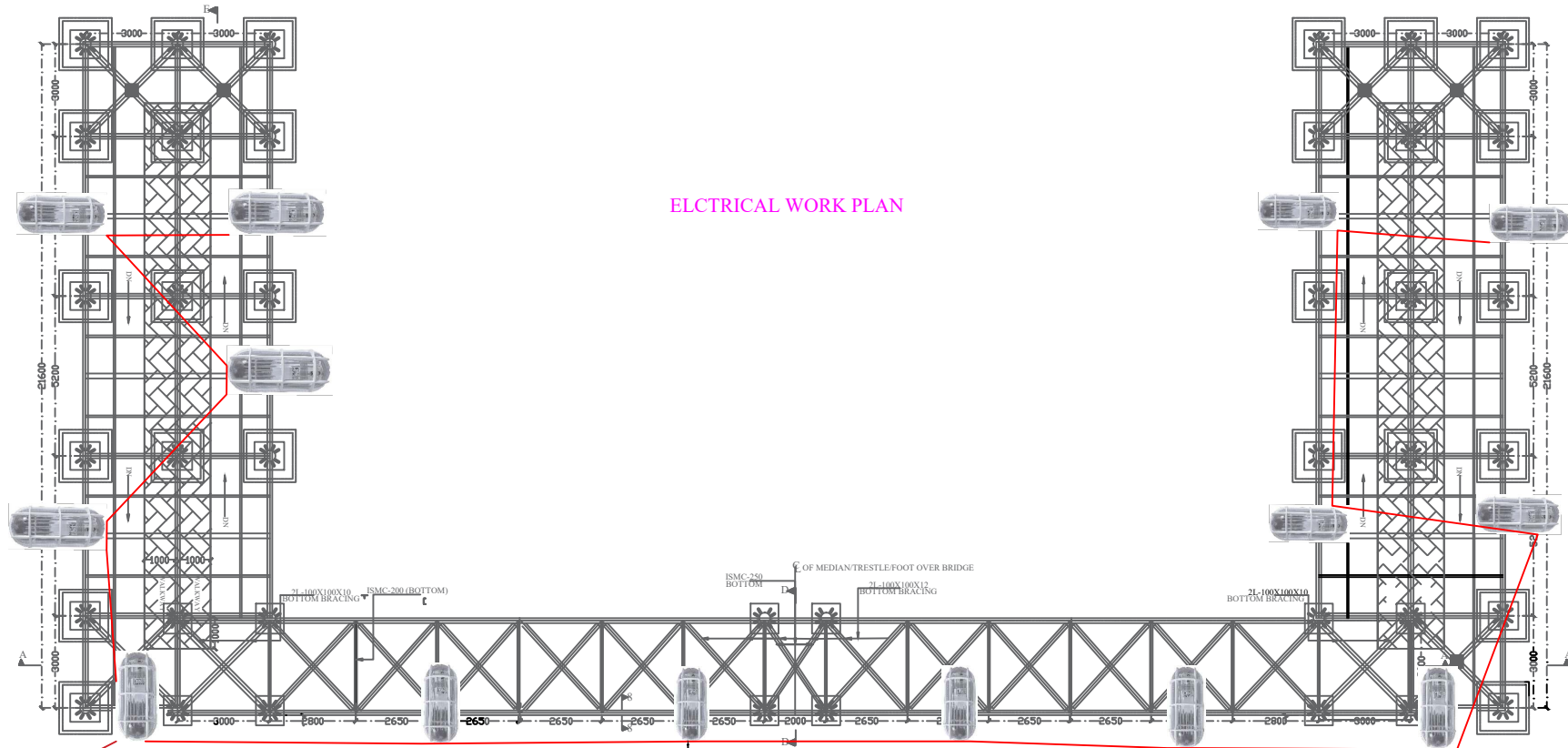


ELECTRICAL WORK PLAN

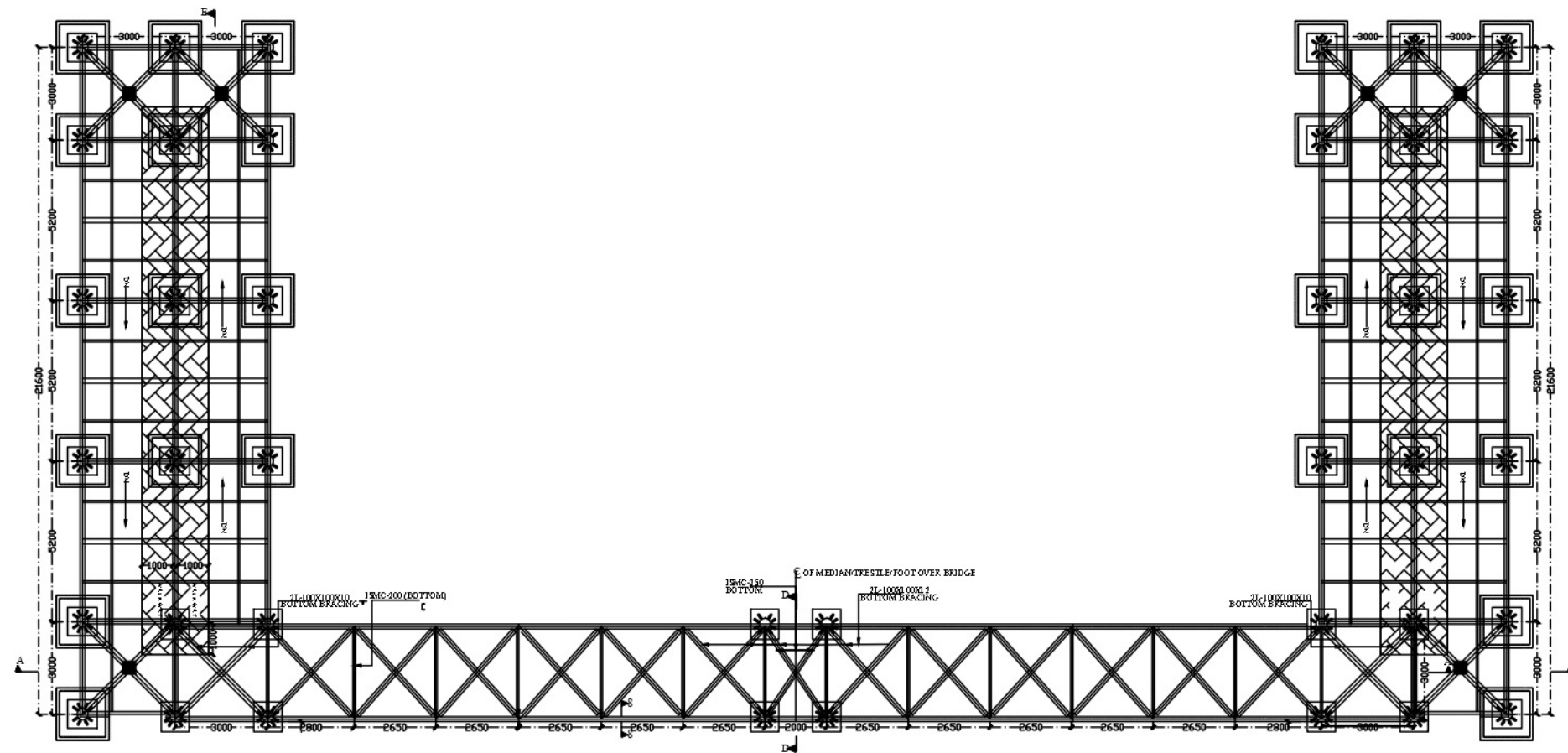


Pannel Box

Earth Plate System

Quantity Surveyor
MSV International INC in association
with Manglam Association
Guwahati

Resident Engineer
MSV International INC. in Association
with Manglam Associates
Nalbari



PLAN

Quantity Surveyor
MSV International INC in association
with Manglam Association
Guwahati

Resident Engineer
MSV International INC. in Association
with Manglam Associates
Nalbari

LEGEND

NOTES :-
1. ALL DIMENSION ARE IN MILLIMETERS, LEVELS IN METERS AND CHAINAGES IN KILOMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSION TO BE FOLLOWED.
REFERENCE DRAWINGS :-
1. GENERAL ARRANGEMENT DRAWING FOR FOOT OVER BRIDGE AT Ch. 1018+800 km, Ch. 1063+300 km, and Ch. 1049+000 km.

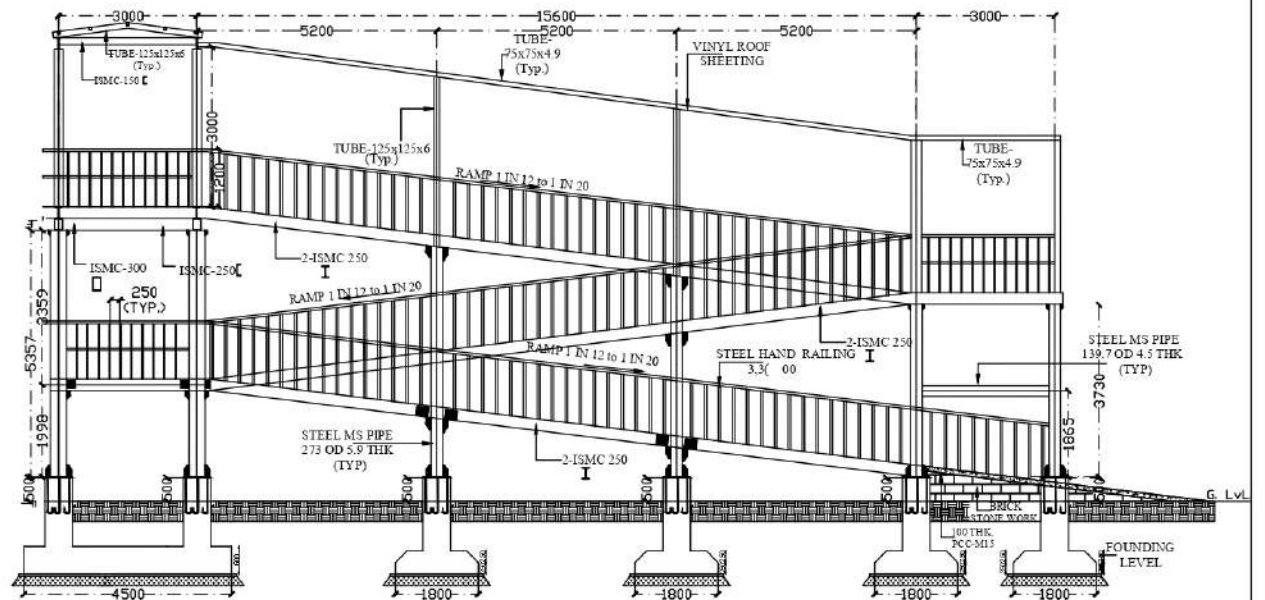
H			DESIGN CONSULTANT		EPC CONTRACTOR:	CONCESSIONAIRE:	INDEPENDENT CONSULTING ENGINEER:	CLIENT:  NATIONAL HIGHWAYS AUTHORITY OF INDIA	PROJECT:— Proposal for Construction of FOBs along with Ramps and service road at Ch. 1018+800 in front of Bhawanipur Anchalik College, at Ch. 1063+300, Laudal Chowk and at Ch. 1049+000 in front of St. John's High School, Barama.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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- REFERENCE DRAWINGS :-

- 1- GENERAL ARRANGEMENT DRAWING FOR FOOT OVER BRIDGE AT
Ch. 1018+800 km, Ch. 1063+300 km and Ch. 1049+000 km

[illegible]



SECTION AT E-E

Quantity Surveyor
MSV International INC in association
with Manglam Association
Guwahati

Resident Engineer
MSV International INC. in Association
with Manglam Associates
Nalbari

