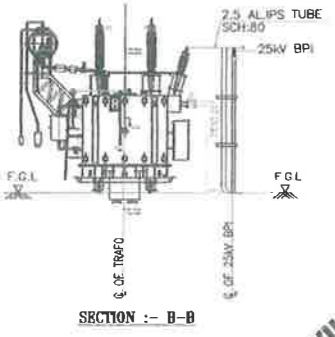
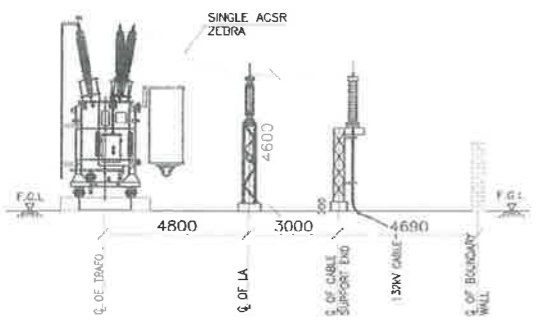


5300.00 SQ.M.



E=5046.719  
N=5044.020

PLOT - 1  
3300.00 SQ.M.

ADDITIONAL AREA REQUIRED  
737.8731 SQ.M.

ADDITIONAL AREA REQUIRED  
154.7299 SQ.M.

4500.00 SQ.M.

SER. NO.	SYMBOL	DESCRIPTION	QTY
01		132/33KV, 20/25MVA AUXILIARY MAIN TRANSFORMER	02
02		132/27.5KV, 21.6/30.24MVA TRACTION TRANSFORMER	02
03		110KV LIGHTNING ARRESTOR	10
04		84KV LIGHTNING ARRESTOR	02
05		CABLE TERMINATION BUSHING	10
06		72.5KV ISOLATOR	02
07		NGR	02
08		HIGH MAST	01
09		GATE	01
10		FENCE	-
11		132KV LONG BURIED RAIL	01

**SWPL- LEGEND**

ADDITIONAL AREA REQUIRED

= 394.5267 SQ. MTR. + 154.7299 SQ. MTR.  
= 549.2566 SQ. MTR.

NEPALI MARKET AREA

**PLOT CO-ORDINATES**

POINT ID	EASTING	NORTHING	POINT ID	EASTING	NORTHING
1	5046.719	5044.020	A	5001.451	5000.954
2	5071.201	5038.958	B	5008.835	5007.503
3	5109.295	5031.010	C	5046.719	4989.016
4	5104.035	4991.176	D	5022.334	5042.287
5	5081.728	4986.251	E	5109.820	5034.987
6	5132.413	5037.873			

**LEGEND- (INDOOR CABLE TRENCH TYPE)**

SER. NO.	LEGEND	DESCRIPTION
01		CABLE TRENCH TYPE-1-1 3100(X)3000(D)
02		CABLE TRENCH TYPE-2-2
03		CABLE TRENCH TYPE-3-3
04		CABLE TRENCH TYPE-4-4
05		CABLE TRENCH TYPE-5-5
06		CABLE TRENCH TYPE-6-6
07		CABLE TRENCH TYPE-7-7
08		CABLE TRENCH TYPE-8-8

**LEGEND- (OUTDOOR CABLE TRENCH TYPE)**

SER. NO.	LEGEND	DESCRIPTION
09		CABLE TRENCH TYPE-A-A 1400(X)1200(D)
10		CABLE TRENCH TYPE-A1-A1 1000(X)1000(D)
11		CABLE TRENCH TYPE-B-B 1800(X)800(D)
12		CABLE TRENCH TYPE-B1-B1 1000(X)800(D)
13		CABLE TRENCH TYPE-C-C 700(X)750(D)
14		CABLE TRENCH TYPE-D-D 400(X)450(D)
15		CABLE TRENCH TYPE-E-E 1000(X)1000(D)

**SYSTEM PARAMETERS**

SR.NO.	DESCRIPTION	132KV	33KV & 27.5KV
1.	MINIMUM CLEARANCE	1300mm	350mm
2.	PHASE TO GROUND	1300mm	320mm
3.	SECTIONAL CLEARANCE	3500mm	3000mm

**NOTES:-**

- 1) ALL DIMENSIONS ARE IN MM.
- 2) WATER SUMP, BOT WILL BE LOCATED SUITABLY AS PER SITE CONDITION.
- 3) FOR DETAILS OF INDOOR & OUTDOOR CABLE TRENCHES, NAME PIPES, PULL PITS, INSIDE, RISE, PLOT REEFER DRAWING FOUNDATION AND CABLE TRENCH LAYOUT PLAN - PCMC - RS2-2 DRAWING NO. - MWB05-SNW-AP-PES-RS2-DRP-001A\_REV-001

ADDITIONAL AREA REQUIRED  
394.5267 SQ.M.

TO PIMPRI VILLAGE

E=5008.835  
N=5007.503

E 5001.451  
N 5000.954

E=5046.788  
N=4989.016

E=5043.356  
N=4980.889

E=5072.434  
N=5042.787

E=5071.201  
N=5038.958

E=5109.820  
N=5034.987

E=5109.295  
N=5031.010

E=5104.035  
N=4991.176

E=5081.728  
N=4986.251

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT / DETAILED DESIGN CONSULTANT & CONTRACTOR. IT IS CERTIFIED THAT THERE IS NO CHANGE IN THIS GRID FROM THE ALREADY APPROVED OR DATED.

THIS DRAWING INCLUDING ITS DESIGN AND DETAILING HAS BEEN PROOF CHECKED INDEPENDENTLY AND FOUND SUITABLE FOR THE EXECUTION PURPOSE AND IS RECOMMENDED FOR GFC / NO OBJECTION.

Proof checked & Approved by GC  
 Being Given No Objection  
Issued As Good For Construction.

COUNTER SIGNED BY MAHARASHTRA METRO RAIL CORPORATION LTD.

PROJECT: PUNE METRO RAIL PROJECT  
The Orion Building, 1st Floor, Opposite Don Bosco Center, Near Saint Mira's Girls College, Koregaon Park, Pune - 411001, MH, India

REV NO	DATE	DESCRIPTION	SIGN
A04	10.06.2020	REVISED IN LINE WITH FOUNDATION AND CABLE TRENCH LAYOUT	
A03	20.02.2020	REVISED AS PER COMMENTS RECEIVED VIDE EMAIL DTD. 20.02.20	
A02	07.10.2019	132KV GSE HALL DIMENSIONS ARE REVISED IN LINE WITH 132KV SINGLE LINE DIAGRAM FOR CHINCHWAD GSS (PCMC RISE, INSIDE METERS ARRANGEMENT), DRG NO MWB05-SNW-AP-PES-RS2-DRP-001A, REV:003 DTD. 26.07.19	
B01	24.06.2018	ISSUED FOR APPROVAL	

DDC / CONTRACTOR				CONTRACTOR				PROOF CONSULTANT			
SIGN:	SIGN:	SIGN:	SIGN:	SIGN:	SIGN:	SIGN:	SIGN:	SIGN:	SIGN:	SIGN:	SIGN:
DATE: 10.06.2020	DATE: 10.06.2020	DATE: 10.06.2020	DATE: 10.06.2020	DATE: 10.06.2020	DATE: 10.06.2020	DATE: 10.06.2020	DATE: 10.06.2020	DATE: 10.06.2020	DATE: 10.06.2020	DATE: 10.06.2020	DATE: 10.06.2020
NAME: B.A.R.	NAME: A.V.P.	NAME: K.K.L.	NAME: S.S.	NAME: ---	NAME: ---	NAME: ---	NAME: ---	NAME: ---	NAME: ---	NAME: ---	NAME: ---
DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY	ACCEPTED BY	REVIEWED BY (STRUCT. ENGG.)	APPROVED BY (TEAM LEADER)	REVIEWED BY	APPROVED BY	REVIEWED BY	APPROVED BY	REVIEWED BY

**STERLING & WILSON PVT LTD**  
Universal Majestic, 9th Floor,  
P.L. Lokhande Marg, Chembur (W),  
Mumbai - 400043

**SYSTRA-AECOM-EGIS-RITES**  
(GENERAL CONSULTANT TO PUNE METRO RAIL PROJECT)

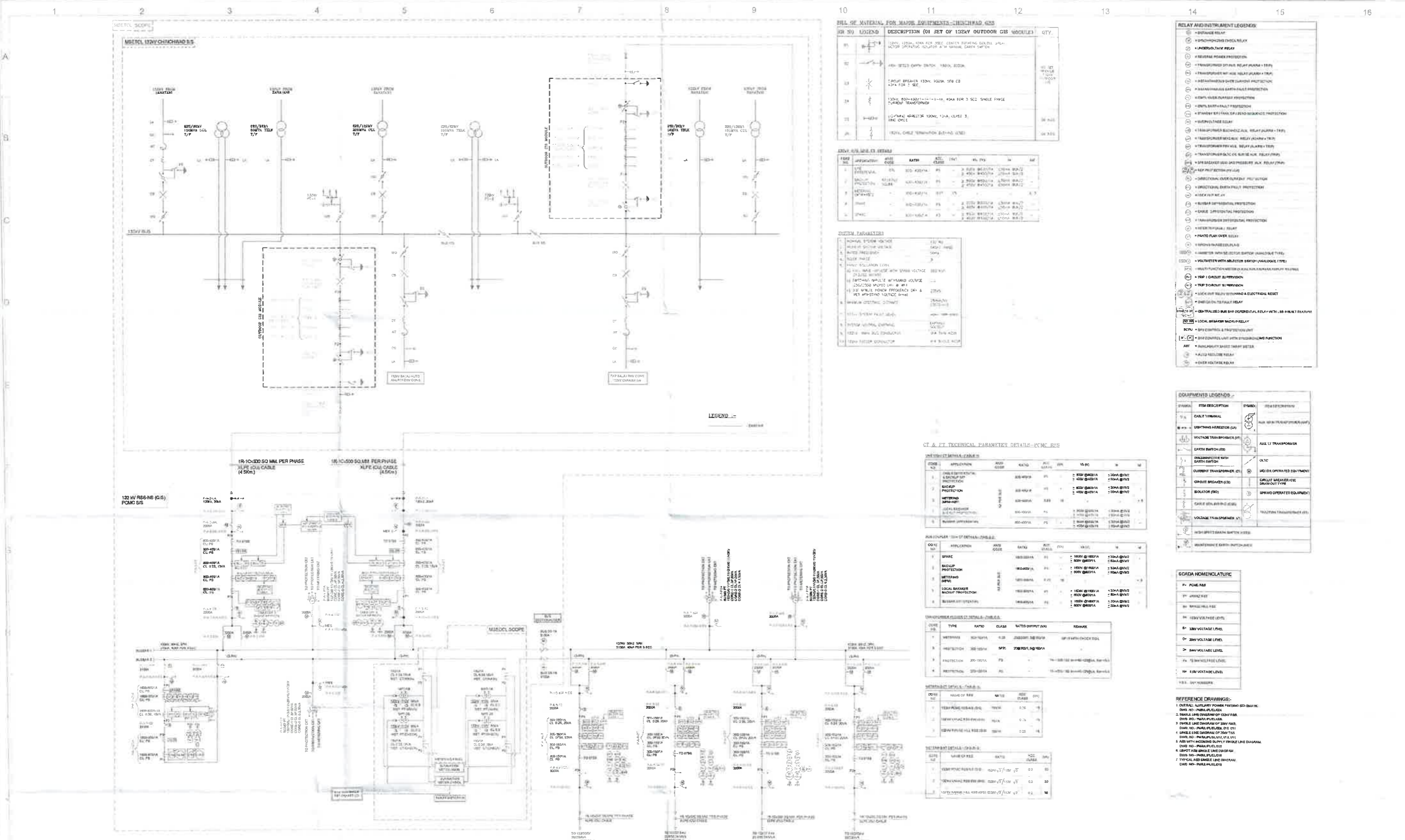
BY HOD

CLIENT: MAHARASHTRA METRO RAIL CORPORATION LTD  
LOCATION: Receiving Sub Station-2

TITLE: GENERAL ARRANGEMENT LAYOUT PLAN-PCMC  
SCALE: AS SHOW DATE: 10.06.2020 STATUS: Issued for Approval  
DRG NO: MWB05-SNW-AP-PES-RS2-DRP-0001

REVISION NO:  
A04





SR NO	SYMBOL	DESCRIPTION (11 SET OF 132KV OUTDOOR GIS MODULE)	QTY
11	[Symbol]	132KV, 1250A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET
12	[Symbol]	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET
13	[Symbol]	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET
14	[Symbol]	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET
15	[Symbol]	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET
16	[Symbol]	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET

CODE	DESCRIPTION	RATIO	CLASS	WATER OUTPUT (L/MIN)	REMARK
1	SPACE	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
2	SCALP PROTECTION	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
3	METHOD PROTECTION	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
4	LOCAL BREAKER	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
5	RESERVE DIFFERENTIAL	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A

ITEM NO	ITEM DESCRIPTION	QTY	REMARKS
1	132KV, 1250A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
2	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
3	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
4	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
5	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	

SYMBOL	ITEM DESCRIPTION	QTY	REMARKS
[Symbol]	132KV, 1250A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
[Symbol]	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
[Symbol]	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
[Symbol]	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
[Symbol]	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	

ITEM NO	ITEM DESCRIPTION	QTY	REMARKS
1	132KV, 1250A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
2	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
3	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
4	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	
5	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET	

CT & PT TECHNICAL PARAMETERS DETAILS - PCMC RSS

CODE	APPLICATION	RATIO	CLASS	WATER OUTPUT (L/MIN)	REMARK
1	SPACE	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
2	SCALP PROTECTION	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
3	METHOD PROTECTION	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
4	LOCAL BREAKER	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
5	RESERVE DIFFERENTIAL	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A

CODE	APPLICATION	RATIO	CLASS	WATER OUTPUT (L/MIN)	REMARK
1	SPACE	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
2	SCALP PROTECTION	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
3	METHOD PROTECTION	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
4	LOCAL BREAKER	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
5	RESERVE DIFFERENTIAL	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A

CODE	TYPE	RATIO	CLASS	WATER OUTPUT (L/MIN)	REMARK
1	SPACE	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
2	SCALP PROTECTION	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
3	METHOD PROTECTION	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
4	LOCAL BREAKER	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A
5	RESERVE DIFFERENTIAL	1000/110V	PS	2.500 @ 110V/1A	1.500VA @ 110V/1A

CODE	NAME OF RELAY	RATIO	CLASS	WATER OUTPUT (L/MIN)	REMARK
1	132KV, 1250A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET			
2	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET			
3	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET			

CODE	NAME OF RELAY	RATIO	CLASS	WATER OUTPUT (L/MIN)	REMARK
1	132KV, 1250A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET			
2	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET			
3	11KV, 2000A, 40KA FOR 3 SEC. CENTER BREAKING, DOUBLE BREAKING, 20KV OPERATING VOLTAGE & 40KV MAXIMUM OPEN SWITCH	03 SET			

NOTES:  
 1. THIS SINGLE LINE DIAGRAM IS PREPARED IN CONFORMANCE WITH THE REQUIREMENTS OF ALL 132KV & 11KV GSS AS PER IEC 60044-1 & 60044-2.  
 2. THIS DRAWING IS THE PROPERTY OF STERLING & WILSON PVT LTD. AND SHALL REMAIN THEIR PROPERTY.  
 3. ALL INSTRUMENTS AND RELAYS ARE TO BE PROVIDED BY THE CONTRACTOR.  
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE DRAWING.  
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE DRAWING.  
 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE DRAWING.  
 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE DRAWING.  
 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE DRAWING.  
 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE DRAWING.  
 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE DRAWING.

