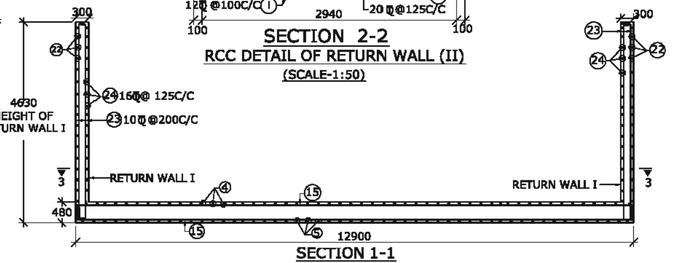
SECTION Y-Y
SCALE-1:100



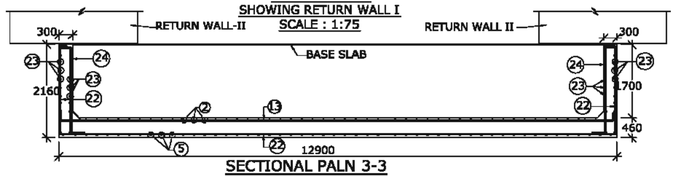
PLAN OF APPROACH SLAB
SCALE 1:100



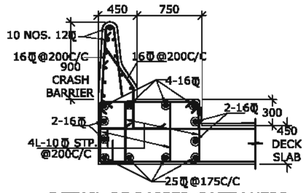
SECTION 2-2
RCC DETAIL OF RETURN WALL (II)
(SCALE-1:50)



SECTION 1-1
SHOWING RETURN WALL I
SCALE : 1:75



SECTIONAL PALN 3-3
SCALE : 1:75



DETAIL OF RAISED SAFTY KERB
(FOR REINFORCEMENT ONLY)
SCALE-1:50

SCHEDULE OF REINFORCEMENT

SL. NO.	BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
1.	①	12	225
2.	②	16	225
3.	③	12	225
4.	④	16	225
5.	⑤	16	175
6.	⑥	16	225
7.	⑧	16	225
8.	⑨	10	225
9.	⑩	10	225
10.	⑪	10	225
11.	⑫	12	225
12.	⑬	12	225
13.	⑭	10	-
14.	⑮	12	225
15.	⑯	12	-
16.	⑰	12	225
17.	⑱	10	-
18.	⑲	10	-
19.	⑳	10	150
20.	㉑	10	-
21.	㉒	10	250

LEGEND
TOP FACE BARS / OUTER FACE BARS
BOTTOM FACE BARS / INNER FACE BARS

NOTES :
1. CLEAR COVER SHALL BE 40mm.
2. MINIMUM LAP LENGTH OF REINFORCEMENT SHALL BE DECIDED AS PER THE REINFORCEMENT ARRANGEMENT BASED ON THE CLAUSE IRC-21-2000. NOT MORE THAN 50% OF THE REINFORCEMENT SHALL BR LAPPED AT ANY ONE LOCATION.
3. WELDING OF BARS SHALL NOT BE PERMITTED.
4. SHARP EDGES OF CONCRETE SHALL NOT BE PERMITTED.
5. CONCRETING SHALL BE CARRIED OUT CONTINUOUSLY UP TO CONSTRUCTION JOINT AS SHOWN IN DRAWING.
6. THIS DRAWING HAS BEEN PREPARED BASED ON STANDARD DRAWINGS FOR BOX CULVERT PUBLISHED BY MoRTH.
7. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-II/BC/3X4-1/GA-01

DESIGN CONSULTANT:
Cetest
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

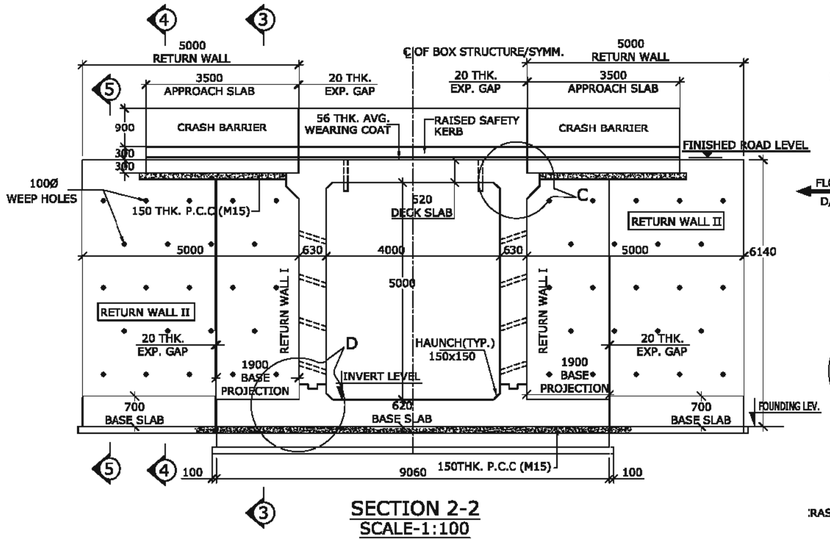
PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV (57KM-71.5967KM)

REINFORCEMENT DETAILS OF SINGLE CELL
R.C.C BOX CULVERT (3.0M X 4.0M)

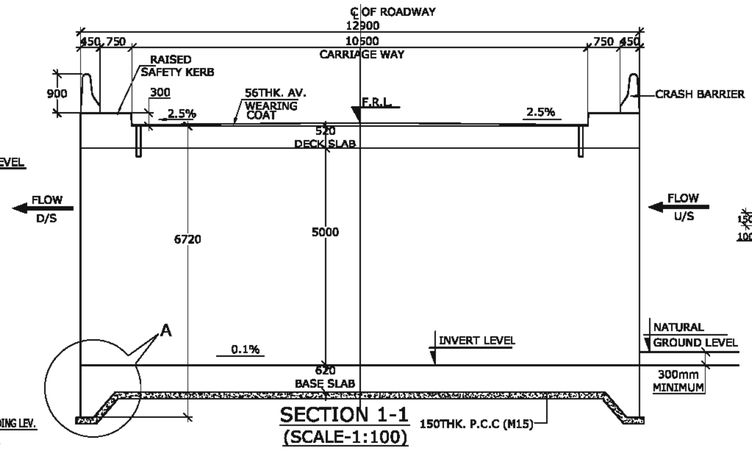
ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

DRG. NO. CET/2010/2364/PKG-II/BC/3X4-1/RCC-01
DATE : MARCH, 2010

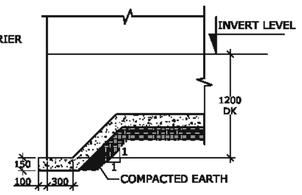
DRAWN	CHECKED	APPROVED	REV.
P.D	S.T.	DMN	0



SECTION 2-2
SCALE-1:100

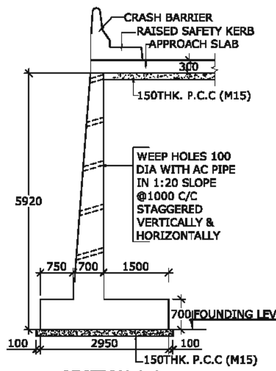


SECTION 1-1
(SCALE-1:100)

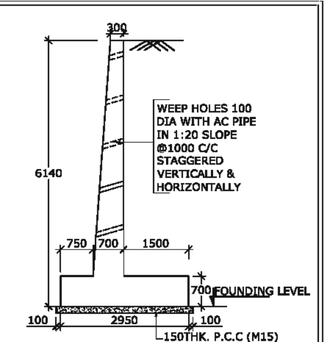


DETAIL 'A'
(SCALE-1:50)

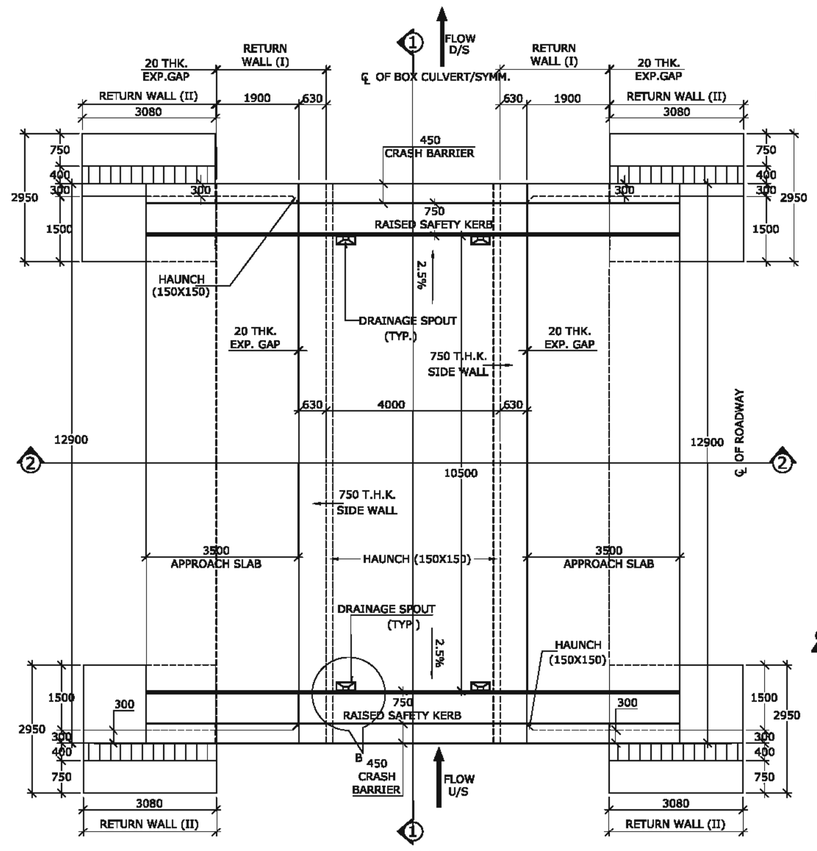
DK= DEPTH OF KEY AT BASE SLAB
LK= LENGTH OF KEY AT BASE SLAB



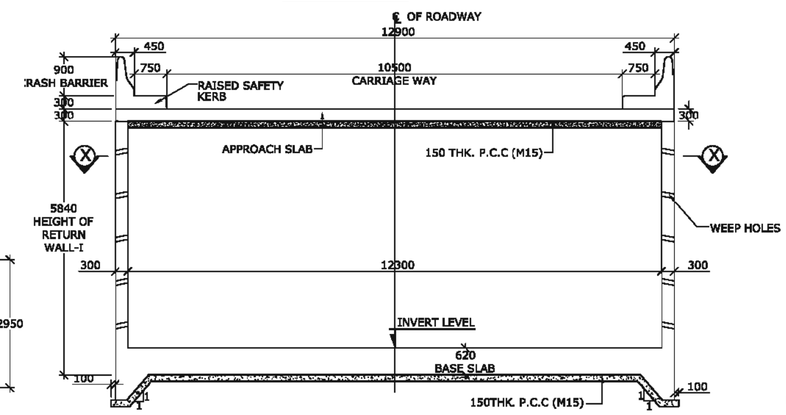
SECTION 4-4
(SHOWING RETURN WALL- II)
(SCALE-1:100)



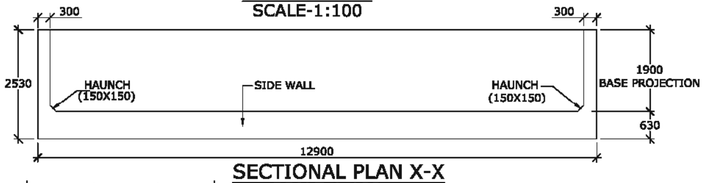
SECTION 5-5
(SHOWING RETURN WALL- II)
(SCALE-1:100)



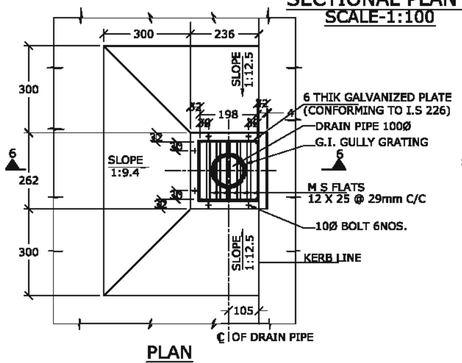
PLAN
SCALE-1:100



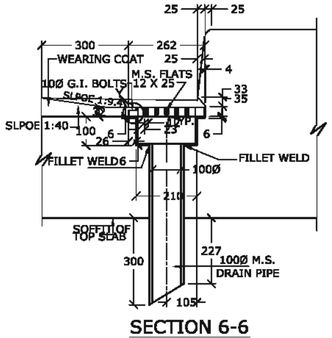
SECTION 3-3
SCALE-1:100



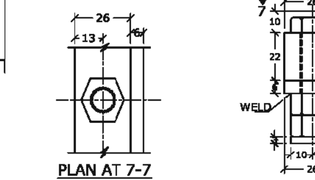
SECTIONAL PLAN X-X
SCALE-1:100



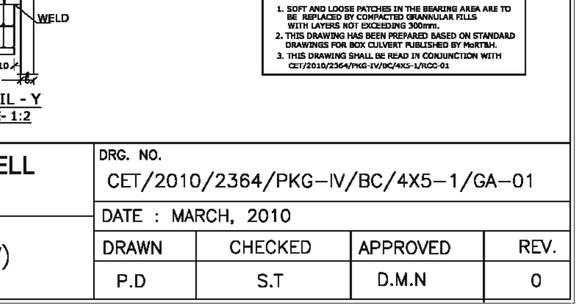
PLAN
DETAIL OF DRAINAGE SPOUT AND COLLECTION PIT
SCALE- 1:15



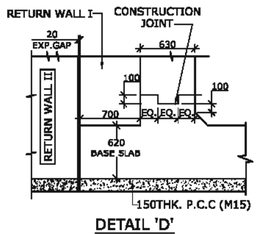
SECTION 6-6
SCALE- 1:15



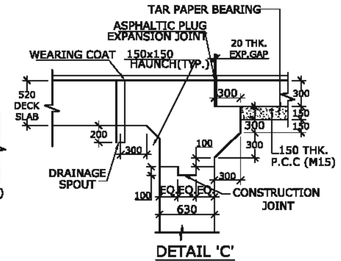
DETAIL 'B'
(SCALE-1:40)



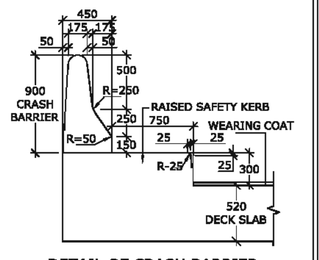
DETAILS OF APPPROACH SLAB
SCALE-1:50



DETAIL 'D'
(SCALE-1:50)

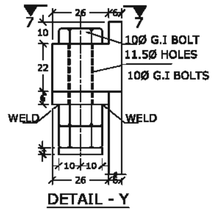


DETAIL 'C'
(SCALE-1:50)



DETAIL OF CRASH BARRIER
(SCALE-1:40)

PLAN AT 7-7
SCALE- 1:2



DETAIL - Y
SCALE- 1:2

NOTES :

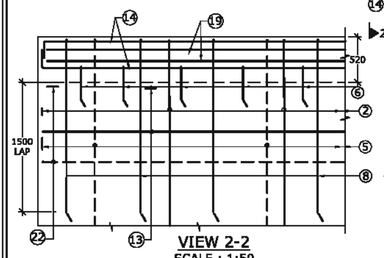
1. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANNULAR FILLS WITH LAYERS NOT EXCEEDING 300mm.
2. THIS DRAWING HAS BEEN PREPARED BASED ON STANDARD DRAWINGS FOR BOX CULVERT PUBLISHED BY MoRTH.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BC/4X5-1/RCC-01

DESIGN CONSULTANT: Cetest — C.E. TESTING COMPANY PVT. LTD. 124A,N.S.C. BOSE ROAD KOLKATA – 700092 INDIA — As IS/ISO 9001:2000 CERTIFIED COMPANY	SCALE: AS DRAWN	CLIENT: PUBLIC WORKS DEPARTMENT GOVT. OF ARUNACHAL PRADESH PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV (57KM-71.5967KM)	GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (4.0M X 5.0M) ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

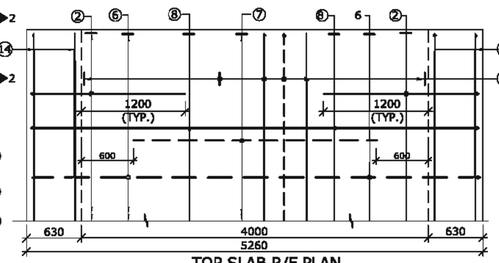
DRG. NO. CET/2010/2364/PKG–IV/BC/4X5–1/GA–01

DATE : MARCH, 2010

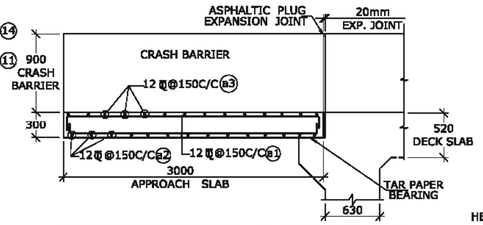
DRAWN	CHECKED	APPROVED	REV.
P.D	S.T	D.M.N	0



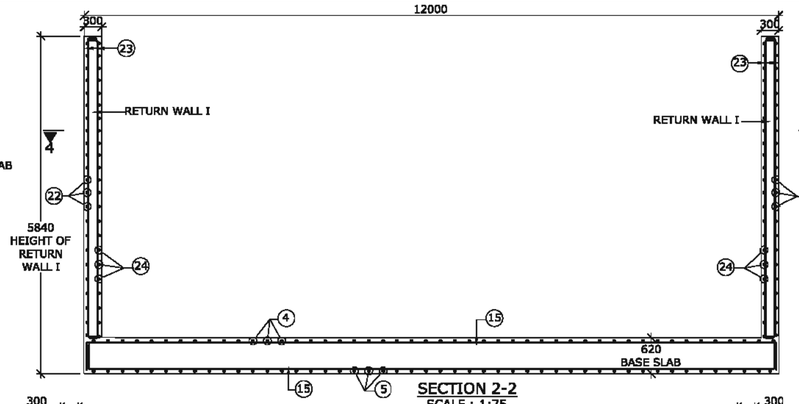
VIEW 2-2
SCALE : 1:50



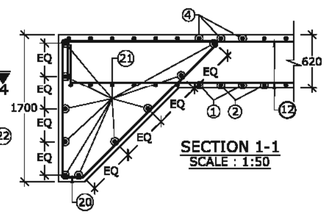
TOP SLAB R/F PLAN
SCALE : 1:50
(BAR MARK ⑤ , ⑲, KERB, BRACKET & HAUNCH LINES NOT SHOWN IN PLAN)



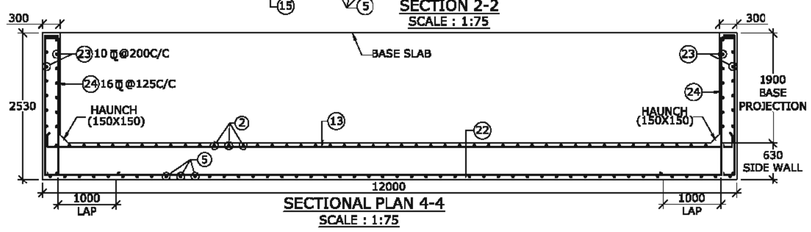
REINFORCEMENT DETAIL OF APPROACH SLAB
SCALE-1:50



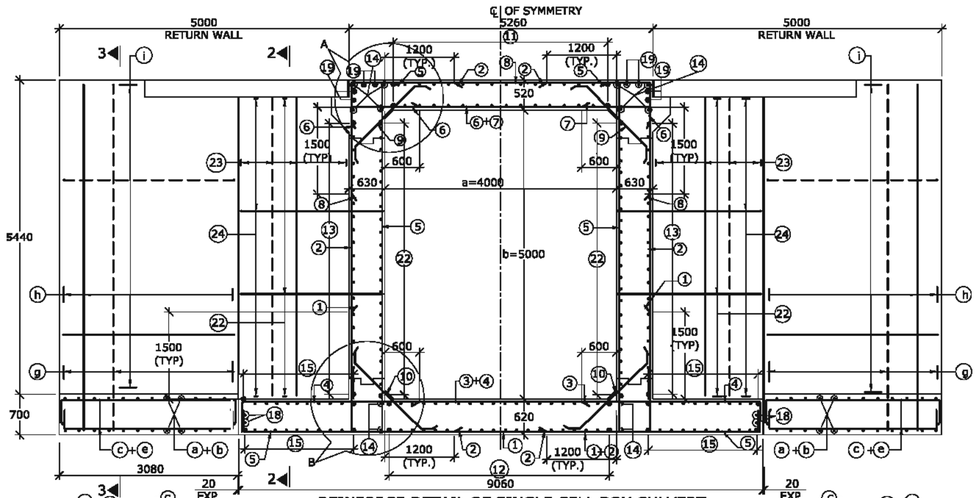
SECTION 2-2
SCALE : 1:75



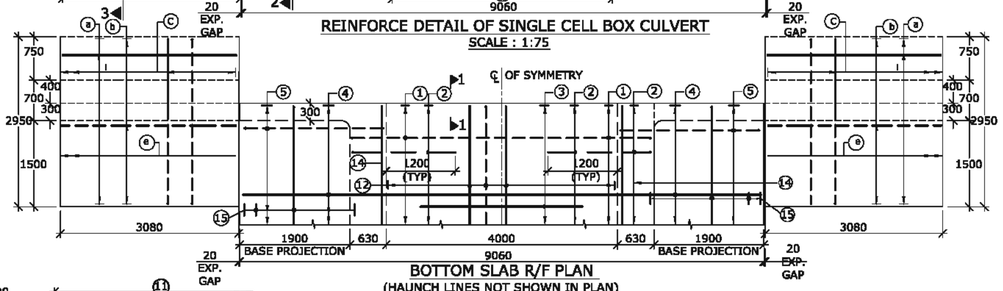
SECTION 1-1
SCALE : 1:50



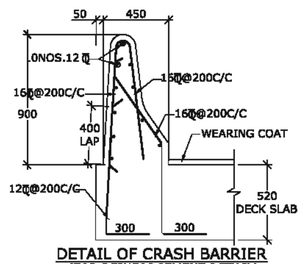
SECTIONAL PLAN 4-4
SCALE : 1:75



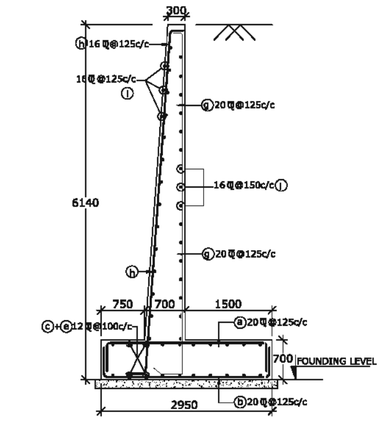
REINFORCE DETAIL OF SINGLE CELL BOX CULVERT
SCALE : 1:75



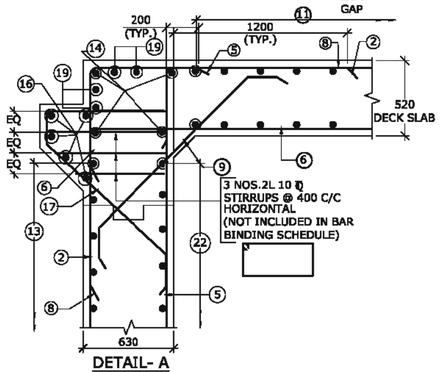
BOTTOM SLAB R/F PLAN
(HAUNCH LINES NOT SHOWN IN PLAN)
SCALE : 1:75



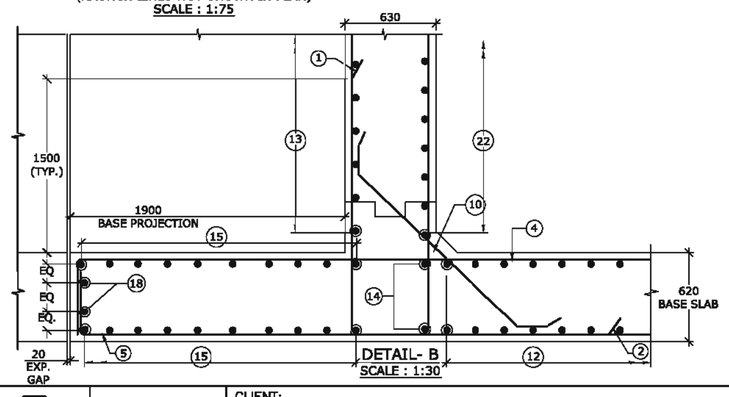
DETAIL OF CRASH BARRIER
(FOR REINFORCEMENT DETAIL)
SCALE-1:30



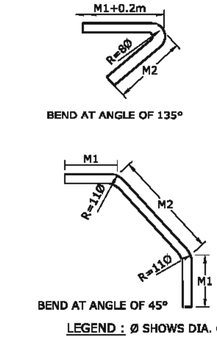
REINFORCEMENT DETAIL OF RETURN WALL II
SECTION 6-6
(SCALE-1:75)



DETAIL- A
SCALE : 1:30



DETAIL- B
SCALE : 1:30



BEND AT ANGLE OF 135°

BEND AT ANGLE OF 45°

LEGEND : Ø SHOWS DIA. OF BAR

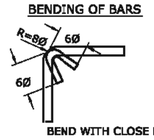
LEGEND :
- TOP FACE BARS / OUTER FACE BARS
- BOTTOM FACE BARS / INNER FACE BARS

SCHEDULE OF REINFORCEMENT

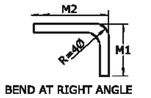
SL. NO.	BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
1.	①	10	200
2.	②	20	200
3.	③	12	200
4.	④	16	200
5.	⑤	12	150
6.	⑥	20	200
7.	⑦	12	200
8.	⑧	12	200
9.	⑨	10	200
10.	⑩	12	200
11.	⑪	10	200
12.	⑫	12	175
13.	⑬	12	200
14.	⑭	10	-
15.	⑮	10	200

SL. NO.	BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
16.	⑯	12	-
17.	⑰	12	200
18.	⑱	10	-
19.	⑲	10	-
20.	⑳	10	150
21.	㉑	10	-
22.	㉒	10	230
23.	㉓	10	200
24.	㉔	16	125

BENDING OF BARS



BEND WITH CLOSE HOOKS



BEND AT RIGHT ANGLE

NOTES :

1. CLEAR COVER SHALL BE 40mm.
2. MINIMUM LAP LENGTH OF REINFORCEMENT SHALL BE DECIDED AS PER THE REINFORCEMENT ARRANGEMENT BASED ON THE CLAUSE IRC-21-2000. NOT MORE THAN 50% OF THE REINFORCEMENT SHALL BR LAPPED AT ANY ONE LOCATION.
3. WELDING OF BARS SHALL NOT BE PERMITTED.
4. SHARP EDGES OF CONCRETE SHALL NOT BE PERMITTED.
5. CONCRETING SHALL BE CARRIED OUT CONTINUOUSLY UP TO CONSTRUCTION JOINT AS SHOWN IN DRAWING.
6. THIS DRAWING HAS BEEN PREPARED BASED ON STANDARD DRAWINGS FOR BOX CULVERT PUBLISHED BY MoRTH.
7. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BC/4X5-1/GA-01

DESIGN CONSULTANT:
Cetest
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

An IS/ISO 9001:2000 CERTIFIED COMPANY

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV (57KM-71.5967KM)

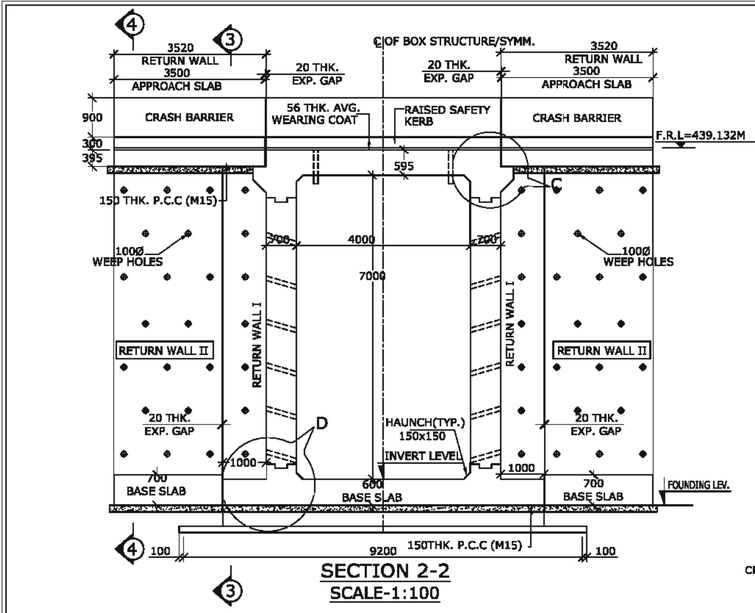
GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (4.0M X 5.0M)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

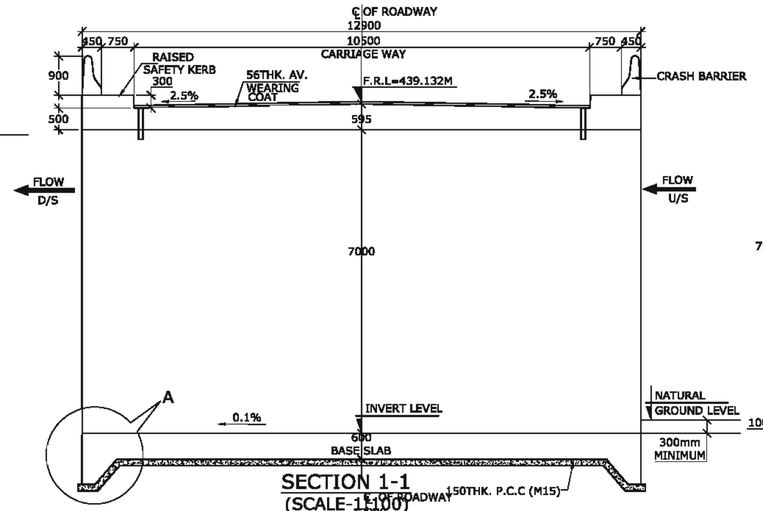
DRG. NO. CET/2010/2364/PKG–IV/BC/4X5–1/RCC–01

DATE : MARCH, 2010

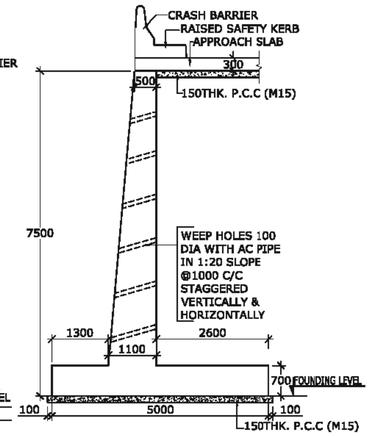
DRAWN	CHECKED	APPROVED	REV.
P.D	S.T	D.M.N	0



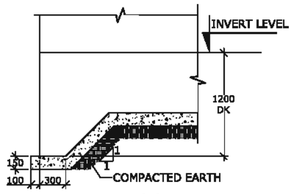
SECTION 2-2
SCALE-1:100



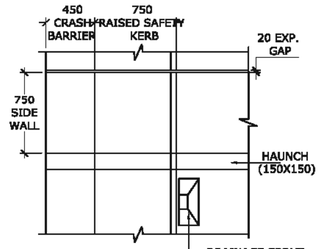
SECTION 1-1
(SCALE-1:100)



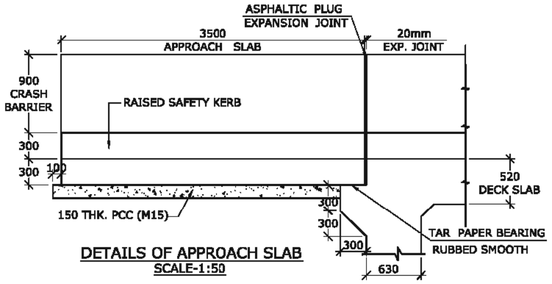
SECTION 4-4
(SHOWING RETURN WALL- II)
(SCALE-1:100)



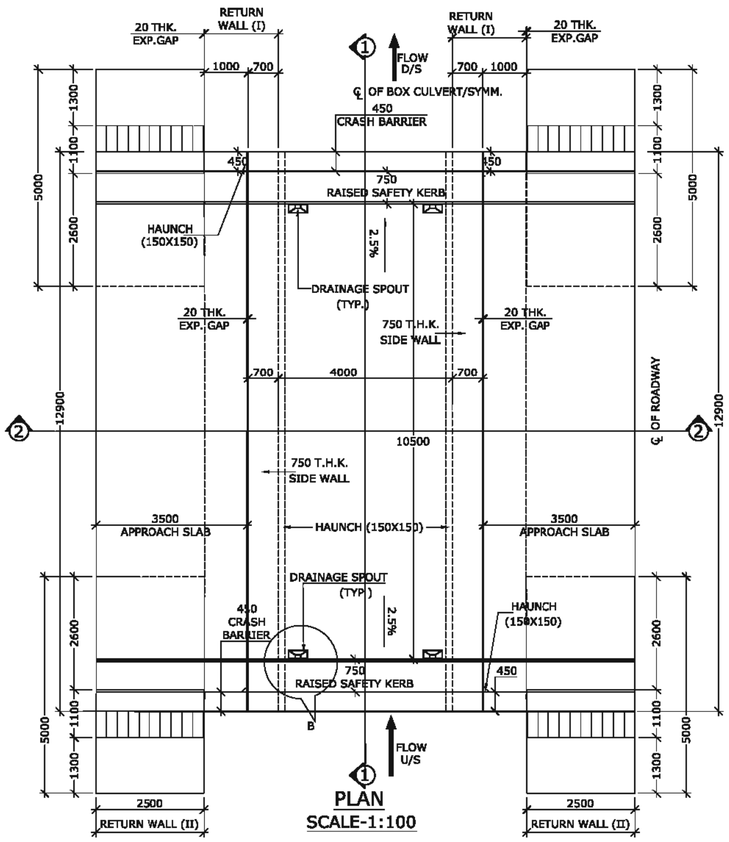
DETAIL 'A'
(SCALE-1:50)