NOTES :-

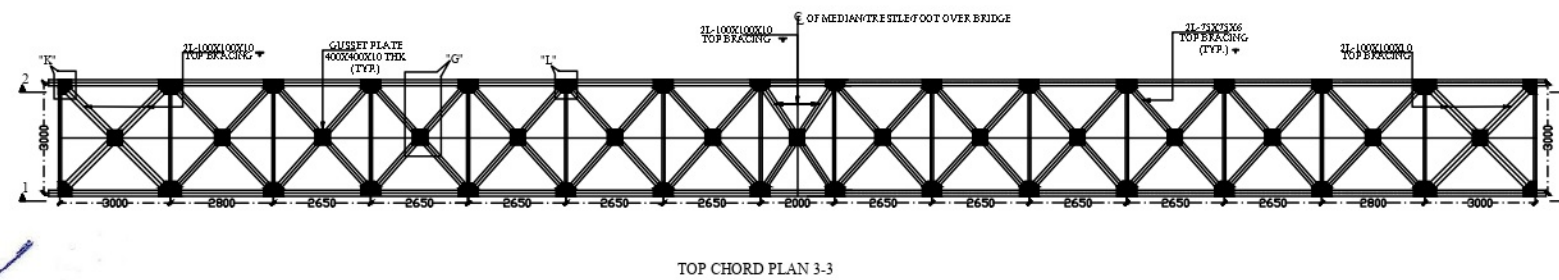
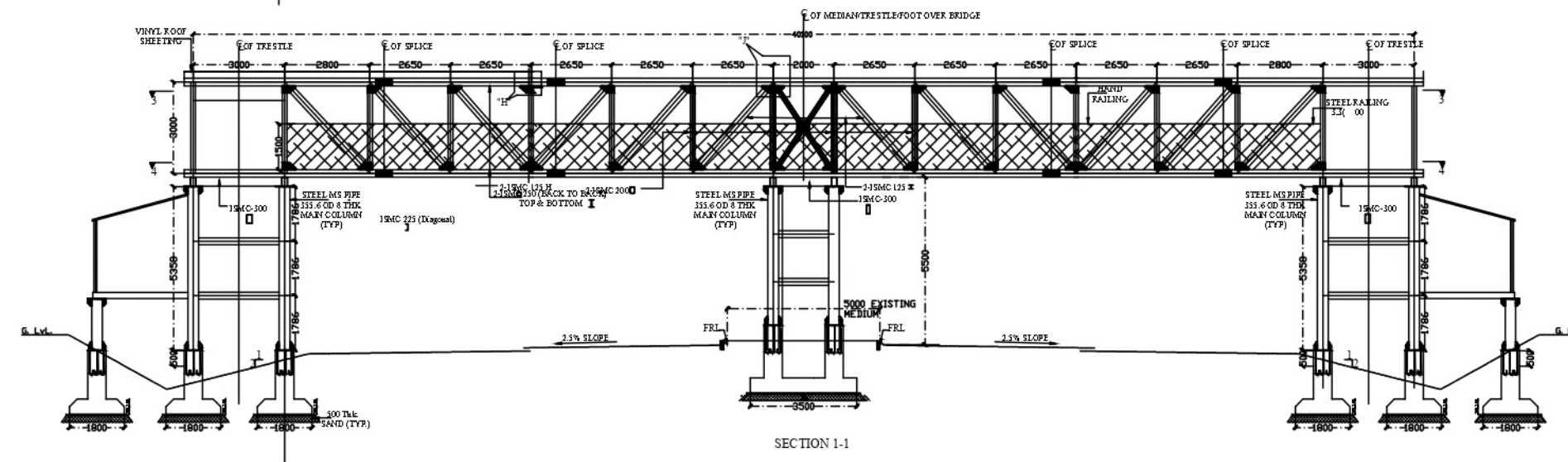
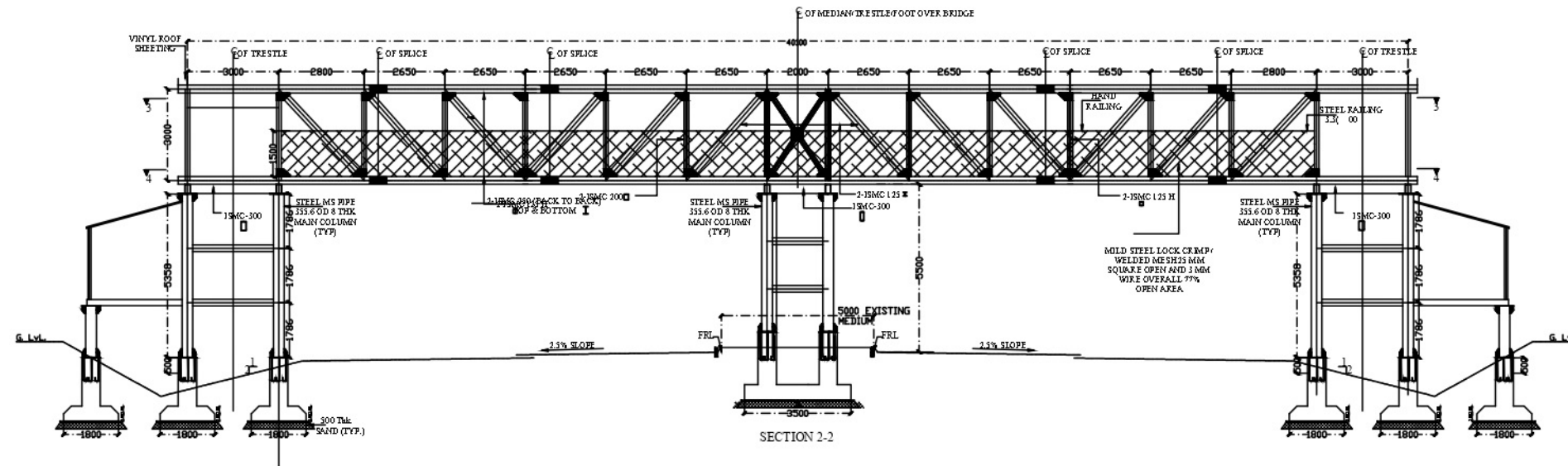
1. ALL DIMENSION ARE IN MILLIMETERS, LEVELS IN METERS AND CHAINAGES IN KILOMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSION TO BE FOLLOWED.

2. SLOPE SHOULD NOT BE LESS THAN 1:12, DESIRABLE 1:15 TO 1:20 AS PER SITE CONDITION

REFERENCE DRAWINGS :-

1- GENERAL ARRANGEMENT DRAWING FOR FOOT OVER BRIDGE AT Ch. 1018+800 km, Ch. 1063+300 km and Ch. 1049+000 km.

		DESIGN CONSULTANT		EPC CONTRACTOR:		CONCESSIONAIRE:		INDEPENDENT CONSULTING ENGINEER:		CLIENT:		PROJECT:- Proposal for Construction of FOBs along with Ramps and service road at Ch. 1018+800 in front of Bhawanipur Andharik College, at Ch. 1063+300, Laudal Chowk and at Ch. 1049+000 in front of St. John's High School, Baroma.	
													
										NATIONAL HIGHWAYS AUTHORITY OF INDIA			
		RIGHT OF STAKES COLUMN										TITLE: GAD of FoB at Ch. 1018+800 km, Ch. 1063+300 km and Ch. 1049+000 km. SHEET: 3 OF 3	
		DESCRIPTION OF REVISIONS		DESIGNED BY:		CHECKED BY:						DETAILS: SCALE: NOT TO SCALE	
REV												DATE: DRAWING NO.: REV.	
1		2		3		4		5		6		7	
8		9		10		11		12		13		14	



NOTES :-

1. ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS IN METERS AND CHAINAGES IN KILOMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSION TO BE FOLLOWED.

REFERENCE DRAWINGS :-

1. GENERAL ARRANGEMENT DRAWING FOR FOOT OVER BRIDGE AT CH. 1018+800 KM, CH. 1063+300 KM AND CH. 1049+000 KM
2. DIMENSIONAL DETAIL OF FOOT OVER BRIDGE AT CH. 1018+800 KM, CH. 1063+300 KM AND CH. 1049+000 KM
3. DIMENSIONAL DETAIL OF FOOT OVER BRIDGE FOR RAMP AND FOUNDATION AT CH. 918+610 KM, CH. 1063+300 KM AND CH. 1049+000 KM

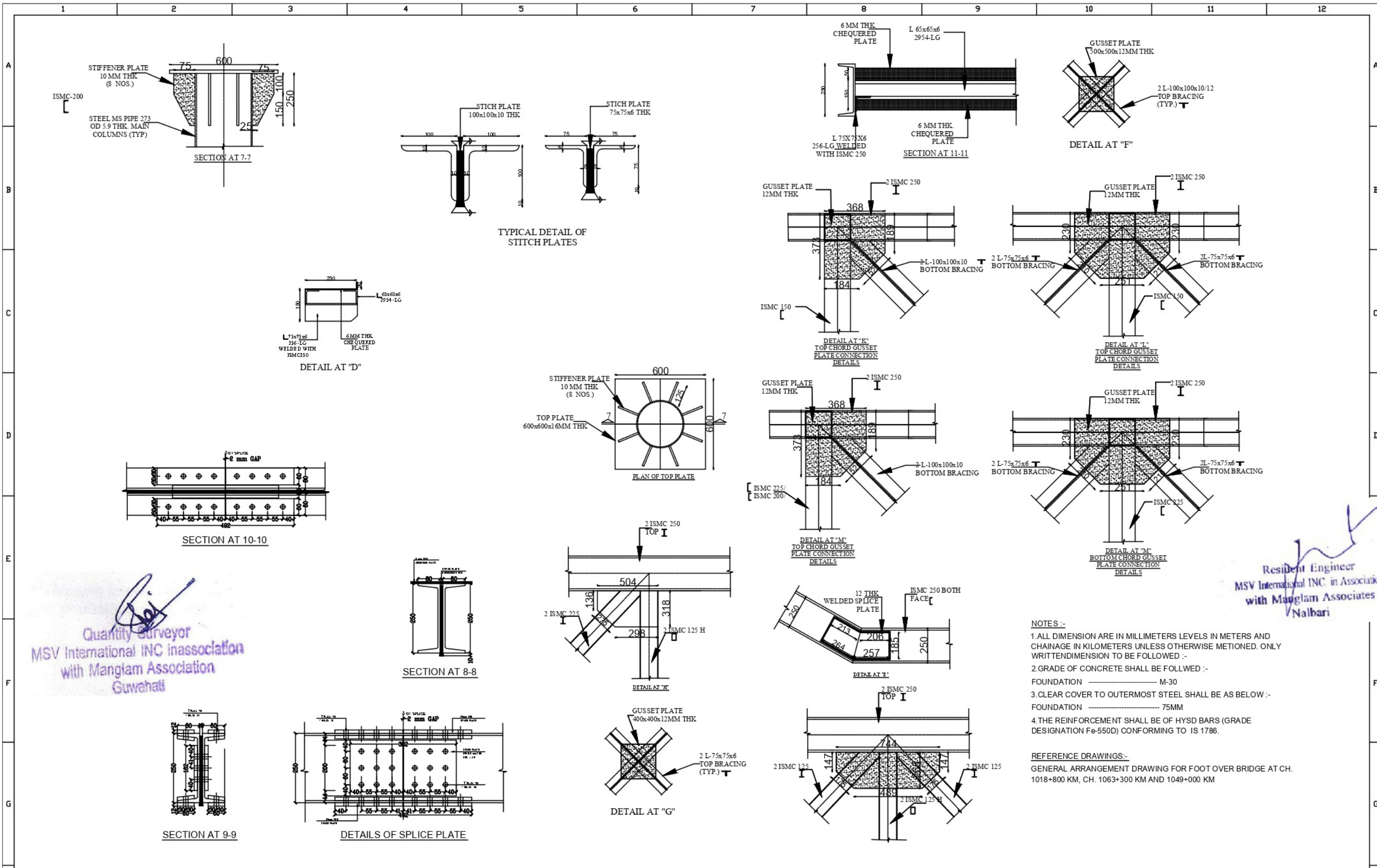
Quantity Surveyor
MSV International INC in association
with Manglam Association
Guwahati

Resident Engineer
MSV International INC. in Association
with Manglam Associates
Nalbari

H	DESIGN CONSULTANT		EPC CONTRACTOR:		CONCESSIONAIRE:		INDEPENDENT CONSULTING ENGINEER:		CLIENT:		PROJECT:- Proposal for Construction of FOBs along with Ramps and service road at Ch. 1018+800 in front of Bhawanipur Anchalik College, at Ch. 1063+300, Laudal Chowk and at Ch. 1049+000 in front of St. John's High School, Barama.	
	MEMBERS											
	REV	DATE	DESCRIPTION OF REVISIONS	DESIGNED BY:	CHECKED BY:							
	1			2	3	4	5	6	7	8	9	10
												11
												12

NATIONAL HIGHWAYS
AUTHORITY OF INDIA

TITLE: GAD of FoB at Ch. 1018+800 km, Ch. 1063+300 km and Ch. 1049+000 km SHEET: 1 OF 5
DETAILS: SCALE: NOT TO SCALE
DATE: DRAWING NO.: REV. R1

