



INDRADHANUSH GAS GRID LIMITED (IGGL)
(Joint Venture of IOCL, ONGC, GAIL, OIL and NRL)
GUWAHATI, ASSAM

NORTH -EAST GAS GRID PIPELINE PROJECT

**BID DOCUMENT FOR
COMPOSITE WORKS
(ELECTRICAL & INSTRUMENTATION, CIVIL) FOR NEGDCL
PIPELINE CONNECTIVITY UNDER NORTH EAST GAS GRID
(NEGG) PROJECT OF M/S INDRADHANUSH GAS GRID
LIMITED (IGGL)**

OPEN DOMESTIC COMPETITIVE BIDDING

Tender ID: 2025_IGGL_235870_1

Bid Document No.: 05/51/23VC/IGGL/001(NEGDCL)

VOLUME – III OF III



**PREPARED AND ISSUED BY
MECON LIMITED
(A Govt. of India Undertaking)
Delhi, India**

**TENDER DRAWINGS-SINGLE
LINE DIAGRAM (SLD)
(ELECTRICAL SYSTEM)**



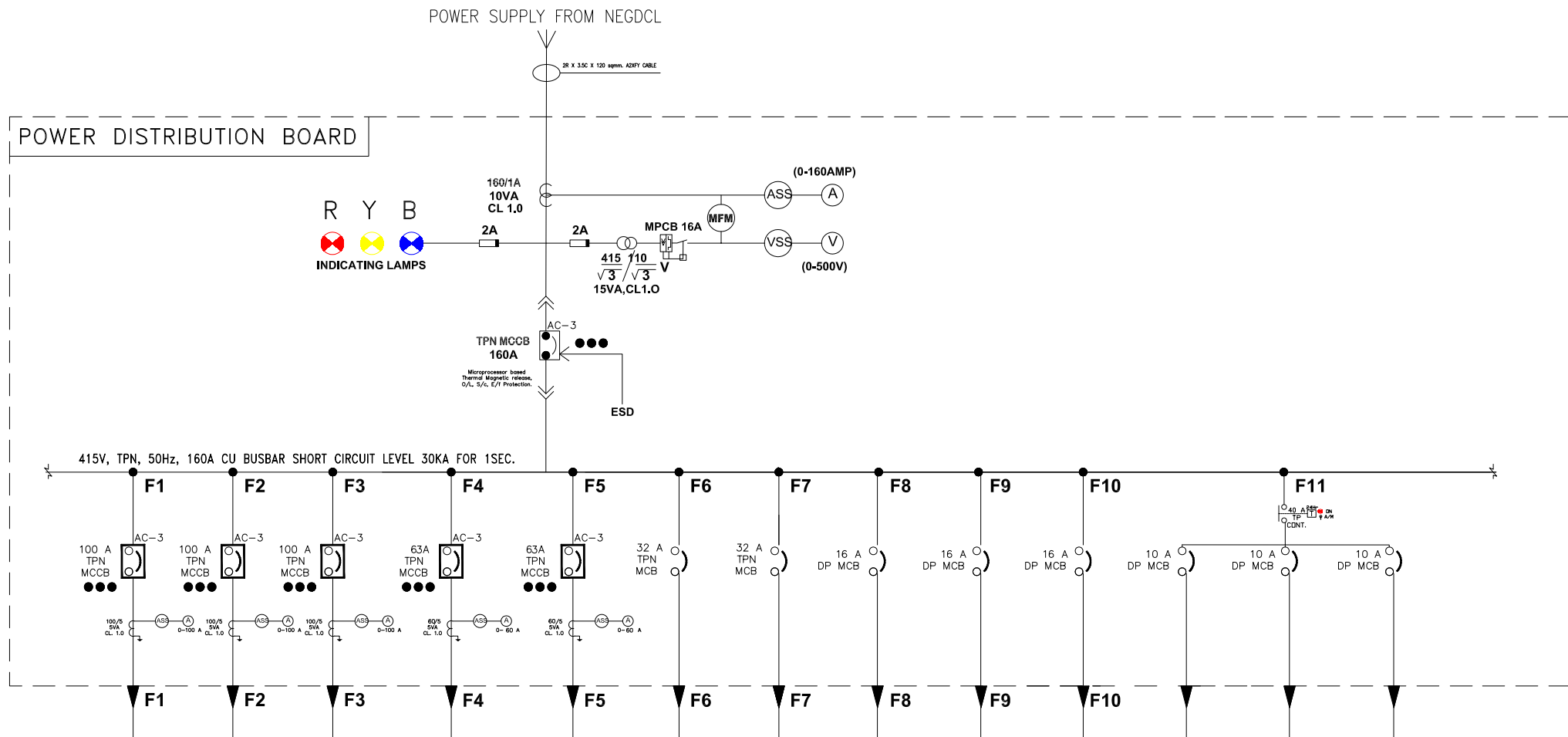
 IGGL	OIL & GAS SBU	COMPOSITE WORKS (ELECTRICAL & INSTRUMENTATION, CIVIL) FOR NEGDCL PIPELINE CONNECTIVITY	 MECON LTD, DELHI
TITLE	TABLE OF CONTENT (ELECTRICAL SYSTEM)	DOCUMENT NO.	Page 1 of 1
			REVISION 0

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1	Scope of Work for Electrical system	MEC/23UU/05/E9/E/001	Rev. 0
2	Electrical Check List	-	Rev. 0
3	List of Tool Kits and instruments- Annexure A	-	Rev. 0
4	List of Suppliers of Major bought out items	-	Rev. 0
5	Inspection Categorization plan for electrical items	-	-
6	Quality Assurance Plan for Electrical system	MEC/05/E9/23UU/QAP/01	Rev. 0
7	Standard Datasheets of Electrical System	-	-
VOL-II : STANDARD SPECIFICATIONS OF ELECTRICAL SYSTEM			
8	Standard Specification of Electrical System	-	-
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10	Indoor lighting layout- RT NEGDCL	MEC/23VC/05/E9/E/1082	0
11	Typical Equipment Layout for Receiving Facility, NEGDCL	MEC/23VC/05/E9/E/NEGDCL/EQUIPMENT LAYOUT	0
12	Standard Drawings of Electrical System	-	-



LEGEND

(A)	AMMETER	(C)	CURRENT TRANSFORMER
(ASS)	AMMETER SELECTOR SWITCH	(TVM)	TRI VECTOR METER
(V)	VOLTMETER	(F)	FREQUENCY METER
(VSS)	VOLTMETER SELECTOR SWITCH	(D)	DRAW OUT
(KWH)	KILOWATT HOUR METER	(E)	EARTHING
(T)	TRANSFORMER (POTENTIAL CONTROL)	(G)	CABLE GLAND
(L)	INDICATION LAMP	(H)	HRC FUSE
(M)	MCCB+ELR	(I)	SELECTOR SWITCH
(C)	CONTACTOR	(J)	AIR CKT BREAKER
(R)	O/L RELAY	(K)	SWITCH FUSE UNIT
(B)	MCB	(L)	VACCUUM CIRCUIT BREAKER
(O)	ON OFF TRIP INDICATION	(M)	MCCB
(P)	MOTOR PROTECTION CIRCUIT BREAKER		

POWER DISTRIBUTION BOARD FEEDER DETAILS

FEEDER TYPE	TPN MCCB	TPN MCCB	TPN MCCB	TPN MCCB	TPN MCCB	TPN MCB	TPN MCB	DP MCB	DP MCB	DP MCB	DP MCB	DP MCB	DP MCB
LOAD DETAILS	UPS-1	UPS-2	SPARE	BYPASS	SPARE								
RATING	100 A	100 A	100 A	63A	63A	32 A	32 A	16 A	16 A	16 A	10 A	10 A	10 A
CABLE SIZE													

FOR TENDER PURPOSE ONLY

NORTH EAST GAS GRID PIPELINE PROJECT (23VC)

मेकॉन लिमिटेड

MECON LIMITED

REV	SEC	CONCURRED BY

NOTE:-

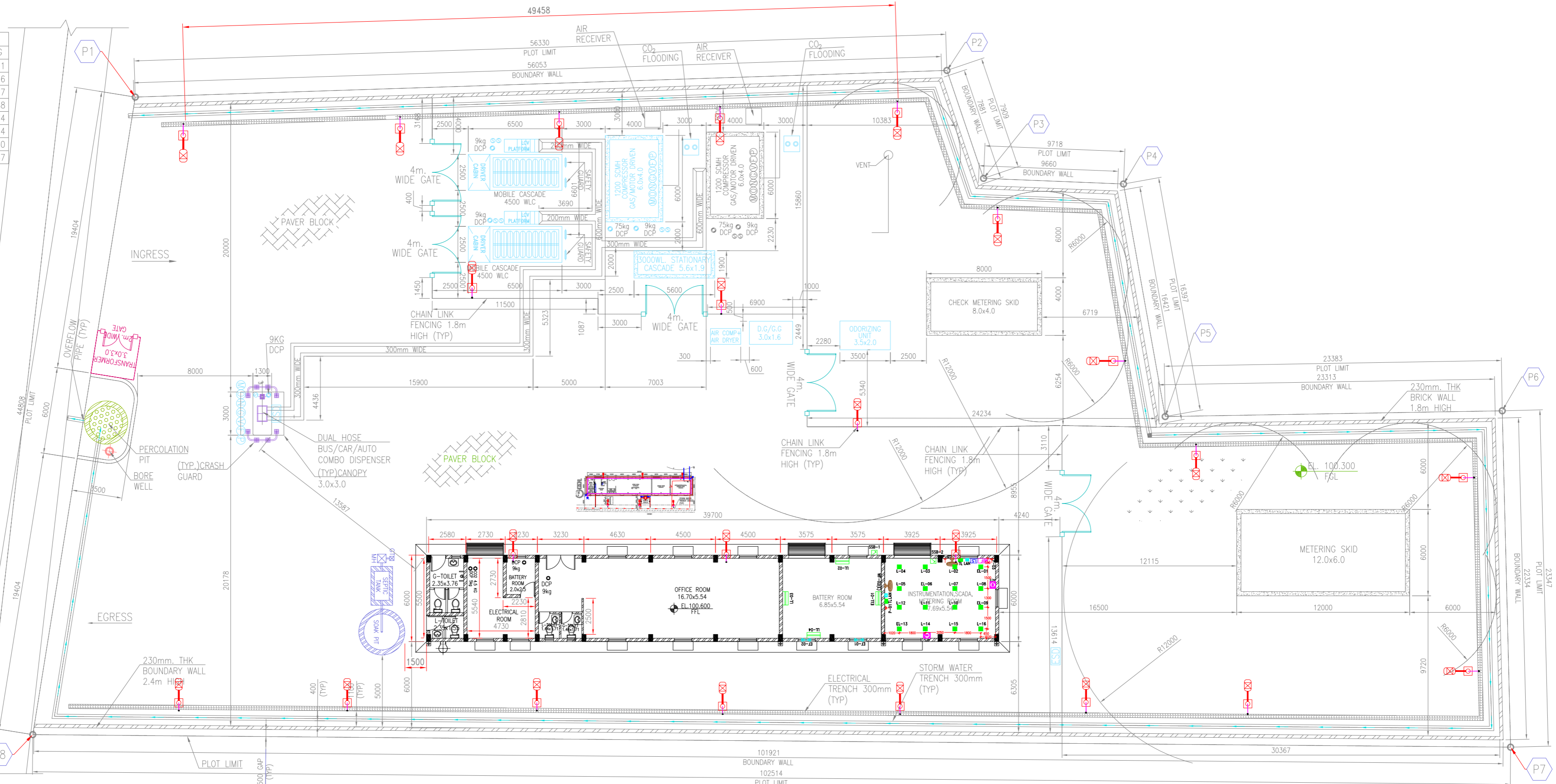
- DEGREE OF PROTECTION OF PDB SHALL BE IP-54.
- MFM COMMUNICATION CABLE & SHUNT TRIP CABLE OF MCCB SHALL BE TERMINATED AT THE TERMINAL BOX.

REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED

SECTION	ELECTRICAL	SINGLE LINE DIAGRAM OF PDB AT RT NEGDC
LOCATION	NEW DELHI	
DESIGNED	ASHISH	
DRAWN	BHAWNA	
CHECKED AND VERIFIED	MUKESH	REFERENCES
APPROVED	SIG	DRG.NO.
DATE	05.05.2025	SCALE : NTS
		DRG. NO. MEC/23VC/05/E9/E/1081
		Page 4 of 33
		REV
		0

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S.NO.	EASTING	NORTHING
P1	475968.00	2958994.91
P2	476024.30	2958996.76
P3	476026.84	2958989.27
P4	476036.55	2958988.88
P5	476039.44	2958972.74
P6	476062.82	2958973.14
P7	476063.40	2958942.80
P8	475960.89	2958950.67



PLOT LAYOUT PLAN
(SCALE - 1:175)

- NOTES :-**
- POWER PONT, LAN SOCKET & TELEPHONE SOCKET SHALL BE MOUNTED AT HEIGHT OF 350 MM FROM FGL.
 - SSBs SHALL BE MOUNTED AT HEIGHT OF 1050MM FROM FGL.
 - TOP OF LDBs SHALL BE MOUNTED AT A HEIGHT OF 1800 mm FROM FFL.
 - LIGHTING SWITCHBOARD SHALL BE LOCATED NEAR THE DOOR AT A HEIGHT OF 1500 MM FROM FFL. ONE NO. 3PIN/2PIN 5A COMBINATION SOCKET SHALL BE PROVIDED ON EACH SWITCH BOARD.
 - LOCATION AND QUANTITY OF TELEPHONE SOCKET (TL) & LAN SOCKET IS INDICATIVE. EXACT LOCATION SHALL BE FINALISED IN CONSULTATION WITH ENGINEER-IN-CHARGE.
 - LOCATION OF CEILING/WALL MOUNTED FAN IN CONTROL ROOM, ELECTRICAL ROOM & SCADA ROOM SHALL NOT BE IN THE CENTRE. IT SHALL BE FINALIZED AFTER CONSIDERING EQUIPMENT LAYOUT.
 - CONDUIT LAYOUT DRG. SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BEFORE PLACEMENT OF PURCHASE ORDER BY THE CONTRACTOR.
 - CONDUIT SHALL BE LAID FOR BUILDING MOUNTED & FLOOD LIGHTING FIXTURES, TELEPHONE & LAN SOCKET AND SOCKET FOR ACs. SAME SHALL BE SHOWN IN THE CONDUIT LAYOUT DRAWING.
 - ALL LIGHTING AND FAN POINTS INITIATES WITH LETTER 'E' INDICATES EMERGENCY POWER, FOR THIS SEPARATE WIRING SHALL BE DONE FROM INVERTER (MENTIONED IN BOM).
 - CATALOGUE OF SELECTED LIGHTING FIXTURES ETC. SHALL BE SUBMITTED FOR APPROVAL BEFORE PLACEMENT
 - REFER OUTDOOR LIGHTING LAYOUT DRG. FOR FINALIZING OF LOCATION & ORIENTATION OF BML & FL LIGHT FIXTURES.
 - REFER EQUIPMENT LAYOUT DRG. FOR FINALIZING OF ORIENTATION OF LDBs.
 - AC IN INST./SCADA TELECOM ROOM SHALL BE MOUNTED ABOVE WINDOW. STABILIZER & 20A SOCKET OUTLET FOR AC SHALL BE NEAR TO AC. 20A MCB FOR AC SHALL BE PROVIDED AT 500mm FROM FFL.
 - PVC PIPING FOR AC DRAINAGE WATER SHALL BE PROVIDED BY CONTRACTOR.
 - EYE WASH & SHOWER SHALL BE PROVIDED WITH DRAINAGE & WATER TAP CONNECTION.
 - CUTOUT FOR EXHAUST FAN SHALL BE AS PER THE SIZE OF FAN & LOUVERS SHALL BE PROVIDED ON EXHAUST FAN.
 - 3Nos. OF POWER CABLE SHALL BE LAID FROM ELECTRICAL ROOM TO GUARD ROOM (FOR NORMAL POWER, EMERGENCY POWER & BOREWELL STARTER). NECESSARY JBbs SHALL BE PROVIDED AT GUARD ROOM FOR TERMINATION OF NORMAL AND EMERGENCY POWER CABLE AND FURTHER CONNECTION TO SWITCH BOARD. CONDUITS SHALL BE PROVIDED FROM JB TO SWITCH BOARD.
 - BUILDING MOUNTED FIXTURES AND FLOOD LIGHT FIXTURES SHOWN IN THE DRAWING ARE INDICATIVE ONLY. FOR FINAL QUANTITY & LOCATION OF THIS FIXTURES REFER LATEST OUTDOOR LIGHTING LAYOUT RESPECTIVE STATION/ TERMINAL. NECESSARY CONDUITS FOR THESE FIXTURES SHALL BE LAID ACCORDINGLY.