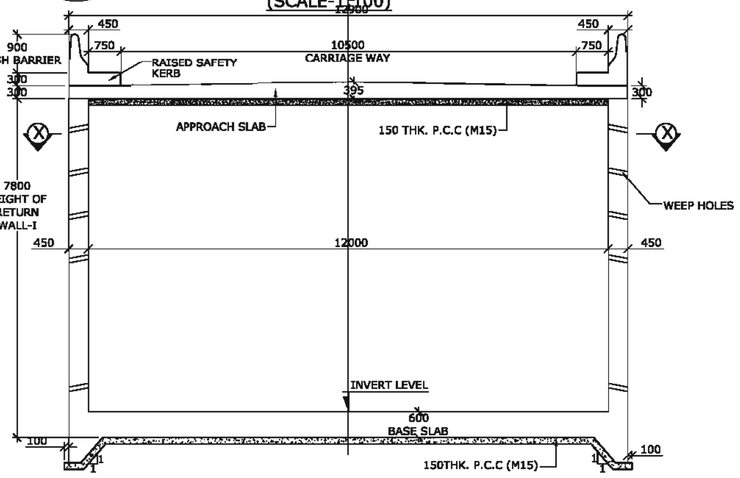
DETAIL 'B'
(SCALE-1:40)



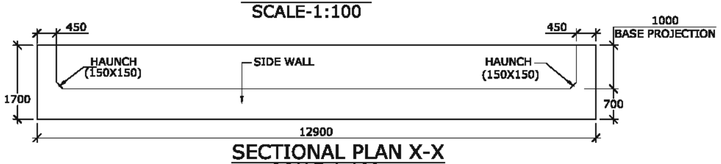
DETAILS OF APPROACH SLAB
SCALE-1:50



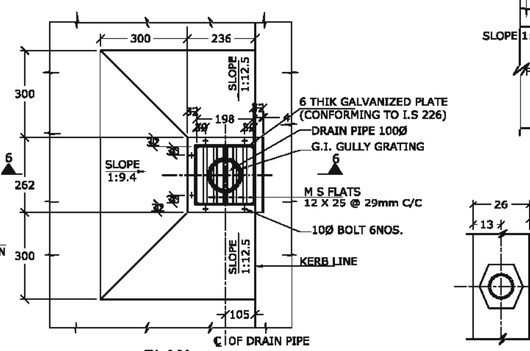
PLAN
SCALE-1:100



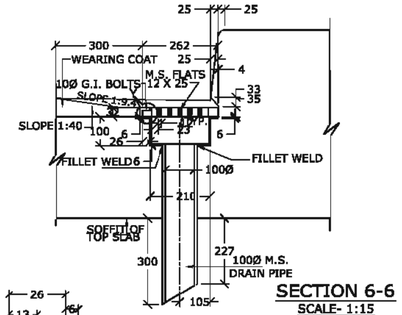
SECTION 3-3
SCALE-1:100



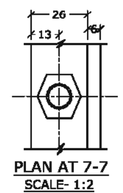
SECTIONAL PLAN X-X
SCALE-1:100



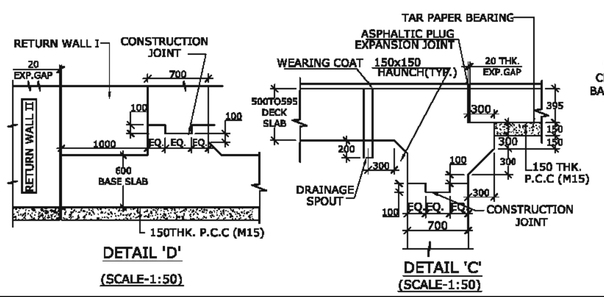
PLAN
DETAIL OF DRAINAGE SPOUT AND COLLECTION PIT
SCALE- 1:15



SECTION 6-6
SCALE- 1:15

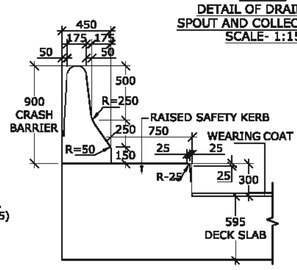


PLAN AT 7-7
SCALE- 1:2

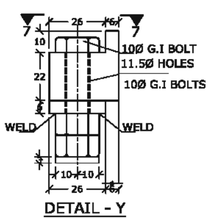


DETAIL 'D'
(SCALE-1:50)

DETAIL 'C'
(SCALE-1:50)



DETAIL OF CRASH BARRIER
(SCALE-1:40)



DETAIL - Y
SCALE- 1:2

NOTES :

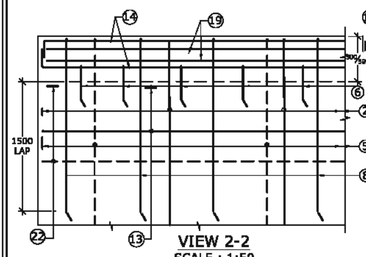
1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
2. GRADE OF CONCRETE :
   BOX CELL STRUCTURE & KERB = M20
   CURTAIN WALL = M15
   LEVELING COURSE (P.C.C.)= M15
   RETURN WALL = M25
   APPROACH SLAB = M30
   CRASH BARRIER = M40
3. GRADE OF STEEL Fe 415 AS PER I.S.-1786.
4. CLASS 70R TRACKED PRODUCING WORST EFFECT ARE CONSIDERED FOR DESIGN.
5. PROPERTIES OF BACKFILL SOIL $\gamma = 1.8t/m^3$, $\theta = 30°$.
6. FILTER MATERIAL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO CLAUSE 2504.2.2 OF MoRTH SPECIFICATIONS TO A THICKNESS OF NOT LESS THAN 600mm. WITH SMALLER SIZE TOWARDS THE SOIL AND BIGGER SIZE TOWARDS THE WALL TO THE FULL HEIGHT.
7. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANULAR FILLS WITH LAYERS NOT EXCEEDING 300mm.
8. EARTH BELLOW BOX SHALL BE WELL COMPACTED TO ACHIEVE MINIMUM $25t/m^2$ BEARING CAPACITY.
9. THE REINFORCEMENT OF TOP SLAB OF BOX SHALL BE SUITABLY MODIFIED TO ACCOMMODATE THE DRAINAGE SPOUT.
10. THE DRAINAGE SPOUT SHALL BE GALVANIZED AFTER WELDING THE PLATES & FLATS.
11. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BC/4X7-1/RCC-01

DESIGN CONSULTANT: Cetest — C.E. TESTING COMPANY PVT. LTD. 124A,N.S.C. BOSE ROAD KOLKATA – 700092 INDIA (An IS/ISO 9001:2000 CERTIFIED COMPANY)	SCALE: AS DRAWN	CLIENT: PUBLIC WORKS DEPARTMENT GOVT. OF ARUNACHAL PRADESH PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)	GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (4.0M X 7.0M) ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

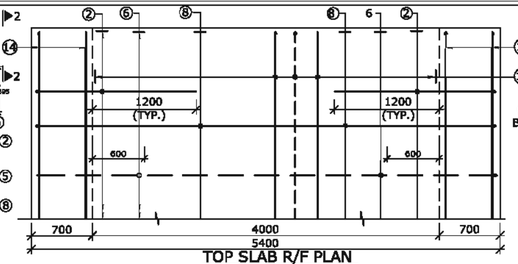
DRG. NO. CET/2010/2364/PKG–IV/BC/4X7–1/GA–01

DATE : MARCH, 2010

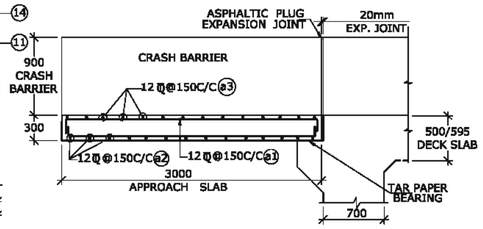
DRAWN	CHECKED	APPROVED	REV.
P.D	S.T	D.M.N	0



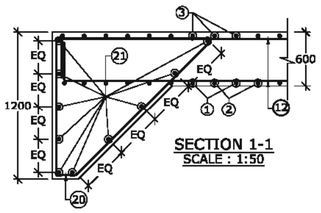
VIEW 2-2
SCALE : 1:50



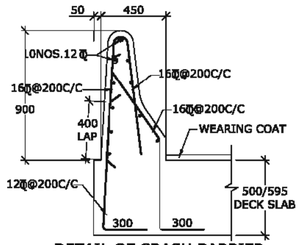
TOP SLAB R/F PLAN
SCALE : 1:50
(BAR MARK ⑤ , ⑲, KERB, BRACKET & HAUNCH LINES NOT SHOWN IN PLAN)



REINFORCEMENT DETAIL OF APPROACH SLAB
SCALE-1:50



SECTION 1-1
SCALE : 1:50

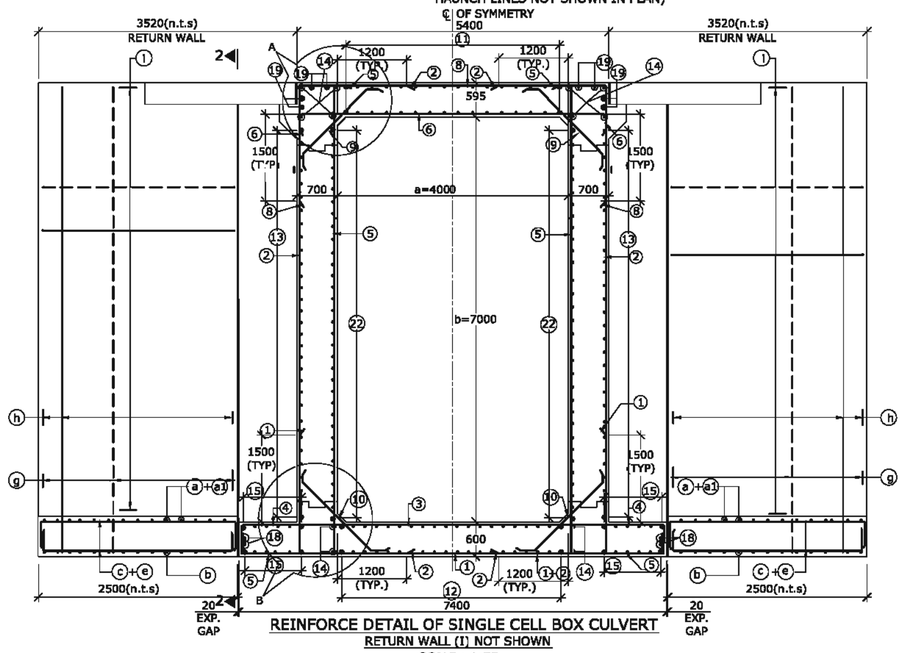


DETAIL OF CRASH BARRIER
(FOR REINFORCEMENT DETAIL)
SCALE-1:30

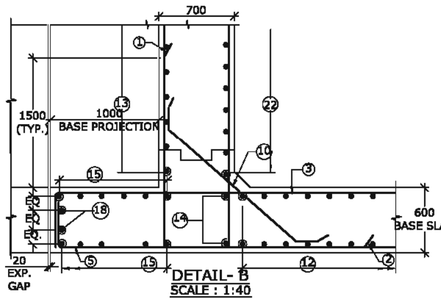
SCHEDULE OF REINFORCEMENT

BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
①	16	125
②	20	125
③	12	125
⑤	20	125
⑥	16	125
⑧	16	125
⑨	10	200
⑩	10	200
⑪	12	125
⑫	12	125
⑬	12	125
⑭	10	-
⑮	10	125

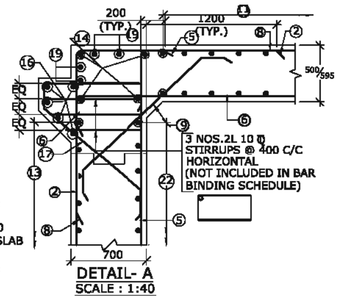
BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
⑯	12	-
⑰	12	200
⑱	10	-
⑲	10	-
⑳	10	150
㉑	10	-
㉒	10	125
㉓	10	200
㉔	16	125



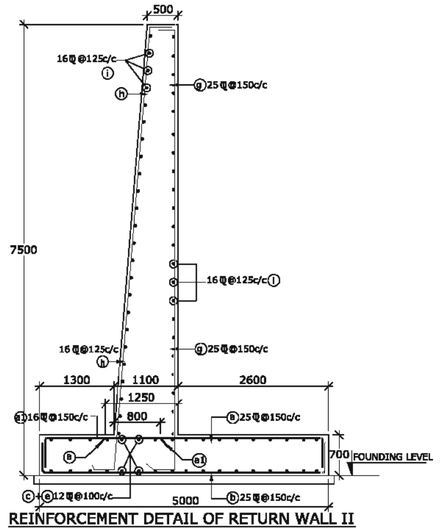
REINFORCE DETAIL OF SINGLE CELL BOX CULVERT
RETURN WALL (I) NOT SHOWN
SCALE : 1:75



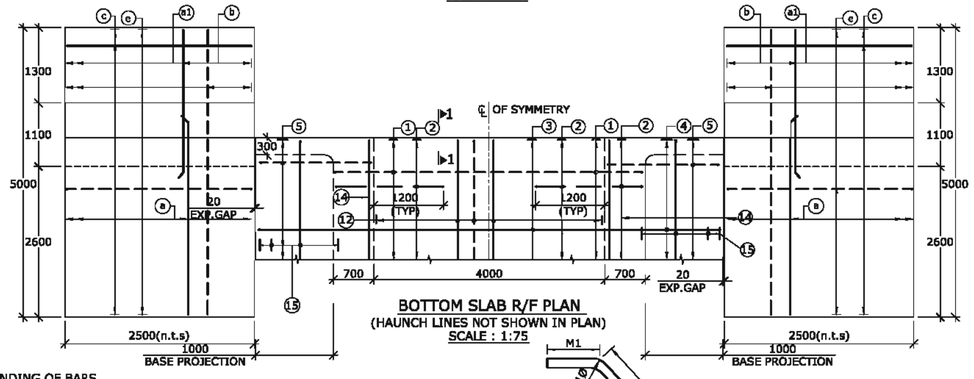
DETAIL- B
SCALE : 1:40



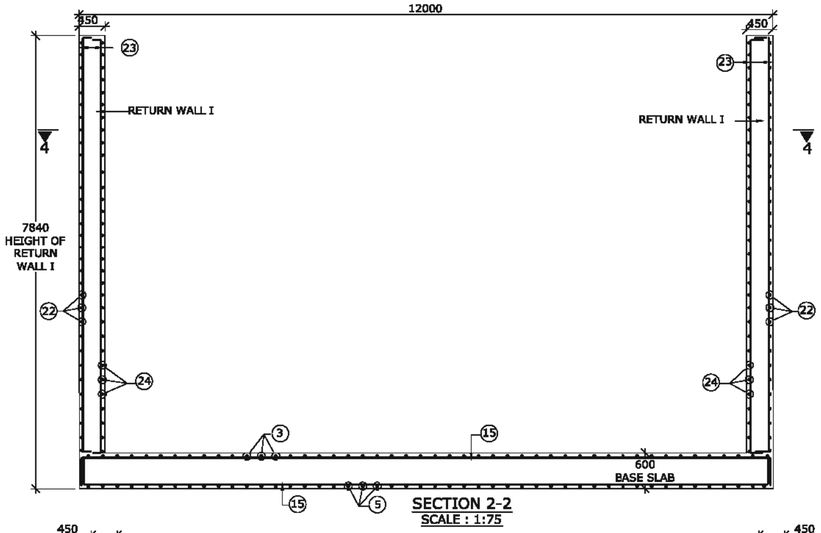
DETAIL- A
SCALE : 1:40



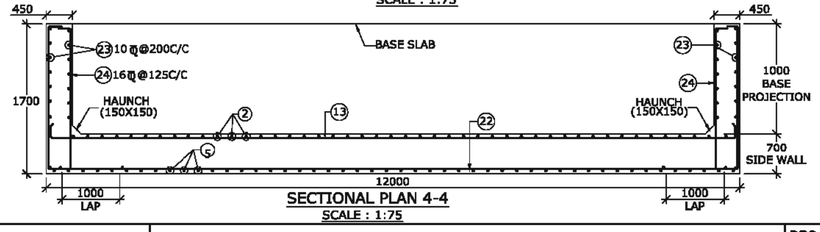
REINFORCEMENT DETAIL OF RETURN WALL II
(SCALE-1:75)



BOTTOM SLAB R/F PLAN
(HAUNCH LINES NOT SHOWN IN PLAN)
SCALE : 1:75

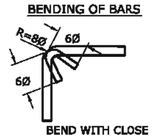


SECTION 2-2
SCALE : 1:75

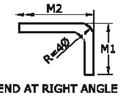


SECTIONAL PLAN 4-4
SCALE : 1:75

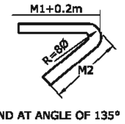
BENDING OF BARS



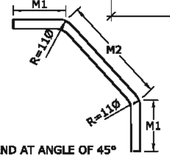
BEND WITH CLOSE HOOKS



BEND AT RIGHT ANGLE



BEND AT ANGLE OF 135°



BEND AT ANGLE OF 45°

LEGEND : Ø SHOWS DIA. OF BAR

LEGEND :
TOP FACE BARS / OUTER FACE BARS
BOTTOM FACE BARS / INNER FACE BARS

NOTES :

1. CLEAR COVER SHALL BE 50MM.& BOTTOM SLAB=75MM
2. MINIMUM LAP LENGTH OF REINFORCEMENT SHALL BE DECIDED AS PER THE REINFORCEMENT ARRANGEMENT BASED ON THE CLAUSE IRC-21-2000. NOT MORE THAN 50% OF THE REINFORCEMENT SHALL BR LAPPED AT ANY ONE LOCATION.
3. WELDING OF BARS SHALL NOT BE PERMITTED.
4. SHARP EDGES OF CONCRETE SHALL NOT BE PERMITTED.
5. CONCRETING SHALL BE CARRIED OUT CONTINUOUSLY UP TO CONSTRUCTION JOINT AS SHOWN IN DRAWING.
6. THIS DRAWING HAS BEEN PREPARED BASED ON STANDARD DRAWINGS FOR BOX CULVERT PUBLISHED BY MoRTH.
7. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BC/4X7-1/GA-01

DESIGN CONSULTANT:
Cetest
An IS/ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (4.0M X 7.0M)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

DRG. NO. CET/2010/2364/PKG–IV/BC/4X7–1/RCC–01

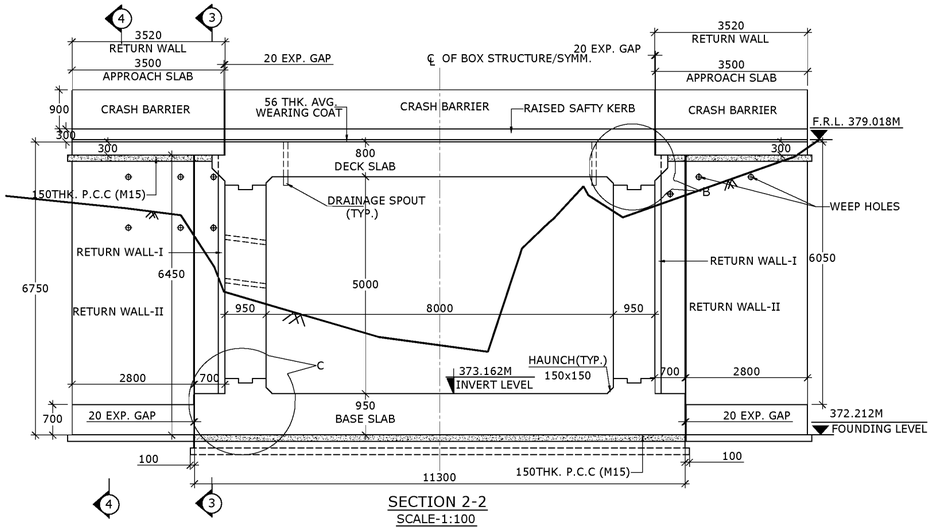
DATE : MARCH, 2010

DRAWN	DESIGNED	CHECKED	APPROVED	REV.
P.D	M.H	S.T	D.M.N	0

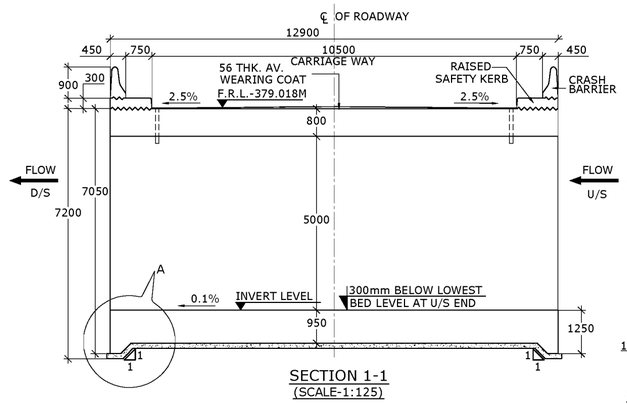
Details of Minor Bridges

CONTENTS

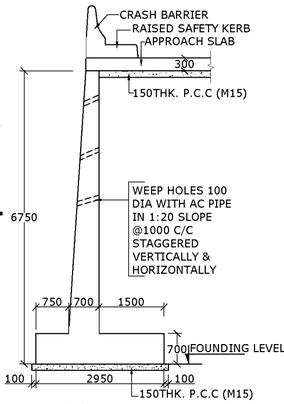
Road Name: Pasighat – Pangin road
(Package–IV)
(MINOR BRIDGES)



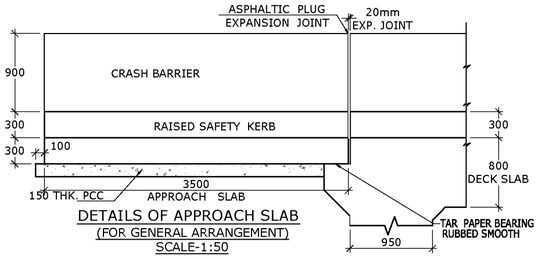
SECTION 2-2
SCALE-1:100



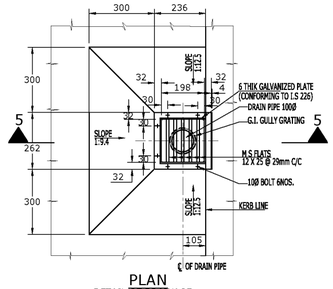
SECTION 1-1
(SCALE-1:125)



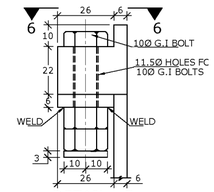
SECTION 4-4
(SHOWING RETURN WALL- II)
(SCALE-1:100)



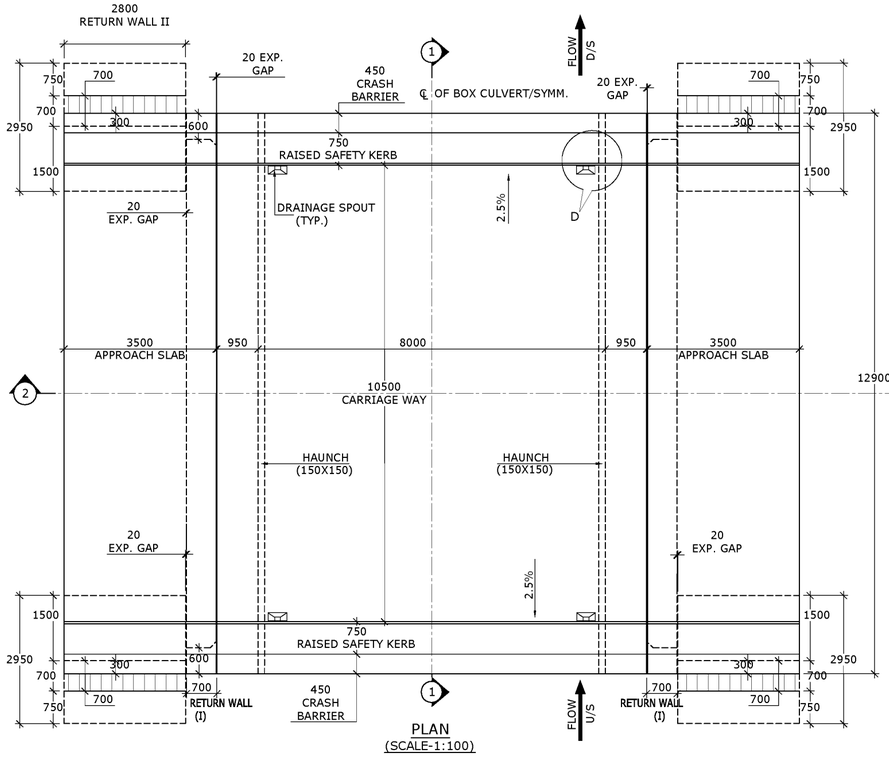
DETAILS OF APPROACH SLAB
(FOR GENERAL ARRANGEMENT)
SCALE-1:50



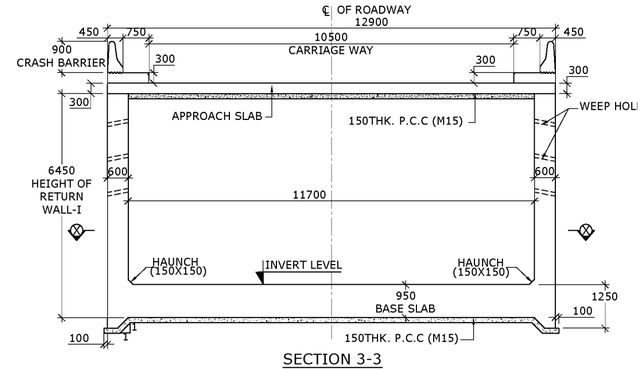
PLAN
DETAIL OF DRAINAGE
SPOUT AND COLLECTION PIT
SCALE- 1:20



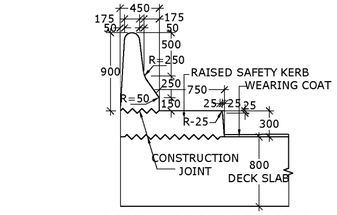
DETAIL - E
SCALE- 1:2



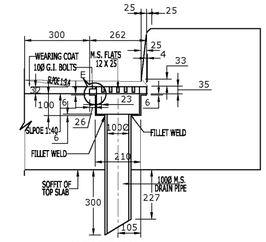
PLAN
(SCALE-1:100)



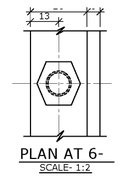
SECTION 3-3
SHOWING RETURN WALL I
SCALE-1:125



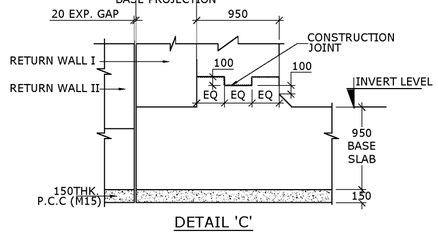
DETAIL OF CRASH BARRIER
(FOR GENERAL ARRANGEMENT)
(SCALE-1:50)



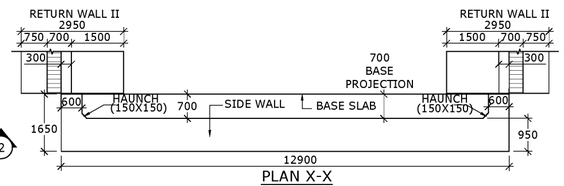
SECTION 5-5
SCALE- 1:20



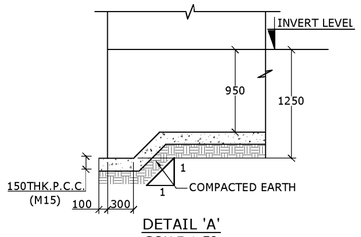
SCALE- 1:2



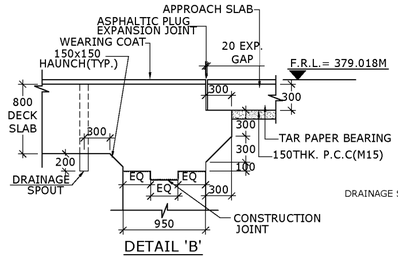
DETAIL 'C'
(SCALE-1:50)



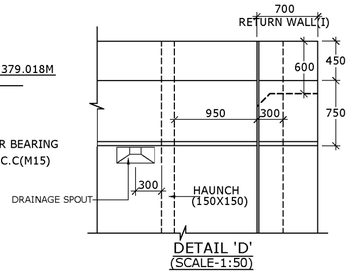
PLAN X-X
SCALE-1:125



DETAIL 'A'
SCALE-1:50



DETAIL 'B'
(SCALE-1:50)



DETAIL 'D'
(SCALE-1:50)

NOTES :

1. ALL DIMENTIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
2. GRADE OF CONCRETE SHALLL BE M-25.
3. GRADE OF STEEL Fe 415 AS PER I.S.-1786.
4. CLASS 70R TRACKED PRODUCING WORST EFFECT ARE CONSIDERED FOR DESIGN.
5. PROPERTIES OF BACKFILL SOIL * =1.8t/m^3 , Ø=30•.
6. FILTER MATERIAL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO CLAUSE 2504.2.2 OF MoRTH SPECIFICATIONS TO A THICKNESS OF NOT LESS THAN 600mm. WITH SMALLER SIZE TOWARDS THE SOIL AND BIGGER SIZE TOWARDS THE WALL TO THE FULL HEIGHT.
7. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANNULAR FILLS WITH LAYERS NOT EXCEEDING 300mm.
8. EARTH BELLOW BOX SHALL BE WELL COMPACTED TO ACHEIVE MINIMUM 10t/m^2 BEARING CAPACITY.
9. THE REINFORCEMENT OF TOP SLAB OF BOX SHALL BE SUITABLY MODIFIED TO ACCOMMODATE THE DRAINAGE SPOUT.
10. THE DRAINAGE SPOUT SHALL BE GALVANIZED AFTER WELDING THE PLATES & FLATS.
11. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BDG/MN/CH-61.260KM/RCC-01

DESIGN CONSULTANT:
Cetest
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57KM-71.5967KM)

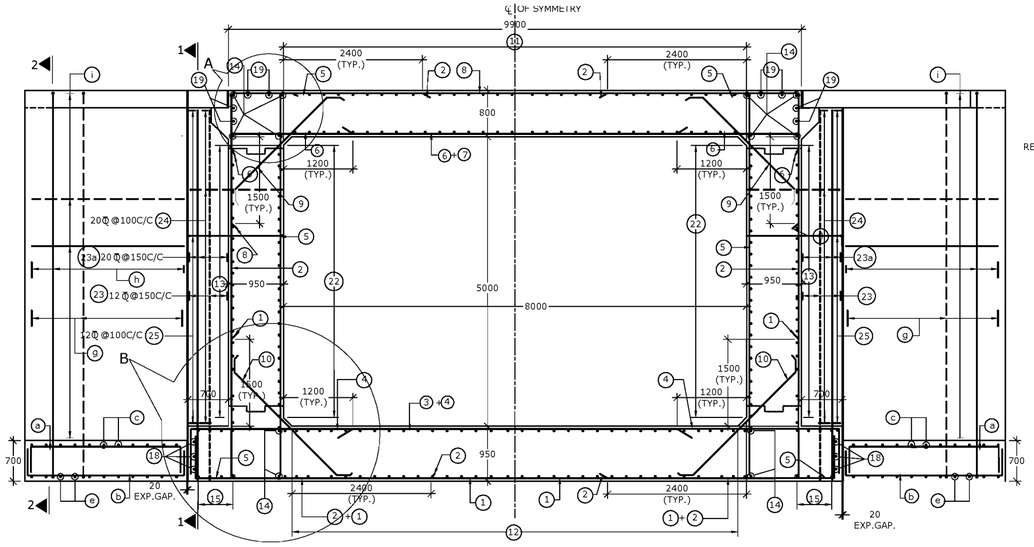
GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (8.0M X 5.0M)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)
CHAINAGE : 61.260KM

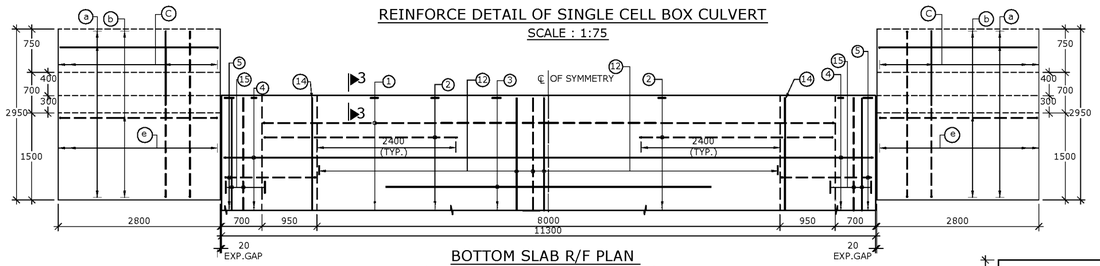
DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–61.260KM/GA–01