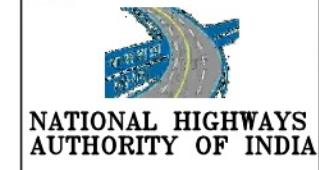


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MSV International INC. in Association
with Manglam Associates
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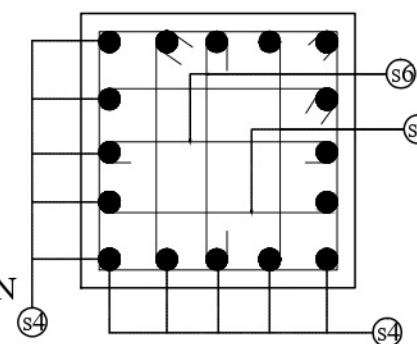
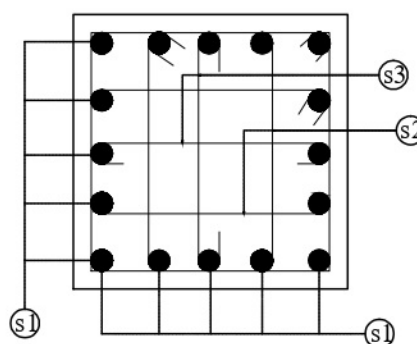
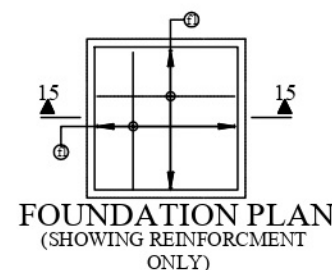
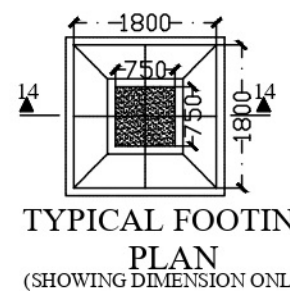
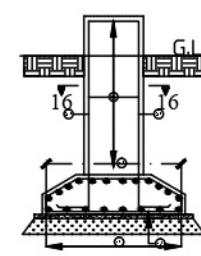
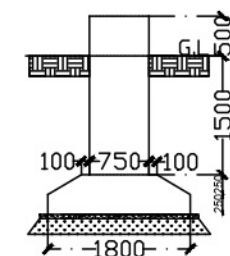
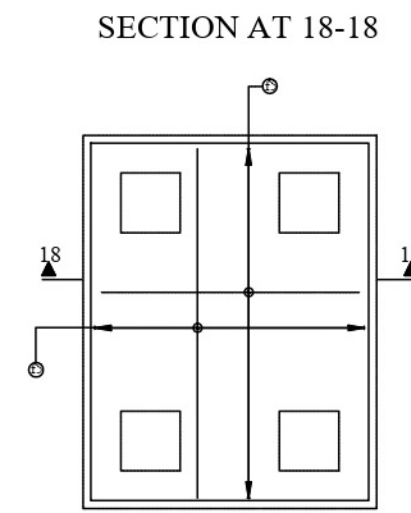
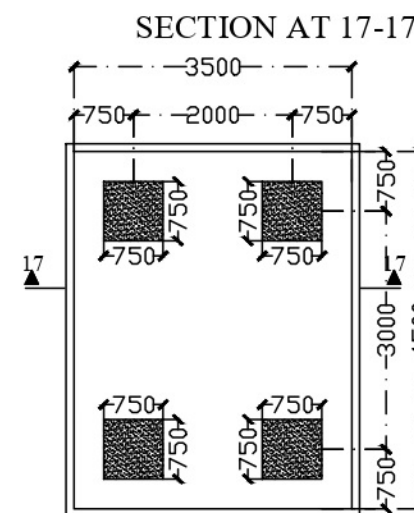
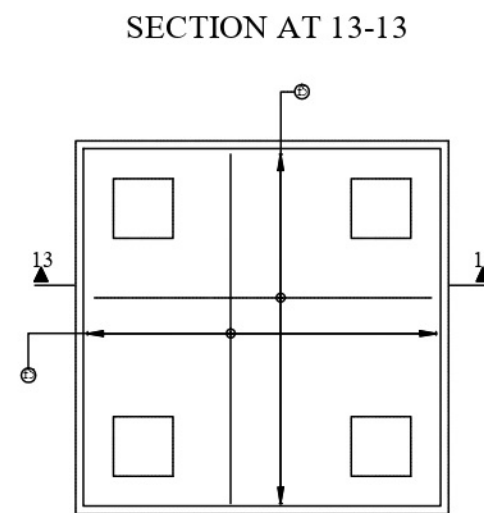
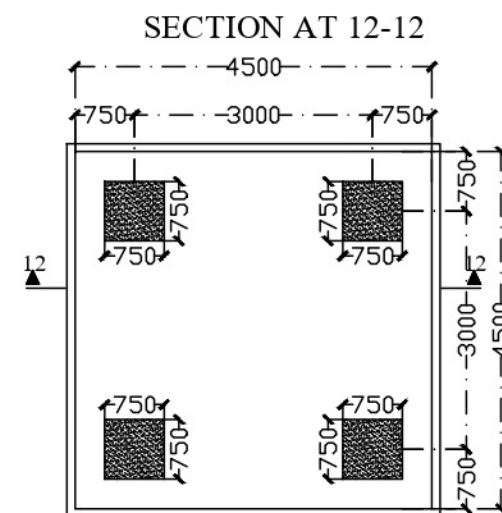
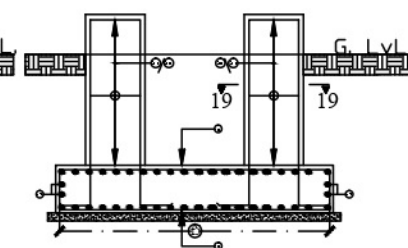
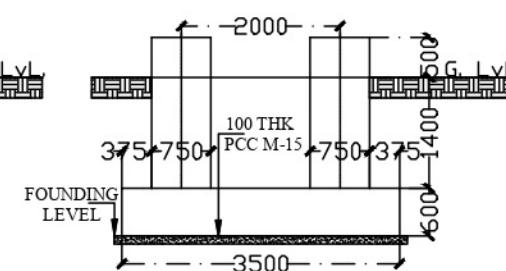
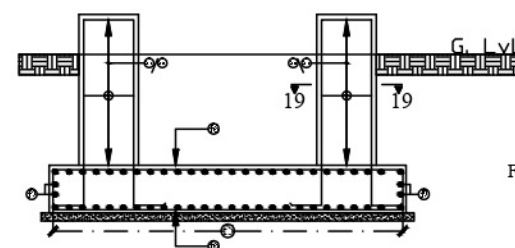
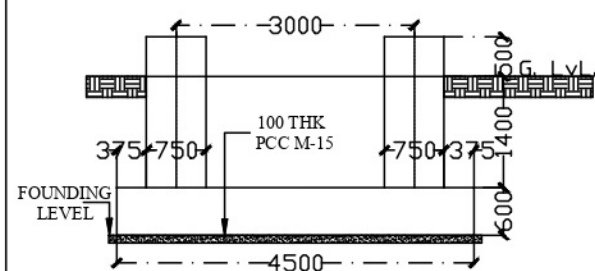
- NOTES :-**
1. ALL DIMENSION ARE IN MILLIMETERS LEVELS IN METERS AND CHAINAGE IN KILOMETERS UNLESS OTHERWISE METIONED. ONLY WRITTENDIMENSION TO BE FOLLOWED :-
 2. GRADE OF CONCRETE SHALL BE FOLLOWED :-
FOUNDATION M-30
 3. CLEAR COVER TO OUTERMOST STEEL SHALL BE AS BELOW :-
FOUNDATION 75MM
 4. THE REINFORCEMENT SHALL BE OF HYSD BARS (GRADE DESIGNATION Fe-550D) CONFORMING TO IS 1786.

REFERENCE DRAWINGS:-
GENERAL ARRANGEMENT DRAWING FOR FOOT OVER BRIDGE AT CH. 1018+800 KM, CH. 1063+300 KM AND 1049+000 KM

DESIGN CONSULTANT		EPC CONTRACTOR:		CONCESSIONAIRE:		INDEPENDENT CONSULTING ENGINEER:		CLIENT:		PROJECT:- Proposal for Construction of FOBs along with Ramps and service road at Ch. 1018+800 in front of Bhawanipur Anchalik College, at Ch. 1063+300, Laudal Chowk and at Ch. 1049+000 in front of St. John's High School, Barama.	
DESIGNED BY:		CHECKED BY:								TITLE: GAD of FoB at Ch. 1018+800 km, Ch. 1063+300 km and Ch. 1049+000 km	
SHEET: 3 OF 5		SCALE: NOT TO SCALE								DATE:	
DRAWING NO.:										REV.	



NATIONAL HIGHWAYS
AUTHORITY OF INDIA



SCHEDULE OF REINFORCEMENT		
ISOLATED FOOTING (RAMP/STAIR)		
BAR	BAR	BAR
MARKED	DIA & SPACING/NOS	SHAPE
COLUMN FOOTING-		
f1	≡ FF	20d  200
f2	≡ FF	15d  150
f3	≡ FF	15d  150
f4	≡ FF	30d  300
COLUMN SHAFT-		
s1	≡ QRV	300d  400
s2	/ ≡ FF vertically	
s3	≡ QNV ≡ FF vertically	
COLUMN FOOTING-		
f5	≡ FF	20d  200
f6	≡ FF	30d  300
f7	≡ 126	
COLUMN SHAFT-		
s4	≡ QRV	300d  400
s5	/ ≡ FF vertically	
s6	≡ QNV ≡ FF vertically	

NOTES:-

1. ALL DIMENSION ARE IN MILLIMETERS LEVELS IN METERS AND CHAIRAGE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITE DIMENSION TO BE FOLLOWED:-

2. GRADE OF CONCRETE SHALL BE FOLLOWED:-

FOUNDATION ----- M-30

3. CLEAR COVER TO OUTERMOST STEEL BARS SHALL BE AS BELOW:-

FOUNDATION ----- 75MM

4. THE REINFORCEMENT SHALL BE OF HYSD BARS (GRADE DESIGNATION Fe-550) ACCORDING TO IS 1786.

REFERENCE DRAWINGS:-
GENERAL ARRANGEMENT DRAWING FOR FOOT OVER BRIDGE AT CH. 1018+800 KM, CH. 1063+300 KM AND 1049+000 KM
DIMENSIONAL DETAILS OF FOOT OVER BRIDGE AT CH. 1018+800 KM
CH. 1063+300 KM AND CH. 1049+000 KM

Quantity Surveyor
MSV International INC in association
with Manglam Association
Guwahati

Resident Engineer
MSV International INC. in Association
with Manglam Associates
Nalbari

CLIENT:



**NATIONAL HIGHWAYS
AUTHORITY OF INDIA**

PROJECT:- Proposal for Construction of FOBs along with Ramps and service road at Ch. 1018+800 in front of Bhawanipur Anchalik College, at Ch. 1063+300, Laudal Chowk and at Ch. 1049+000 in front of St. John's High School, Baran.

TITLE: GAD of FoB at Ch. 1018+800 km, Ch. 1063+300 km and Ch. 1049+000 km

DETAILS:

DATE:

DATE:	
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10

SHEET:4 OF 5

[illegible]

REV

S.NO.	SECTION	ISMC
1.		ISMC-300 R1-13mm R2- 3.2mm
2.		ISMC-250 R1-12mm R2- 3.2mm
3.		ISMC-225 R1-12mm R2- 3.2mm
4.		ISMC-200 R1-11mm R2- 3.2mm

S.NO.	SECTION	ISMC
5.		ISMC-150 R1-10mm R2- 2.4mm
6.		ISMC-125 R1-9.5mm R2- 2.4mm
7.		ISMC-125H R1-9.5mm R2- 2.4mm
8.		ISMC-100 R1-9mm R2- 2.4mm
9.		ISMC-75 R1-8.5mm R2- 2.4mm

S.NO.	SECTION	TUBE
10.		125x125x6
11.		75x75x4.9
12.		70x70x4.9
13.		STEEL MS PIPE 21.3 OD 2 MM THK.

S.NO.	SECTION	TUBE
14.		100x100x12
15.		100x100x10
16.		75x75x6
17.		65x65x6
18.		50x50x5

NOTES :-

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REFERENCE DRAWINGS:-

GENERAL ARRANGEMENT DRAWING FOR FOOT OVER BRIDGE AT CH. 1018+800 KM, CH. 1063+300 KM AND CH. 1049+000 KM

Quantity Surveyor
MSV International INC in association
with Manglam Association
Guwahati

Resident Engineer
MSV International INC. in Association
with Manglam Associates
Nalbari

H				DESIGN CONSULTANT		EPC CONTRACTOR:		CONCESSIONAIRE:		INDEPENDENT CONSULTING ENGINEER:		CLIENT:		PROJECT:-- Proposal for Construction of FOBs along with Ramps and service road at Ch. 1018+800 in front of Bhawanipur Anchalik College, at Ch. 1063+300, Laudal Chowk and at Ch. 1049+000 in front of St. John's High School, Barama.			H
	R1		MEMBERS DISCUSSION														
	REV	DATE	DESCRIPTION OF REVISIONS	DESIGNED BY:	CHECKED BY:												
	1			2	3	4	5	6	7	8	9	10	11	12			

	
NATIONAL HIGHWAYS AUTHORITY OF INDIA	

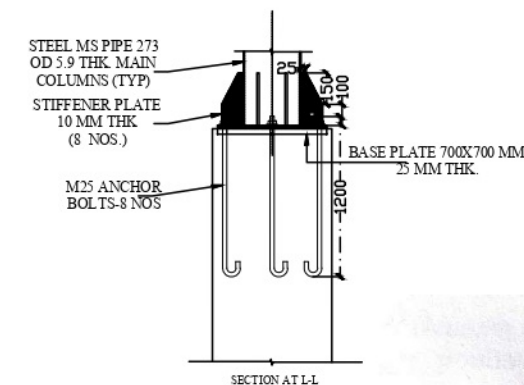
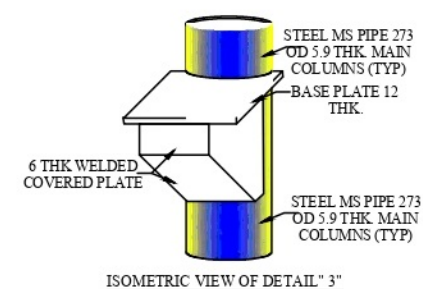
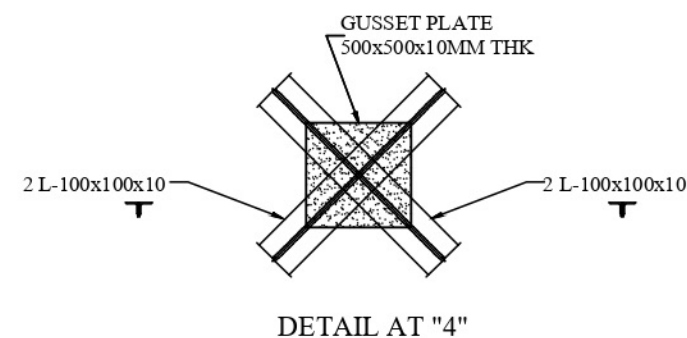
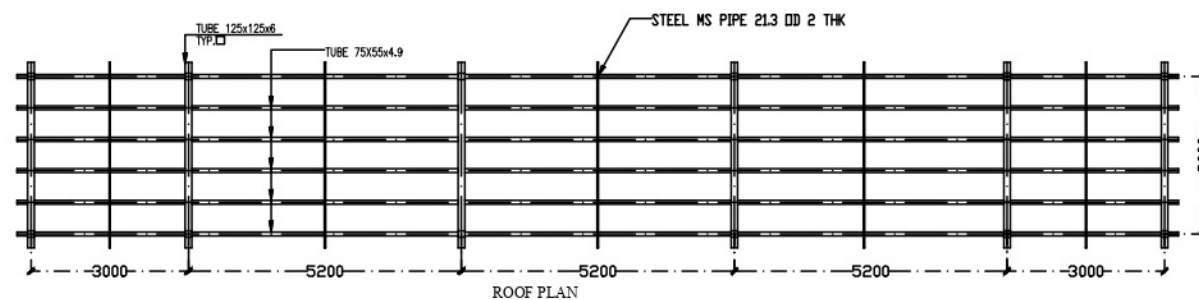
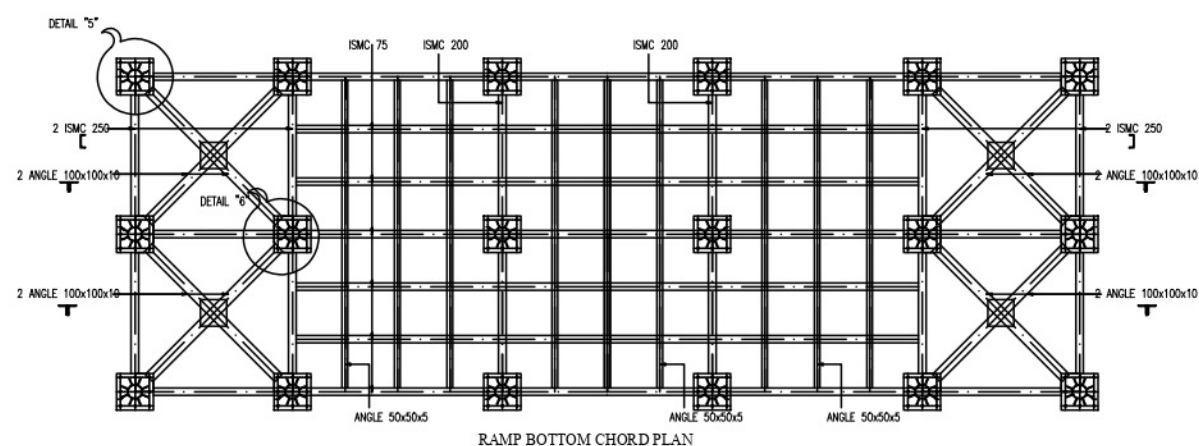
TITLE: GAD of FoB at Ch. 1018+800 km, Ch. 1063+300 km and Ch. 1049+000 km		SHEET:5 OF 5
DETAILS:		SCALE: NOT TO SCALE
DATE:	DRAWING NO.:	REV.

