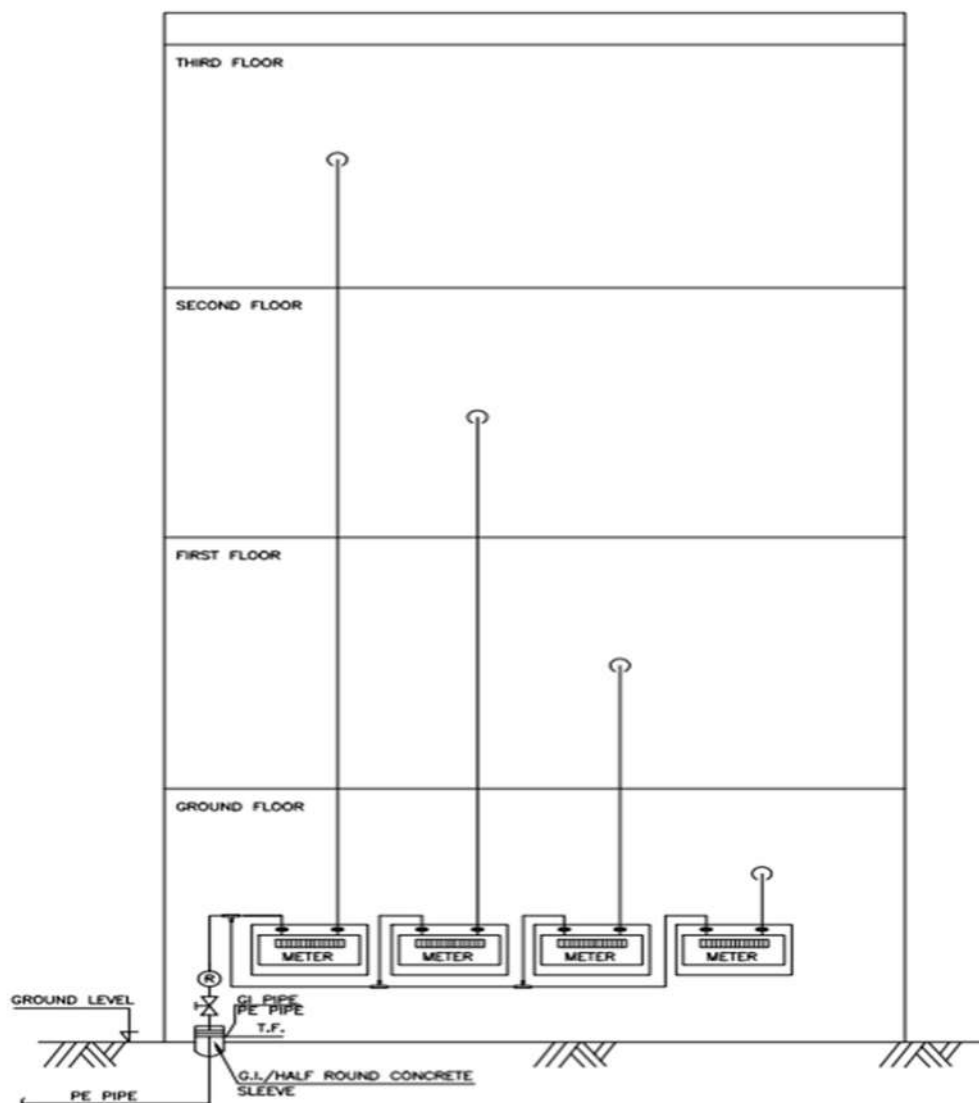


TYPICAL DOMESTIC CONNECTION LAYOUT OF NG DISTRIBUTION

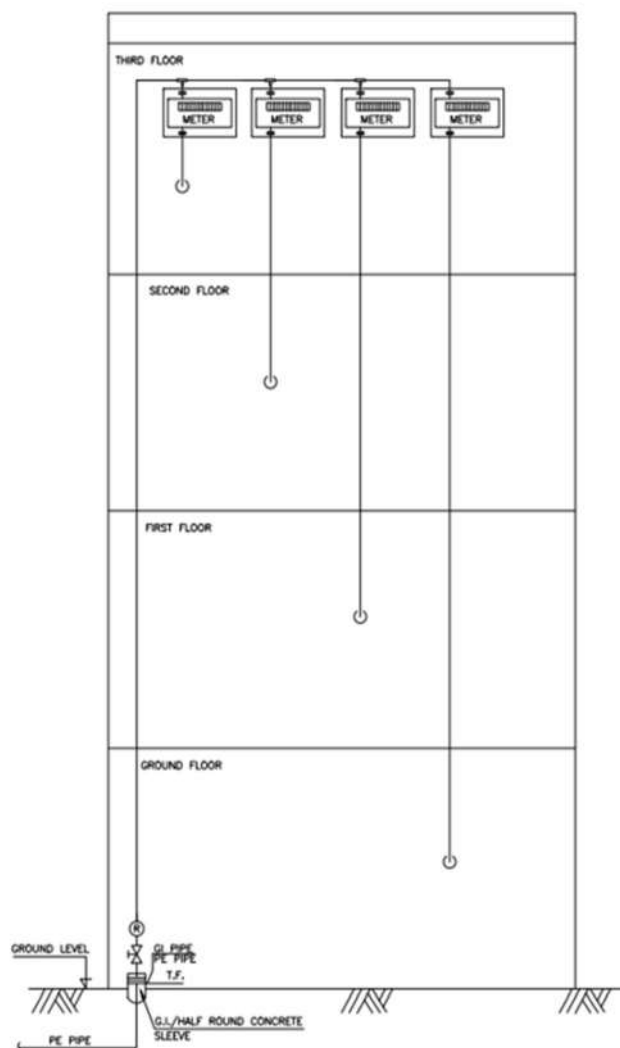


INDICATIVE RISER ARRANGEMENT IN BUILDING, IF METER IS INSTALLED AT GROUND FLOOR

NOTES:—

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
4. RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. HOWEVER IT SHALL BE TAKEN APPROVAL FROM OWNER BEFORE STARTING THE EXECUTION.
5. IT SHALL BE DECIDED BY OWNER/OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS.
6. IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER.
7. TAPPING SHALL BE LEFT NEAR THE OUTSIDE KITCHEN AS DIRECTED BY OWNER/OWNER'S REPRESENTATIVE.
8. MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE 1.5M PIPE GOES IN THE STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC.
9. FROM THE TRANSITION FITTING TO THE ISOLATION VALVE SHALL BE CONSIDERED IN THE OUTSIDE KITCHEN PIPING.
10. AT THE TIME OF MEASURING LENGTH OG GI/COPPER PIPE, GI/CU FITTINGS SHALL BE COUNTED IN THE PIPE LENGTH.

TYPICAL DOMESTIC CONNECTION LAYOUT OF NG DISTRIBUTION

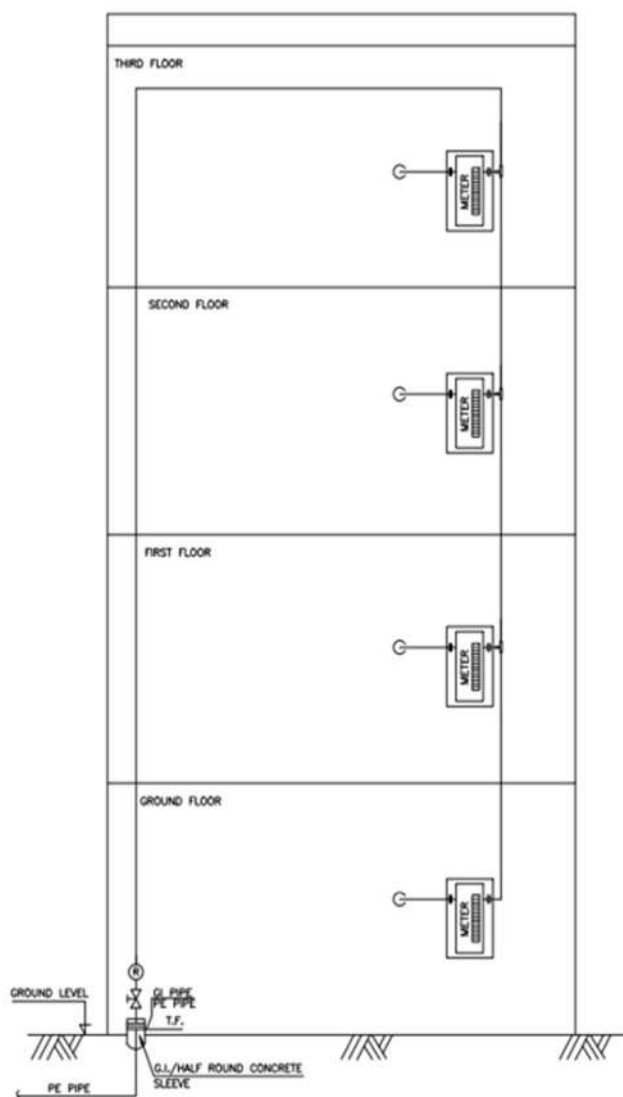


INDICATIVE RISER ARRANGEMENT IN BUILDING, IF METER IS INSTALLED AT TOP OF FLOOR

NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
4. RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. HOWEVER IT SHALL BE TAKEN APPROVAL FROM OWNER BEFORE STARTING THE EXECUTION.
5. IT SHALL BE DECIDED BY OWNER/OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS.
6. IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFTING SHALL BE USED AT THE OUTLET THE METER.
7. TAPPING SHALL BE LEFT NEAR THE OUTSIDE KITCHEN AS DIRECTED BY OWNER/OWNER'S REPRESENTATIVE.
8. MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE 1.5M PIPE GOES IN THE STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC.
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10. AT THE TIME OF MEASURING LENGTH OG GI/COPPER PIPE, GI/CU FITTINGS SHALL BE COUNTED IN THE PIPE LENGTH.

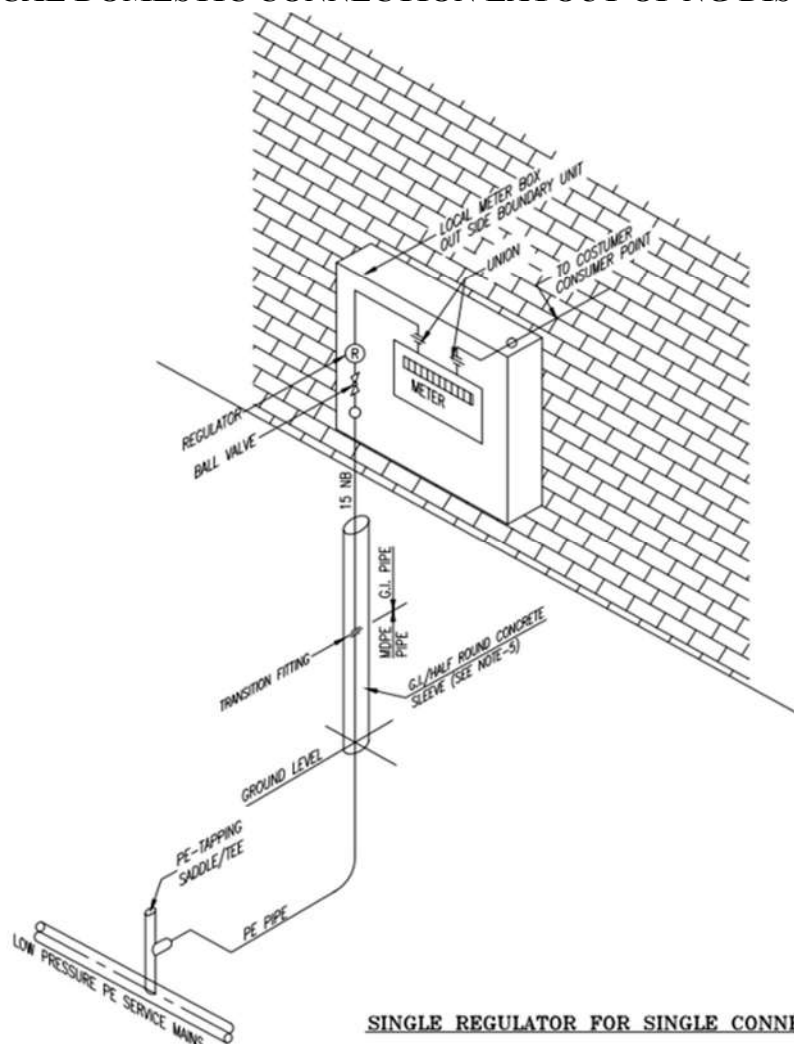
TYPICAL DOMESTIC CONNECTION LAYOUT OF NG DISTRIBUTION



NOTES:—

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
4. RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. HOWEVER IT SHALL BE TAKEN APPROVAL FROM OWNER BEFORE STARTING THE EXECUTION.
5. IT SHALL BE DECIDED BY OWNER/OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS.
6. IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFFITTING SHALL BE USED AT THE OUTLET THE METER.
7. TAPPING SHALL BE LEFT NEAR THE OUTSIDE KITCHEN AS DIRECTED BY OWNER/OWNER'S REPRESENTATIVE.
8. MAXIMUM DISTANCE BETWEEN CLAMPS SHALL BE 1.5M PIPE GOES IN THE STRAIGHT LENGTH, IF ANY TEE OR ANY FITTING USE IN BETWEEN THE PIPE THAN CLAMP SHALL BE PLACED 150MM FAR AWAY FROM CENTER LINE OF FITTINGS AT EVERY SIDE. HOW EVER THE SAME MAY BE CHANGES AS PER SITE CONDITIONS/AS DIRECTED BY EIC.
9. FROM THE TRANSITION FITTING TO THE ISOLATION VALVE SHALL BE CONSIDERED IN THE OUTSIDE KITCHEN PIPING.
10. AT THE TIME OF MEASURING LENGTH OG GI/COPPER PIPE, GI/CU FITTINGS SHALL BE COUNTED IN THE PIPE LENGTH.

TYPICAL DOMESTIC CONNECTION LAYOUT OF NG DISTRIBUTION

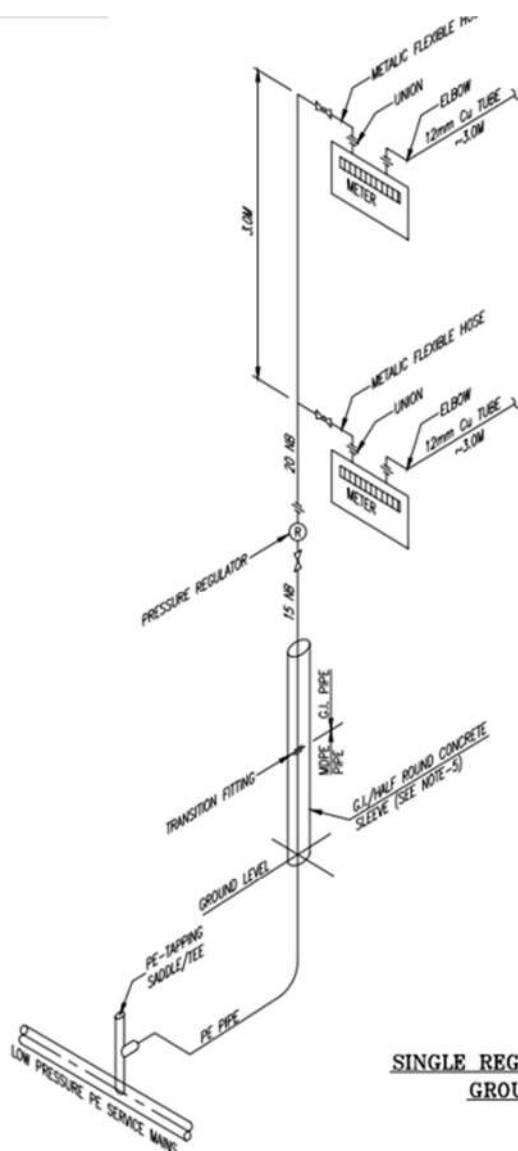


SINGLE REGULATOR FOR SINGLE CONNECTION

NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
4. TENTATIVE RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. ANY CHANGES IN RISER LENGTH SHALL BE AFTER APPROVED FROM EIC.
5. G.I. INSTALLATION/METER INSTALLATION SHALL BE DECIDED BY OWNER/ OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS.
6. IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER.
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TYPICAL DOMESTIC CONNECTION LAYOUT OF NG DISTRIBUTION

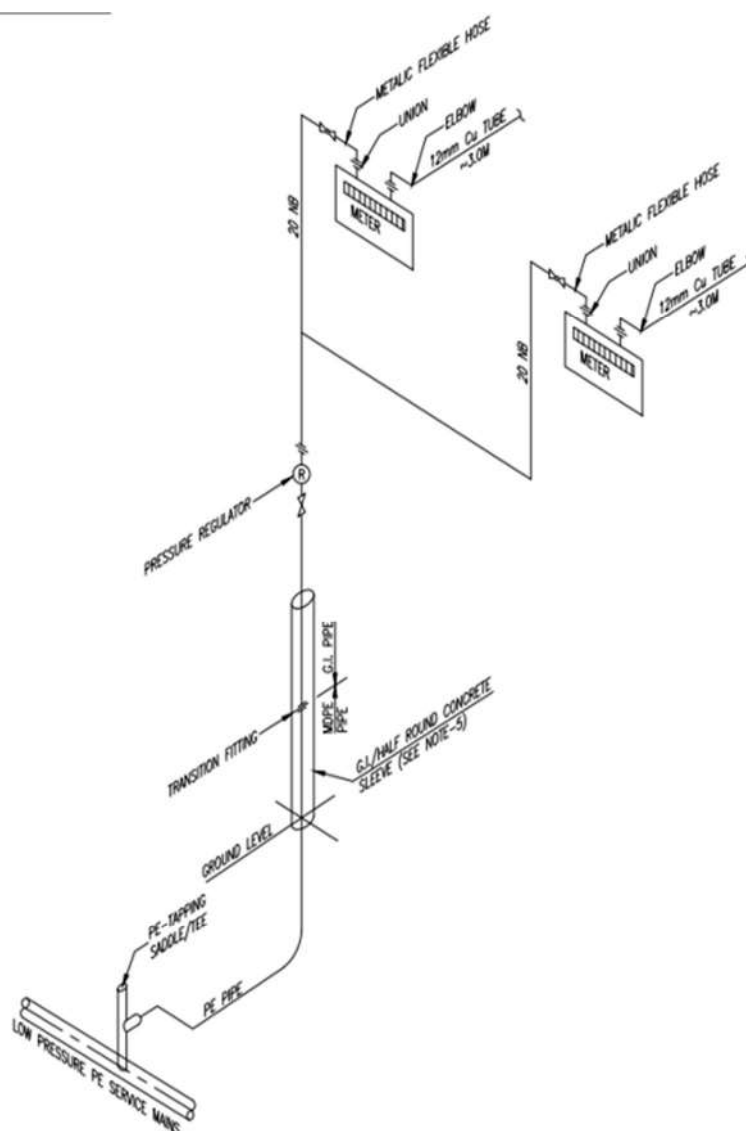


SINGLE REGULATOR & SINGLE CONNECTION ON
GROUND FLOOR & FIRST FLOOR

NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
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TYPICAL DOMESTIC CONNECTION LAYOUT OF NG DISTRIBUTION

