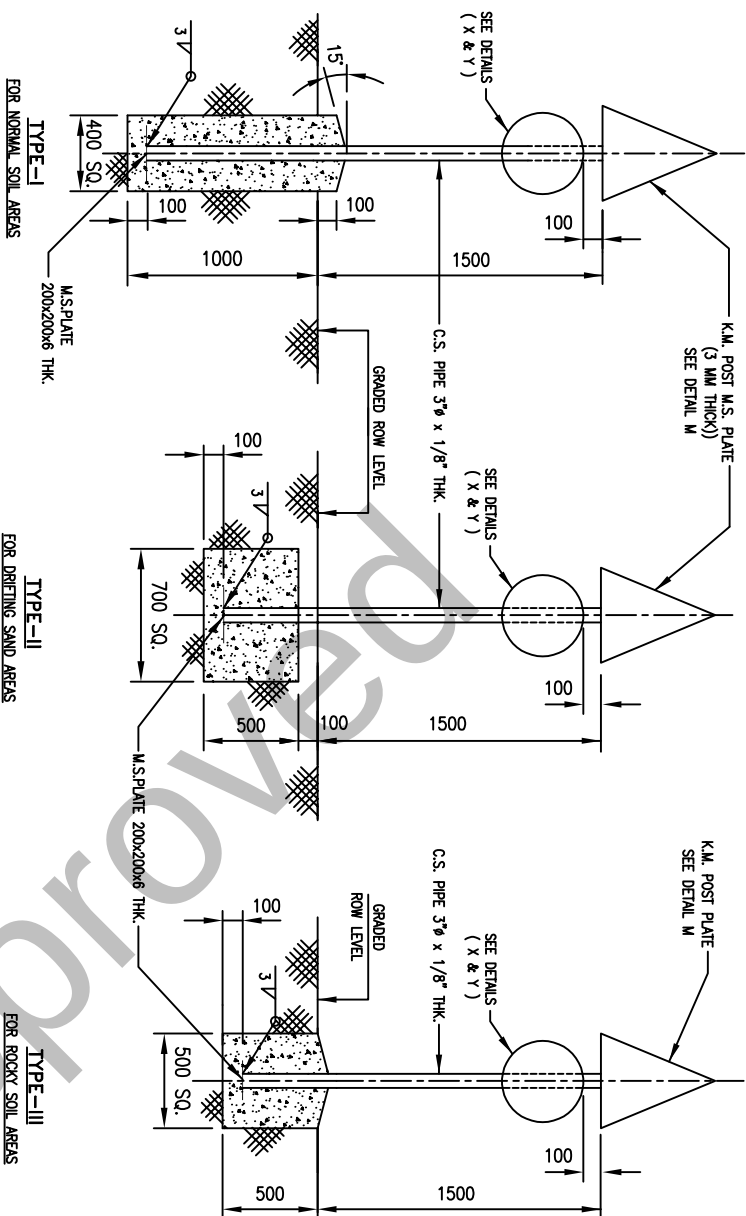


KILOMETER POST

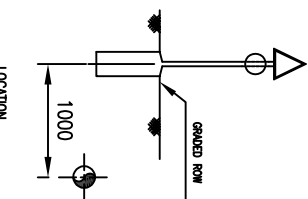
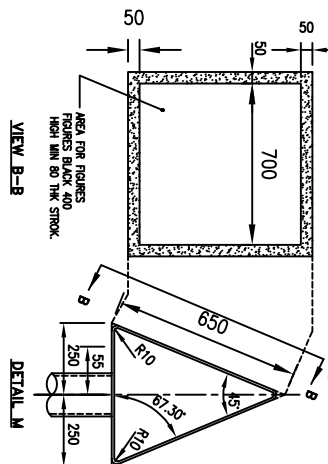
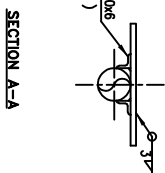
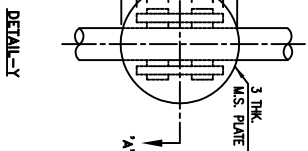
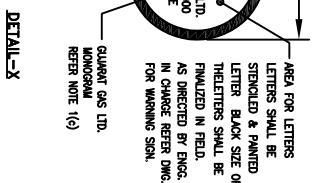