NOTES :-

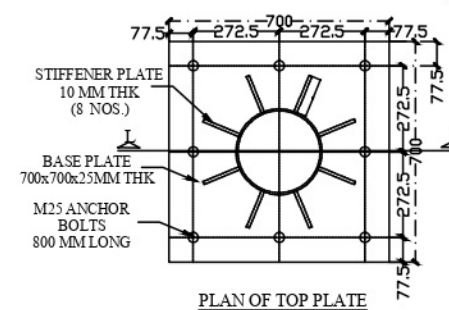
1. ALL DIMENSION ARE IN MILLIMETERS, LEVELS IN METERS AND CHAINAGES IN KILOMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSION TO BE FOLLOWED.

REFERENCE DRAWINGS :-

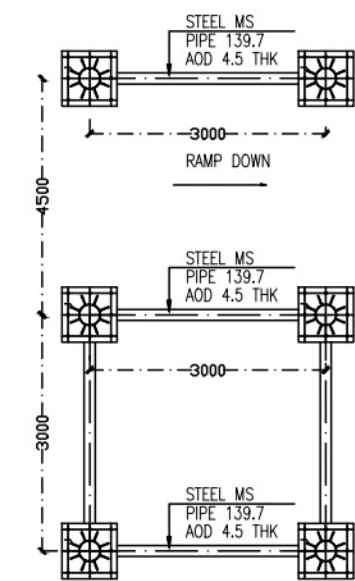
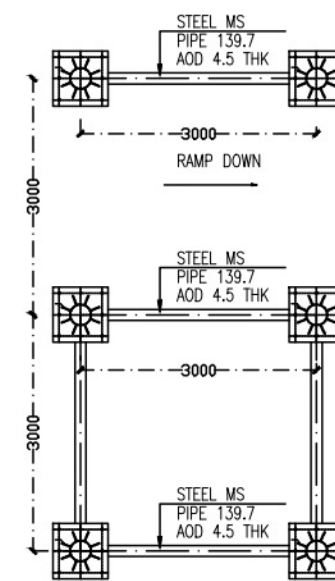
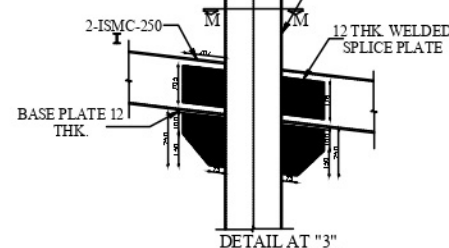
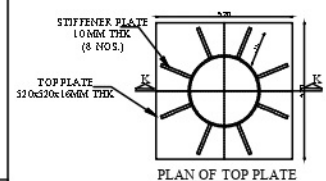
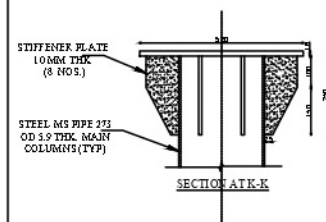
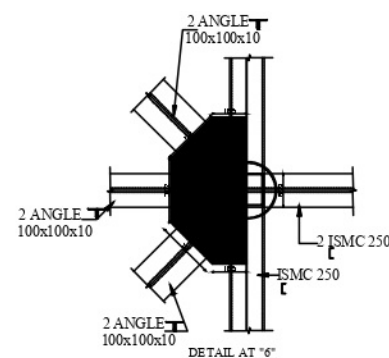
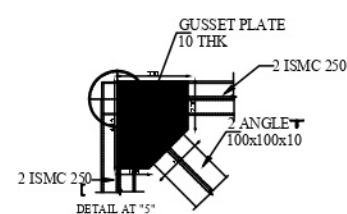
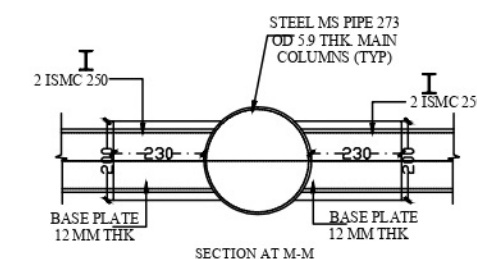
1- GENERAL ARRANGEMENT DRAWING FOR FOOT OVER BRIDGE AT CH. 1018+800 KM, CH. 1063+300 KM AND CH. 1049+000 KM.



Quantity Surveyor
MSV International INC in association
with Manglam Association
Guwahati

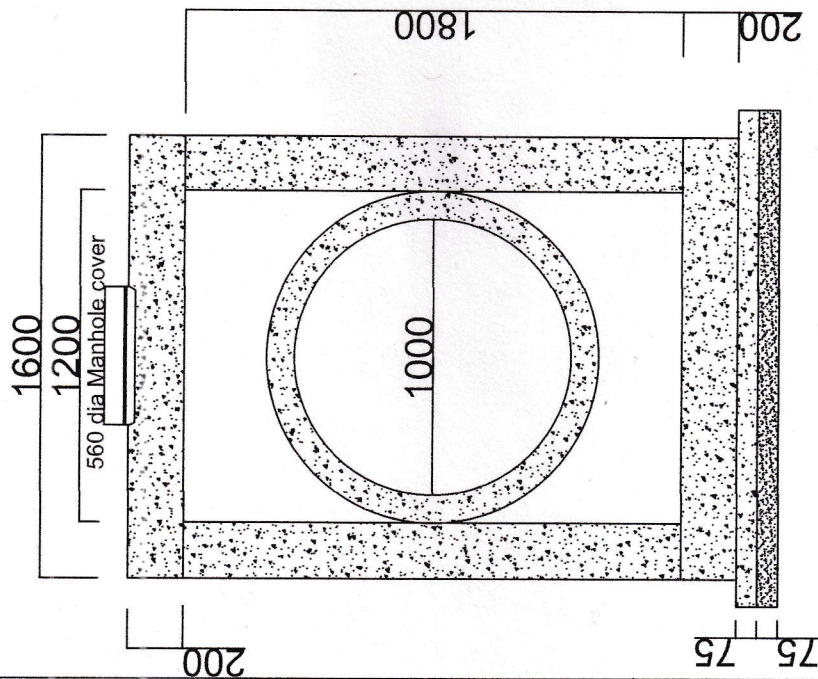


Resident Engineer
MSV International INC. in Association
with Manglam Associates
Nalbari

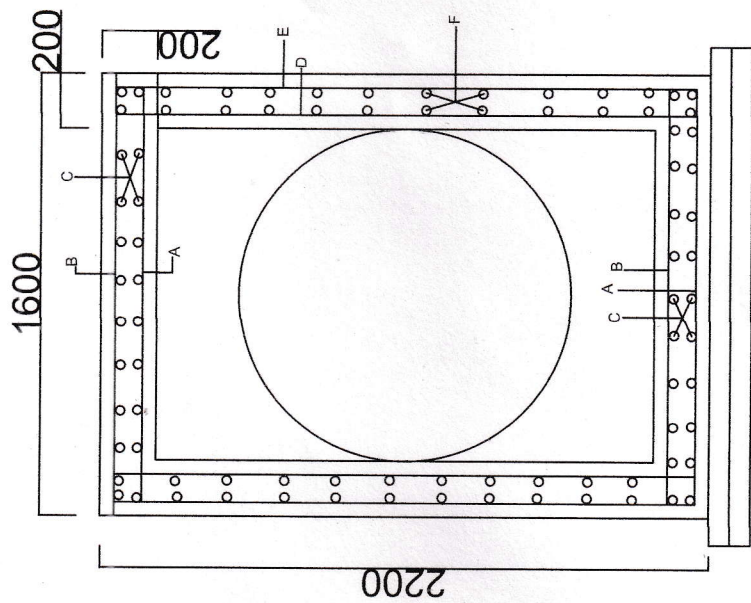


DESIGN CONSULTANT		EPC CONTRACTOR:		CONCESSIONAIRE:		INDEPENDENT CONSULTING ENGINEER:		CLIENT:		PROJECT:- Proposal for Construction of FOBs along with Ramps and service road at Ch. 1018+800 in front of Bhawanipur Anchalik College, at Ch. 1063+300, Laudal Chowk and at Ch. 1049+000 in front of St. John's High School, Barama.	
DESIGNED BY:		CHECKED BY:								TITLE: GAD of FoB at Ch. 1018+800 km, Ch. 1063+300 km and Ch. 1049+000 km	
REV		DATE		DESCRIPTION OF REVISIONS		SCALE: NOT TO SCALE		DRAWING NO.:		SHEET: 02 OF 02	
1		2		3		4		5		6	
7		8		9		10		11		12	

NATIONAL HIGHWAYS
AUTHORITY OF INDIA

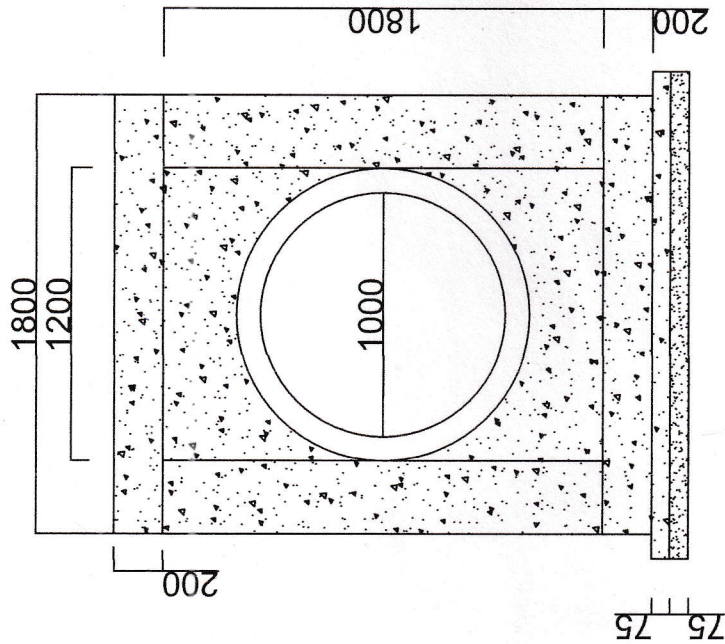


Cross Section of RCC
Manhole with Chamber

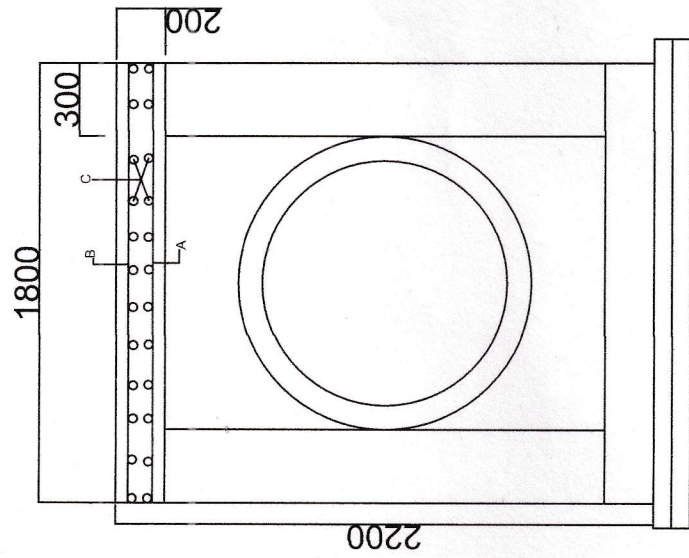


Reinforcement Detailing

BAR BENDING SCHEDULE			
BAR MARK	SHAPE OF BAR	BAR DIA	SPACING
A		16 mm	200 mm
B		16 mm	100 mm
C		12 mm	200 mm
D		16 mm	100 mm
E		16 mm	100 mm
F		12 mm	200 mm