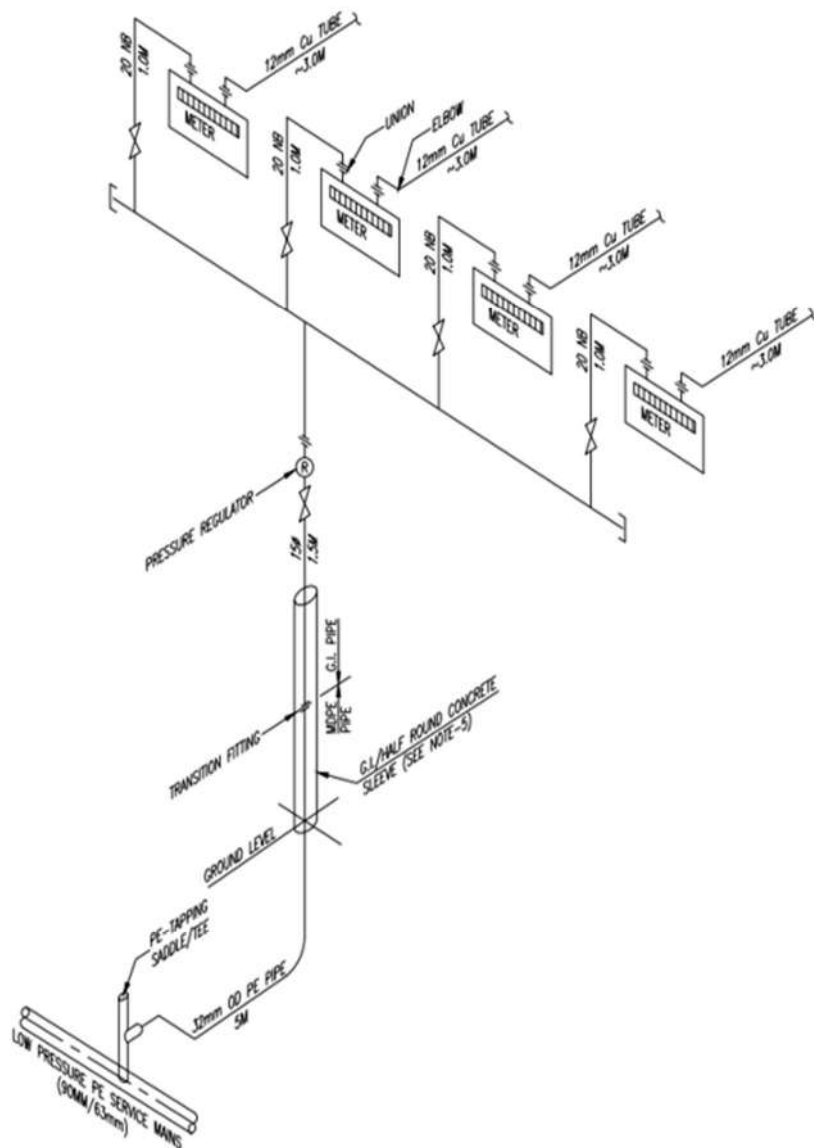


SINGLE REGULATOR & DOUBLE CONNECTION ON GROUND FLOOR

NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
4. TENTATIVE RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. ANY CHANGES IN RISER LENGTH SHALL BE AFTER APPROVED FROM EIC.
5. G.I. INSTALLATION/METER INSTALLATION SHALL BE DECIDED BY OWNER/ OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS.
6. IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER.
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TYPICAL DOMESTIC CONNECTION LAYOUT OF NG DISTRIBUTION

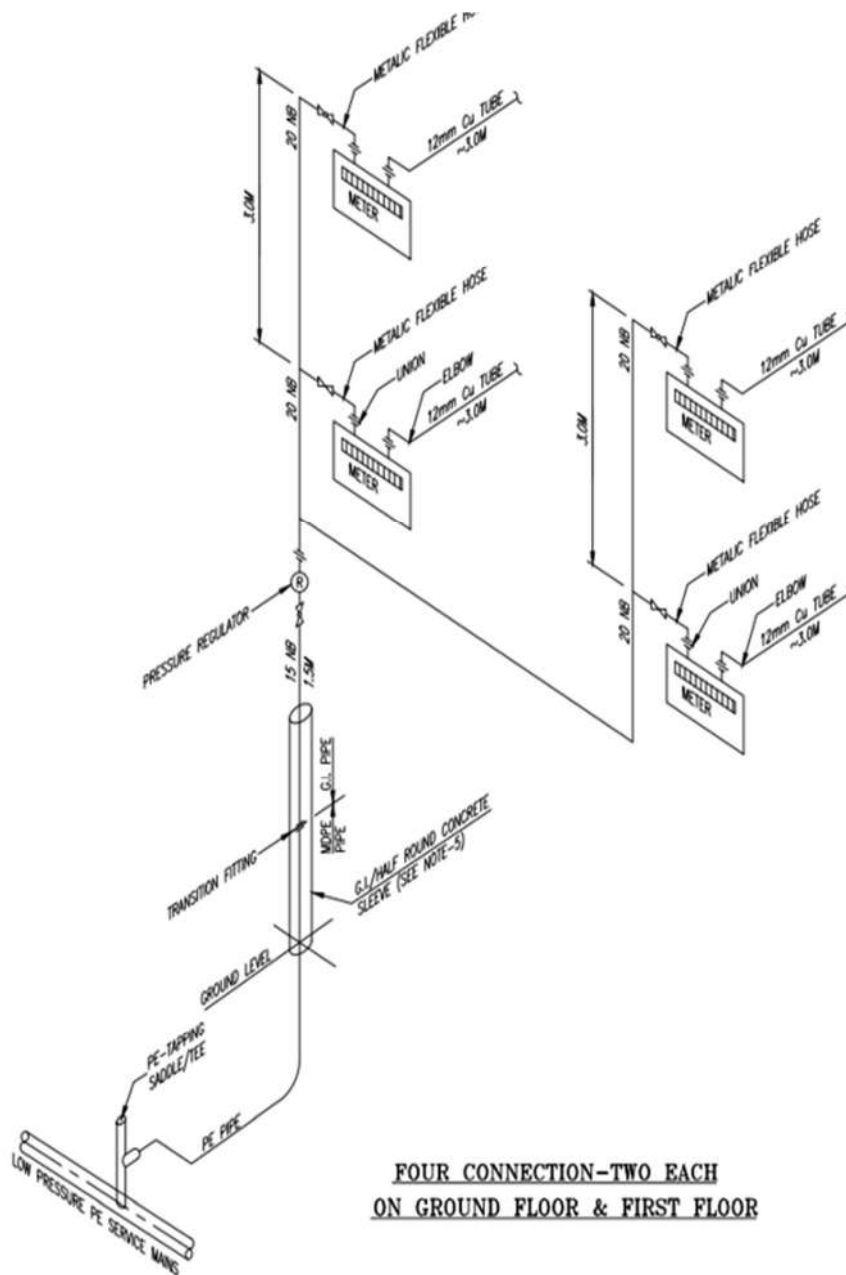


FOUR CONNECTION ON GROUND FLOOR

NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
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5. G.I. INSTALLATION/METER INSTALLATION SHALL BE DECIDED BY OWNER/OWNER'S REPRESENTATIVE AS PER SITE CONDITIONS.
6. IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER.
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TYPICAL DOMESTIC CONNECTION LAYOUT OF NG DISTRIBUTION

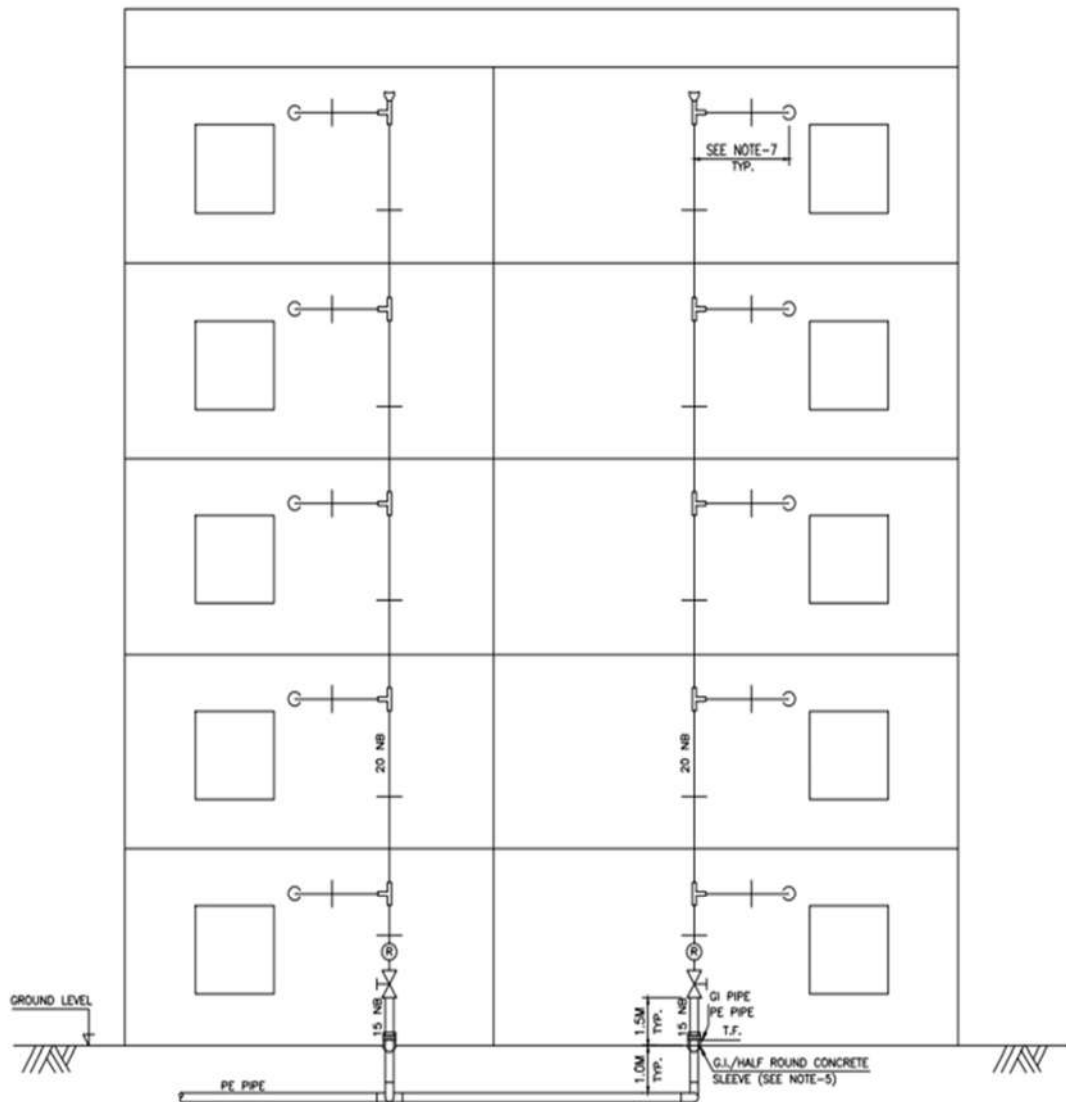


FOUR CONNECTION-TWO EACH
ON GROUND FLOOR & FIRST FLOOR

NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
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TYPICAL DOMESTIC CONNECTION LAYOUT OF NG DISTRIBUTION

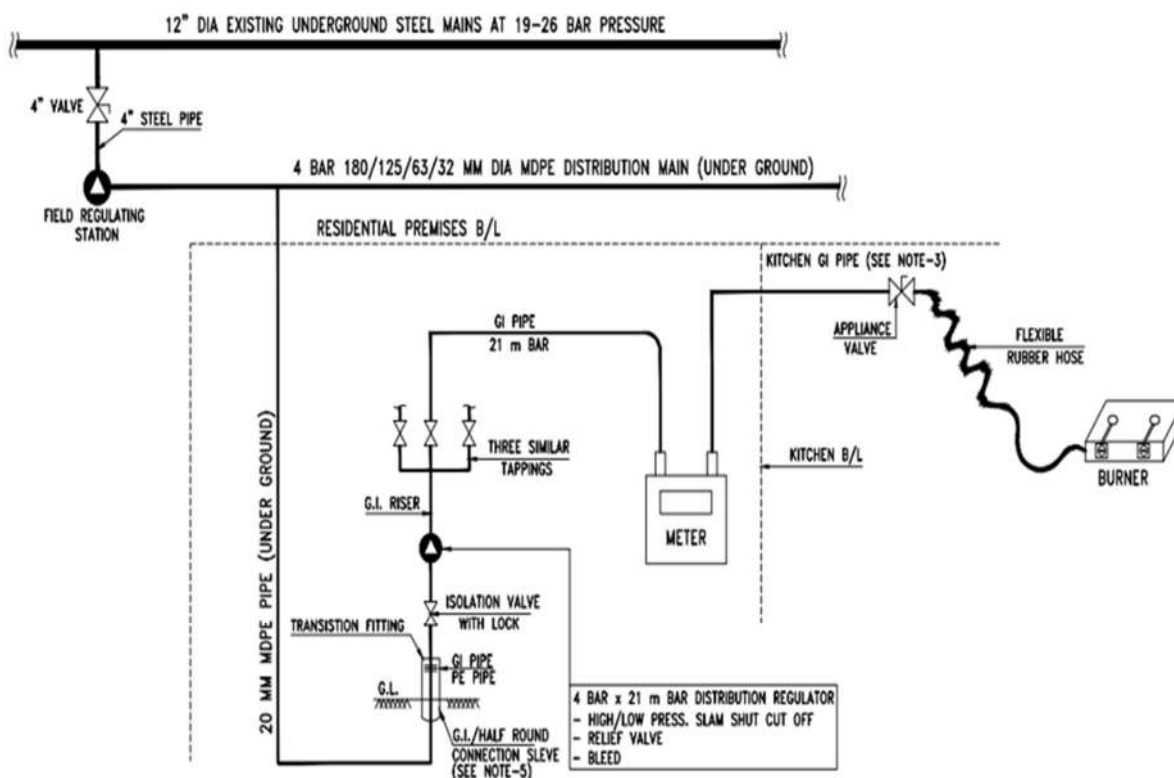


INDICATIVE RISER ARRANGEMENT IN GR+4 BUILDING (METER INSTALLED INSIDE THE KITCHEN)

NOTES:—

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
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8. TAPPING SHALL BE LEFT NEAR THE OUTSIDE KITCHEN AS DIRECTED BY OWNER/OWNER'S REPRESENTATIVE.

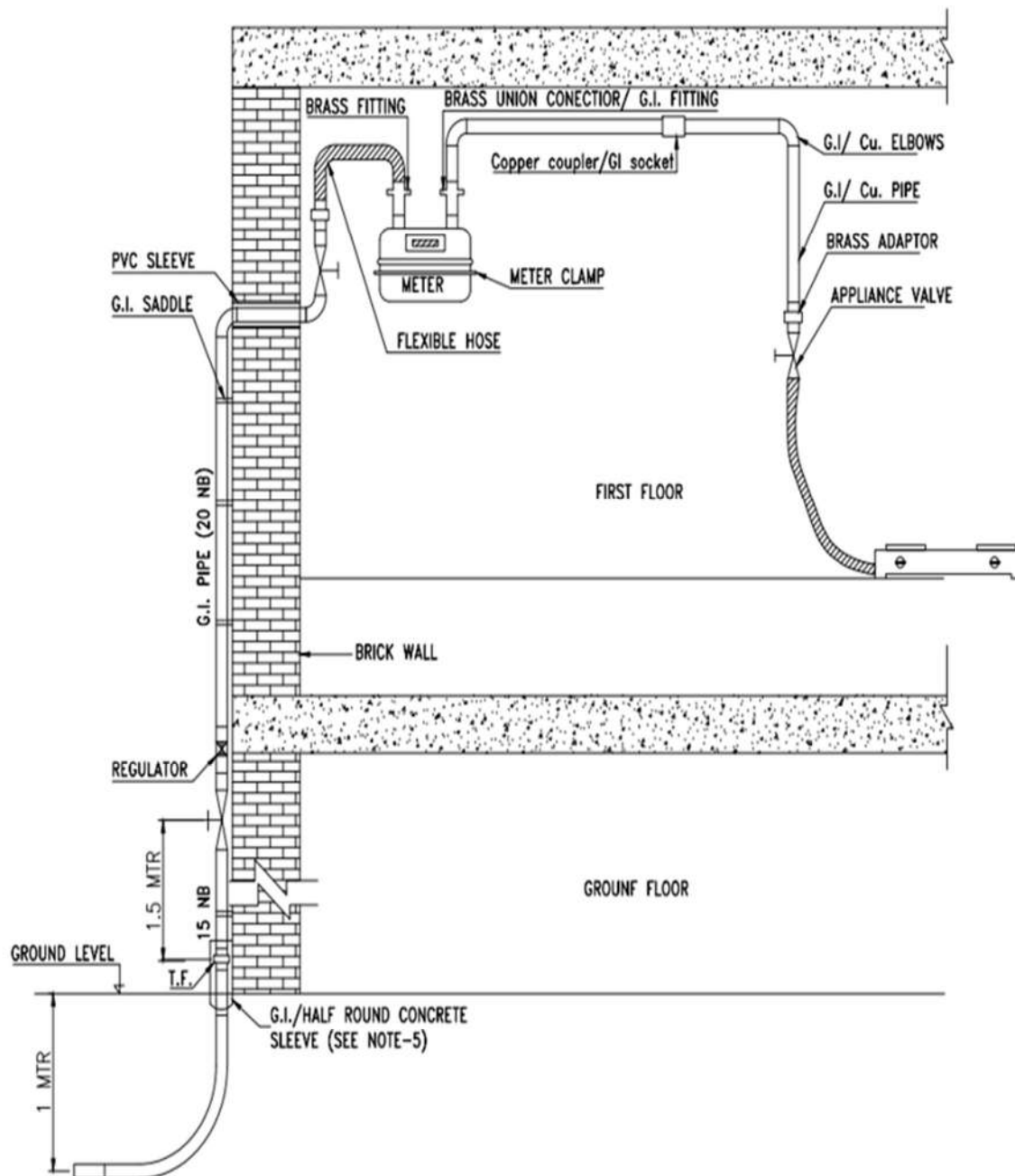
SCHEMATIC DRAWING FOR DOMESTIC CONNECTION



NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
4. TENTATIVE RISER LENGTH (FROM OUTLET OF TRANSITION FITTING TO INLET OF ISOLATION VALVE) SHALL BE 1.5m. ANY CHANGES IN RISER LENGTH SHALL BE AFTER APPROVED FROM EIC.
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6. IF COPPER PIPE GOES TO THE APPLIANCE VALVE THAN BRASS FITTING SHALL BE USED AT THE OUTLET OF METER OR GI PIPE GOES TO THE APPLIANCE VALVE THAN GIFITTING SHALL BE USED AT THE OUTLET THE METER.
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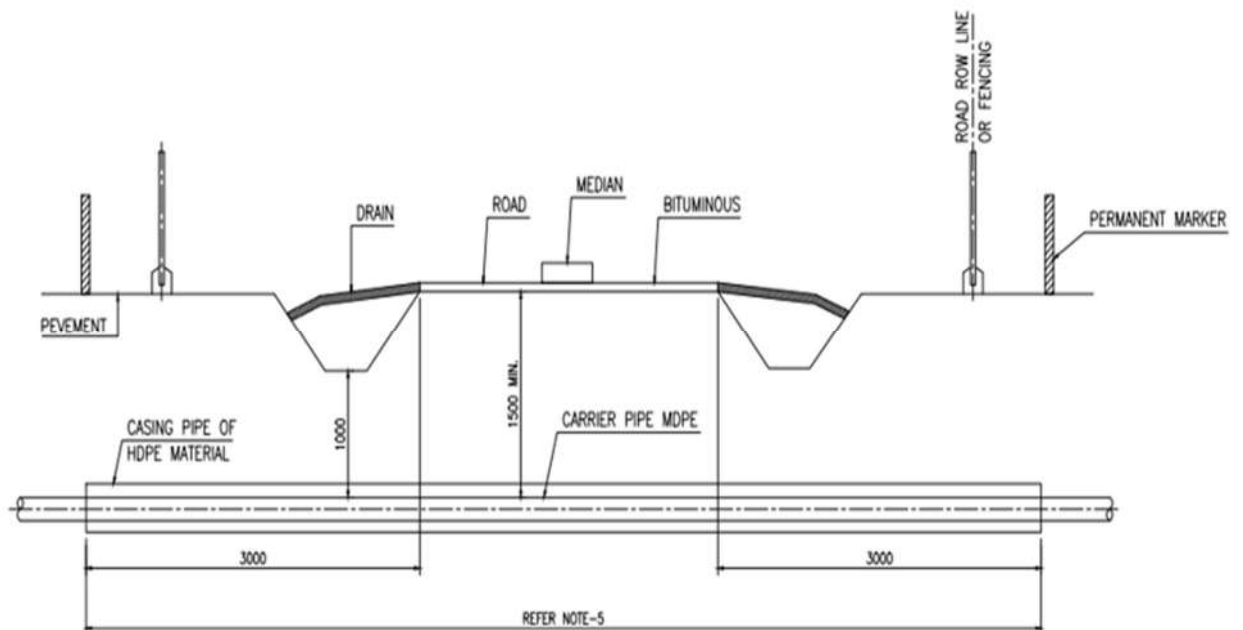
TYPICAL NATURAL GAS INSTALLATION INSIDE KITCHEN



NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE SIZES SHOWN IN THE DRAWING ARE TENTATIVE. IT SHALL BE DECIDED DURING DETAILS ENGINEERING.
3. PIPING DOWN STREAM METER SHALL BE OF COPPER IN CASE METER IS INSTALLED WITHIN THE KITCHEN.
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8. METER CLAMP SHALL BE APPROVED FROM OWNER/OWNER'S REPRESENTATIVE.

ROAD /HIGHWAY CASED CROSSING FOR MDPE PIPE

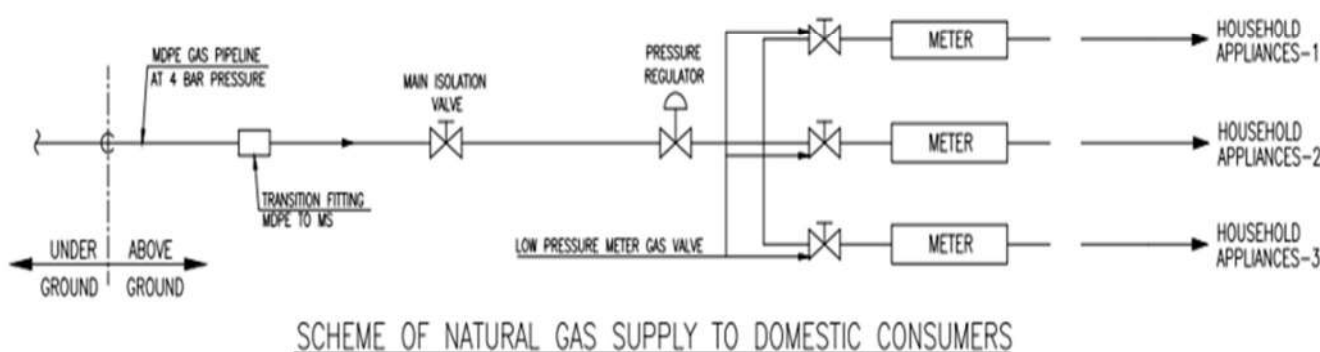
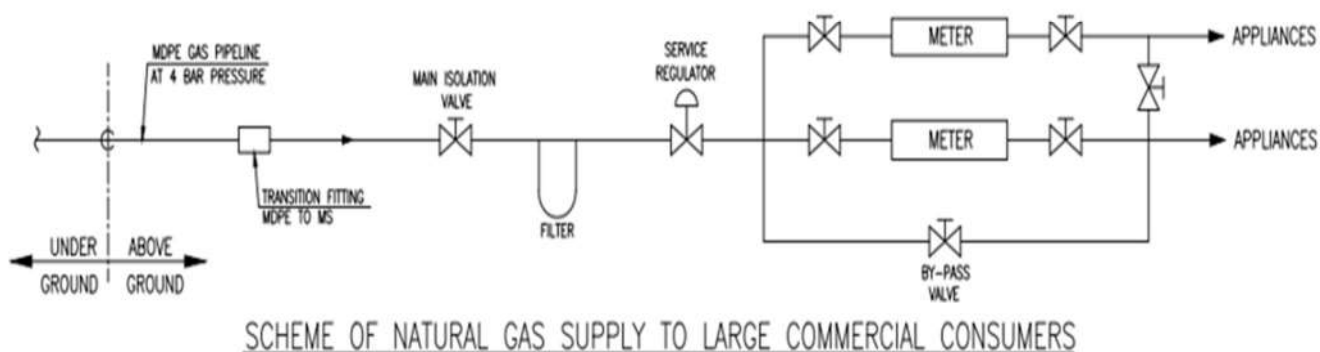
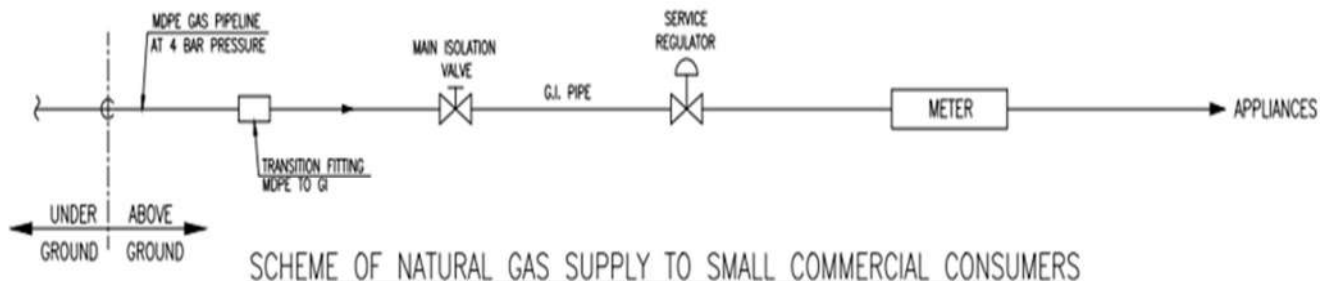


TYPICAL SECTION

NOTES:-

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. ROAD HIGHWAY CROSSING SHALL BE RESTORED TO ORIGINAL CONDITION TO THE ENTIRE SATISFACTION OF OWNER AND CONCERNED AUTHORITIES HAVING JURISDICTION.
3. REFER API RP 1102 FOR OTHER DESIGN AND INSTALLATION REQUIREMENTS.
4. ANGLE OF INTERSECTION BETWEEN PIPELINE AND THE ROAD/ HIGHWAY SHALL BE AS CLOSE TO 90° AS POSSIBLE BUT IN NO CASE LESS THAN 30°.
5. CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS WITH RESPECT TO SURVEY DETAILS OF EACH ROAD/HIGHWAY CROSSING AND PREPARE DETAILED DRAWINGS FOR INDIVIDUAL CROSSING TAKE ENGINEER-IN-CHARGE AND CLIENTS APPROVAL BEFORE COMMENCEMENT OF CONSTRUCTION.
6. THE CASING PIPE SHALL BE OF SIZE MAINTAINED AT CLAUSE NO.19 OF TECHNICAL SPECIFICATION FOR PE LAYING.

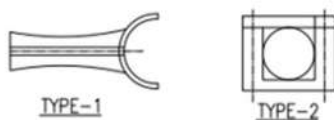
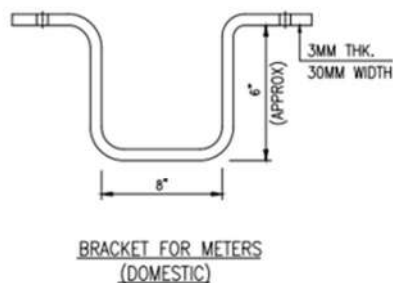
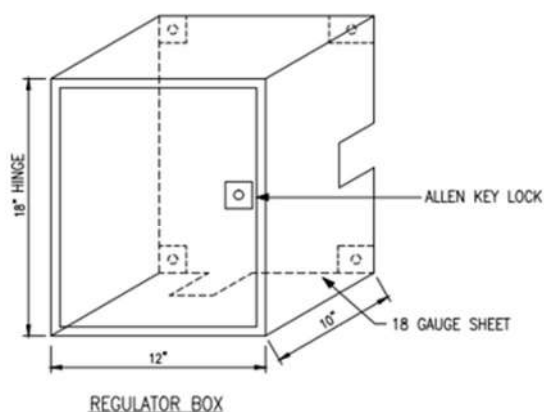
SCHEME OF GAS SUPPLY TO SMALL/LARGE/DOMESTIC CONSUMERS



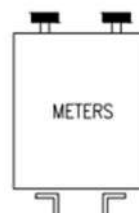
NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. SIZE OF LINE, VALVE ETC. SHALL BE DECIDED AT THE TIME OF EXECUTION AS PER THE INSTRUCTIONS OF OWNER/OWNER'S REPRESENTATIVE.

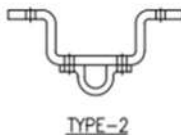
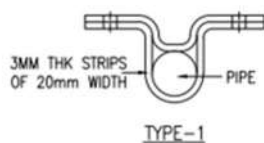
SKETCH FOR REGULATOR BOX, BRACKETS & CLAMPS



PE/PVC CLAMPS FOR COPPER PIPE



ANGLE BRACKETS 50x50mm
FOR NON DOMESTIC METERS

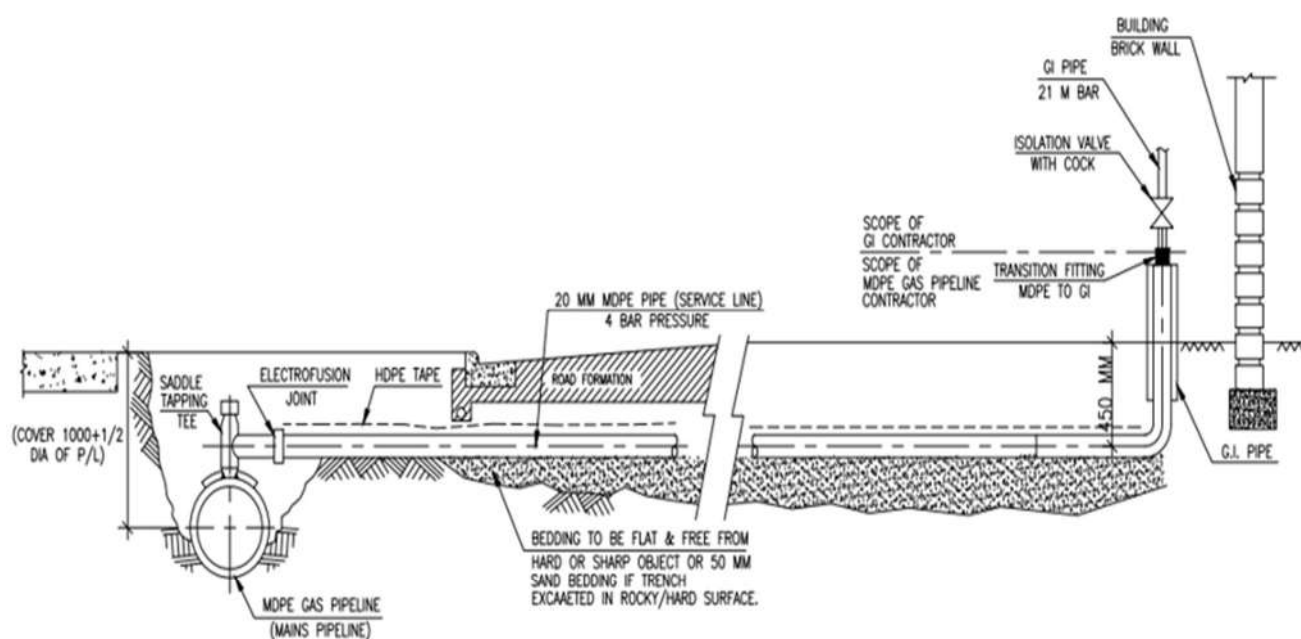


MS CLAMPS FOR GI PIPE

NOTES:-

1. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
2. CLAMP, REGULATOR BOX AND METER BRACKET ARE TO BE MADE AS PER DIRECTION AND APPROVAL OF EIC.
3. CLAMPS/BOXES BRACKETS TO BE TIGHTLY SECURED TO THE WALL WITH PROPER ROWEL PLUGS, SCREWS ETC. WOODEN BLOCK TO BE USED IN CASE ROWEL PLUGS DO NOT HOLD. PROPER THE AREA.
4. PAINTING WITH ONE COAT OF ZINC PRIMER AND THREE COATS OF SYNTHETIC ENAMEL PAINT OF REPUTED MAKE (ASIAN PAINT, BERGER, NEROLAC) TO BE USED.
5. CLAMPS ON PIPES TO BE FIXED AT MAXIMUM DISTANCE OF 1.5 mtrs AND AT BENDS.

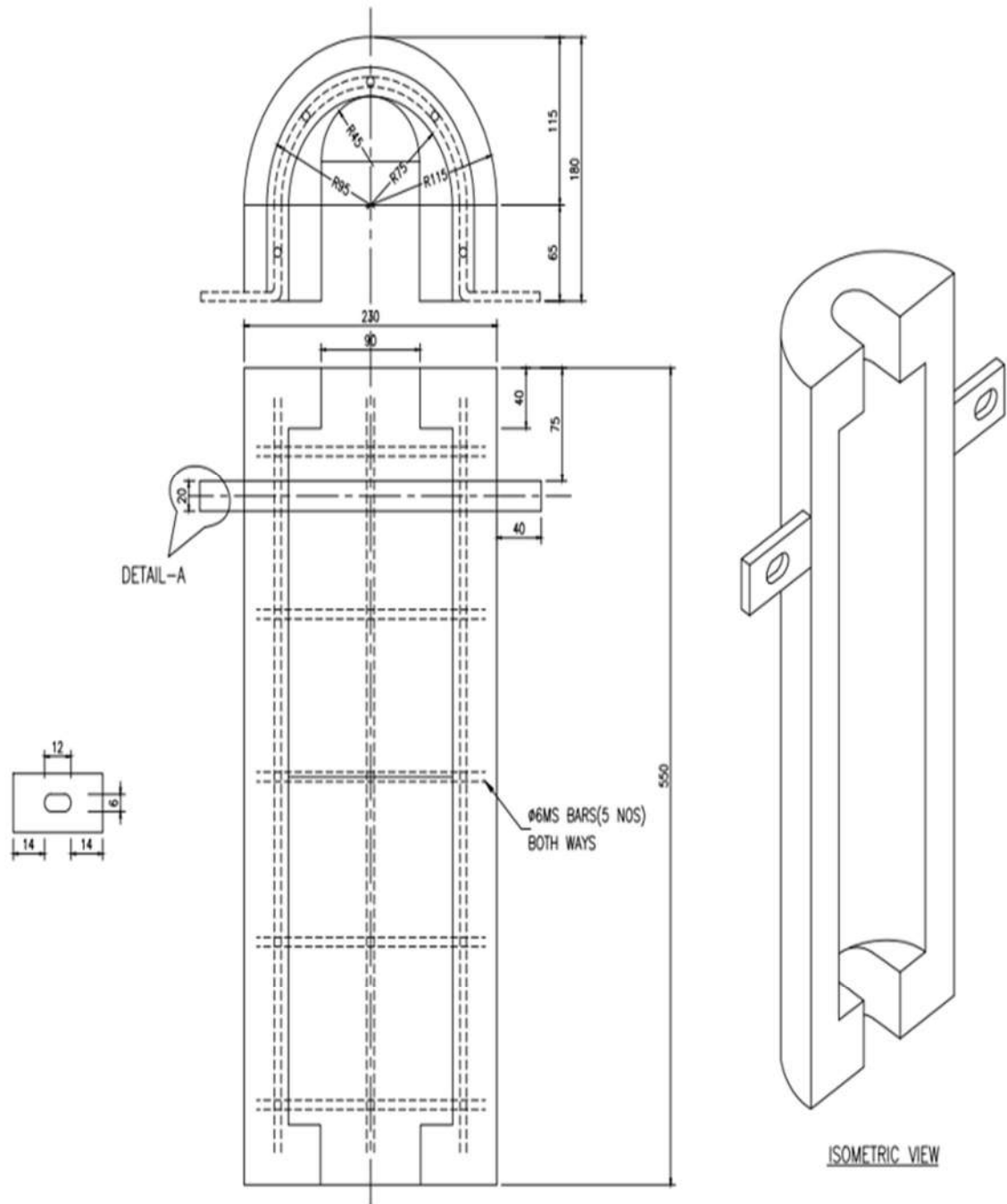
SCHEME OF HIGH-PRESSURE SERVICE INSTALLATION



GENERAL NOTES

1. FOR CLAMPING TO BRICK WALL USE SUITABLE WALL BRACKETS.
2. TRENCH BACK FILL TO BE FREE FROM STONES OR SHARP OBJECTS. CARE TO BE EXERCISED WHEN CONSOLIDATING BACK FILL TO AVOID DAMAGING PLASTIC PIPE.
3. THIS SKETCH IS INDICATIVE AND FINAL LAYING WILL BE DECIDED BY ENGINEER-IN-CHARGE.