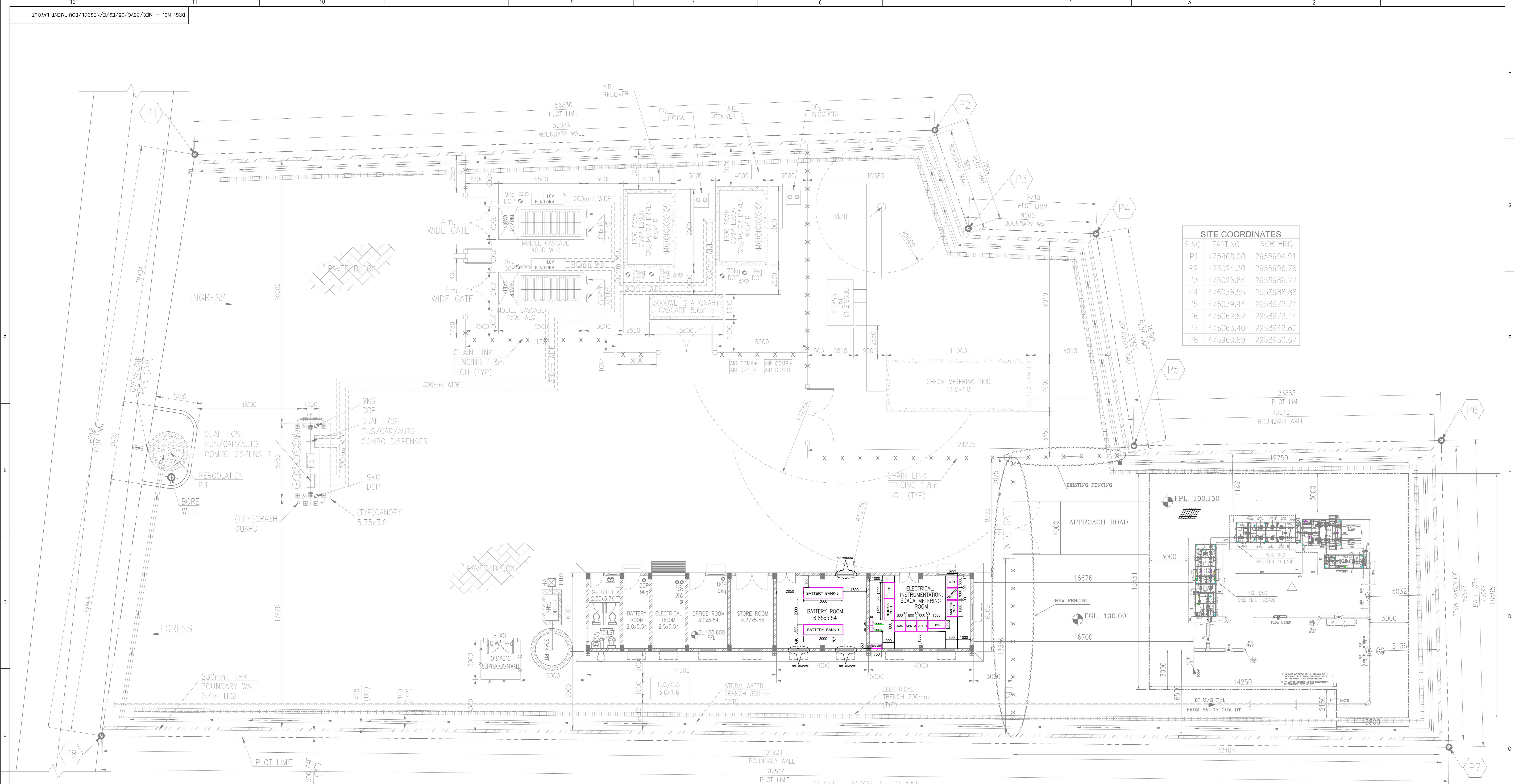
ISSUED FOR CONSTRUCTION
SIGNATURE : _____ DATE : _____

 	INDRADHANUSH GAS GRID LTD
	मेकॉन लिमिटेड
MECON LIMITED	

SECTION	ELECTRICAL	NORTH EAST GAS GRID PIPELINE PROJECT (23VC)
LOCATION	DELHI	
DESIGNED	ASHISH	INDOOR LIGHT LAYOUT FOR RT NEGDC
DRAWN	BHAWNA	
CHECKED AND VERIFIED	MUKESH	SCALE : N.T.S
SIG		Page 5 of 33
DATE	05.05.2025	DRG. NO. MEC/23VC/05/E9/E/1082

REV. NO.	DATE	ZONE	DESCRIPTION	BY	VERIFIED	REFERENCES	DRG. NO.
27.02.2023			GENERAL REVISION	A.M.	M.J.		
13.06.2023			GENERAL REVISION	A.M.	M.J.		
			REVISION				

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SITE COORDINATES		
S.NO.	EASTING	NORTHING
P1	475968.00	2958994.91
P2	476024.30	2958996.76
P3	476026.84	2958989.27
P4	476036.55	2958988.88
P5	476039.44	2958972.74
P6	476062.82	2958973.14
P7	476063.40	2958942.80
P8	475960.89	2958950.67

PLOT LAYOUT PLAN

ISSUED FOR CONSTRUCTION
SIGNATURE : _____ DATE : _____



	INDRADHANUSH GAS GRID LTD
	मेकॉन लिमिटेड
	MECON LIMITED
SECTION ELECTRICAL	NORTH-EAST GRID PIPELINE PROJECT PIPELINE SECTION-1
LOCATION DELHI	
DESIGNED ADITYA	TYPICAL EQUIPMENT LAYOUT FOR RECEIVING FACILITY, NEGDC/1
DRAWN SUNIL	
CHECKED AND VERIFIED AASHISH	SCALE : N.T.S
SIG (QUASIM)	
APPROVED DATE 02.05.2025	DRG. NO. - MEC/23VC/05/E9/E/NEGDC/1/EQUIPMENT LAYOUT

- NOTES :-
1. THE LOCATION OF EQUIPMENT MARKED IN LAYOUT MY CHANGE AS PER THE SITE REQUIREMENT, AS PER DIRECTION OF THE SITE ENGINEER.
 2. 1/E-LDB/PP-LDB/OLDB/COS-1&2/DCDB(24V & 48V) SHALL BE INSTALLED ON THE WALL. VERTICAL CABLE TRAYS SHALL BE INSTALLED FOR LAYING OF CABLE FROM THE LDB/ELDB/OLDB/COS-1&2 TO TRENCHES.
 3. NECESSARY CUT OUT SHALL BE PROVIDED IN CHEQUERED PLATE AS PER REQUIREMENT.
 4. UNUTILISED TRENCH AREAS SHALL BE COVERED WITH CHEQUERED PLATE.
 5. TOP OF THE 1/E-LDB/PP-LDB/OLDB/COS-1&2/DCDB(24V & 48V) SHALL AT 180MM FROM THE FLOOR LEVEL.
 6. ALL DIMENSIONS ARE IN MM.
 7. CABLE TRENCH DEPTH SHALL BE MIN 300MM IN ELECTRICAL ROOM .

REV	DATE	DESCRIPTION	BY	VERIFIED

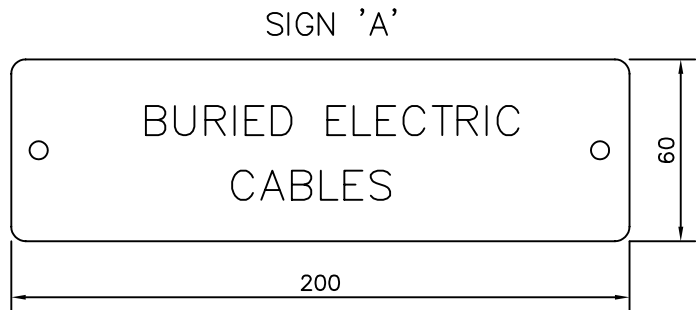
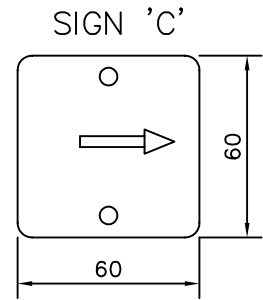
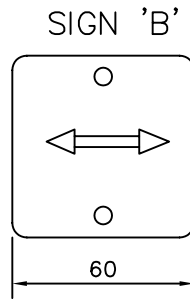
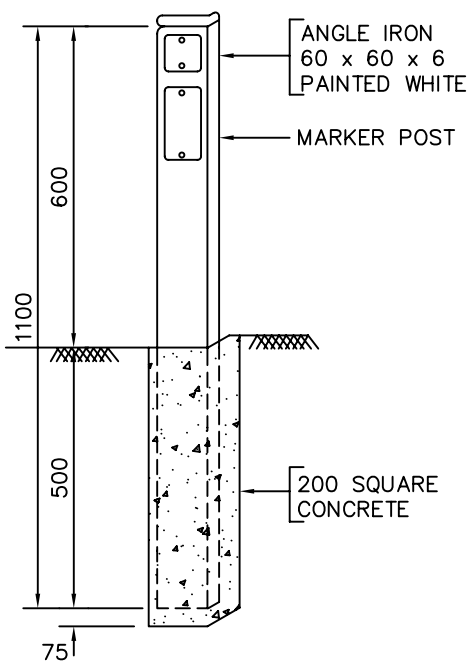
REV. NO.	DATE	ZONE	DESCRIPTION	BY	VERIFIED

STANDARD DRAWINGS (ELECTRICAL)

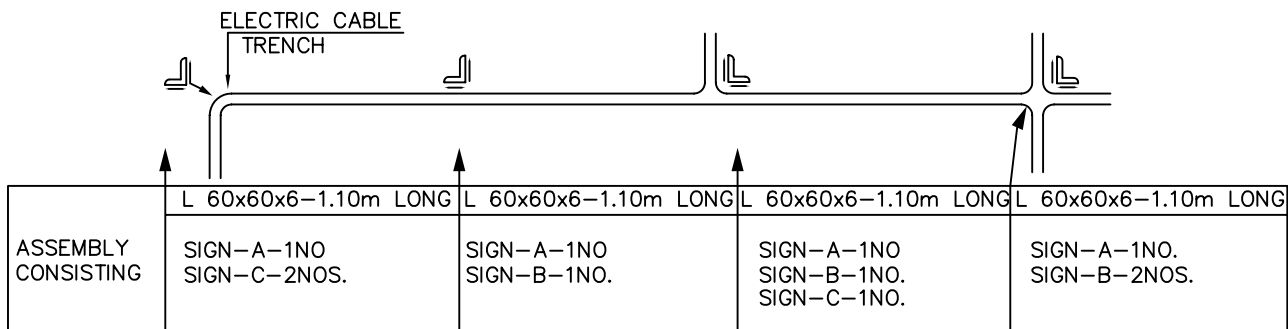
 IGGL	OIL & GAS SBU	NORTH EAST GAS GRID PIPELINE PROJECT SV-5 to RT NEGDCCL CONNECTIVITY	 MECON LTD, DELHI
TITLE	LIST OF STANDARD DRAWINGS		Page 1 of 1 REVISION 0

LIST OF STANDARD DRAWINGS (ELECTRICAL)


Sl. No.	Description of Drawings	Drawings No.
1	MARKING OF TRENCHES FOR ELECTRIC CABLES	MEC/SD/05/E9/01/01
2	TYPICAL SECTION OF CABLE TRENCH IN UNPAVED AREAS	MEC/SD/05/E9/01/02
3	EARTH ELECTRODE IN TEST PIT	MEC/SD/05/E9/02/01
4	COPPER PLATE ELECTRODE IN TEST PIT	MEC/SD/05/E9/02/02
5	TYPICAL EARTH CONNECTION FOR STREET LIGHT POLE	MEC/SD/05/E9/02/03
6	EARTHING OF TANKS AND VESSELS	MEC/SD/05/E9/02/04
7	EARTHING METHOD FOR PROCESSING EQUIPMENT	MEC/SD/05/E9/02/05
8	TYPICAL INSTALLATION OF POLE MOUNTED STREET LIGHTING FIXTURE FOR SAFE AREA (WITHOUT RUNGS)	MEC/SD/05/E9/03/01
9	TYPICAL INSTALLATION OF FLOOD LIGHTING POLE (WITH RUNGS)	MEC/SD/05/E9/77/02
10	DIV.2 / FLAME PROOF LIGHTING FIXTURE MOUNTING DETAILS	MEC/SD/05/E9/77/03
11	TYPICAL INSTALLATION OF LIGHTING FIXTURES ON GI OCTOGONAL POLE.	MEC/SD/05/E9/77/04 Sheet 1 of 3
12	TYPICAL INSTALLATION OF LIGHTING FIXTURES ON GI OCTOGONAL POLE.	MEC/SD/05/E9/77/04 Sheet 2 of 3
13	TYPICAL INSTALLATION OF LIGHTING FIXTURES ON GI OCTOGONAL POLE.	MEC/SD/05/E9/77/04 Sheet 3 of 3



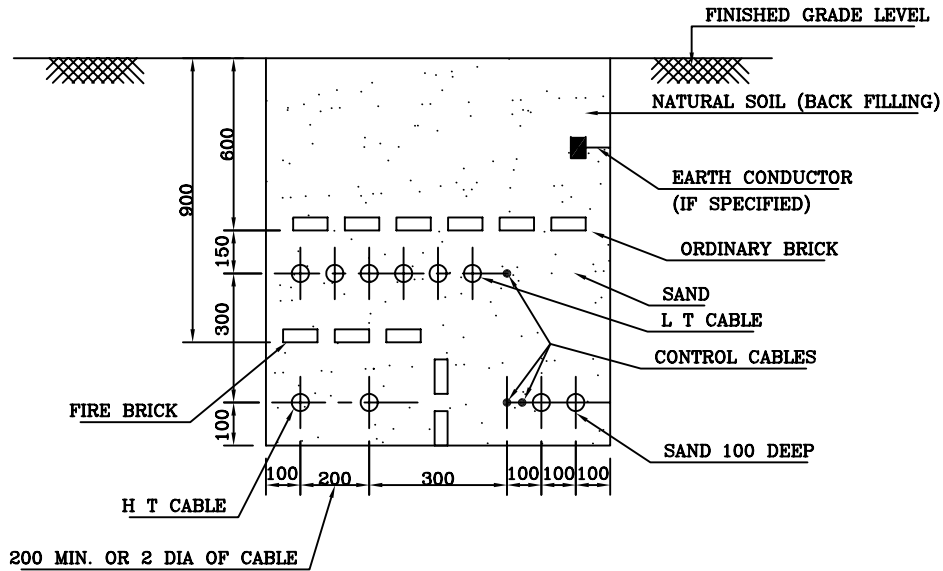
TYPICAL ARRANGEMENT OF MARKER



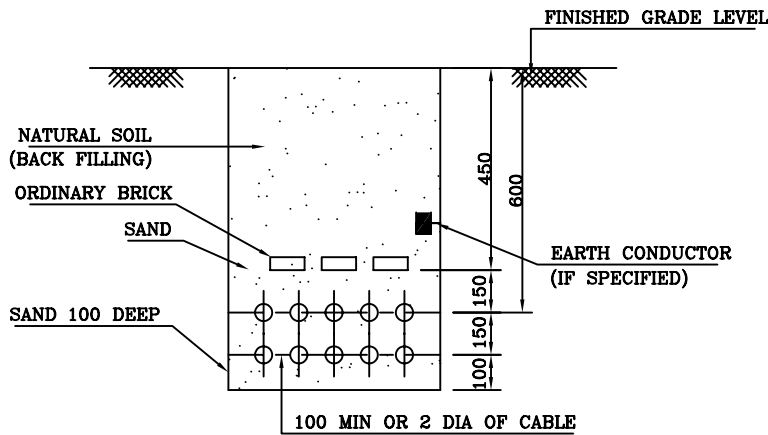
NOET: - 1. TRENCHES SHALL BE MARKED AT ALL DIRECTION CHANGES, INTERSECTIONS AND STRAIGHT RUNS.
2. SIGN MADE OF 14 ENAMELLED SHEET PLATE WHITE LETTRING MADE ON GREEN BACKGROUND.

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.		
SECTION: ELECTRICAL			MARKING OF TRENCHES FOR ELECTRIC CABLES		 मेकॉन लिमिटेड MECON LIMITED		SCALE : N.T.S. Page 9 of 33 DRG.NO MEC/SD/05/E9/01/01		
DSGN	NAME	DATE						CHKD	DATE
DRWN									
APPROVED								REV 0	