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT / DETAILED DESIGN CONSULTANT & CONTRACTOR. IT IS CERTIFIED THAT THERE IS NO CHANGE IN THIS GFC FROM THE ALREADY APPROVED CR DWG NO. [ ]  
 APPROVED ON DATE [ ]  
 DDC / CONTRACTOR [ ]  
 CONTRACTOR / DDC [ ]  
 SIGN: [ ] DATE: 26.07.19  
 SIGN: [ ] DATE: 26.07.19  
 SIGN: [ ] DATE: 26.07.19  
 SIGN: [ ] DATE: 26.07.19  
 SIGN: [ ] DATE: 26.07.19  
 DRAWN BY [ ] DESIGN BY [ ] CHECKED BY [ ] APPROVED BY [ ]

THIS DRAWING INCLUDING ITS DESIGN AND DETAILING HAS BEEN CHECKED AND FOUND SUITABLE FOR THE EXECUTION PURPOSE AND IS RECOMMENDED FOR GFC / NO OBJECTION.  
 PROOF CONSULTANT [ ]  
 GENERAL CONSULTANT TO PMR [ ]  
 SIGN: [ ] DATE: 24/08/2019  
 NAME: [ ]

COUNTER SIGNED BY MAHARASHTRA METRO RAIL CORPORATION LTD.  
 PROJECT: [ ]  
 CLIENT: MAHARASHTRA METRO RAIL CORPORATION LTD. (MRA - METRO)  
 LOCATION: PUNE METRO RAIL PROJECT  
 TITLE: 132KV SINGLE LINE DIAGRAM FOR CHINCHWAD GSS & PCMC RSS  
 SCALE: NTS  
 DATE: 26.07.19 STATUS: - SHEET NO.: 1 OF 1 REVISION NO. [ ]

PROJECT: PUNE METRO RAIL PROJECT  
 101, The Orion, Opposite Don Bosco Youth Centre, Koregaon Park, Pune 411001, Maharashtra, INDIA  
 CLIENT: MAHARASHTRA METRO RAIL CORPORATION LTD. (MRA - METRO)  
 LOCATION: PUNE METRO RAIL PROJECT  
 TITLE: 132KV SINGLE LINE DIAGRAM FOR CHINCHWAD GSS & PCMC RSS  
 SCALE: NTS  
 DATE: 26.07.19 STATUS: - SHEET NO.: 1 OF 1 REVISION NO. [ ]  
 DRG NO: MWB05-SNW-AP-PES-PWD-SLD-0001  
 B03

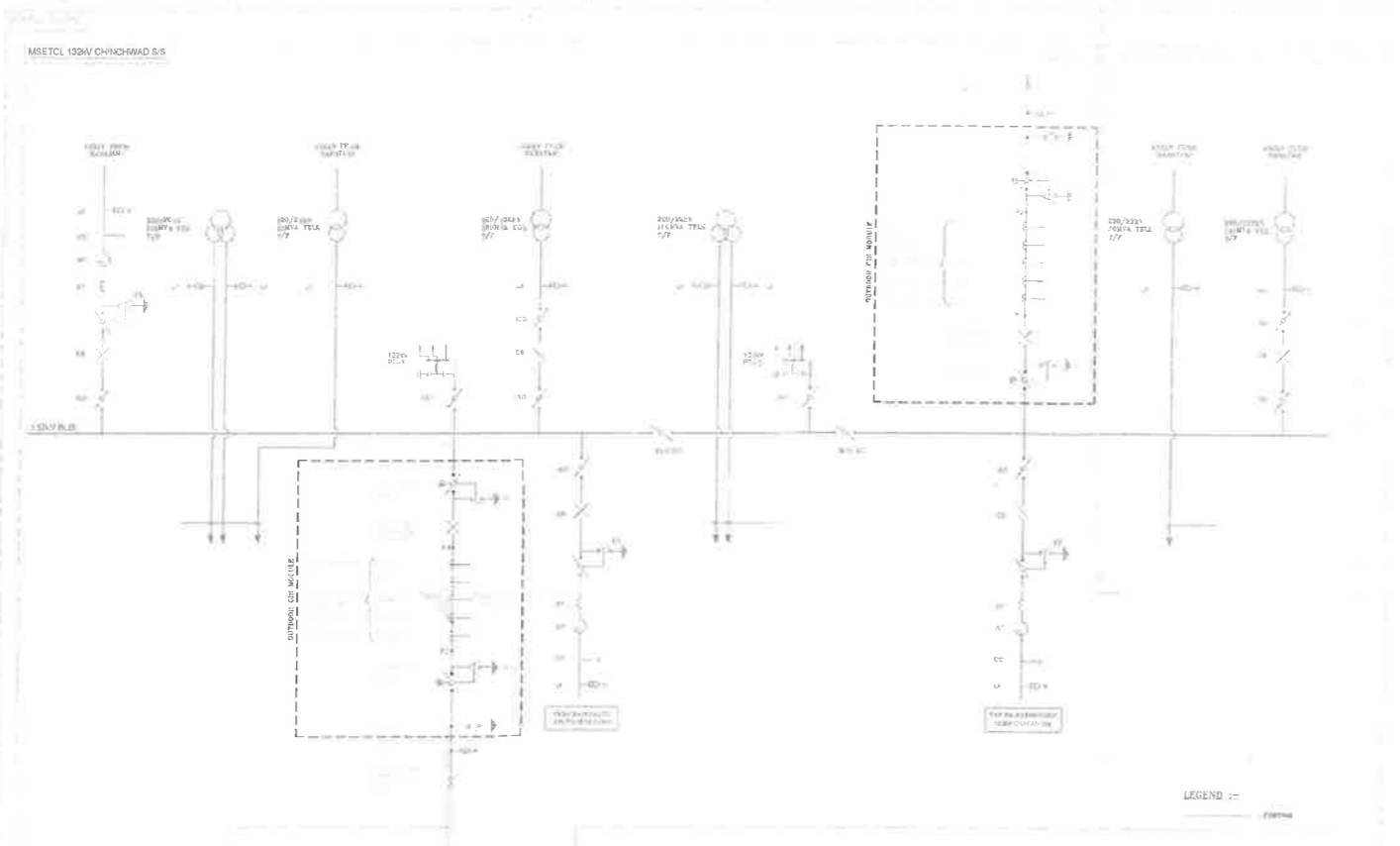
REV NO	DATE	DESCRIPTION	SIGN
B03	26.07.19	REVISED AS PER MSETCL REQUIREMENT CONVEYED DURING MEETING DTD 25.07.2019	[ ]
B02	02.07.19	REVISED AS PER E-MAIL DATED 02.07.19	[ ]
B01	24.06.19	ISSUE FOR APPROVAL	[ ]

STERLING & WILSON PVT LTD.  
 Universal Majestic, 13th Floor,  
 P.L. Lokhande Marg, Chembur (W),  
 Mumbai - 400043



PROOFCONSULTANT [ ]  
 SYSTRA-AECOM-EGIS-RITES





**LIST OF MATERIAL FOR SAME EQUIPMENT - CHINCHWAD GSS**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
01	33KV CIRCUIT BREAKER	NO.	03
02	33KV ISOLATOR	NO.	06
03	33KV FUSE	NO.	03
04	33KV CT	NO.	06
05	11KV ISOLATOR	NO.	06
06	11KV FUSE	NO.	03
07	11KV CT	NO.	06
08	11KV CB	NO.	03

**RELAY AND INSTRUMENT LEGENDS**

1	OVERCURRENT RELAY
2	UNDERCURRENT RELAY
3	UNDERVOLTAGE RELAY
4	DIFFERENTIAL PROTECTION
5	TRANSFORMER OIL LEAK RELAY (ALARM + TRIP)
6	TRANSFORMER OVERHEAT RELAY (ALARM + TRIP)
7	TRANSFORMER OVERCURRENT PROTECTION
8	TRANSFORMER OVERVOLTAGE PROTECTION
9	TRANSFORMER UNDERVOLTAGE PROTECTION
10	TRANSFORMER WINDING PROTECTION
11	TRANSFORMER SHORT CIRCUIT RELAY (ALARM + TRIP)
12	TRANSFORMER RATIO CHECK RELAY
13	TRANSFORMER POLARITY CHECK RELAY
14	TRANSFORMER ELECTRICAL BURST RELAY (ALARM)
15	TRANSFORMER OVERTEMPERATURE RELAY (ALARM)
16	TRANSFORMER OIL LEVEL RELAY
17	TRANSFORMER DIFFERENTIAL PROTECTION
18	TRANSFORMER OVERVOLTAGE PROTECTION
19	TRANSFORMER UNDERVOLTAGE PROTECTION
20	TRANSFORMER WINDING PROTECTION
21	TRANSFORMER SHORT CIRCUIT RELAY (ALARM + TRIP)
22	TRANSFORMER RATIO CHECK RELAY
23	TRANSFORMER POLARITY CHECK RELAY
24	TRANSFORMER ELECTRICAL BURST RELAY (ALARM)
25	TRANSFORMER OVERTEMPERATURE RELAY (ALARM)
26	TRANSFORMER OIL LEVEL RELAY

**11KV BUSBARS CT DETAILS**

NO.	APPLICATION	CLASS	RATED	ACC. CLASS	CT RATIO	VECT.
1	OVERCURRENT	0.5	1000	0.5	1000/5	0.5
2	UNDERCURRENT	0.5	1000	0.5	1000/5	0.5
3	UNDERVOLTAGE	0.5	1000	0.5	1000/5	0.5
4	DIFFERENTIAL	0.5	1000	0.5	1000/5	0.5

**NEW PARAMETERS**

NO.	PARAMETER	VALUE
1	MINIMUM BREAKING CAPACITY	132KV
2	MINIMUM SHORT CIRCUIT CAPACITY	132KV
3	MINIMUM PROTECTION	132KV
4	MINIMUM ISOLATION	132KV
5	MINIMUM OPERATING VOLTAGE	132KV
6	MINIMUM OPERATING CURRENT	132KV
7	MINIMUM OPERATING POWER	132KV
8	MINIMUM OPERATING ENERGY	132KV
9	MINIMUM OPERATING TIME	132KV
10	MINIMUM OPERATING FREQUENCY	132KV
11	MINIMUM OPERATING TEMPERATURE	132KV
12	MINIMUM OPERATING HUMIDITY	132KV

**COMPONENT LEGENDS**

SYMBOL	ITEM DESCRIPTION	SYMBOL	ITEM DESCRIPTION
[Symbol]	132KV BUSBAR	[Symbol]	11KV BUSBAR
[Symbol]	33KV BUSBAR	[Symbol]	11KV ISOLATOR
[Symbol]	11KV BUSBAR	[Symbol]	11KV FUSE
[Symbol]	11KV CT	[Symbol]	11KV CB
[Symbol]	11KV ISOLATOR	[Symbol]	11KV FUSE
[Symbol]	11KV CT	[Symbol]	11KV CB
[Symbol]	11KV ISOLATOR	[Symbol]	11KV FUSE
[Symbol]	11KV CT	[Symbol]	11KV CB
[Symbol]	11KV ISOLATOR	[Symbol]	11KV FUSE
[Symbol]	11KV CT	[Symbol]	11KV CB

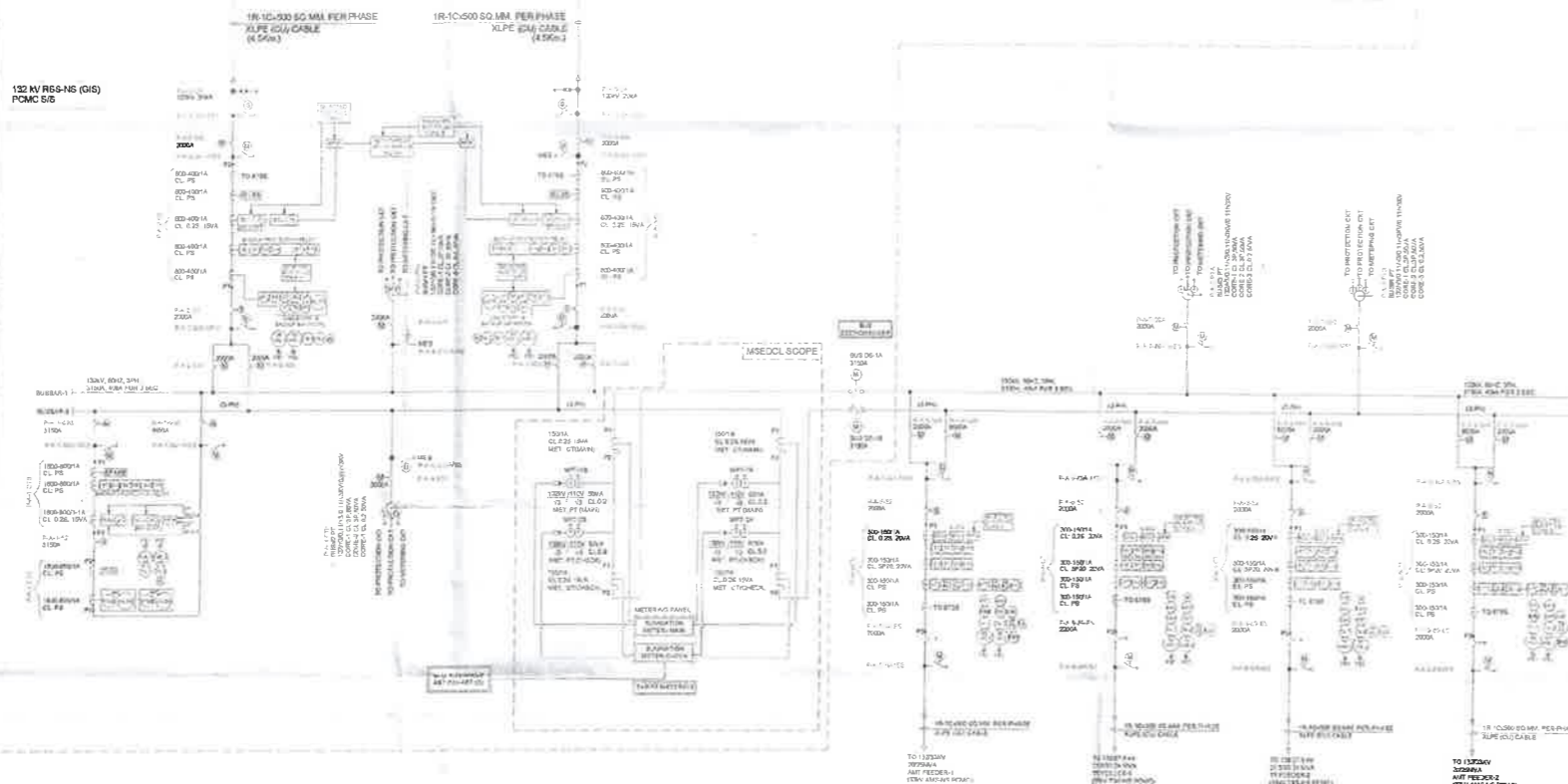
**CT & PT TECHNICAL PARAMETER DETAILS - PCMC RSS**

**CT DETAILS (TABLE 1)**

NO.	APPLICATION	CLASS	RATED	ACC. CLASS	CT RATIO	VECT.
1	OVERCURRENT	0.5	1000	0.5	1000/5	0.5
2	UNDERCURRENT	0.5	1000	0.5	1000/5	0.5
3	UNDERVOLTAGE	0.5	1000	0.5	1000/5	0.5
4	DIFFERENTIAL	0.5	1000	0.5	1000/5	0.5

**PT DETAILS (TABLE 2)**

NO.	APPLICATION	CLASS	RATED	ACC. CLASS	PT RATIO	VECT.
1	OVERVOLTAGE	0.5	1000	0.5	1000/5	0.5
2	UNDERVOLTAGE	0.5	1000	0.5	1000/5	0.5
3	DIFFERENTIAL	0.5	1000	0.5	1000/5	0.5
4	OVERCURRENT	0.5	1000	0.5	1000/5	0.5



**NOTES:**

- THE SINGLE LINE DIAGRAM IS PREPARED AS A REPRESENTATION OF THE OPERATION OF ALL 132KV/33KV/11KV TRANSFORMERS AND EQUIPMENT OPERATING UNDER NORMAL OPERATIONAL CONDITIONS.
- THESE DIAGRAMS ARE NOT TO BE USED FOR THE PURPOSES OF THE DESIGN OF THE EQUIPMENT.
- THESE DIAGRAMS ARE NOT TO BE USED FOR THE PURPOSES OF THE DESIGN OF THE EQUIPMENT.
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THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT / DETAILED DESIGN CONSULTANT & CONTRACTOR. IT IS CERTIFIED THAT THERE IS NO CHANGE IN THIS GFCO FROM THE ALREADY APPROVED OR CIVIL NO.