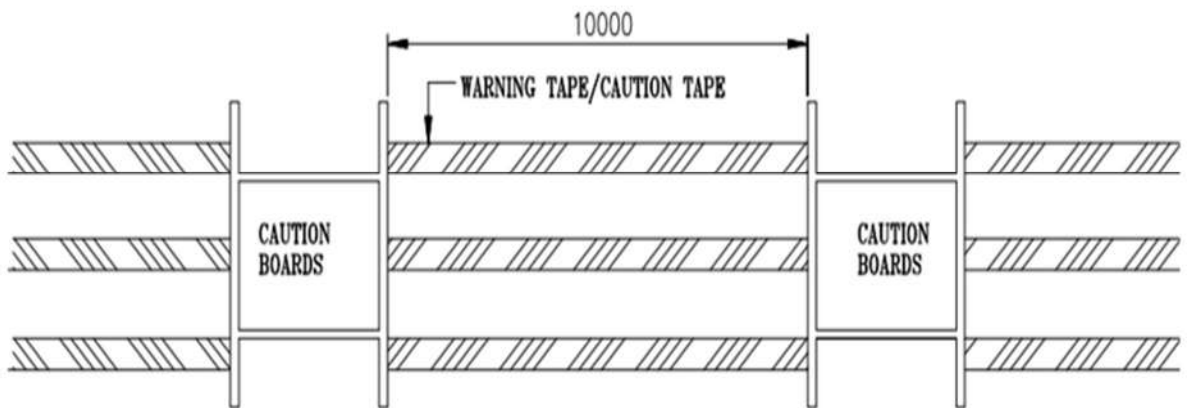
HALF-ROUND CONCRETE SLEEVE



NOTES:—

1. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
2. IT SHALL BE TAKEN APPROVAL FROM OWNER/OWNER'S REPRESENTATIVE. BEFORE STARTING THE PROCUREMENT.
3. SIZES ARE SHOWN AS A TENTATIVE ONLY.

BARRICADING

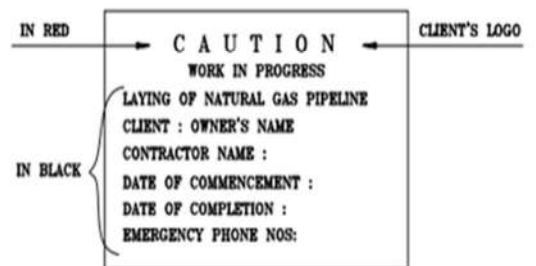
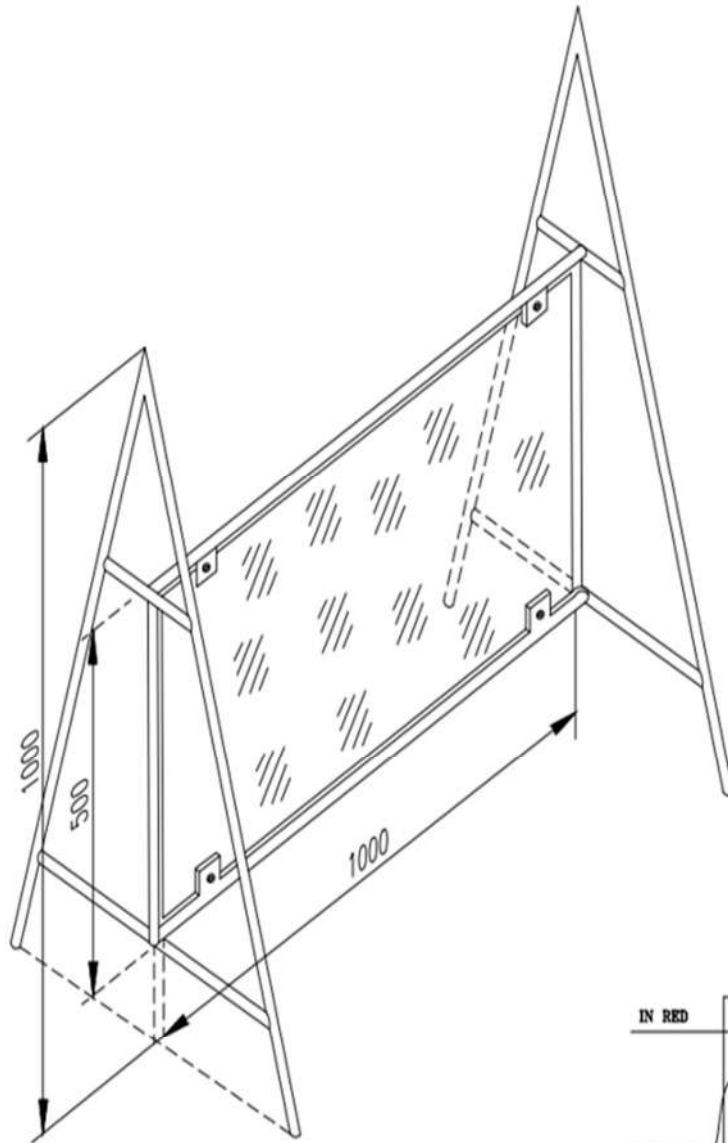


SCHEMATIC LAYOUT OF CAUTION BOARDS AND BARRICADING

NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. TO THE CAUTION BOARDS REFER DRAWING NO. MEC/TYP/05/28/STD/1002

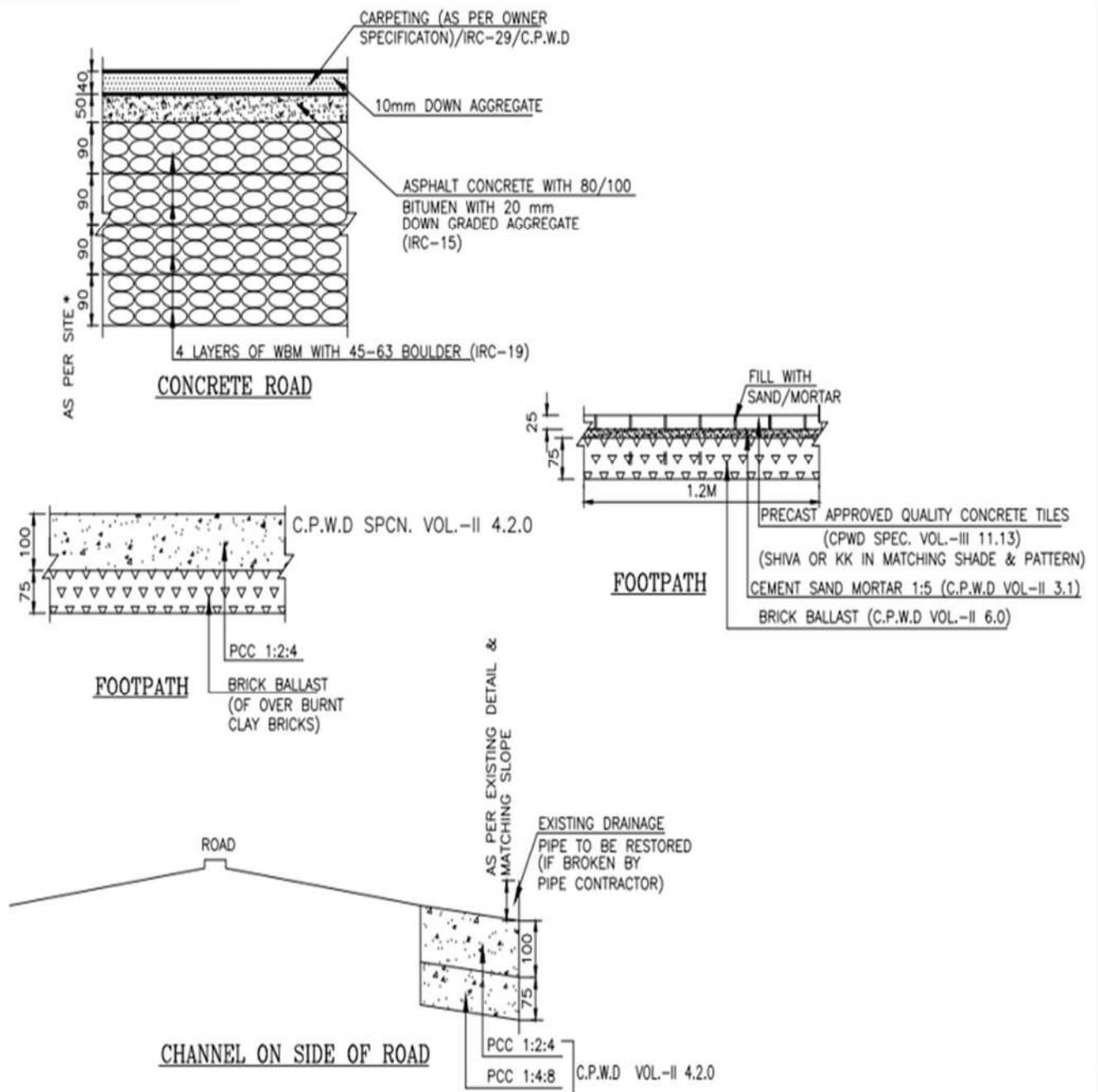
CAUTION BOARD



NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.

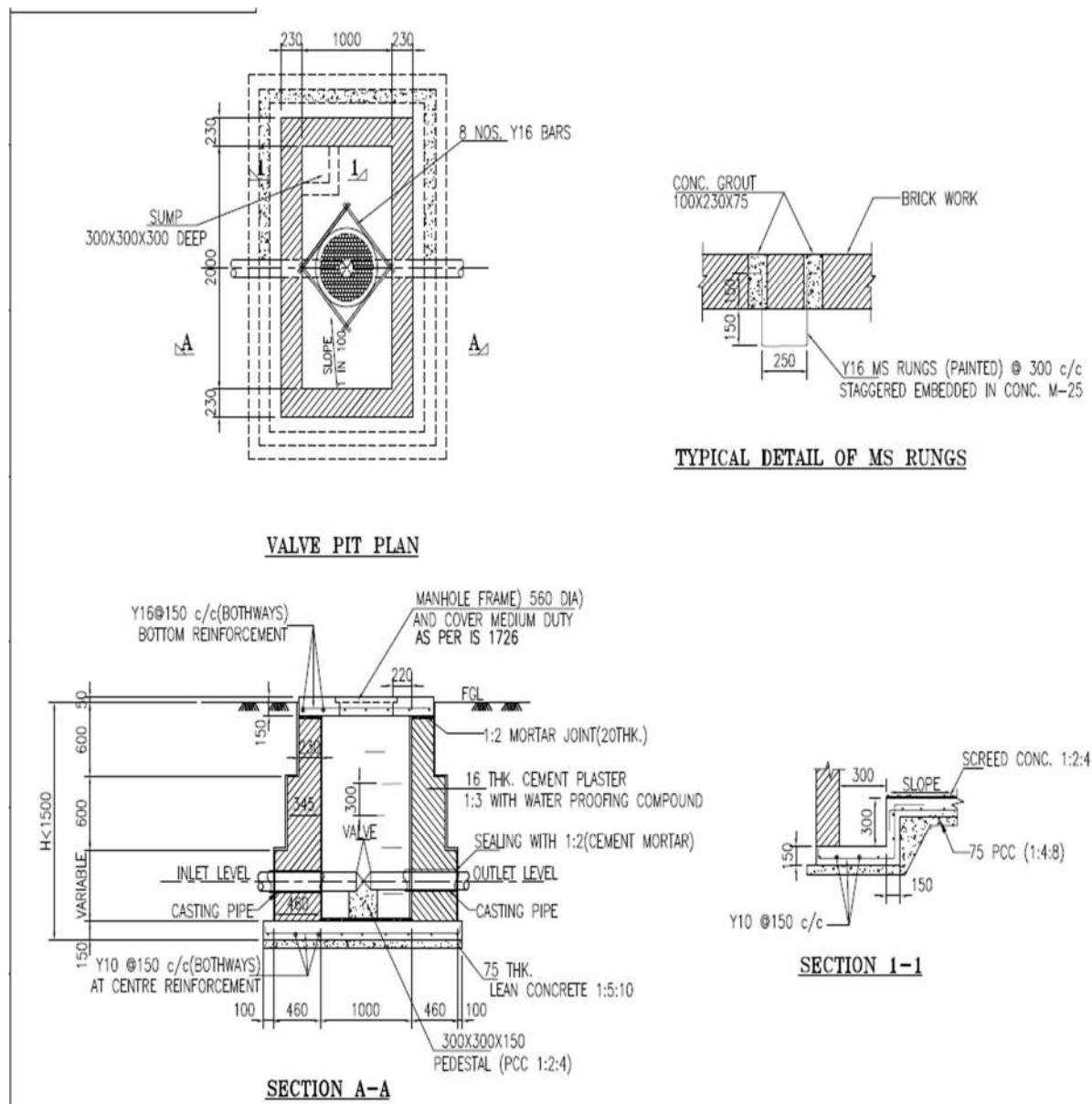
RESTORATION OF ROADS, FOOTPATHS & CHANNEL



NOTES:-

1. ALL DIMENSIONS ARE IN mm & LEVELS ARE IN METRE.
2. ONLY FIGURED DIMENSIONS ARE TO BE FOLLOWED.
3. THESE ARE INDICATIVE SCHEME ONLY. ACTUAL WORK TO FOLLOW AS PER CPWD/PWD CONCERNED AUTHORITIES REQUIREMENTS IN RESPECTIVE AREA.

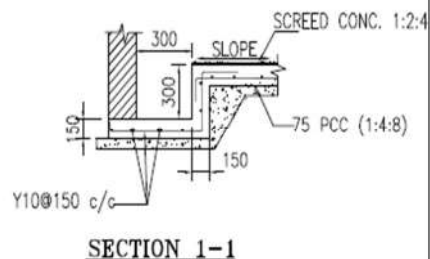
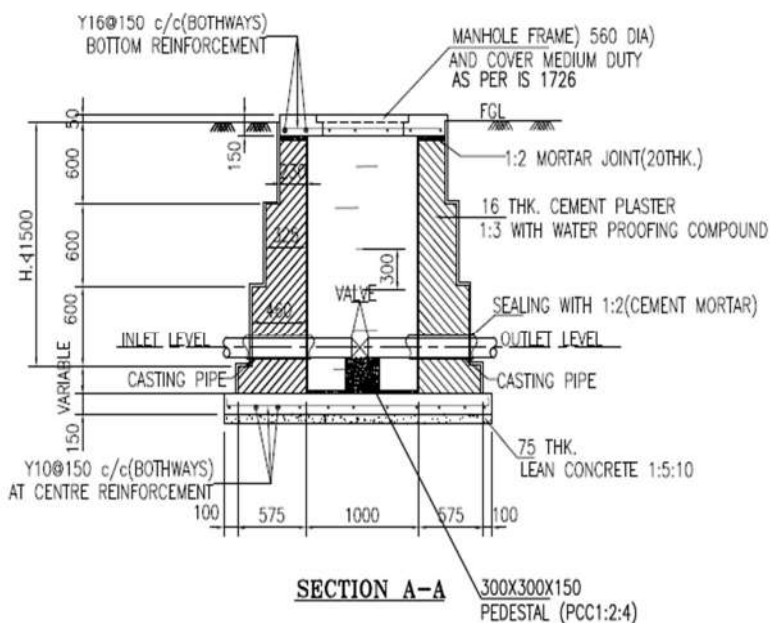
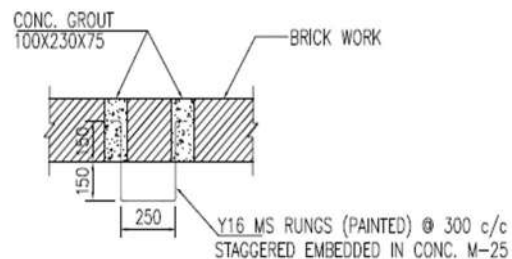
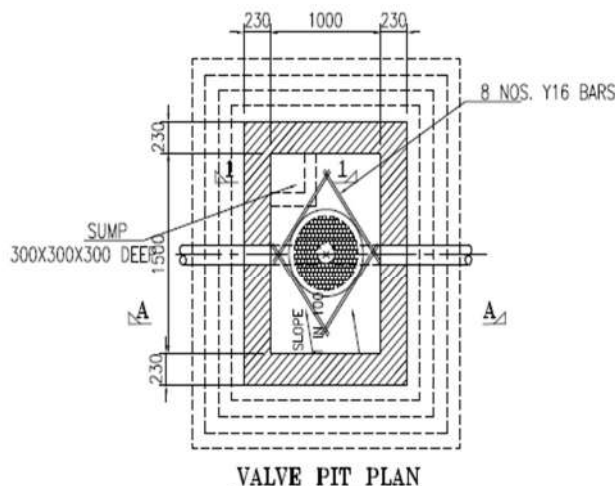
STD. DETAILS OF BRICK VALVE CHAMBER (TYPE I)



NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE THE DIMENSIONS.
3. CLEAT COVER TO MAIN REINFORCEMENT SHALL BE (a) SLAB = 20mm.
4. GRADE OF CONCRETE BE M-25.
5. REINFORCEMENT SHALL BE OF HYSD (GRADE Fe 415) CONFORMING IS:1786.

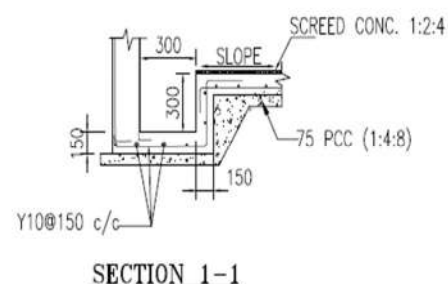
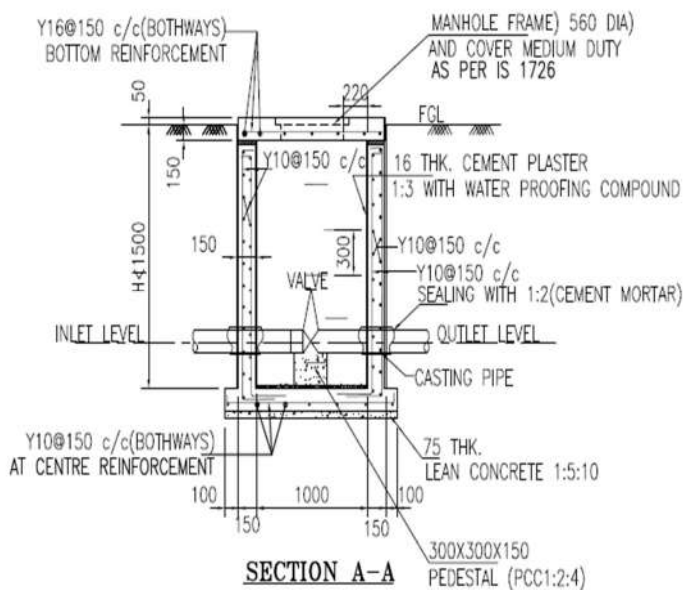
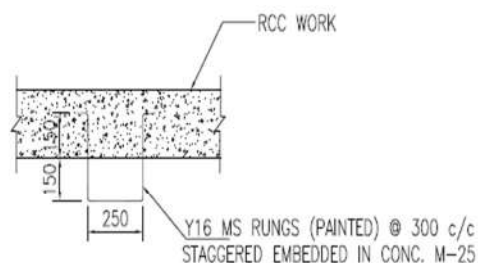
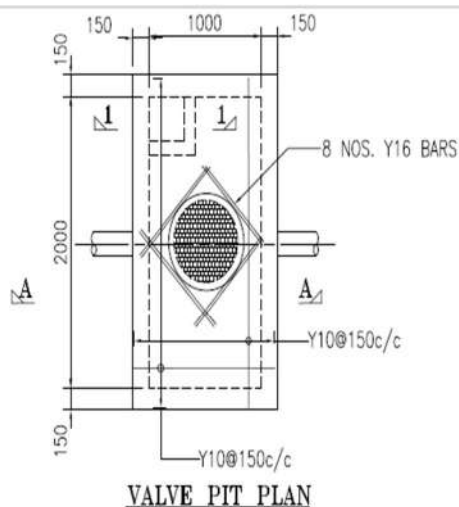
STD. DETAILS OF BRICK VALVE CHAMBER (TYPE II)



NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE THE DIMENSIONS.
3. CLEAT COVER TO MAIN REINFORCEMENT SHALL BE (a) SLAB = 20mm.
4. GRADE OF CONCRETE BE M-25.
5. REINFORCEMENT SHALL BE OF HYSD (GRADE Fe 415) CONFORMING IS:1786.