TYPICAL SECTION WITH H. T. CABLES AND L T CABLES



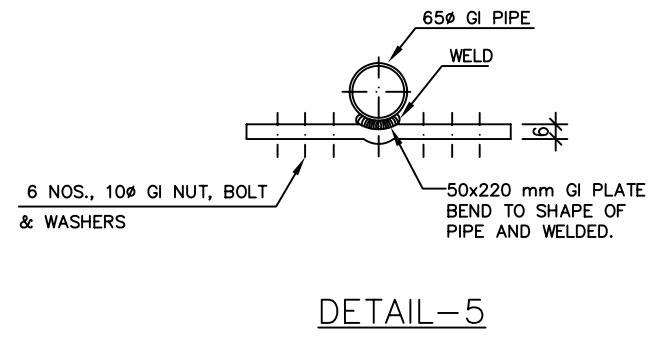
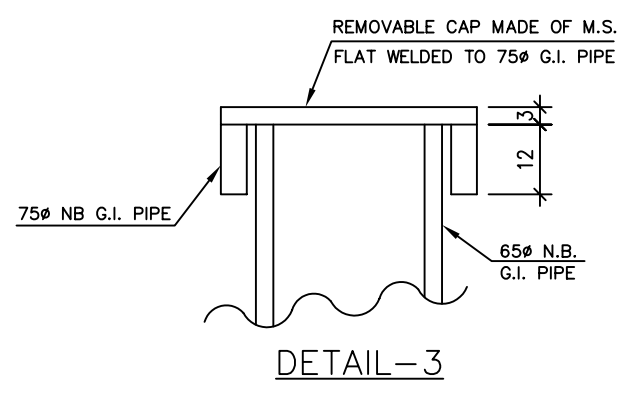
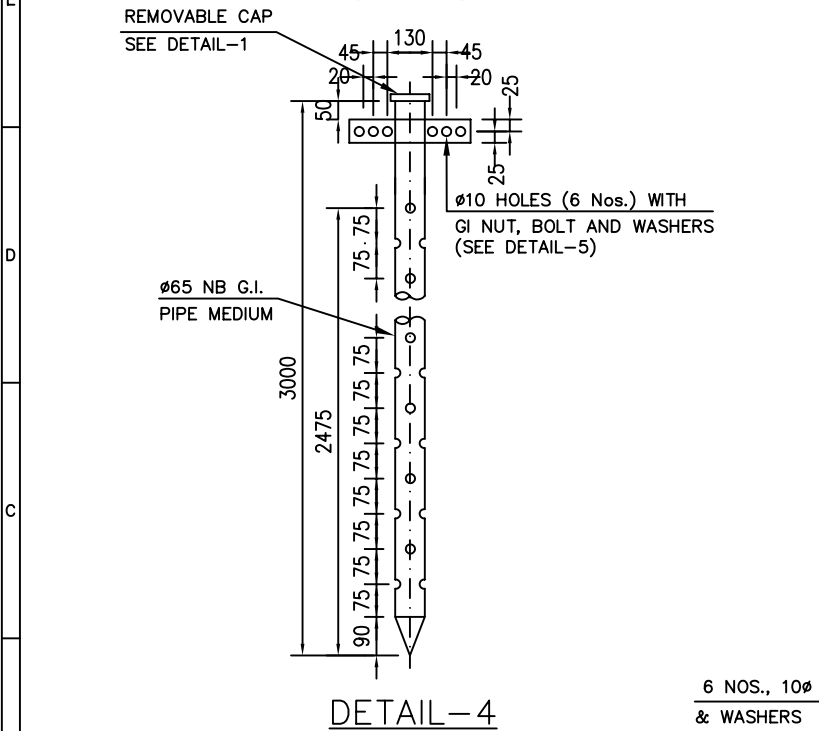
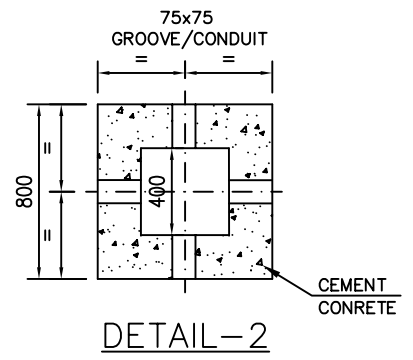
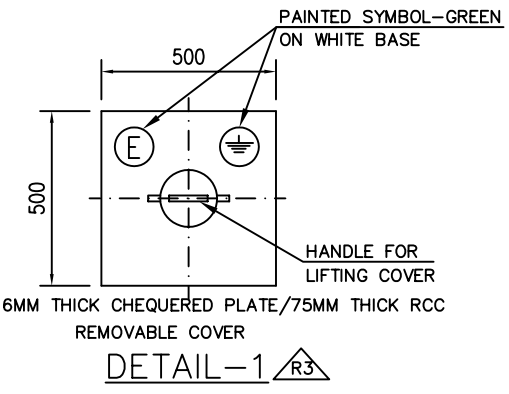
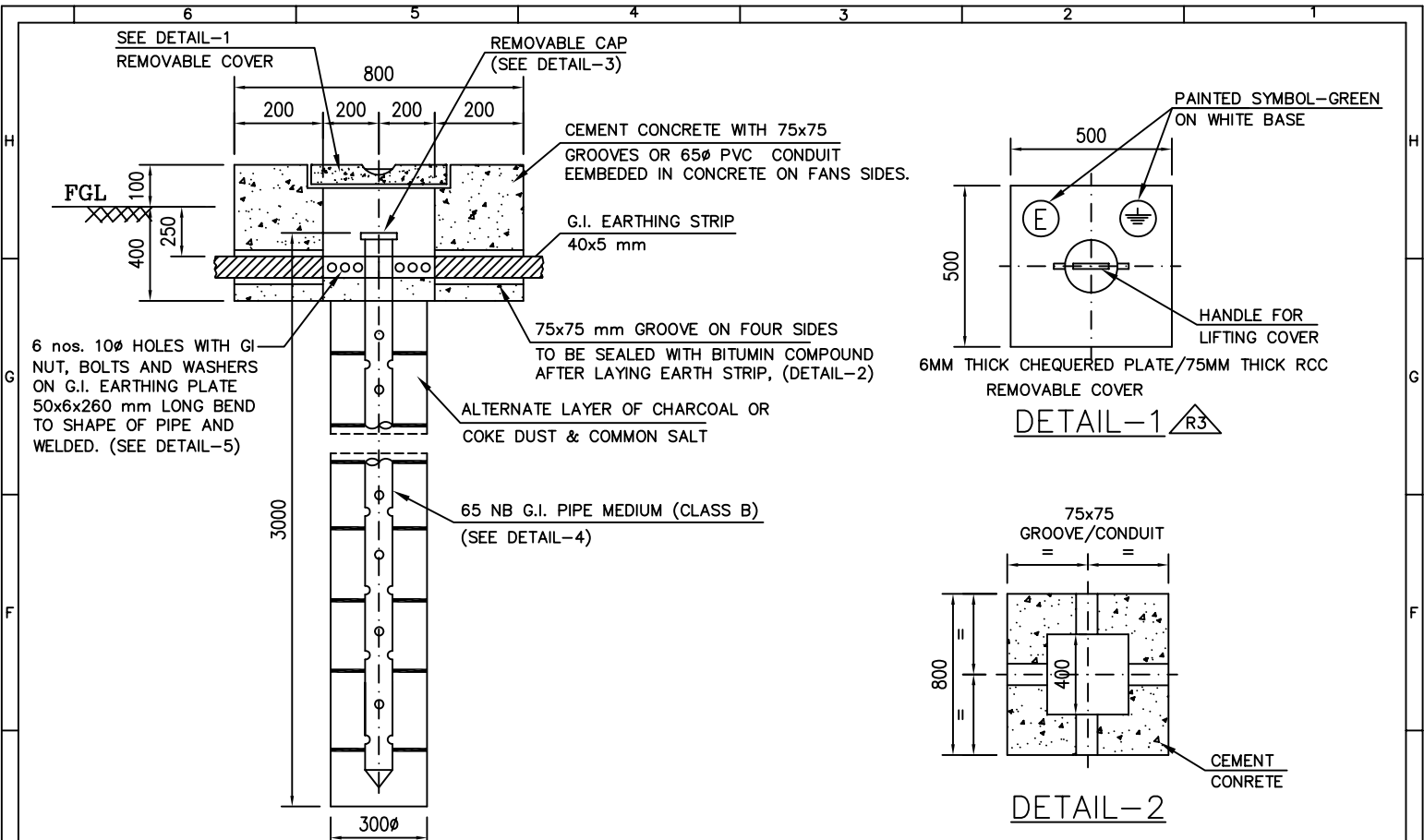
TYPICAL SECTION WITH L T CABLES ONLY




NOTES:—

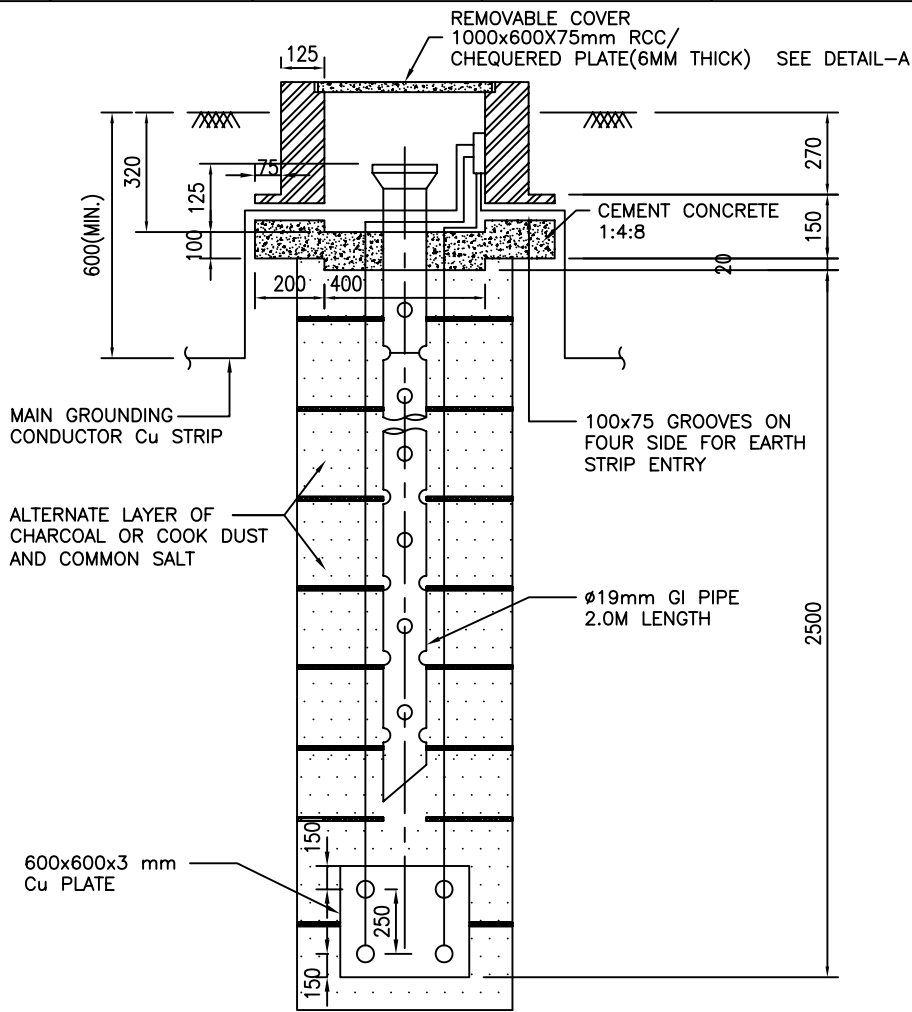
1. LEAVE SPACE FOR LATER ADDITION OF AT LEAST 2 CABLES OR 15% AVERAGE SPARE SPACE REGARDLESS OF FUTURE EXPANSION.
2. IF TELEPHONE CABLES ARE LAID IN THE SAME TRENCH A CLEARANCE OF 300mm SHALL BE PROVIDED BETWEEN POWER AND TELEPHONE CABLES .

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.			
SECTION: ELECTRICAL			TYPICAL SECTION OF CABLE TRENCH IN UNPAVED AREAS				मेकॉन लिमिटेड MECON LIMITED			
DSGN	NAME	DATE					CHKD	DATE	SCALE : N.T.S.	REV 0
DRWN									DRG.NO MEC/SD/05/E9/01/02	
APPROVED							Page 10 of 33			

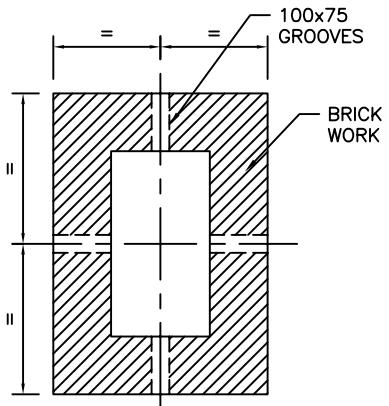


NOTE: -
 1.) THE PIPE SHALL BE HOT DIP GALVANISED AFTER FABRICATION.

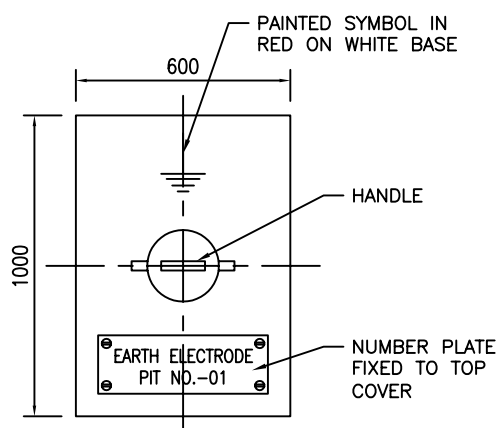
3	30.04.07	G2	CHEQUERED PLATE COVER ADDED	QA	DKP	
REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	
SECTION: ELECTRICAL			REFERENCES			DRG. NO.
DSGN	NAME	DATE	CHKD	DATE	 मेकॉन लिमिटेड MECON LIMITED	
DRWN	IRFAN	23.07.04				
APPROVED			EARTH ELECTRODE IN TEST PIT			SCALE : N.T.S.
						Page 11 of 33 DRG.NO MEC/SD/05/E9/02/01
						REV 3




COPPER PLATE ELECTRODE WITH TREATED EARTH PIT



DETAIL-B



DETAIL-A

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.			
SECTION: ELECTRICAL			COPPER PLATE ELECTRODE IN TEST PIT				मेकॉन लिमिटेड MECON LIMITED			
NAME	DATE	CHKD						DATE	SCALE : N.T.S. (SH. 1 OF 1)	REV
DSGN	Q.A.	QA						DRG.NO MEC/SD/05/E9/02/02	Page 12 of 33	0
DRWN	IRFAN	05.01.07								
APPROVED	(DK PANDE)									

STREET LIGHT POLE

50 mm WIDEx60x6 mm THK. MS FLAT WELDED TO POLE FOR EARTH TERMINATION (SEE DETAIL-1)

10 mm DIA. GALVANISED MS BOLT, NUT & SPRING WASHER

TERMINAL CONNECTION

25x4mm GI STRIP

G.L.

225

450 MIN.

45

20

20

WELD

10 mm DIA GALVANISED MS BOLTS, NUTS AND SPRING WASHER

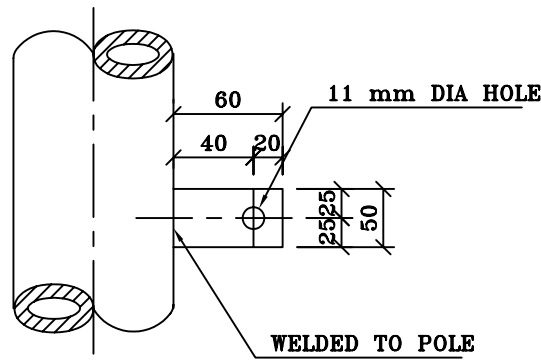
25x4mm GI STRIP FROM NEAREST MAIN EARTH GRID OR FROM LOCAL EARTHING STATION. SEE DETAIL -2

50x6x65 LONG G.I. FLAT

38 mm DIA. & 2500 mm LONG. G.I. PIPE (MEDIUM)

DETAIL-2

LOCAL EARTHING STATION




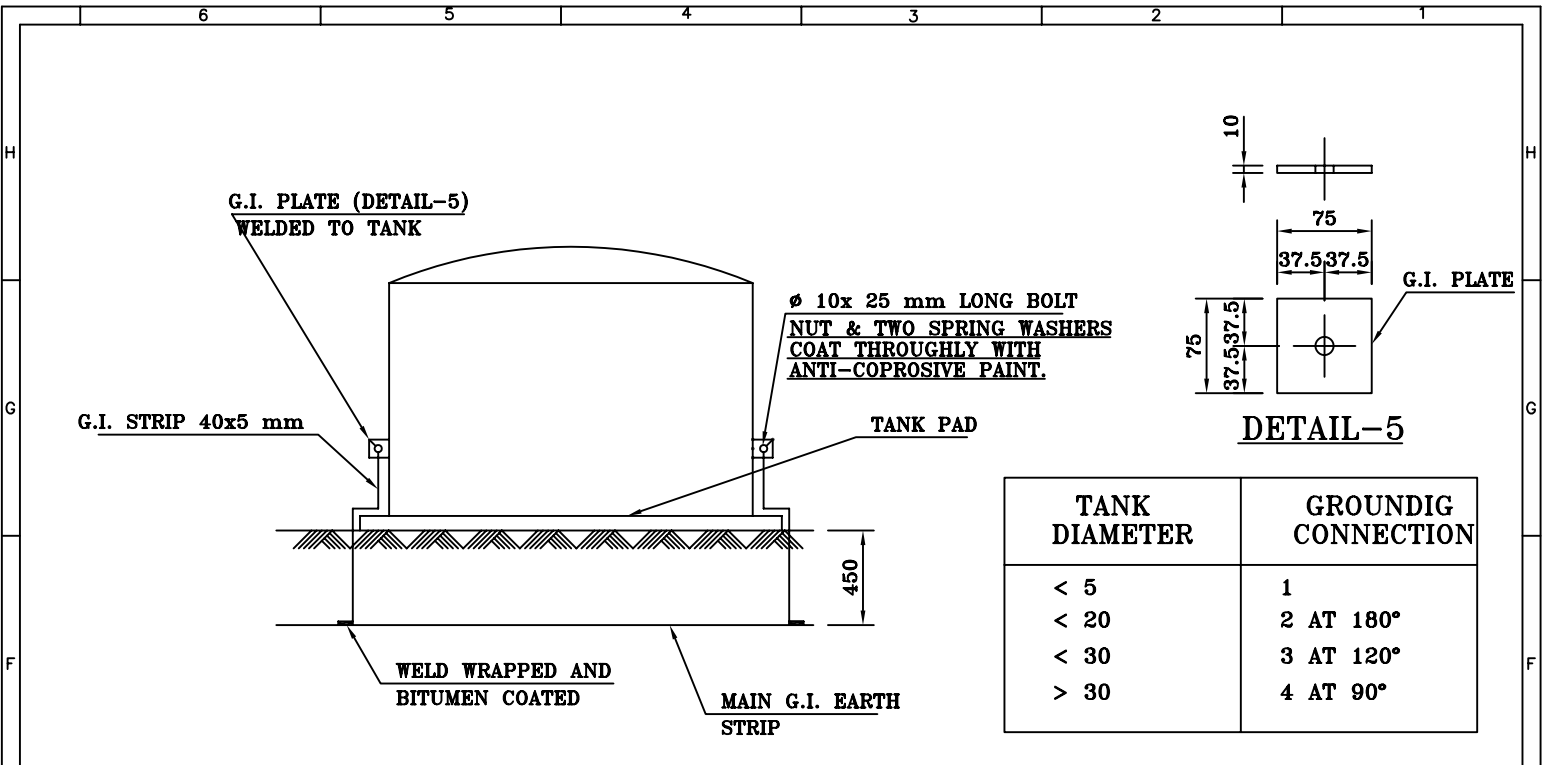
DETAIL-1

WELDED TO POLE

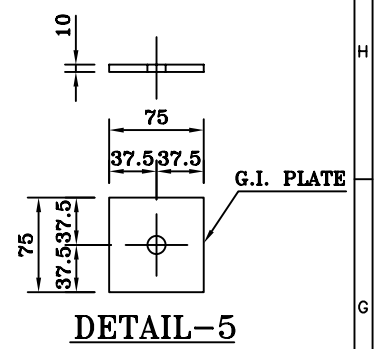
NOTES:-

1. USE TWO EARTHING IF VOLTAGE IN POLE JUNCTION BOX IS 415 V

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
<p>SECTION: ELECTRICAL</p> <p>TYPICAL EARTH CONNECTION FOR STREET LIGHT POLE</p>							
DSGN	NAME	DATE	CHKD	DATE	 <p>मेकॉन लिमिटेड MECON LIMITED</p>		
DRWN	IRFAN	29.07.04			<p>SCALE : N.T.S. Page 13 of 33</p> <p>DRG.NO MEC/SD/05/E9/02/03</p>		
APPROVED					REV 2		