THIS DRAWING INCLUDING ITS DESIGN AND DETAILING HAS BEEN PROOF CHECKED INDEPENDENTLY AND FOUND SUITABLE FOR THE EXECUTION PURPOSE AND IS RECOMMENDED FOR GFC/NO OBJECTION.

COUNTER SIGNED BY MAHARASHTRA METRO RAIL CORPORATION LTD.

PROJECT: PUNE METRO RAIL PROJECT  
 101, The Orion, Opposite Don Bosco Youth Centre, Koregaon Park, Pune 411001 Maharashtra, INDIA

CLIENT: MAHARASHTRA METRO RAIL CORPORATION LTD. (MAHA METRO)

LOCATION: PUNE METRO RAIL PROJECT

TITLE: 132KV SINGLE LINE DIAGRAM FOR CHINCHWAD GSS & PCMC RSS

SCALE: NTS DATE: 26.07.19 STATUS: - SHEET NO: - 1 OF 1 REVISION NO:

DRG NO: MWB05-SNW-AP-PES-PWD-SLD-0001 B03

DDC / CONTRACTOR  
 SIGN: [Signature] DATE: 26.07.19  
 NAME: B.A.R.

CONTRACTOR / DDC  
 SIGN: [Signature] DATE: 26.07.19  
 NAME: A.V.P.

PROOF CONSULTANT  
 SIGN: [Signature] DATE: 24/8/2019  
 NAME: S. Ravani Sridharan

STERLING & WILSON PVT LTD.  
 Universal Majestic, 13th Floor,  
 P.L. Lokhande Marg, Chembur (W),  
 Mumbai - 400043

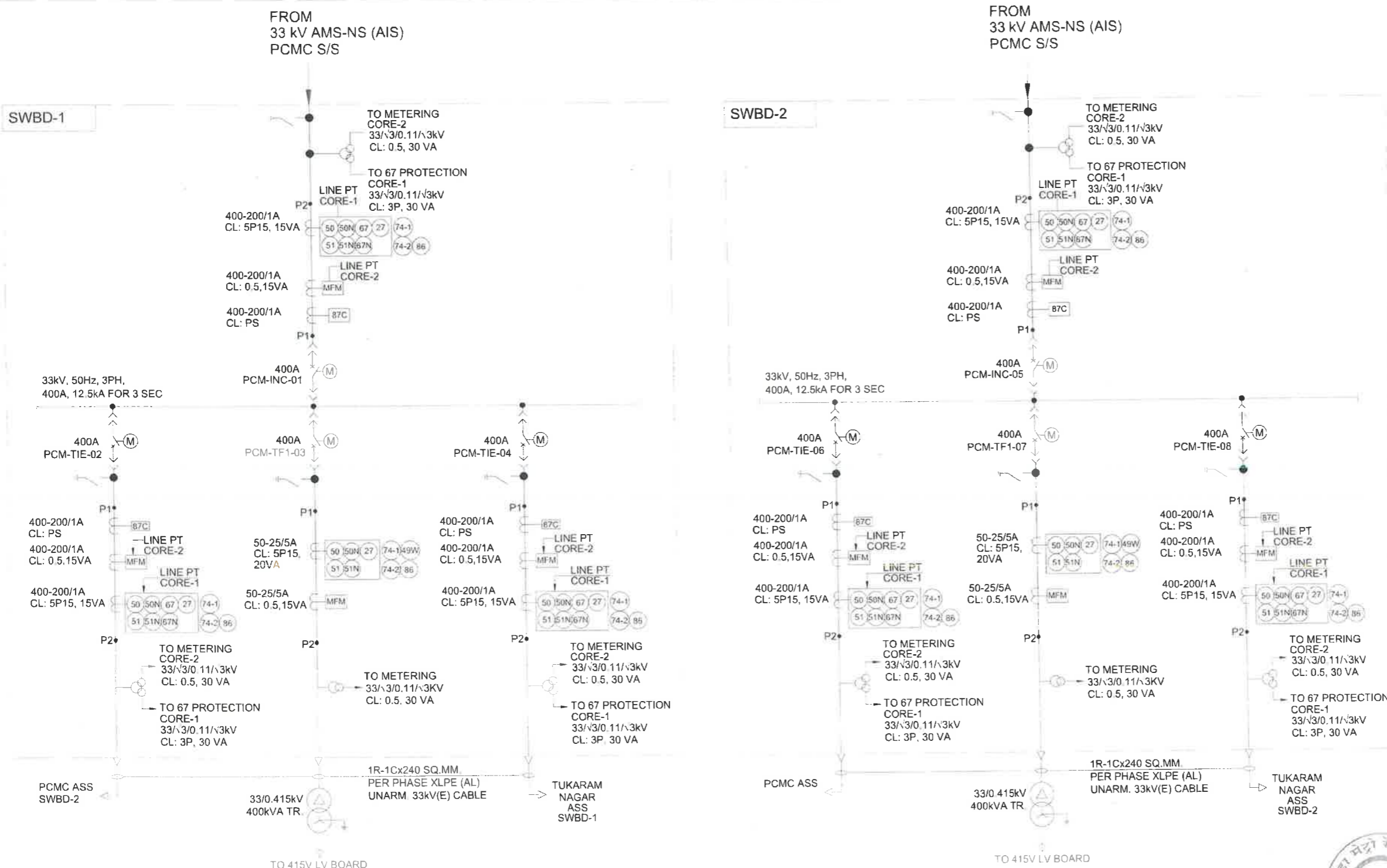
PROOFCONSULTANT  
 SYSTRA-AECOM-EGIS-RITES

**REVISIONS**

REV NO	DATE	DESCRIPTION
B03	26.07.19	REVISED AS PER MSETCL REQUIREMENT CONVEYED DURING MEETING DTD.25.07.2019
B02	02.07.19	REVISED AS PER E MAIL DATED. 02.07.19
B01	24.06.19	ISSUE FOR APPROVAL



# SLD FOR 33kV POWER DISTRIBUTION- PCMC ASS



### RELAY AND INSTRUMENT LEGENDS:

- (27) = UNDERVOLTAGE RELAY
- (50) = INSTANTANEOUS OVER CURRENT PROTECTION
- (50N) = INSTANTANEOUS EARTH FAULT PROTECTION
- (51) = IDMTL OVER CURRENT PROTECTION
- (51N) = IDMTL EARTH FAULT PROTECTION
- (67) = DIRECTIONAL OVER CURRENT PROTECTION
- (67N) = DIRECTIONAL EARTH FAULT PROTECTION
- (86) = LOCK OUT RELAY
- (87C) = CABLE DIFFERENTIAL PROTECTION
- MFM = MULTI FUNCTION METER
- (74-1) = TRIP 1 CIRCUIT SUPERVISION
- (74-2) = TRIP 2 CIRCUIT SUPERVISION

### EQUIPMENTS LEGENDS :-

SYMBOL	ITEM DESCRIPTION
▽ Δ	CABLE TERMINAL
●	EARTH SWITCH (ES)
P1, P2	CURRENT TRANSFORMER (CT)
(M)	MOTOR OPERATED EQUIPMENT
(CB)	CIRCUIT BREAKER (CB) DRAW OUT TYPE
(A)	AUX LT TRANSFORMER
(V)	VOLTAGE TRANSFORMER (VT)

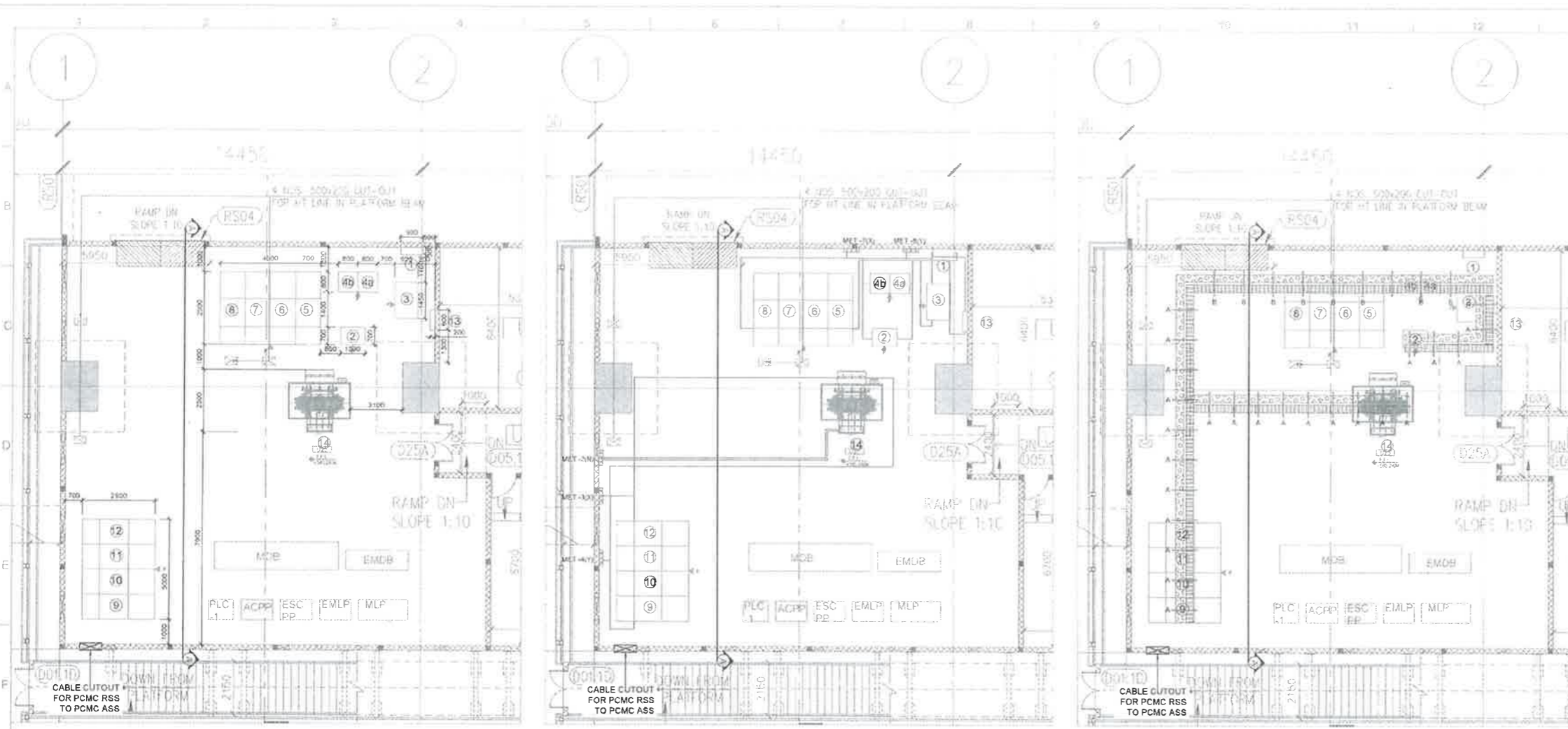
Mukeshwar  
SWPL



S.R.G.  
SEPS & GC







**EQUIPMENT LAYOUT**  
SCALE- 1:100

**EARTHING LAYOUT**  
SCALE- 1:100

**CABLE TRAY ELECTRICAL LAYOUT**  
SCALE- 1:100

**EQUIPMENTS DETAIL :-**

S.R. NO	DESCRIPTION	SIZE (MM) (LxWxH)
1	415V, ACDB PANEL (WALL MOUNTED)	900 X 300 X 1000
2	110V BATTERY CHARGER	1000 X 700 X 1600
3	110V BATTERY BANK	925 X 1450
4	MTU PANEL	800 X 800 X 2200
5	33kV VCB PANEL-1/C#1 FROM PCMC ASS	1000 X 2900 X 3125
6	33kV VCB PANEL-0/G#1 TO TUKARAM NAGAR	1000 X 2900 X 3125
7	33kV VCB PANEL-AUX TR #1	1000 X 2900 X 3125
8	33kV VCB PANEL-33kV CABLE INTER CONNECTION	1000 X 2900 X 3125
9	33kV VCB PANEL-33kV CABLE INTER CONNECTION	1000 X 2900 X 3125
10	33kV VCB PANEL-AUX TR #2	1000 X 2900 X 3125
11	33kV VCB PANEL-0/G#2 TO TUKARAM NAGAR	1000 X 2900 X 3125
12	33kV VCB PANEL-1/C#2 FROM PCMC RSS	1000 X 2900 X 3125
13	110V, DCDB PANEL (WALL MOUNTED)	800 X 200 X 750
14	AUX TRANSFORMER - 400kVA 33/0 415kV/1	2500 X 2500 X 2500