DATE : MARCH, 2010

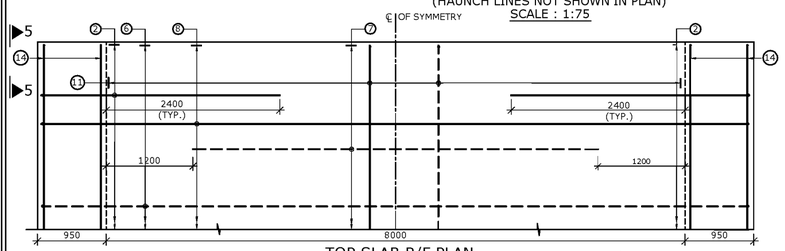
DRAWN	CHECKED	APPROVED	REV.
P.D	S.T	D.M.N	0



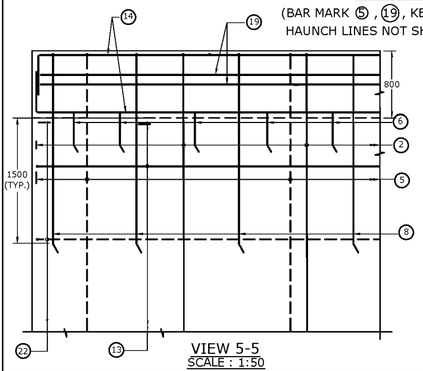
REINFORCE DETAIL OF SINGLE CELL BOX CULVERT
SCALE : 1:75



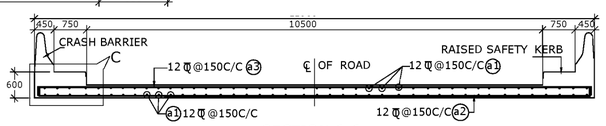
BOTTOM SLAB R/F PLAN
(HAUNCH LINES NOT SHOWN IN PLAN)
SCALE : 1:75



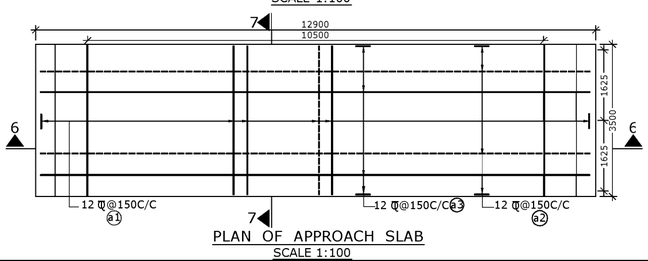
TOP SLAB R/F PLAN
SCALE : 1:60



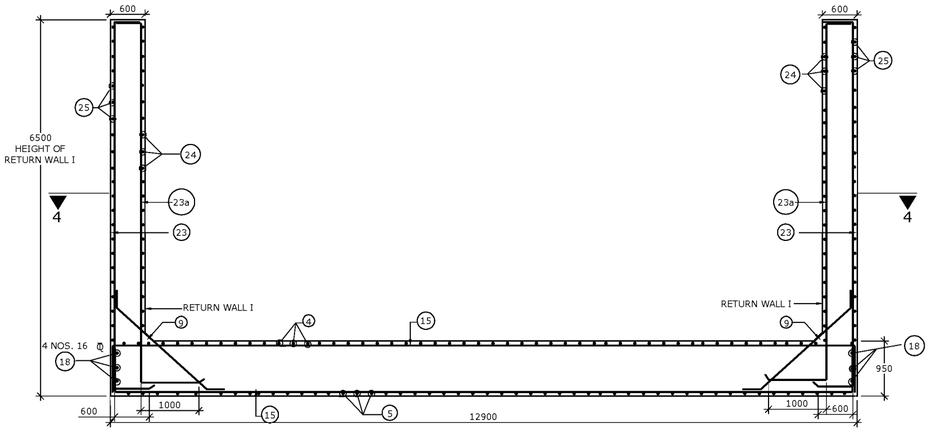
VIEW 5-5
SCALE : 1:50
(BAR MARK ⑤ , ⑲, KERB, BRACKET & HAUNCH LINES NOT SHOWN IN PLAN)



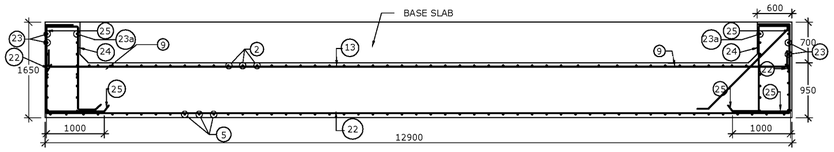
SECTION 6-6
SCALE-1:100



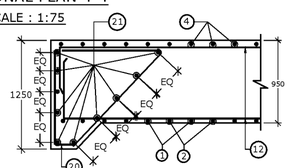
PLAN OF APPROACH SLAB
SCALE 1:100



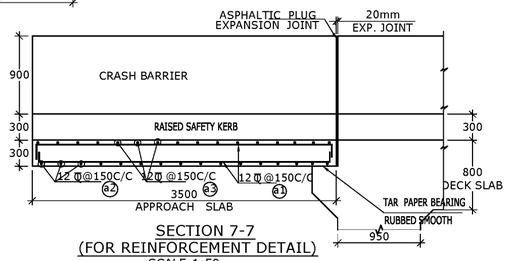
SECTION 1-1
SCALE : 1:75



SECTIONAL PLAN 4-4
SCALE : 1:75

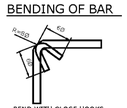


SECTION 3-3
SCALE : 1:50

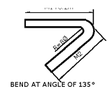


SECTION 7-7
(FOR REINFORCEMENT DETAIL)
SCALE-1:50

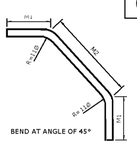
BENDING OF BAR



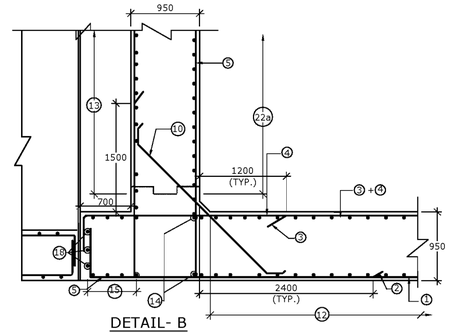
BEND WITH CLOSE HOOKS



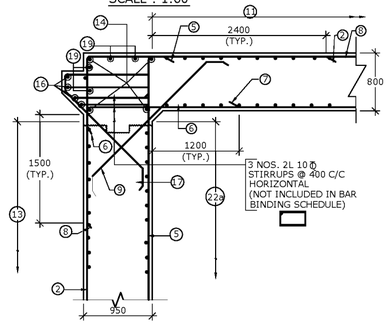
BEND AT RIGHT ANGLE



LEGEND : Ø SHOWS DIA. OF BA



DETAIL- B
SCALE : 1:60



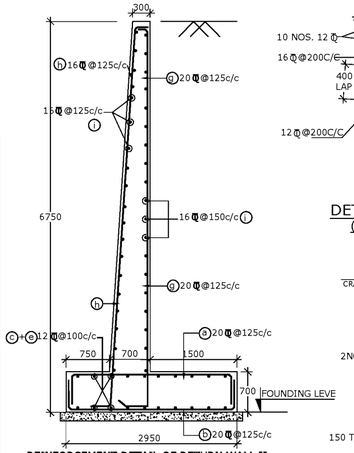
DETAIL- A
SCALE : 1:60

LEGEND
TOP FACE BARS / OUTER FACE BARS
BOTTOM FACE BARS / INNER FACE BARS

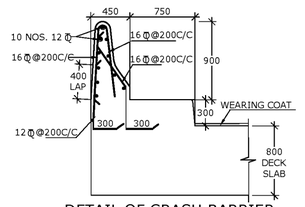
SCHEDULE OF REINFORCEMENT

BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
①	16	200
②	25	200
③	25	200
④	16	200
⑤	12	150
⑥	20	200
⑦	16	200
⑧	16	200
⑨	10	200
⑩	10	200
⑪	12	150
⑫	12	125

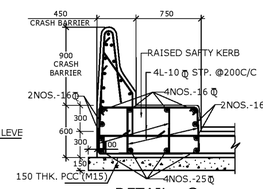
BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
⑬	12	125
⑭	10	-
⑮	12	150
⑯	12	-
⑰	12	200
⑱	10	-
⑲	10	-
⑳	10	150
㉑	10	-
㉒	12	190
㉓	12	150
㉓a	20	150
㉔	20	100
㉕	12	100



REINFORCEMENT DETAIL OF RETURN WALL II
SECTION 2-2
(SCALE-1:75)



DETAIL OF CRASH BARRIER
(FOR REINFORCEMENT ONLY)
SCALE-1:50



DETAIL - C
(FOR REINFORCEMENT DETAIL)
SCALE-1:50

NOTES :
1. CLEAR COVER SHALL BE 40mm.
2. MINIMUM LAP LENGTH OF REINFORCEMENT SHALL BE DECIDED AS PER THE REINFORCEMENT ARRANGEMENT BASED ON THE CLAUSE IRC-21-2000. NOT MORE THAN 50% OF THE REINFORCEMENT SHALL BR LAPPED AT ANY ONE LOCATION.
3. WELDING OF BARS SHALL NOT BE PERMITTED.
4. SHARP EDGES OF CONCRETE SHALL NOT BE PERMITTED.
5. CONCRETING SHALL BE CARRIED OUT CONTINUOUSLY UP TO CONSTRUCTION JOINT AS SHOWN IN DRAWING.
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BDG/MN/CH-61.260KM/GA-01

DESIGN CONSULTANT:
Cetest
An ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57KM-71.5967KM)

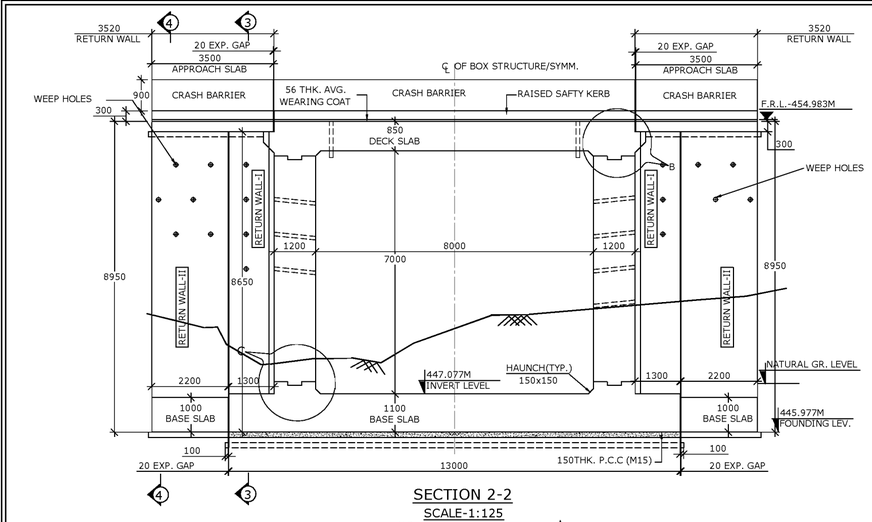
REINFORCEMENT DETAILS OF SINGLE CELL R.C.C BOX CULVERT (8.0M X 5.0M)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)
CHAINAGE : 61.260KM

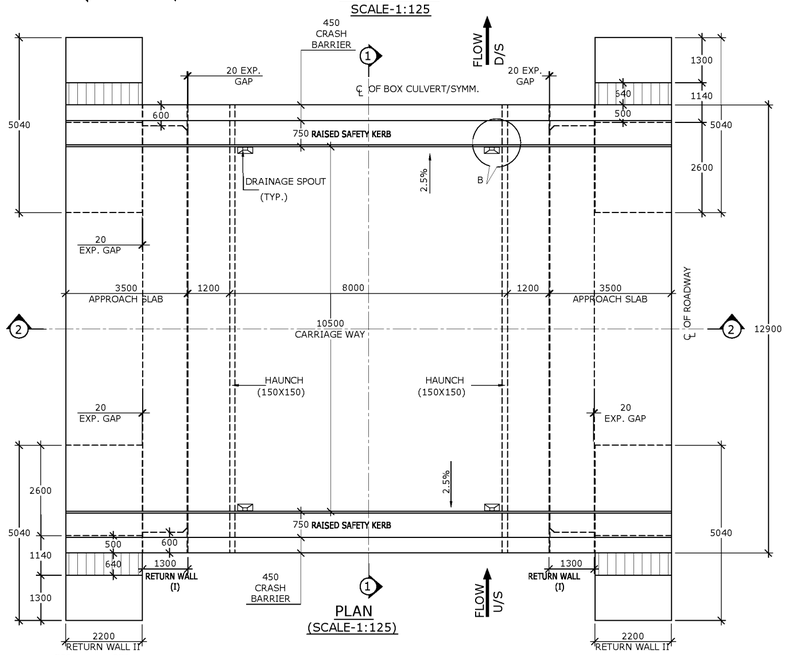
DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–61.260KM/RCC–01

DATE : MARCH, 2010

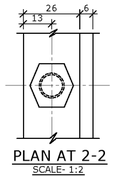
DRAWN	CHECKED	APPROVED	REV.
P.D	S.T	D.M.N	0



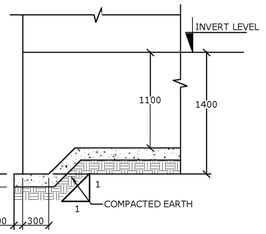
SECTION 2-2
SCALE-1:125



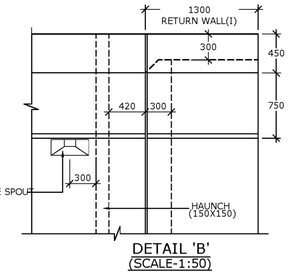
PLAN
(SCALE-1:125)



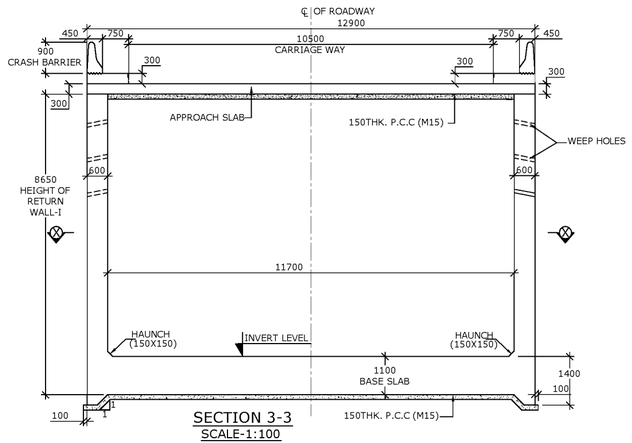
PLAN AT 2-2
SCALE- 1:2



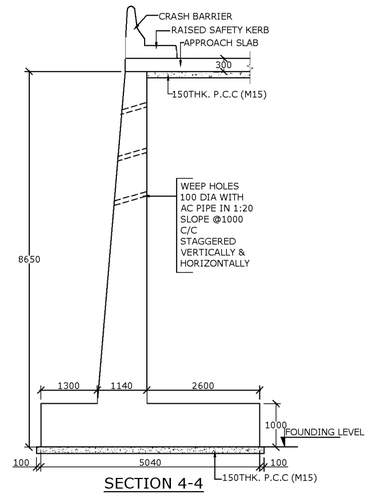
DETAIL 'A'
SCALE-1:50



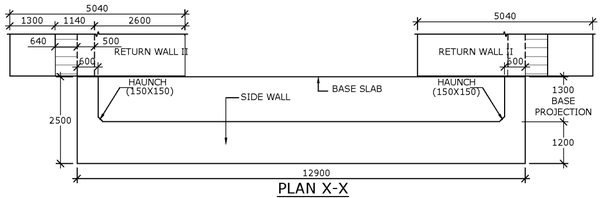
DETAIL 'B'
(SCALE-1:50)



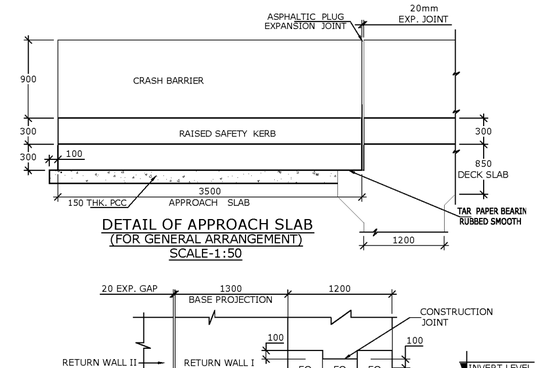
SECTION 3-3
SCALE-1:100



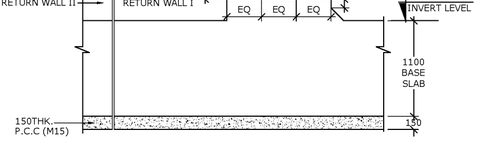
SECTION 4-4
(SHOWING RETURN WALL- II)
(SCALE-1:100)



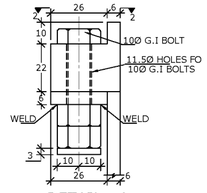
PLAN X-X
SCALE-1:125



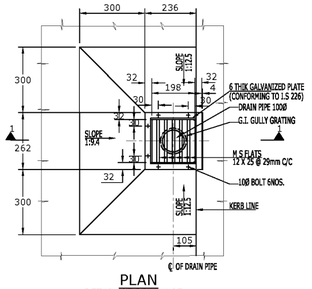
DETAIL OF APPROACH SLAB
(FOR GENERAL ARRANGEMENT)
SCALE-1:50



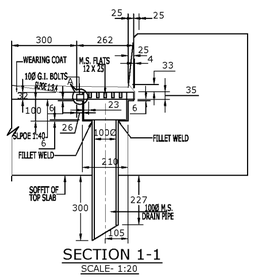
DETAIL 'C'
(SCALE-1:50)



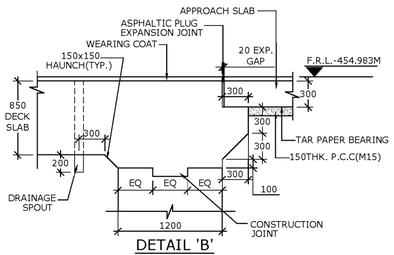
DETAIL - A
SCALE- 1:2



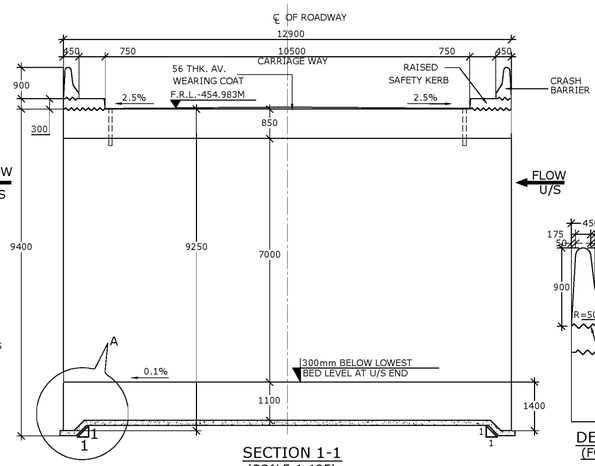
PLAN
DETAIL OF DRAINAGE
SPOUT AND COLLECTION PIT
SCALE- 1:20



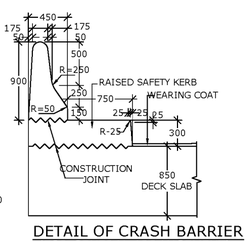
SECTION 1-1
SCALE- 1:20



DETAIL 'B'
(SCALE-1:50)



SECTION 1-1
(SCALE-1:125)



DETAIL OF CRASH BARRIER
(FOR GENERAL ARRANGEMENT)
(SCALE-1:50)

NOTES :

1. ALL DIMENTIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
2. THIS DRAWING HAS BEEN PREPARED BASED ON STANDARD DRAWINGS FOR BOX CULVERT PUBLISHED BY MoRTH.
3. PROPERTIES OF BACKFILL SOIL * =1.8t/m^3 , Ø=30•.
4. FILTER MATERIAL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO CLAUSE 2504.2.2 OF MoRTH SPECIFICATIONS TO A THICKNESS OF NOT LESS THAN 600mm. WITH SMALLER SIZE TOWARDS THE SOIL AND BIGGER SIZE TOWARDS THE WALL TO THE FULL HEIGHT.
5. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANNULAR FILLS WITH LAYERS NOT EXCEEDING 300mm.
6. THE REINFORCEMENT OF TOP SLAB OF BOX SHALL BE SUITABLY MODIFIED TO ACCOMMODATE THE DRAINAGE SPOUT.
7. THE DRAINAGE SPOUT SHALL BE GALVANIZED AFTER WELDING THE PLATES & FLATS.
8. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BDG/MN/CH-64.423KM/RCC-01

DESIGN CONSULTANT:

Cetest

C.E. TESTING COMPANY PVT. LTD.
124,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57KM-71.5967KM)

GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (8.0M X7.0M)

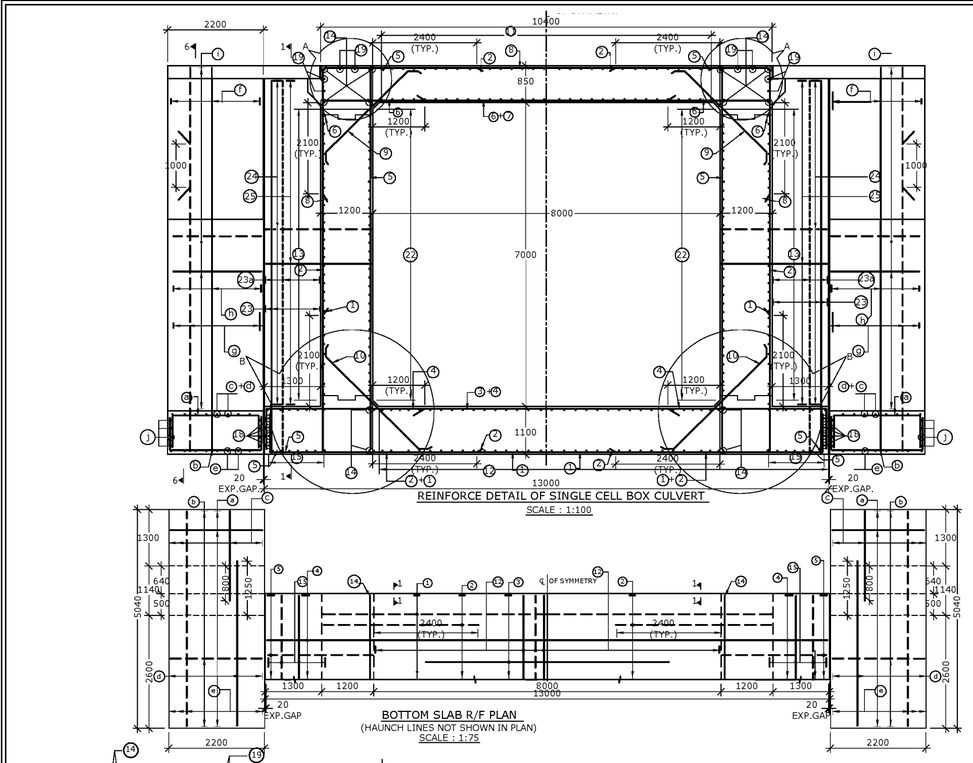
ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

CHAINAGE : 64.423KM

DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–64.423KM/GA–01

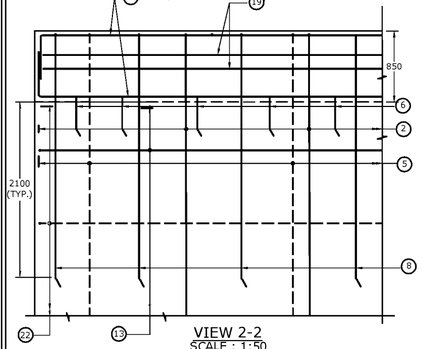
DATE : MARCH, 2010

DRAWN	CHECKED	APPROVED	REV.
P.D	S.T	D.M.N	0

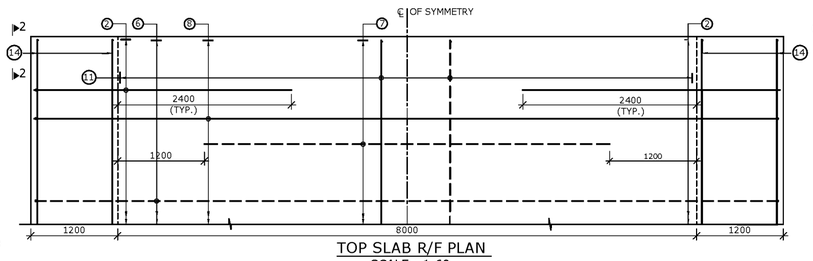


REINFORCE DETAIL OF SINGLE CELL BOX CULVERT
SCALE : 1:100

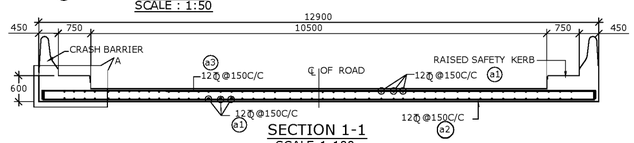
BOTTOM SLAB R/F PLAN
(HAUNCH LINES NOT SHOWN IN PLAN)
SCALE : 1:75



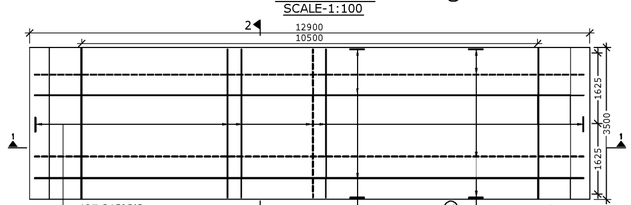
VIEW 2-2
SCALE : 1:50



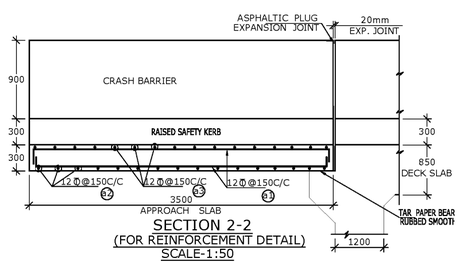
TOP SLAB R/F PLAN
SCALE : 1:60
(BAR MARK ⑤ , ⑲, KERB, BRACKET & HAUNCH LINES NOT SHOWN IN PLAN)



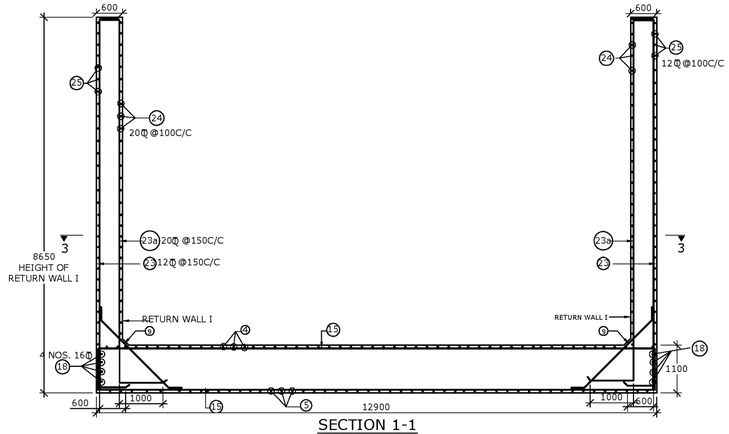
SECTION 1-1
SCALE-1:100



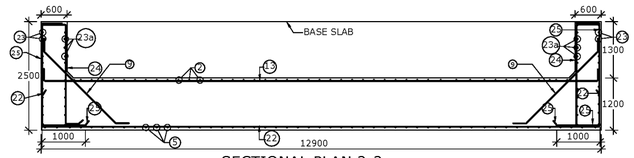
PLAN OF APPROACH SLAB
SCALE 1:100



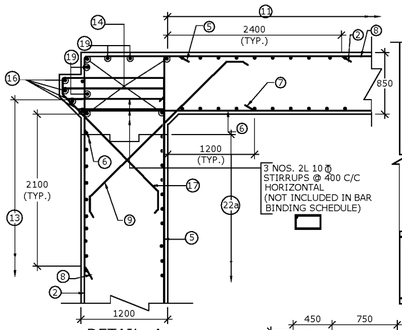
SECTION 2-2
(FOR REINFORCEMENT DETAIL)
SCALE-1:50



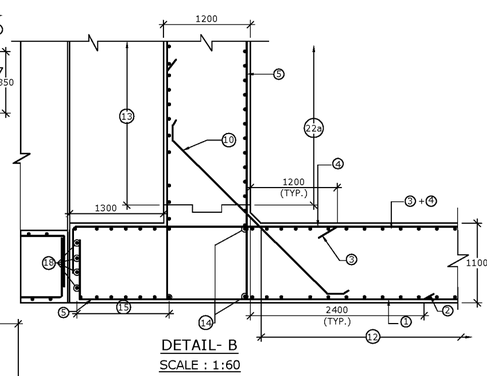
SECTION 1-1
SCALE : 1:100



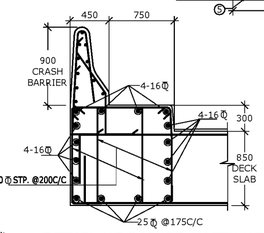
SECTIONAL PLAN 3-3
SCALE : 1:100



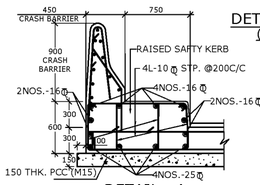
DETAIL- A
SCALE : 1:60



DETAIL- B
SCALE : 1:60

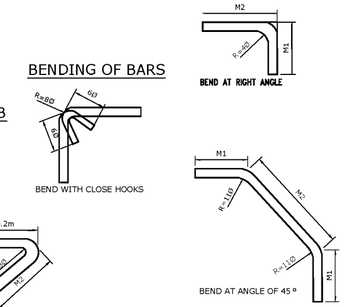


DETAIL OF RAISED SAFTY KERB
(FOR REINFORCEMENT ONLY)
SCALE-1:50

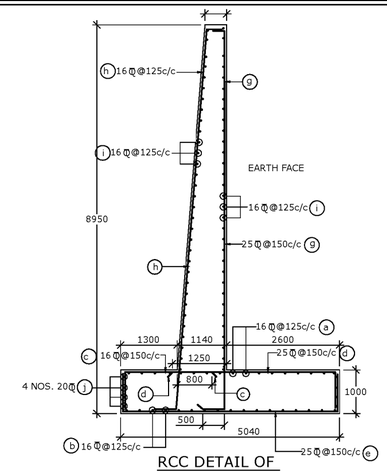


DETAIL - A
(FOR REINFORCEMENT DETAIL)
SCALE-1:50

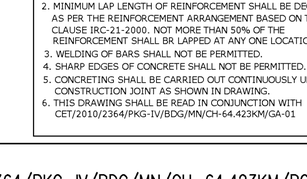
BENDING OF BARS



LEGEND : Ø SHOWS DIA. OF BAR



RCC DETAIL OF
RETAINING WALL-II
SECTION 6-6
(SCALE-1:100)



SECTION 1-1
SCALE : 1:50

SCHEDULE OF REINFORCEMENT

BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
①	25	200
②	25	200
③	25	200
④	16	200
⑤	12	150
⑥	20	200
⑦	12	200
⑧	16	200
⑨	10	200
⑩	10	200
⑪	12	150
⑫	12	100

BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
⑬	12	100
⑭	10	-
⑮	12	100
⑯	12	-
⑰	12	200
⑱	10	-
⑲	10	-
⑳	10	150
㉑	10	-
㉒	12	150
㉓	12	150
㉓a	20	150
㉔	20	100
㉕	12	100

LEGEND
TOP FACE BARS / OUTER FACE BARS
BOTTOM FACE BARS / INNER FACE BARS

NOTES :
1. CLEAR COVER SHALL BE 40mm.
2. MINIMUM LAP LENGTH OF REINFORCEMENT SHALL BE DECIDED AS PER THE REINFORCEMENT ARRANGEMENT BASED ON THE CLAUSE IRC-21-2000. NOT MORE THAN 50% OF THE REINFORCEMENT SHALL BR LAPPED AT ANY ONE LOCATION.
3. WELDING OF BARS SHALL NOT BE PERMITTED.
4. SHARP EDGES OF CONCRETE SHALL NOT BE PERMITTED.
5. CONCRETING SHALL BE CARRIED OUT CONTINUOUSLY UP TO CONSTRUCTION JOINT AS SHOWN IN DRAWING.
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BDG/MN/CH-64.423KM/GA-01

DESIGN CONSULTANT:
Cetest
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57KM-71.5967KM)

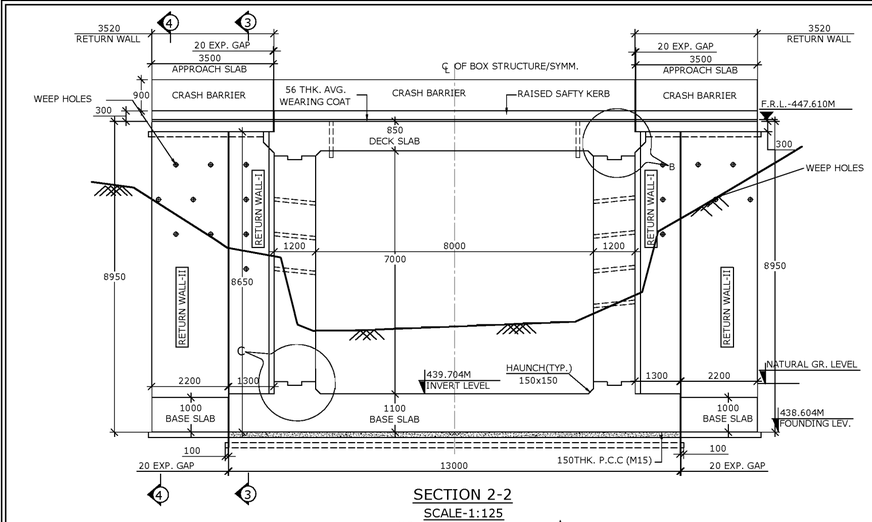
GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (8.0M X 7.0M)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)
CHAINAGE : 64.423KM