- NOTE :-**
- 1) ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
 - 2) SCHEME OF PAINTING AND COLOURING:
 - a) UNDERGROUND STEEL STRUCTURE EXCEPT THAT EMBEDDED IN CONCRETE COAT TAR EPOXY MIN 300 MICRON THK.
 - b) OVERGROUND STEEL STRUCTURE ONE COAT OF PRIMER
 - c) COLOUR SCHEME FOR GUJARAT GAS LTD. MONOGRAM SHALL BE AS DIRECTED BY COMPANY.
 - d) POST SHALL BE PAINTED WITH 250 WIDE ALTERNATE BANDS OF BLACK AND WHITE PAINTS.
 - e) ALL OTHER ABOVE GROUND STEEL SHALL BE PAINTED YELLOW.
 - f) FIGURES SHALL BE STENCILED ON BOTH SIDE FO POST IN BLACK.
 - 3) LOCATION:
 - a) KM POST SHALL BE INSTALLED AT EVERY KILOMETER AS PER REQUIREMENTS OF COMPANY.
 - b) COMPANY NAME PLATE SHALL FACE THE PIPELINE.
 - c) KM POST SHALL BE 1000 MM TO THE LEFT OF THE PIPE CENTER LINE VIEWING TOWARDS THE DIRECTION OF FLOW AND AS DIRECTED BY COMPANY.
 - d) THE FOUNDATION SHALL BE MADE OF CONCRETE M 20.
 - e) THE HEIGHT OF KM POST MAY BE VARIED TO SUIT FIELD REQUIREMENTS.
 - f) REFERENCE OF MARKER INSTALLATION GUIDELINE.

TYPE-I
FOR NORMAL SOIL AREAS

TYPE-II
FOR DRIFTING SAND AREAS

TYPE-III
FOR ROCKY SOIL AREAS



NO.	DATE	REVISION	REV. BY.	SIGN.

PREPARED BY	CHECKED BY	APPROVED BY
SIGN.		
NAME	HZ/HPS	SB
DATE	23.02.2023	US
FOR	GGL	GGL

GUJARAT GAS LIMITED
TECHNICAL SERVICES

TYPICAL DRAWING FOR PIPELINE CONSTRUCTION

PROJECT NAME: TYPICAL DRAWING

STATUS: ISSUED FOR INFORMATION CUM CONSTRUCTION

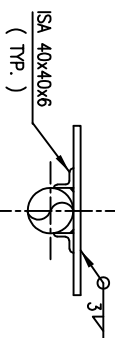
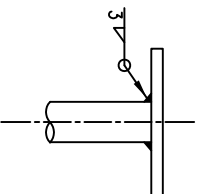
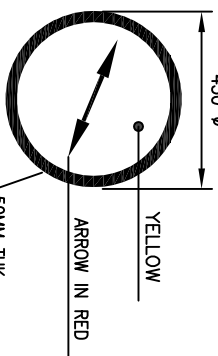
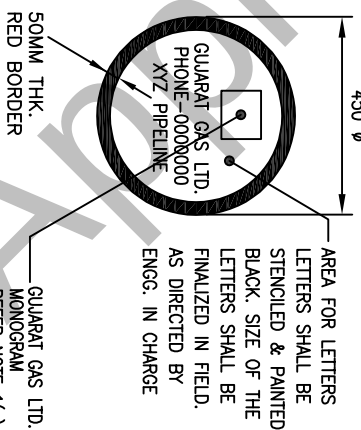
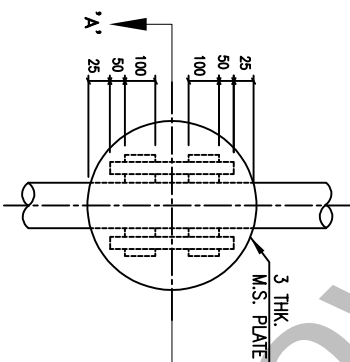
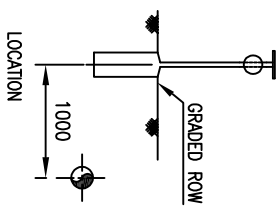
TITLE: KILOMETER POST

SCALE	SHEET	DRAWING NO.	REV.
NTS	1 OF 1	GGL/TS/STEEL/TYP.MARKER/DRW-01	0

The diagrams illustrate three types of manhole structures, each with a cross-section showing the internal and external components and their dimensions.