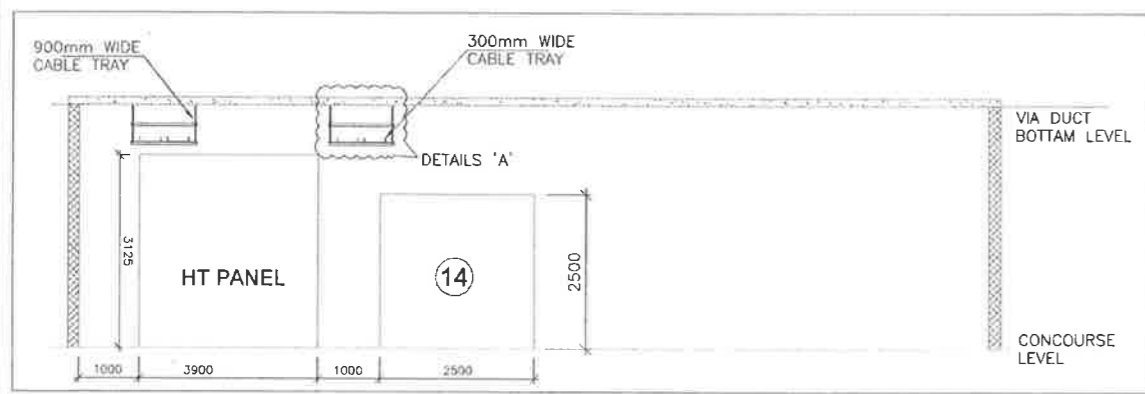
**CABLE TRAY DETAILS**

TRAY NO	SYMBOL	DESCRIPTION	BOT (IN Mtr)	BOO (IN Mtr)
T1	[Symbol]	450mm TRAY FOR FOR DROP ON PANEL	-	11
T2	[Symbol]	900mm TRAY FOR HT POWER CABLES	4.5	12
T3	[Symbol]	300mm TRAY FOR CONTROL CABLES	4.2	42
T4	[Symbol]	300mm TRAY FOR LT POWER CABLES	4.2	42

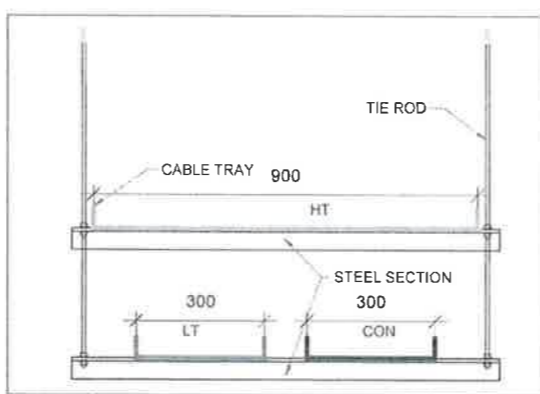
**MET DETAILS**

MET NO	DESCRIPTION
MET-2(N)	FOR NEUTRAL EARTHING OF EQUIPMENT SR. NO. 14 (TRANSFORMER 1)
MET-3(X)	
MET-4(Y)	FOR BODY EARTHING OF EQUIPMENT SR. NO. 9,10,11,12
MET-7(X)	
MET 8(Y)	FOR BODY EARTHING OF EQUIPMENT SR. NO. 1,2,3,4A,4B,5,6,7,8

TOTAL LENGTH OF 50x6 GI STRIP REQUIRED FOR EARTHING =120M  
**LEGEND :-**  
 --- GI STRIPS FOR EARTHING  
**NOTE :-**  
 • ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.  
 • EQUIPMENT/PANEL DIMENSION SHOWN IN THE DRAWING ARE TENTATIVE AND  
 • ASS EQUIPMENT LAYOUT DRAWING HAS BEEN DEVELOPED ON THE BASIS OF WILL BE FINALISED AFTER DETAILED ENGINEERING. P.M.R.C DRAWING NO. P1001-AE-AR-PRM-DRP-2011 (STATION - REACH-1-PCMC STATION - CONCOURSE LEVEL PLAN)



**SECTION 'A'**



**DETAILS 'A'**

**BOO OF TRAY SUPPORT ARRANGMENT :-**

TYPE	DESCRIPTION	NO OF SETS
A	2 Nos 700MM LONG TIE ROD WITH 2 Nos 1200MM LONG STEEL SECTION IN TWO LAYERS FOR SUPPORT THE TRAY	09 Nos
B	2 Nos 700MM LONG TIE ROD WITH 2 Nos 1200MM LONG STEEL SECTION IN TWO LAYERS FOR SUPPORT THE TRAY	22 Nos

**NOTES:**

REV NO	DATE	DESCRIPTION	SIGN
B11	10.05.22	AS BUILT DRAWING	
B10	25.04.22	AS BUILT DRAWING	
B09	02.08.21	Revised as per GC Comments	
B08	21.04.21	Revised as per GC Comments	
B07	12.04.21	Revised as per latest CSO layout mail dtd 07.04.21	
B06	28.05.20	Revised as per GC Comments	
B05	30.04.20	Revised as per GC Comments	
B04	04.02.20	Revised as per GC Comments	
B03	18.12.19	Revised as per GC Comments	
B02	04.11.18	Revised as per GC Comments	
B01	04.09.19	For Review and Approval	

THE RESPONSIBILITY OF CONTROL, CHECK & VERIFICATION OF ACCURACY, CORRECTNESS, COMPLETENESS, INTEGRATION & FULL COMPLIANCE OF THE CONTRACT PROVISIONS IN RESPECT OF DESIGN, ANALYSIS AND DRAWINGS RESTS WITH THE DETAILED DESIGN CONSULTANT / DETAILED DESIGN CONSULTANT & CONTRACTOR. IT IS CERTIFIED THAT THERE IS NO CHANGE IN THIS GCD FROM THE ALREADY APPROVED CR Dwg NO. ... APPROVED ON DATE

**DDC**  
 SIGN: [Signatures] DATE: 10.05.2022  
 NAME: B.V.P., NAME: S.P., NAME: G.N.S., NAME: S.S.

**CONTRACTOR**  
 SIGN: [Signature] DATE: 10.05.2022  
 NAME: MUKTACHAWA

**PROOF CONSULTANT**  
 SIGN: [Signature] DATE: 10.05.2022  
 NAME: [Name]

**STERLING & WILSON PVT LTD.**  
 Universal Majestic, 8th Floor,  
 P.L. Lokhande Marg, Chembur (W),  
 Mumbai - 400043

THIS DRAWING INCLUDING ITS DESIGN AND DETAILING HAS BEEN PROOF CHECKED INDEPENDENTLY AND FOUND SUITABLE FOR THE EXECUTION PURPOSE AND IS RECOMMENDED FOR GFC / NO OBJECTION.

Proof checked by GC  
 Being Given No Objection  
 Issued As Good For Construction

**AECOM-SYSTRACEG**  
 (GENERAL CONSULTANT TO PUNE METRO RAIL PROJECT)

**PUNE METRO RAIL PROJECT**  
 The Orion Building, 1st Floor, Opposite Don Bosco Center, Near Saini Mira's Girls College, Koregaon Park, Pune - 411001, MH, India

**MAHARASHTRA METRO RAIL CORPORATION LTD.**

LOCATION: PCMC ASS  
 TITLE: CLASS EQUIPMENT EARTHING AND CABLE TRAY LAYOUT-PCMC ASS  
 SCALE: AS SHOWN DATE: 09.05.2022 STATUS: Good for Handover  
 PROJECT NO: MWB05-SNW-AP-PES-PIM-DRP-0001

**ARCHITECTURE**

REVISION NO: **B11**

**Part a: Proposed Personnel**

Bidder should provide the details of the proposed personnel and their experience record in the relevant Information Forms below for each candidate in line with the requirement specified in section VII B Part 2 : Appendix B 10, of Part-2 Works' Requirement:

1.	Title of position
	Name
2.	Title of position
	Name
3.	Title of position
	Name
4.	Title of position
	Name
5.	Title of position
	Name
6.	Title of position
	Name
etc.	Title of position
	Name



**Part b: Resumé of Proposed Personnel**

The Bidder shall provide all the information requested below. Use one form for each position listed in part a of Form-4A

<b>Position</b>		
<b>Personnel information</b>	<b>Full Legal Name</b>	<b>Date of Birth</b>
	<b>Known as</b>	<b>Place of Birth</b>
	<b>Nationality</b>	<b>Citizenship</b>
	<b>Type of Government ID</b>	<b>ID number</b>
	<b>Attach a copy of ID to this form</b>	
<b>Professional qualifications</b>		
<b>Present employment</b>	<b>Name of employer</b>	
	<b>Address of employer</b>	
	<b>Telephone</b>	<b>Contact (manager / personnel officer)</b>
	<b>Fax</b>	<b>E-mail</b>
	<b>Job title</b>	<b>Years with present employer</b>

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From	To	Company/Project/Position/Relevant Technical and Management Experience



## 3.3 Return Cables(3.3kV)

SN	Indications	Unit	Expected values	Values submitted
1	Manufacturer			
2	Cable size	Sqmm	240	
3	Cable type		XLPE	
4	Voltage grade (Uo / U (U2))	kV	1.9/3.3 (3.6)	
5	Reference standard		IEC 60502-1 latest version	
6	Operating voltage	kV	3.3	
7	Conducting core		Annealed copper	
8	Shape		Circular compact stranded	
9	Class / standard		Class 2 / IEC 228	
10	Nominal diameter of conductor	mm		
11	Conductor screen materials		Extruded semi conducting compound	
12	Nominal thickness of conductor screen	mm		
13	Insulation material		Extruded solid dielectric made of XLPE with tolerance as per IEC 502-1	
14	Nominal thickness of insulation	mm		
15	Nominal diameter over insulation	mm		
16	Insulation screen material (non-metallic)		Non-metallic part of semi-conducting material plus metallic part consisting of standard wire and copper tape, rated to carry a short circuit current of 14kA for 1 second	





SN	Indications	Unit	Expected values	Values submitted
17	Nominal thickness of insulation screen	mm		
18	Insulation screen material (metallic)			
19	Nominal thickness of tape	mm		
20	Nos. and diameter of wires	No. / mm		
21	Cross sectional area	Sqmm		
22	Outer sheath material		FRLS	
23	Nominal thickness of outer sheath	mm		
24	Nominal overall diameter (+/- 2mm)	mm		
25	Minimum bending radius	mm		
26	Max DC conductor resistance at 20°C	Ω/km		
27	Max AC conductor resistance at 65°C	Ω/km		
28	Approx weight of cable	Kg/km		
29	Max current rating in air	A		
30	Max current rating in ground	A		
31	Max conductor temperature on continuous	°C	90	
32	Max conductor temperature in short circuit	°C	250	
33	Max short circuit current rating			
a.	t = 0.1 sec	kA		
b.	t = 0.2 sec	kA		
c.	t = 0.3 sec	kA		
d.	t = 0.4 sec	kA		
34	Length marking (length shall be marked with number at one meter intervals on the sheath)			
35	Armouring		Armored	



**Annexure-4 to Corrigendum-II**

**Form of Legal Capacity / Power of Attorney**

(Refer ITB20.2)

(To be forwarded on the letterhead of the Bidder or Lead Member of JV/Consortium, as the case may be)

**Format for Board Resolution**

**(A) Format for the Board resolution to be passed by a Bidder (not applicable in case of JV/Consortium)**

The Board, after discussion, at the duly convened Meeting on ..... (Insert date), with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956, passed the following Resolution:

RESOLVED THAT pursuant to the applicable provisions of the Companies Act, 1956 and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to submit a Bid in response to the Bidding Documents dated \_\_\_\_\_ issued by Maharashtra Metro Rail Corporation Limited (Maharashtra Metro Rail Corporation Limited) for [Insert name of the work] for Maharashtra Metro Rail Corporation Limited.

FURTHER RESOLVED THAT Mr./Ms....., (insert the name and designation of the concerned official of the Company) be and is hereby authorized to take all the steps required to be taken by the Company for submission of the aforesaid Bid, including in particular, signing the Bid, making changes thereto and submitting amended Bid, signing and executing all the documents related to the Bid, certified copy of this Board resolution or letter or undertakings, etc., required to be submitted to Maharashtra Metro Rail Corporation Limited as part of the Bid or such other documents as may be necessary in this regard and to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to submission of our said Bid including signing and executing the Contract Documents, making representations to Maharashtra Metro Rail Corporation Limited or any other authority, and providing information / responses to Maharashtra Metro Rail Corporation Limited, representing us in all matters before Maharashtra Metro Rail Corporation Limited, and generally dealing with Maharashtra Metro Rail Corporation Limited in all matters in connection with our Bid till the completion of the bidding process as per the terms of the above said Bidding Documents and further till the Contract is entered into with Maharashtra Metro Rail Corporation Limited and thereafter till the expiry of the Contract.

FURTHER RESOLVED THAT a power of attorney as per the draft attached to the Bidding Documents be issued in favour of the above named person, \_\_\_\_\_, to be executed by Mr. \_\_\_\_\_ or Mr. \_\_\_\_\_, Directors of the Company under the Common seal of the Company, affixation thereof to be witnessed by one or both of the above named Directors and by Mr. \_\_\_\_\_, (insert the name and designation of the concerned official of the Company) or as per the Memorandum and Articles of Association of the Company.

Signature and stamp of Company Secretary / Managing Director/Directors of Bidding entity

**Notes:**





1. This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary / Managing Director/Director of the Bidder.
2. The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.
3. In the event the Board resolution is from a company incorporated outside India, the same needs to be notarized by a notary in the home country of company passing the resolution and legalized by the Indian Embassy there. However, in case such company is from a country which has signed The Hague Legislation Convention 1961, then the Board Resolution is not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.
4. This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act 1956 may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing company and the authorizations granted therein are true and valid.

Or

**(B) Format for the Board resolution to be passed by "Lead Member" of JV/Consortium (applicable in case the Bidder is a JV/Consortium)**

The Board, after discussion, at the duly convened Meeting on ..... (Insert date), with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956, passed the following Resolution:

RESOLVED THAT pursuant to the applicable provisions of the Companies Act, 1956 and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to submit a Bid in response to the Bidding Documents dated \_\_\_\_\_ issued by Maharashtra Metro Rail Corporation Limited (Maharashtra Metro Rail Corporation Limited) for '.....' [Name of the work] for Maharashtra Metro Rail Corporation Limited in Consortium with \_\_\_\_\_ (insert the name and address of the other Consortium members).

FURTHER RESOLVED THAT pursuant to the applicable provisions of the Companies Act, 1956 and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to execute a **JV/Consortium Agreement** as per the format annexed to the aforesaid Bidding Documents with \_\_\_\_\_ (insert the name and address of the other **JV/Consortium** members).

FURTHER RESOLVED THAT approval of the Board be and is hereby accorded to the Company to accept and act as the **Lead Member** of the aforesaid **JV/Consortium** and also as true and lawful attorney to do in the name and on behalf of the **JV/Consortium**, all such acts, deeds and things necessary in connection with or incidental to submission of Consortium's Bid in response to the Bidding Documents dated \_\_\_\_\_ issued by Maharashtra Metro Rail Corporation Limited for '.....' [name of the work] including signing and submission of the Bid and all



documents related to the Bid as specified in the Bidding Documents, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document, which Maharashtra Metro Rail Corporation Limited may require us to submit and carrying out the Contract and doing all necessary deeds and things as may be required in respect of the above and also for making representations to Maharashtra Metro Rail Corporation Limited and providing information / responses to Maharashtra Metro Rail Corporation Limited, representing the Consortium in all matters before Maharashtra Metro Rail Corporation Limited, and generally dealing with Maharashtra Metro Rail Corporation Limited and/or any other authority in all matters in connection with Consortium's Bid, till completion of the bidding process in accordance with the Bidding Documents and further till the Contract is entered into with Maharashtra Metro Rail Corporation Limited and thereafter till the expiry of the Contract.