Cross Section Load Bearing



Reinforcement Detailing

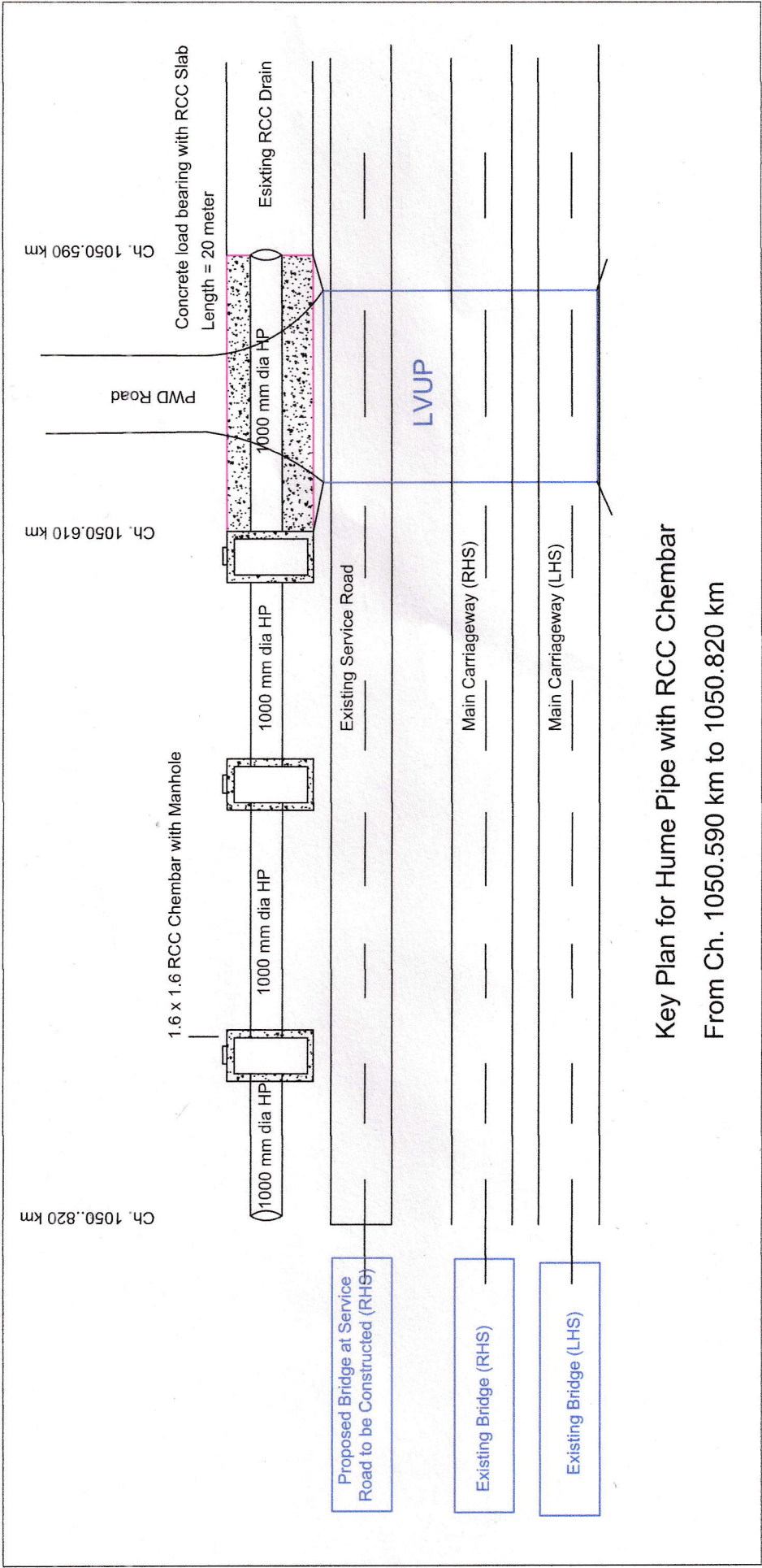
BAR BENDING SCHEDULE			
BAR MARK	SHAPE OF BAR	BAR DIA	SPACING
A		16 mm	200 mm
B		16 mm	100 mm
C		12 mm	200 mm

Concrete load bearing with RCC Slab

From Ch. 1050.590 km to Ch. 1050.610

Quantity Surveyor
MSV International INC in association
with Manglam Association
Guwahati

Resident Engineer
MSV International INC. in Association
with Manglam Associates
Nalbari, Assam



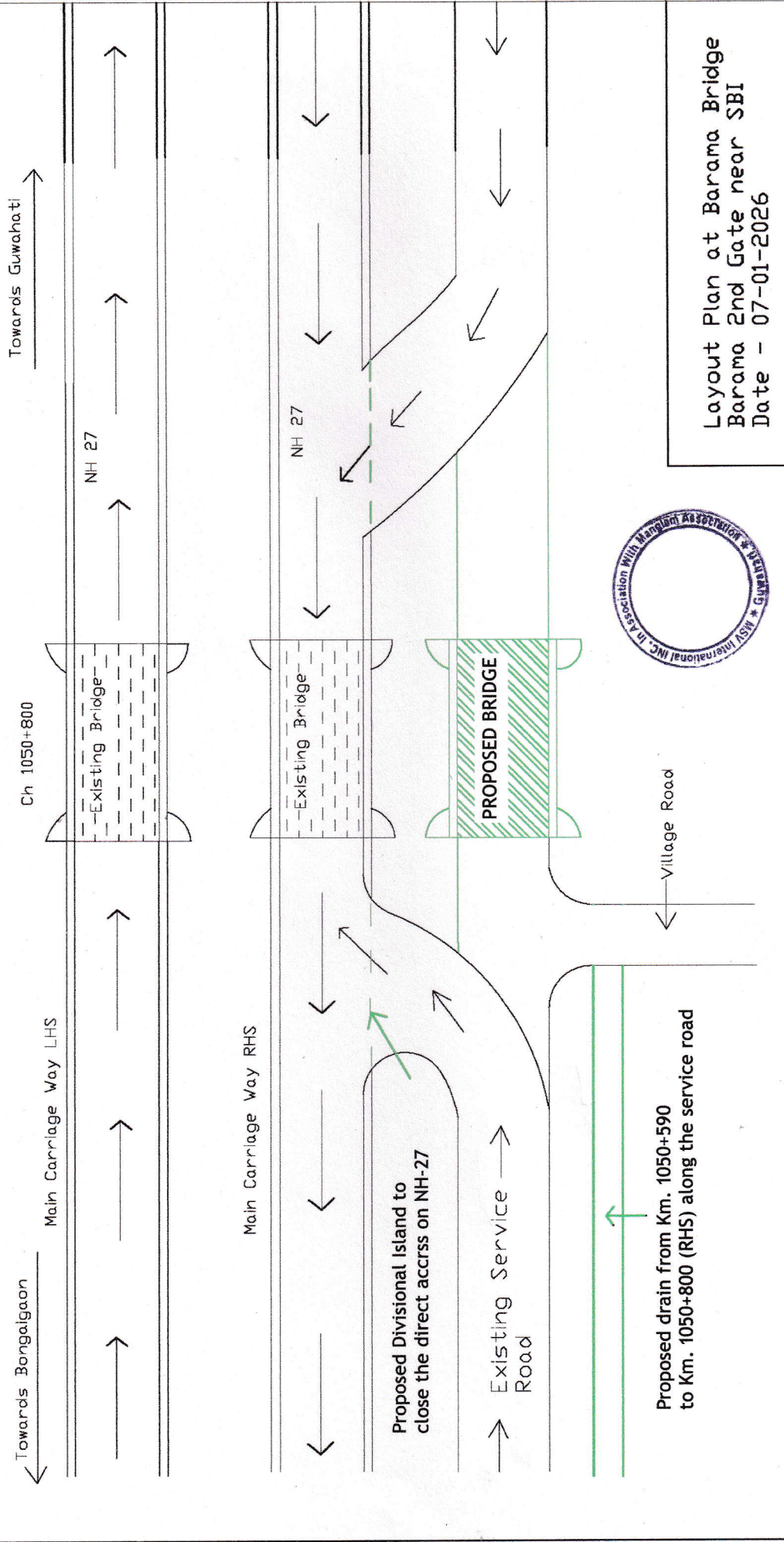
Key Plan for Hume Pipe with RCC Chembar

From Ch. 1050.590 km to 1050.820 km

Quantity Surveyor
MSV International INC in association
with Manglam Association
Guwahati

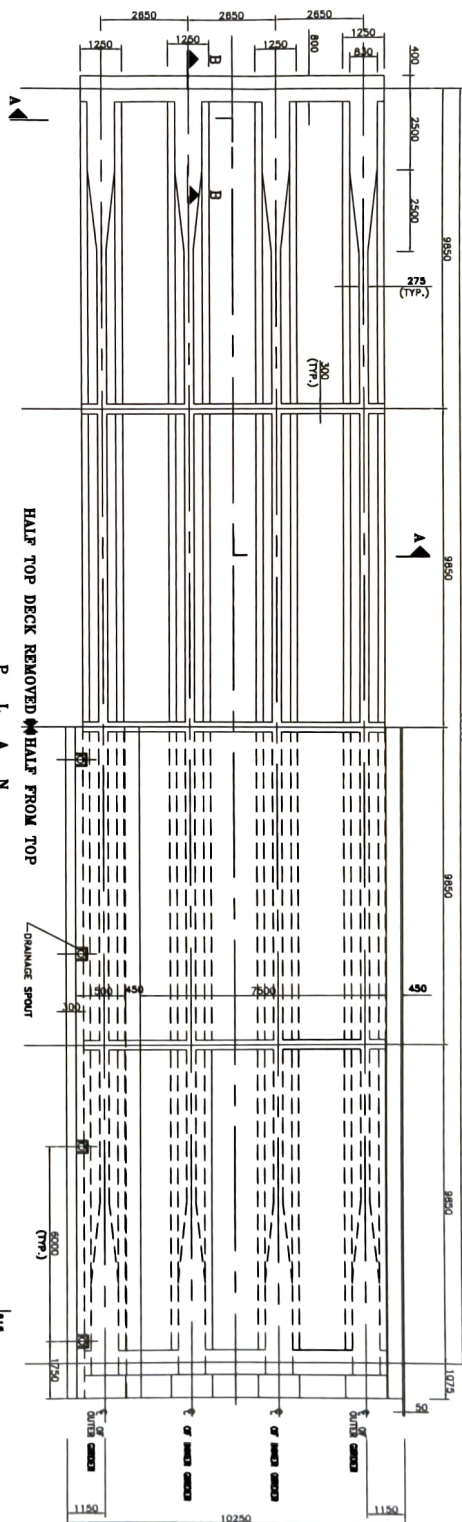
Resident Engineer
MSV International INC. in Association
with Manglam Associates
Guwahati, Assam

Strengthening and Major maintenance work of stretch of Patacharkuchi to Baihata from Km. 1040.300 to Km 1097.150 (Package no. AS-06, AS-05 & AS-04 balance) of NH-31 in the State of Assam on PBMC Mode (Length=56.850 Km)

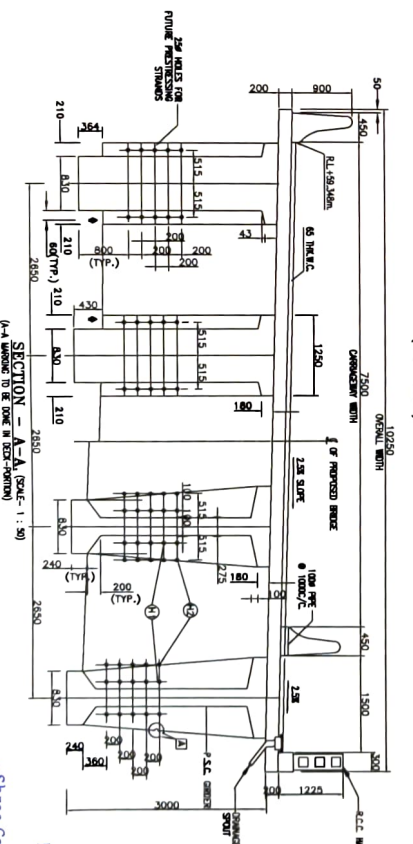


Team Leader
 Manglam Association
 with Manglam Association
 Guwahati
 (BORA ETE)
 Team Leader cum Highway Engineer

(Scale - 1 to 100)



HALF TOP DECK REMOVED ~~OF~~ HALF FROM TOP



SECTION - A-A, (SCALE: 1 : 50)
A WARNING TO BE DONE IN DECK-PORTION)

51.9
5
R-12.3

DETAIL A

- NOTES:-
1. ALL JOCKEYS ARE IN SHIRTING & TROUSERS & ARE WEARING WHITE OVERSHIRT. APPROVED.
 2. COATS OF COLOURS 1 to 10. NAMES GIVEN ARE: WHITE, BROWN, RED, BLUE, GREEN, YELLOW, PURPLE, PINK, ORANGE, & GREY. THE LOCATION OF EACH FOR LITING IS THE CORRESPONDING TO SPACE NUMBER IT IS. IS SHOWN THIS IS CURRENTLY CHANGED ON THE DAY BEFORE THE RACE.
 3. AFTER THE RACE BEGINS TO BE RACED WITH REPEATED REVERSE-WINDMILL MOTIONS.
 4. AFTER THE RACE BEGINS TO BE RACED WITH REPEATED REVERSE-WINDMILL MOTIONS.
 5. MANUAL SWITCHES ON ANY JACK UNDER LITING CONTROL UNIT.
 6. DURING JOCKEY OPERATIONS ALL THE JACKS PLACED UNDER THE DAY CROSS ARE OPERATED SIMULTANEOUSLY AND IT ASSURED THAT THE REACTION OF ALL THE JACKS ARE EQUAL AT ALL TIMES.