- TYPE-I FOR NORMAL SOIL:** This diagram shows a manhole structure with a 400 SQ. base. The internal structure consists of a 3" x 3" x 1/8" THK. C.S. PIPE (3" diameter, 1/8" thick) and a 200x200x6 THK. M.S. PLATE. The structure is supported by a 100x100x100 base. The total height of the structure is 2000. The top of the structure is 100 units above the ground level. The bottom of the structure is 100 units below the ground level. The structure is labeled "SEE DETAILS-X & Y" and "SEE DETAILS-M & N".
- TYPE-II FOR DRIFTING SAND AREA:** This diagram shows a manhole structure with a 700 SQ. base. The internal structure consists of a 3" x 3" x 1/8" THK. C.S. PIPE (3" diameter, 1/8" thick) and a 200x200x6 THK. M.S. PLATE. The structure is supported by a 100x100x100 base. The total height of the structure is 2000. The top of the structure is 100 units above the ground level. The bottom of the structure is 100 units below the ground level. The structure is labeled "SEE DETAILS-X & Y" and "SEE DETAILS-M & N".
- TYPE-III FOR ROCKY SOIL:** This diagram shows a manhole structure with a 300 SQ. base. The internal structure consists of a 3" x 3" x 1/8" THK. C.S. PIPE (3" diameter, 1/8" thick) and a 200x200x6 THK. M.S. PLATE. The structure is supported by a 100x100x100 base. The total height of the structure is 2000. The top of the structure is 100 units above the ground level. The bottom of the structure is 100 units below the ground level. The structure is labeled "SEE DETAILS-X & Y" and "SEE DETAILS-M & N".

- 1) ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED
- 2) SCHEME OF PAINTING AND COLOURING:
- 3) UNDERGROUND STEEL STRUCTURE EXCEPT THAT EMBEDDED IN CONCRETE COAT TAR EPOXY MIN 300 MICRON THK.
- 4) OVERGROUND STEEL STRUCTURE ONE COAT OF PRIMER TWO COATS OF SPECIFIED COLOUR PAINTS.
- 5) COLOUR SCHEME FOR GUARAT GAS LTD. MONOGRAM SHALL BE AS DIRECTED BY COMPANY.
- 6) POST SHALL BE PAINTED WITH 250 WIDE ALTERNATE BANDS OF BLACK AND WHITE PAINTS.
- 7) ALL OTHER ABOVE GROUND STEEL SHALL BE PAINTED YELLOW.
- 8) LOCATION:
- 9) DIRECTION MARKERS SHALL BE INSTALLED ON EITHER SIDES ALL TURNING POINT & ONE OF CENTER OF T.P.
- 10) COMPANY NAME PLATE SHALL FACE THE PIPELINE.
- 11) DIRECTION MARKER SHALL BE INSTALLED AT 1000 MM TO THE LEFT OF THE PIPE CENTER LINE VIEWING TOWARDS THE DIRECTION OF FLOW AND AS INDICATED IN THE LOCATION SKETCH BELOW.
- 12) DIRECTION MARKERS SHALL SHOW THE CHANGE IN DIRECTION OF PIPELINE ALIGNMENT.
- 13) THE FOUNDATION SHALL BE MADE OF CONCRETE M 20.
- 14) THE HEIGHT OF THE POST MAY BE VARIED TO SUIT THE FIELD REQUIREMENTS.
- 15) REFERENCE OF MARKER INSTALLATION GUIDELINE.



SYMBOL

NO.	DATE	REVISION	REV.BY.	SIGN.

	PREPARED BY	CHECKED BY	APPROVED BY
SIGN.			
NAME	HZ/HPS	SB	US
DATE	23.02.2023		
FOR	GGL	GGL	GGL

GUJARAT GAS LIMITED

TYPICAL DRAWING FOR PIPELINE CONSTRUCTION

PROJECT NAME: TYPICAL DRAWING

STATUS: ISSUED FOR INFORMATION CUM CONSTRUCTION

TITLE: DIRECTION AERIAL MARKER

SCALE

SHEET

RE	NO.
----	-----

TYPE-I
FOR NORMAL SOIL

400 SQ. (Area of sign plate)

1000 (Length of sign plate)

100 (Width of sign plate)

15° (Angle of sign plate)

1750 (Distance between sign plates)

C.S. PIPE 3" Ø x 1/8" THK. (Material of sign plate)

PIPELINE WARNING SIGN PLATE IN REGIONAL LANGUAGE (M.S. PLATE/3 MM THICK) (Language of sign plate)

SEE DETAILS (Reference to details)

TYPE-II
FOR DRIFTING SAND

700 SQ. (Area of sign plate)

500 (Length of sign plate)

100 (Width of sign plate)

1750 (Distance between sign plates)

C.S. PIPE 3" Ø x 1/8" THK. (Material of sign plate)

PIPELINE WARNING SIGN PLATE IN ENGLISH (SEE DETAIL X) (M.S. PLATE/3 MM THICK) (Language of sign plate)

SEE DETAILS (Reference to details)