FURTHER RESOLVED THAT Mr./Ms....., (insert the name and designation of the concerned official of the Company) be and is hereby authorized to take all the steps required to be taken by the Company for submission of the **JV/Consortium's** Bid, including in particular, signing the Bid, making changes thereto and submitting amended Bid, signing and executing all the documents related to the Bid, certified copy of this Board resolution or letter or undertakings, etc., required to be submitted to Maharashtra Metro Rail Corporation Limited as part of the Bid or such other documents as may be necessary in this regard and to do in the name and on behalf the **JV/Consortium** all or any of the acts, deeds or things necessary or incidental to submission of said Bid including signing and executing the Contract Documents, making representations to Maharashtra Metro Rail Corporation Limited or any other authority, and providing information / responses to Maharashtra Metro Rail Corporation Limited, representing the **JV/Consortium** in all matters before Maharashtra Metro Rail Corporation Limited, and generally dealing with Maharashtra Metro Rail Corporation Limited in all matters in connection with our Bid till the completion of the bidding process as per the terms of the above said Bidding Documents and further till the Contract is entered into with the Company and thereafter till the expiry of the Contract.

FURTHER RESOLVED THAT a power of attorney as per the draft attached to the Bidding Documents be issued in favour of the above named person, \_\_\_\_\_, to be executed by Mr. \_\_\_\_\_ or Mr. \_\_\_\_\_, Directors of the Company under the Common seal of the Company, affixation thereof to be witnessed by one or both of the above named Directors and by Mr. \_\_\_\_\_, (insert the name and designation of the concerned official of the Company) or as per the Memorandum and Articles of Association of the Company.

Signature and stamp of Company Secretary / Managing Director/Directors of Bidding entity

**Notes:**

1. This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary / Managing Director/Directors of the Bidding Entity.
2. The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.
3. In the event the Board resolution is from a company incorporated outside India, the same needs to be notarized by a notary in the home country of company passing the resolution and legalized by the Indian Embassy there. However, in case such company is from a country which has signed The Hague Legislation Convention 1961, then the Board Resolution is not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.





4. This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act 1956 may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing company and the authorizations granted therein are true and valid.

**(C) Format for the Board resolution to be passed by a Member other than the Lead Member of JV/Consortium (applicable in case the Bidder is a JV/Consortium)**

The Board, after discussion, at the duly convened Meeting on ..... (Insert date), with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956, passed the following Resolution:

RESOLVED THAT pursuant to the applicable provisions of the Companies Act, 1956 and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to submit a Bid in response to the Bidding Documents dated \_\_\_\_\_ issued by Maharashtra Metro Rail Corporation Limited (Maharashtra Metro Rail Corporation Limited) for '.....' [name of the work] for Maharashtra Metro Rail Corporation Limited in **JV/Consortium** with \_\_\_\_\_ (insert the name and address of the other **JV/Consortium** members).

FURTHER RESOLVED THAT pursuant to the applicable provisions of the Companies Act, 1956 and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to execute a **JV/Consortium** Agreement as per the format annexed to the aforesaid Bidding Documents with \_\_\_\_\_ (insert the name and address of the other **JV/Consortium** members).

FURTHER RESOLVED THAT approval of the Board be and is hereby accorded to constitute, appoint and authorize \_\_\_\_\_ (name and registered office address of the **Lead Member**), which is one of the Members of the **JV/Consortium**, to act as the **Lead Member** of the aforesaid **JV/Consortium** and also as true and lawful attorney, to do in the name and on behalf of the **JV/Consortium**, all such acts, deeds and things necessary in connection with or incidental to submission of **JV/Consortium's** Bid in response to the Bidding Documents dated \_\_\_\_\_ issued by Maharashtra Metro Rail Corporation Limited for '.....' [name of the work] including signing and submission of the Bid and all documents related to the Bid as specified in the Bidding Documents, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document, which Maharashtra Metro Rail Corporation Limited may require us to submit and carrying out the Contract and doing all necessary deeds and things as may be required in respect of the above and also for making representations to Maharashtra Metro Rail Corporation Limited and providing information / responses to Maharashtra Metro Rail Corporation Limited, representing the **JV/Consortium** in all matters before Maharashtra Metro Rail Corporation Limited, and generally dealing with Maharashtra Metro Rail Corporation Limited and/or any other authority in all matters in connection with our Bid, till completion of the bidding process in accordance with the Bidding Documents and further till the Contract is entered into with Maharashtra Metro Rail Corporation Limited and thereafter till the expiry of the Contract.

FURTHER RESOLVED THAT a power of attorney as per the draft attached to the Bidding Documents be issued in favour of the above said Lead Member, \_\_\_\_\_, to be executed



by Mr. \_\_\_\_\_ or Mr. \_\_\_\_\_, Directors of the Company under the Common seal of the Company, affixation thereof to be witnessed by one or both of the above named Directors and by Mr. \_\_\_\_\_, (insert the name and designation of the concerned official of the Company) or as per the Memorandum and Articles of Association of the Company.

FURTHER RESOLVED THAT a power of attorney as per the draft attached to the Bidding Documents be issued in favour of Mr./Ms....., (insert the name and designation of the concerned official of the Company) to be executed by Mr. \_\_\_\_\_ or Mr. \_\_\_\_\_, Directors of the Company under the Common seal of the Company, affixation thereof to be witnessed by one or both of the above named Directors and by Mr. \_\_\_\_\_, (insert the name and designation of the concerned official of the Company) or as per the Memorandum and Articles of Association of the Company.

FURTHER RESOLVED THAT Mr./Ms....., (insert the name and designation of the concerned official of the Company) be and is hereby authorized to take all the steps required to be taken by the Company for submission of the aforesaid Bid, including in particular, signing and executing all the documents related to the Bid, certified copy of this Board resolution or letter or undertakings, etc., required to be submitted to Maharashtra Metro Rail Corporation Limited as part of the Bid or such other documents as may be necessary in this regard and to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to give effect to this resolution.

Signature and stamp of Company Secretary / Managing Director/Directors of Bidding Entity

**Notes:**

1. This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary / Managing Director/Director of the Bidder.
2. The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.
3. In the event the Board resolution is from a company incorporated outside India, the same needs to be notarized by a notary in the home country of company passing the resolution and legalized by the Indian Embassy there. However, in case such company is from a country which has signed The Hague Legislation Convention 1961, then the Board Resolution is not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.
4. This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act 1956 may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing company and the authorizations granted therein are true and valid.

**(D) Power of Attorney to be provided by each of the Members of the JV/Consortium (other than the Lead Member) in favour of the Lead Member of Bidding Entity**

WHEREAS Maharashtra Metro Rail Corporation Limited, (the 'Employer') has issued the Bidding Documents on \_\_\_\_\_ / Tender No. for inviting Bids for '.....' [name of the work] for





Maharashtra Metro Rail Corporation Limited on the terms and contained in the Bidding Documents;

AND WHEREAS ....., ..... and ..... (Insert names of all Members of Consortium) the Members of the Consortium are desirous of submitting a Bid in response to the Bidding Documents, and if selected, undertaking the responsibility of '*Insert the name of the work*' as per the terms of the Bidding Documents;

AND WHEREAS all the Members of the **JV/Consortium** have agreed under the **JV/Consortium** Agreement dated ..... entered into between all the Members and submitted along with the Bid to appoint ..... (Insert the name and address of the Lead Member) as Lead Member to represent all the Members of the **JV/Consortium** for all matters regarding the Bidding Documents and the Bid;

AND WHEREAS pursuant to the terms of the Bidding Documents and the **JV/Consortium** Agreement, we, the Members of the **JV/Consortium** hereby designate M/s ..... (Insert name of the Lead Member) as the Lead Member to represent us in all matters regarding the Bid and the Bidding Documents, in the manner stated below:-

Know all men by these presents, We ..... (Insert name and address of the registered office of the Member-1), ..... (Insert name and address of the registered office of the Member-2) ..... (Insert name and address of the registered office of the Member-n) do hereby constitute, appoint and authorize ..... (name and registered office address of the Lead Member), which is one of the Members of the **JV/Consortium**, to act as the **Lead Member** and our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of JV/Consortium's Bid in response to the *Bidding Document dated / Tender No \_\_\_\_\_* issued by the 'Employer' for '*.....*' [*name of the work*] including signing and submission of the Bid and all documents related to the Bid as specified in the Bidding Documents, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document, which the 'Employer' may require us to submit and carrying out the Contract and doing all necessary deeds and things as may be required in respect of the above. The aforesaid Attorney shall be further authorized for making representations to the 'Employer' named in the Bidding Documents, and providing information / responses to the 'Employer' named in the Bidding Documents, representing us and the **JV/Consortium** in all matters before the 'Employer' named in the Bidding Documents, and generally dealing with the 'Employer' named in the Bidding Documents and/or any other authority in all matters in connection with our Bid, till completion of the bidding process in accordance with the Bidding Documents and further till the Contract is entered into with the 'Employer' and thereafter till the expiry of the Contract.

We, as Members of the Consortium, hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms in the Bidding Documents.

Signed by the within named  
.....[Insert the name of the executant]  
through the hand of

Mr. ....  
(duly authorized by the Board to issue such Power of Attorney



Signature of Executant

Dated this ..... day of .....

Accepted

.....  
Signature of Attorney  
(Name, designation and address of the Attorney)

Attested

.....  
(Signature of the executant)  
(Name, designation and address of the executant)

.....  
Signature and stamp of Notary of the place of execution

Common seal of ..... has been affixed in my/our presence pursuant to Board of Director's Resolution dated.....

**WITNESS:**

1. ....  
(Signature)  
Name .....  
Designation.....

2. ....  
(Signature)  
Name .....  
Designation.....

**Notes:**

1. The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.
2. In the event, power of attorney has been executed outside India, the same needs to be notarized by a notary in the home country of company executing this power of attorney and legalized by the Indian Embassy there. However, in case such company is from a country which has signed The Hague Legislation Convention 1961, then the said power of attorney is not required to be legalized by the Indian Embassy if it carries a conforming Appostille certificate.
3. Also, wherever required, the executant(s) should submit for verification the extract of the chartered documents and documents such as a Board resolution / power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).



**(E) Format for PoA for Lead Member of JV/Consortium  
POWER OF ATTORNEY**

*(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution and notarised with Notary Public. Foreign companies submitting Bids are required to follow the applicable law in their country)*

Power of Attorney to be provided by the Bidder Company/ **Lead Member** in favour of its representative as evidence of authorized signatory's authority.

Know all men by these presents, We .....(name and address of the registered office of the Bidding Company or Lead Member of the Bidding **JV/Consortium**, as applicable) do hereby constitute, appoint and authorize Mr./Ms.....(name and residential address) who is presently employed with us and holding the position of \_\_\_\_\_, as our Attorney to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to submission of our Bid for '.....' [name of the work] for Maharashtra Metro Rail Corporation Limited in response to the Bidding Document dated \_\_\_\_\_ issued by Maharashtra Metro Rail Corporation Limited (Maharashtra Metro Rail Corporation Limited) ('Employer') including signing and submission of the Bid and all other documents related to the bidding, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the 'Employer' may require us to submit the bid and also signing and executing the Contract Documents. The aforesaid Attorney is further authorized for making representations to the 'Employer' or any other authority, and providing information / responses to the 'Employer', representing us in all matters before the 'Employer', and generally dealing with the 'Employer' in all matters in connection with our Bid till the completion of the bidding process as per the terms of the Bidding Documents and further till the Contract is entered into with the 'Employer' and thereafter till the expiry of the Contract.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

(Add in the case of a **JV/Consortium**)

Our firm is a Member/Lead member of the **JV/Consortium** of \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_

All the terms used herein but not defined shall have the meaning ascribed to such terms under the Bidding Documents.

Signed by the within named  
.....[Insert the name of the executant]  
through the hand of  
Mr. ....  
duly authorized by the Board to issue such Power of Attorney  
Signature of Executant of POA

Dated this ..... day of .....

Accepted

.....  
Signature of Attorney  
(Name, designation and address of the Attorney)

Attested

.....  
(Signature of the executant)





(Name, designation and address of the executant)

Signature and stamp of Notary of the place of execution

Common seal of ..... has been affixed in my/our presence pursuant to Board of Director's Resolution dated.....

**WITNESS**

1. ....  
(Signature)

Name .....

Designation.....

2. ....  
(Signature)

Name .....

Designation.....

**Notes:**

1. The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.
2. In the event, power of attorney has been executed outside India, the same needs to be duly notarized by a notary public of the jurisdiction where it is executed.
3. Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a board resolution / power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).



**(F) Format for PoA for Other Member(s)  
POWER OF ATTORNEY**

*(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution and notarised with Notary Public . Foreign companies submitting Bids are required to follow the applicable law in their country)*

Power of Attorney to be provided by **each Member** other than the **Lead Member** in favor of its representative as evidence of authorized signatory's authority. (Applicable to **JV/Consortium** only)

Know all men by these presents, We .....(name and address of the registered office of the Member of the **JV/Consortium**, as applicable) do hereby constitute, appoint and authorize Mr./Ms.....(name and residential address) who is presently employed with us and holding the position of \_\_\_\_\_, as our Attorney to sign bid document and execute the Contract Agreement and any other requisite document in our name and our behalf for Tender No.'.....' [name of the work] for Maharashtra Metro Rail Corporation Limited in response to the Bidding Document dated \_\_\_\_\_ issued by Maharashtra Metro Rail Corporation Limited (Maharashtra Metro Rail Corporation Limited) ('Employer') and to do all or any of the acts, deeds or things necessary or incidental to the above.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

(Add in the case of a Consortium)

Our firm is a Member of the Consortium of \_\_\_\_\_ and \_\_\_\_\_

All the terms used herein but not defined shall have the meaning ascribed to such terms under the Bidding Documents.

Signed by the within named

.....[Insert the name of the executant]

through the hand of

Mr. ....

Signature of executant

duly authorized by the Board to issue such Power of Attorney (As per board resolution)

Dated this ..... day of .....

Accepted

.....  
Signature of Attorney

(Name, designation and address of the Attorney)

Attested

.....  
(Signature of the executant)

(Name, designation and address of the executant)

.....  
Signature and stamp of Notary of the place of execution



Common seal of ..... has been affixed in my/our presence pursuant to Board of Director's Resolution dated.....

**WITNESS**

1. ....  
(Signature)

Name .....

Designation.....

2. ....  
(Signature)

Name .....

Designation.....

**Notes:**

1. The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.
2. In the event, power of attorney has been executed outside India, the same needs to be duly notarized by a notary public of the jurisdiction where it is executed.
3. Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a board resolution / power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).