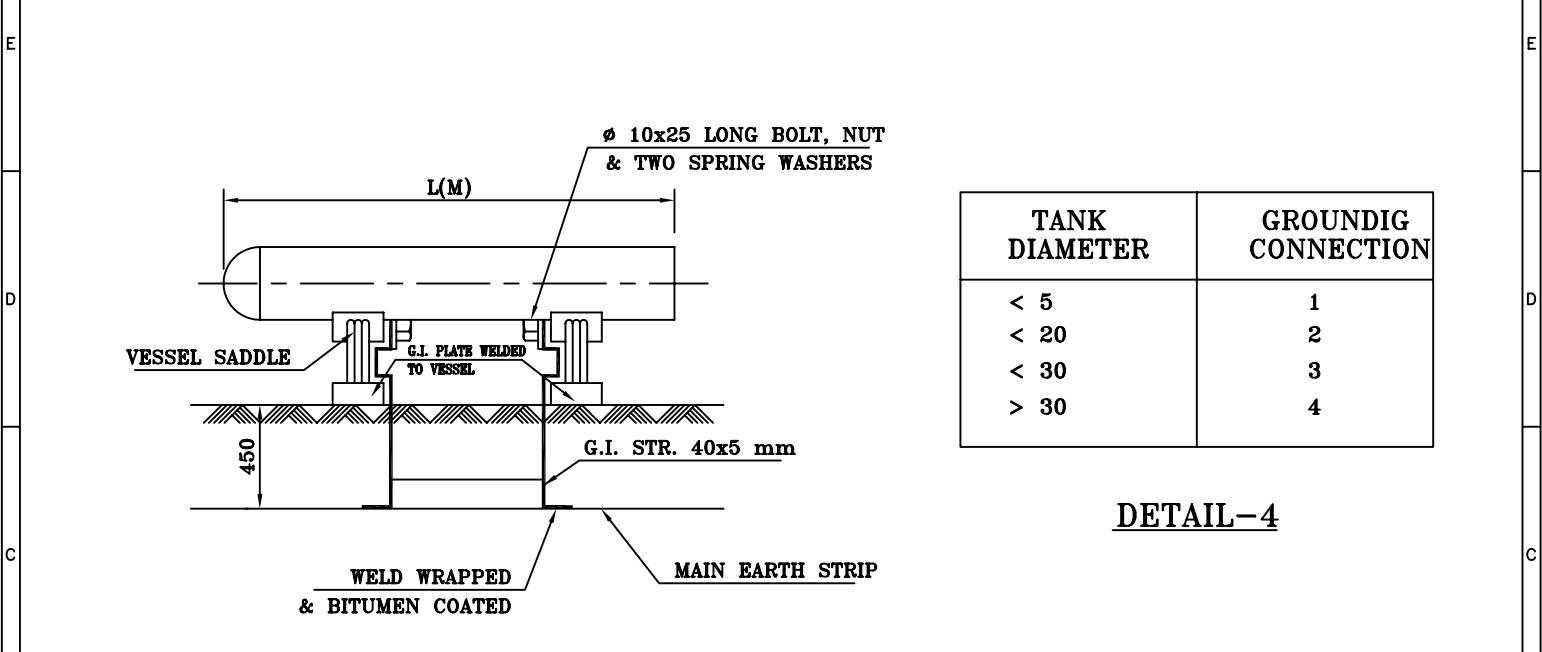
DETAIL-1



DETAIL-5

TANK DIAMETER	GROUNDING CONNECTION
< 5	1
< 20	2 AT 180°
< 30	3 AT 120°
> 30	4 AT 90°

DETAIL-2

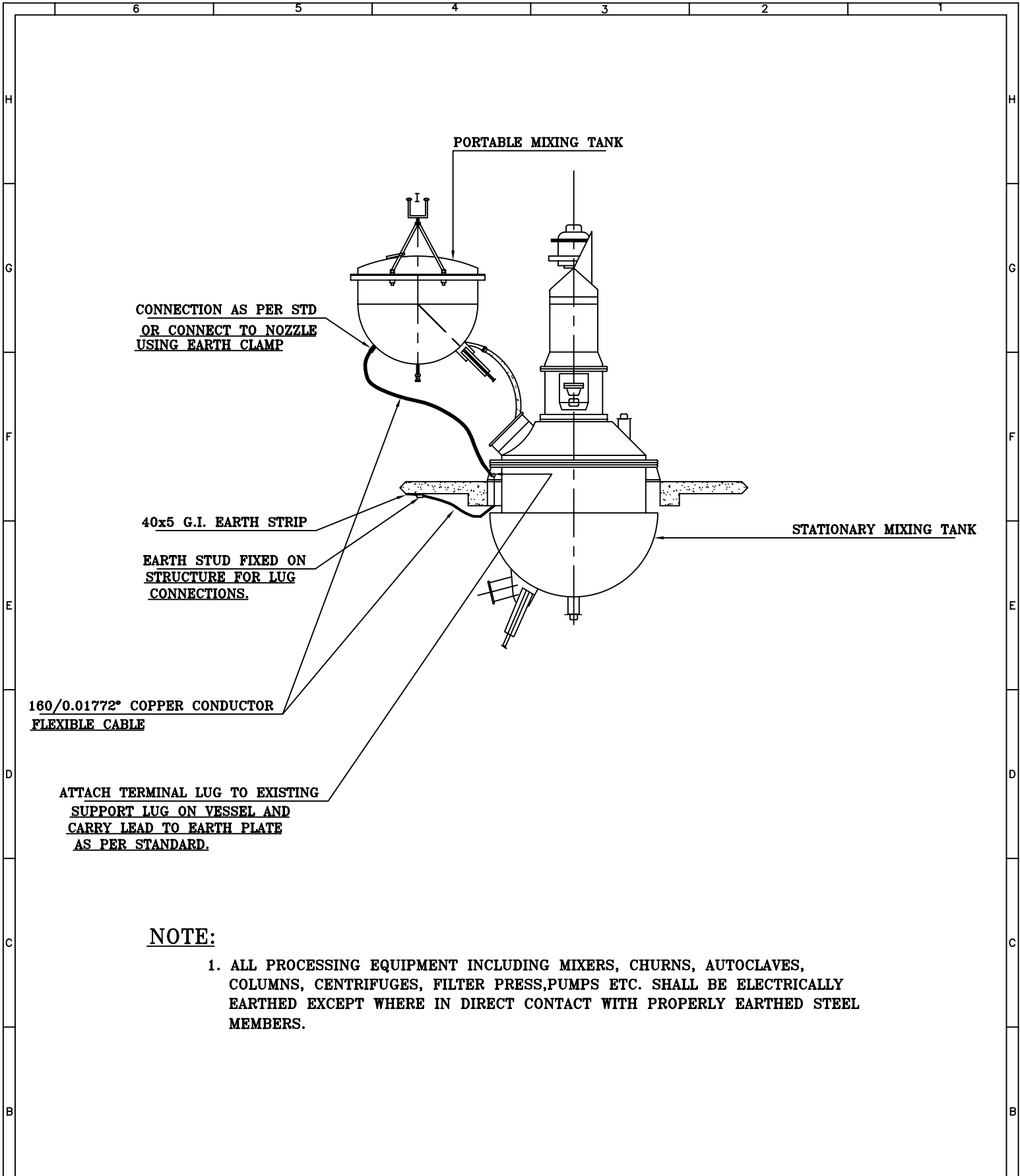


DETAIL-3

TANK DIAMETER	GROUNDING CONNECTION
< 5	1
< 20	2
< 30	3
> 30	4


DETAIL-4

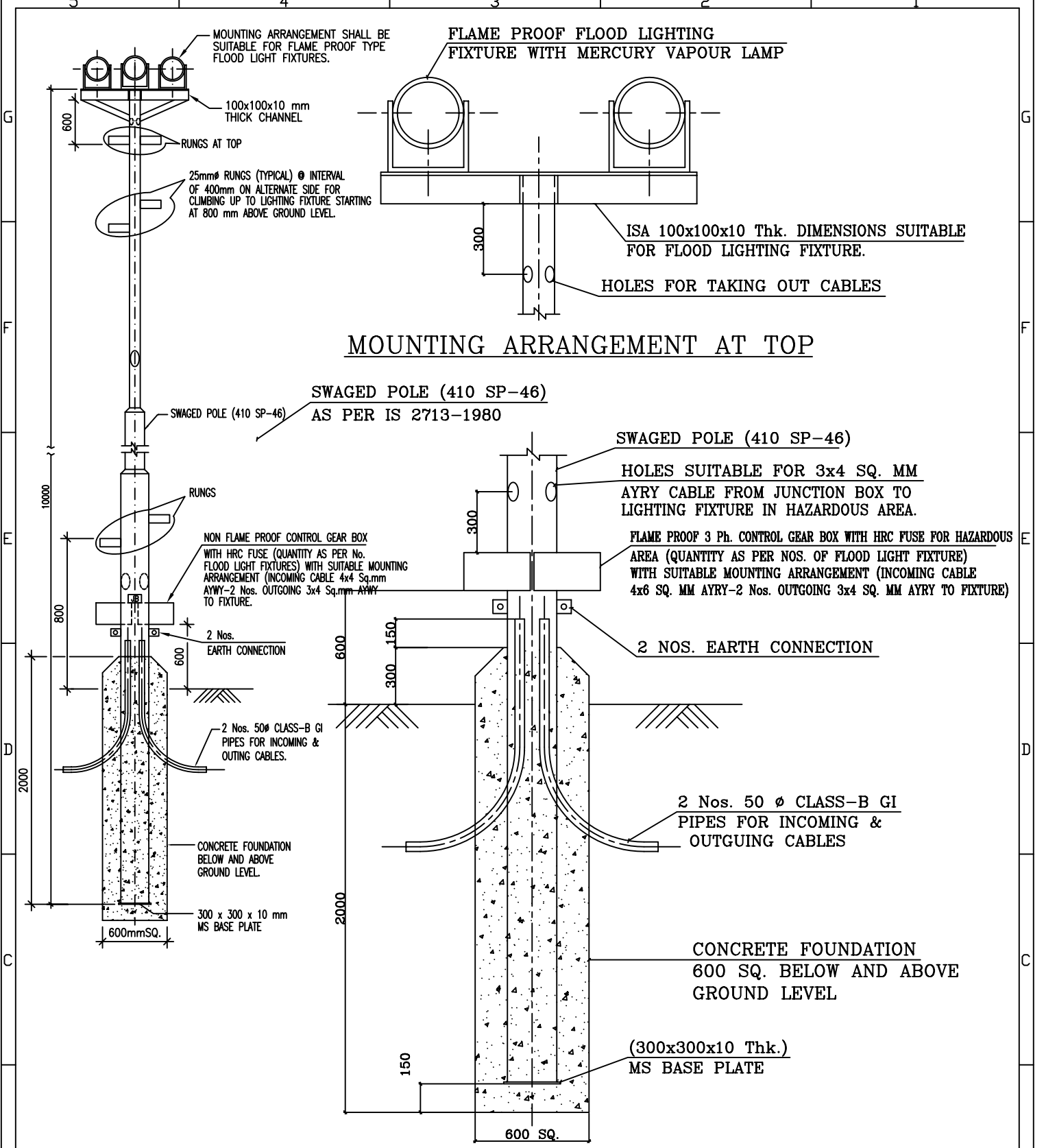
REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD			
REVISIONS						REFERENCES		
						DRG. NO.		
SECTION: ELECTRICAL			EARTHING OF TANKS AND VESSELS			 मेकॉन		
DSGN	NAME	DATE					CHKD	DATE
DRWN								MECON LIMITED
APPROVED						SCALE : N.T.S.		
DRG.NO MEC/SD/05/E9/02/04						REV 0		



NOTE:


1. ALL PROCESSING EQUIPMENT INCLUDING MIXERS, CHURNS, AUTOCLAVES, COLUMNS, CENTRIFUGES, FILTER PRESS, PUMPS ETC. SHALL BE ELECTRICALLY EARTHED EXCEPT WHERE IN DIRECT CONTACT WITH PROPERLY EARTHED STEEL MEMBERS.

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.		
SECTION: ELECTRICAL			EARTHING METHOD FOR PROCESSING EQUIPMENT				मेकॉन लिमिटेड MECON LIMITED		
DSGN	NAME	DATE						CHKD	DATE
DRWN									
APPROVED									
SCALE : N.T.S.						Page 15 of 33			
DRG.NO						MEC/SD/05/E9/02/05			
						REV 0			



NOTE :-

- MARSHALLING BOX / JUNCTION BOX & G.I. PIPES FOR CABLES SHALL BE PROVIDED ON THE CABLE TRENCH SIDE.

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.			
REVISIONS						REFERENCES				
THIS DRAWING IS PROPERTY OF MECON AND IS ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.										
SECTION ELECTRICAL		TYPICAL INSTALLATION OF FLOOD LIGHTING POLE (WITH RUNGS)					मेकन लिमिटेड			
NAME	DATE						CHKD	DATE	MECON LIMITED	
DSGN										
DRWN	DAYA					12.04.2001				
APPROVED						SCALE : 1:50	Page 16 of 33			
						DRG.NO. MEC/SD/05/E9/77/02	REV 0			

38/50 ϕ G.I. PIPE

SEE DETAIL-1

CABLE GLAND

①

DIV. 2/FLAME PROOF WELL GLASS
LIGHTING FIXTURE-POLE MOUNTED

INTERNAL THREAD

HEXAGONAL HEAD

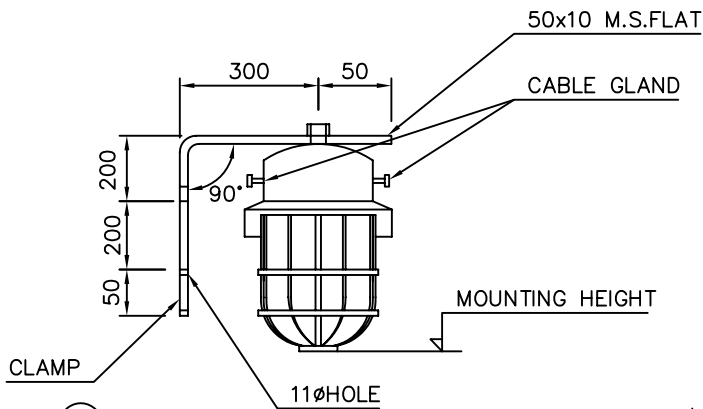
EXTERNAL THREAD

25 mm min.

25mm min.

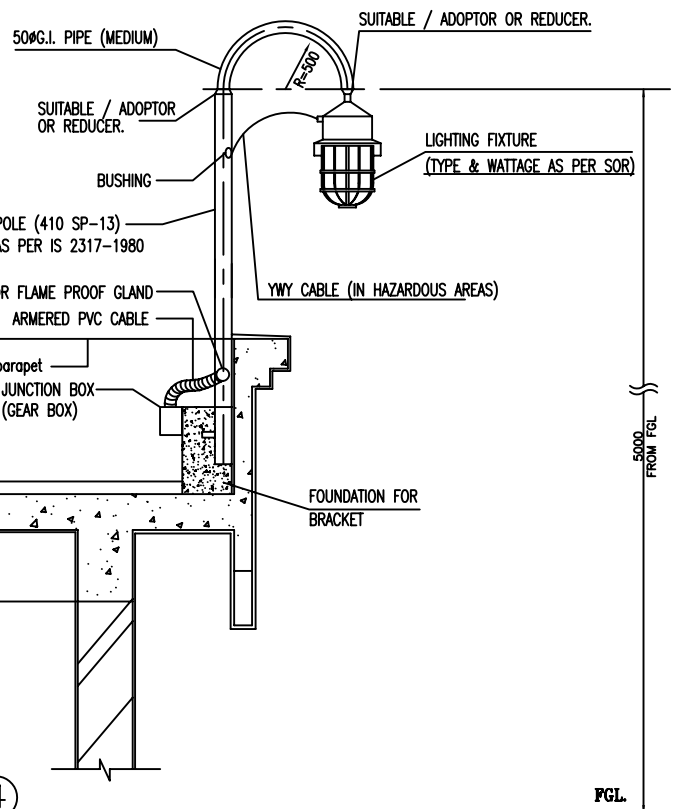
DETAIL - 1
(ADAPTOR)

DESCRIPTION	DIMENSIONS	
	X	Y
PLATFORM MOUNTED POLE	TO SUIT 19 ϕ B.S. PIPE	TO SUIT 38 ϕ B.S. PIPE
FLOOR MOUNTED POLE	TO SUIT 19 ϕ B.S. PIPE	TO SUIT 50 ϕ B.S. PIPE



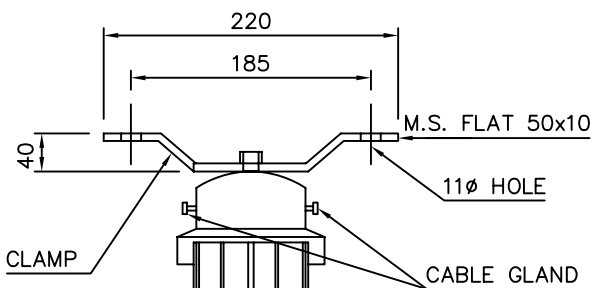
②

DIV. 2/FLAME PROOF WELL GLASS
LIGHTING FIXTURE-BRACKET MOUNTED



④

DIV. 2/FLAME PROOF WELL GLASS
LIGHTING FIXTURE-BRACKET MOUNTED ON BUILDING.