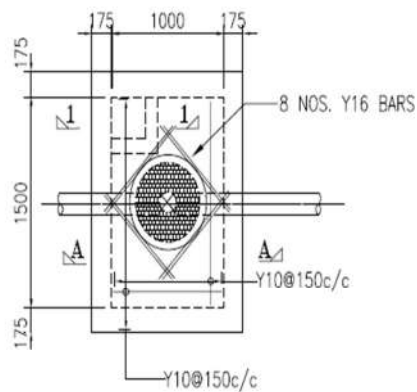
STD. DETAILS OF RCC VALVE CHAMBER (TYPE-I)



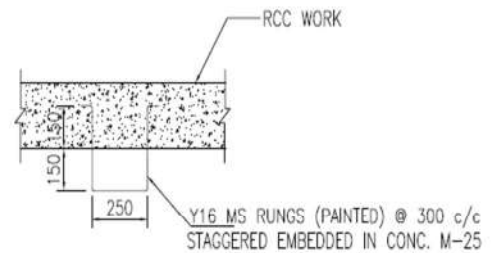
NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE THE DIMENSIONS.
3. CLEAT COVER TO MAIN REINFORCEMENT SHALL BE (a) SLAB = 20mm.
4. GRADE OF CONCRETE BE M-25.
5. REINFORCEMENT SHALL BE OF HYSD (GRADE Fe 415) CONFORMING IS:1786.

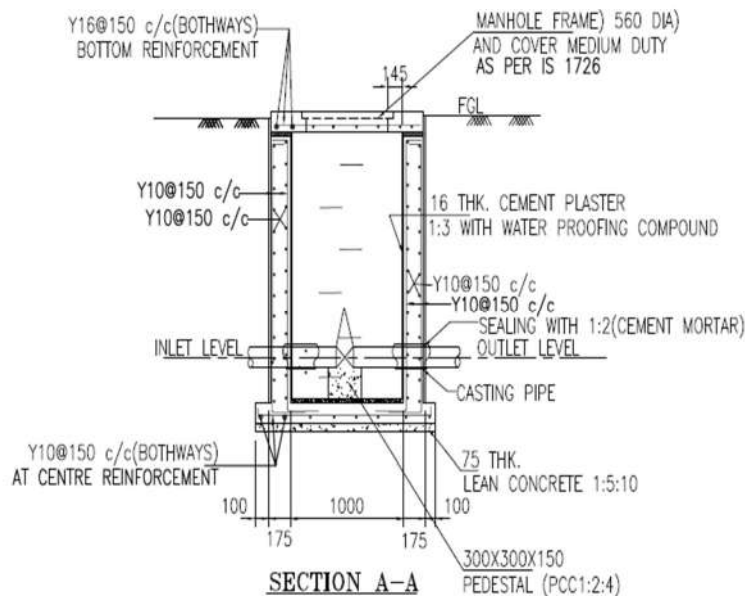
STD. DETAILS OF BRICK RCC CHAMBER (TYPE –II)



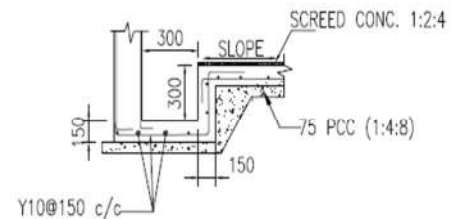
VALVE PIT PLAN



TYPICAL DETAIL OF MS RUNGS



SECTION A-A

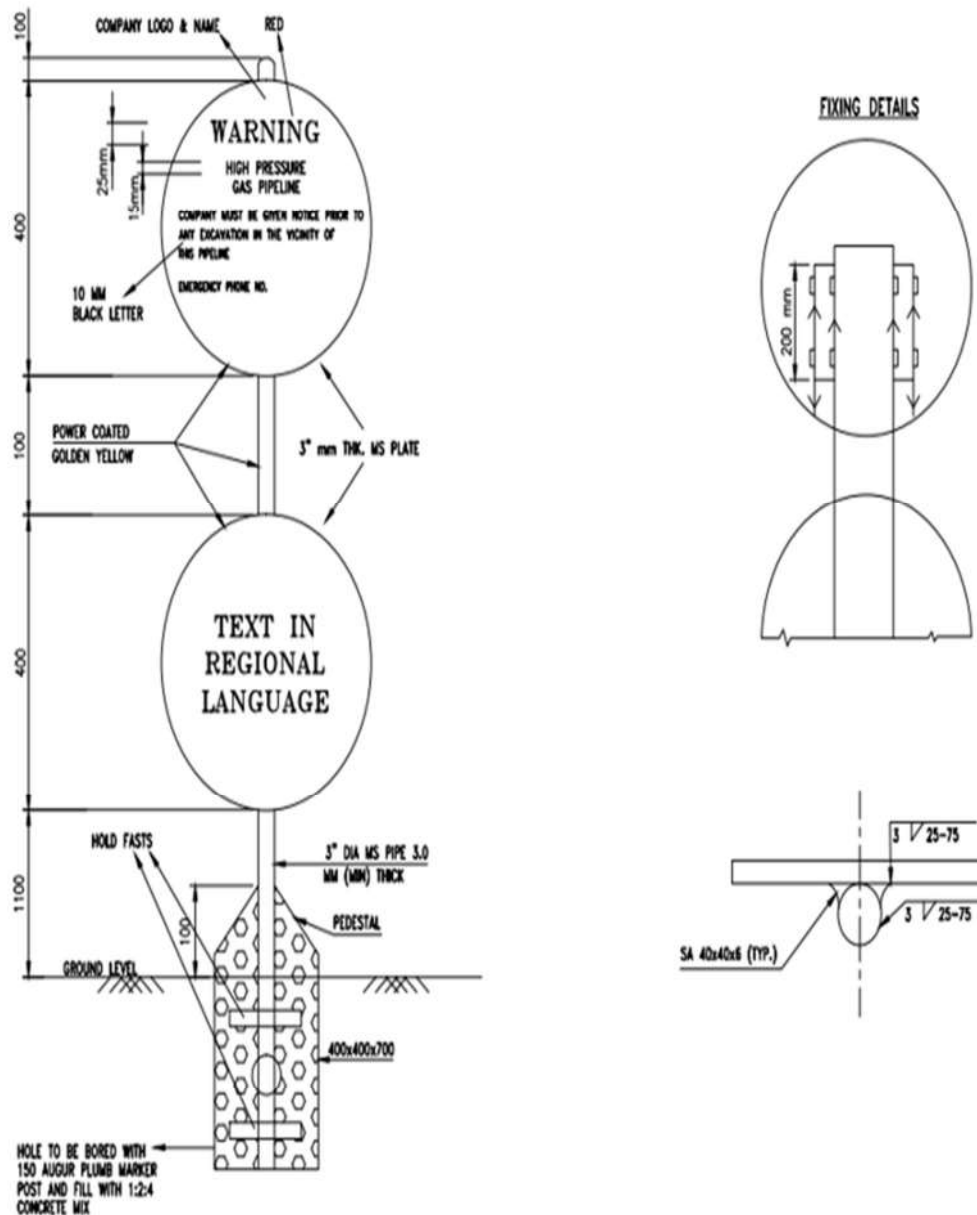


SECTION 1-1

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE THE DIMENSIONS.
3. CLEAT COVER TO MAIN REINFORCEMENT SHALL BE (a) SLAB = 20mm.
4. GRADE OF CONCRETE BE M-25.
5. REINFORCEMENT SHALL BE OF HYSD (GRADE Fe 415) CONFORMING IS:1786.

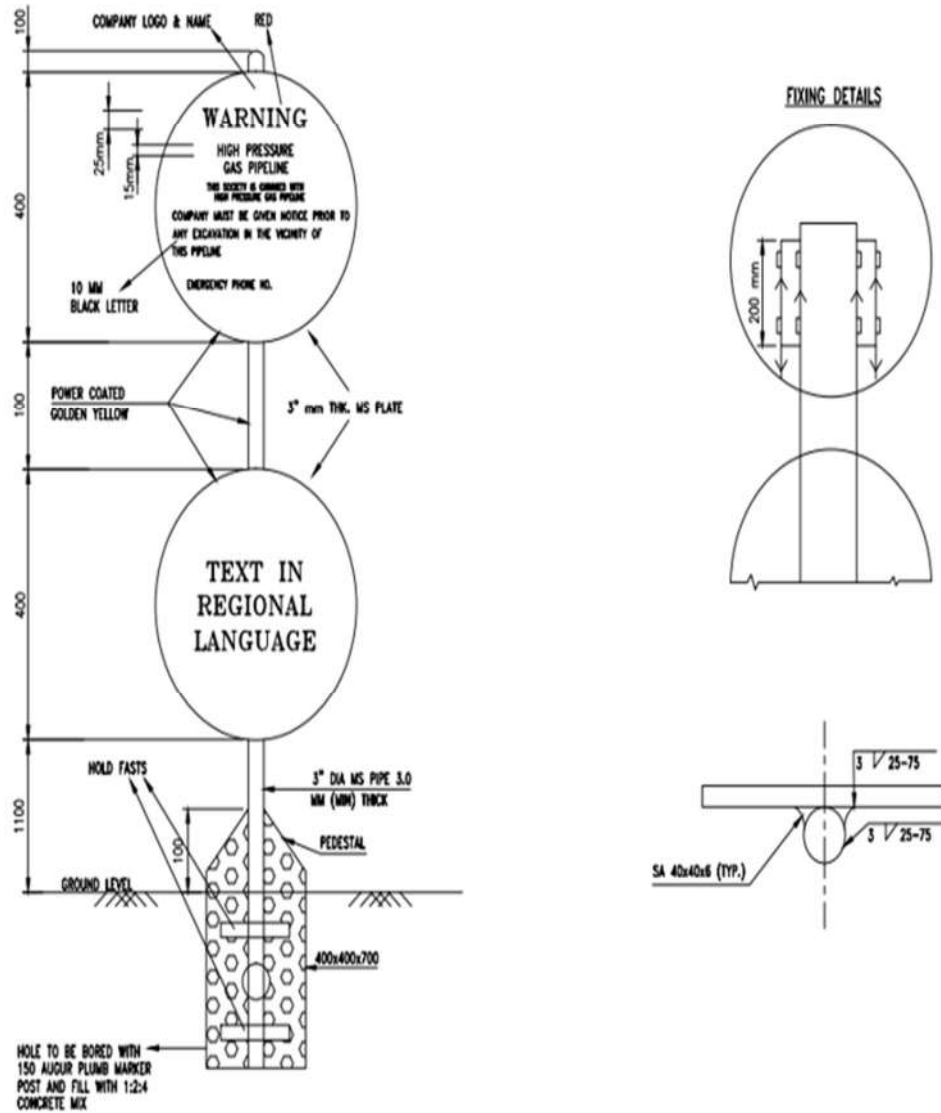
POLE MARKER WITH FOUNDATION



NOTES:—

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE FULL WORKING AND SIZES ARE ONLY INDICATIVE AND ARE SUBJECT TO THE APPROVAL BY OWNER/OWNER'S REPRESENTATIVE BEFORE FABRICATION.
3. SCHEME FOR POWDER COATING AND COLOURING
ONE COAT OF PRIMER & TWO COATS OF SPECIFIED PANTS
ALL LETTERS EXCEPT "WARNING" TO BE PAINTED BLACK.
4. APPROVAL OF WARNING MARKER DESIGN SHALL BE OBTAINED BEFORE THE COMMENCEMENT OF WORK.

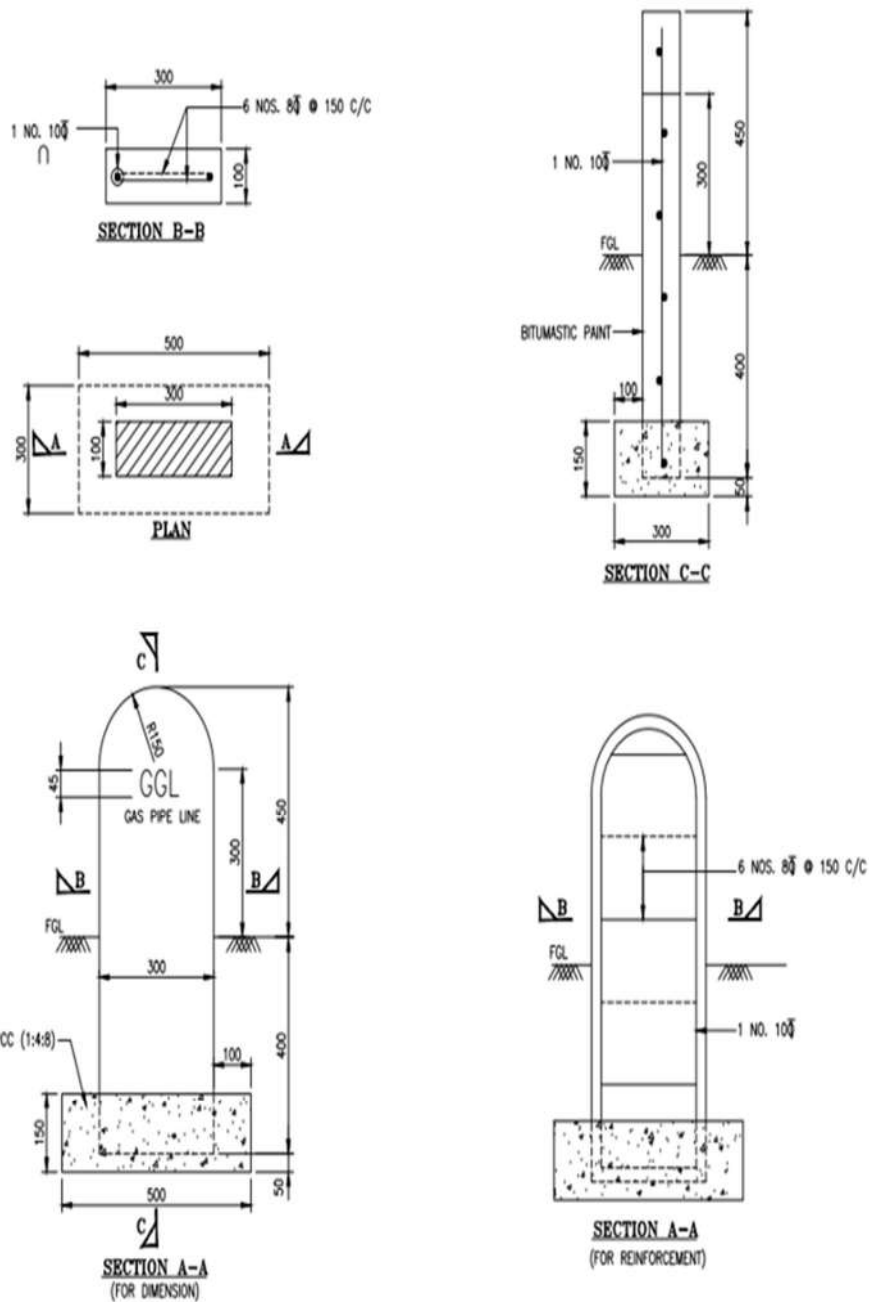
POLE MARKER WITH FOUNDATION (INDIVIDUAL SOCIETIES/AREAS)



NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS NOTED OTHERWISE.
2. THE FULL WORKING AND SIZES ARE ONLY INDICATIVE AND ARE SUBJECT TO THE APPROVAL BY OWNER/OWNER'S REPRESENTATIVE BEFORE FABRICATION.
3. SCHEME FOR POWDER COATING AND COLOURING
ONE COAT OF PRIMER & TWO COATS OF SPECIFIED PAINTS
ALL LETTERS EXCEPT "WARNING" TO BE PAINTED BLACK.
4. APPROVAL OF WARNING MARKER DESIGN SHALL BE OBTAINED BEFORE THE COMMENCEMENT OF WORK.

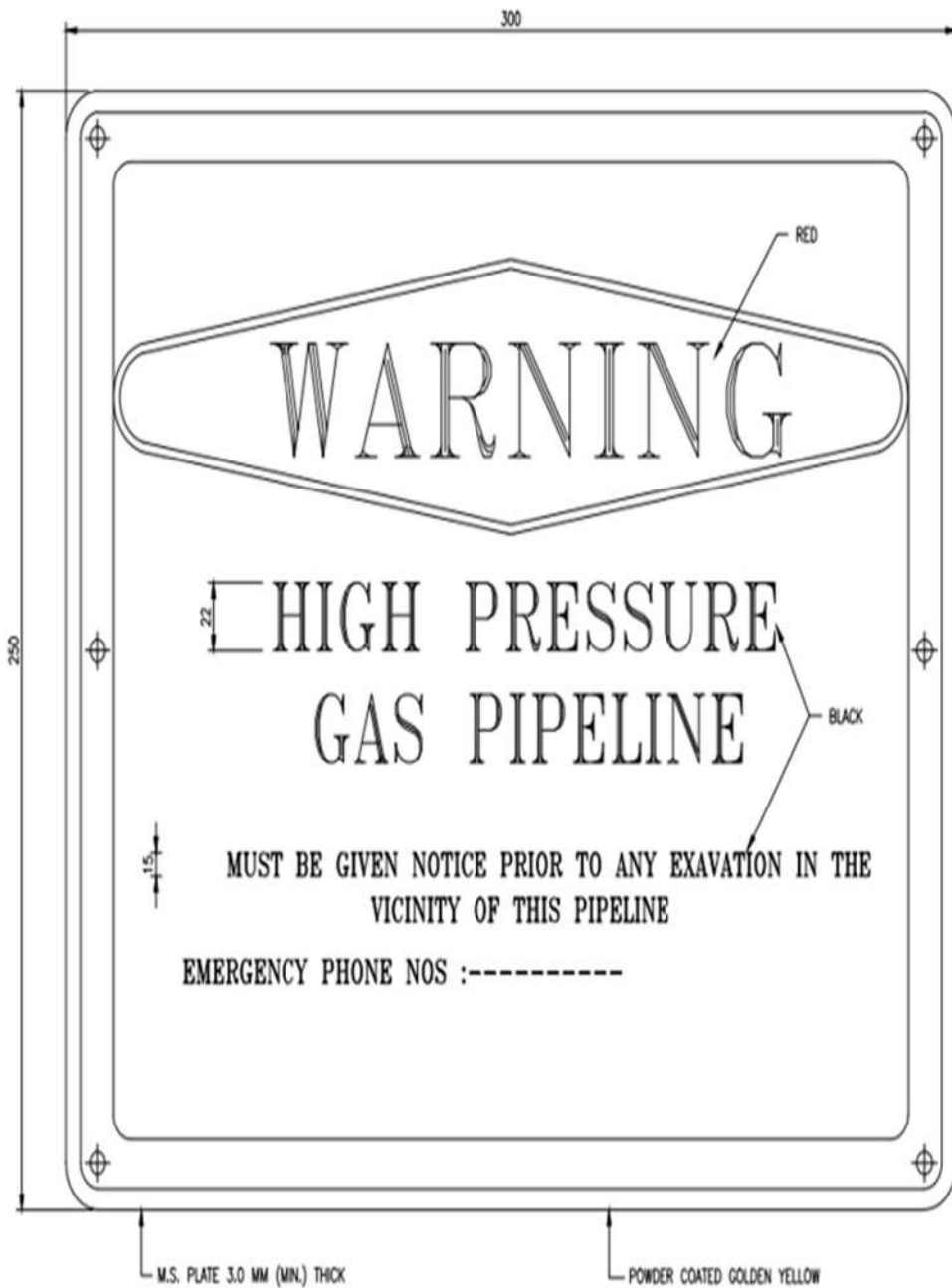
SKETCH FOR RCC ROUTE MARKER



NOTES:-

1. DRAWING IS NOT TO SCALE.
2. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
3. MARKERS SHALL BE INSTALLED IN EVERY 50M INTERVAL AS PER INSTRUCTION OF ENGINEER-IN-CHARGE.
4. ALL BOUNDARY MARKERS SHALL BE PRECAST AND INSCRIPTIONS SHALL BE ENGRAVED 5mm DEEP IN THE MOULD ON BOTH FACE.
5. CONCRETE FOR BOUNDARY MARKER SHALL BE M20.