**Corrigendum-II PART-A: Response to Pre-Bid Queries**

**13-Mar-25**

**Name of Work: Design, Supply, Installation, Testing & Commissioning of 25kV Flexible Overhead Catenary System, associated 25kV Sectioning Posts, 33kV Auxiliary Sub-Station (ASS), associated Cabling and SCADA Systems for PCMC-Nigdi Elevated Extension of Pune Metro Rail Project**

**Tender No: P1A-TR-03/2025**

SN	Vol No.	Clause no	Tender condition	Bidder's Queries	Maha-Metro's Response													
1	Part 1 Section-3 Eligibility and evaluation criteria	Clause no 4.1 General experience	<table border="1"> <tr> <td>The experience under similar contracts (as single entity or Lead member of JV) shall be at least five (5) years (the 05 Year period shall end on the Base Date i.e. 28 days prior to the Last date of Bid Submission)</td> <td>Must meet requirement</td> <td>N/A</td> <td>Must meet requirement</td> <td>Must meet requirement</td> </tr> </table>	The experience under similar contracts (as single entity or Lead member of JV) shall be at least five (5) years (the 05 Year period shall end on the Base Date i.e. 28 days prior to the Last date of Bid Submission)	Must meet requirement	N/A	Must meet requirement	Must meet requirement	We kindly request that you reconsider the requirement for similar work experience in the tender. Typically, utility companies do not demand identical experience in general experience, and not all tenders mandate bidders to have completed electrical work contracts on a turnkey basis for over 5 years. We believe our overall experience and qualifications make us a suitable for this project. We would appreciate it if you could consider our request and evaluate our bid based on our general experience and capabilities. We are requesting you to please consider our request.	Tender Conditions prevail.								
The experience under similar contracts (as single entity or Lead member of JV) shall be at least five (5) years (the 05 Year period shall end on the Base Date i.e. 28 days prior to the Last date of Bid Submission)	Must meet requirement	N/A	Must meet requirement	Must meet requirement														
2	Part 1 Section-3 Eligibility and evaluation criteria	Clause no 4.2 Specific experience	<table border="1"> <thead> <tr> <th rowspan="2">Requirement</th> <th rowspan="2">Single Entity</th> <th colspan="3">Consortium/Joint Venture (existing or intended)</th> </tr> <tr> <th>All Members Combined</th> <th>All Non-Lead Members</th> <th>Lead Member</th> </tr> </thead> <tbody> <tr> <td>A) Bidder should have "Similar work experience during Last 10 (years) Years (the 10 Year period shall end on the Base Date i.e. 28 days prior to the Last date of Bid Submission) and should be either of the following:  The Bidder must have satisfactorily executed "Similar Works" amounting to not less than INR 34.30 Cr, under One Contract. OR The Bidder must have satisfactorily executed "Similar Works" amounting to not less than 21.44 Cr each under two Contracts. OR The Bidder must have satisfactorily executed Similar Works amounting to not less than INR 17.15 Cr each under Three Contracts.  B) The works under 4.2 must have been completed or substantially completed.</td> <td>Must meet requirement</td> <td>Must meet requirement</td> <td>Must meet Min. 20% (Twenty Percent) of the requirement</td> <td>Must meet Min. 51% (Fifty one) of the requirement</td> </tr> </tbody> </table>	Requirement	Single Entity	Consortium/Joint Venture (existing or intended)			All Members Combined	All Non-Lead Members	Lead Member	A) Bidder should have "Similar work experience during Last 10 (years) Years (the 10 Year period shall end on the Base Date i.e. 28 days prior to the Last date of Bid Submission) and should be either of the following:  The Bidder must have satisfactorily executed "Similar Works" amounting to not less than INR 34.30 Cr, under One Contract. OR The Bidder must have satisfactorily executed "Similar Works" amounting to not less than 21.44 Cr each under two Contracts. OR The Bidder must have satisfactorily executed Similar Works amounting to not less than INR 17.15 Cr each under Three Contracts.  B) The works under 4.2 must have been completed or substantially completed.	Must meet requirement	Must meet requirement	Must meet Min. 20% (Twenty Percent) of the requirement	Must meet Min. 51% (Fifty one) of the requirement	We request you to please accept all members combined full fill this requirement.	Tender Conditions prevail.
Requirement	Single Entity	Consortium/Joint Venture (existing or intended)																
		All Members Combined	All Non-Lead Members	Lead Member														
A) Bidder should have "Similar work experience during Last 10 (years) Years (the 10 Year period shall end on the Base Date i.e. 28 days prior to the Last date of Bid Submission) and should be either of the following:  The Bidder must have satisfactorily executed "Similar Works" amounting to not less than INR 34.30 Cr, under One Contract. OR The Bidder must have satisfactorily executed "Similar Works" amounting to not less than 21.44 Cr each under two Contracts. OR The Bidder must have satisfactorily executed Similar Works amounting to not less than INR 17.15 Cr each under Three Contracts.  B) The works under 4.2 must have been completed or substantially completed.	Must meet requirement	Must meet requirement	Must meet Min. 20% (Twenty Percent) of the requirement	Must meet Min. 51% (Fifty one) of the requirement														
3	Part 1 Section-3 Eligibility and evaluation criteria	Clause no 4.1 General experience	The experience under similar contracts (as single entity or Lead member of JV) shall be at least five (5) years (the 05 Year period shall end on the Base Date i.e. 28 days prior to the Last date of Bid Submission)	We request you to kindly ammend this clause and replace it as "The experience under <b>electrical</b> contracts"	Tender Conditions prevail.													
4	Part 1 Section-3 Eligibility and evaluation criteria	Clause no 4.1 General experience	All Non - Lead members - Must meet Min 20% (Twenty Percent ) of the requirement Lead members - Must meet Min 51% (Fifty one Percent ) of the requirement	We request you to kindly ammend this tender requirement under Specific experience and replace it as " <b>Not Applicable</b> " for Lead Member and for All Non Lead Members.	Tender Conditions prevail.													
5	Part 1 Section-3 Eligibility and evaluation criteria	Special notes to Section-3	"*Similar Work" means "Design, supply, installation, testing and commissioning of 25 kV flexible overhead catenary system, associated 25 kV sectioning posts, 33 kV auxiliary sub-station (ASS), associated cabling and SCADA systems collectively" for Metro Rail Projects/Public Sector Units/Indian Railways Mainlines/High-Speed Rails etc.	We request you to kindly ammend this clause for 33KV Auxillary substation (ASS) and modify it as "33KV Auxillary Substation <b>or more</b> "	Tender Conditions prevail.													



**Name of Work: Design, Supply, Installation, Testing & Commissioning of 25kV Flexible Overhead Catenary System, associated 25kV Sectioning Posts, 33kV Auxiliary Sub-Station (ASS), associated Cabling and SCADA Systems for PCMC-Nigdi Elevated Extension of Pune Metro Rail Project**

**Tender No: P1A-TR-03/2025**

SN	Vol No.	Clause no	Tender condition	Bidder's Queries	Maha-Metro's Response
6	Section I ITB	Cl 4.7	The minimum local content in procurement value of this Tender shall be as per the above Policy circulars. The Bidder shall upload in the online Technical Package, a scanned copy of certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practising cost accountant or practising chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. The Bidders shall deliver the original certificate (hard copy) to Maha-Metro within 07 days from the 'last date of Bid submission'.	We have seen previously in all of the railway and metro tenders that the normal practice is adopted for requirement of CA certification instead of Statutory auditor certification for Local content declaration.  Request you to allow the same.	Tender Conditions prevail.
7	Section IX PCC	Cl 14.1	The Contractor shall be solely responsible to find out and ascertain whether their supplies for Maha-Metro will qualify and be eligible for the concession duty benefits under Chapter 98.01 of custom Tariff Act for project Imports & shall manage the Custom Duty and Excise duty applicability and inclusion in their quoted price accordingly. After award of the Contract, Employer at the written request of a contractor shall facilitate the contractor for obtaining sponsoring / recommendation letter from the Ministry of Urban Development (MoUD) / GOM for getting themselves registered for availing Project Import benefits. However, the responsibility to avail the concessional benefits under Project Import or otherwise as extended in accordance with the law of the land shall solely rest with the Contractor.	The project is funded by GOI and GOM, hence kindly confirm if : 1) Exemption of custom duty as per notification no. 84/97-Cus., dated 11.11.1997 is applicable OR 2) Concessional custom duty under Chapter 98.01 of Customs tariff Act for Project Imports is applicable.	Tender Conditions prevail.
8	Section IX PCC	Cl 14.8	Delayed Payment Sub-clause 14.8 (Delayed Payment) of GCC is not applicable to this tender	Any delay in payment to the contractor affect the overall cashflow of the project and the bidder is left with no other option except to incur financial charges to the extent of delayed payments through other sources (bankers/ finances).  In view of the above it is requested to delete PCC 14.8 and retain FIDIC Yellow book clause 14.8.	Tender Conditions prevail.
9	Section IV Bidding Forms	Form 35 POA	<b>Format of Power of Attorney</b> including signing and submission of the Bid and all other document related to the bidding, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the <b>Company</b> may require us to submit and also signing and executing the Contract Document. The aforesaid Attorney is further authorized for making representations to the <b>Company</b> or any other authority, and providing information / responses to the <b>Company</b> , representing us in all matters before the <b>Company</b> , and generally dealing with the Company in all matters in connection with our Bid till the completion of the bidding process as per the terms of the Bidding Document and further till the Contract is entered into with the Company and thereafter till the expiry of the Contract.	It is requested to replace word Company with <b>Maharashtra Metro Rail Corporation Limited (MMRCL)</b> in POA Format for its better understanding as the word "Company" itself implicate the bidder.	Please refer Part-B of Corrigendum-II for revised format.



**Name of Work: Design, Supply, Installation, Testing & Commissioning of 25kV Flexible Overhead Catenary System, associated 25kV Sectioning Posts, 33kV Auxiliary Sub-Station (ASS), associated Cabling and SCADA Systems for PCMC-Nigdi Elevated Extension of Pune Metro Rail Project**

**Tender No: P1A-TR-03/2025**

SN	Vol No.	Clause no	Tender condition	Bidder's Queries	Maha-Metro's Response																		
10	Section IV Bidding Forms	Form 16	Liquid Assets and Liquid Liabilities	As per accounting terms Liquid Assets mean cash and cash equivalents, short-term financial instruments, short term available-for-sale-securities, marketable securities, trade receivables, short-term financing receivables and other assets that can be converted into cash within one year and Liquid Liabilities are short-term financial obligations that a company owes to its creditors and suppliers.  It is requested to please state what components of Current assets and Current liabilities needs to be included in calculating Liquid Assets and Liquid Liabilities.	As certified by statutory auditor.																		
11	Section-3: Eligibility & Evaluation Criteria	Cl 3.1 (b) ,( c) , (d) 3.2	"Bid Capacity, Net Worth, Net Profit & Average Annual Turnover "" Only Statutory Auditor's certificate required to be enclosed with bid. The certificate must be with UDIN"" "	Standalone financials certified by statutory auditor are part of Siemens Annual reports and published in public portal and available for anybody scrutiny. In view of the above we request you to accept certification from Chartered Accountant required in the following forms instead of Statutory auditor. Form -16 Financial Situation and Performance of Bidder Form- 17 Average Annual Turnover Form-18 Financial Resources Format- 19 Current Contract Commitments	Tender Conditions prevail.																		
12	PART 2: WORKS REQUIREMENTS	APPENDIX VII-B10: KEY PERSONNEL, CONSTRUCTION MACHINERY, SHE MANPOWER	1. Personnel (Bidder shall use TP.1 Form of Technical Proposal to submit the detail) iv. The Bidder shall provide details of the proposed personnel and their experience records using TP-1 Form of Technical Proposal included in Section IV, Bidding Forms of Part-1: Bidding Procedure.  2. Equipment (Bidder shall use TP.2 Form of Technical Proposal to submit the detail) The Bidder shall provide further details of proposed items of equipment using TP-2 Form of Technical Proposal included in Section IV, Bidding Forms of Part-1: Bidding Procedure.	It is requested to provide format of Form TP.1 and Form TP.2	Please refer SN 1 & 2 of Part-B of Corrigendum-II.																		
13	PART 2: WORKS REQUIREMENTS	SECTION VII-B: WORKS REQUIREMENT – PARTICULAR SPECIFICATION APPENDIX VII-B10: KEY PERSONNEL, CONSTRUCTION MACHINERY, SHE MANPOWER	<table border="1"> <thead> <tr> <th>No.</th> <th>Position</th> <th>Nos.</th> <th>Total Work Experience (years)</th> <th>In Similar Works Experience (years)</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Dy. Chief Project Manager</td> <td>1</td> <td>12 years</td> <td>10 years</td> <td>To be mobilized within one month of award and shall be posted full time in Pune till completion of project</td> </tr> <tr> <td>2</td> <td>Project Manager</td> <td>1</td> <td>10 years</td> <td>8 years</td> <td>To be mobilized within one month of award and shall be posted full time in Pune till completion of project</td> </tr> </tbody> </table>	No.	Position	Nos.	Total Work Experience (years)	In Similar Works Experience (years)	Remarks	1	Dy. Chief Project Manager	1	12 years	10 years	To be mobilized within one month of award and shall be posted full time in Pune till completion of project	2	Project Manager	1	10 years	8 years	To be mobilized within one month of award and shall be posted full time in Pune till completion of project	Being the small project of 4 stations, project can be managed by Project manager, hence it is requested to delete requirement of Dy. Chief Project Manager	Tender Conditions prevail.
No.	Position	Nos.	Total Work Experience (years)	In Similar Works Experience (years)	Remarks																		
1	Dy. Chief Project Manager	1	12 years	10 years	To be mobilized within one month of award and shall be posted full time in Pune till completion of project																		
2	Project Manager	1	10 years	8 years	To be mobilized within one month of award and shall be posted full time in Pune till completion of project																		





**Name of Work: Design, Supply, Installation, Testing & Commissioning of 25kV Flexible Overhead Catenary System, associated 25kV Sectioning Posts, 33kV Auxiliary Sub-Station (ASS), associated Cabling and SCADA Systems for PCMC-Nigdi Elevated Extension of Pune Metro Rail Project**