③

DIV. 2/FLAME PROOF WELL GLASS
LIGHTING FIXTURE-CEILING MOUNTED

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD
REVISIONS					

REFERENCES

DRG. NO.

SECTION: ELECTRICAL

NAME	DATE	CHKD	DATE
DSGN			
DRWN			

FLAME PROOF LIGHTING
FIXTURE MOUNTING DETAILS
(TYPICAL)



मेकॉन लिमिटेड

MECON LIMITED

SCALE : N.T.S.

Page 17 of 33

REV

DRG.NO MEC/SD/05/E9/77/03

0

APPROVED

6

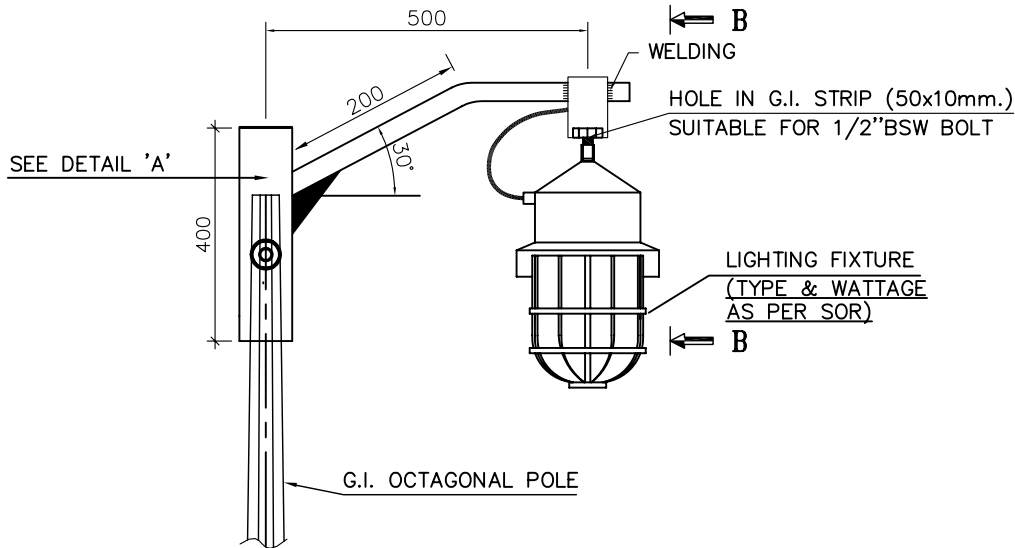
5

4

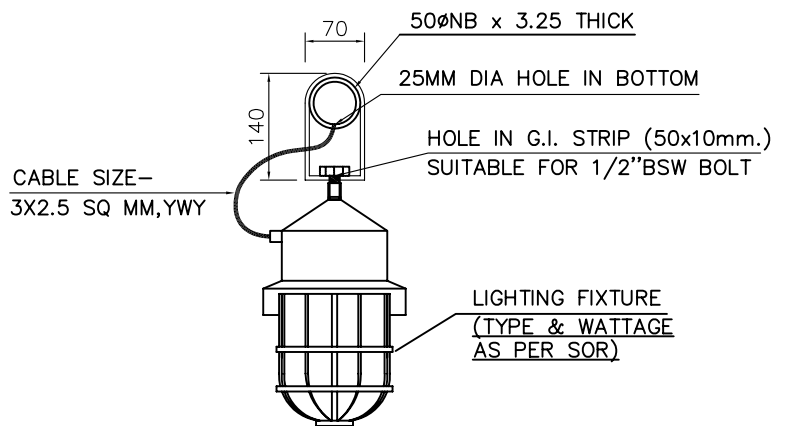
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2

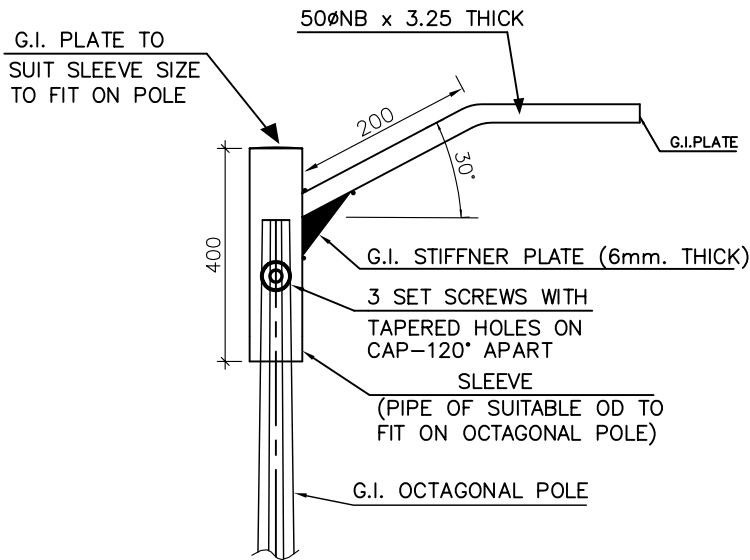
1




DETAIL OF BRACKET/ARM

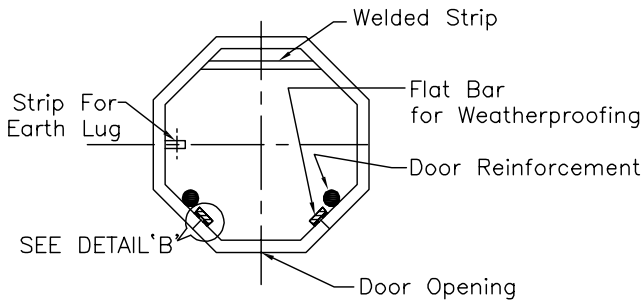


VIEW B-B

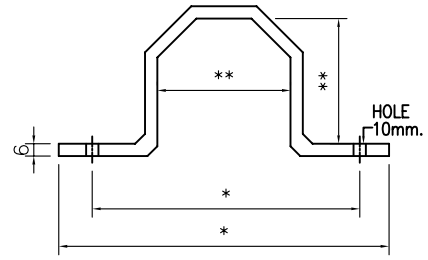


DETAIL-A

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.				
SECTION: ELECTRICAL			TYPICAL INSTALLATION OF LIGHTING FIXTURE ON OCTAGONAL POLE				मेकॉन लिमिटेड MECON LIMITED				
DSGN	QUASIM	DATE						CHKD	DATE	SCALE : N.T.S.	SHEET 2 OF 3
DRWN	SUNIL	13.01.10								DRG.NO MEC/SD/05/E9/77/04	REV 0
APPROVED											



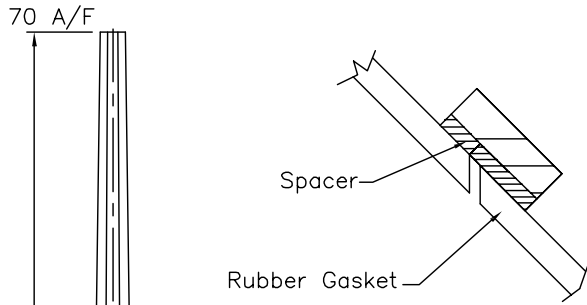
**SECTION A-A
(FOR SAFE AREA)**



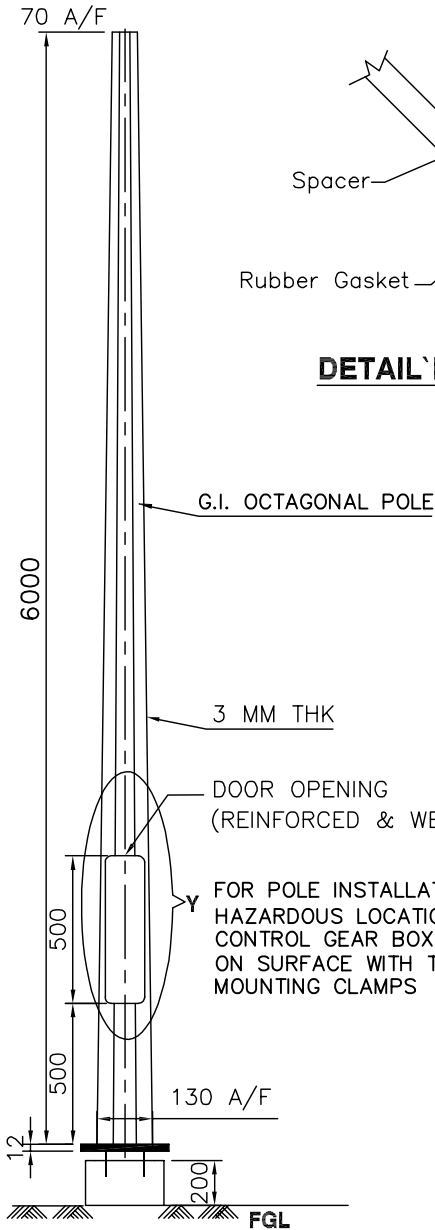
G.I. MOUNTING CLAMPS FOR CONTROL GEAR BOX

NOTE:-

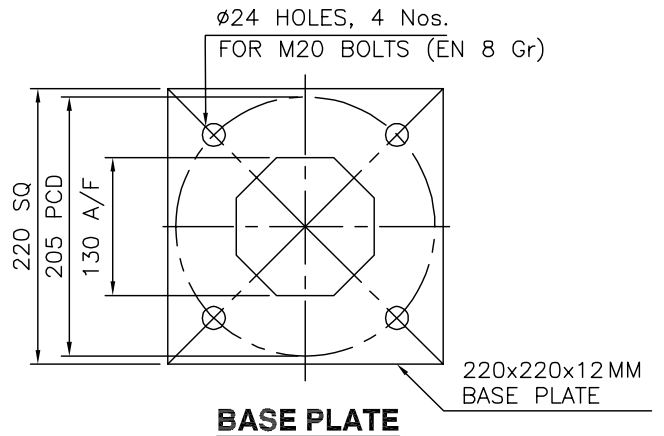
- * DIMENSION TO FIT THE MOUNTING HOLE OF CONTROL GEAR BOX.
- ** TO SUIT POLE DIMENSION



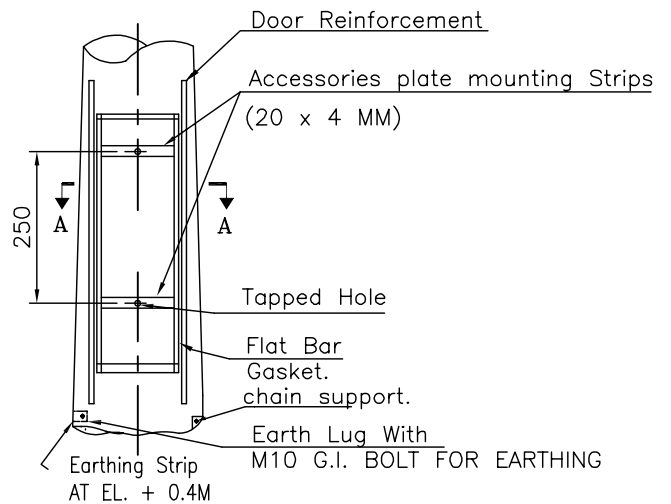
DETAIL 'B'




ELEVATION

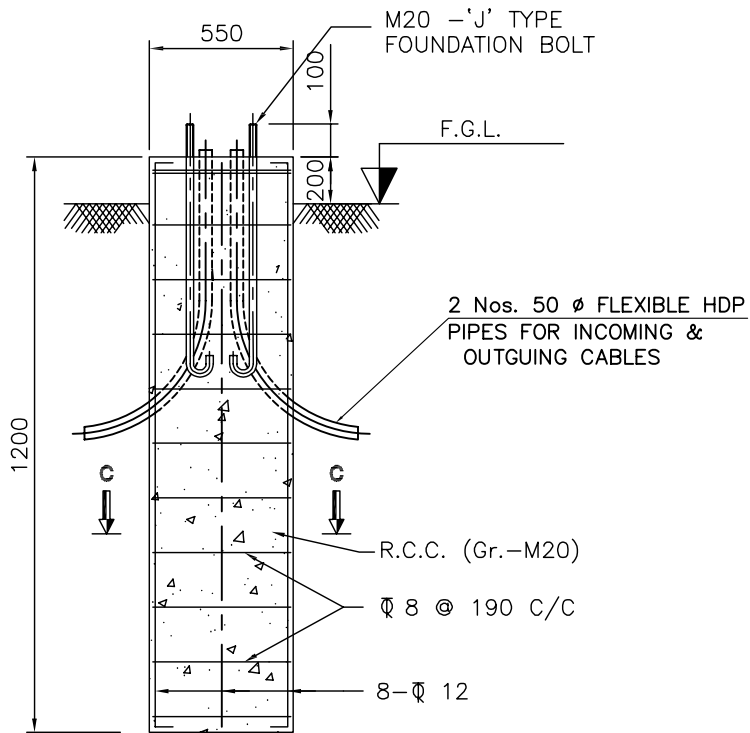


BASE PLATE

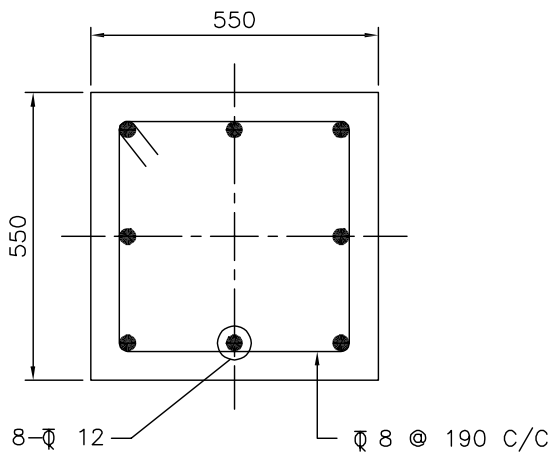


DETAIL 'Y'

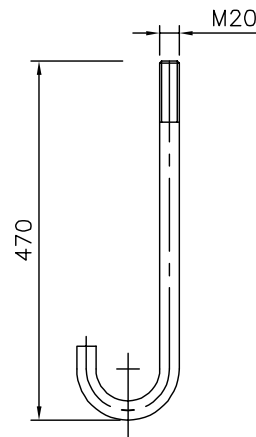
REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
SECTION: ELECTRICAL			TYPICAL INSTALLATION OF LIGHTING FIXTURE ON OCTAGONAL POLE				मेकॉन लिमिटेड MECON LIMITED
DSGN	QUASIM		CHKD		DATE	SCALE : N.T.S.	SHEET 1 OF 3
DRWN	SUNIL	13.01.10				DRG.NO MEC/SD/05/E9/77/04	REV 0
APPROVED							



DETAIL OF CIVIL FOUNDATION



SECTION C-C

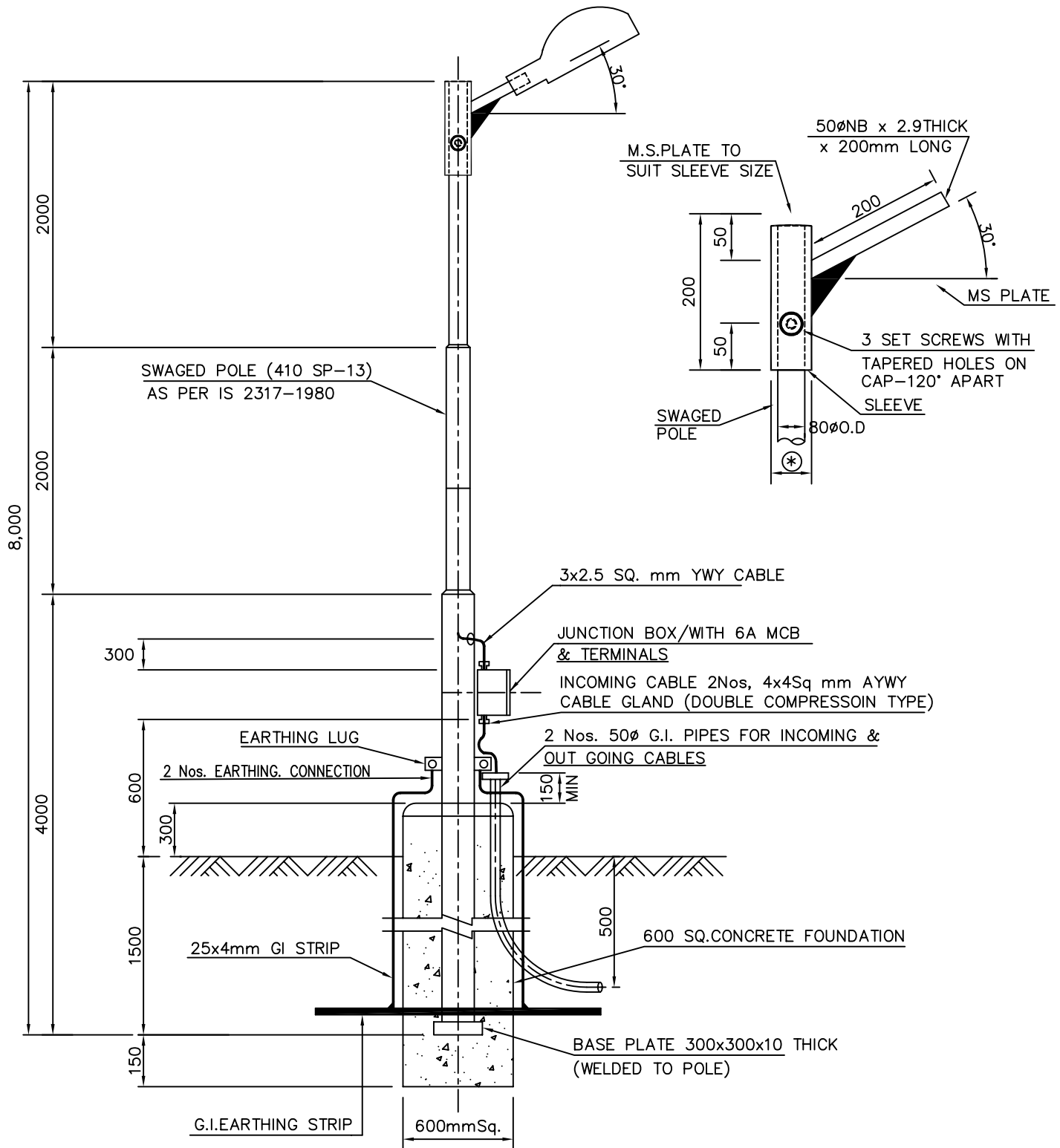


ANCHOR BOLT DETAIL
(TOTAL LENGTH-600 mm)