MAIDUR RAHMAN
Project Manager
Shree Gautam Construction Co. Ltd.

Senior Engineer
SV International INC. in Association
with Manglam Associates
Nalbari, Assam

FOR CONSULTANT	FOR CONTRACTOR
Checked By : Approved By :	Prepared By: Checked By : Submitted By :

SCALE : AS SHOWN	TYPICAL DRAWING OF MOD-1 IN. AT CL. 1050+000

NATIONAL HIGHWAYS AUTHORITY OF INDIA (MINISTRY OF ROAD TRANSPORT & HIGHWAYS)	MSY INTERNATIONAL, INC. IN ASSOCIATION WITH MANIGALAM ASSOCIATES
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EMPLOYER

CONSULTANT

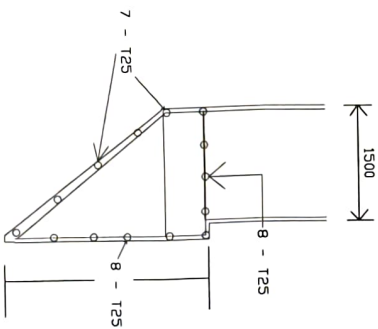
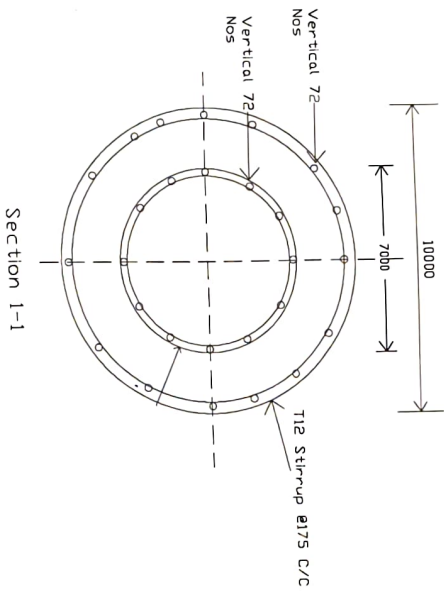
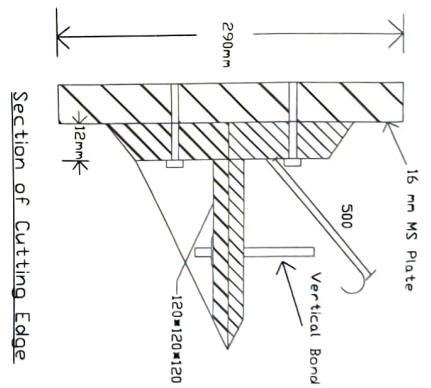
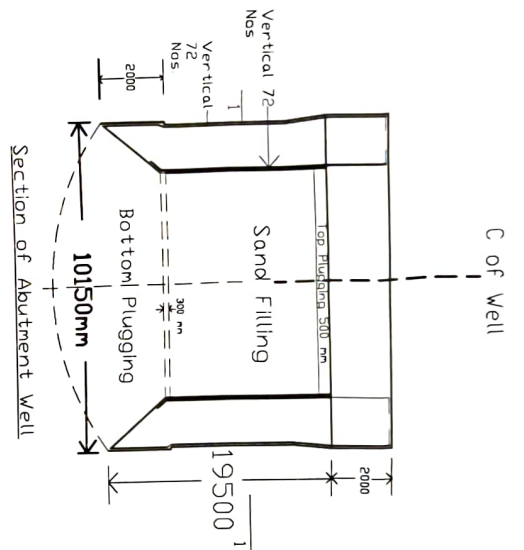
CONTRACTOR

PROJECT

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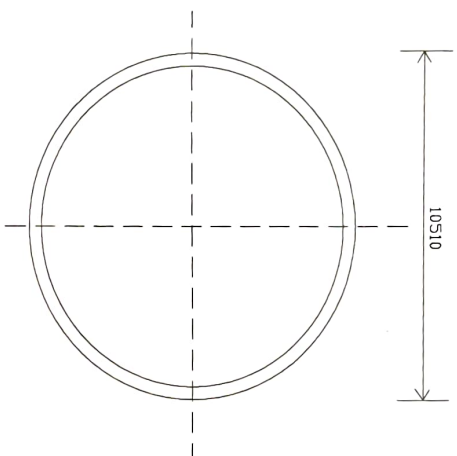
MAIDUR RAHMAN
Project Manager
Shree Gautam Construction Co. Ltd.

MSV INTERNATIONAL INC.
IN ASSOCIATION WITH
MALGALAM ASSOCIATES

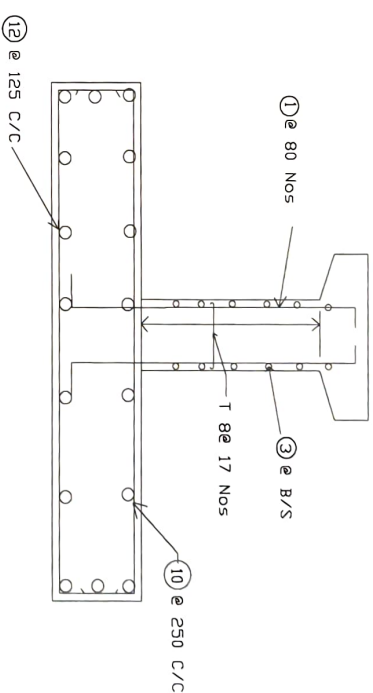
Typical Drawing of Ch 1050+800

Typical Detail of Well Curb RC Drawing

Resident Engineer
MSV International Inc. in Association
with Malgalam Associates
Nabari, Assam



Well Cap



Rcc Details of Well Cap & Shaft

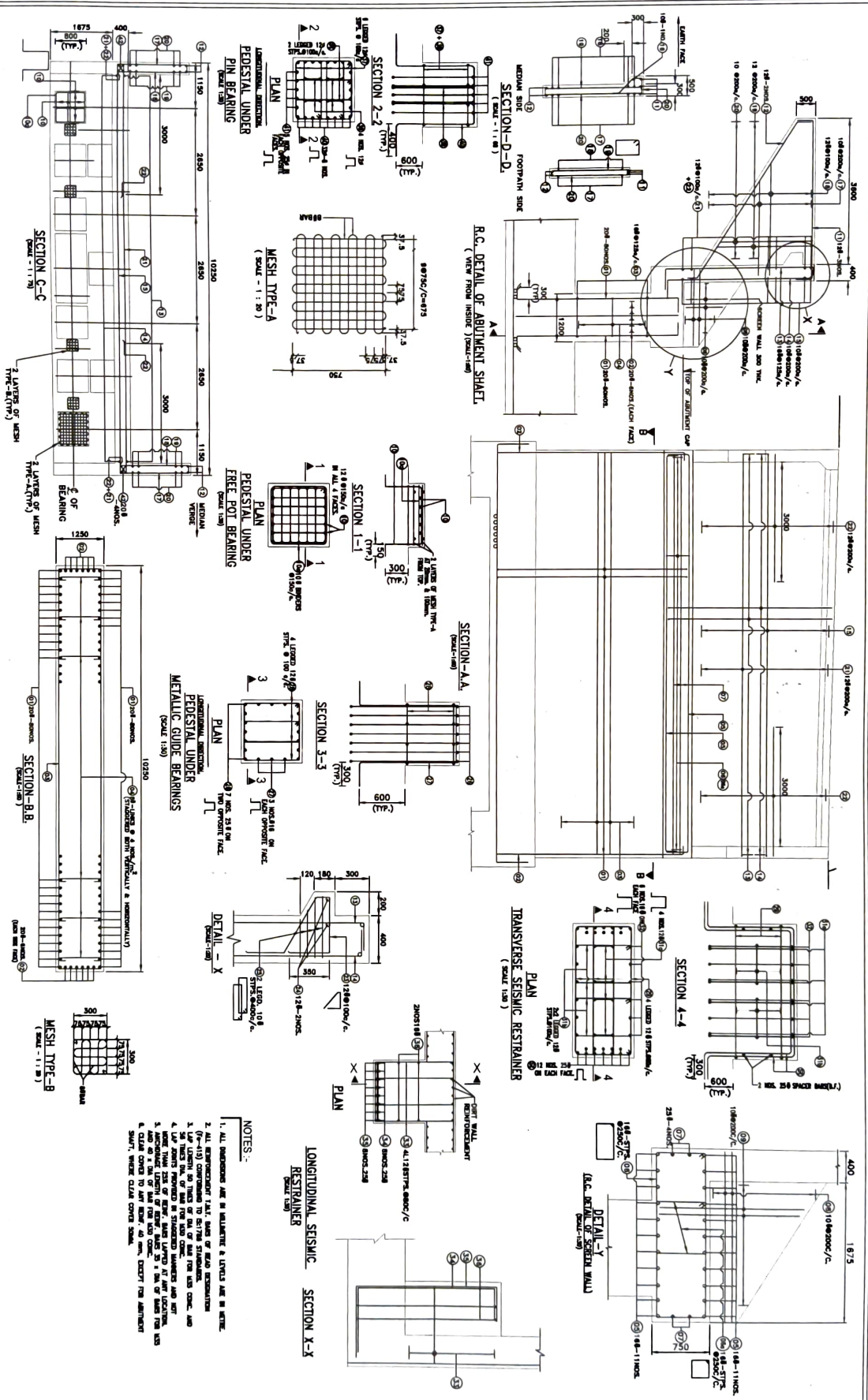
MAIDUR RAHMAN
Project Manager
Shree Gautam Construction Co. Ltd.

Resident Engineer
MSV International INC. in Association
with Manojm Associates
Nalbari, Assam

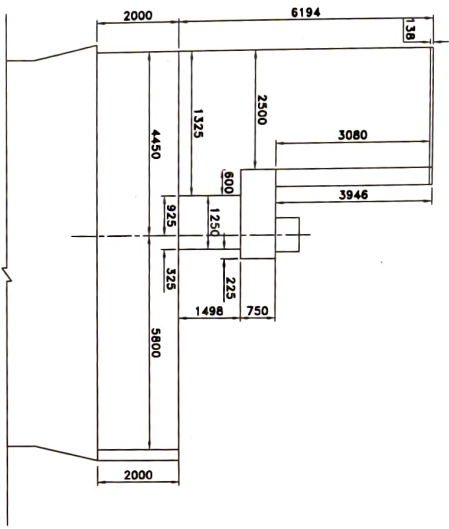
MSV INTERNATIONAL INC.
IN ASSOCIATION WITH
MALGALAM ASSOCIATES

Typical Drawing of Ch 1050+800

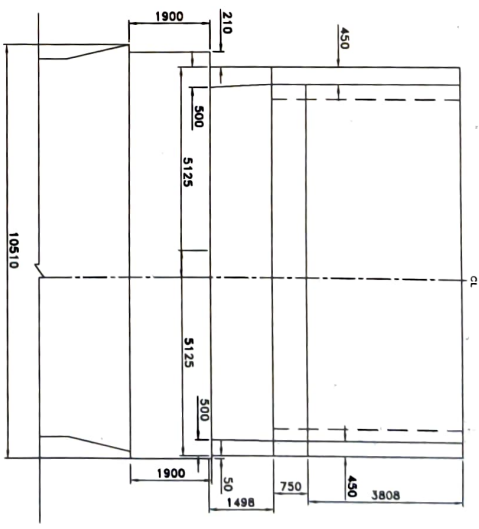
Typical Details of Well Cap & Shaft RC Drawing



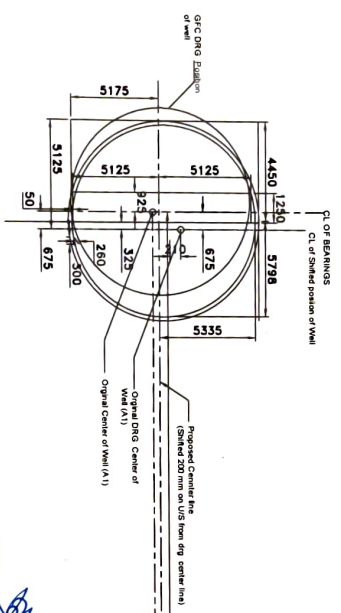
 NATIONAL HIGHWAYS AUTHORITY OF INDIA (MINISTRY OF ROAD TRANSPORT & HIGHWAYS)	EMPLOYER	CONSULTANT	CONTRACTOR	PROJECT					
	INTERNATIONAL INC. MASSACHUSETTS WITH MANULIFE ASSOCIATES								
					FOR CONSULTANT		FOR CONTRACTOR		SCALE : AS SHOWN
					Checked By : Approved By : Prepared By :		Checked By : Submitted By :		
					BYE. No:		DATE:		
					TYPICAL BALANCE OF RIDGE IN LT CL. 100+400 TYPICAL L.C. DETAILS OF LANTERN, LANTERN CUT, BAY WALL, EXTERIOR WALL, SCOUR WALL & SCOUR PROTECTION				



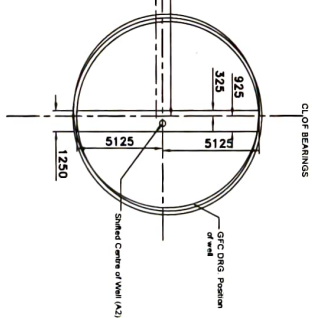
DIMENSIONAL VIEW OF WELL CAP & ABUTMENT CAP (A1)