**Tender No: P1A-TR-03/2025**

SN	Vol No.	Clause no	Tender condition	Bidder's Queries	Maha-Metro's Response												
14	Part-3: Conditions of Contract and Contract Forms	Particular Conditions Part A – Contract Data	1.1.27 Defects Notification Period (DNP) / Defect Liability Period (DLP):  24 Months from the date of Commissioning of assets for public uses/system taking over whichever is later.	Commissioning of asset for public uses attracts completion of other activities which can not be directly controlled by system works contractor.  In view of the above It is requested to modify the clause as under: 24 Months from the date of Commissioning of assets for public uses/system taking over whichever is earlier.	Tender Conditions prevail.												
15	Part-3: Conditions of Contract and Contract Forms	Section - IX: Particular Conditions of Contract (PC)  Annexure IX - F	<b>4.0 Price variation on account of Labour component adjustment against Installation and Site Testing works (Cost Center C):</b> - This is applicable only for items in cost center C under section PH-1A PSI & PH-1A OHE, works related to Installation and Site Testing. The Contract price shall be adjusted for increase or decrease in rates for the prices quoted in INR for Labour used against Installation and Site Testing component in accordance with the formula given below: $VL = 0.85 \times R \times [(Li - Lo)/Lo]$	We request to extend this clause for Cost Centre A, Cost Centre D under section PH-1A PSI & PH-1A OHE, COST CENTRE No. A1,A3, COST CENTRE E: Supervision of Maintenance under MS Schedule.	Tender Conditions prevail.												
16	Part-3: Conditions of Contract and Contract Forms	Section - IX: Particular Conditions of Contract (PC)  Annexure IX - F	Total admissible price variation amount shall be subject to a ceiling of $\pm 20\%$ (Plus/Minus Twenty Percentage only) of Equivalent Contract Price in INR considering currency conversion factor at the time of bid. The above price variation shall only be applicable for items quoted in Indian Rupees.	It is requested to provide Price Variation for items quoted in Foreign Currency.	Tender Conditions prevail.												
17	Part-3: Conditions of Contract and Contract Forms	Section IX: Particular Conditions of Contract (PCC) PCC 2.1	If the Contractor suffers delay from failure on the part of the Employer to grant right of access to, or possession of the Site, the Contractor shall give notice to the Engineer in a period of 28 days of such occurrence.  After receipt of such notice the Engineer shall proceed to determine any extension of time to which the Contractor is entitled and shall notify the Contractor accordingly.  For any such delay in handing over of site, Contractors will be entitled to only reasonable extension of time as per Sub-Clause 8.5 Extension of Time for Completion.	Delay in access to sites calls for deployment of resources for the delayed period also over and above the stipulated completion period. Since reasons for delays are not attributable to contractor, it is requested to compensate the contractor by deleting PCC 2.1 in addition to the extension of time as per sub clause 8.5	Tender Conditions prevail.												
18	PART 4:	PRICING DOCUMENT BOQ_199946	<table border="1"> <thead> <tr> <th>Cover No</th> <th>Cover Type</th> <th>Description</th> <th>Document Type</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Fee/PreQual/Technical</td> <td>Tender Document Receipt/ EMD Receipt/ BG/ MSME Certificate (in case of Exemption) GST Certificate/ PAN/TAN Technical Documents Additional Documents</td> <td>.pdf .rar .rar</td> </tr> <tr> <td>2</td> <td>Finance</td> <td>Boq(P1A-TR-03/2025 ) Scan copy of Signed and Stamped copy of entire Financial Bid (Pricing documents)</td> <td>.xls .pdf</td> </tr> </tbody> </table>	Cover No	Cover Type	Description	Document Type	1	Fee/PreQual/Technical	Tender Document Receipt/ EMD Receipt/ BG/ MSME Certificate (in case of Exemption) GST Certificate/ PAN/TAN Technical Documents Additional Documents	.pdf .rar .rar	2	Finance	Boq(P1A-TR-03/2025 ) Scan copy of Signed and Stamped copy of entire Financial Bid (Pricing documents)	.xls .pdf	Excel BOQ have only one summary page. Appendix B to G is not available in the documents.  As per E-portal Scan copy of Signed and Stamped copy of entire Financial Bid(Pricing documents) is required. Bidder understand that only Boq(P1A-TR-03/2025) signed and stamp along with Part 4 Financial Bid required in Mahatender portal and no other document required. Please confirm our understanding.  It is requested to provide excel copy of Part 4 Financial Bid.	Only summary of Financial Bid to be filled in Excel. Rest of the Financial Bid needs to be filled manually and then Bidder shall upload the scanned pdf.
Cover No	Cover Type	Description	Document Type														
1	Fee/PreQual/Technical	Tender Document Receipt/ EMD Receipt/ BG/ MSME Certificate (in case of Exemption) GST Certificate/ PAN/TAN Technical Documents Additional Documents	.pdf .rar .rar														
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**Name of Work: Design, Supply, Installation, Testing & Commissioning of 25kV Flexible Overhead Catenary System, associated 25kV Sectioning Posts, 33kV Auxiliary Sub-Station (ASS), associated Cabling and SCADA Systems for PCMC-Nigdi Elevated Extension of Pune Metro Rail Project**

**Tender No: P1A-TR-03/2025**

SN	Vol No.	Clause no	Tender condition	Bidder's Queries	Maha-Metro's Response			
19	Section-3: Eligibility & Evaluation Criteria	Special Notes to Section-3: (iii)	For arriving at cost of similar work, the actual value of work executed shall be brought to current costing level by considering 5% inflation (for INR portion) and 2% inflation (for foreign currency portion) per year compounded annually, calculated from the date of completion to the base date (28 days before last date of Bid submission).	For evaluation purpose all the prices will be converted into INR using exchange rate after considering inflation. For foreign currency conversion, bidder understand that exchange rate applicable shall be as per BDS 32.1 which is at the close of business 28 (twenty-eight) days before the last date of Bid submission.  Kindly confirm.	ITB 32.1 is self explanatory.			
20	Part 2 Works Requirements - General Specification	Appendix 9 9.0 WORKS AREAS	(d) In addition to these principal Works Areas, the Contractor will be required to establish secondary Works Areas at, for example, station locations. The Contractor shall submit to the Employer's Engineer proposals for the use and occupation of these secondary Works Areas, such submissions being at least sixty (60) days prior to the programmed use of the specific Works Area.	Bidder Understand that land for contractor's store set up along with office shall also be provided free of charge. Please confirm.	If available, store land will be provided. However office to setup space will not be provided.			
21	Part-3: Conditions of Contract and Contract Forms	Section IX: Particular Conditions of Contract (PCC)	<table border="1"> <tr> <td>1.1.20</td> <td>where the Contract allows for Cost Plus Profit, percentage profit to be added to the Cost</td> <td>Not Applicable</td> </tr> </table>	1.1.20	where the Contract allows for Cost Plus Profit, percentage profit to be added to the Cost	Not Applicable	Please reinstate FIDIC condition to allow reasonable Profits on the additional cost incurred by Contractor.	Tender Conditions prevail.
1.1.20	where the Contract allows for Cost Plus Profit, percentage profit to be added to the Cost	Not Applicable						
22	Part 2 Works Requirement - Particular Specification	14.0 MISCELLANEOUS	14.1.1.1 The successful bidder has to provide following to MAHA-METRO or its designated Engineer for the proper Management & supervision of construction work till completion of DLP: (a) One air-conditioned Innova / equivalent Car (which shall be provided at the commencement of the Works as agreed by the Employer's Representative). (b) One air-conditioned vehicle, (Ertiga/Equivalent) (which shall be provided at the commencement of the Works as agreed by the Employer's Representative) for round the clock.	We understand that requirement at Sr. no.b (Ertiga/equivalent) shall be provided during normal office hour (8 Hours) instead of round the lock i.e. 3x8 hours.  Kindly confirm our understanding	Tender Conditions prevail.			
23	Part 2 Works Requirement - Particular Specification	Clause 10.4.1.5.7	10.4.1.5.7 The contractor shall include the following cost in this bid: To and fro travel of Engineer, Engineer's Representatives, General Consultant/Advisors to any place within the country for technical discussions, design review, inspection visits etc at manufacturer's or his sub system manufacturer's place, mock ups, Factory Acceptance Tests or First Article of Inspection at manufacturer's or its sub system manufacturer's works or other project related works. The lodging, boarding, local transport and other incidental expenses.	Since cost with respect to this clause is not ascertain, requesting you to delete the scope from the bidder.	Tender Conditions prevail.			



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**Tender No: P1A-TR-03/2025**

SN	Vol No.	Clause no	Tender condition	Bidder's Queries	Maha-Metro's Response												
24	Part-3: Conditions of Contract and Contract Forms	Annexure IX - G IT / 5D-BIM Requirements of the Employer	<p>BIM Process Requirement</p> <p><b>3. Allocation of 5D BIM License</b> – As per the contract requirement Maha Metro will allocate the required number of licenses for Maha Metro's 5D BIM platform. The cost of the license provided would be recovered from the contractor on yearly basis. The indicative cost per license is as below:</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Software</th> <th>approx. Cost for per license per year (In INR)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>ERP</td> <td>50,000/-</td> </tr> <tr> <td>2</td> <td>Scheduling Application</td> <td>1,00,000/-</td> </tr> <tr> <td>3</td> <td>CDE</td> <td>3,00,000/-</td> </tr> </tbody> </table>	S. No.	Software	approx. Cost for per license per year (In INR)	1	ERP	50,000/-	2	Scheduling Application	1,00,000/-	3	CDE	3,00,000/-	<p>Bidder understand that license cost per year mentioned for scheduling application refers to P6 and CDE refers to Bentley ProjectWise &amp; AssetWise and RIB iTWO 5D BIM software.</p> <p>Kindly confirm.</p>	<p>Scheduling application refers to P6. CDE refers to Bentley/Autodesk/any other equivalent software or Maha-Metro's in-house solution. RIB iTWO software will be used for 5D BIM integration.</p>
S. No.	Software	approx. Cost for per license per year (In INR)															
1	ERP	50,000/-															
2	Scheduling Application	1,00,000/-															
3	CDE	3,00,000/-															
25	General	General	General	It is requested to share the deviation format in case of deviations are acceptable.	Deviations are not allowed												
26	Part 2 Works Requirement - Particular Specification	3.7.1	IACS (Industrial automation and control system) - SCADAs, BMS, TCMS & related NMS (of all communication systems) shall provide relevant data/information required to integrate with Asset Management System (AMS) of Maha-Metro, which would enable maintenance staff to assess the need for unscheduled preventive/failure/breakdown maintenance based on degradation of normal operating parameters	<p>As per the bidder's understanding, since the existing SCADA system is already in place and our scope is limited to integrating 4 RTUs into the existing SCADA, no separate interface with the AMS is required under this contract. The data needed by the AMS system from the newly added stations will be obtained from the existing SCADA via the existing AMS interface.</p> <p>Please confirm our understanding.</p>	<p>Your understanding is correct. The data of newly added stations to be shared with AMS of Maha Metro</p>												
27	Part 2 Works Requirement - Particular Specification	4.5.9	Expandability: The size of the system must be sufficient to allow the addition of new equipment to be supervised. It should be borne in mind that the system represents roughly 75% of the final project. The system provided will therefore incorporate the relevant expandability requirements. The various phases of line extension will be as much as possible performed by simple addition of racks, or cards on a modular basis.	<p>As per the bidder's understanding, only 4 stations need to be integrated into the existing Phase 1 SCADA system. Therefore, we assume that there is sufficient expansion capacity available in the Phase 1 SCADA system for the integration of these 4 stations. Since our scope is limited to integration into the existing SCADA, the expandability clause does not apply to this tender.</p> <p>Please clarify.</p>	<p>This is Design &amp; Built contract, the Bidder to interface with OEM M/s Hitachi and propose suitable SCADA system. The same is clarified in note under chapter 8, clause 8.0 SCADA SYSTEM.</p>												
28	Part 2 Works Requirement - Particular Specification	8.0	SCADA SYSTEM	<p>As per the bidder's understanding, Chapter 8 defines the functions and technical requirements of the complete SCADA system. However, our scope is limited to integrating 4 stations into the existing SCADA. Therefore, we will utilize all technical and functional requirements released under Phase 1 SCADA by M/s Hitachi Energy for the integration of these 4 stations. The technical and functional requirements defined in this chapter are for informational purposes only and are not applicable to this tender.</p> <p>Please clarify.</p>	<p>This is Design &amp; Built contract, the Bidder to interface with OEM M/s Hitachi and propose suitable SCADA system. The same is clarified in note under chapter 8, clause 8.0 SCADA SYSTEM.</p>												
29	Part 2 Works Requirement - Particular Specification	8.3.3.2.h	RTU shall support time synchronization through messages received from master station using IEC 60870-5-101 protocol.	<p>According to clause 3.2.3.4, since the communication between OCC and BOCC uses the IEC 60870-5-104 protocol, the bidder understands that time synchronization will also be done using the IEC 60870-5-104 protocol.</p> <p>Kindly confirm</p>	<p>Your understanding is correct.</p>												





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**Tender No: P1A-TR-03/2025**

SN	Vol No.	Clause no	Tender condition	Bidder's Queries	Maha-Metro's Response
30	Part 2 Works Requirement - Particular Specification	8.3.5	SAS/SCADA requirements of Phase1 Extension is to be incorporated in existing system of phase-1. Any additional item required in existing RSS, OCC, BOCC, Training centers etc shall be in scope of Power supply Contractor in order to make the system fully functional & compatible to Pune metro phase -1.	As per the bidder's understanding, additional item requirements only refer to related communication equipment. No addition/upgradation of new servers, workstations, monitors, or printers at OCC, BCC, or RSS should be covered under this clause. If any new or upgradation of servers, workstations, monitors, printers, etc., are required, please provide the quantity and location.	This is Design & Built contract, the Bidder to interface with OEM M/s Hitachi and propose suitable SCADA system. The same is clarified in note under chapter 8, clause 8.0 SCADA SYSTEM.
31	Part 2 Works Requirement - Particular Specification	3.2.2.4 (w)	Mast foundations and geotechnical investigations shall be done as per the foundation's design and calculation.	Total section is elevated & OHE shall be supported by structures with base plate so no need to do the foundation work for track side equipment also.  This clause is not applicable for elevated section. Kindly confirm	Your understanding is correct.
32	Part-3: Conditions of Contract and Contract Forms	IX and 1.6	The costs of stamp duties and similar charges (if any) imposed by law and as per Stamp Duty Act (amended from time to time) of state in which the work is executed, in connection to entering into the Contract Agreement, shall be borne by the Contractor.	Bidder understands that "similar charges" included in the sub-clause only refer to stamp duty.  Also please confirm there is no requirement of registration of contract in this tender.	Tender Conditions Prevail.
33	Part-3: Conditions of Contract and Contract Forms	IX and 2.7	Add a new Clause 2.7 : The Employer shall be fully entitled without consent of the contractor to assign any part of work to any third party at the risk and cost of the contractor by giving 14 days' notice when the contractor is behind the schedule and causing undue delay.	Request deletion of this clause.	Tender Conditions Prevail.
34	Part-3: Conditions of Contract and Contract Forms	IX and 11.12	Add a new sub-clause 11.12 : Emergency defect rectification If any defect or damage is requiring immediate attention from safety, environmental or operational viewpoint, the Employer/Engineer has the authority to proceed with rectification in any manner suitable and deduct such sums from the Contract Price.	This clause is open ended and does not provide an opportunity to the contractor to perform rectification. Hence it is requested to modify as under.  "If any defect or damage is requiring immediate attention from safety, environmental or operational viewpoint, the Employer/Engineer has the authority to proceed with rectification in any manner suitable and deduct such sums from the Contract Price. "	Tender Conditions Prevail.
35	Part-3: Conditions of Contract and Contract Forms	IX and 14.17	Add a new sub clause :14.17: Recovery of money due to the Employer  All damages (including, without limitation, liquidated damages), costs, charges, expenses, debts, or sums for which the Contractor is liable to the Employer under any provision of the Contract may be deducted by the Employer from monies due to the Contractor under the Contract including, without limitation, and the Employer shall have the power to recover any balance not so deducted from monies due to the Contractor under any other contract between the Employer and the Contractor.	Any contract is awarded to the bidder based on the financial qualifications evaluated by the customer. individual contracts are dealt with the merits of the terms and conditions written within the contract and its boundaries.  In view of the above it is requested to delete the condition.	Tender Conditions Prevail.