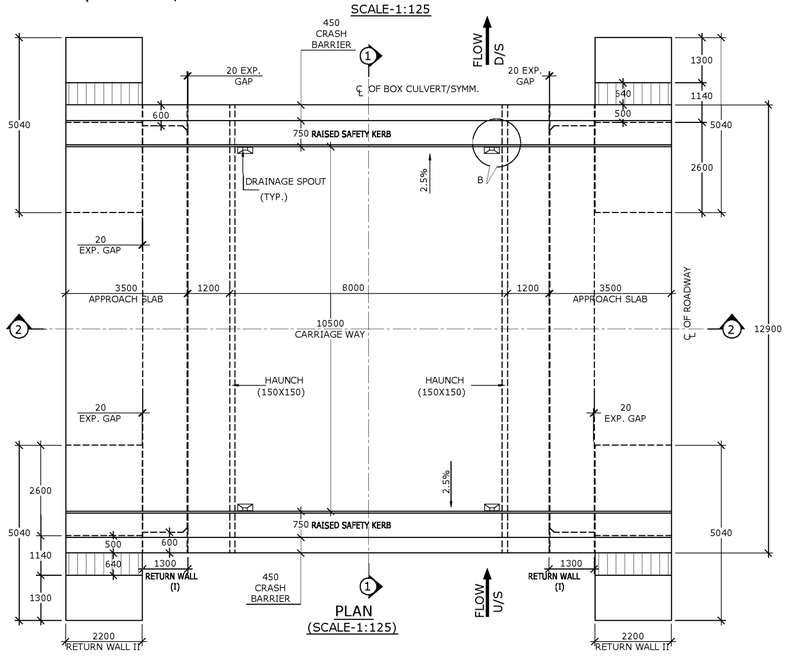
DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–64.423KM/RCC–01

DATE : MARCH, 2010

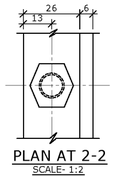
DRAWN	CHECKED	APPROVED	REV.
S.C	S.T	D.M.N	0



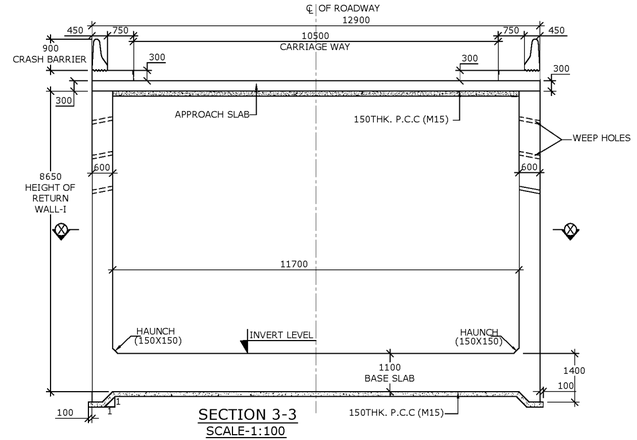
SECTION 2-2
SCALE-1:125



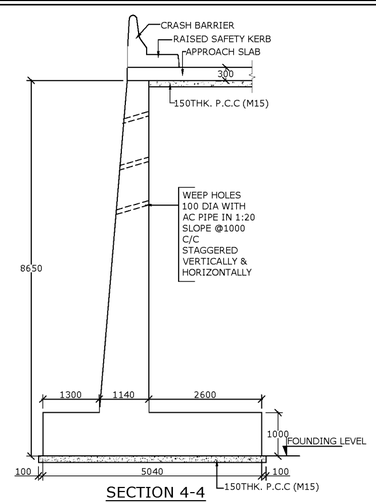
PLAN
(SCALE-1:125)



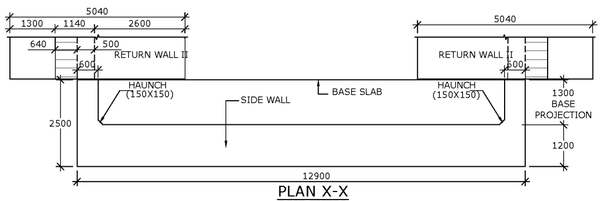
PLAN AT 2-2
SCALE- 1:2



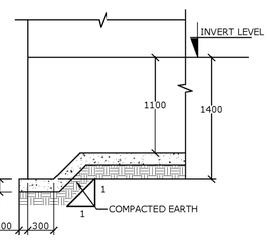
SECTION 3-3
SCALE-1:100



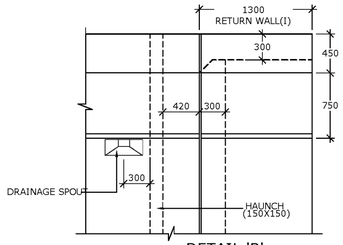
SECTION 4-4
(SHOWING RETURN WALL- II)
(SCALE-1:100)



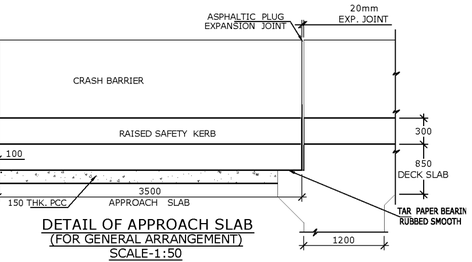
PLAN X-X
SCALE-1:125



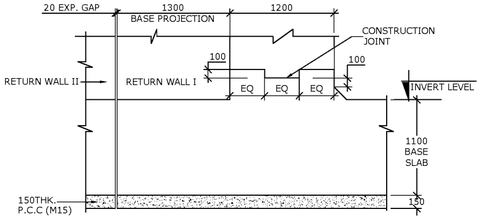
DETAIL 'A'
SCALE-1:50



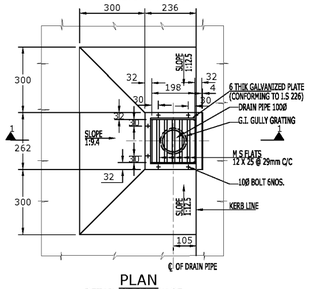
DETAIL 'B'
(SCALE-1:50)



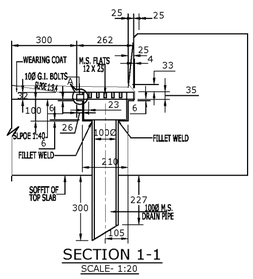
DETAIL OF APPROACH SLAB
(FOR GENERAL ARRANGEMENT)
SCALE-1:50



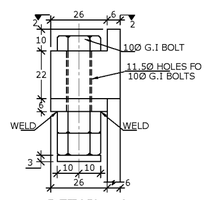
DETAIL 'C'
(SCALE-1:50)



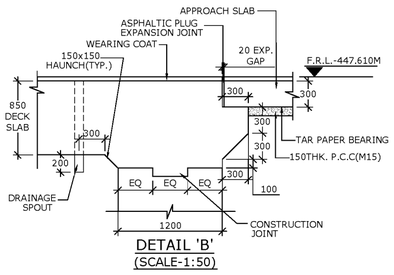
PLAN
DETAIL OF DRAINAGE SPOUT AND COLLECTION PIT
SCALE- 1:20



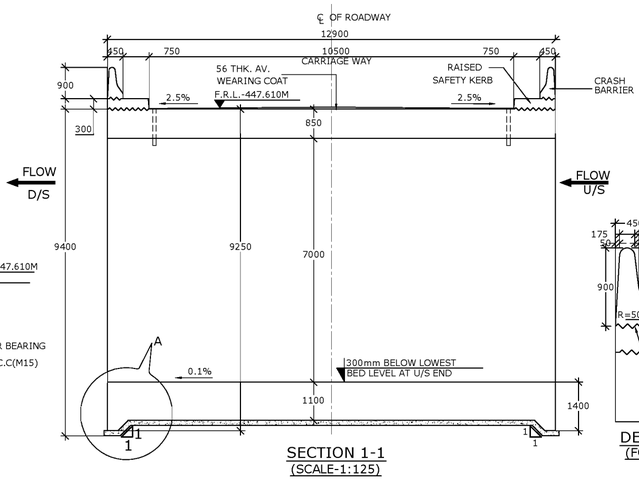
SECTION 1-1
SCALE- 1:20



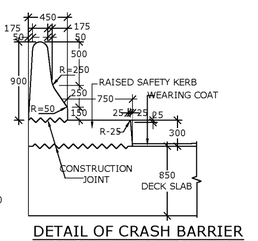
DETAIL - A
SCALE- 1:2



DETAIL 'B'
(SCALE-1:50)



SECTION 1-1
(SCALE-1:125)



DETAIL OF CRASH BARRIER
(FOR GENERAL ARRANGEMENT)
(SCALE-1:50)

NOTES :

1. ALL DIMENTIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
2. THIS DRAWING HAS BEEN PREPARED BASED ON STANDARD DRAWINGS FOR BOX CULVERT PUBLISHED BY MoRTH.
3. PROPERTIES OF BACKFILL SOIL • =1.8t/m³ , Ø=30•.
4. FILTER MATERIAL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO CLAUSE 2504.2.2 OF MoRTH SPECIFICATIONS TO A THICKNESS OF NOT LESS THAN 600mm. WITH SMALLER SIZE TOWARDS THE SOIL AND BIGGER SIZE TOWARDS THE WALL TO THE FULL HEIGHT.
5. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANNULAR FILLS WITH LAYERS NOT EXCEEDING 300mm.
6. THE REINFORCEMENT OF TOP SLAB OF BOX SHALL BE SUITABLY MODIFIED TO ACCOMMODATE THE DRAINAGE SPOUT.
7. THE DRAINAGE SPOUT SHALL BE GALVANIZED AFTER WELDING THE PLATES & FLATS.
8. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BDG/MN/CH-65.946KM/RCC-01

DESIGN CONSULTANT:
Cetest
C.E. TESTING COMPANY PVT. LTD.
124,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

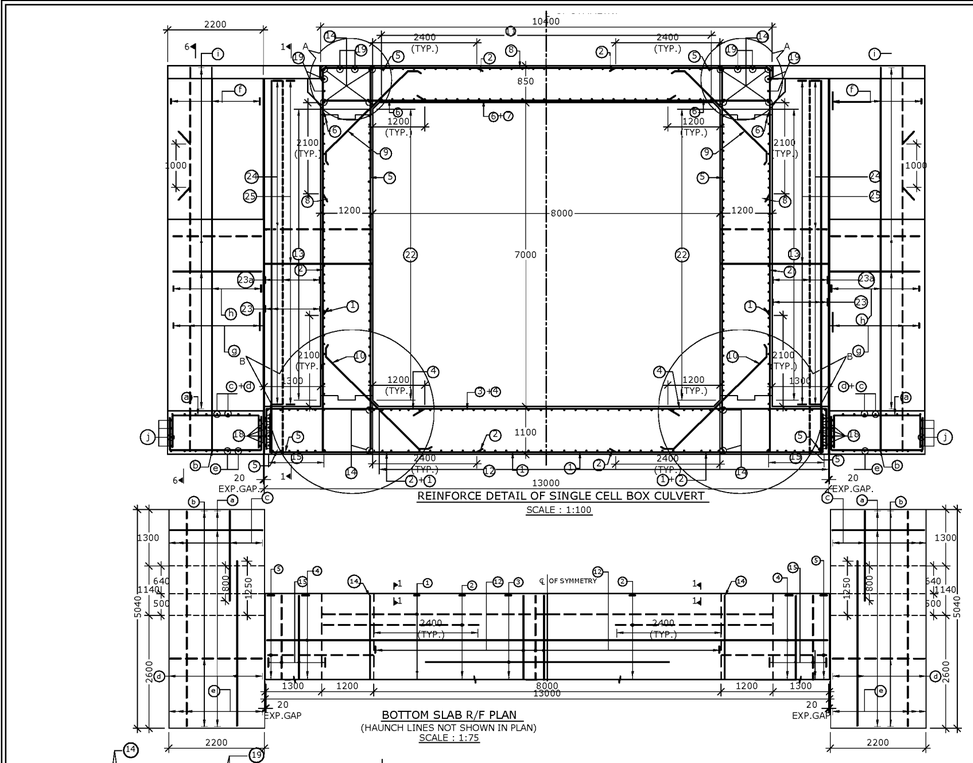
PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57KM-71.5967KM)

GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (8.0M X7.0M)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)
CHAINAGE : 65.946KM

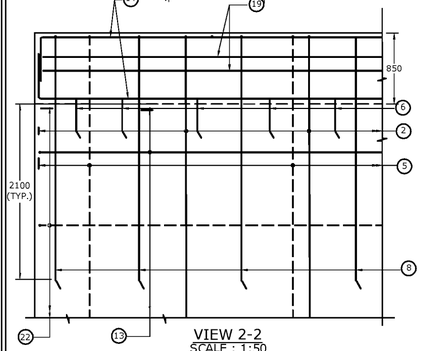
DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–65.946KM/GA–01
DATE : MARCH, 2010

DRAWN	CHECKED	APPROVED	REV.
P.D	S.T	D.M.N	0

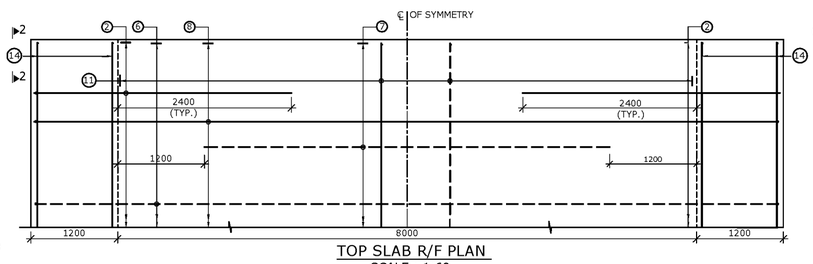


REINFORCE DETAIL OF SINGLE CELL BOX CULVERT
SCALE : 1:100

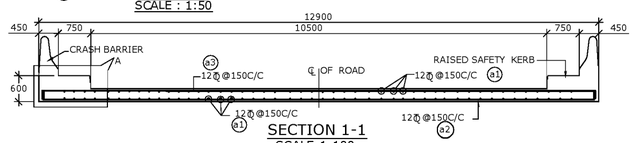
BOTTOM SLAB R/F PLAN
(HAUNCH LINES NOT SHOWN IN PLAN)
SCALE : 1:75



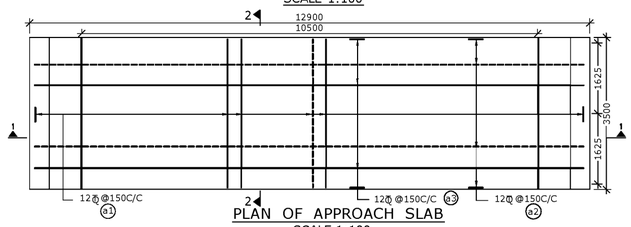
VIEW 2-2
SCALE : 1:50



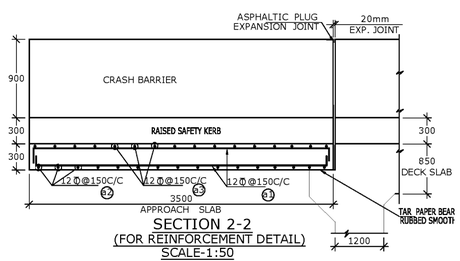
TOP SLAB R/F PLAN
SCALE : 1:60
(BAR MARK ⑤ , ⑲, KERB, BRACKET & HAUNCH LINES NOT SHOWN IN PLAN)



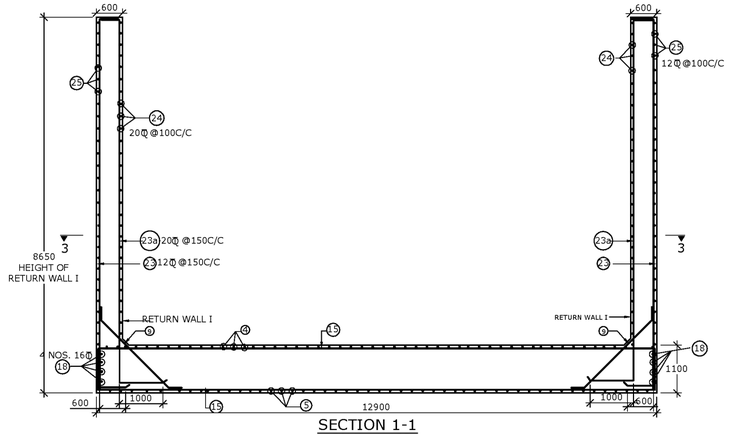
SECTION 1-1
SCALE-1:100



PLAN OF APPROACH SLAB
SCALE 1:100



SECTION 2-2
(FOR REINFORCEMENT DETAIL)
SCALE-1:50



SECTION 1-1
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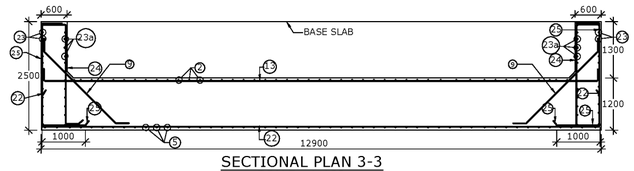
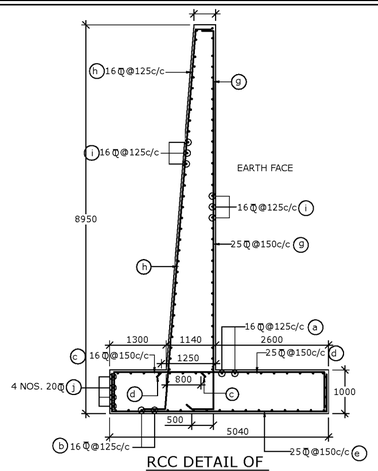
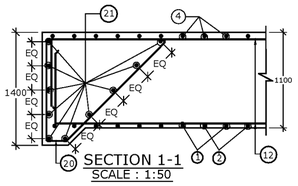


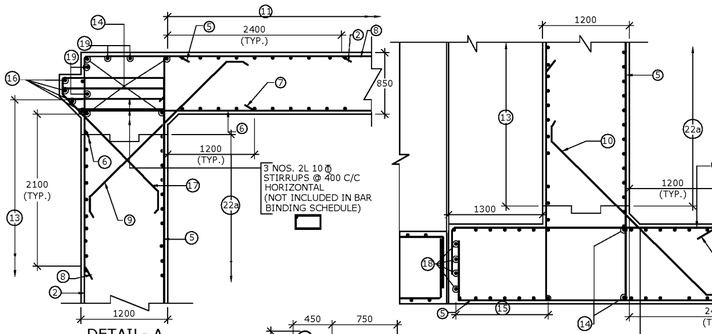
SECTIONAL PLAN 3-3
SCALE : 1:100



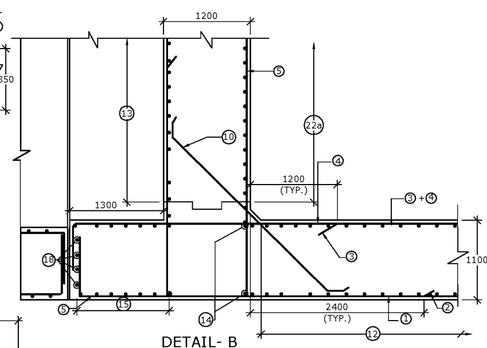
RCC DETAIL OF
RETAINING WALL-II
SECTION 6-6
(SCALE-1:100)



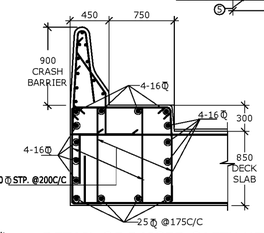
SECTION 1-1
SCALE : 1:50



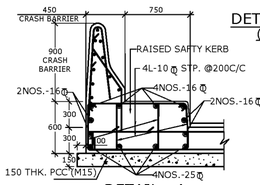
DETAIL- A
SCALE : 1:60



DETAIL- B
SCALE : 1:60

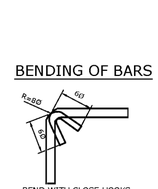


DETAIL OF RAISED SAFTY KERB
(FOR REINFORCEMENT ONLY)
SCALE-1:50

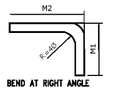


DETAIL - A
(FOR REINFORCEMENT DETAIL)
SCALE-1:50

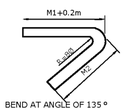
BENDING OF BARS



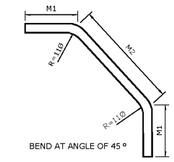
BEND WITH CLOSE HOOKS



BEND AT RIGHT ANGLE



BEND AT ANGLE OF 135°



BEND AT ANGLE OF 45°

LEGEND : Ø SHOWS DIA. OF BAR

SCHEDULE OF REINFORCEMENT

BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
①	25	200
②	25	200
③	25	200
④	16	200
⑤	12	150
⑥	20	200
⑦	12	200
⑧	16	200
⑨	10	200
⑩	10	200
⑪	12	150
⑫	12	100

BAR MARK	DIA. OF BARS (mm)	SPACING (mm)
⑬	12	100
⑭	10	-
⑮	12	100
⑯	12	-
⑰	12	200
⑱	10	-
⑲	10	-
⑳	10	150
㉑	10	-
㉒	12	150
㉓	12	150
㉓a	20	150
㉔	20	100
㉕	12	100

LEGEND
TOP FACE BARS / OUTER FACE BARS
BOTTOM FACE BARS / INNER FACE BARS

NOTES :
1. CLEAR COVER SHALL BE 40mm.
2. MINIMUM LAP LENGTH OF REINFORCEMENT SHALL BE DECIDED AS PER THE REINFORCEMENT ARRANGEMENT BASED ON THE CLAUSE IRC-21-2000. NOT MORE THAN 50% OF THE REINFORCEMENT SHALL BR LAPPED AT ANY ONE LOCATION.
3. WELDING OF BARS SHALL NOT BE PERMITTED.
4. SHARP EDGES OF CONCRETE SHALL NOT BE PERMITTED.
5. CONCRETING SHALL BE CARRIED OUT CONTINUOUSLY UP TO CONSTRUCTION JOINT AS SHOWN IN DRAWING.
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BDG/MN/CH-65.946KM/GA-01

DESIGN CONSULTANT:
Cetest
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57KM-71.5967KM)

GENERAL ARRANGEMENT OF SINGLE CELL R.C.C BOX CULVERT (8.0M X 7.0M)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)
CHAINAGE : 65.946KM

DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–65.946KM/RCC–01
DATE : MARCH, 2010

DRAWN	CHECKED	APPROVED	REV.
S.C	S.T	D.M.N	0

Details of PSC Bridge at Chainage - 57.123 km

(A) GENERAL

1. These notes are applicable for the Standard Drawings for Prestressed Concrete Girders and RC Slab Type Composite Superstructure with and without footpaths.

2. The drawings are applicable only for right bridges.

3 The design is according to the following Codes:

I. IRC: 5- 1985
II. IRC: 6- 1966(1981 Print)
III. IRC 18- 1985
IV. IRC: 21- 1987
V. IRC: 22- 1986
VI. IRC: 83: (Part 1) 1982
VII. IRC: SP: 33-1989

4. All dimensions are in mm. Only written dimensions shall be followed. No drawing shall be scaled.

5. Public utility services (except water supply and sewerage), if required, shall be carried over the bridge through 150 mm dia ducts provided in the footpaths. Total load of such services shall not be more than 1.0 kN/m on each footpath.

6. Wearing Coat shall consist of the following:
i) A coat of mastic asphalt, 6 mm thick, with a prime coat over the top of the deck before the wearing coat is laid. The prime coat of mastic asphalt shall be 30% straight run 30/40 penetration grade bitumen and 50% light solvent (Benzol) to be laid over the deck slab. The insulation layer of 6 mm thick mastic asphalt with 75% limestone dust filler and 25% of 30/40 penetration grade bitumen shall be laid at 375° F with broom over the prime coat.

ii) 50 mm thick asphaltic concrete wearing coat in two layers of 25 mm each as per Clause 512 of MOST's Specification for Road and Bridge Works (2nd revision).

7. The following loads have been considered in the design.

i) One lane of IRC Class 70R or two lanes of IRC Class, A. on carriageway, whichever governs

ii) Foothpath load of 5 kN/sq.m for superstructure having footpaths.

iii) Wearing Coat load of 2 kN/sq m.

8. The designs are applicable for "moderate and "severe" conditions of exposure. In case of "severe" conditions suitable anti-corrosion treatment-as approved by Engineer-in-Charge may be provided to reinforcement bars and exposed concrete surface.

(B) MATERIALS SPECIFICATIONS

Concrete

1. Concrete shall be design mix and have minimum 28 days characteristic strength of 40 MPa on 150 mm cubes for ail elements of superstructure.

2. Ordinary Portland cement conforming to IS:269 or High strength Ordinary Portland cement conforming to IS:8112 capable of achieving the required design concrete strength shall only be used.

3. To improve workability of concrete and cement grout, admixtures conforming to IS:6925 and IS:9103 could be permitted subject to satisfactory proven use. Admixtures generating hydrogen, nitrogen, chlorides etc should not be used.

4. Cement content in concrete shall neither be less than 400 kg/cu. m nor more than 540 kg/cu. m of concrete.

5. Maximum water cement ratio shall be as follows:
Deck slab 0.40;
Precast Girder 0.40

Reinforcement

6. Reinforcing Steel shall be of HYSD bars (Grade designation S:415) conforming to IS:1786.

Prestressing Steel and Accessories

7. Cable consisting of 12 nos. of 12.7 mm dia. 7-ply Class 2 Strand as per IS:6006-1983 shall be used for main prestressing.

8. For future prestressing, single 12.7 mm dia. 7 – ply Class 2 Strand as per 18:6006-1983 shall be used.

9. The prestressing steel and accessories shall be subjected to an acceptance test prior to their actual use on the works (Guidance may be taken from BS:4447). Only multi strand jacks shall be used for tensioning of cables. Direct and indirect force measurement device (e.g. Pressure Gauge) to be attached in consultation with system manufacturer.

Sheathing

10. Sheathing shall be of "Drossbach" type 75 mm ID manufactured from minimum 0.4 mm thick bright metal strip. It shall be tested as per IRC: 18-1985, AppendiX: 1.

Water

11. Water to be used in concreting, grouting and curing shall conform to Clause 5.1 (ii) of IRC:SP: 33-1989.

Expansion Joints

12. Expansion joints must be robust, durable, water tight and replaceable. It must be provided over the full width of deck and follow the profile including kerb, footpath (where relevant) and facia. Expansion joints shall be obtained only from approved manufacturers and be of proven type Details of expansion joints may be g0t approved before commencement of construction Site fabricated expansion joints shall be prohibited.
13. Expansion joints shall have the following additional essential features.
a) It shall cater for a total movement of ± 40 mm
b) It shall be provided with a water proof membrane to ensure against leakage below the joint.
c) It shall have a cushion of elastomer to enable absorption of shock transmitted by vehicles.

14. Fabricated steel parts of expansion joints

shall be positioned accurately before the concreting

of that portion of the deck slab.

15. Presence of manufacturer's representative at the time of positioning of embedded parts and installation of expansion joints is mandatory.

16. The initial gap at the time of concreting of deck slab shall be 38 mm. The gap at the time of installation between the adjacent movable concrete faces shall be fixed in consultation with the manufacturer of the expansion joint.

(C) CONSTRUCTION

Sequence

DAY	ACTIVITY
(After casting of main girders)	
14	Stressing of 1st stage cables
21	Casting of deck slab and cross girders
56	Stressing of 2nd stage cables
After 56	Installation of expansion joint and casting / laying of footpath (where applicable), kerb, wearing coat and railing.

Stressing of 1st stage cables can be done earlier on achieving a strength of 35 MPa. Subsequent activities can also be advanced keeping the same time intervals.

DESIGN CONSULTANT: Cetest — C.E. TESTING COMPANY PVT. LTD. 124A,N.S.C. BOSE ROAD KOLKATA – 700092 INDIA	SCALE: AS DRAWN	CLIENT: PUBLIC WORKS DEPARTMENT GOVT. OF ARUNACHAL PRADESH	GENERAL NOTES FOR CONSTRUCTION	DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/GENERAL NOTES–01
		PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)	ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV) CHAINAGE : 57.123KM	DATE : MARCH, 2010 — REV. 0

DRAWN	DESIGNED	CHECKED	APPROVED
P.D.	S.D.	S.T.	DMN

Launching Truss

The design is based on cast-in-situ construction. However launching of girders may be permitted for which the load from leg of launching truss should not exceed the value given in relevant drawing.

(D) WORKMANSHIP/DETAILING

1. Minimum cover to any reinforcement shall be 50 mm unless shown otherwise in the drawing.

2. For ensuring proper cover of concrete to reinforcement bars, specially made polymer cover blocks shall only be used.

3. Construction Joints shall be provided at locations shown in drawings.

4. Welding of reinforcement bars shall not be permitted.

5. Bending of reinforcement bars to be as per IS:25021963.

6. Minimum lap length shall be kept as 63 d where "d" is the diameter of bar.

7. Supporting chairs of 12 mm dia. shall be provided at suitable intervals, as per IS:2502.

8. Sharp edges of concrete shall be chamfered (10 mm x 10 mm).

9. Shuttering plates shall suitably be stiffened to enable the compaction by form vibrators.

10. Full width screed vibrator shall be used for compaction of concrete in deck slab.

11. The jacking force in each cable is 1543 kN, to be imparted at both ends simultaneously by using multistrand jacks.

12. The following properties have been considered in the design.
i) Area of 1 strand = 98.7 mm^2
ii) Wobble coefficient k = O.0046/m
iii) Friction coefficient u = O.25
iv) Modulus of elasticity of steel in strand = 1.95 x 10^5 MPa
v) Average slip = 6 mm

13. Minimum strength of concrete at the time of tensioning of cables shall be 35 MPa or as recommended by system manufacturer, whichever is higher.

14. *Appendix* 2 Grouting shall be carried out as per IRC:18-1985.

15. For future prestressing in case of bridge distress single 12.7 mm dia 7 -ply Class 2 strands as per IS:6006-1983 shall be used. The tensioning force per strand shall be 128.6 KN. Mono strand jacks shall be used for tensioning of strands utilizing approved prestressing system only. The externally placed strands shall be protected by polyethelene sheathing and grouted.

16. The location of jacks for lifting up the superstructure to replace bearing etc. is shown thus ▲. This shall be distinctly etched on end cross-girders and pier/abutment caps.

(E) SPECIAL NOTE FOR PRESTRESSING

If the calculated elongation is reached before the calculated gauge pressure is obtained continue tensioning till attaining the calculated guage pressure, provided the elongation does not exceed 1.05 times the calculated elongation. If this elongation is achieved before the calculated guage pressure is attained, stop stressing and inform the engineer.

If the calculated elongation has not been reached continue tensioning by intervals of 5 kg/sq cm until the calculated elongation is reached provided the guage pressure does not exceed 1.05 times the calculated guage pressure.

If the elongation at 1.05 times the calculated guage pressure IS less than 095 times the calculated elongation, the following measures must be taken, in succession, to define the cause of this lack of elongation.

- Recalibrate the pressure guage
- Check the correct functioning of the jack, pump and leads
- De-tenSion the cable. Slide it in its duct to check that it is not blocked by mortar which has entered through holes in the sheath. Re-tension the cable, if free.

If the required elongation is flat obtained, further finishing operations such as cutting or sealing, should not be undertaken without the approval of the engineer.

(F) CONTENTS (DRAWING)

The drawing volume contains General arrangement drawings & Reinforcement detail drawing with connection details at Abutment & Pier locations.

DESIGN CONSULTANT:
Cetest
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

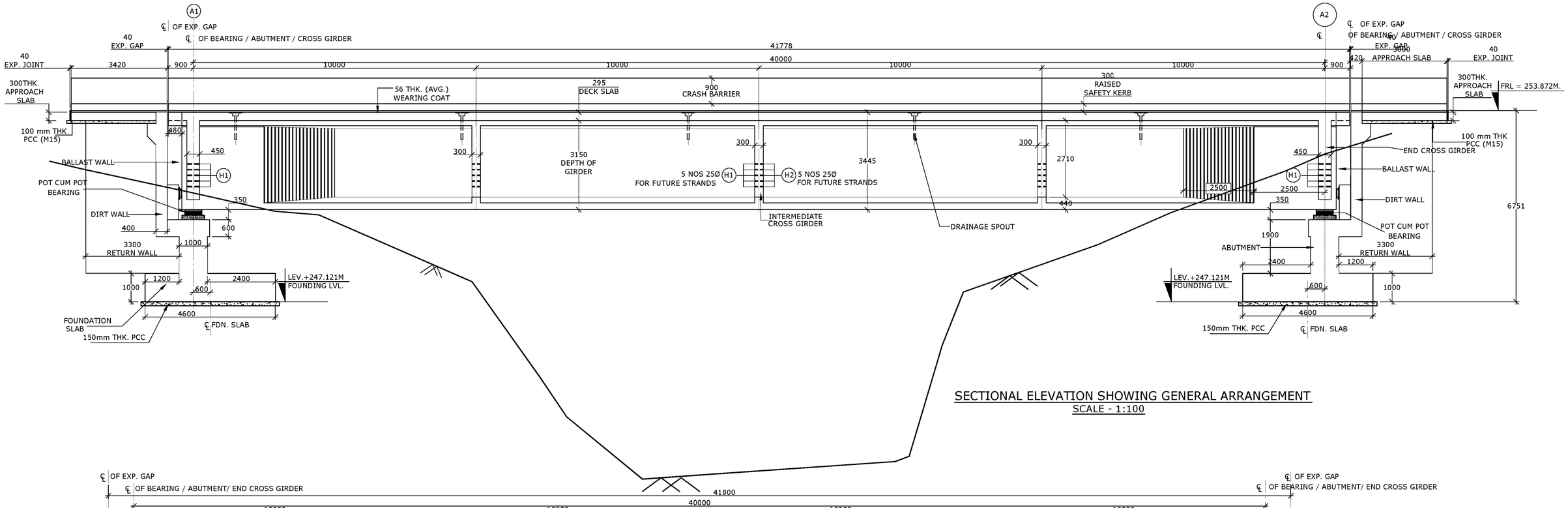
GENERAL NOTES FOR CONSTRUCTION

ROAD NAME : PASIGHAT–MARIYANG–YINGKIONG ROAD (PKG–IV)
CHAINAGE : 57.123 KM.

DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/GENERAL NOTES–02

DATE : MARCH, 2010 | REV.

DRAWN	DESIGNED	CHECKED	APPROVED	
P.D.	S.D.	S.T.	DMN	0



SECTIONAL ELEVATION SHOWING GENERAL ARRANGEMENT
SCALE - 1:100

TOP PLAN
SCALE - 1:100

NOTES :
1. ALL DIMENSIONS IN MM AND LEVELS ARE IN M. UNLESS OTHERWISE NOTED.
2. GRADE OF CONCRETE :
   - SUPER STRUCTURE = M40
   - SUB STRUCTURE = M25
   - REACTION BLOCK = M35
   - LEVELING COURSE (P.C.C.)= M15
   - RETURN WALL = M25
   - APPROACH SLAB = M30
   - CRASH BARRIER = M40
   - SAFETY KERB = M25
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH :
   - CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/ GA- 02 TO 06
   - CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC- 01 TO 05

DESIGN CONSULTANT:
Cetest
An IS/ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.P.D BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

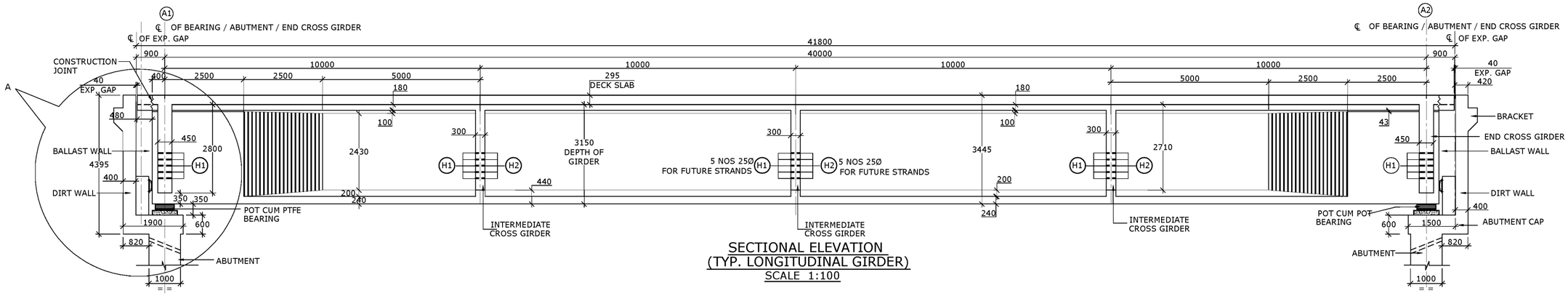
GENERAL ARRANGEMENT OF PSC BRIDGE (40 M SPAN)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)
CHAINAGE : 57.123KM

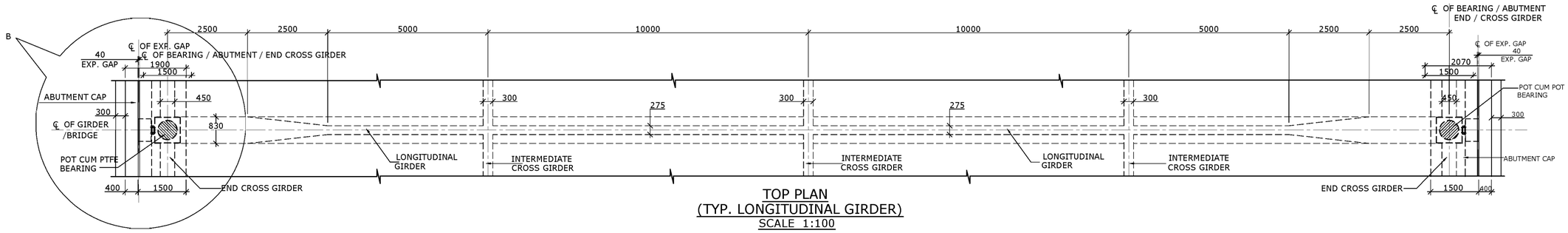
DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/GA–01

DATE : MARCH, 2010 — REV. 0

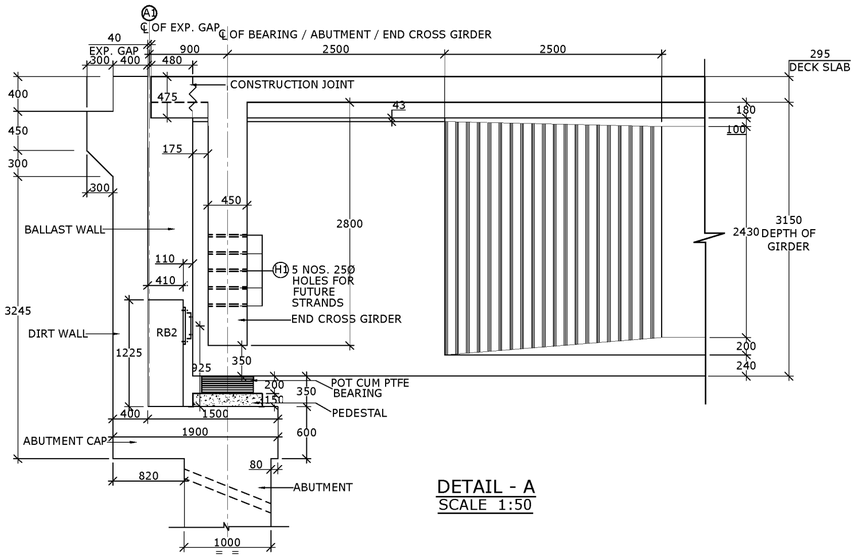
DRAWN	DESIGNED	CHECKED	APPROVED	Pg.No.
P.D	S.D.	S.T.	DMN	02



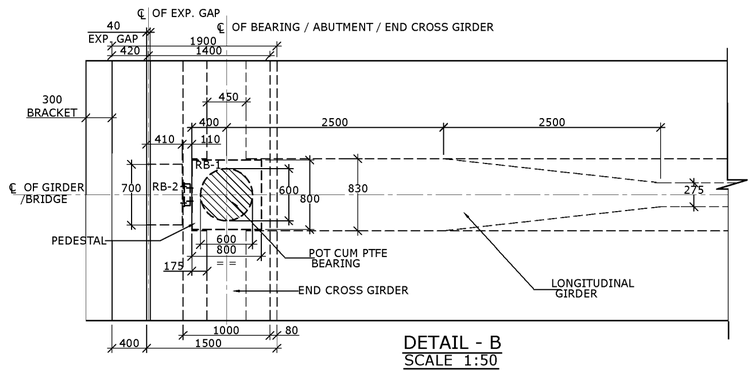
SECTIONAL ELEVATION
(TYP. LONGITUDINAL GIRDER)
SCALE 1:100



TOP PLAN
(TYP. LONGITUDINAL GIRDER)
SCALE 1:100



DETAIL - A
SCALE 1:50



DETAIL - B
SCALE 1:50

NOTES :

1. ALL DIMENSIONS IN MM AND LEVELS ARE IN M. UNLESS OTHERWISE NOTED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH:-
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-01, & 03 TO 06
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC- 01 TO 05

DESIGN CONSULTANT:

Cetest

An IS/ISO 9001:2000 CERTIFIED COMPANY

C.E. TESTING COMPANY PVT. LTD.
124A,N.P.D BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

DETAIL OF LONGITUDINAL GIRDER

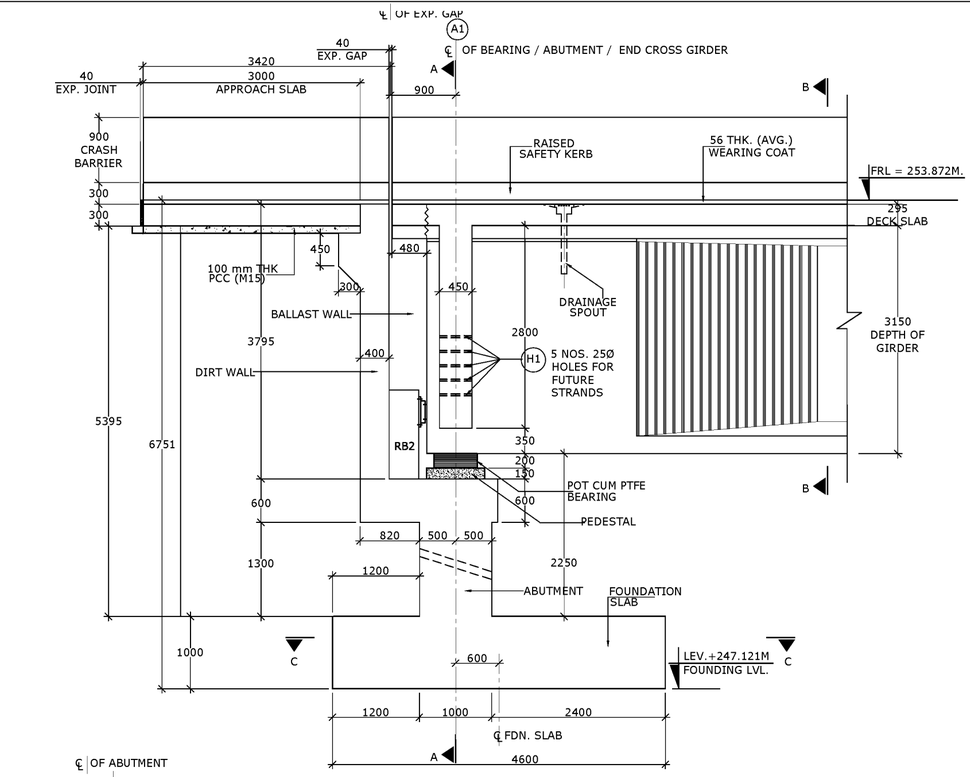
ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)
CHAINAGE : 57.123KM

DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/GA–02

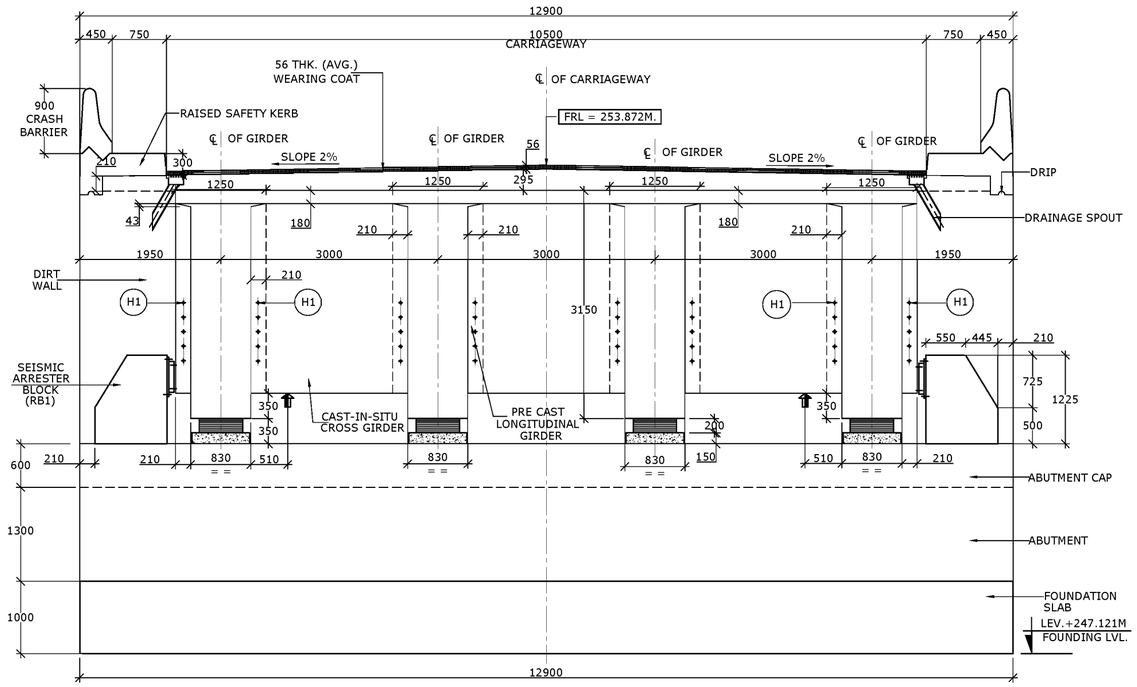
DATE : MARCH, 2010 — REV.

DRAWN	DESIGNED	CHECKED	APPROVED	REV.
P.D	S.D.	S.T.	DMN	0

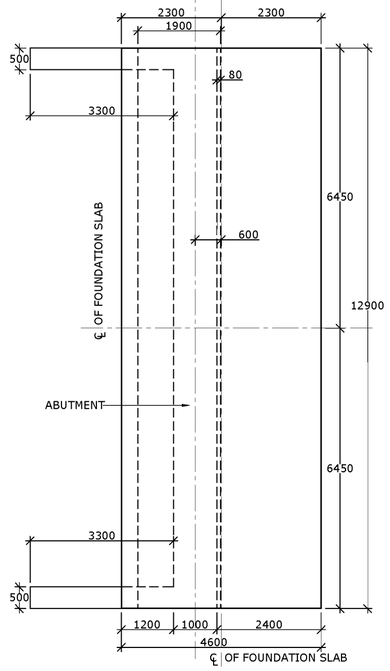
Pg.No. 03



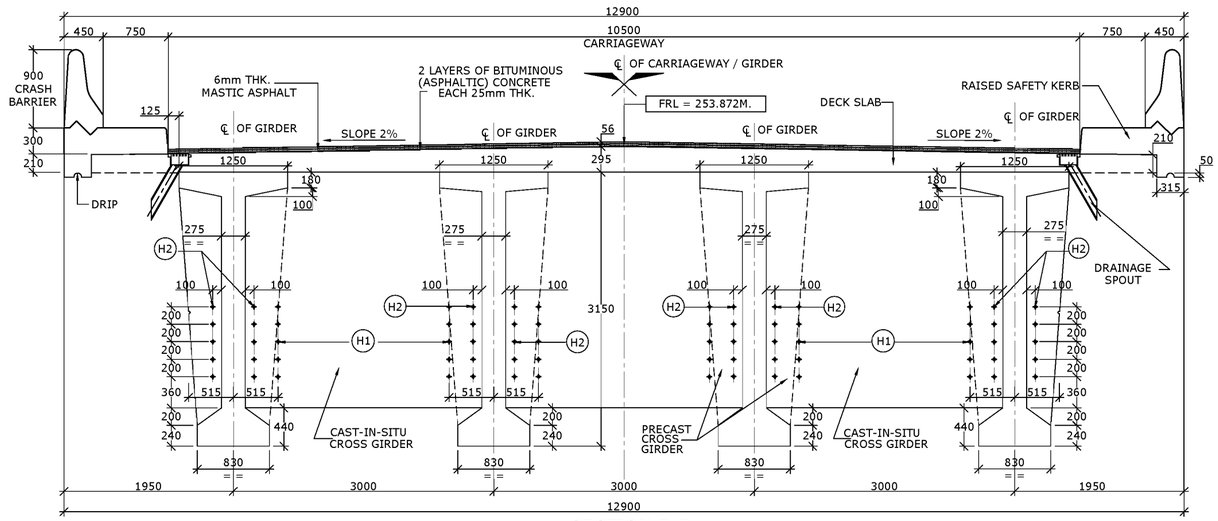
SECTIONAL ELEVATION OF ABUTMENT
SCALE 1:60



SECTION A-A
SCALE 1:60



PLAN C-C
SCALE 1:100



SECTION B-B
SCALE 1:50

NOTES :

1. ALL DIMENSIONS IN MM AND LEVELS ARE IN M. UNLESS OTHERWISE NOTED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH :-

CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-01, 02 & 04 TO 06
CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC- 01 TO 05

DESIGN CONSULTANT:
Cetest
An IS/ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.P.D BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

GENERAL ARRANGEMENT OF ABUTMENT

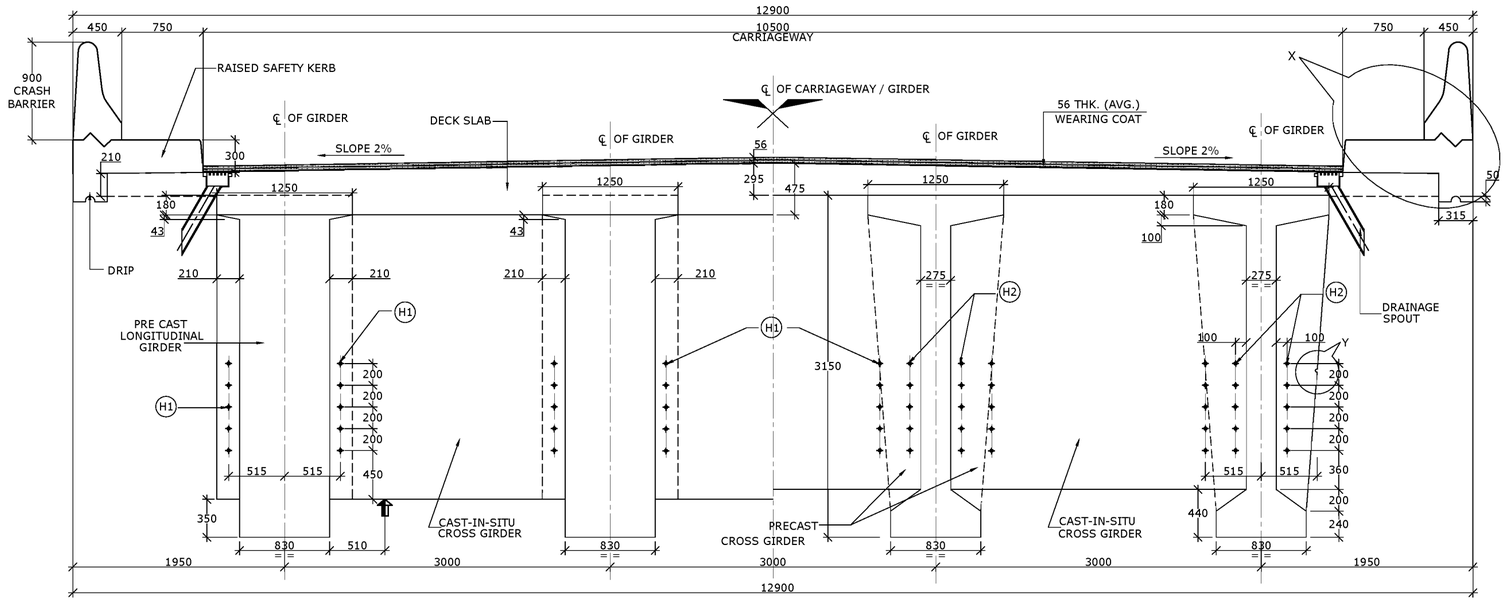
ROAD NAME: PASIGHAT–PANGIN ROAD(PKG–IV)
CHAINAGE : 57.123KM

DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/GA–03

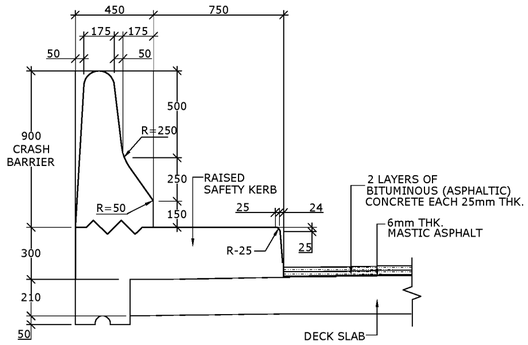
DATE : MARCH, 2010 — REV.

DRAWN	DESIGNED	CHECKED	APPROVED	REV.
P.D	S.D.	S.T.	DMN	0

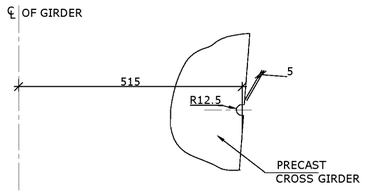
Pg.No. 04



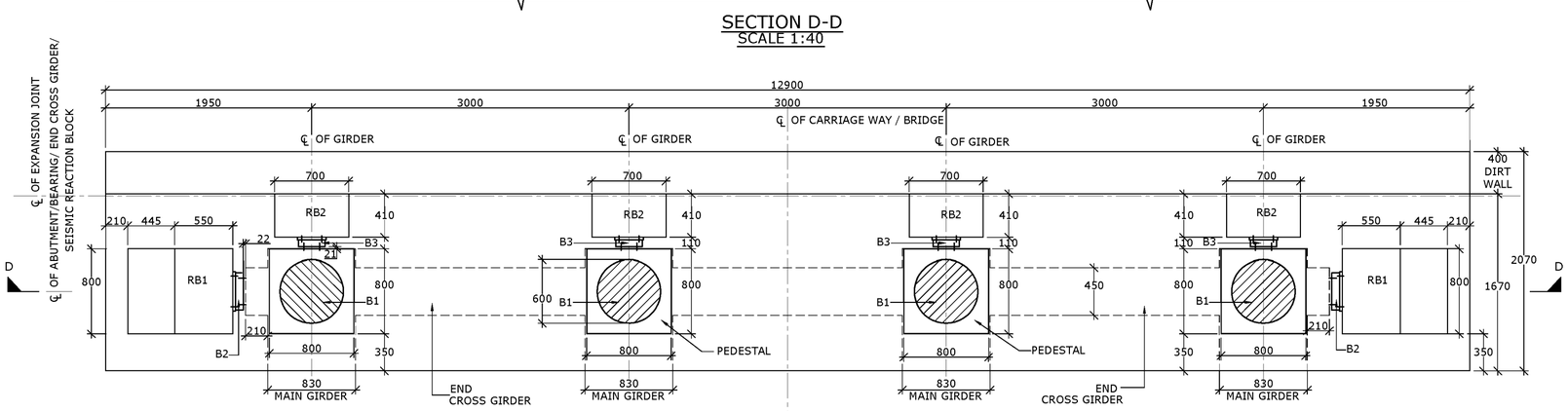
HALF END VIEW & HALF CENTER VIEW OF LONGITUDINAL GIRDER
SCALE 1:40



DETAIL OF "X"
(SCALE-1:25)

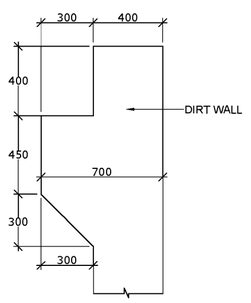


DETAIL - Y
SCALE - 1:10



SECTION D-D
SCALE 1:40

SECTIONAL PLAN OF ABUTMENT CAP SHOWING ARRANGEMENT OF SEISMIC ARRESTER BLOCK
SCALE 1:40



DETAIL OF BRACKET
SCALE 1:25

NOTES :

1. ALL DIMENSIONS IN MM AND LEVELS ARE IN M. UNLESS OTHERWISE NOTED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH
CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-01 TO 03 & 06
CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01 TO 05

DESIGN CONSULTANT:
C.E. TESTING COMPANY PVT. LTD.
124A,N.P.D BOSE ROAD
KOLKATA – 700092
INDIA
An IS/ISO 9001:2000 CERTIFIED COMPANY

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

DETAIL OF BEARING, CROSS GIRDER, BRACKET & CRASH BARRIER

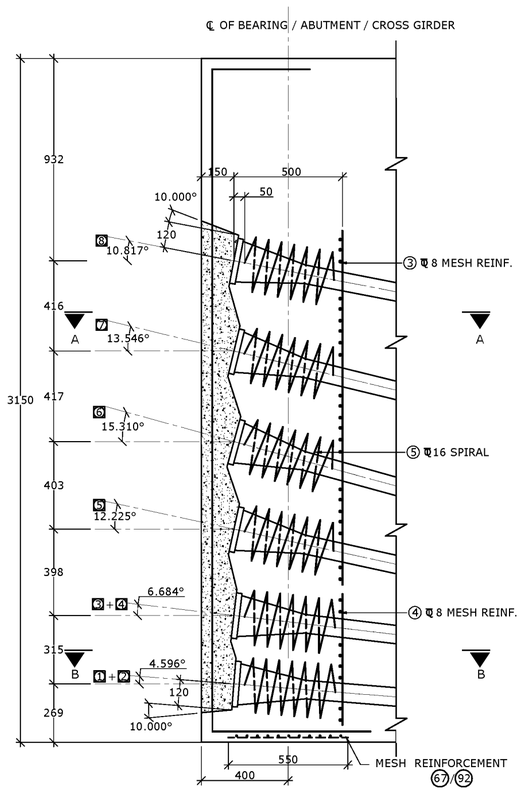
ROAD NAME: PASIGHAT–PANGIN ROAD
CHAINAGE : 57.123KM

DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/GA–04

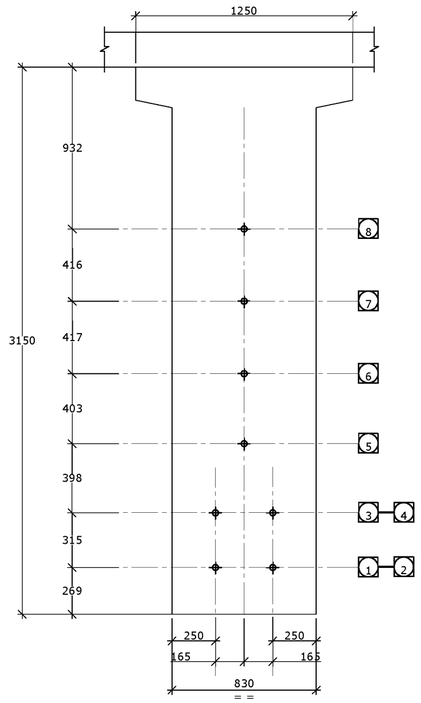
DATE : MARCH, 2010 | REV.

DRAWN	DESIGNED	CHECKED	APPROVED	REV.
P.D	S.D.	S.T.	DMN	0

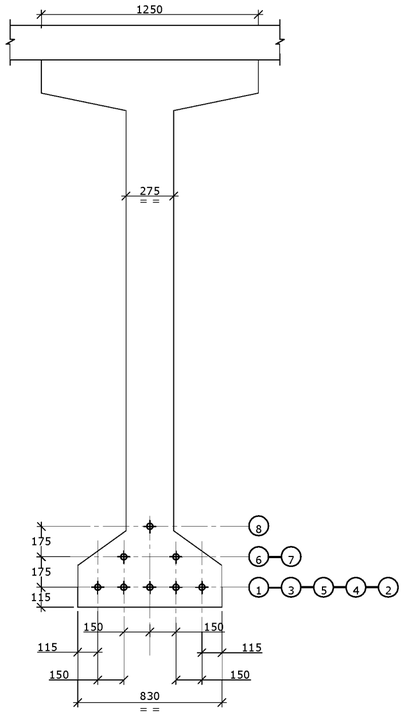
Pg.No. 05



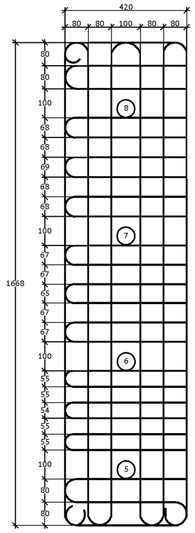
ELEVATION
END BLOCK DETAIL
SCALE - 1:20



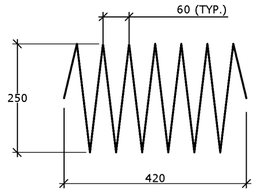
END VIEW OF BEAM
150mm INSIDE FROM GIRDER FACE
SCALE - 1:25



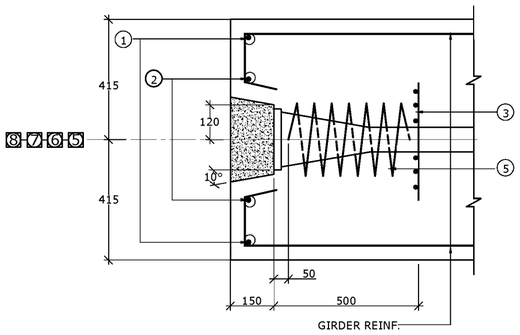
SECTION AT MID SPAN
SCALE - 1:25



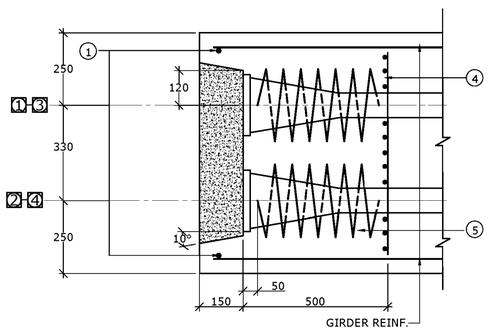
③ 8℄ MESH REINF.
SCALE - 1:10



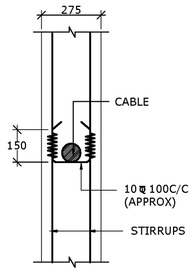
⑤ ℄16 SPIRAL
SCALE - 1:10



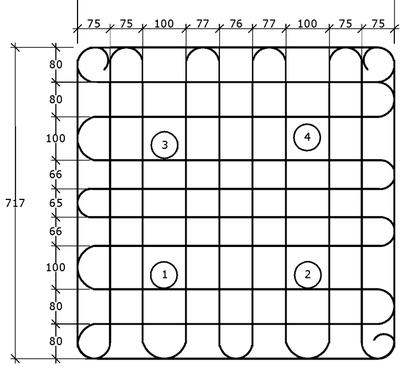
PLAN AT A-A
SCALE - 1:15



PLAN AT B-B
SCALE - 1:15



TYPICAL DETAIL OF SUPPORTING
ARRANGEMENT FOR CABLES
SCALE - 1:20



④ 8℄ MESH REINF.
SCALE - 1:10

NOTES :

1. ANCHORAGE RECESSES TO BE SEALED WITH PREPACKAGED NON-SHRINK MORTAR. END FACE OF GIRDER TO BE COATED WITH 2 COATS OF EPOXY.
2. ALL DIMENSIONS IN MM AND LEVELS ARE IN M. UNLESS OTHERWISE NOTED.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-01 to 04 & 06
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01 TO 05

DESIGN CONSULTANT:
Cetest
An IS/ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.P.D BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

DETAIL OF BEARING, CROSS GIRDER, BRACKET & CRASH BARRIER

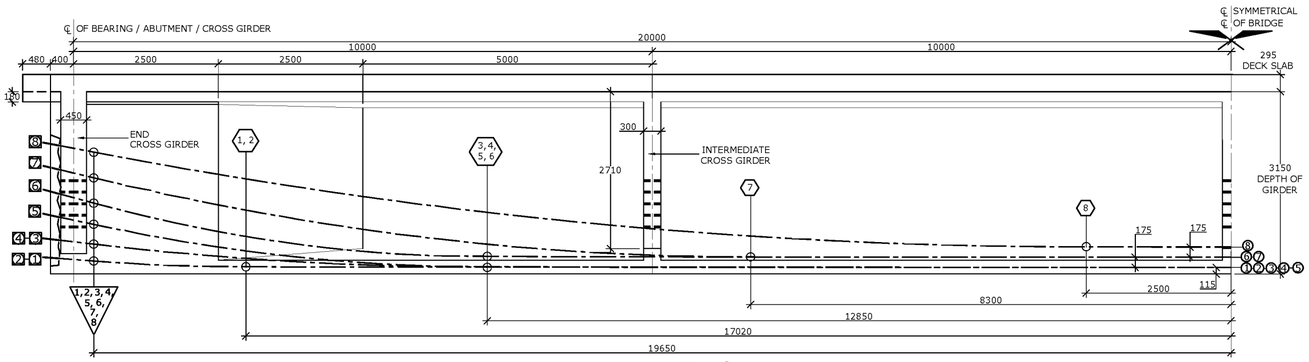
ROAD NAME: PASIGHAT–PANGIN ROAD(PKG–IV)
CHAINAGE : 57.123KM

DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/GA–05

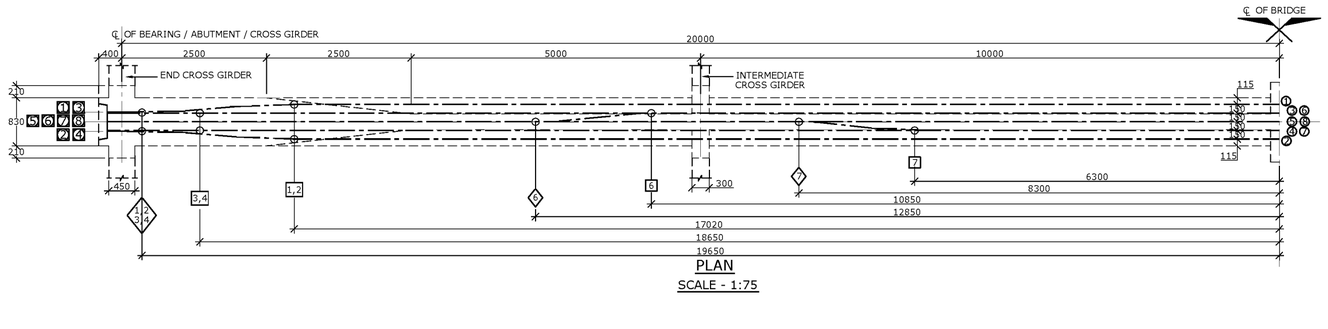
DATE : MARCH, 2010 — REV.