NOTES:

1. Grade of steel reinforcement (for R.C.C.) - Fe 415
2. Clear cover to reinforcement - 50 mm
3. Assumed S.B.C. - 10 T/Sq.mtr. (minimum)

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
SECTION: ELECTRICAL			REVISIONS		REFERENCES		DRG. NO.
DSGN	NAME	DATE	CHKD	DATE	TYPICAL INSTALLATION OF LIGHTING FIXTURE ON OCTAGONAL POLE		 मेकॉन लिमिटेड MECON LIMITED
DRWN	SUNIL	13.01.10					
APPROVED							
					SCALE : N.T.S.		SHEET 3 OF 3
					DRG.NO MEC/SD/05/E9/77/04		REV 0



NOTES:-

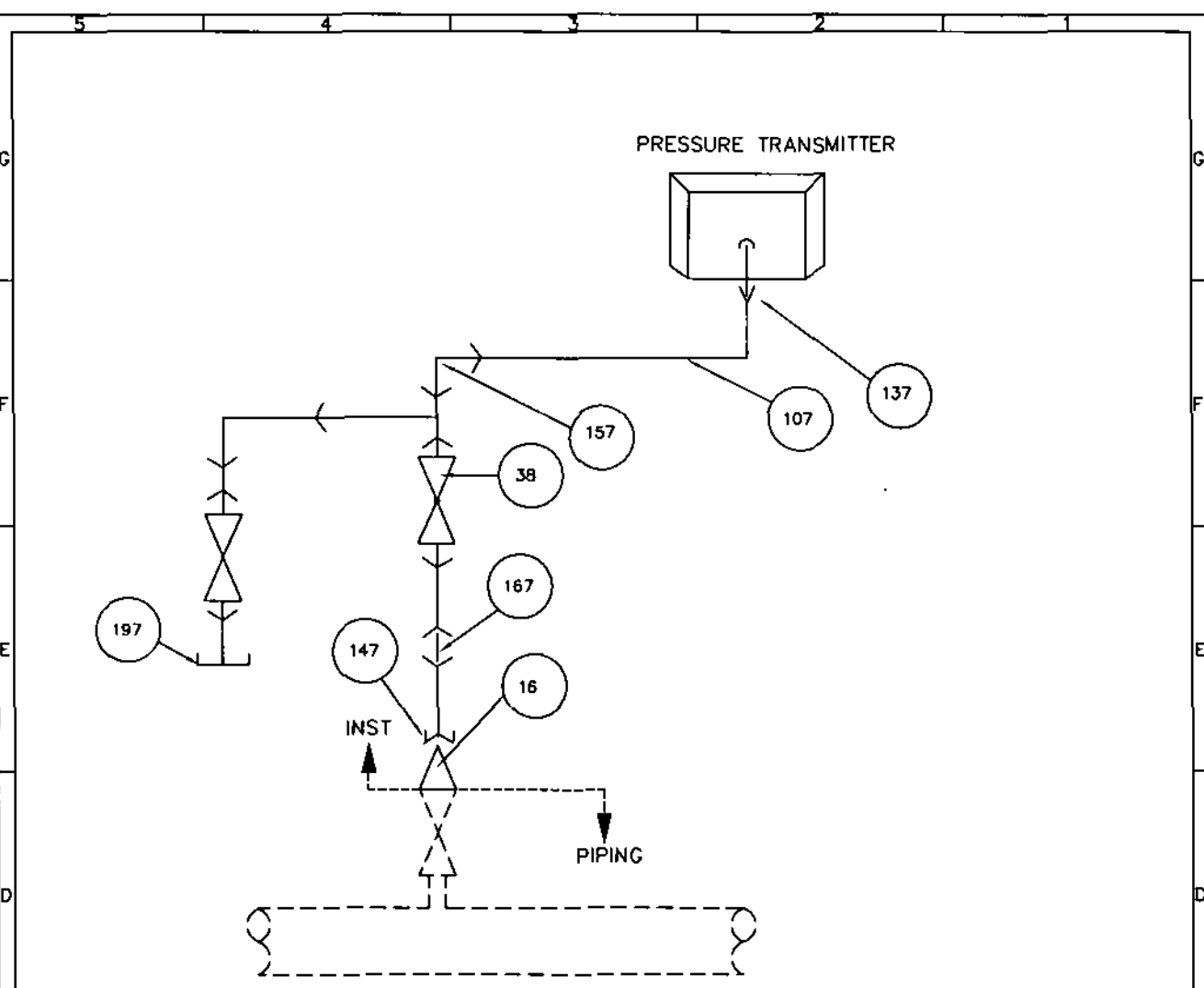
- 1.) * TO SUIT 80mm ϕ DD (TOP SECTION).
- 2.) MARSHALLING BOX, JUNCTION BOX & G.I. PIPES FOR CABLES SHALL BE PROVIDED ON THE CABLE TRENCH SIDE.

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.			
REVISIONS										
REFERENCES										
DRG. NO.										
SECTION: ELECTRICAL					<p style="text-align: center;">मेकॉन लिमिटेड MECON LIMITED</p>					
DSGN	NAME	DATE	CHKD	DATE				<p style="text-align: center;">TYPICAL INSTALLATION OF STREET LIGHTING FIXTURE (BRACKET MOUNTED) ON POLE FOR SAFE AREA</p>		
DRWN	IRFAN	30.07.04								
APPROVED										
SCALE : N.T.S.					Page 21 of 33					
DRG.NO MEC/SD/05/E9/03/01					REV 0					

STANDARD DRAWINGS (INSTRUMENTATION WORKS)

LIST OF DRAWINGS

SI.NO	DESCRIPTION	DRG. NO.
1.	Installation diagram for Pressure Transmitter	MEC/05/E5/SD/PT/001
2.	Support Details For Junction Box	MEC/05/E5/SD/JP/009
3.	Instrument Support Single Instrument	MEC/05/E5/SD/IS/010A
4.	Instrument Support Two Instrument	MEC/05/E5/SD/IS/010 B
5.	Fabricated Canopy for Instruments	MEC/05/E5/SD/CY/011
6.	Perforated Tray Supports & Cable Clamping details	MEC/05/E5/SD/CBLY/012

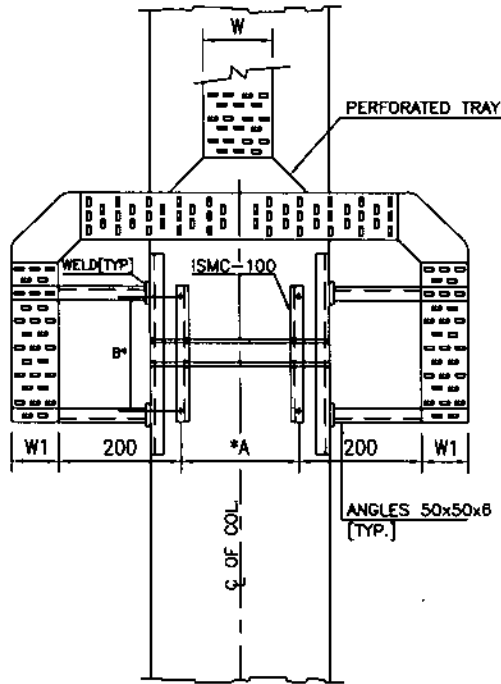


LIST OF MATERIAL

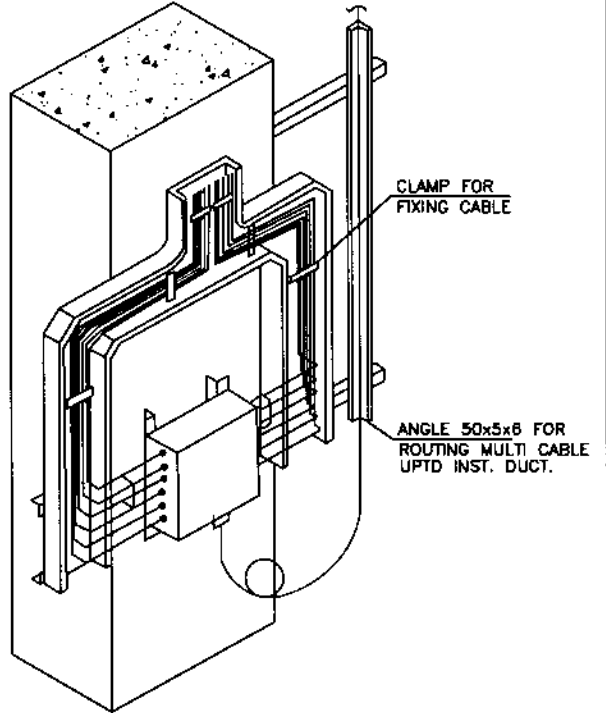
ITEM NO	DESCRIPTION	SIZE	QUANTITY (NOS.)	MATERIAL
16	SWAGE NIPPLE PLXTH	3/4"x1/2"	1	S.S
137	MALE CONNECTOR	1/2"TH 1/2"OD	5	S.S
147	FEMALE CONNECTOR	1/2"TH 1/2"OD	1	S.S
38	BALL VALVE SCRD	1/2"	2	S.S
157	UNION TEE SCRD	1/2"OD	1	S.S
107	TUBE	1/2"OD	A/R	S.S
167	TUBE UNION	1/2"OD	1	S.S
197	PLUG SCRD	1/2"OD	1	S.S

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
REVISIONS							
REFERENCES							
DRG. NO.							
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SECTION : ELECTRICAL/INSTN.			INSTALLATION DIAGRAM FOR PRESSURE TRANSMITTER			 मेकॉन लिमिटेड MECON LIMITED	
DSGN	R.K.S	P.S					
DRWN	IRFAH						
APPROVED	D.G.M						
SCALE : NTS						REV 0	
DRG.NO. MEC/05/E5/SD/PT/001							

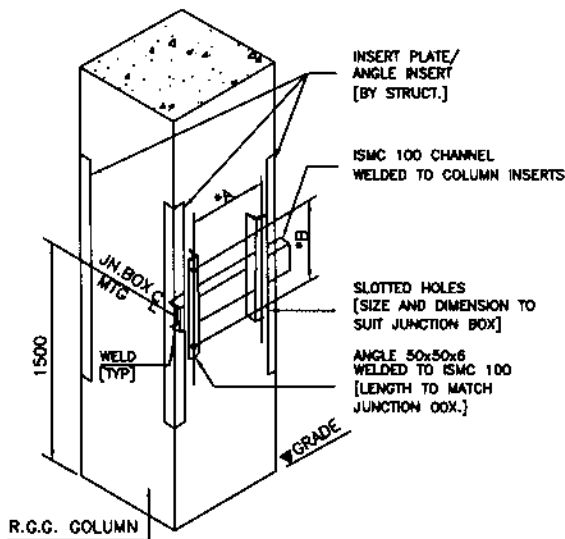
TRAY ARRANGEMENT FOR JUNCTION BOXES



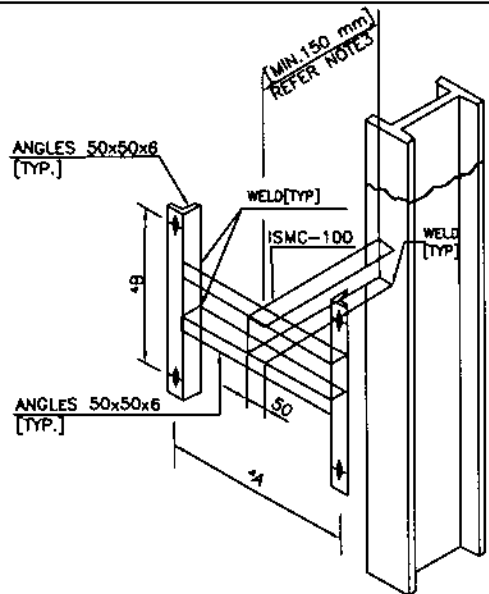
CABLE ROUTING FOR JUNCTION BOXES



JN. BOX MOUNTING FRAME [R.C.C. COLUMN]



JN. BOX MOUNTING FRAME [STEEL COLUMN]




* DIMENSIONS 'A AND B' TO SUIT JUNCTION BOX.

NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. CLAMP MULTICABLE ON ANGLE WITH 25mm WIDE PVC COVERED ALLUMINIUM STRIP.
3. ADD 50mm WHERE-EVER FIRE INSULATION IS PROVIDED.

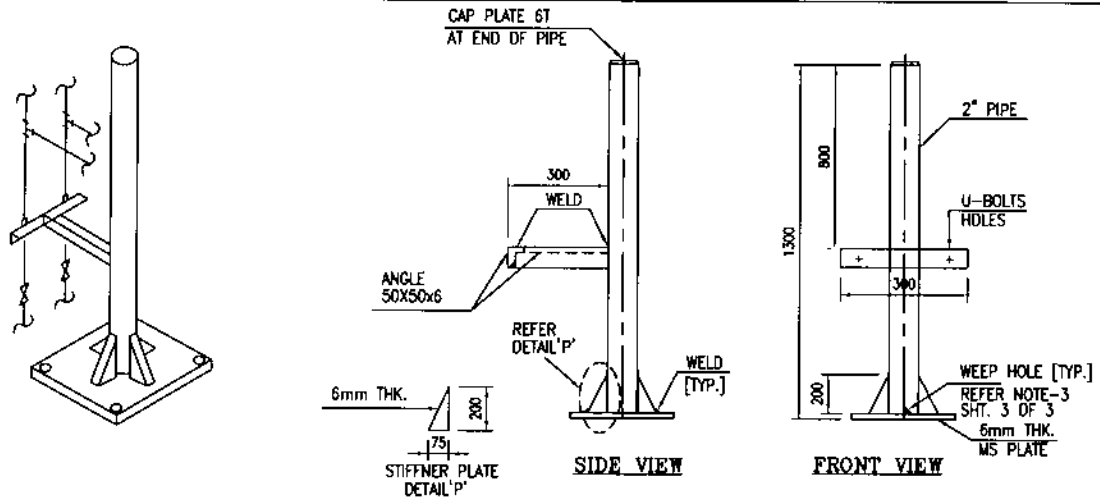
TRAY WIDTH

JN. BOX	W	W1
12 PAIR	300	150
6 TRIAD	300	150
8 PAIR	150	100
6 TRIAD	150	100

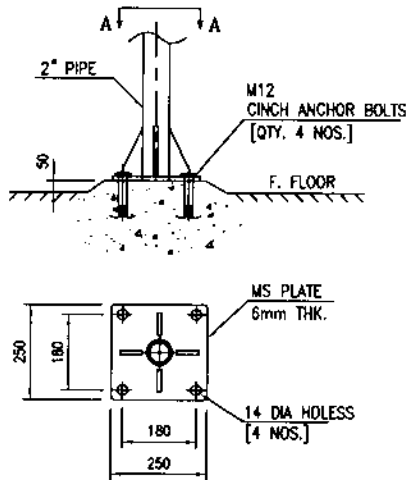
REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
SECTION: INSTRUMENTATION							 <p>मेकॉन लिमिटेड MECON LIMITED</p>
NAME	DATE	CHKD	DATE	<p>SUPPORT DETAILS FOR JUNCTION BOXES</p>			
DSGN	R.K.S	P.S					
DRWN	SUNIL						
APPROVED	D.G.M			<p>SCALE : N.T.S. (SH. 1 OF 1) REV</p> <p>DRG.NO MEC/05/E5/SD/JB/DD9</p>			

TYTE 11

SINGLE INSTRUMENT SUPPORT - GENERAL ARRANGEMENT

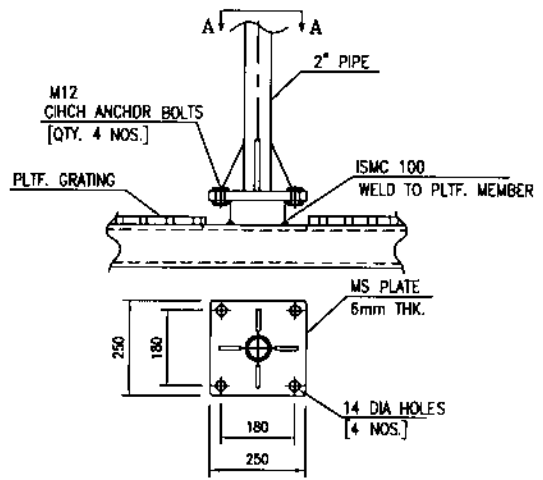


TYTE 11-1



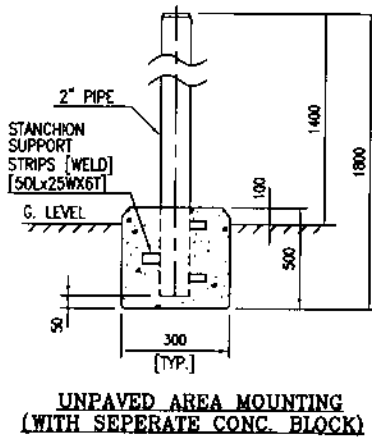
VIEW A-A
PAVED AREA MOUNTING

TYTE 11-2



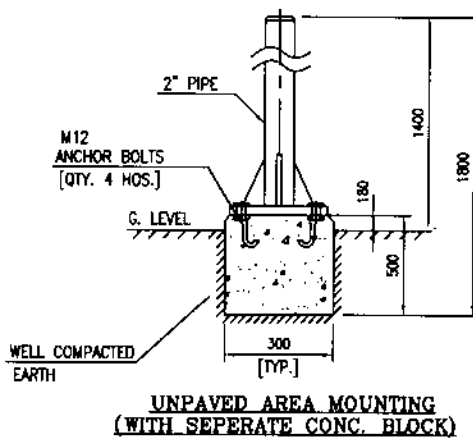
VIEW A-A
PLATFORM MOUNTING

TYTE 11-3



UNPAVED AREA MOUNTING
(WITH SEPERATE CONC. BLOCK)