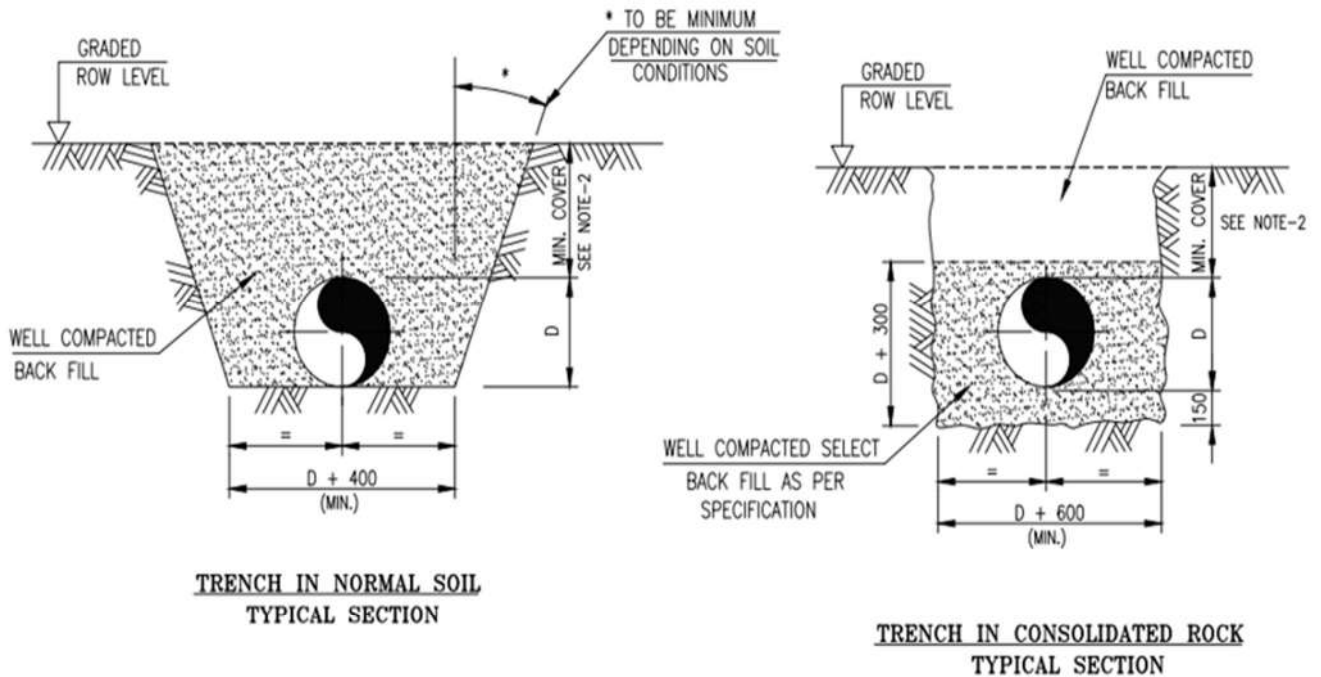
PLATE MARKER



NOTES:—

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. FOLLOW WRITEN DIMENSION ONLY. DO NOT SCALE.

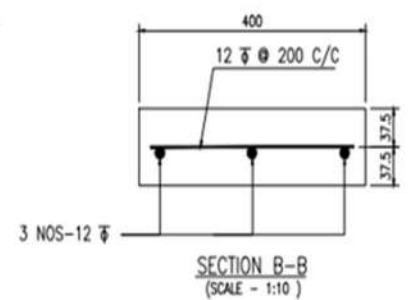
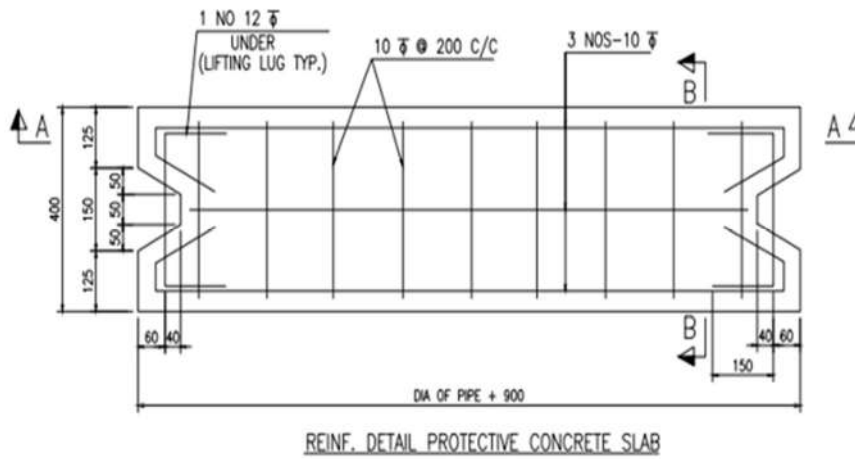
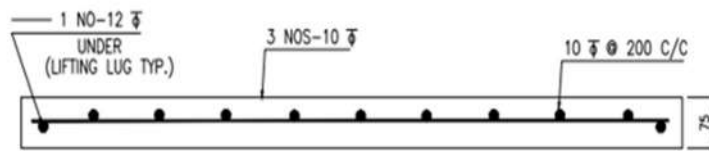
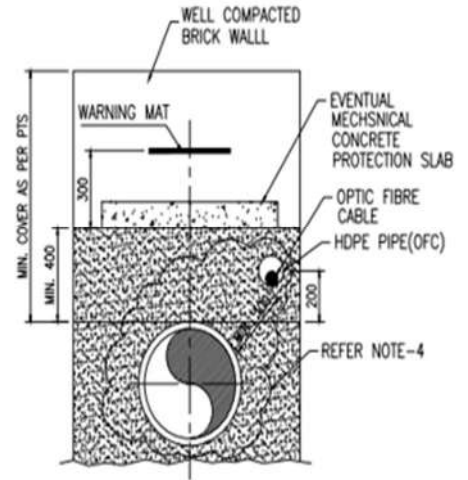
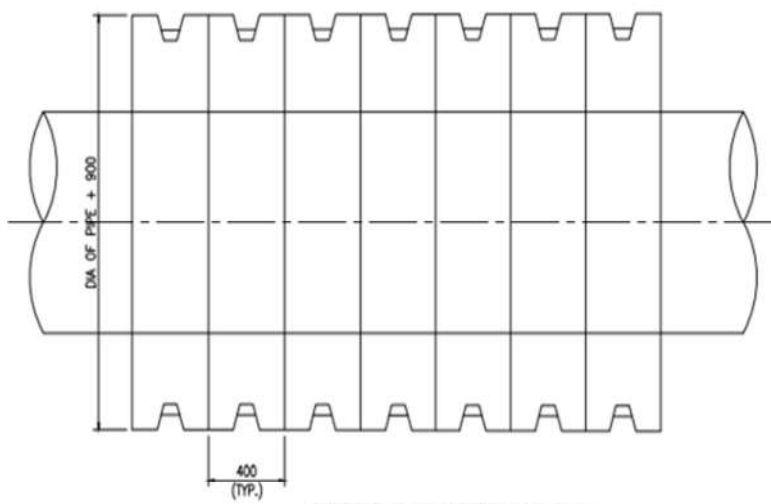
TYPICAL TRENCH DIMENSIONS FOR PIPELINE



NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS SPECIFIED OTHERWISE.
2. FOR ALL PIPELINES TO BE CONSTRUCTED IN THE LAND UNDER JURISDICTION OF GOVT. OF INDIA THE MINIMUM COVER TO BE ADOPTED SHALL BE 1000 MM. IN ACCORDANCE WITH GOVT. OF INDIA PETROLEUM PIPELINES (ACQUISITION OF RIGHT OF USER IN LAND) ACT NO. 50,1962 AND AMENDMENT ACT NO. 13,1977. ANY EXTRA REQUIREMENT SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.
3. MINIMUM COVER REQUIREMENT SHALL BE SUBJECTED TO APPROVAL OF CONCERNED AUTHORITIES WHEREVER REQUIRED.
4. EXTRA COVER REQUIREMENT SHALL BE ESTABLISHED AT ALL COVER BENDS, SAG BENDS AND HORIZONTAL BENDS WHEREVER REQUIRED.
5. FOR MINIMUM COVER REQUIREMENT AT PIPELINES CROSSING ROADS, RAILWAY TRACKS, RIVERS, MARSHY AREASETC, REFER RELEVANT STANDARDS.

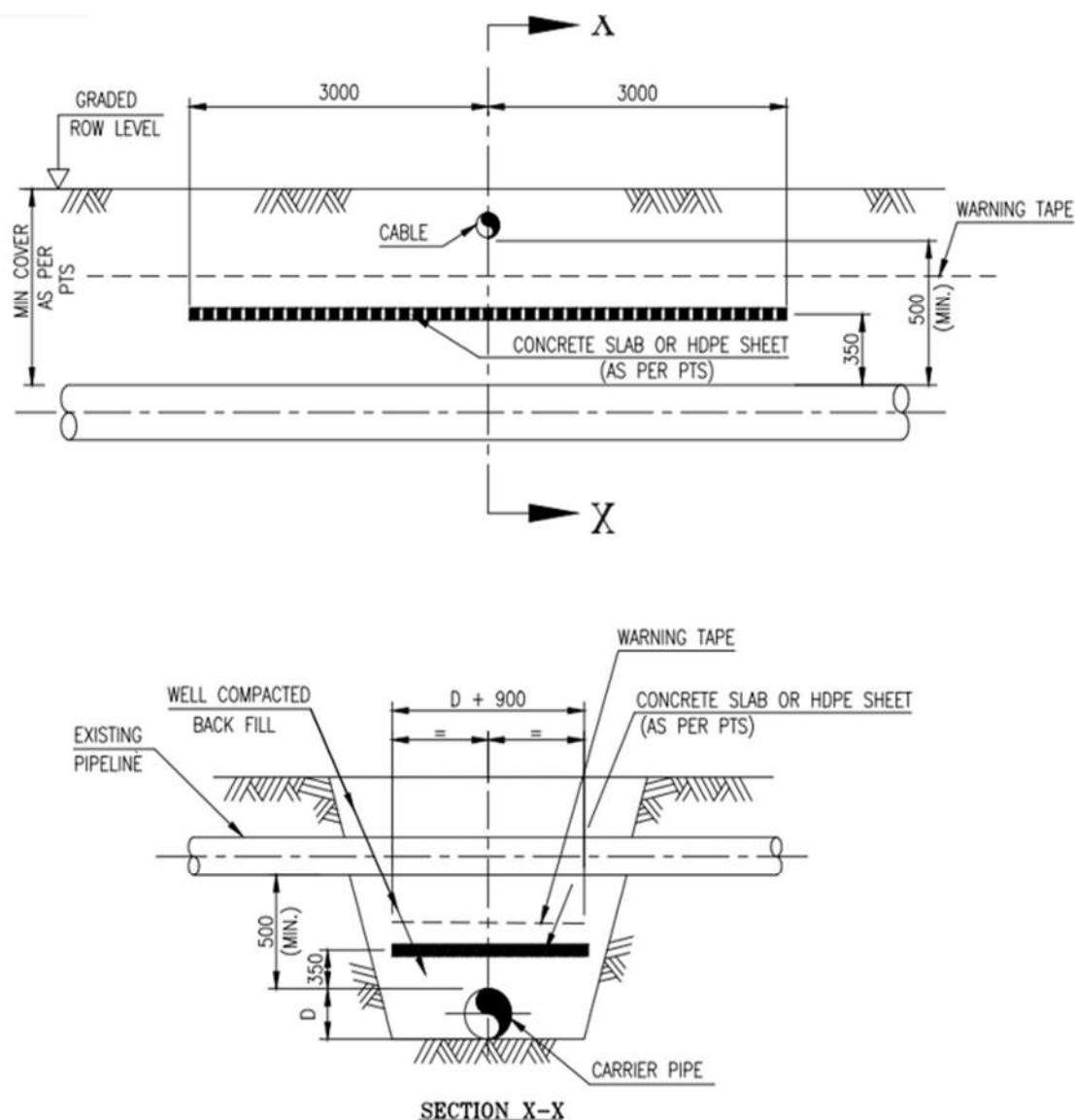
TYPICAL MECHANICAL PROTECTION CONCRETE SLAB DETAILS



NOTES:-

1. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
2. MINIMUM COVER OVER LINE PIPE SHALL BE AS PER SPECIFICATION AND REQUIREMENT OF CONCERNED AUTHOTITIES.
3. THIS SKETCH IS INDICATIVE ONLY.
4. TYPE OF TRENCHING SHALL BE AS PER PTS AND APPROVED PROCEDURE.
5. CONCRETE MIX M20 SHALL BE USED.

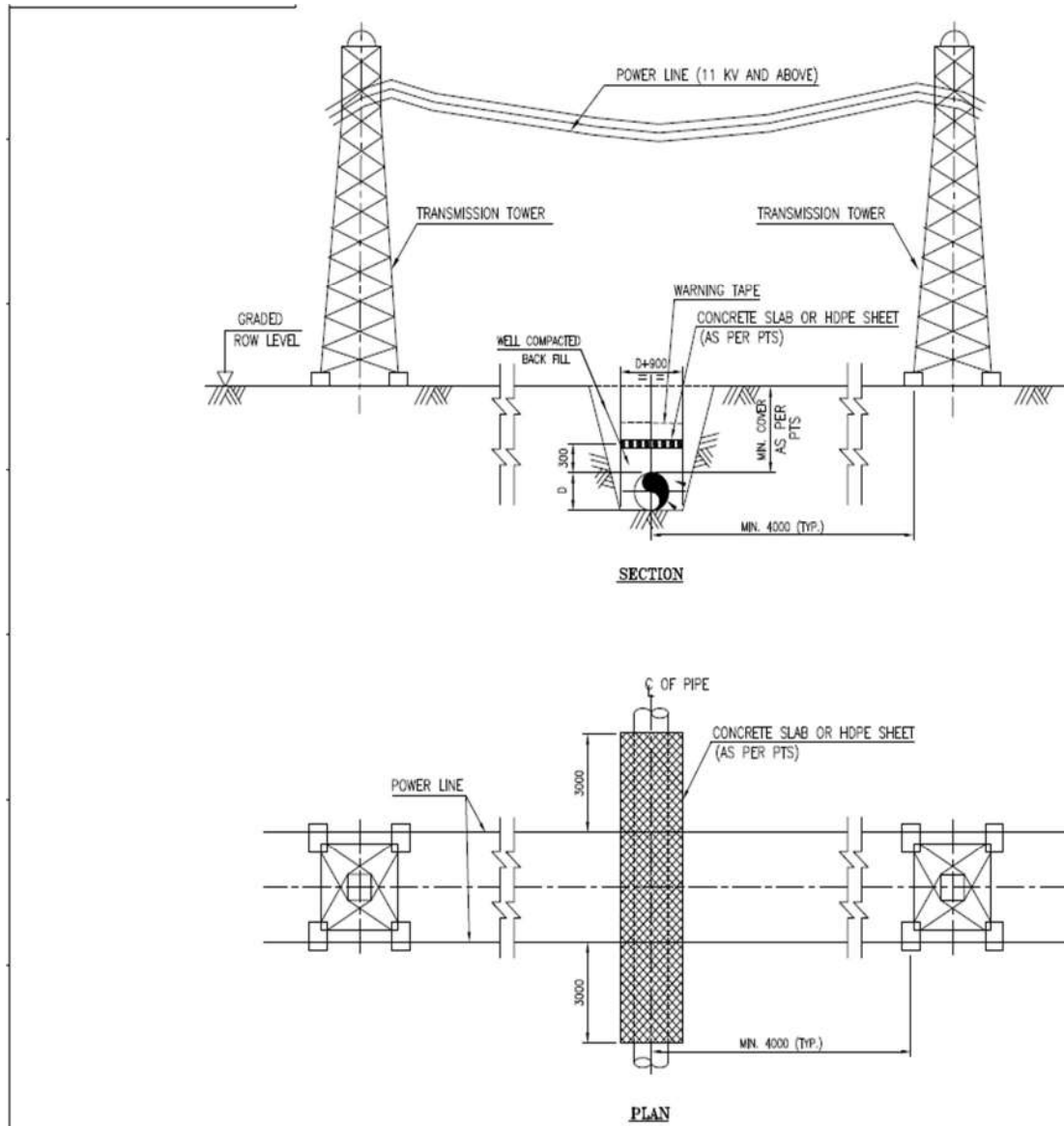
TYPICAL UNDERGROUND CABLE CROSSING DETAILS



NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS SPECIFIED OTHERWISE.
2. A MODIFIED PIPELINE WARNING SIGN SHALL BE INSTALLED CLOSE TO THE CROSSING.
3. IN CASE OF ARMOURED OFC CABLE, CP BONDING IS NOT BE PROVIDED BETWEEN PIPELINE AN CABLE ARMOUR IN CASE OF UNARMORED CABLE ARRANGEMENT FOR SHIELDING (BY PROVIDING CASING ON EITHER SIDE OF THE PIPELINE OR CABLE) SHALL BE CONSIDERED.
4. FOR APPROVAL OF XING SHALL BE OBTAINED FROM CONCERNED AUTHORITIES.
5. FOR CONCRETE SLAB SHALL BE REFER STD. DRG. NO. MEC/TYP/05/28/STD/0007