DRAWN	DESIGNED	CHECKED	APPROVED	REV.
P.D	S.D.	S.T.	DMN	0

Pg.No. 05



ELEVATION
SCALE - 1:75



PLAN
SCALE - 1:75

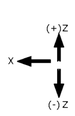
NOTE :

1. The length of cable indicate the measured along the profile between mid span & end of precast girder only. Additional length to be required for attaching jack is to be added in construction with manufacturer.
2. The extension indicates are for portion of cables between mid span & end face of precast girder only. Additional extension for portion laying between end face & griping point of jack is to be added (apprxiamte 7 mm/m)
3. The extension are based on the follwing data :
   i) Wobble coefficient k = 0.0046/m
   ii) Friction coefficient u = 0.25
   iii) Modulus of Elasticity of steel in strand Es = 1.95×10^5 Mpa
4. THE SEQUENCE OF STRESSING OF PRESTRESSING CABLES SHALL BE AS FOLLOWS:

   STAGE 1 NOS. 1,2,3,4,5 & 8 (14TH DAY AFTER CASTING OF GIRDER.)
   STAGE 2 NOS. 6 & 7 (56TH DAY AFTER CASTING OF GIRDER OR 35TH DAY AFTER CASTING OF DECK WHICHEVER IS LATER) SUPERIMPOSED DEAD LOAD LOADS WILL BE PLACED IMMEDIATELY AFTER STAGE 2 PRESTRESSING.

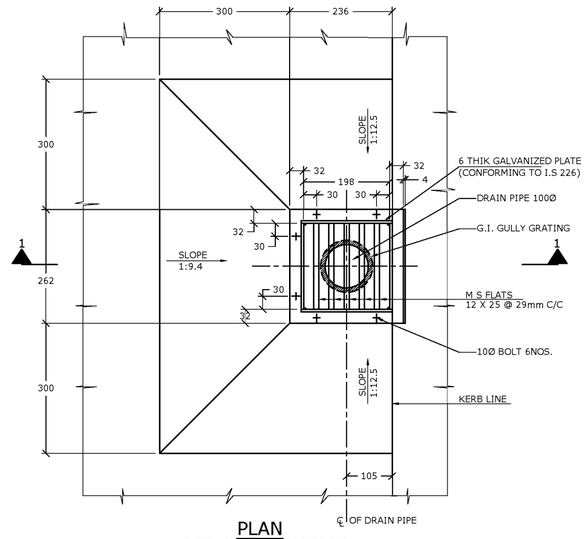
5. STAGE 2 CABLES SHALL BE STRESSED PROGRESSIVELY ONE AT A TIME IN THE THREE GIRDERS.
6. ALL CABLES ARE TO HAVE SMOOTH PROFILE (WITHOUT KINKS) PASSING THROUGH GIVEN ORDINATES AND FINALY SUPPORTED AT EVERY 1.0m INTERVAL AS SHOWN.
7. This drawing shall be read in conjunction with :
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-01 to 05 & 07
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01 to 06

CABLE NO.	LENGTH (mm)	EXTENSION AT EACH END(mm)	EMERGENCE ANGLE(degree)
1 & 2	20410	122.20	4.596
3 & 4	20421	125.50	6.684
5	20470	125.20	12.225
6	20519	119.30	15.31
7	20539	122.90	13.546
8	20517	127.70	10.817



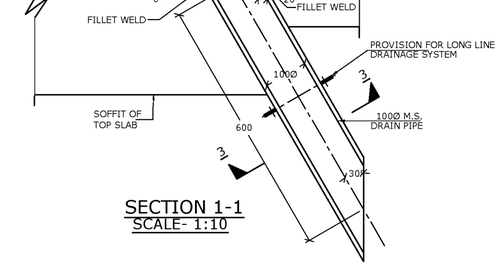
LEGEND :

- INDICATES START OF INCLINATION IN ELEVATION
- INDICATES END OF INCLINATION IN ELEVATION
- INDICATES START OF INCLINATION IN PLAN
- INDICATES END OF INCLINATION IN PLAN
- INDICATES END OF CABLE
- INDICATES CABLE NUMBER

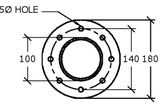


PLAN
DETAIL OF DRAINAGE SPOUT AND COLLECTION PIT
SCALE- 1:10

CABLE NO.	ORDINATES AT DISTANCE 'X' FROM CENTER																																			
	20250		20000		19000		18000		17000		16000		15000		14000		13000		12000		11000		10000		9000		8000		7000		6000		5000		4000		3000		2000/1000		0	
	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z
1	269	+165	249	+165	175	+182	130	+263	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300	115	+300
2	269	-165	249	-165	175	-182	130	-263	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300	115	-300
3	584	+165	555	+165	441	+154	344	+150	264	+150	201	+150	155	+150	126	+150	115	+150	115	+150	115	+150	115	+150	115	+150	115	+150	115	+150	115	+150	115	+150	115	+150	115	+150	115	+150
4	584	-165	555	-165	441	-154	344	-150	264	-150	201	-150	155	-150	126	-150	115	-150	115	-150	115	-150	115	-150	115	-150	115	-150	115	-150	115	-150	115	-150	115	-150	115	-150	115	-150
5	982	0	928	0	718	0	538	0	390	0	273	0	189	0	136	0	115	0	115	0	115	0	115	0	115	0	115	0	115	0	115	0	115	0	115	0	115	0	115	0
6	1385	0	1317	0	1051	0	824	0	637	0	490	0	383	0	317	0	290	0	290	+54	290	+148	290	+150	290	+150	290	+150	290	+150	290	+150	290	+150	290	+150	290	+150	290	+150
7	1802	0	1742	0	1506	0	1289	0	1094	0	920	0	767	0	635	0	525	0	435	0	367	0	321	0	295	0	290	-7	290	-113	290	-150	290	-150	290	-150	290	-150	290	-150
8	2218	0	2170	0	1981	0	1803	0	1636	0	1480	0	1335	0	1202	0	1079	0	968	0	867	0	778	0	700	0	634	0	578	0	533	0	500	0	478	0	466	0	465	0	465	0

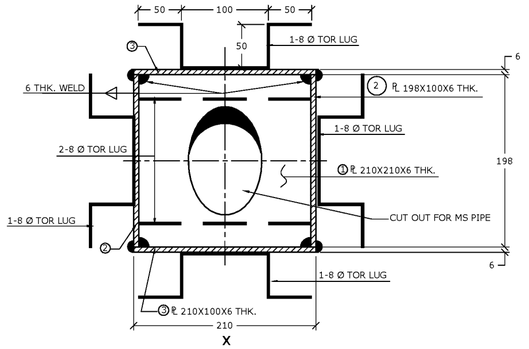


SECTION 1-1
SCALE- 1:10

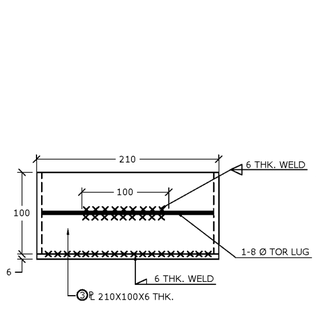


SECTION 3-3
SCALE- 1:10

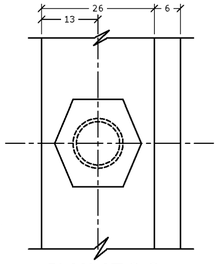
CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA



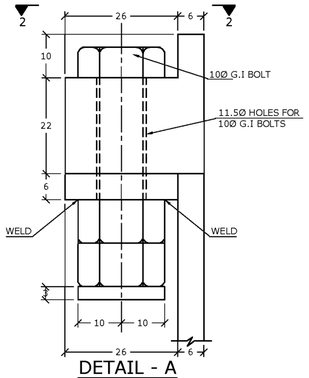
DETAIL OF DRAINAGE BOX



VIEW: X



PLAN AT 2-2
SCALE- 1:1



DETAIL - A
SCALE- 1:1

NOTES :

1. ONLY FIGURED DIMENSIONS ARE TO BE FOLLOWED.
2. ALL STEEL WORK SHALL BE AS PER IS - 2062.
3. DRAINAGE SPOUT & COLLECTION PIT ASSEMBLY SHALL BE FABRICATED FROM MILD STEEL & AFTER FABRICATION, THE COMPLETE ASSEMBLY EXCEPT GRATING SHALL BE GIVEN A HOT DIPPED GALVANISED COATING.
4. THE REINFORCEMENT OF TOP SLAB OF BOX SHALL BE SUITABLY MODIFIED TO ACCOMMODATE THE DRAINAGE SPOUT.
5. THE DRAINAGE SPOUT SHALL BE GALVANIZED AFTER WELDING THE PLATES & FLATS.
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-01 TO 06

NOTES :

1. ANCHORAGE RECESSES TO BE SEALED WITH PREPACKAGED NON-SHRINK MORTAR. END FACE OF GIRDER TO BE COATED WITH 2 COATS OF EPOXY.
2. ALL DIMENSIONS IN MM AND LEVELS ARE IN M. UNLESS OTHERWISE NOTED.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-01 to 04 & 05
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01 TO 05

DESIGN CONSULTANT:
Cetest
C.E. TESTING COMPANY PVT. LTD.
124A,N.P.D BOSE ROAD
KOLKATA – 700092
INDIA
An IS/ISO 9001:2000 CERTIFIED COMPANY

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

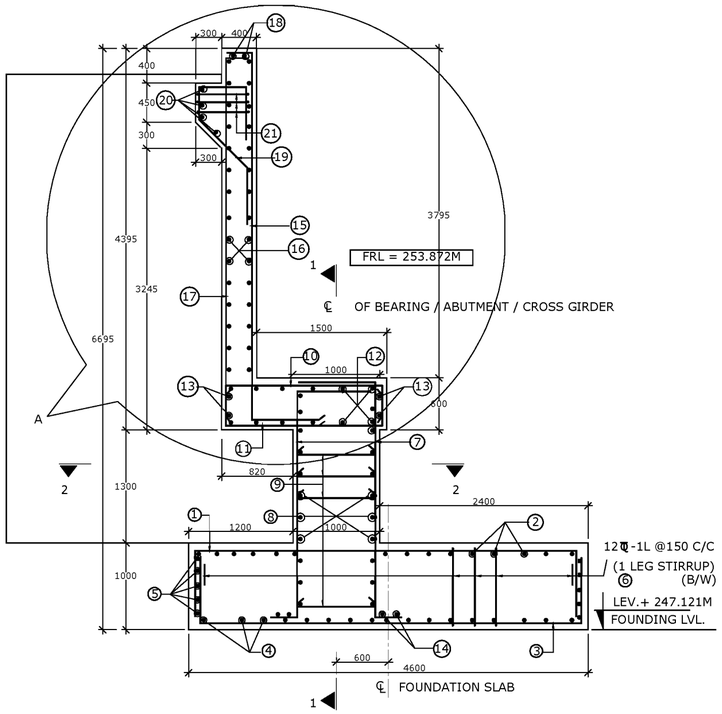
DETAIL OF PRESTRESSING CABLES ARRANGEMENT & DETAIL OF DRAINAGE SPOUT

ROAD NAME: PASIGHAT–PANGIN ROAD(PKG–IV)
CHAINAGE : 57.123KM

DRG. NO. CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-06

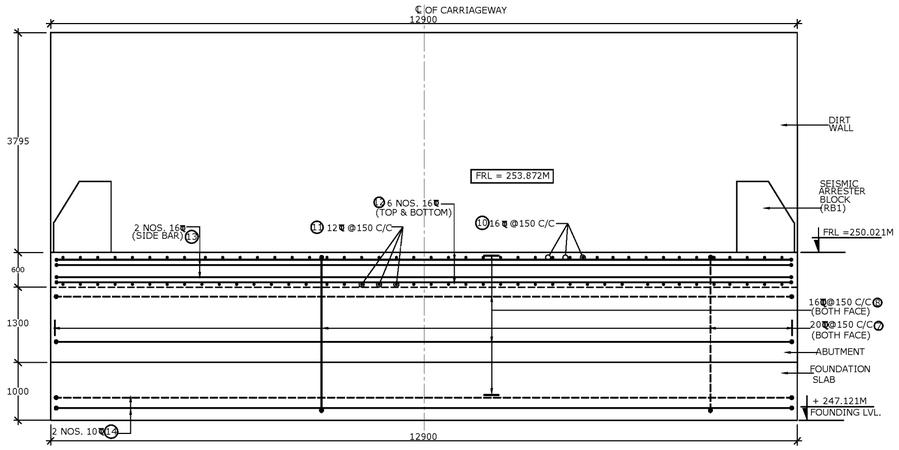
DATE : MARCH, 2010 REV. 0

DRAWN	DESIGNED	CHECKED	APPROVED	Pg.No.
P.D	S.D.	S.T.	DMN	05



REINFORCEMENT DETAIL OF ABUTMENT

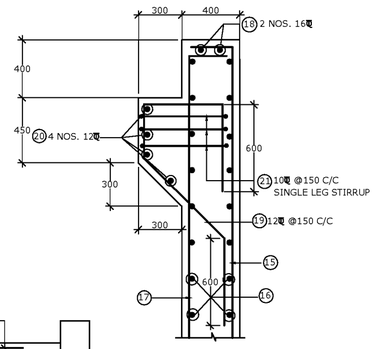
SCALE-1:50



SECTION 1-1

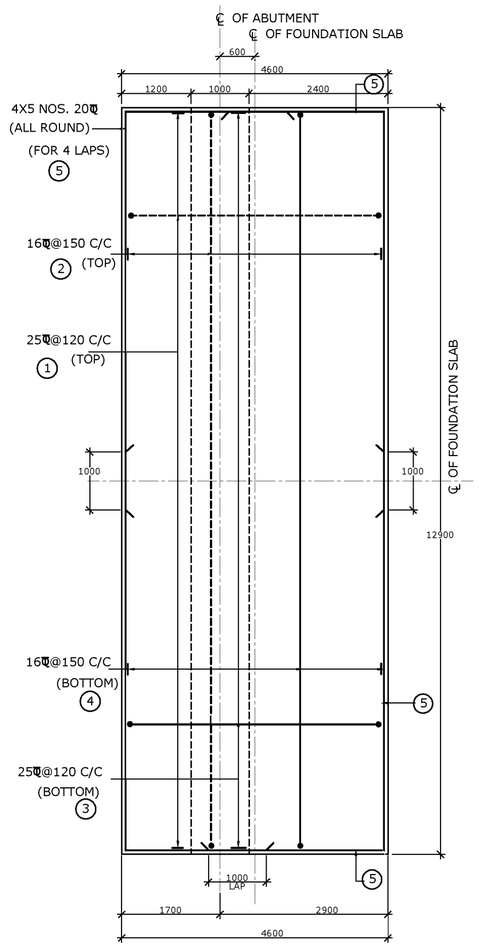
SCALE 1:75

(OTHER BARS ARE NOT SHOWN FOR CLARITY)



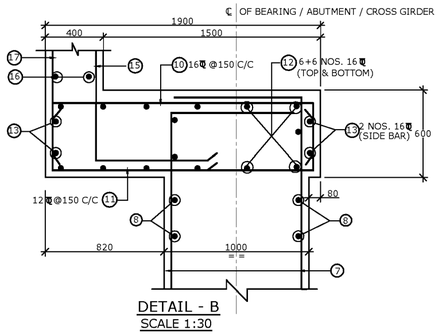
DETAIL - C

SCALE 1:30



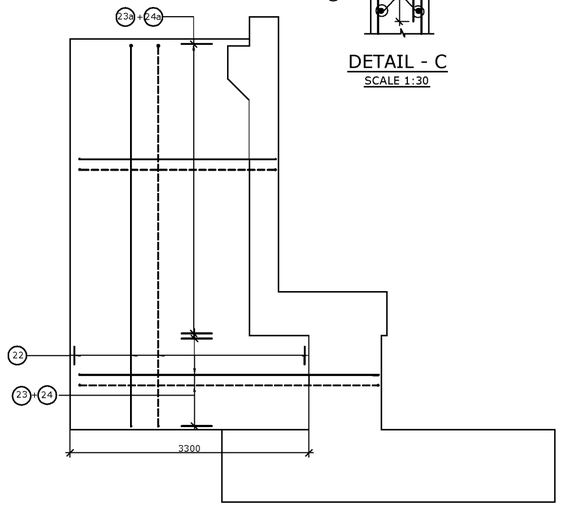
REINFORCEMENT DETAIL AT PLAN OF FOUNDATION SALB

SCALE-1:75



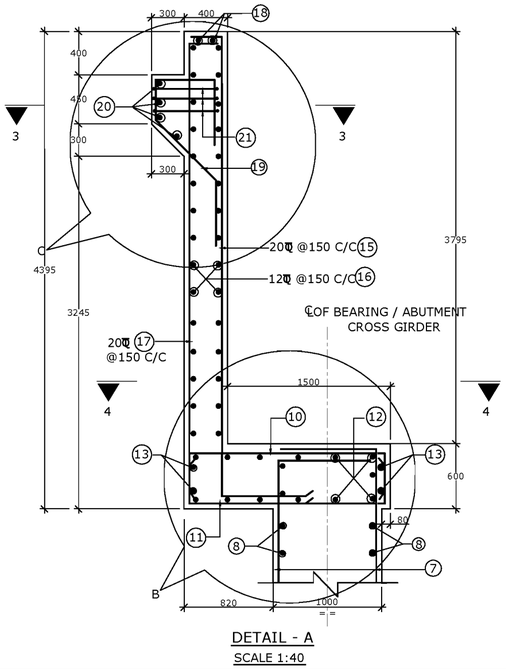
DETAIL - B

SCALE 1:30



REINFORCEMENT DETAIL OF RETURN WALL

SCALE-1:60



DETAIL - A

SCALE 1:40

LEGEND:-

REAR FACE / TOP BAR ----------

FRONT FACE / BOTTOM BAR ——————

NOTE:-

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METRE UNLESS OTHERWISE SPECIFIED.
2. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-01 TO 06 CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01 -SH-02TO 05

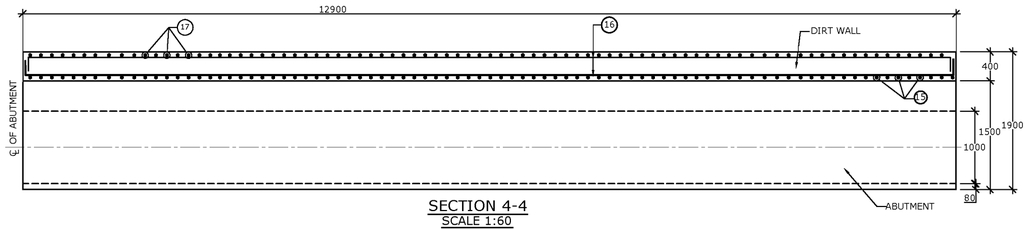
DESIGN CONSULTANT: Cetest — An IS/ISO 9001:2000 CERTIFIED COMPANY — C.E. TESTING COMPANY PVT. LTD. 124A,N.S.C. BOSE ROAD KOLKATA – 700092 INDIA	SCALE: AS DRAWN	CLIENT: PUBLIC WORKS DEPARTMENT GOVT. OF ARUNACHAL PRADESH PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)	REINFORCEMENT DETAIL OF ABUTMENT & FOUNDATION SLAB ROAD NAME : PASIGHAT–PANGIN ROAD CHAINAGE : 57.123KM.

DRG. NO. CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01/SH-01

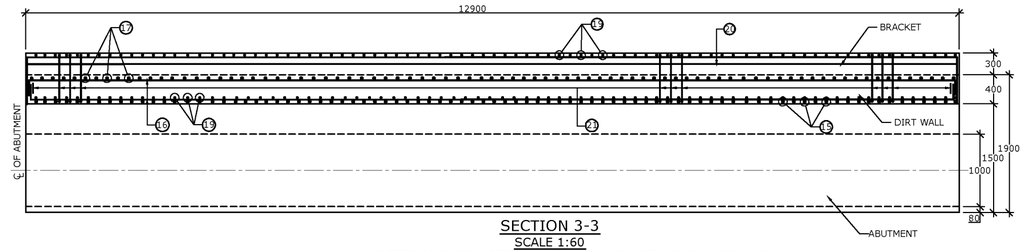
DATE : MARCH, 2010 — REV.

DRAWN	DESIGNED	CHECKED	APPROVED	REV.
P.D.	J.D.	S.T.	DMN	0

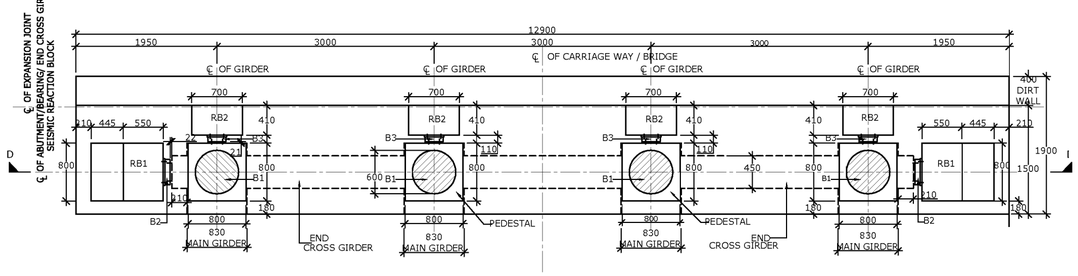
Pg.No. 08



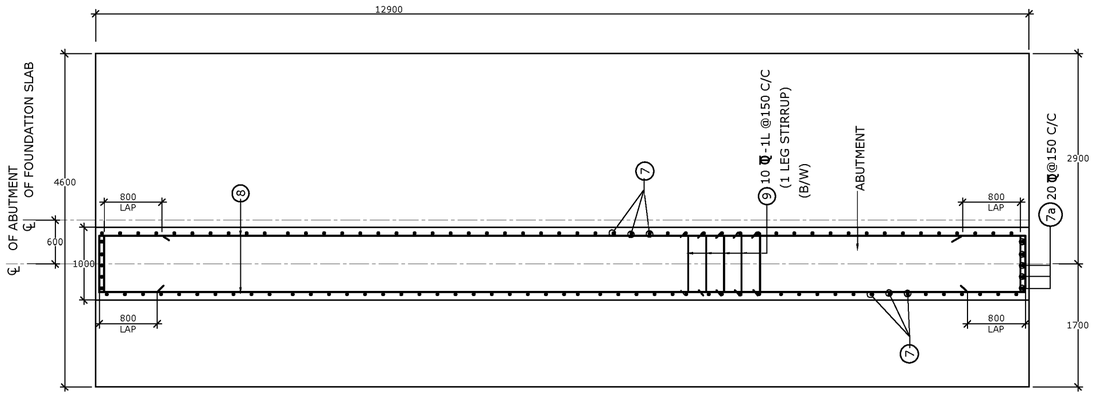
SECTION 4-4
SCALE 1:60
(REFER DRG. NO.- CET/BDG/2010/2364/CH-57.123KM./RCC-01/SH-1)



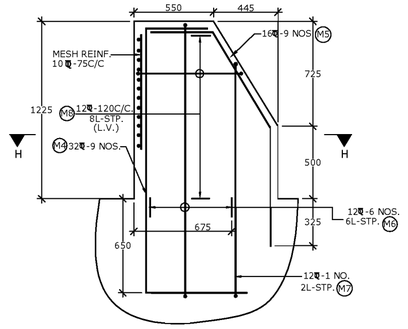
SECTION 3-3
SCALE 1:60
(REFER DRG. NO.- CET/BDG/2010/2364/CH-57.123KM./RCC-01/SH-1)



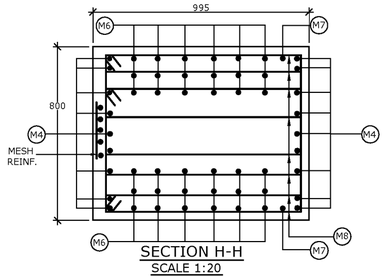
SECTIONAL PLAN OF ABUTMENT CAP SHOWING
ARRANGEMENT OF SEISMIC ARRESTER BLOCK
SCALE 1:60



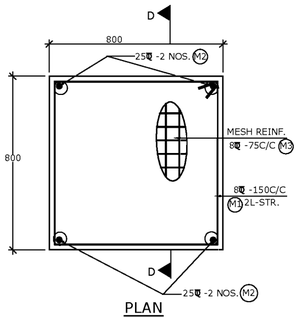
SECTION 2-2
SCALE-1:60
(OTHER BARS ARE NOT SHOWN FOR CLARITY)



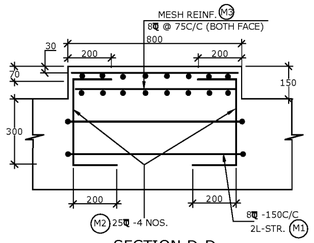
R.C.C DETAIL OF SEISMIC
REACTION BLOCK TYPE RB-1
SCALE 1:30



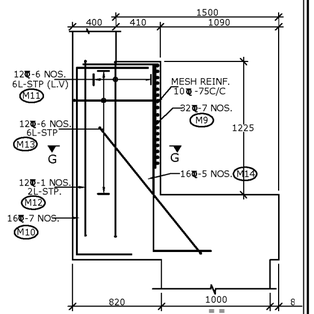
SECTION H-H
SCALE 1:20



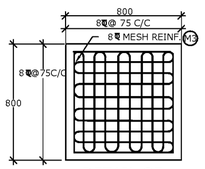
PLAN
SHOWING PEDESTAL REINF.
SCALE 1:20



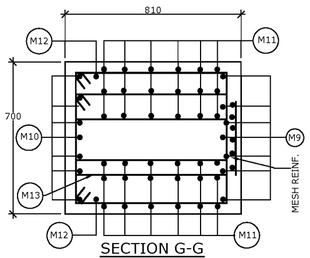
SECTION D-D
SCALE 1:20



R.C.C DETAIL OF SEISMIC
REACTION BLOCK TYPE RB-2
SCALE 1:40



DETAIL OF
MESH REINF.
SCALE 1:30



SECTION G-G
SCALE 1:20

LEGEND:-
REAR FACE / TOP BAR ----------
FRONT FACE / BOTTOM BAR ——————

NOTE:-
1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METRE UNLESS OTHERWISE SPECIFIED.
2. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-01 TO 06 CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01 -SH-01TO 05

DESIGN CONSULTANT:
Cetest
An IS/ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

REINFORCEMENT DETAIL OF ABUTMENT & FOUNDATION SLAB

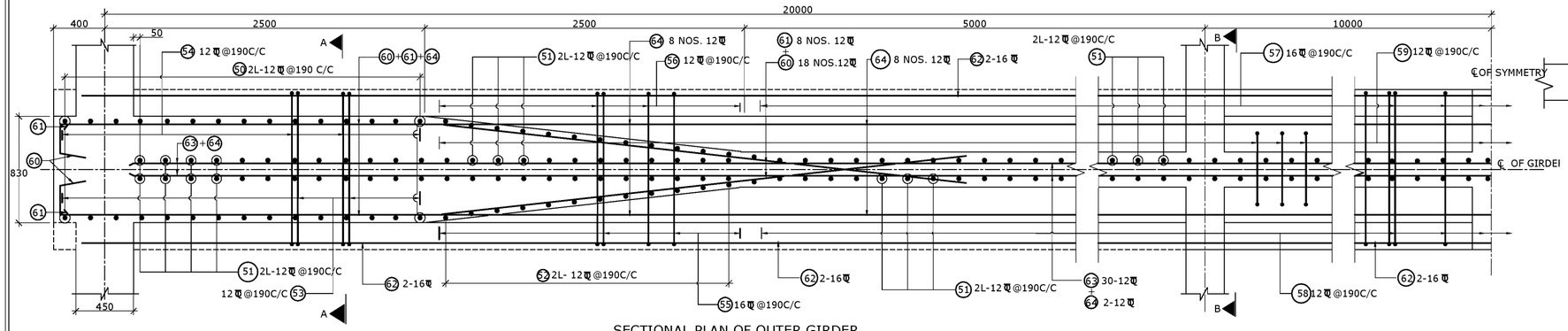
ROAD NAME : PASIGHAT–PANGIN ROAD

CHAINAGE : 57.123KM.

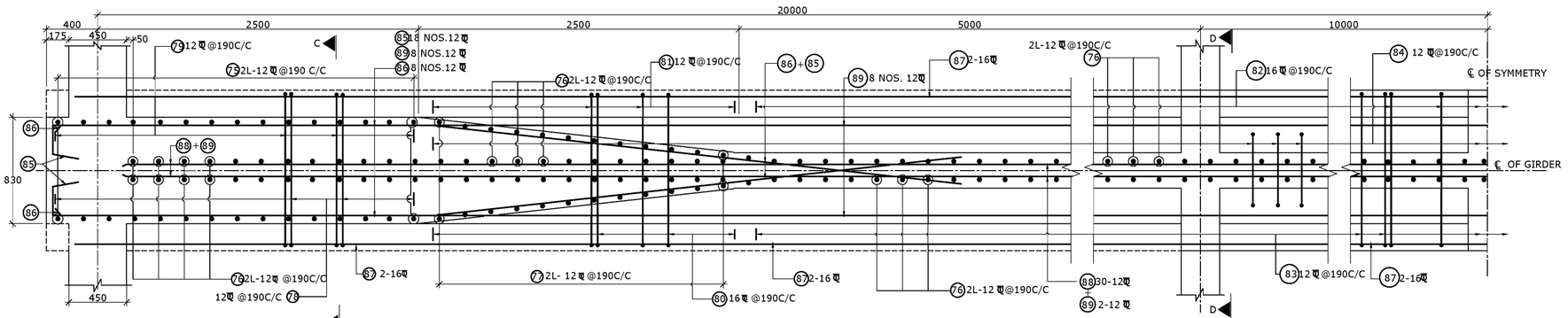
DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/RCC–01/SH–02

DATE : MARCH, 2010 — REV. 0

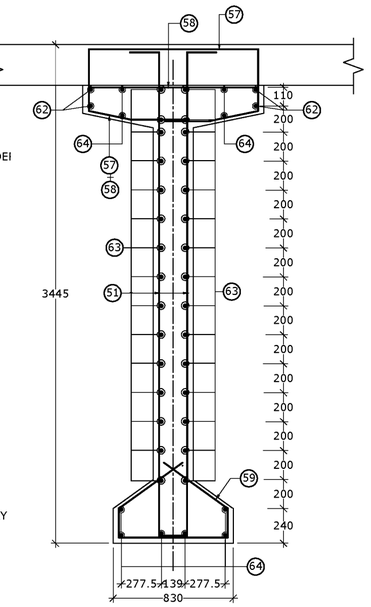
DRAWN	DESIGNED	CHECKED	APPROVED	Pg.No.
P.D.	J.D.	S.T.	DMN	09



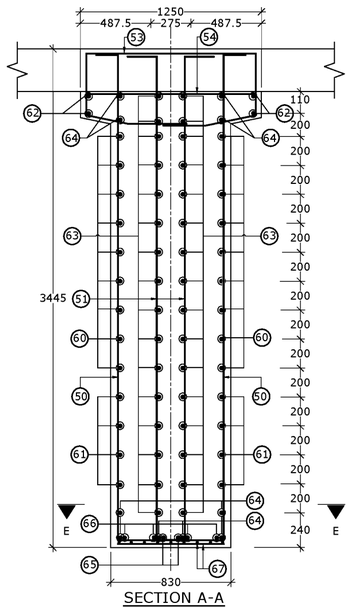
SECTIONAL PLAN OF OUTER GIRDER
SCALE - 1:30



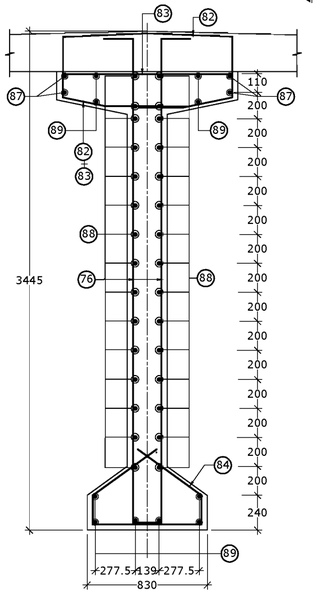
SECTIONAL PLAN OF CENTRAL GIRDER
SCALE - 1:30



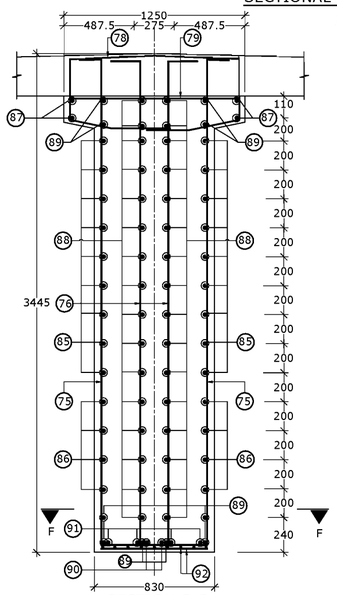
SECTION B-B
SCALE - 1:30



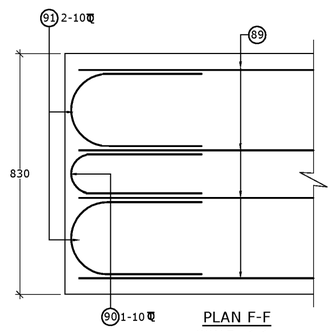
SECTION A-A
SCALE - 1:30



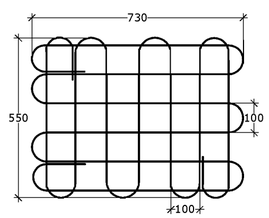
SECTION D-D
SCALE - 1:30



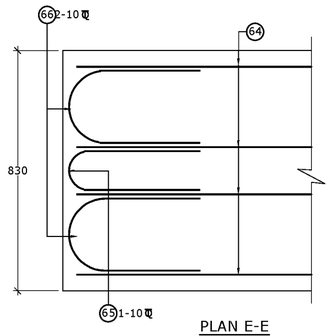
SECTION C-C
SCALE - 1:30



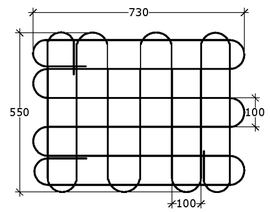
PLAN F-F
SCALE - 1:15



8Ø MESH REINFORCEMENT ABOVE BEARING
SCALE - 1:15



PLAN E-E
SCALE - 1:15



8Ø MESH REINFORCEMENT ABOVE BEARING
SCALE - 1:15

NOTE :

1. The precast girder is safe for a maximum reaction of 990 KN. from leg of moving launching truss.
2. For further details refer general notes.
3. This drawing shall be read in conjunction with
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA- 01 TO 06
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01, 02/SH-01, & 03 TO 05

DESIGN CONSULTANT:
Cetest
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

An IS/ISO 9001:2000 CERTIFIED COMPANY

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

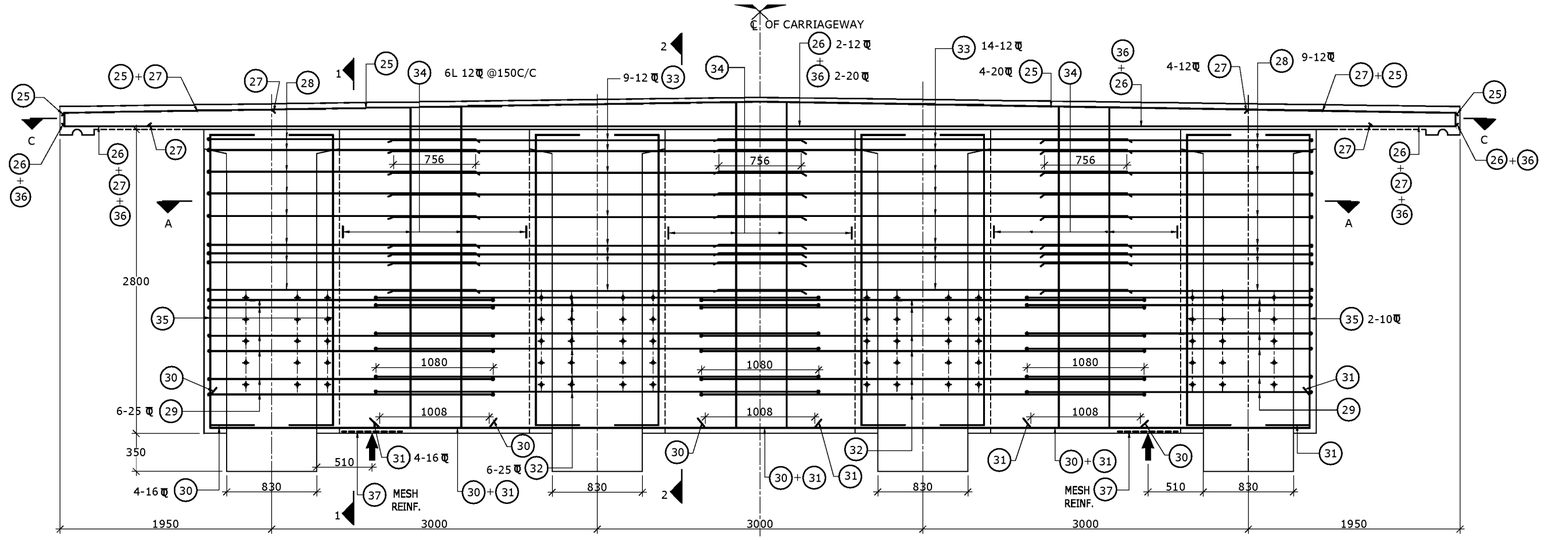
PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

REINFORCEMENT DETAIL OF LONGITUDINAL GIRDER

ROAD NAME: PASIGHAT–PANGIN ROAD
CHAINAGE : 57.123 KM.