DIMENSIONAL VIEW OF WELL CAP & ABUTMENT CAP (A1)



WELL CAP (A1)

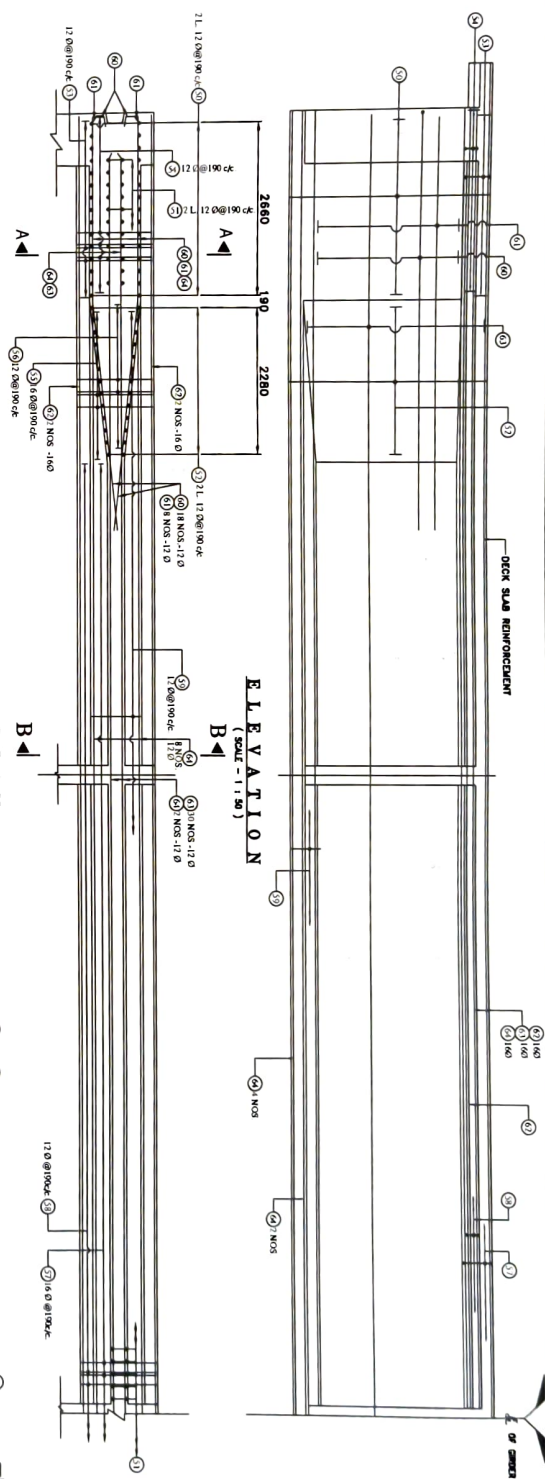


WELL CAP (A2)

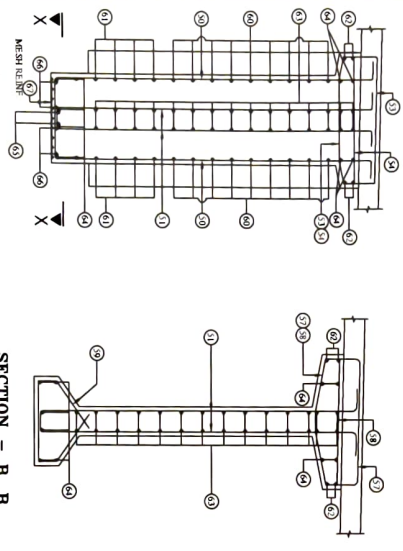
MAIDUR RAHMAN
Project Manager
Shree Gautam Construction Co. Ltd.

Responsible Engineer
SV International Inc. in Association
with Menzies Associates
Nalbari, Assam

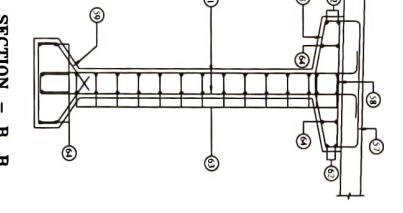
	NATIONAL HIGHWAYS AUTHORITY OF INDIA (MINISTRY OF ROAD TRANSPORT & HIGHWAYS)	NEW INTERNATIONAL INC IN ASSOCIATION WITH MENZIES ASSOCIATES	CONSULTANT	CONTRACTOR	PROJECT	FOR CONSULTANT	FOR CONTRACTOR	SCALE : AS SHOWN	TITIAL NUMBER OF SHEETS IS 17 OF 180-000 SHEET No. 17 DATE:
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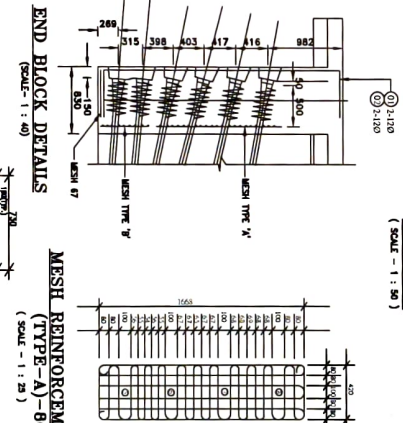
ELEVATION
(SCALE - 1:50)



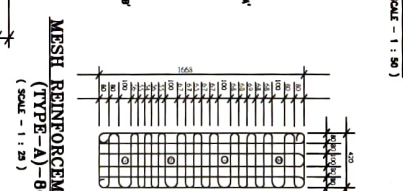
SECTION - A-A
(SCALE - 1:50)



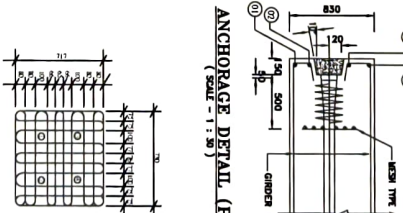
SECTION - B-B
(SCALE - 1:50)



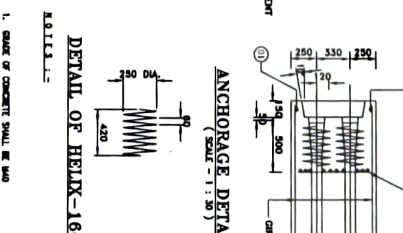
END BLOCK DETAILS
(SCALE - 1:50)



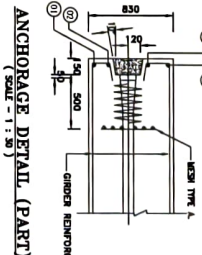
**MESH REINFORCEMENT
(TYPE-A)-60**
(SCALE - 1:25)



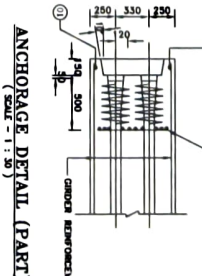
**MESH REINFORCEMENT
(TYPE-B)-60**
(SCALE - 1:25)



DETAIL OF HELIX-160
(SCALE - 1:25)



ANCHORAGE DETAIL (PART)
(SCALE - 1:50)



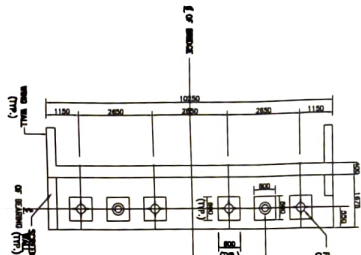
ANCHORAGE DETAIL (PART)
(SCALE - 1:50)

- NOTES:-**
1. SCALE OF CONCRETE SHALL BE 1:50
 2. SCALE OF REINFORCEMENT SHALL BE 1:25
 3. ALL REINFORCEMENT SHALL BE 12mm dia. unless otherwise specified.
 4. LAPS / JOINTS SHALL BE 30d, WHERE 'd' IS THE DIA. OF BAR.
 5. REINFORCEMENT SHALL BE 12mm dia. unless otherwise specified.
 6. ALL CONCRETE SHALL BE OF M20 GRADE.
 7. ALL CONCRETE SHALL BE OF M20 GRADE.
 8. ALL CONCRETE SHALL BE OF M20 GRADE.
 9. ALL CONCRETE SHALL BE OF M20 GRADE.
 10. ALL CONCRETE SHALL BE OF M20 GRADE.

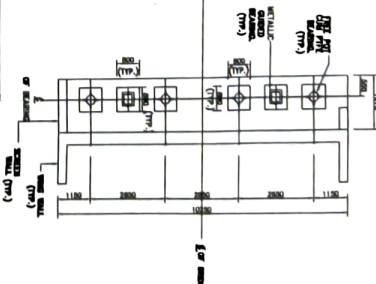
	NATIONAL HIGHWAYS AUTHORITY OF INDIA (MINISTRY OF ROAD TRANSPORT & HIGHWAYS)	EMPLOYER	CONSULTANT	CONTRACTOR	PROJECT	FOR CONSULTANT Checked By: _____ Approved By: _____	FOR CONTRACTOR Checked By: _____ Submitted By: _____	SCALE: AS SHOWN	DATE: _____	TYPICAL B.C. DETAILS OF P.S.C. GIRDER
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MAIDUR KATHIMAN
Project Manager
Shree Gautam Construction Co. Ltd.
resident Engineer
Shree Gautam Construction Co. Ltd.
with Mangalam Associates
No. 10/1, Assam

N. ALDARI SIDE



A1



A2

S. ALDARI SIDE

DATA FOR DESIGN OF BEARINGS

(REVISED DUE TO CHANGE IN GIRDER SECTION & END CROSS GIRDER)

GENERAL DATA:-

1. STRUCTURE IS LOCATED IN SEISMIC ZONE : V
2. MATERIAL FOR SUBSTRUCTURE : CONCRETE
3. MATERIAL FOR SUPERSTRUCTURE : CONCRETE

SPAN : 30.40 M o/c BEARINGS

IF CONCRETE, GRADE : M35

IF CONCRETE, GRADE : M40

Sl. No.	BEARING TYPE	LOAD CONDITION	CONSTRAINTS, LOADS, PERMISSIBLE MOVEMENTS AND RESTRAINT DATA										GTL (mm)
			VERTICAL (LOADING)	HORIZONTAL (RESTRAINT)	ROTATIONAL (RESTRAINT)	WIND (RESTRAINT)	SEISMIC (RESTRAINT)	TEMPERATURE (RESTRAINT)	SHRINKAGE (RESTRAINT)	CRACKING (RESTRAINT)	SLIDING (RESTRAINT)	SETTLING (RESTRAINT)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. ROLLER BEARING	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
2. ROLLER BEARING	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0

Sl. No.	BEARING TYPE	LOAD CONDITION	CONSTRAINTS, LOADS, PERMISSIBLE MOVEMENTS AND RESTRAINT DATA										GTL (mm)
			VERTICAL (LOADING)	HORIZONTAL (RESTRAINT)	ROTATIONAL (RESTRAINT)	WIND (RESTRAINT)	SEISMIC (RESTRAINT)	TEMPERATURE (RESTRAINT)	SHRINKAGE (RESTRAINT)	CRACKING (RESTRAINT)	SLIDING (RESTRAINT)	SETTLING (RESTRAINT)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. ROLLER BEARING	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
2. ROLLER BEARING	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	0

LEGENDS :-	
○	Roller Bearing
□	Roller Bearing
○	Roller Bearing

NOTES :-
1. ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE STATED.



NATIONAL HIGHWAYS AUTHORITY OF INDIA
(MINISTRY OF ROAD TRANSPORT & HIGHWAYS)

CONSULTANT

CONTRACTOR

PROJECT

FOR CONSULTANT

FOR CONTRACTOR

SCALE : AS SHOWN

TYPICAL BEARING OF GIRDER END CL. 100-100

TYPICAL LAYOUT OF BEARING BEARING JOINTS

MAIDURAHMAN
Project Manager
Shree Gaum Construction Co. Ltd.

President Engineer
MSI International Inc. in Association
with Vangiam Associates
Nabari, Assam

50 mm Exp Gap



As Built Drawing For Railing Post & Hand Rail At Ch. 1050+800 (Median Side).



FOR CONSULTANT		FOR CONTRACTOR	
Checked By :	Approved By :	Prepared By:	Checked By : Submitted By :

SCALE :	A9 SHOW
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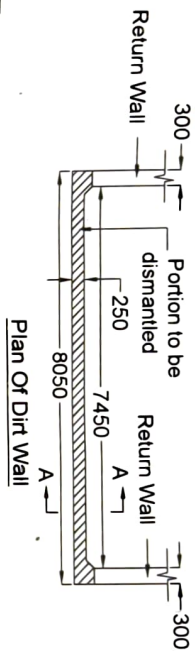
TYPICAL MATERIALS OF CONSTRUCTION
CONCRETE TO A MINIMUM STRENGTH

MAIDUR RAHMAN
Project Manager
Shree Gautam Construction Co. Ltd.