TYTE 11-4



UNPAVED AREA MOUNTING
(WITH SEPERATE CONC. BLOCK)

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
			REVISIONS				

SECTION: INSTRUMENTATION				
NAME	DATE	CHKD	DATE	
R.K.5		P.S		
DSGN	DRWN	APPROVED		
SUNIL			D.G.M	

INSTRUMENT SUPPORT
SINGLE INSTRUMENT

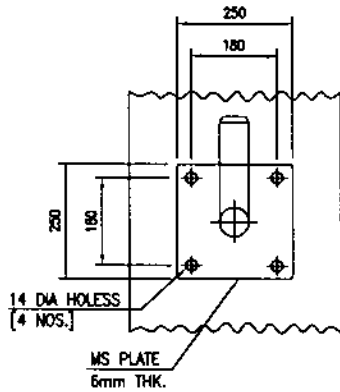


मेकॉन लिमिटेड
MECON LIMITED

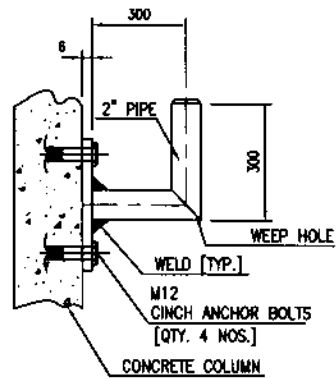
SCALE : N.T.S.	(SH. 1 OF 3)	REV
DRG.NO MEC/05/E5/SD/IS/010 A		D

TYTE 12

CONCRETE COLOUMN MOUNTING



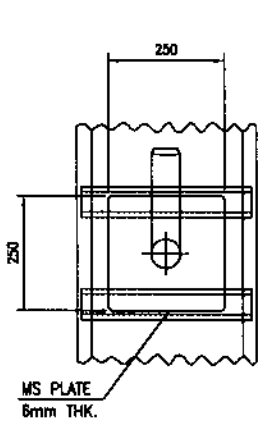
FRONT VIEW



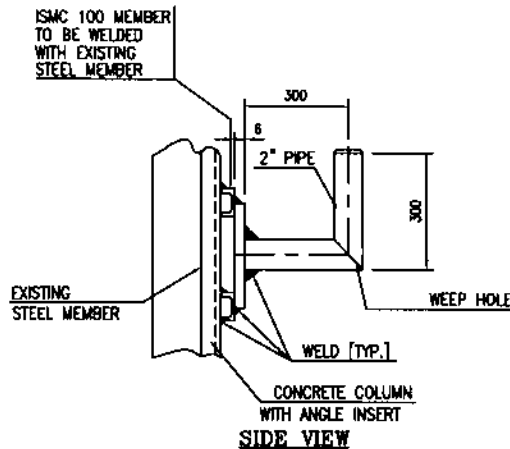
SIDE VIEW

TYTE 13

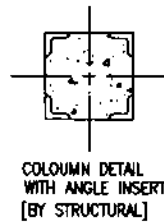
CONCRETE COLUMN [WITH ANGLE NSERT] MOUNTING



FRONT VIEW

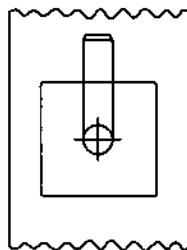


SIDE VIEW

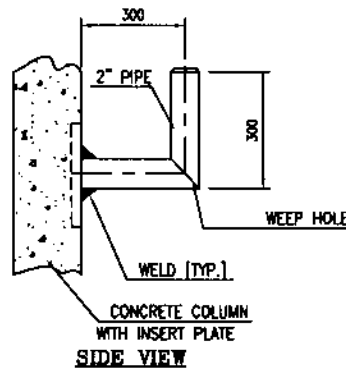


TYTE 14

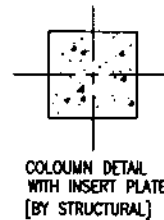
CONCRETE COLUMN [WITH INSERT PLATE] MOUNTING




FRONT VIEW



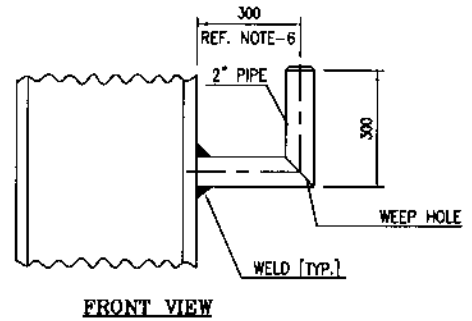
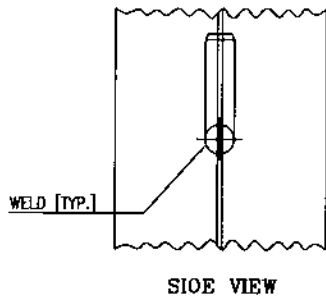
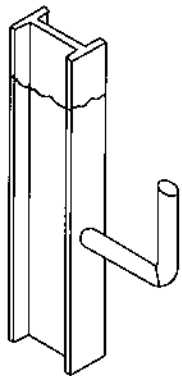
SIDE VIEW



REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRO	REFERENCES	DRG. NO.
REVISIONS							
SECTION: INSTRUMENTATION							
DSGN	R.K.S		CHKD	P.S			
DRWN	SUNIL						
APPROVED	D.G.M						
<p align="center">CONCRETE COLOUMN MOUNTING</p>							<p align="center">मेकॉन लिमिटेड</p> <p align="center">MECON LIMITED</p>
							<p>SCALE : N.T.S. (SH. 2 OF 3)</p> <p>DRG.NO MEC/D5/E5/SD/IS/D1D A</p>

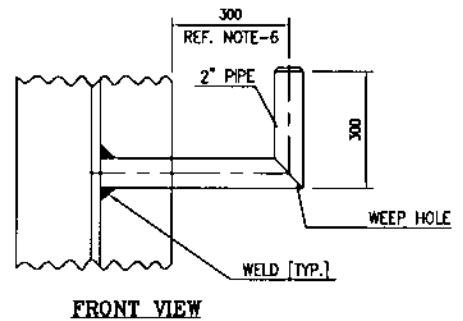
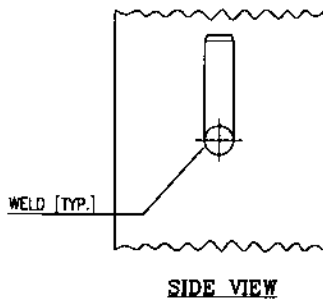
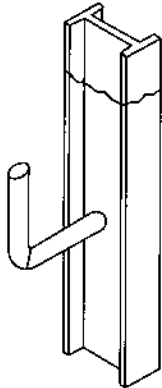
TYTE 15

STEEL COLOUMN MOUNTING [FLANGE FACE]



TYTE 16

STEEL COLOUMN MOUNTING [WEB FACE]



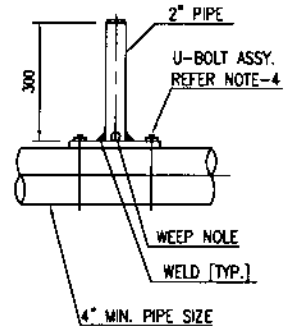
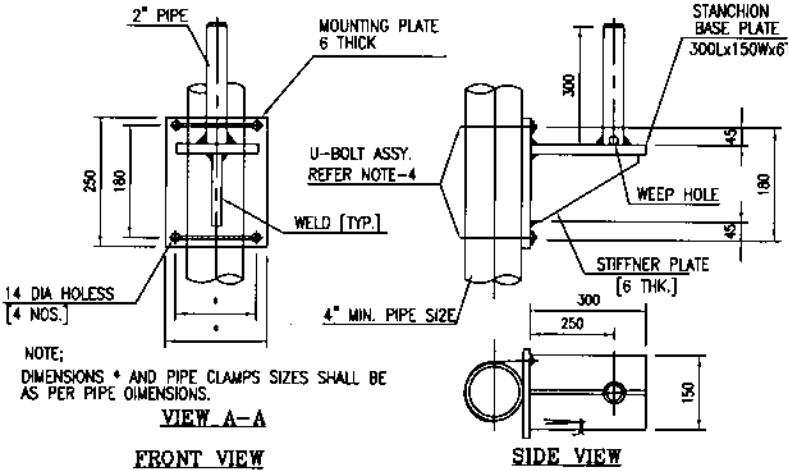
TYTE 17

PIPE BRACKET MOUNTING


TYTE 17-1

[VERTICAL PIPE]

TYTE 17-2 [HORIZONTAL PIPE]

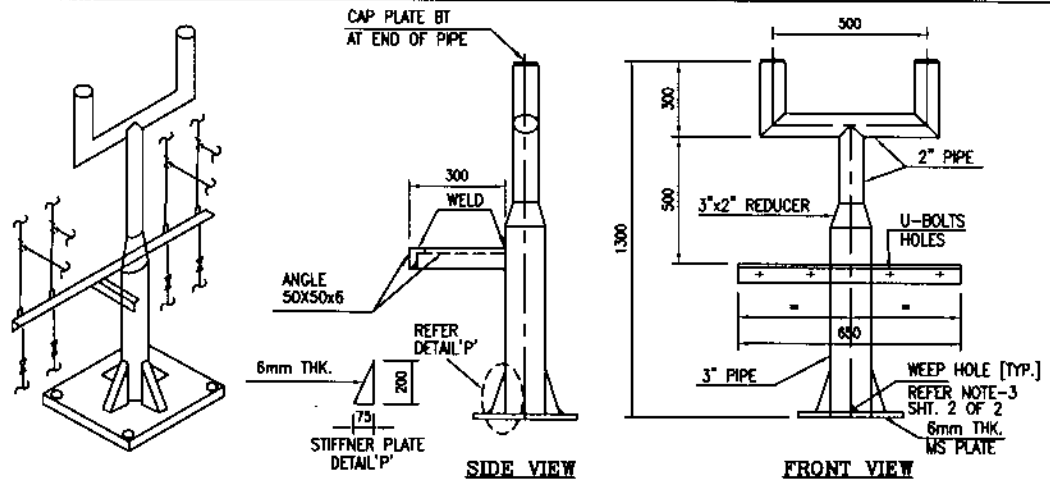


- NOTES:-
1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE SPECIFIED.
 2. PIPE MATERIAL SHALL BE IS:239 HEAVY GRADE AS A MINIMUM.
 3. 6mm DIA WEEP HOLE SHALL BE PROVIDED AT LDW POINT.
 4. U-BOLT ASSEMBLY SHALL BE DF MIN. M12 SIZE WITH NUT AND SPRING WASHERS.
 5. ALL WELD SHALL BE 3mm FILLET WELD FULL STRENGTH.
 6. ADD 50mm WHERE-EVER ARE INSULATION IS PROVIDED.
 7. BOLT SHALL BE TURNED FROM MS ROUNDS CONFIRMING TO IS : 432 GRADE 1.
 8. NUTS AND WASHERS SHALL CONFIRM TO IS : 1363 AND IS : 313B.

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
SECTION: INSTRUMENTATION			REVISIONS		REFERENCES		DRG. NO.
DSGN	R.K.S		CHKD	P.S	 <p>मेकॉन लिमिटेड MECON LIMITED</p>		SCALE : N.T.S. (SH. 3 OF 3) REV
DRWN	SUNIL						
APPROVED	D.G.M		STEEL COLOUMN MOUNTING		DRG.NO MEC/05/E5/S0/IS/010 A		D

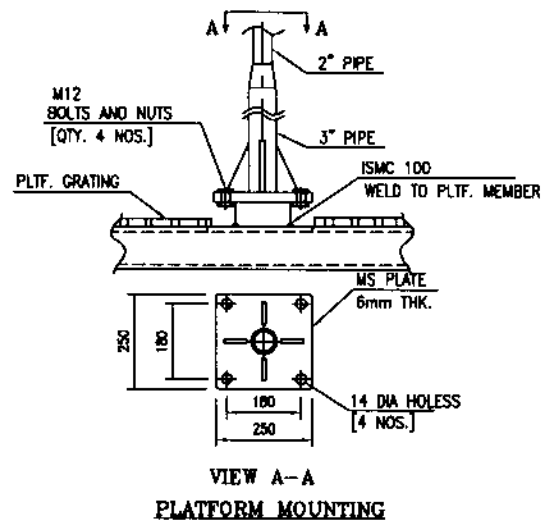
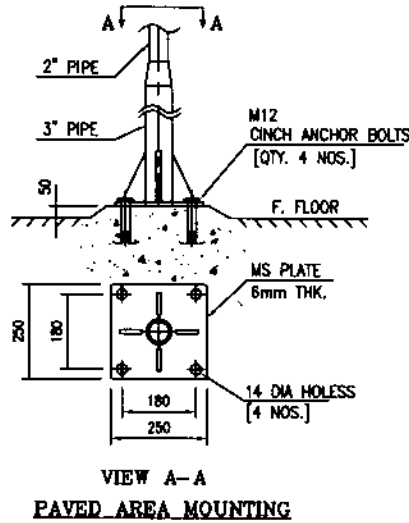
TYTE 21

TWO INSTRUMENT SUPPORT - GENERAL ARRANGEMENT



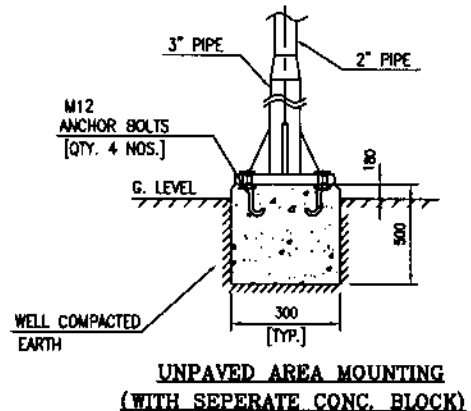
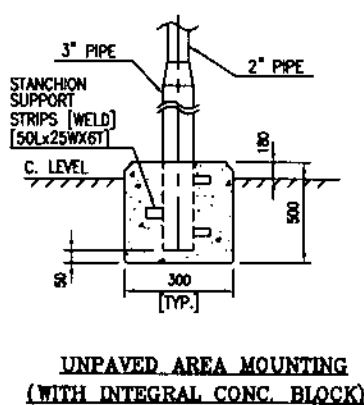
TYTE 21-1


TYTE 21-2



TYTE 21-3

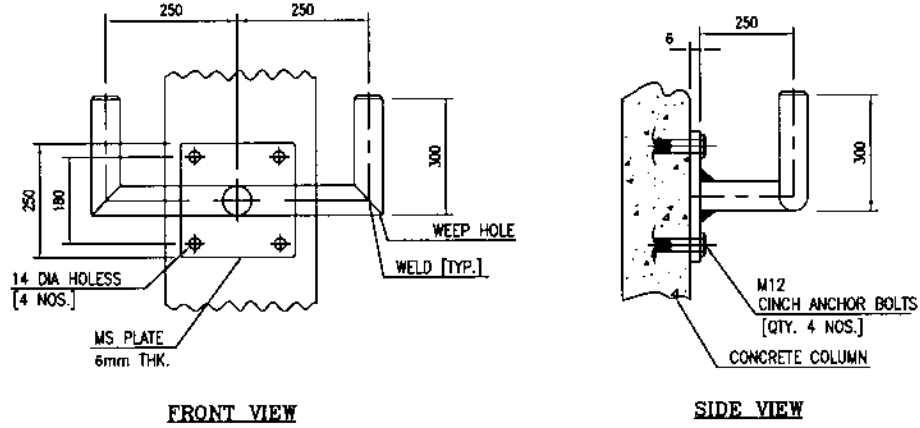
TYTE 21-4



REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
REVISIONS							
SECTION: INSTRUMENTATION							
DSGN	R.K.S		CHKD	P.S.			
DRWN	SUNIL						
APPROVED	D.G.M.						
 मेकॉन लिमिटेड MECON LIMITED						SCALE : N.T.S. (SH. 1 OF 3) REV DRG.NO : MEC/05/E5/SD/IS/D1D B D	

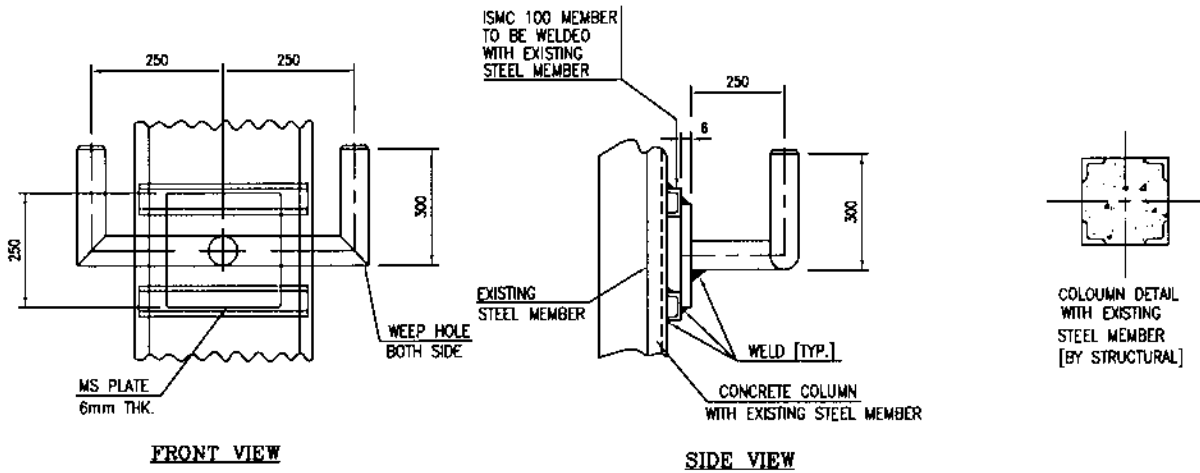
TYTE 22

CONCRETE COLOUMN MOUNTING



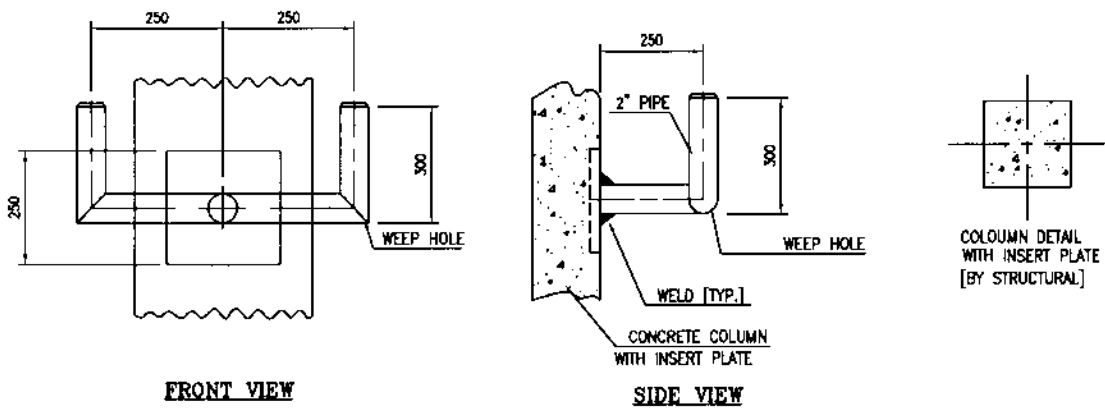
TYTE 23

CONCRETE COLOUMN [WITH ANGLE INSERT] MOUNTING



TYTE 24

CONCRETE [WITH INSERT PLATE] MOUNTING



REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
REVISIONS							

SECTION: INSTRUMENTATION				
NAME	DATE	CHKD	DATE	
DSGN	R.K.S	P.S.		
DRWN	SUNIL			
APPROVED	D.G.M.			