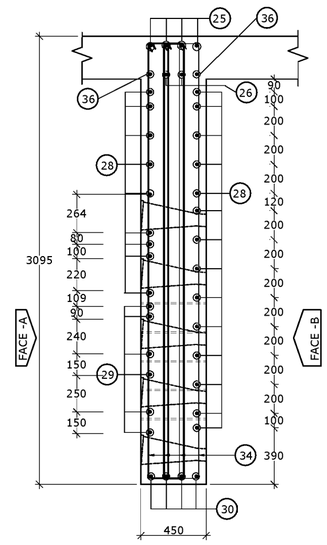
DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/RCC–02

DATE : MARCH, 2010				REV.
DRAWN	DESIGNED	CHECKED	APPROVED	0
P.D	J.K.H	S.T.	DMN	Pg.No. 10



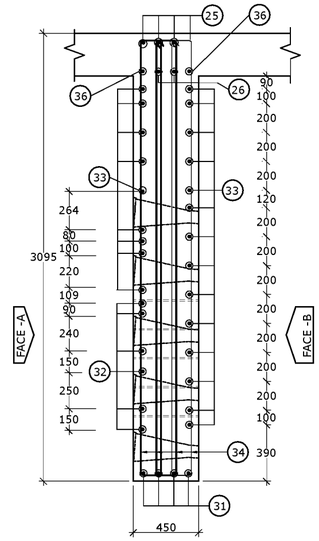
DETAIL OF END CROSS GIRDER
(FOR FACE -A)

SCALE - 1:40



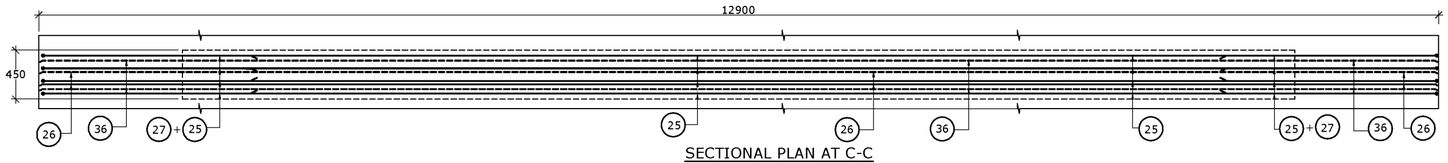
SECTION 1-1

SCALE - 1:30



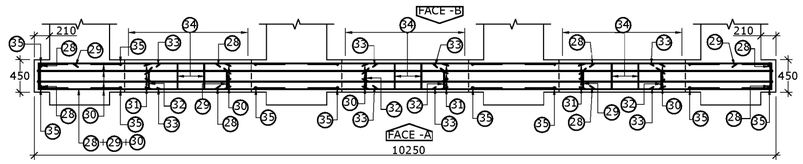
SECTION 2-2

SCALE - 1:30



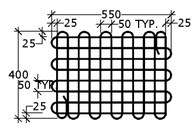
SECTIONAL PLAN AT C-C

SCALE - 1:40



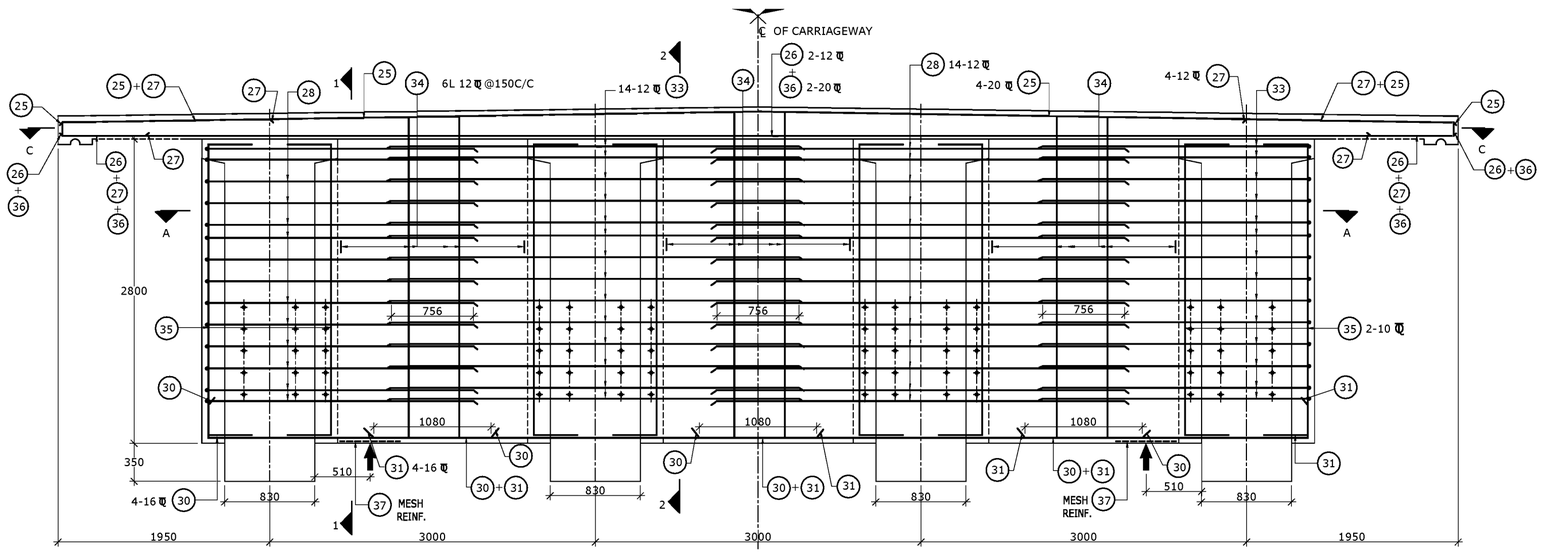
SECTIONAL PLAN AT A-A

SCALE - 1:60



37 MESH REINFORCEMENT

SCALE - 1:20



DETAIL OF END CROSS GIRDER
(FOR FACE -B)

SCALE - 1:40

NOTE :

1. THE LOCATION OF JACKS FOR LIFTING UP THE SUPERSTRUCTURE TO REPLACE BEARING ETC. IS SHOWN THUS ↟. THESE SHOULD BE DISTINCTLY ETCHED ON THE END CROSS GIRDER & PIER / ABUTMENT CAPS.
2. MAXIMUM REACTION TO ANY JACK UNDER LIFTING CONDITION IS 2205 KN.
3. DURING JACKING OPERATION BOTH JACKS PLACED UNDER ONE END CROSS GIRDER SHALL BE OPERATED SIMULTANEOUSLY USING STRESS CONTROL SYSTEM SO AS TO ENSURE THAT THE REACTION ON BOTH THE JACKS IS EQUAL AT ALL TIMES.
4. HOLES IN END CROSS GIRDER & INTERMEDIATE CROSS GIRDER AT PLACED SHOWN IN THIS DRAWING SHALL BE LEFT DURING CONSTRUCTION FOR INSERTING STRANDS FOR FUTURE PRESTRESSING IF ANY.
5. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH

   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA- 01 TO 06
   CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01, 02, 04 & 05

DESIGN CONSULTANT:

Cetest

An IS/ISO 9001:2000 CERTIFIED COMPANY

C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

REINFORCEMENT DETAIL OF END CROSS GIRDER

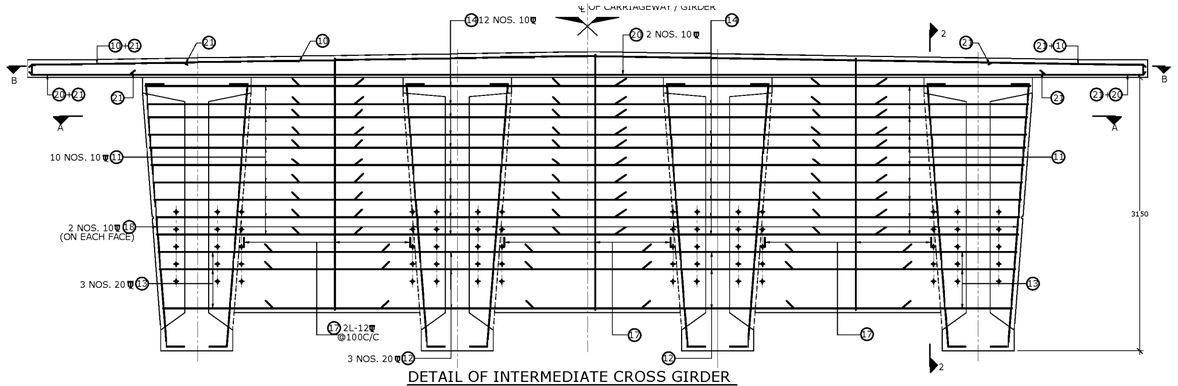
ROAD NAME: PASIGHAT–PANGIN ROAD(PKG–IV)

CHAINAGE : 57.123 KM.

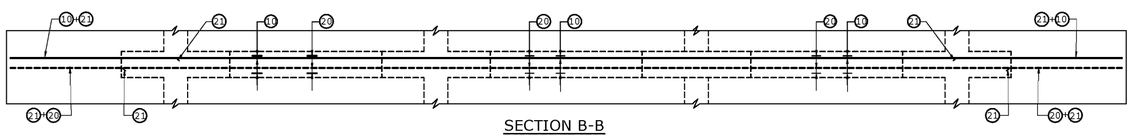
DRG. NO. CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-03

DATE : MARCH, 2010 — REV. 0

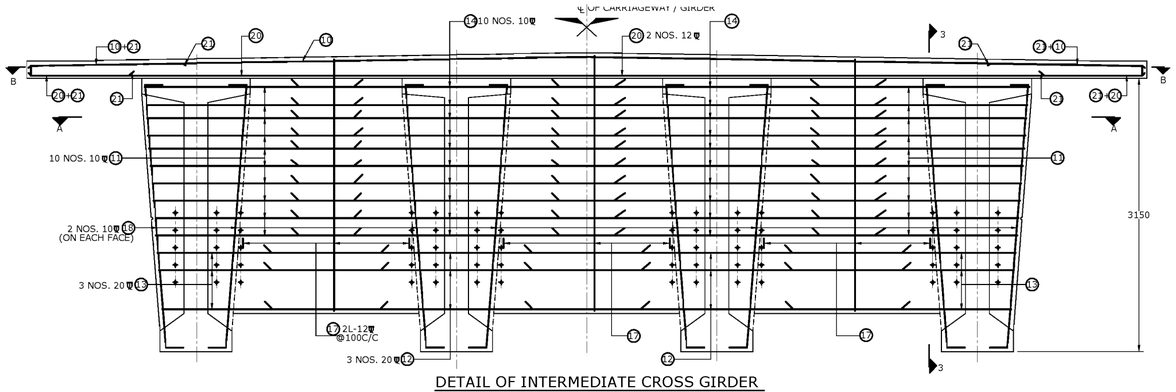
DRAWN	DESIGNED	CHECKED	APPROVED	Pg.No.
P.D	J.K.H	S.T.	DMN	11



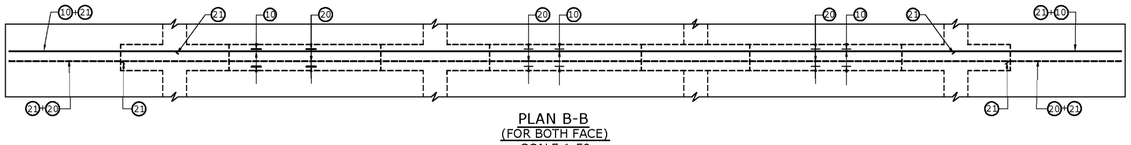
DETAIL OF INTERMEDIATE CROSS GIRDER
(FOR FACE -B)
SCALE 1:50



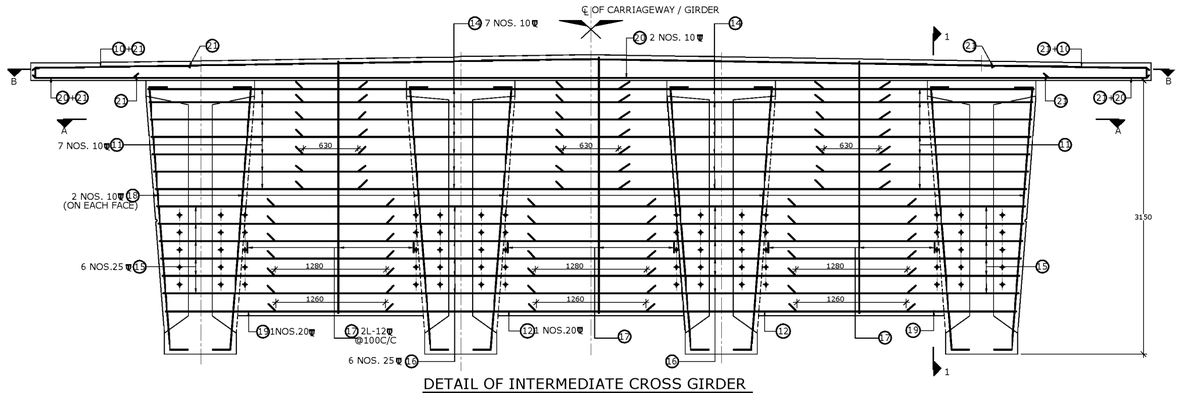
SECTION B-B
(FOR BOTH FACE)
SCALE 1:50



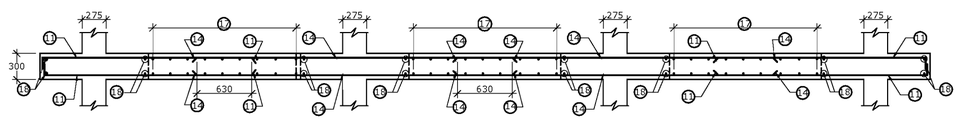
DETAIL OF INTERMEDIATE CROSS GIRDER
(FOR FACE BOTH FACE)
SCALE 1:50



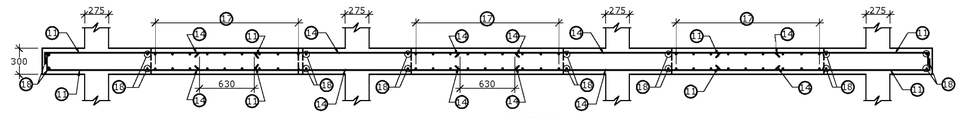
PLAN B-B
(FOR BOTH FACE)
SCALE 1:50



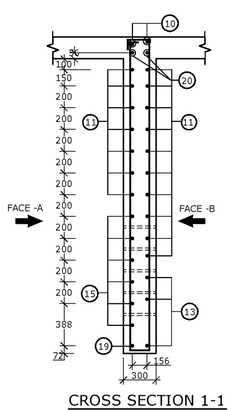
DETAIL OF INTERMEDIATE CROSS GIRDER
(FOR FACE -A)
SCALE 1:50



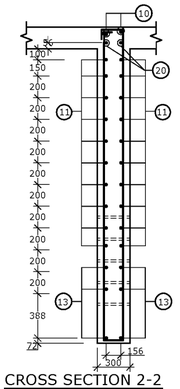
SECTION A-A
(FOR BOTH FACE)
SCALE 1:50



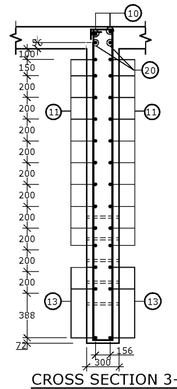
SECTION A-A
(FOR BOTH FACE)
SCALE 1:50



CROSS SECTION 1-1
SCALE 1:40



CROSS SECTION 2-2
SCALE 1:40



CROSS SECTION 3-3
SCALE 1:40

LEGENED:-
TOP BAR
BOTTOM BAR

NOTE :

1. FOR FURTHER DETAILS REFER GENERAL NOTES
2. This drawing shall be read in conjunction with CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/ GA- 01 TO 06
CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01,TO 03, 04/SH-02,03&05

DESIGN CONSULTANT:
Cetest
An IS/ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

REINFORCEMENT DETAIL OF INTERMEDIATE CROSS GIRDER AT L/4

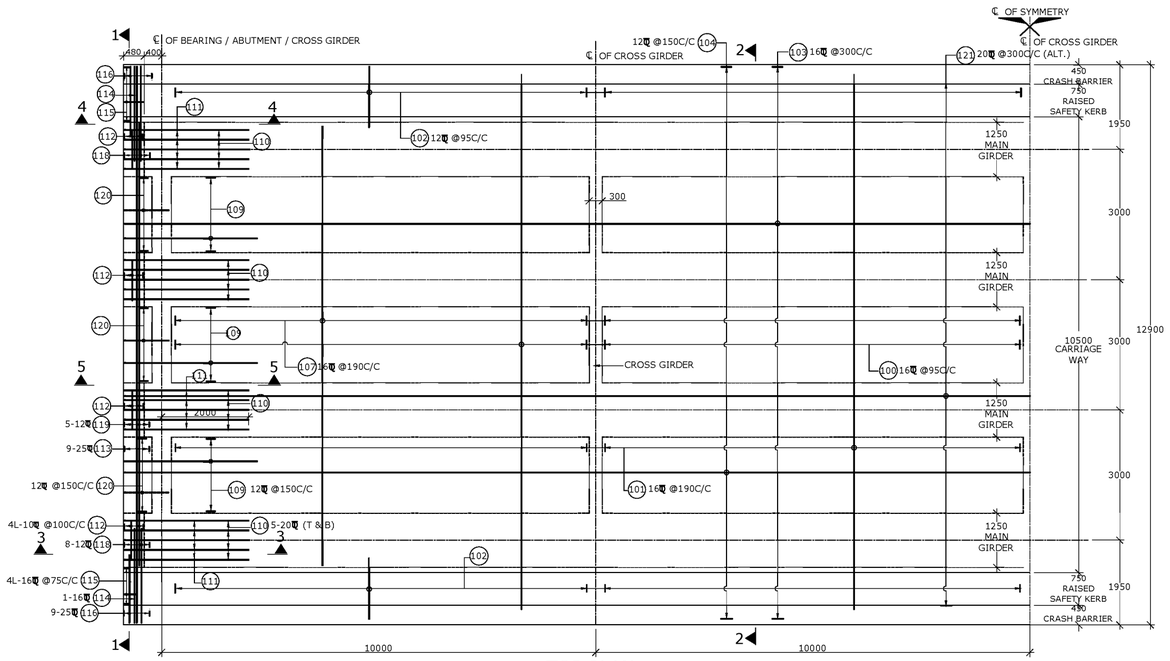
ROAD NAME: PASIGHAT–PANGIN ROAD(PKG–IV)
CHAINAGE : 57.123 KM.

DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/RCC–04

DATE : MARCH, 2010 — REV.

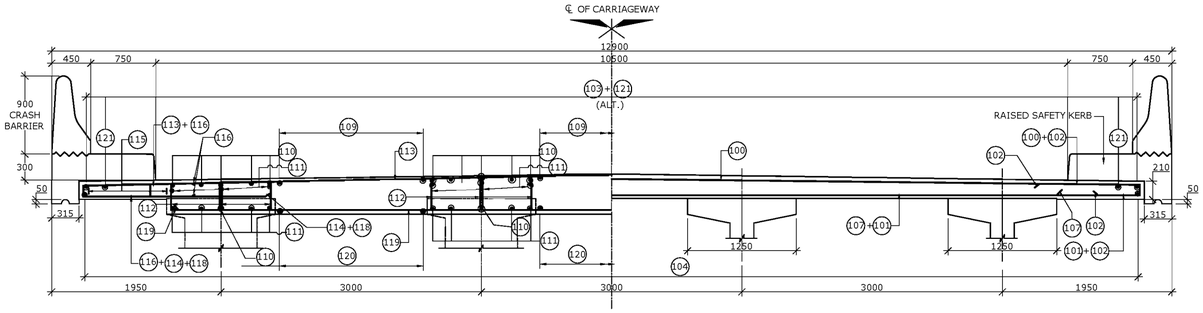
DRAWN	DESIGNED	CHECKED	APPROVED	REV.
P.D	J.D	S.T.	DMN	0

Pg.No. 12



TOP PLAN
(SCALE 1:100)

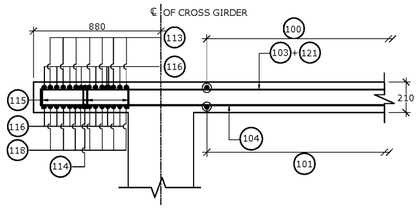
105 , 106 , 108 , 117 BARS ARE NOT SHOWN



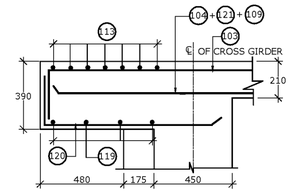
SECTION 1-1

CROSS SECTION DETAILS OF DECK SLAB
(SCALE - 1:50)

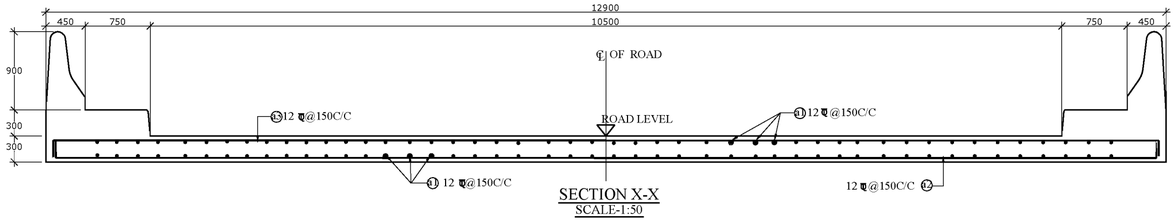
SECTION 2-2



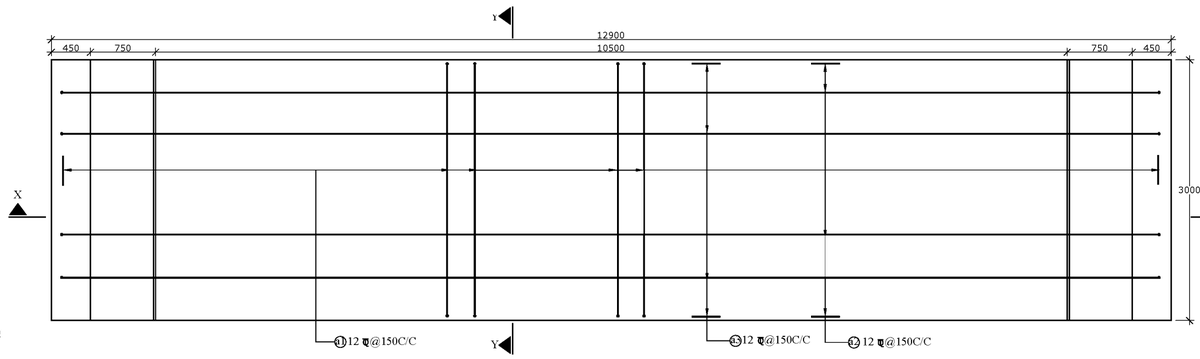
SECTION 4-4
(SCALE - 1:30)



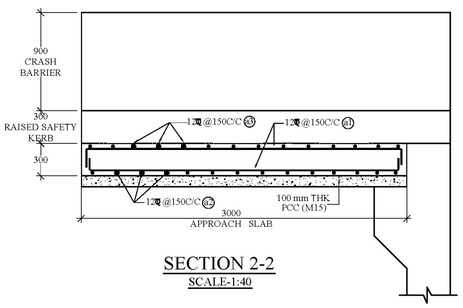
SECTION 5-5
(SCALE 1:25)



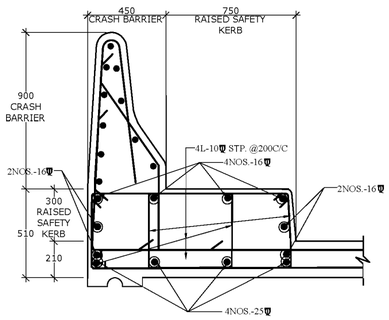
SECTION X-X
SCALE-1:50



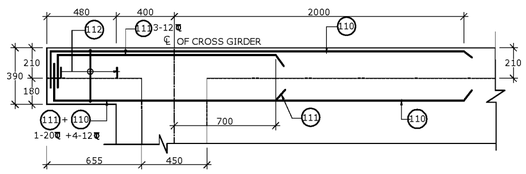
PLAN OF APPROACH SLAB
SCALE 1:50



SECTION 2-2
SCALE-1:40



REINFORCEMENT DETAIL OF CRASH BARRIER WITH RAISED SAFETY KERB
SCALE-1:25



SECTION 3-3
(SCALE 1:30)
(REINFORCEMENT OF CANTILEVER BEAM ONLY)

LEGENED:-
TOP BAR
BOTTOM BAR

NOTE :
1. THE REINFORCE OF THE RAILING POSTS MAY BE PROPERLY ANCHORED IN KERB
2. FOR FURTHER DETAILS REFER GENERAL NOTES
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH
CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/RCC-01 TO 05
CET/2010/2364/PKG-IV/BDG/MN/CH-57.123KM/GA-01 TO 06

DESIGN CONSULTANT:
Cetest
An IS/ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57.00KM-71.5967KM)

REINFORCEMENT DETAIL OF DECK SLAB & APPROACH SLAB

ROAD NAME: PASIGHAT–PANGIN ROAD(PKG–IV)
CHAINAGE : 57.123 KM.

DRG. NO. CET/2010/2364/PKG–IV/BDG/MN/CH–57.123KM/RCC–05

DATE : MARCH, 2010 REV.