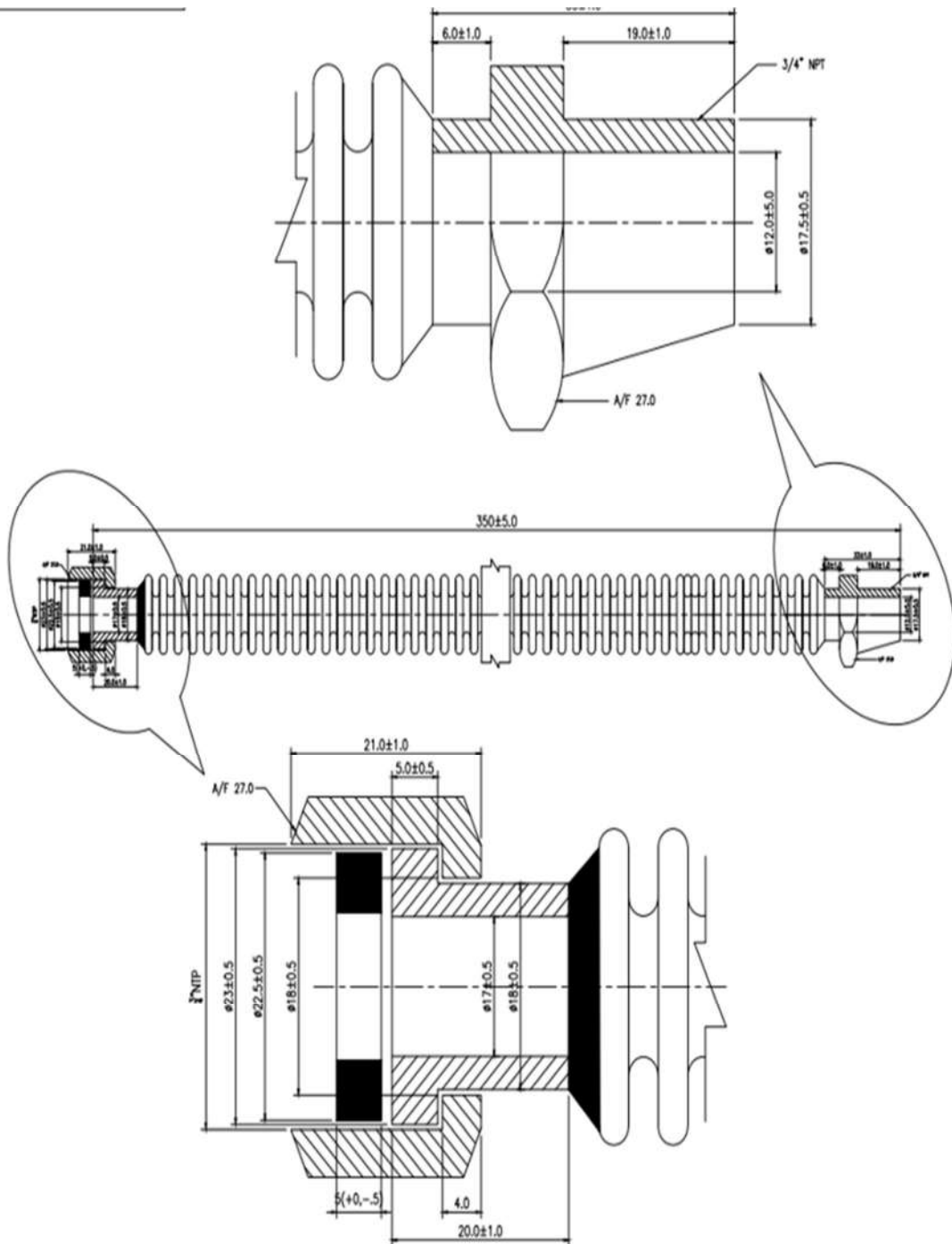
TYPICAL OVERHEAD POWER LINE CROSSING DETAILS



NOTES:-

1. ALL DIMENSIONS ARE IN MM. UNLESS SPECIFIED OTHERWISE.
2. SUITABLE MEASURE SHALL BE TAKEN FOR THE PROTECTION OF THE LINE AND SECURITY OF PERSONNEL WHEREVER FOUND NECESSARY.
3. APPROVAL OF THE CROSSING MAY HAVE TO BE OBTAINED FROM CONCERNED AUTHORITIES.
4. FOR CONCRETE SLAB SHALL BE REFER STD. DRG. NO. MEC/TYP/05/28/STD/0007
5. THIS CONCRETE SLAB/HDPE SHEET PROTECTION SHALL BE PROVEDE FOR VOLTAGE OF 11 KV AND ABOVE.

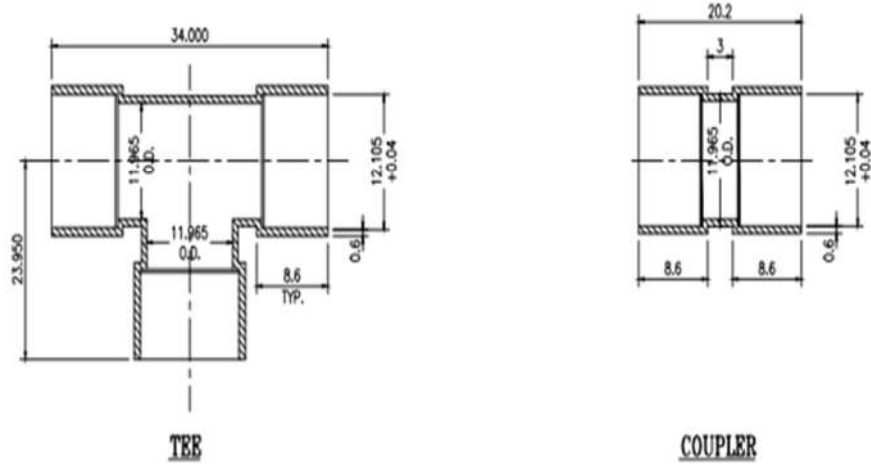
HOSE ASSEMBLY FOR NATURAL GAS SERVICE



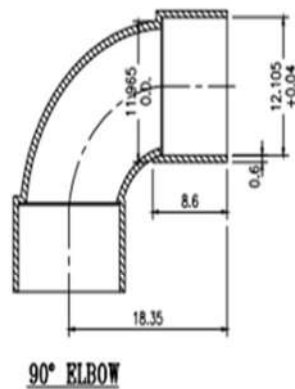
NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE.

COPPER FITTING FOR NATURAL GAS SERVICE



FITTING AS PER EN 1254 PART-1

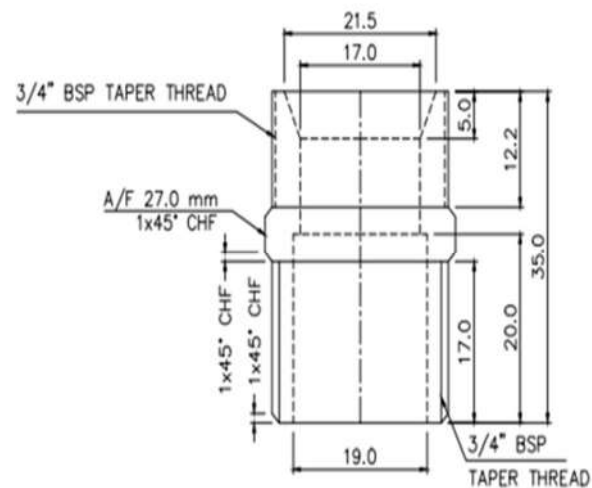
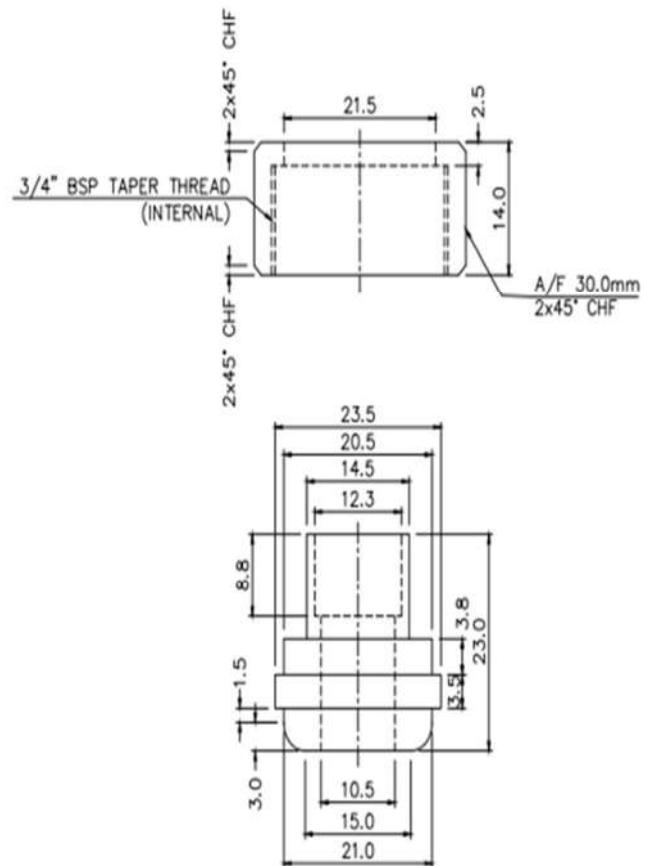
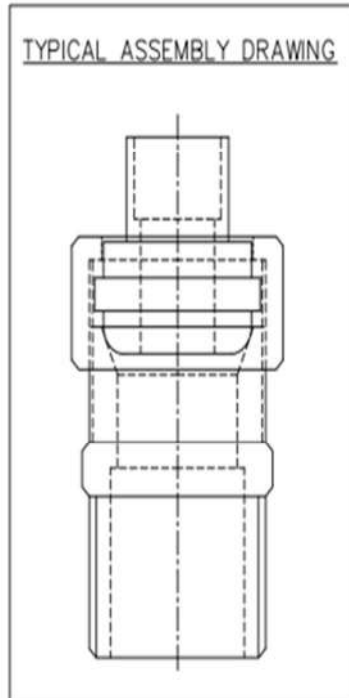


FITTING AS PER EN 1254 PART-1

NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE.
3. OPEN TOLERANCES ON DIMENSIONS SHALL BE AS PER EN 1254.
4. FOR DETAIL REFER SPEC NO.
5. THESE DRAWINGS ARE INDICATIVE ONLY. DETAIL DRAWING TO BE PREPARED BY THE VENDOR AS PER DESIGN CODE/MANUFACTURING STANDARD.

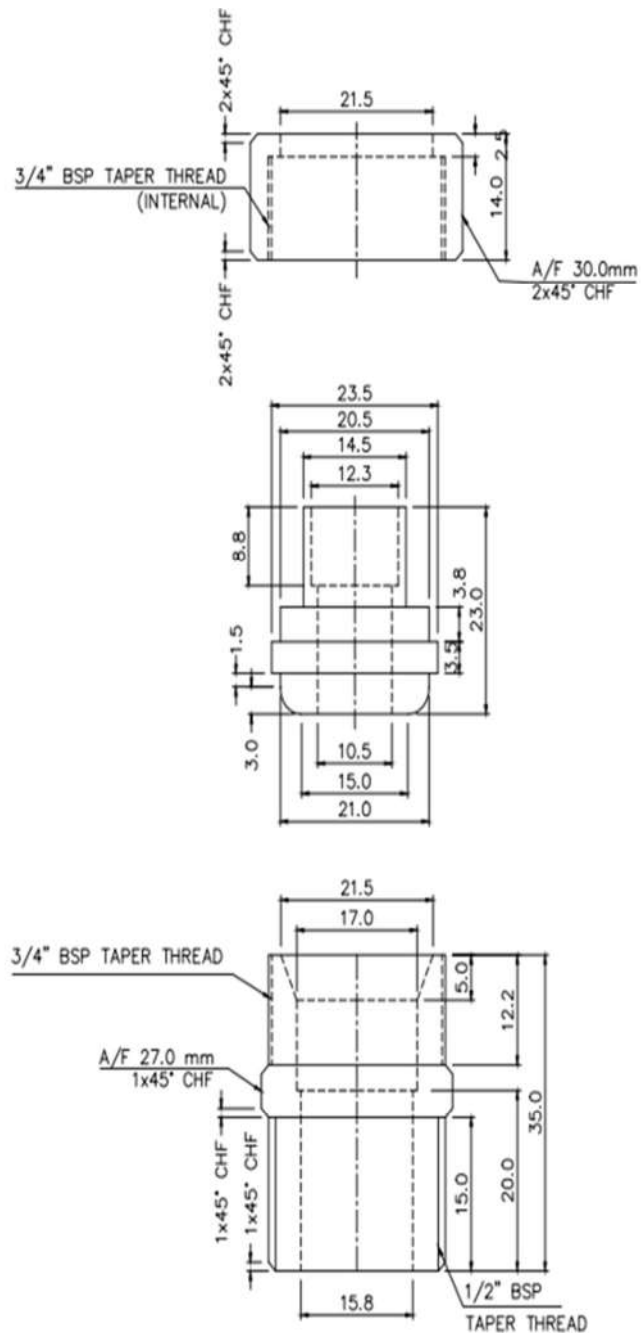
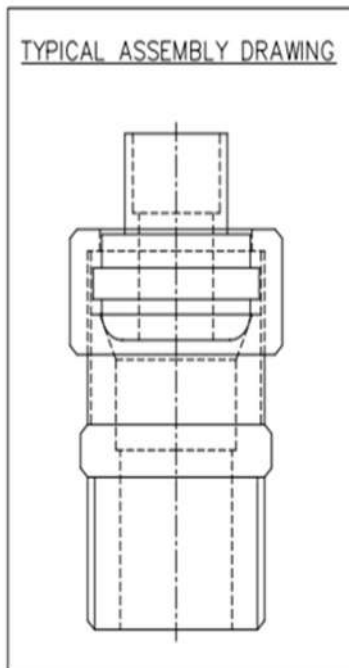
BRASS DISCONNECTING UNION 3/4" BSPT * 12MM (STRAIGHT)



NOTES:-

1. MATERIAL SHALL CONFORM TO 319 : FREE CUTTING EXTRUDED BRASS ROD.
2. DIMENSIONS TOLERANCES SHALL BE AS PER BS 864 AND BS 21.
3. OPEN TOLERANCES ON DIMENSIONS SHALL BE +/- 0.1 mm.
4. THREADING SHALL BE DONE AS PER BS 21.
5. ALL UNIONS BE LEAK TESTED AT 1 BAR.
6. ALL DIMENSIONS ARE IN MM.

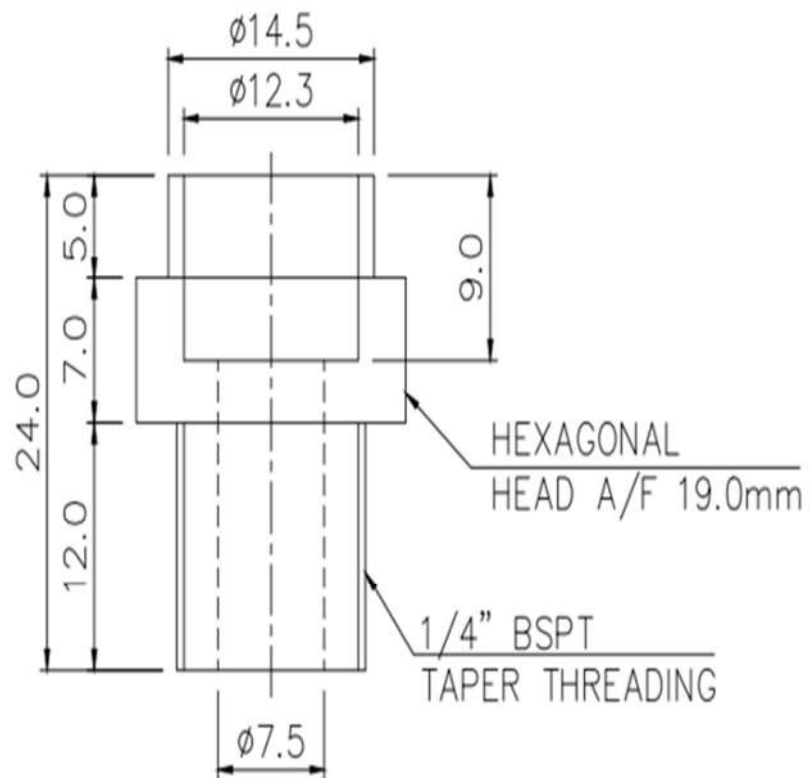
BRASS DISCONNECTING UNION ½” BSPT * 12MM (STRAIGHT)



NOTES:—

1. MATERIAL SHALL CONFORM TO 319 : FREE CUTTING EXTRUDED BRASS ROD.
2. DIMENSIONS TOLERANCES SHALL BE AS PER BS 864 AND BS 21.
3. OPEN TOLERANCES ON DIMENSIONS SHALL BE +/- 0.1 mm.
4. THREADING SHALL BE DONE AS PER BS 21.
5. ALL UNIONS BE LEAK TESTED AT 1 BAR.
6. ALL DIMENSIONS ARE IN MM.