CONCRETE COLOUMN MOUNTING



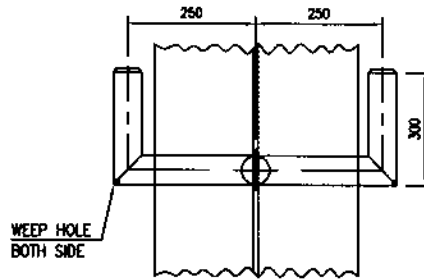
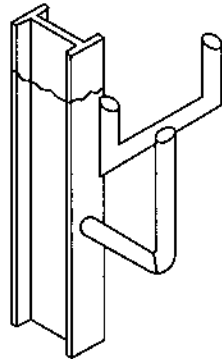
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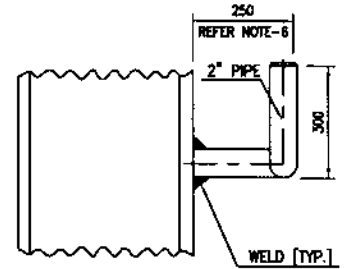
SCALE : N.T.S.	(SH. 2 OF 3)	REV
ORG.NO: MEC/05/E5/SD/IS/010 B		0

TYPE 25

STEEL COLOUMN MOUNTING [FLANFE FACE]



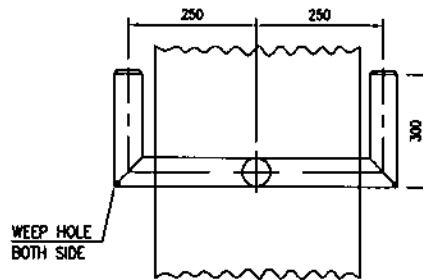
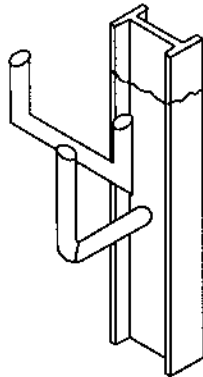
FRONT VIEW



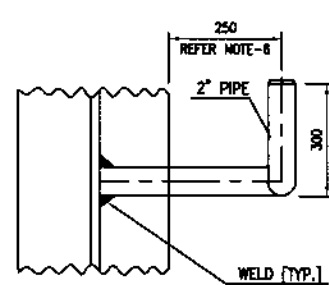
SIDE VIEW

TYPE 26

STEEL COLOUMN MOUNTING [WEB FACE]




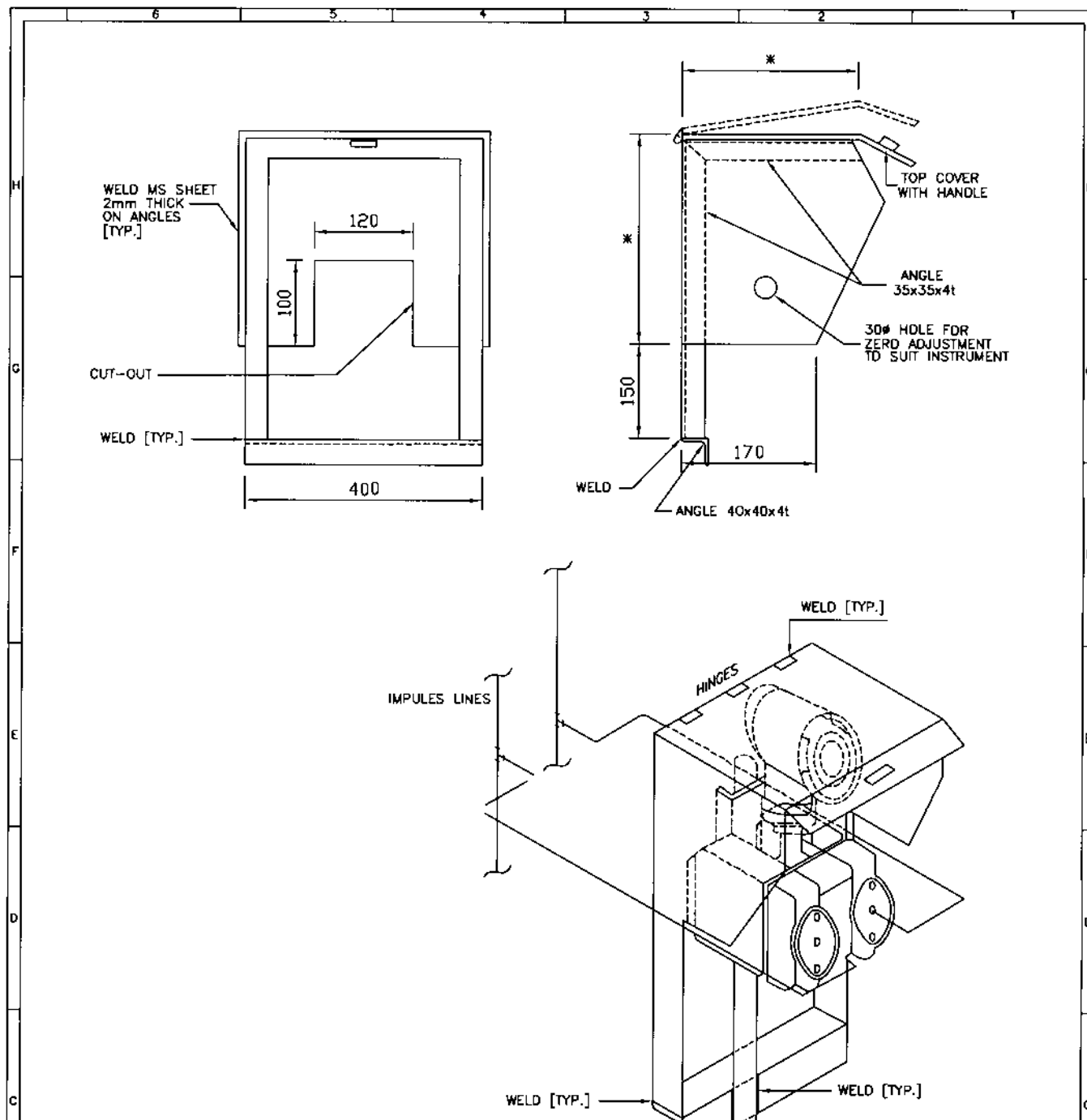
FRONT VIEW



SIDE VIEW

- NOTES:-
1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE SPECIFIED.
 2. PIPE MATERIAL SHALL BE IS:1239 HEAVY GRADE AS A MINIMUM.
 3. 6mm DIA WEEP HOLE SHALL BE PROVIDED AT LOW POINT.
 4. U-BOLT ASSEMBLY SHALL BE OF MIN. M12 SIZE WITH NUT AND SPRING WASHERS.
 5. ALL WELD SHALL BE 3mm FILLET WELD FULL STRENGTH.
 6. ADD 50mm WHERE-EVER ARE INSULATION IS PROVIDED.
 7. BOLT SHALL BE TURNED FROM M5 ROUNDS CONFIRMING TO IS : 432 GRADE 1.
 8. NUTS AND WASHERS SHALL CONFIRM TO IS : 1363 AND IS : 3138.

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
SECTION: INSTRUMENTATION							 <p>मेकॉन लिमिटेड MECON LIMITED</p>
NAME	DATE	CHKD	DATE	STEEL COLOUMN MOUNTING			
DSGN	R.K.S	P.S.					
DRWN	SUNIL						
APPROVED	D.G.M.			SCALE : N.T.S.		(SH. 3 OF 3)	REV
DRG.NO: MEC/05/E5/SD/IS/010 B							0

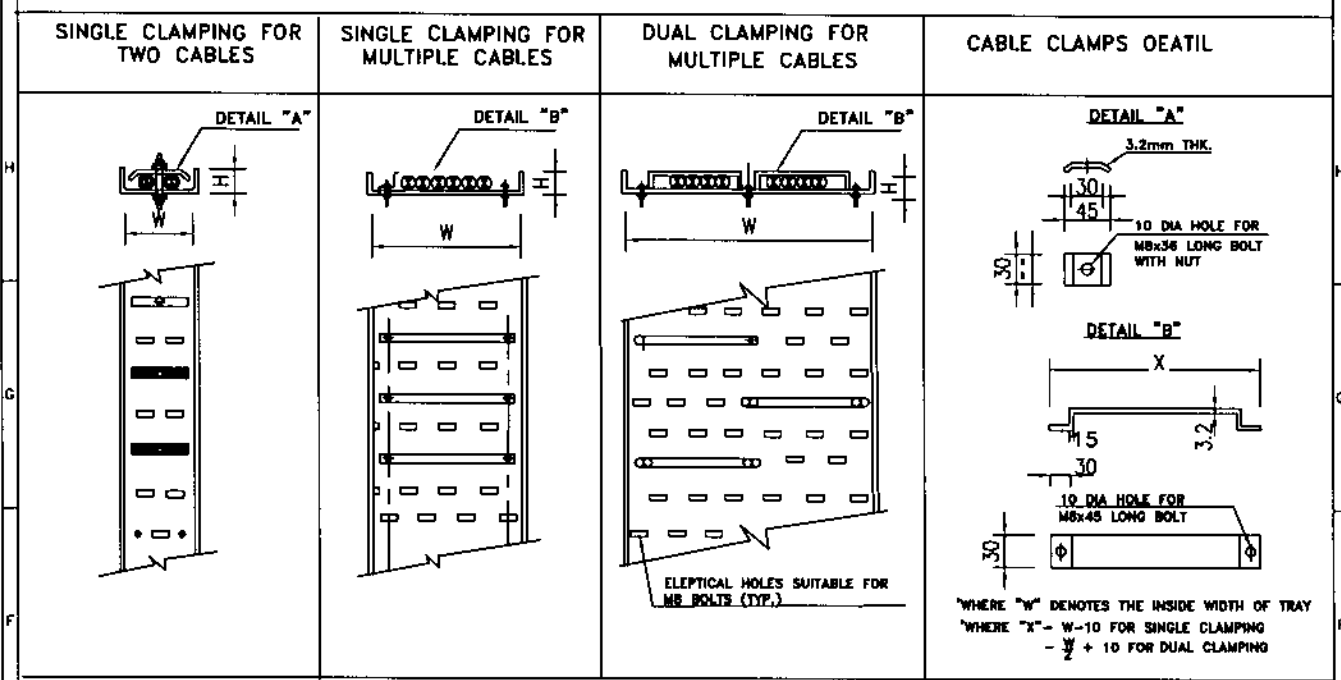


NOTES:

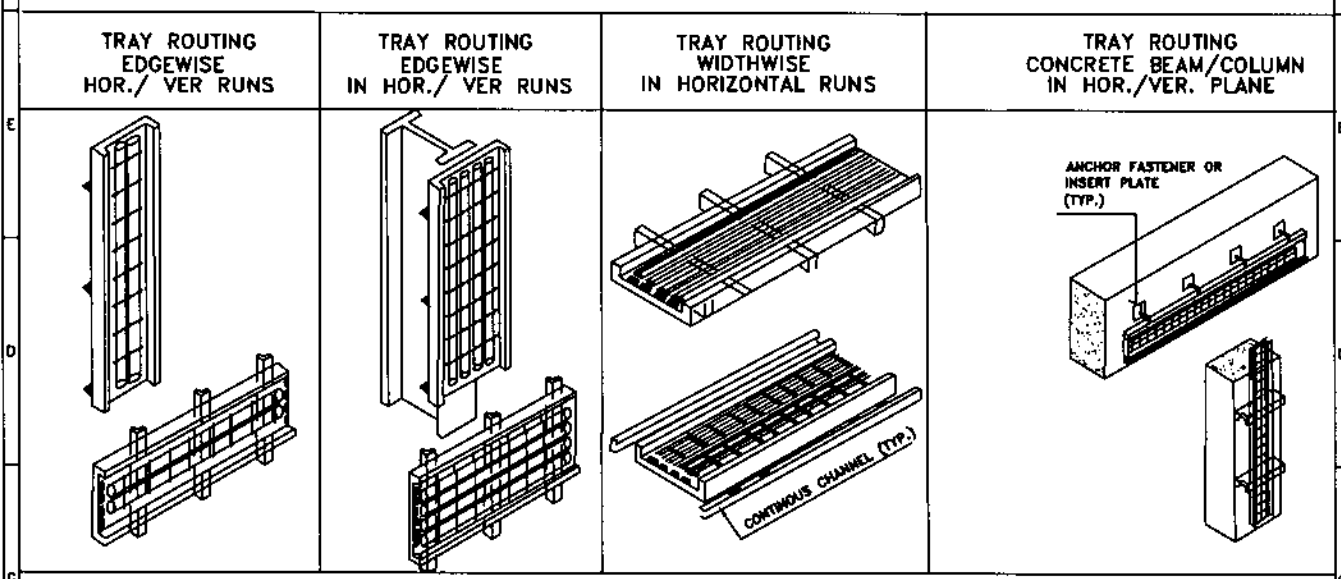
1. ALL DIMENSIONS ARE IN mm.
2. *-TO SUIT INSTRUMENT DIMENSIONS.
3. HINGES SHALL BE OF STAINLESS STEEL.
4. A MINIMUM OF TWO COATS PAINTING SHALL BE CARRIED OUT AFTER A MINIMUM OF ONE COAT OF RED OXIDE ZINC CHROMATE PRIMER. THE COLOUR OF THE PAINT SHALL BE AS PER IS-5.

REV NO	DATE	ZDHE	DESCRIPTIONS	BY	APPRO	REFERENCES	DRG. NO.			
REVISIONS										
REFERENCES										
DRG. NO.										
SECTION: INSTRUMENTATION			<h2 style="margin: 0;">FABRICATED CANOPY FOR INSTRUMENTS</h2>				मेकॉन लिमिटेड			
										MECON LIMITED
										SCALE : N.T.S. (SH. 1 OF 1)
										REV
APPROVED		D.G.M.				DRG.NO MEC/05/E5/S0/CY/011				
						D				

CABLE CLAMPING ON PERFORATED TRAYS



PERFORATED TRAY-SUPPORTING DETAILS



NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. PERFORATED TRAY SHALL BE SUPPORTED AT EVERY 1000mm (TYP.) INTERVAL FOR HORIZONTAL AS WELL AS VERTICAL RUNS USING MINIMUM ANGLE SIZE AS 40x40x5 DR CONTINUOUS CHANNEL SUPPORT MC50.
3. CLAMPING OF CABLES ON PERFORATED TRAYS SHALL BE AT EVERY 500 mm ON VERTICAL RUNS AND EVERY 1000mm ON HORIZONTAL RUNS.
4. PERFORATED TRAYS SHALL BE SUPPLIED WITH CLAMPS, BOLTS/NUTS AND WASHER OF GALVANISED MILD STEEL.
5. GALVANISING SHALL BE AS PER 47SB(66um/480g/m²)
6. THE PERFORATED TRAY THICKNESS SHALL BE 2mm.

CAPACITY OF PERFORATED TRAYS

TRAY WIDTH (W)	FLANGE HEIGHT (H)	NO. OF CABLES		
		1 PAIR/1 TRIAD	6 PAIR/6 TRIAD	12 PAIR/6 TRIAD
60	20	2	1	1
100	30	4	2	1
150	30	8	4	3
200	30	10	8	4
300	30	15	8	6

REV NO	DATE (ZONE)	DESCRIPTIONS	BY	APPRO	REFERENCES
		REVISIONS			DRG. NO.
SECTION: INSTRUMENTATION					
DSGN	R.K.S	DATE	CHKD	DATE	
DRWN	SUNL		P.S		
APPROVED		D.G.M			
PERFORATED TRAY SUPPORTS & CABLES CLAMPING DETAILS					मेकॉन लिमिटेड MECON LIMITED
SCALE : N.T.S.				(SH. 1 OF 1) REV	
DRG.NO MEC/D5/E5/SD/CB-LY/D12					
					0