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**Tender No: P1A-TR-03/2025**

SN	Vol No.	Clause no	Tender condition	Bidder's Queries	Maha-Metro's Response
36	Part-3: Conditions of Contract and Contract Forms	IX and 15.8	Add a new sub clause :15.8 Non-exercise of power not to constitute waiver Provided always that in case any of the powers conferred upon the Employer by Clause 15 (Termination by Employer), shall have become exercisable, and the same may not have been exercised, the non-exercise thereof shall not constitute waiver of any of the conditions thereof.	It is requested to delete this clause.	Tender Conditions Prevail.
37	Part 2 Works Requirement - Particular Specification	2.2.3	Power supply for the above corridors is received at existing 132 kV RSS at following locations. The Receiving substations are already commissioned. The 25kV OHE and 33kV Auxiliary ring supply shall be extended to these extension corridors from the existing Receiving Substations (RSS)	We understood that 33kV MV cable extended from PCMC Station toward Bhakti Shakti station. Hence no work modification consider at 132kV RSS/ 33kV AMS Switchgear end.  Kindly confirm.	Please Refer SN 3 of Part-B of Corrigendum-II.
38	Part 2 Works Requirement - Particular Specification	2.3.1 (f)	The Contractor shall carry out Traction Simulation study to ascertain the load requirement of the system to verify the sizes of the equipment's (OHE & Power Supply), propose the location of neutral section if required considering both phase-1 extension corridor and submit report for approval by the Employer.  Dynamic simulation study for interaction between contact line and pantograph shall also be carried out by the Contractor to ascertain the compatibility of the system and submitted to Employer for approval. (o) The system should be designed such that the power factor of Complete Phase-1 & extension corridor system should be more than 0.98 at all points of metering.	Input required of AC simulation study for phase 1 extension, so it is requested to provide Existing phase - 1 Simulation study as input as per below list: 1. Single Phase AC Traction Load flow and SC study, 2. Three Phase AC Load flow and SC study, 3. Dynamic simulation study. 4. Power factor study.	Available Inputs will be provided to succesful bidder
39	Part 2 Works Requirement - Particular Specification	2.3.1 (m)	(m) The modifications in Phase-1 extension works & Integration of extension corridors with Phase-1 systems requires working under PTW & in only non-revenue hours.  (p) The tie feeding arrangement between Switchboard-1 & 2 at PCMC ASS, shall have to be modified in order to extend 33kV ring main supply to the extension corridor.	We understood that the PCMC station has only modification work under this contract. Hence 33kV ASS O/G panels, 33kV cable termination, cable differential relay are already available. Only 33kV cable to be extended towards Bhakti Shakti stations.  Kindly confirm.	Tender Conditions Prevail.
40	General		Drawing	It is requested to kindly provide PCMC TSS equipment layout, PCMC TSS to FP existing cable layout 25kV TSS SLD, GA input for 25kV cable termination.	Refer tender drawing for PCMC RSS to FP existing cable. PCMC 25kV SLD and GAD refer Annexure-1 of Corrigendum-II.
41	Part 2 Works Requirement - Particular Specification	3.2.1.2	The scope of work broadly includes design, supply, installation, inspection, testing and commissioning of: (a) Feeding arrangements to the overhead contact system with suitable protection at feeding post. (Other protection relays at FP, SP, SSP etc. if foreseen, shall be under the scope of OHE Contractor. However, the final scheme shall be as per design of the Contractor.)	We understood that there is no numerical relay is envisaged for 25kV switching Stations (SSs, SP & SSPs).  Kindly clarify our understanding.	Your understanding is correct.



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SN	Vol No.	Clause no	Tender condition	Bidder's Queries	Maha-Metro's Response
42	Part 2 Works Requirement - Particular Specification	5.3.2.1	The 27.5 kV switchgear shall be indoor switchgear and shall consist of structure mounted Circuit breakers, interrupter and isolators electrically linked.	We understood that the indoor 25kV Switchgear inside RSS is not part of this contract, only 25kV termination shall be done if required.  Kindly confirm.	Your understanding is correct.
43	Part 2 Works Requirement - Particular Specification	6.1.2.1.6	All parts shall withstand at least 10000 operations without any signs of detriment.	10000 operations shall be envisaged only for Circuit breaker as per IEC 62271. Kindly confirm.	Your understanding is correct.
44	Part 2 Works Requirement - Particular Specification	6.1.3.7, 6.1.3.8 and 7.3.13	Each battery shall be of stationary compact, nickel-cadmium type. They shall be maintenance free. The battery charger shall be Float cum Boost type suitable for charging Ni-Cd cells and duly certified, accepted by the battery manufacturer.  7.3.13 110 V DC Power Supply System DC control supply for ASS and Switching post shall be catered by Batteries from S&TC contractor. 2 Nos of feeders will be provided by S&TC contractor at their Distribution board. Supply and laying of cables from S&TC contractor distribution board to DCDB at ASS shall be in scope of Power supply and Traction contraction	Bidder understand that the battery and battery charger shall be part of S&TC contractor scope of supply. Hence Battery bank and its chargers are not part of this contractor, Kindly confirm.	Your understanding is correct.
45	Part 2 Works Requirement - Particular Specification	7.1.2.1	All 33 kV cables (from AMS to ASS and ring cables) shall be provided with pilot wire protection along with overcurrent & earth fault relays.	Bidder understands that two ring feeders and one transformer feeder shall be part of each ASS. Hence infeed ASS switchgear not part of this contract.  Kindly confirm	Your understanding is correct.
46	Part 2 Works Requirement - Particular Specification	7.3.6.1	Dry Type Transformers to be designed with immunity against switching surges. The transformer shall be provided with RC snubber circuit /surge arrester with Phase to Phase & Phase to Earth along with surge counter as per requirement.	Surge arrester with Phase to Phase & Phase to Earth along with surge counter shall be envisaged. Kindly confirm.	Tender Conditions Prevail.
47	Part 2 Works Requirement - Particular Specification	7.3.10.5.1	specified voltage: 19/33 or 33/33 kV rms (according to IS 7098-2) as per design requirement.  3.1 33kV Cables	Technical sheets are conflict with IS 7098, So we are offered MV cable voltage level 19/33kV as per IEC60502 as per technical sheet. Kindly confirm.	Tender Conditions Prevail.
48	Part 2 Works Requirement - Particular Specification	7.3.10.5.2	Indoor Cables: Indoor cables shall be non-fire propagating, non-toxic and non-smoke producing and conform with the UTE standard 32 700, test No 2, IS 7098. Flame barrier tape shall be provided at suitable location (above XLPE).	All 33kV cable offered 19/33/36kV XLPE FRLS AL conductor for for elevated station and switchgear room.  Please confirm	Tender Conditions Prevail.
49	Part 2 Works Requirement - Particular Specification	7.6.10	All Compensator Panels shall be integrated together under a common network. They will be able to communicate with each other and in the event of any changes in the mode of operation (i.e. ASS is shifted from RSS to other RSS as the case may be or ASS shifted from CKT-1 to CKT-2) the same should be immediately detected and appropriately action should be taken by the Compensator Panel network to maintain PF > 0.98 at Point of common coupling (PCC) of all RSS/TSS of Phase-1 Extension.	Bidder understands that power factor >0.98 in existing network of Phase 1 is maintained at Point of Common Coupling (PCC) at all RSS/TSS by Compensator panels installed in Phase 1 corridor.  Under this contract bidder is responsible only for Phase 1 extension station compensator panels to maintain PF > 0.98 at Point of common coupling (4 Nos of ASS Stations only).  Kindly confirm.	Point of Common coupling at RSS will include 33kV and 25kV network combined






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SN	Vol No.	Clause no	Tender condition	Bidder's Queries	Maha-Metro's Response
50	Part 2 Works Requirement - Particular Specification	9.2.1	The current carrying capacity of metallic sheath shall be 14kA minimum for 1 sec	14kA for 1 second is overated metallic sheath, 1kA for 3 second is adequate size for 33kV cable due to NGR ground of 33kV secondary terminat of AMT at RSS.  Kindly confirm.	Tender Conditions Prevail.
51	Part 2 Works Requirement - Particular Specification	7.3.6.2.2	Type test of at least one number of Dry type transformer of each capacity shall pass Fire behaviour test as per the clause 28 of IEC 60076-11 or latest.	There is no set up arrangement in India of any dry type transformer by manufacturer, you are requested to delete the requirement of Fire behaviour test based on proven design .	Please Refer SN 4 of Part-B of Corrigendum-II.

  
(Rajeev Kumar)  
Executive Director/Procurement and  
Contracts



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**Tender No: P1A-TR-03/2025**

SN	Part	Clause no	Description as per Tender Document	Revised herewith as
7	Part 2 Works Requirement - Particular Specification	3.1.14	This contract shall include linking & installation of new OHE in Phase 1 section of Pune metro along with the extension work. The Phase-1 OHE has to be erected from chainage (-) 915.3992 to PCMC dead end chainage (-)1079.3992 i.e. 0.5 RKM approx. for both UP and DN line and this aspect shall be considered during pricing. No extra payment shall be made for work under PTW for this work.	This contract shall include linking & installation of new OHE in Phase 1 section of Pune metro along with the extension work. The Phase-1 OHE has to be erected from chainage <b>(-)614.399</b> to PCMC dead end chainage (-)1079.3992 i.e. 0.5 RKM approx. for both UP and DN line and this aspect shall be considered during pricing. No extra payment shall be made for work under PTW for this work.
8	Part 2 Works Requirement - Particular Specification	APPENDIX VII-B3 : DATA (TECHNICAL) SHEETS	.....	New clause added:  3.3) Return Cable (3.3kV ) Data Sheet attached as Annexure-3 to Corrigendum-II.
9	Part 4 Pricing document	Section Ph1-A PS Cost center B B1.4.1	33kV AIS Panels	33kV GIS Panel
10	Part-1, Section-IV Bidding Forms	Format for Power of Attorney	Form-24	Please refer Annexure-4 to Corrigendum-II for revised Form-24



(Rajeev Kumar)

Executive Director/Procurement and Contracts

**Attachments to Corrigendum-II:**

Annexure-1- Drawings

Annexure-2- Form4A

Annexure-3- Data Sheet

Annexure-4- Format for Power of Attorney

## Corrigendum-II PART-B: Changes in Tender Conditions

13-Mar-25

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**Tender No: P1A-TR-03/2025**

SN	Part	Clause no	Description as per Tender Document	Revised herewith as
1	Part-1 Bidding Procedure	Section IV: Bidding Forms		New form added as Form-4A. Ref. Annexure-2 of Corrigendum-II
2	PART 2: WORKS REQUIREMENTS	APPENDIX VII-B10: KEY PERSONNEL, CONSTRUCTION MACHINERY, SHE MANPOWER	<p>1. Personnel (Bidder shall use TP.1 Form of Technical Proposal to submit the detail) iv. The Bidder shall provide details of the proposed personnel and their experience records using TP-1 Form of Technical Proposal included in Section IV, Bidding Forms of Part-1: Bidding Procedure.</p> <p>2. Equipment (Bidder shall use TP.2 Form of Technical Proposal to submit the detail) The Bidder shall provide further details of proposed items of equipment using TP-2 Form of Technical Proposal included in Section IV, Bidding Forms of Part-1: Bidding Procedure.</p>	<p>1. Personnel (Bidder shall use <b>Form-4A</b> of Technical Proposal to submit the detail) ..... ..... iv. The Bidder shall provide details of the proposed personnel and their experience records using <b>Form-4A</b> of Technical Proposal included in Section IV, Bidding Forms of Part-1: Bidding Procedure.</p> <p>2. Equipment (Bidder shall use <b>Form-8</b> of Technical Proposal to submit the detail) ..... ..... The Bidder shall provide further details of proposed items of equipment using <b>Form-8</b> of Technical Proposal included in Section IV, Bidding Forms of Part-1: Bidding Procedure.</p>





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**Tender No: P1A-TR-03/2025**

SN	Part	Clause no	Description as per Tender Document	Revised herewith as
3	Part 2 Works Requirement - Particular Specification	New clause 5.2		<p>Addition to 5.2 RECEIVING SUBSTATION</p> <p>Contractor shall be required to design and develop protection scheme for the ASS. Also, existing phase-I network setting of RSS to be developed / revised as required. Scheme and relay setting proposed should be developed keeping into view of the 132kV, 25 kV and 33 kV system of Maha Metro, Pune Ph-I extension network in line and stations. All protection scheme, calculation, settings, tests reports, relay manual, data cables, relay software shall be furnished to Maha-Metro before commissioning. The relay setting shall validated through third party reputed agencies like IIT's, NIT's etc.</p>
4	Part 2 Works Requirement - Particular Specification	7.3.6.2.2	Type test of at least one number of Dry type transformer of each capacity shall pass Fire behaviour test as per the clause 28 of IEC 60076-11 or latest.	Dry type transformer should have passed Fire behaviour type test as per the clause 28 of IEC 60076-11 or latest.
5	Part 2 Works Requirement - Particular Specification	1.1.1 Table 1.1	<p>INFRASTRUCTURE FACILITIES PLANNED at PCMC DEAD END</p> <p>Location: PCMC Station Facility: Linking &amp; Installation of new OHE with the existing OHE chainage location (-)915.399 onwards</p>	<p>INFRASTRUCTURE FACILITIES PLANNED at PCMC DEAD END</p> <p>Location: PCMC Station Facility: Linking &amp; Installation of new OHE with the existing OHE chainage location <b>(-)614.399</b> onwards</p>
6	Part 2 Works Requirement - Particular Specification	2.3.1 (q)	The new OHE shall be installed from existing OHE chainage location (-)915.399 near PCMC station and linking with the existing OHE to be carried out.	The new OHE shall be installed from existing OHE chainage location <b>(-)614.399</b> near PCMC station and linking with the existing OHE to be carried out.





## MAHARASHTRA METRO RAIL CORPORATION LIMITED

(Pune Metro Rail Project)

Joint Venture of Govt. of India & Govt. of Maharashtra

CIN: U60100MH2015SGC262054

13-Mar-2025

### CORRIGENDUM-II Part-C

**Name of Work:** Design, Supply, Installation, Testing & Commissioning of 25kV Flexible Overhead Catenary System, associated 25kV Sectioning Posts, 33kV Auxiliary Sub-Station (ASS), associated Cabling and SCADA Systems for PCMC-Nigdi Elevated Extension of Pune Metro Rail Project

**Tender No: P1A-TR-03/2025**

	Description as per NIT	Revised as
<b>Last Date &amp; Time for submission of Bids</b>	Online submission up till 16:00 Hrs. on 17-Mar-2025 on Maha-Tenders Portal.	Online submission up till 16:00 Hrs. on 24-Mar-2025 on Maha-Tenders Portal.
<b>Date &amp; Time of Opening of Technical Bids</b>	On 18-Mar-2025 at 16:00 Hrs in Procurement Department, A2 Block, District Court Interchange Metro Station, Nyaymurti Ranade Path, Shivaji Nagar, Pune-411005.	On 25-Mar-2025 at 16:00 Hrs in Procurement Department, A2 Block, District Court Interchange Metro Station, Nyaymurti Ranade Path, Shivaji Nagar, Pune-411005.

Executive Director/Procurement & Contracts,  
Pune Metro Rail Project,  
Maharashtra Metro Rail Corporation Limited.