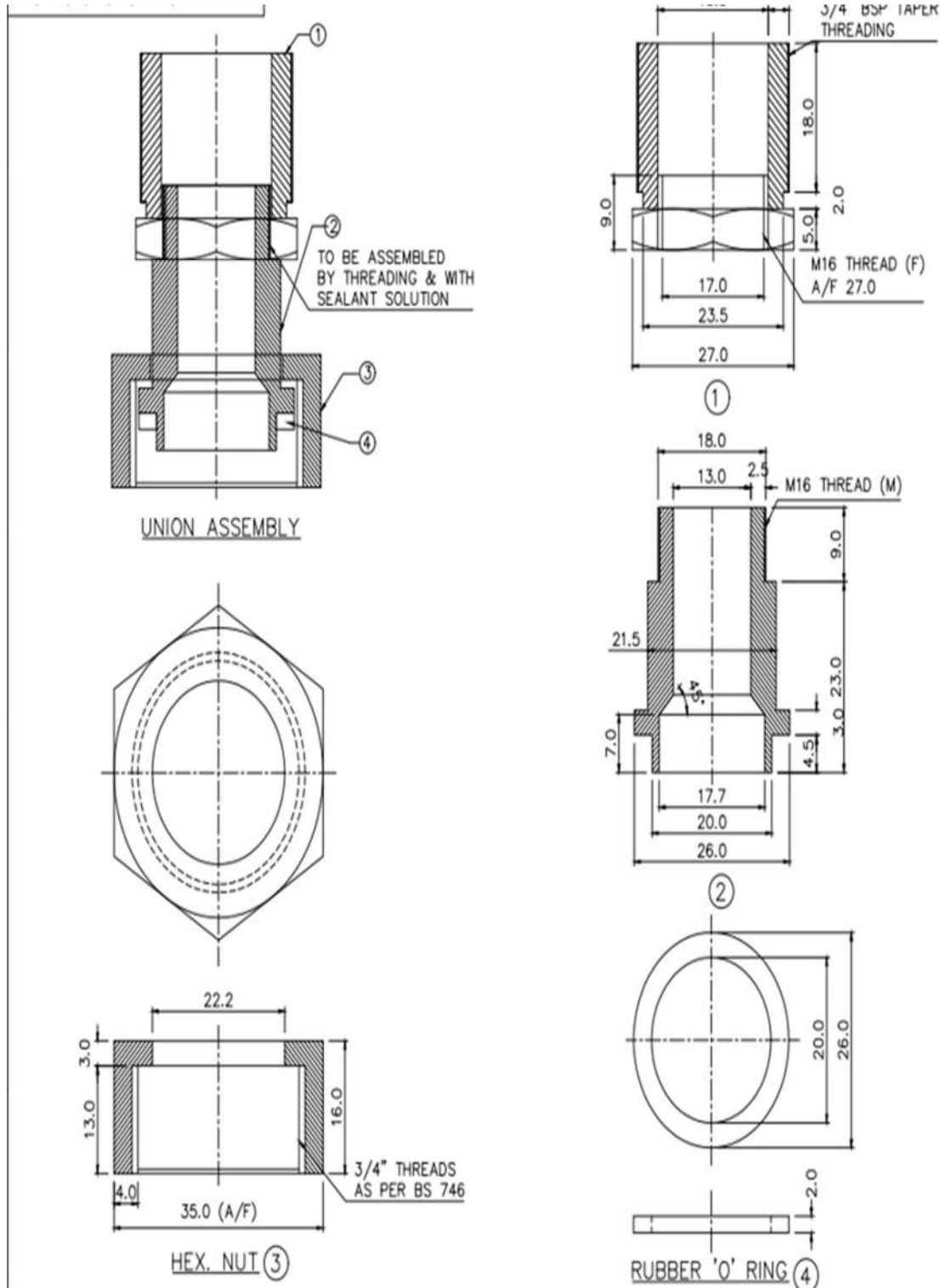
BRASS ADOPTER 1/4 " BSPT * 12MM (STRAIGHT)



NOTES:-

1. MATERIAL SHALL CONFORM TO IS : 319 FREE CUTTING EXTRUDED BRASS RODS.
2. DIMENSIONS TOLERANCES SHALL BE AS PER BS 864 AND BS 21.
3. OPEN TOLERANCES ON DIMENSIONS SHALL BE +/- 0.1 mm.
4. THREADING SHALL BE DONE AS PER BS 21.
5. ALL UNIONS BE LEAK TESTED AT 1 BAR.
6. ALL DIMENSIONS ARE IN MM.

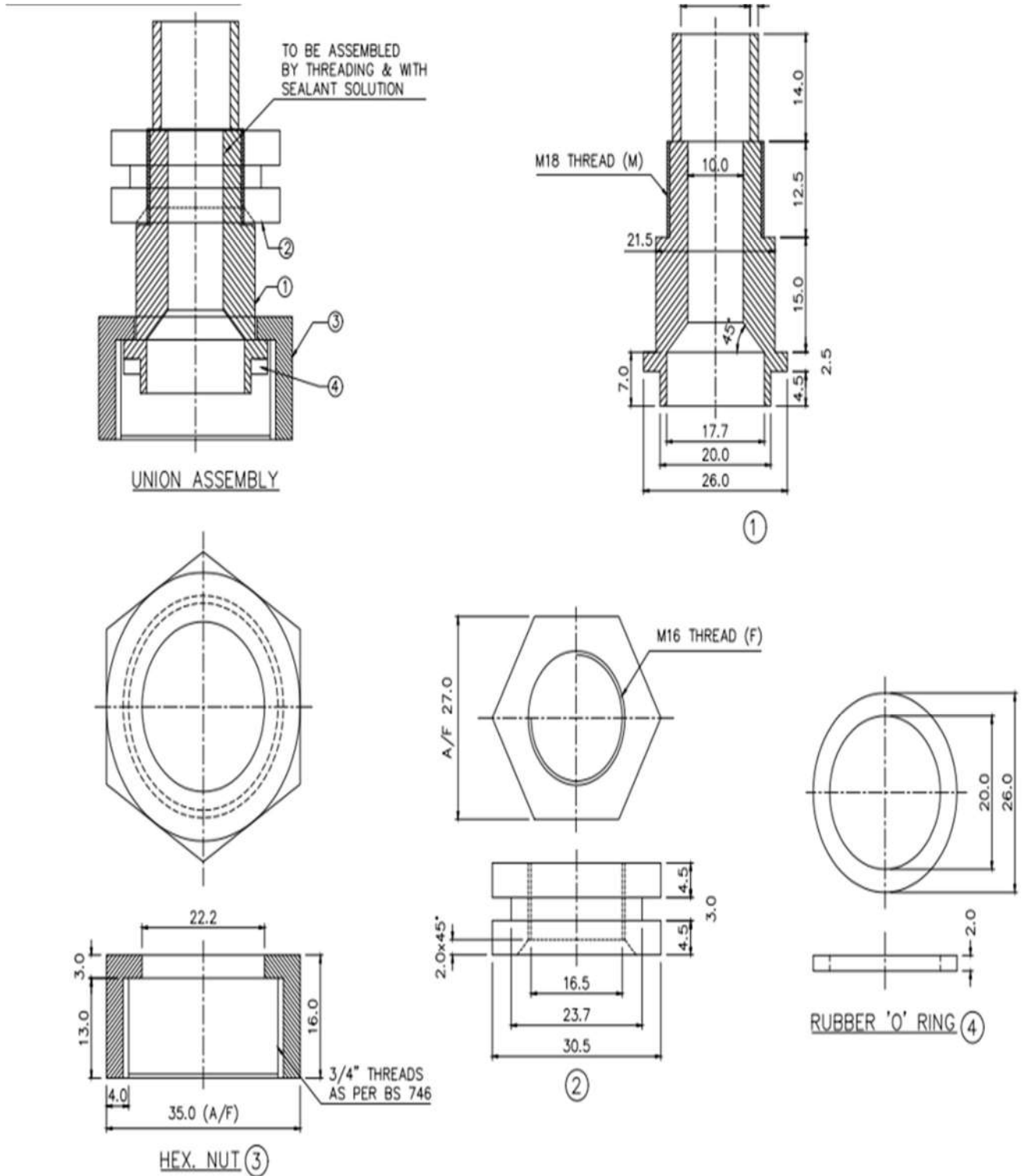
METER INLET UNION 3/4 * 3/4



NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. MATERIAL SHALL BE EXTRUDED FREE CUTTING BRASS ROD AS PER IS 319/BS EQUIVALENT.
3. RUBBER O RING MATERIAL WILL BE NITRAEL.
4. FOR DETAILS REFER TECHNICAL SPECIFICATION NO. MEC/TS/05/62/020B
5. O RING MATERIAL & SEALANT SOLUTION SHOULD BE SUITABLE FOR NATURAL GAS SERVICE.

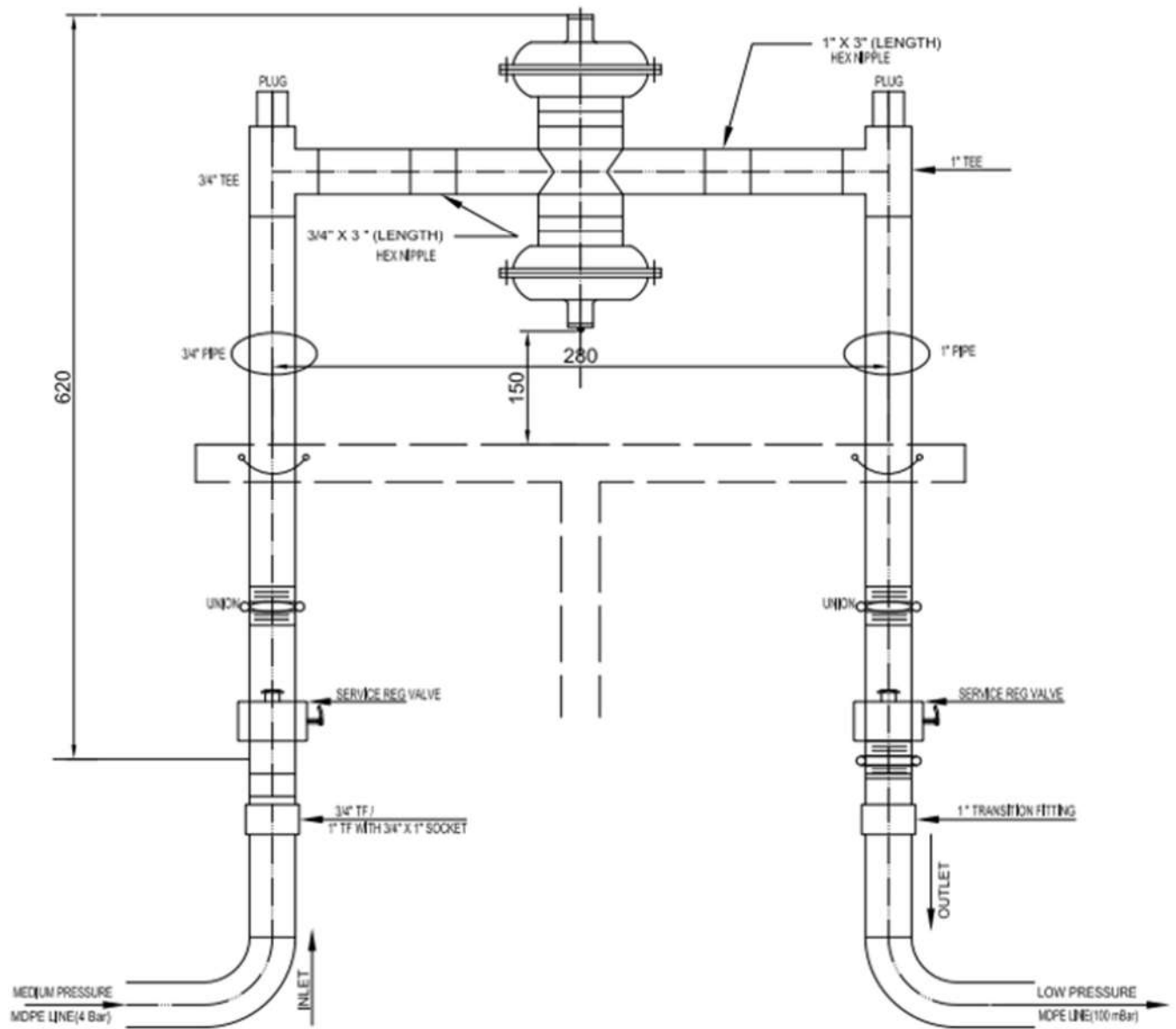
METER OUTLET UNION 3/4 * 12MM (STRAIGHT)



NOTES:-

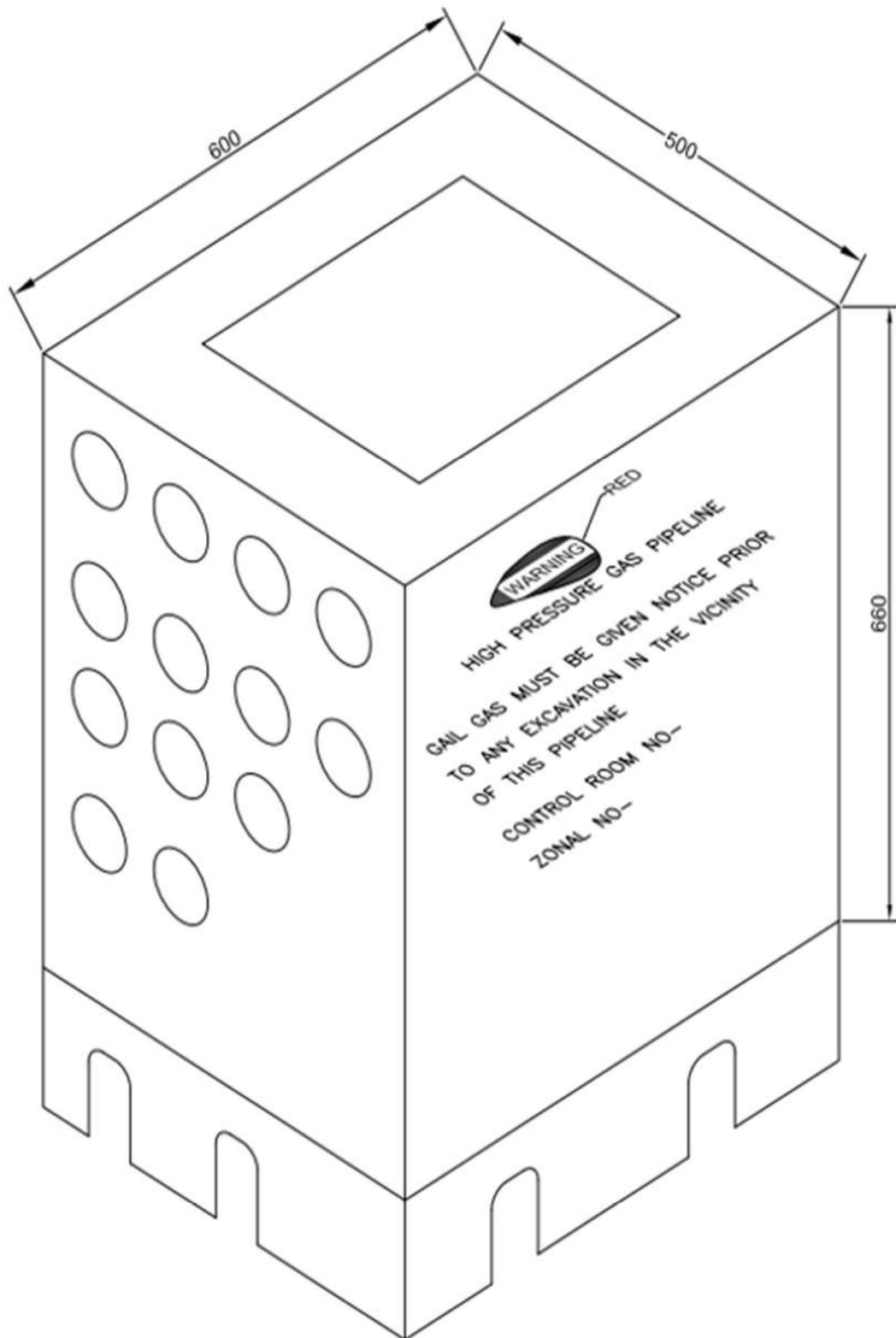
1. ALL DIMENSIONS ARE IN MM.
2. MATERIAL SHALL BE EXTRUDED FREE CUTTING BRASS ROD AS PER IS 319/BS EQUIVALENT.
3. RUBBER O RING MATERIAL WILL BE NITRAEL.
4. FOR DETAILS REFER TECHNICAL SPECIFICATION NO. MEC/TS/05/62/0208
5. O RING MATERIAL & SEALANT SOLUTION SHOULD BE SUITABLE FOR NATURAL GAS SERVICE.

SCHEMATIC DIAGRAM FOR SINGLE STREAM SERVICE REGULATOR



NOTE: ALL DIMENSION ARE IN mm.

SCHEMATIC DIAGRAM OF HOUSING FOR SINGLE SERVICE REGULATOR

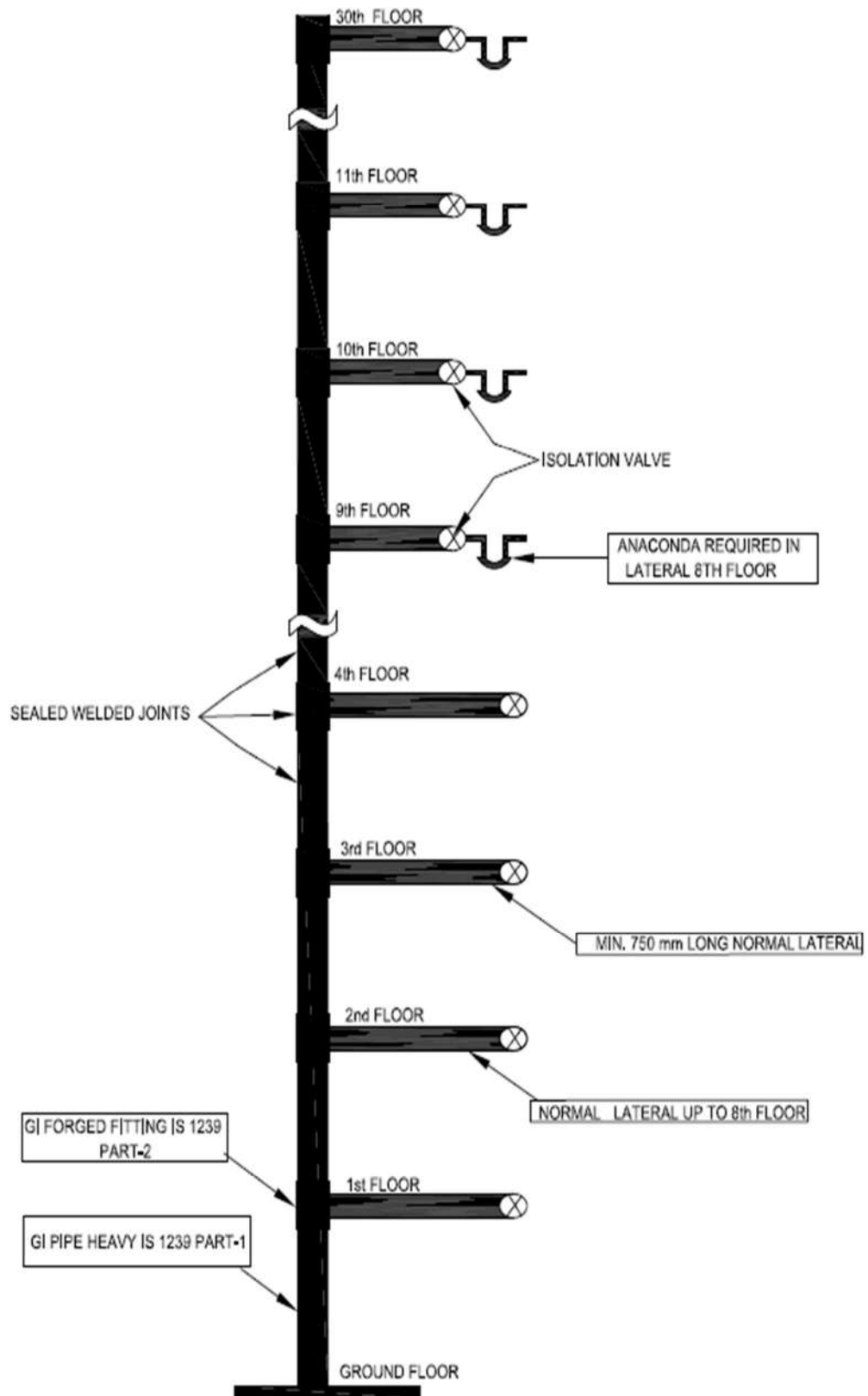


NOTE: ALL DIMENSIONS ARE IN mm.

THE HOUSING SHOULD BE OF FIBER REINFORCED PLASTIC (FRP)

40mm GROUTING WITH NON SHRINKAGE COMPOUND SHALL BE PROVIDED AT BOTTOM OF SERVICE REGULATOR

SCHEMATIC REPRESENTATION OF WELDED RISER



SCHEMATIC DIAGRAM FOR SERVICE REGULATOR