DRAWN	DESIGNED	CHECKED	APPROVED	REV.
P.D	J.H	S.T.	DMN	0

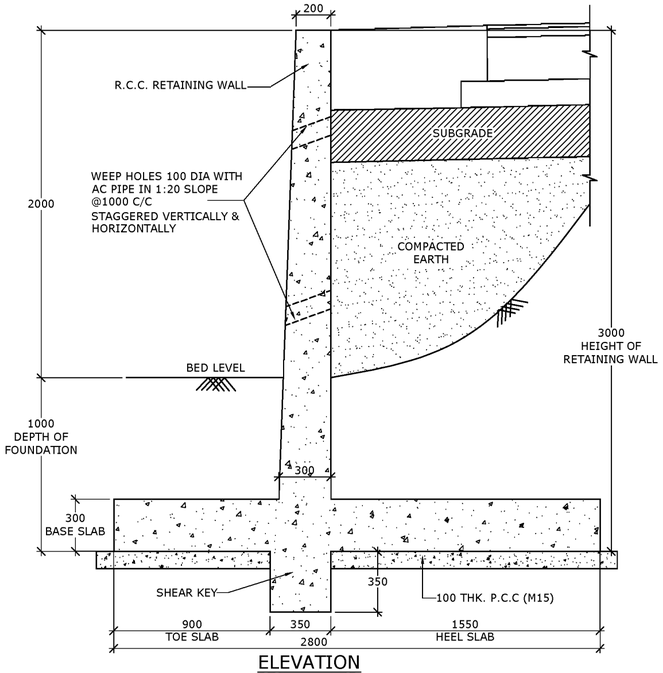
Pg.No. 13

Details of Retaining Wall
(2.0m , 3.0m , 4.0m & 5.0m)

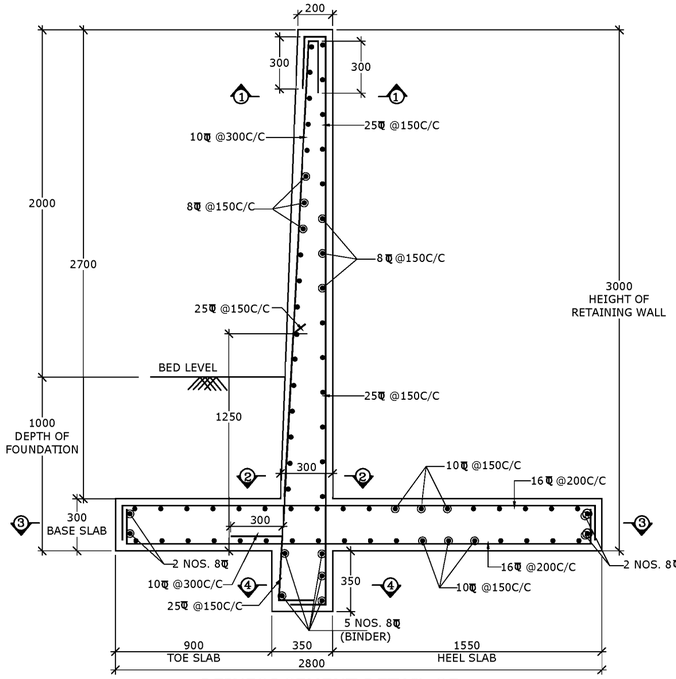
CONTENTS

Road Name: Pasighat - Pangin road
(Package-IV)
(RETAINING WALL)

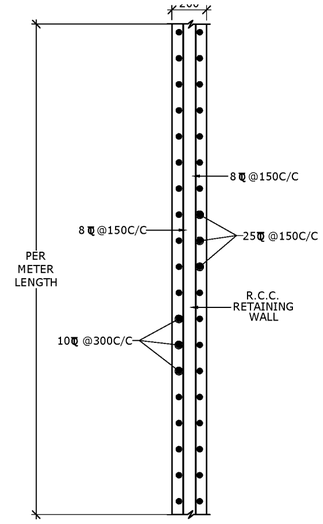
Sl. No.	Description	Drawing No.	No. of Sheets
1.	Details of Retaining Wall (Height - 2.0 M)	CET/2010/2364/PKG-IV/RW/2.0 M	01
2.	Details of Retaining Wall (Height - 3.0 M)	CET/2010/2364/PKG-IV/RW/3.0M	01
3.	Details of Retaining Wall (Height - 4.0 M)	CET/2010/2364/PKG-IV/RW/4.0 M	01
4.	Details of Retaining Wall (Height - 5.0 M)	CET/2010/2364/PKG-IV/RW/5.0 M	01



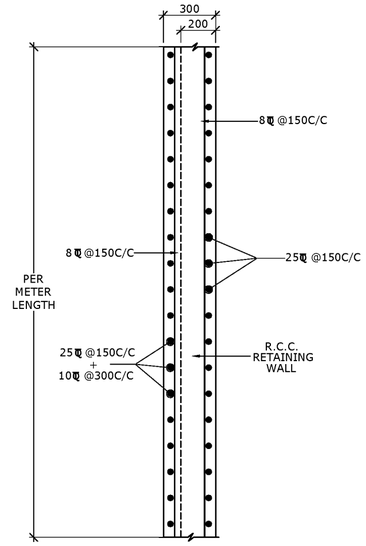
ELEVATION
SCALE:- 1:25



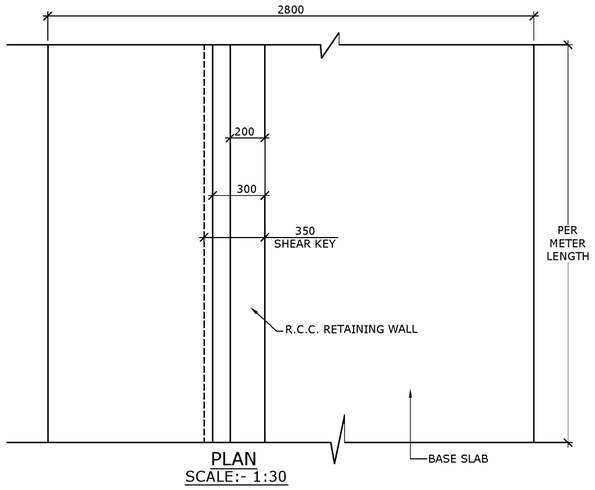
REINFORCEMENT DETAIL OF
SECTIONAL ELEVATION
SCALE:- 1:30



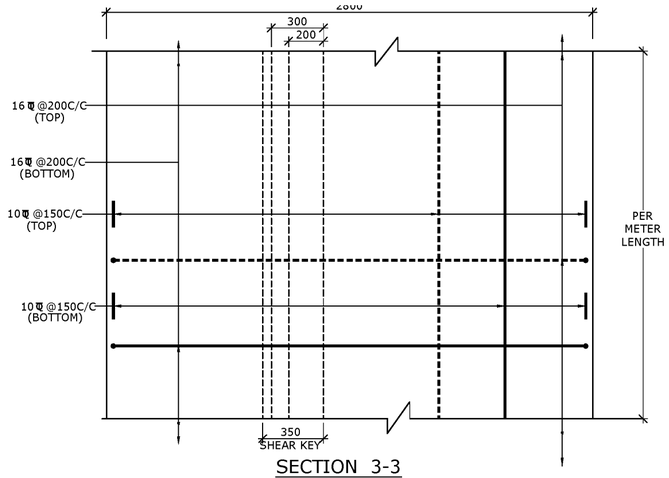
SECTION 1-1
SCALE:- 1:25



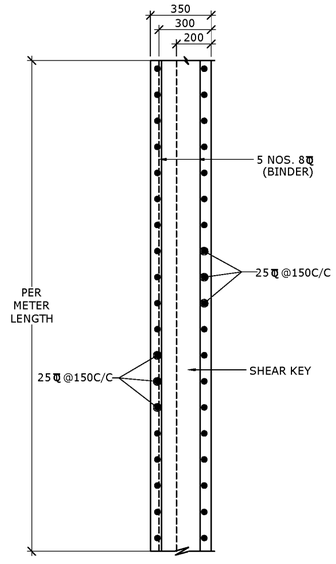
SECTION 2-2
SCALE:- 1:25



PLAN
SCALE:- 1:30



SECTION 3-3
(OTHER BAR DETAILS ARE NOT SHOWN FOR CLARITY)
SCALE:- 1:25



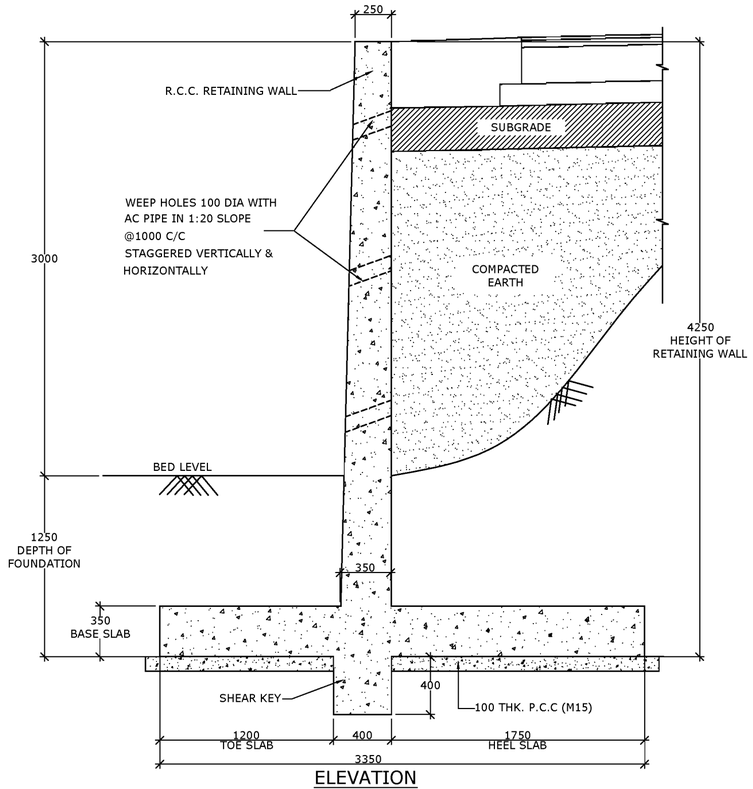
SECTION 4-4
SCALE:- 1:25

LEGENED:-
TOP BAR (T)
BOTTOM BAR (B)

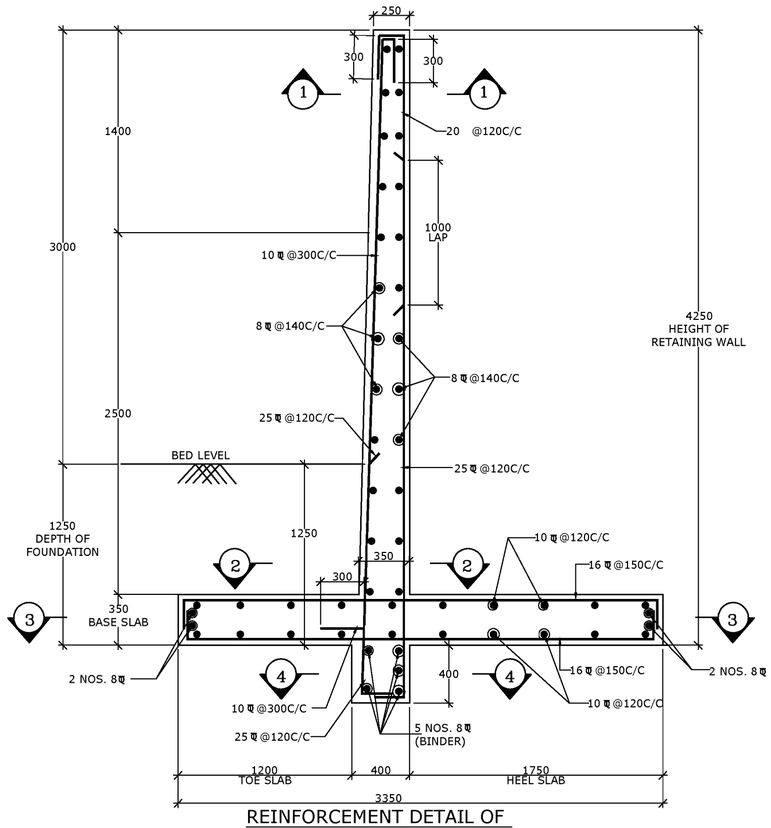
NOTE:-
1. ALL DIMENSIONS ARE IN MM.
2. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.

DESIGN CONSULTANT: Cetest — C.E. TESTING COMPANY PVT. LTD. 124A,N.S.C. BOSE ROAD KOLKATA – 700092 INDIA (An IS/ISO 9001:2000 CERTIFIED COMPANY)	SCALE: AS DRAWN	CLIENT: PUBLIC WORKS DEPARTMENT GOVT. OF ARUNACHAL PRADESH PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57KM-71.5967KM)	GENERAL ARRANGEMENT & REINFORCEMENT DETAILS OF RETAINING WALL(HEIGHT 2.0M.) ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)	DRG. NO. CET/2010/2364/PKG–IV/RW/2.0M DATE : MARCH, 2010

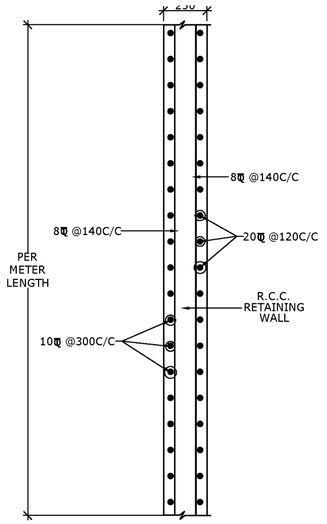
DRAWN	CHECKED	APPROVED	REV.
D.N	S.T	D.M.N	0



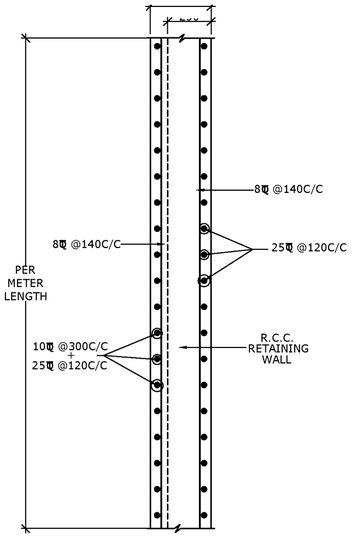
ELEVATION
SCALE:- 1:30



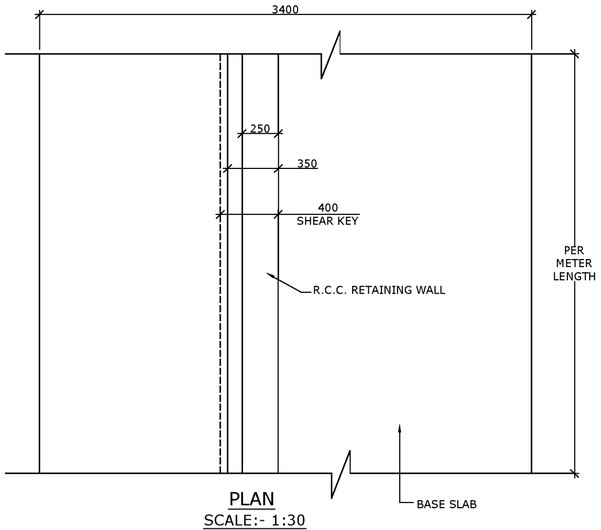
REINFORCEMENT DETAIL OF
SECTIONAL ELEVATION
SCALE:- 1:30



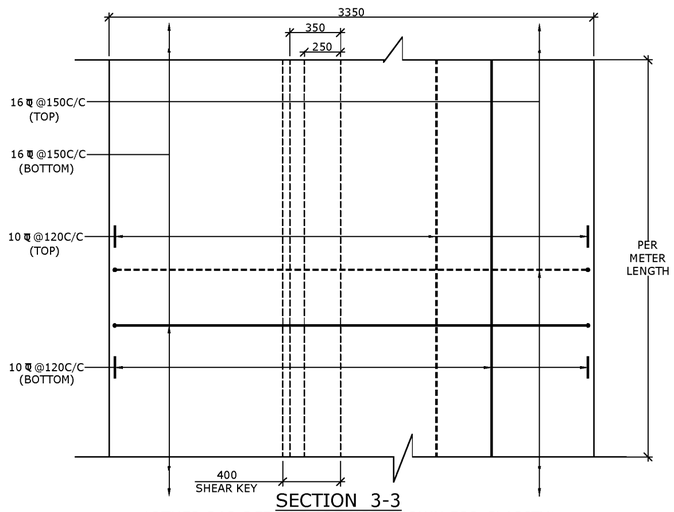
SECTION 1-1
SCALE:- 1:25



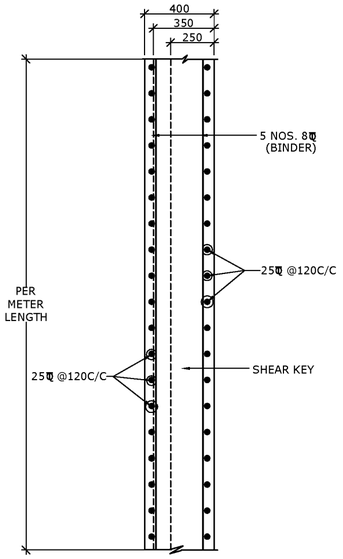
SECTION 2-2
SCALE:- 1:25



PLAN
SCALE:- 1:30



SECTION 3-3
(OTHER BAR DETAILS ARE NOT SHOWN FOR CLARITY)
SCALE:- 1:30



SECTION 4-4
SCALE:- 1:25

LEGENED:-
TOP BAR (T) ----------
BOTTOM BAR (B) ——————

NOTE:-
1. ALL DIMENSIONS ARE IN MM.
2. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.

DESIGN CONSULTANT:
Cetest
An IS/ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57KM-71.5967KM)

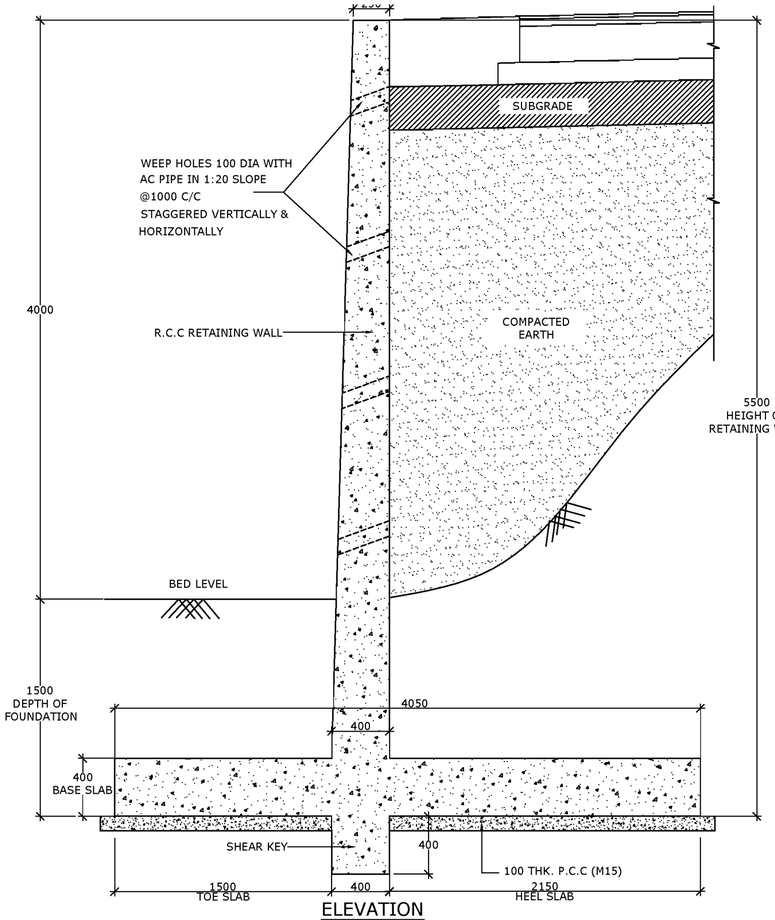
GENERAL ARRANGEMENT & REINFORCEMENT DETAILS OF RETAINING WALL(HEIGHT 3.0M.)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

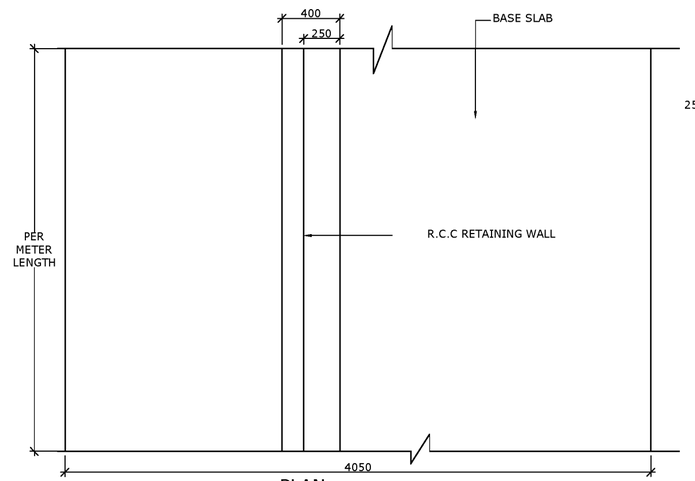
DRG. NO. CET/2010/2364/PKG–IV/RW/3.0M

DATE : MARCH, 2010

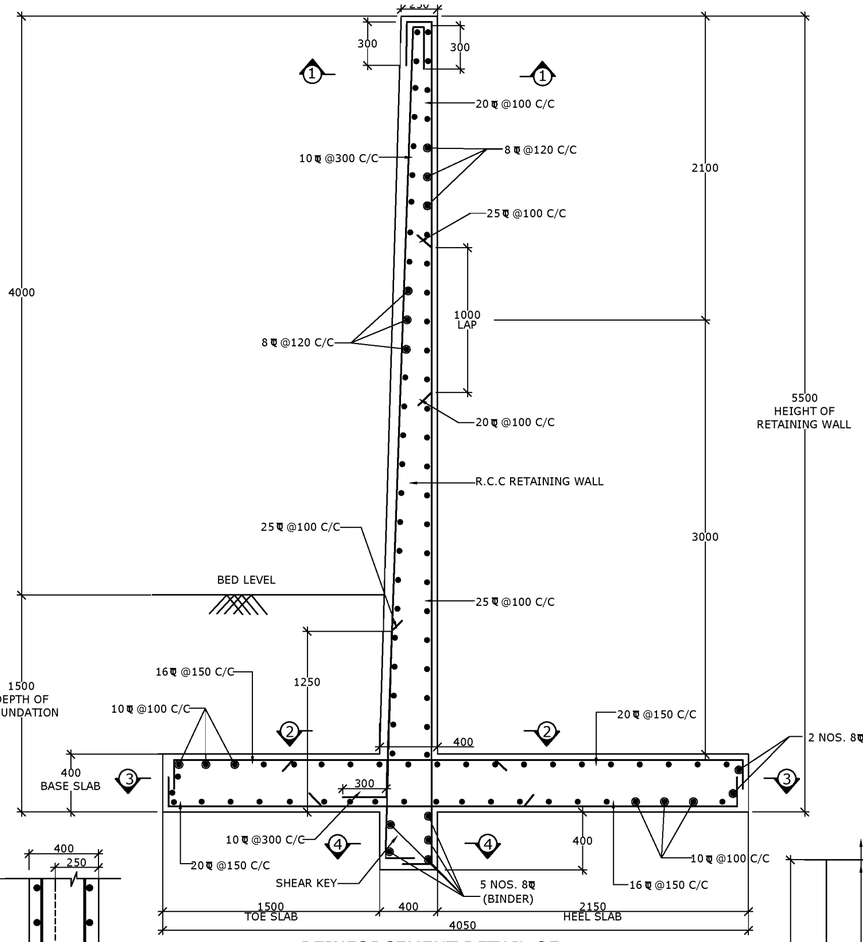
DRAWN	CHECKED	APPROVED	REV.
R.M	S.T	D.M.N	0



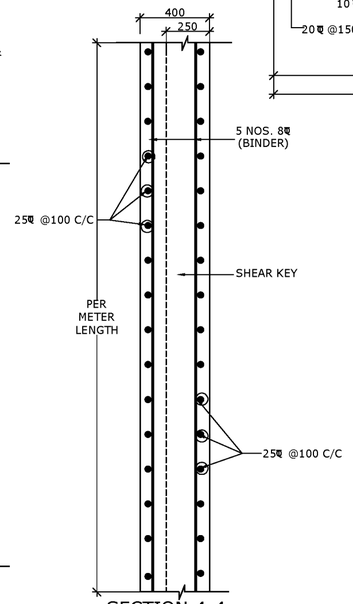
ELEVATION
(SCALE-1:30)



PLAN
(SCALE-1:30)



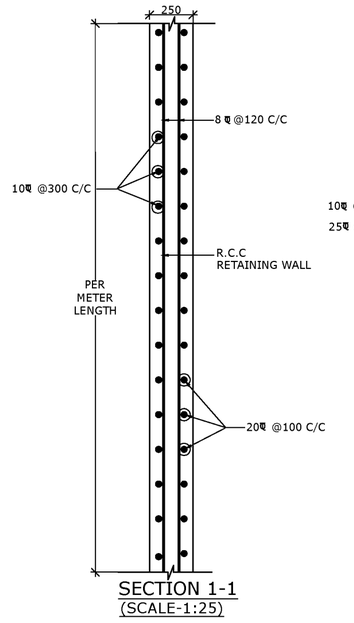
REINFORCEMENT DETAIL OF SECTIONAL ELEVATION
(SCALE-1:30)



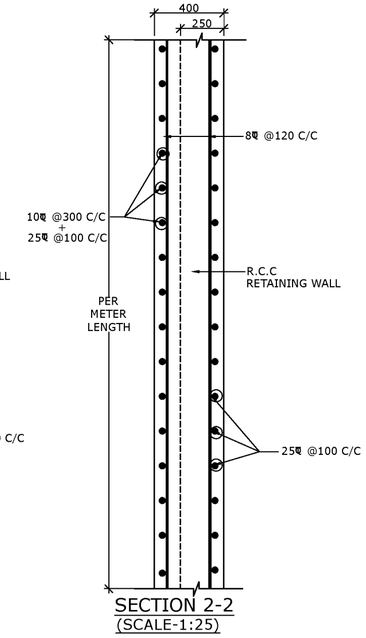
SECTION 4-4
(SCALE-1:25)

LEGEND:-
TOP BAR (T) ----------
BOTTOM BAR (B) ——————

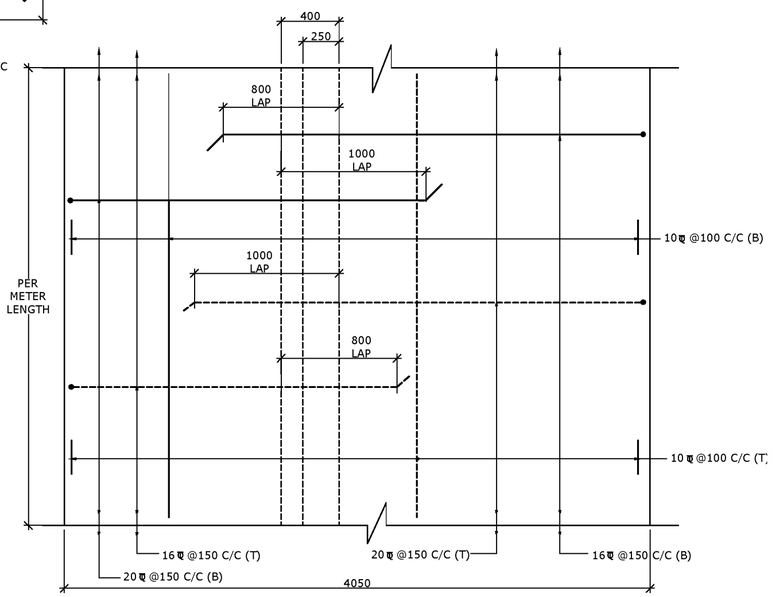
NOTE:-
1. ALL DIMENSIONS ARE IN MM.
2. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.



SECTION 1-1
(SCALE-1:25)



SECTION 2-2
(SCALE-1:25)



SECTION 3-3
(OTHER BAR DETAILS ARE NOT SHOWN FOR CLARITY)
(SCALE-1:30)

DESIGN CONSULTANT:
Cetest
An IS/ISO 9001:2000 CERTIFIED COMPANY
C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57KM-71.5967KM)

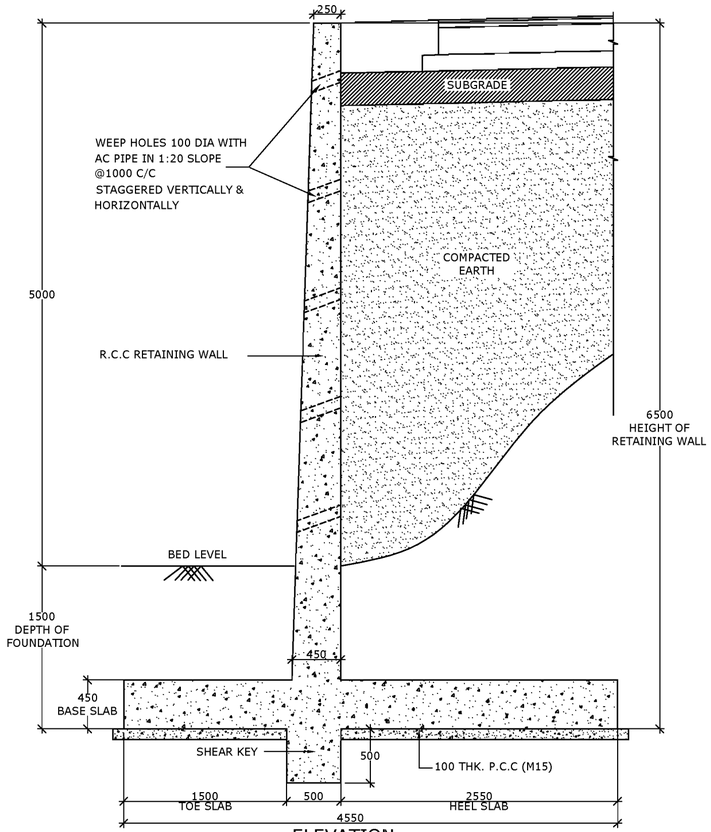
GENERAL ARRANGEMENT & REINFORCEMENT DETAILS OF RETAINING WALL(HEIGHT 4.0M.)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

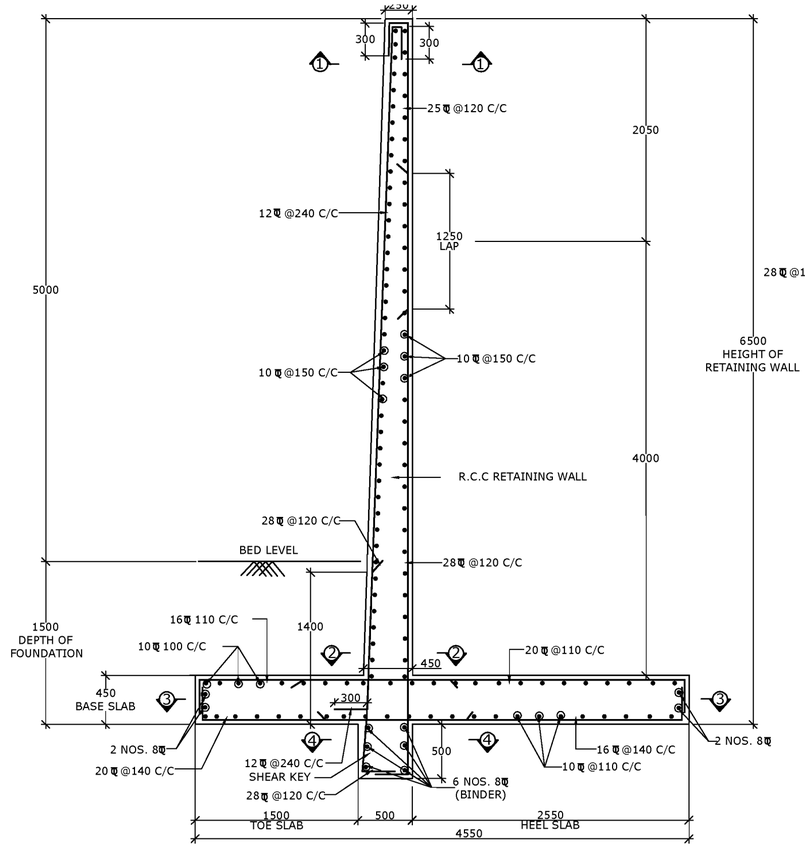
DRG. NO. CET/2010/2364/PKG–IV/RW/4.0M

DATE : MARCH, 2010

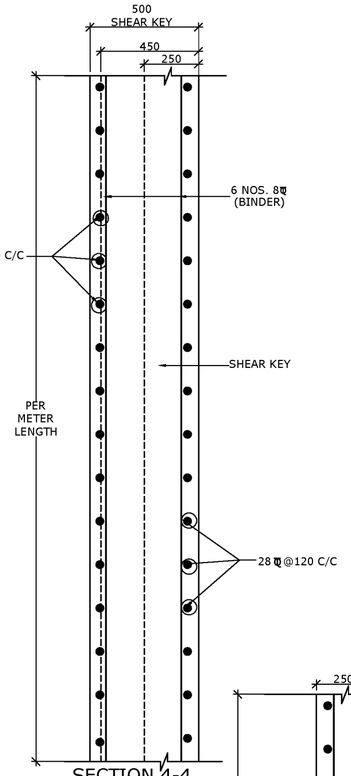
DRAWN	CHECKED	APPROVED	REV.
S.C	S.T	D.M.N	0



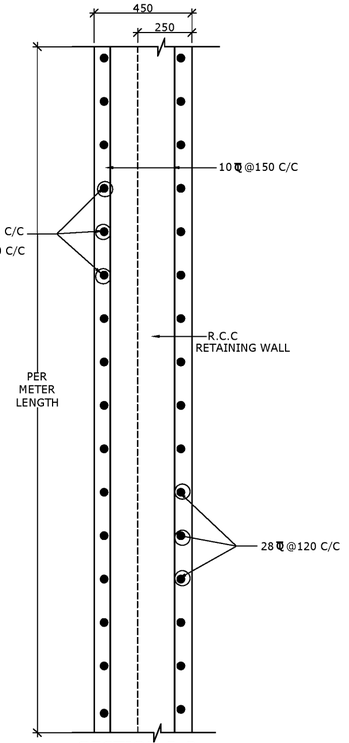
ELEVATION
(SCALE-1:40)



REINFORCEMENT DETAIL OF
SECTIONAL ELEVATION
(SCALE-1:40)

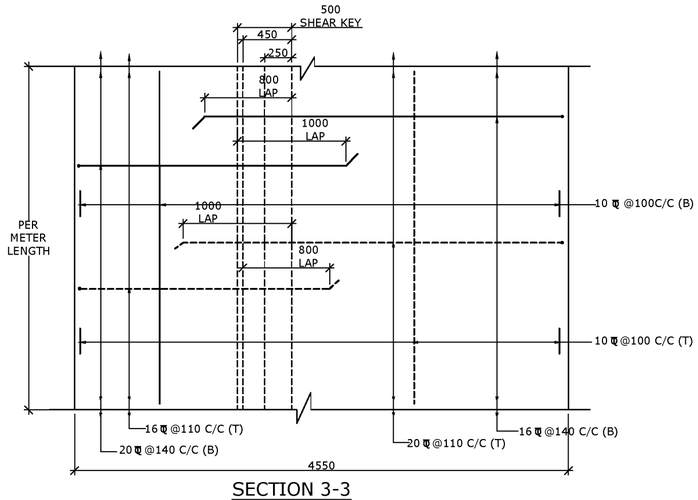


SECTION 4-4
(SCALE-1:20)

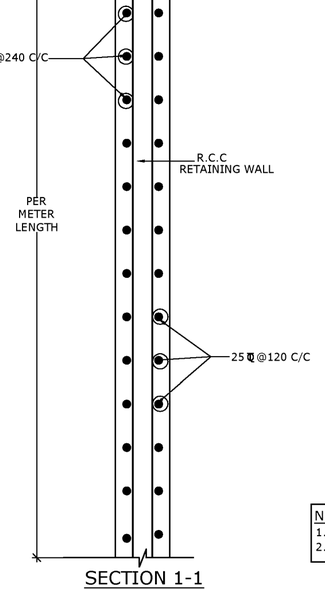


SECTION 2-2
(SCALE-1:20)

PLAN
(SCALE-1:40)



SECTION 3-3
(OTHER BAR DETAILS ARE NOT SHOWN FOR CLARITY)
(SCALE-1:40)



SECTION 1-1
(SCALE-1:50)

NOTE:-
1. ALL DIMENSIONS ARE IN MM.
2. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.

DESIGN CONSULTANT:

Cetest

An IS/ISO 9001:2008 CERTIFIED COMPANY

C.E. TESTING COMPANY PVT. LTD.
124A,N.S.C. BOSE ROAD
KOLKATA – 700092
INDIA

SCALE: AS DRAWN

CLIENT: PUBLIC WORKS DEPARTMENT
GOVT. OF ARUNACHAL PRADESH

PROJECT: DETAILED PROJECT FOR 2-LANING OF PASIGHAT-PANGIN ROAD(NH-229) FOR PACKAGE-IV(57KM-71.5967KM)

GENERAL ARRANGEMENT & REINFORCEMENT DETAILS OF RETAINING WALL(HEIGHT 5.0M.)

ROAD NAME: PASIGHAT–PANGIN ROAD (PKG–IV)

DRG. NO. CET/2010/2364/PKG–IV/RW/5.0M

DATE : MARCH, 2010

DRAWN	CHECKED	APPROVED	REV.
D.N	S.T	D.M.N	0