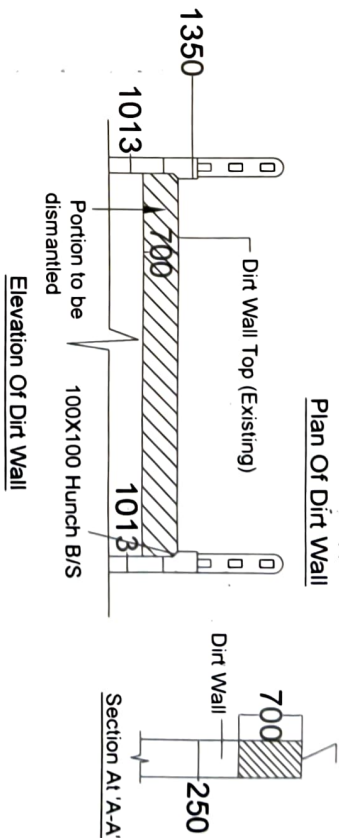
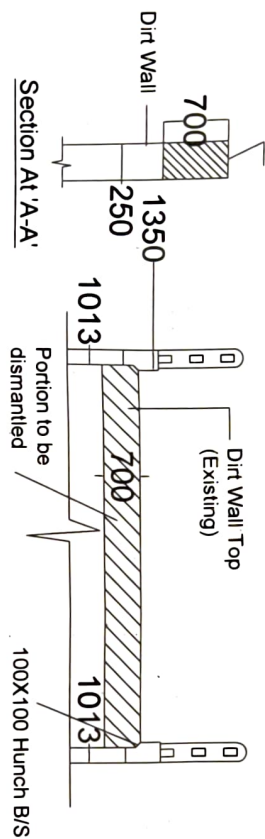
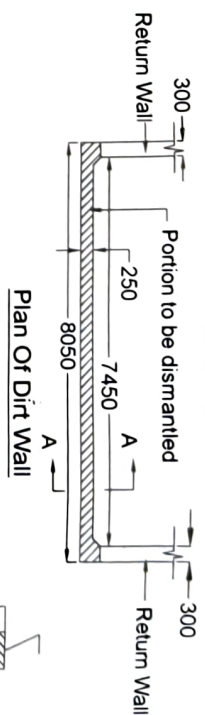
Resident Engineer
MSV International INC. in Association
with Manglam Associates

As Built Drawing of Dirt wall Dismantling & Replacement Portion Both End At Ch. No-1050+800 (Ex. Bridge RHS)

Dismantling of Dirt Wall Birni Side (RHS)



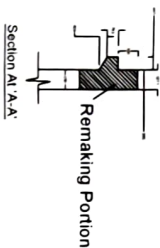
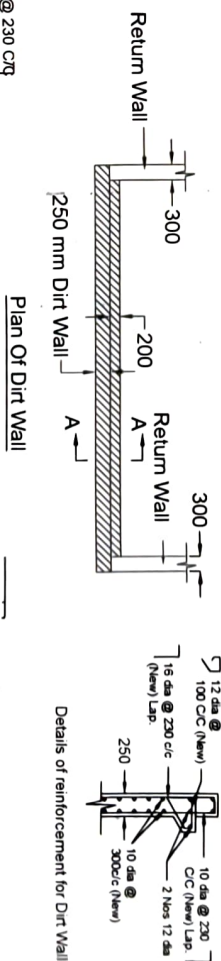
Dismantling of Dirt Wall Nalbari Side (RHS)



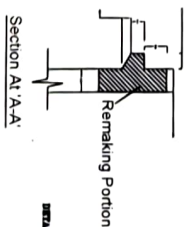
As Built Drawing of Dirt wall (Replacement Portion)
Nalbari end At (RHS)



As Built Drawing of Dirt wall (Replacement Portion)
Birni end (RHS)



Details of Reinforcement for
Dirt Wall



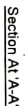
DETAILS OF DIRT WALL

	NATIONAL HIGHWAYS AUTHORITY OF INDIA (MINISTRY OF ROAD TRANSPORT & HIGHWAYS)	MSV INTERNATIONAL INC. IN ASSOCIATION WITH MANGLAM ASSOCIATES	CONSULTANT	CONTRACTOR	PROJECT	FOR CONSULTANT Checked By : Approved By :	FOR CONTRACTOR Prepared By : Checked By : Submitted By :	SCALE : AS SHOWN	TYPICAL BUREAU OF STANDARDS IS: IS: 456-2000	TYPICAL GENERAL ARRANGEMENT DRAWING
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MAIDUR NAHMAN
Project Manager
Shree Gautam Construction Co. Ltd.

Ref: Project Engineer
MSV International Inc. in Association
with Manglam Associates
Maidur Nahman

As Built Drawing of Ex. Joint & Bearing Pedestals Both End At Ch. No-1050+800 (Ex. Bridge RHS)

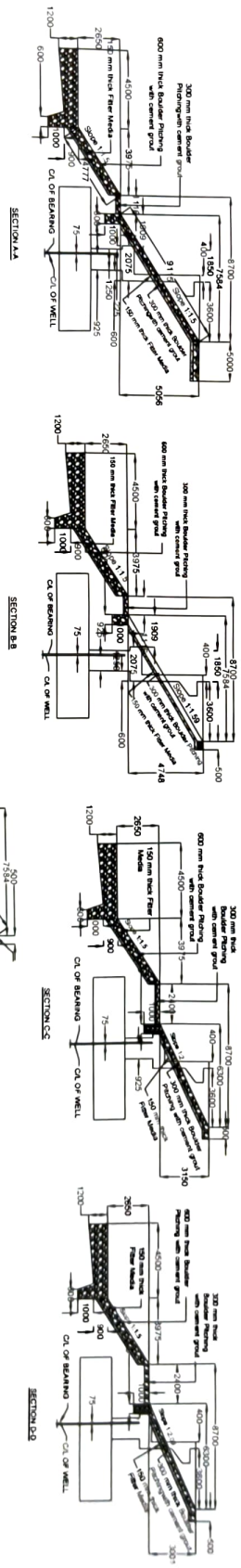
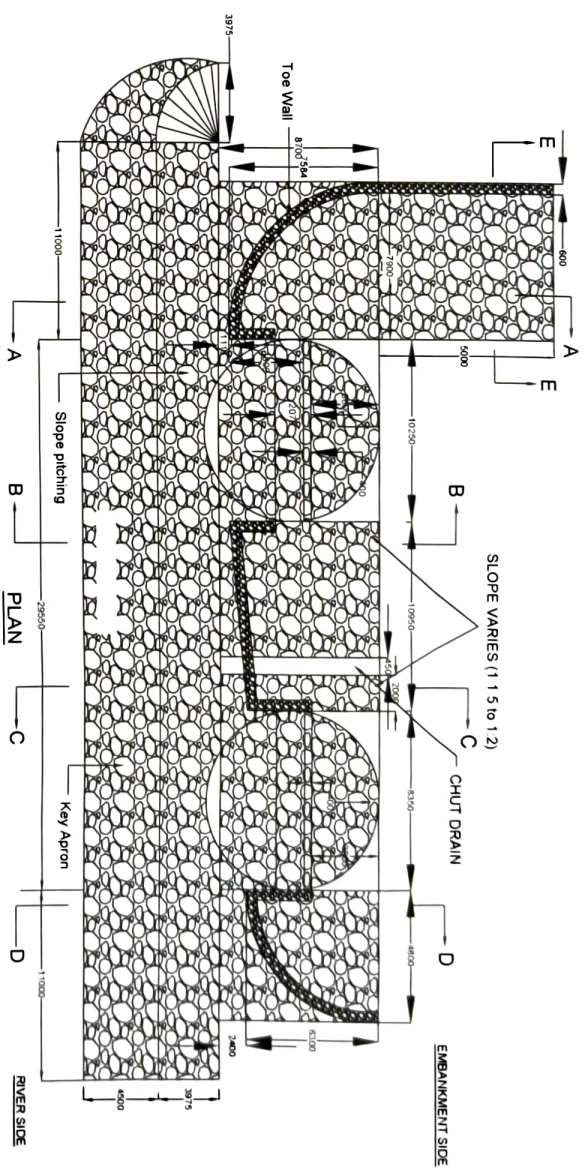


Shree Gautam Construction Co. Ltd.

Nalbari, Assam

	EMPLOYER	CONSULTANT	CONTRACTOR	PROJECT
	NATIONAL HIGHWAYS AUTHORITY OF INDIA (MINISTRY OF ROAD TRANSPORT & HIGHWAYS)			
FOR CONSULTANT'S Quotation By : Approved By : Prepared By : Issued By : Submitted By :				
BPN. No. _____ DATE: _____				
TYPICAL DETAIL OF REINFORCING PROFILES				

AS BUILT DRAWING OF BOULDER PITCHING IN BETWEEN NCW & ECW BRIDGE AT CH - 1050 800 (NALBARI END)

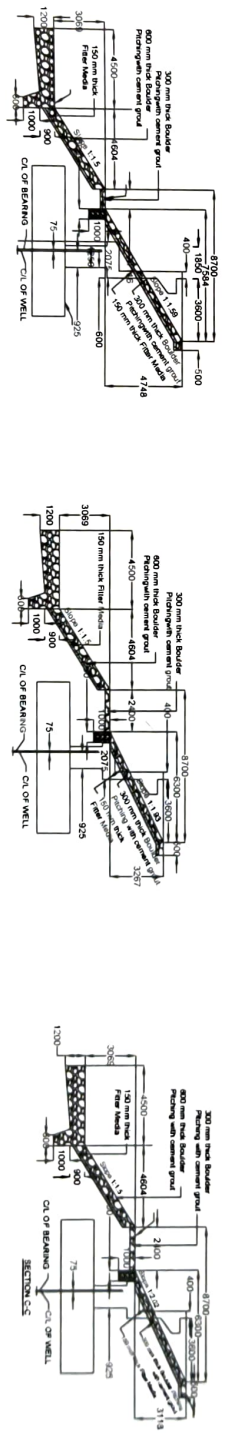
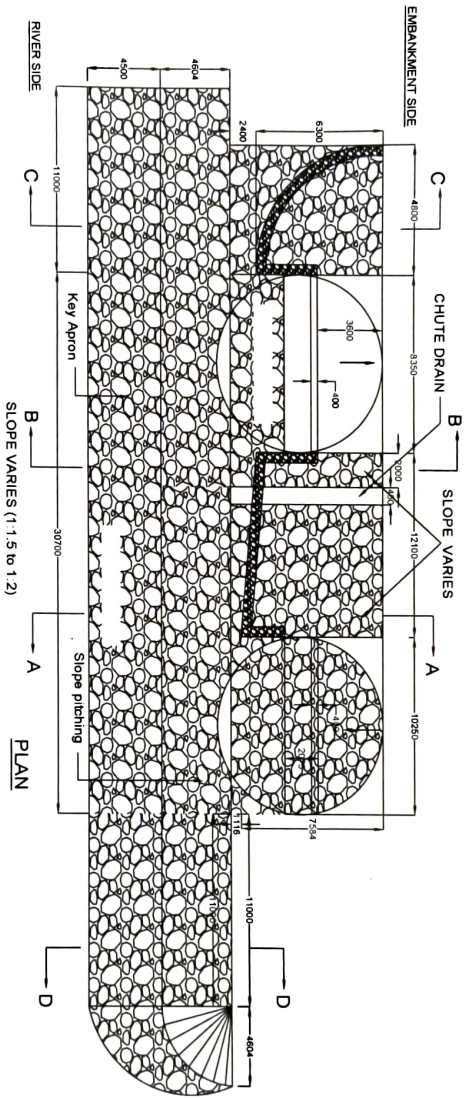
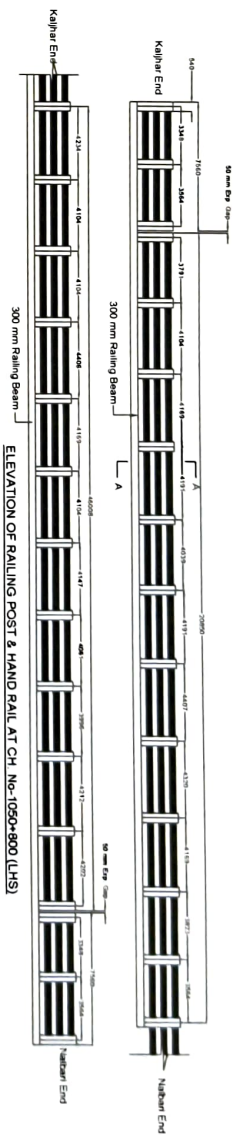


MAIDUR KATHIRAMAN
Project Manager
Shree Gautam Construction Co. Ltd.

Resident Engineer
MSV International Inc. in Association
with Mangalam Associates
Private Limited

 NATIONAL HIGHWAYS AUTHORITY OF INDIA (MINISTRY OF ROAD TRANSPORT & HIGHWAYS)		MSV INTERNATIONAL INC. IN ASSOCIATION WITH MANGALAM ASSOCIATES		CONTRACTOR		PROJECT		FOR CONSULTANT		FOR CONTRACTOR		SCALE : AS SHOWN		TITIAL NAME OF SHEET No. of 14		TITIAL DETAIL OF PROTECTION WORK - 10	
EMPLOYER		CONSULTANT		CONTRACTOR		PROJECT		Checked By : Approved By : Prepared By : Drawn By : Submitted By :		DATE		DATE		DATE		DATE	

AS BUILT DRAWING OF BOULDER PITCHING IN BETWEEN NCW BRIDGE AT CH - 1050 800 KALJHAR END) & HAND RAILING NCW



	NATIONAL HIGHWAYS AUTHORITY OF INDIA (MINISTRY OF ROAD TRANSPORT & HIGHWAYS)		MSV INTERNATIONAL INC. IN ASSOCIATION WITH MANGLAM ASSOCIATES		PROJECT		FOR CONSULTANT		FOR CONTRACTOR		SCALE : AS SHOWN		TYPICAL RAILING OF BRIDGE No. 17 OF CH. 1050+800	
	EMPLOYER	CONSULTANT	CONTRACTOR	PROJECT	FOR CONSULTANT	FOR CONTRACTOR	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE

MAIDUR RAHMAN
Project Manager
Shree Gautam Construction Co. Ltd.

Resident Engineer
MSV International Inc. in Association
with Manglam Associates
Kahbari, Assam