TYPE-III
FOR ROCKY SOIL

300 SQ. (Area of sign plate)

500 (Length of sign plate)

100 (Width of sign plate)

15° (Angle of sign plate)

1750 (Distance between sign plates)

C.S. PIPE 3" Ø x 1/8" THK. (Material of sign plate)

PIPELINE WARNING SIGN PLATE IN REGIONAL LANGUAGE (M.S. PLATE/3 MM THICK) (Language of sign plate)

SEE DETAILS (Reference to details)

- 1) ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
- 2) SCHEME OF PAINTING AND COLOURING:
 - a) UNDERGROUND STEEL STRUCTURE EXCEPT THAT EMBEDDED IN CONCRETE COAL TAR EPOXY MIN 300 MICRON THK.
 - b) OVERGROUND STEEL STRUCTURE ONE COAT OF PRIMER TWO COATS OF SPECIFIED COLOUR PAINTS.
 - c) COLOUR SCHEME FOR GUJARAT GAS LTD. MONOGRAM SHALL BE AS DIRECTED BY COMPANY.
 - d) POST SHALL BE PAINTED WITH 250 WIDE ALTERNATE BANDS OF BLACK AND WHITE PAINTS.
 - e) ALL OTHER ABOVE GROUND STEEL SHALL BE PAINTED YELLOW.
 - f) ALL LETTERS EXCEPT WARNING SHALL BE PAINTED BLACK.
- 3) LOCATION:
 - a) THE PIPELINE WARNING SIGN SHALL BE INSTALLED IN ACCORDANCE WITH CONTRACT REQUIREMENTS AND AS DIRECTED BY COMPANY IT SHALL BE INSTALLED TO THE LEFT OF THE PIPE CENTER LINE VIEWING IN THE DIRECTION OF FLOW AT 300 MM FROM PIPELINE CENTER AND THE WARNING SIGN PLATE SHALL FACE THE UTILITY BEING CROSSED.
 - b) THE WARNING SIGN PLATE MAY BE MOUNTED ON VENT PIPES OR KM POST WHEREVER FEASIBLE.
 - c) IN CASE THE WARNING SIGN IS TO BE USED WHERE THE PIPELINE CROSSED A HAZARDOUS FACILITY EXE. A.H.T. CABLE OR ANOTHER PETROLEUM PIPELINE IN PLACE OF WORDS HIGH PRESSURE GAS PIPELINE WRITE HIGH PRESSURE GAS CROSSING H.T. CABLE OR CONCERNED FACILITY IN LETTERS OF SIZE WHICH ARE TO BE DECIDED AT SITE.
 - d) FOUNDATION SHALL BE MADE OF CONCRETE M 20.
 - e) SIGN PLATE IN REGIONAL LANGUAGE SHALL BE PREPARED BY CONTRACTOR ON SIMILAR LINES AND APPROVED BY ENGS. IN CHARGE.
 - f) THE HEIGHT OF THE POST MAY BE VARIED TO SUIT THE FIELD REQUIREMENTS.
 - g) REFERENCE OF MARKER INSTALLATION GUIDELINE.

Technical drawing of a mechanical assembly showing two circular components (likely wheels or discs) with internal details and dimensions. The drawing includes a section line A-A and a detail view of the internal structure.

Dimensions and labels:

- Overall width: 425
- Internal dimensions: 125, 125, 125, 50, 125
- Section line: A-A
- Label: AS ABOVE
- Label: 3 THK
- Label: M.S. PLATE

[illegible]

NO.	DATE	REVISION	REV. BY.	SIGN.

SIGN.	PREPARED BY	CHECKED BY	APPROVED BY
NAME	HZ/HPS	SB	US
DATE	23.02.2023		
FOR	GGL	GGL	GGL



GUARAT GAS LIMITED

GUARAT GAS
 TECHNICAL SERVICES

TYPICAL DRAWING FOR PIPELINE CONSTRUCTION

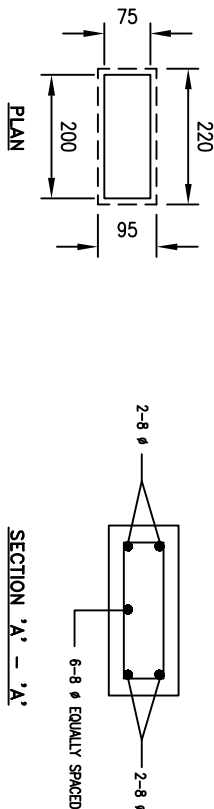
PROJECT NAME: TYPICAL DRAWING

STATUS: ISSUED FOR INFORMATION CUM CONSTRUCTION

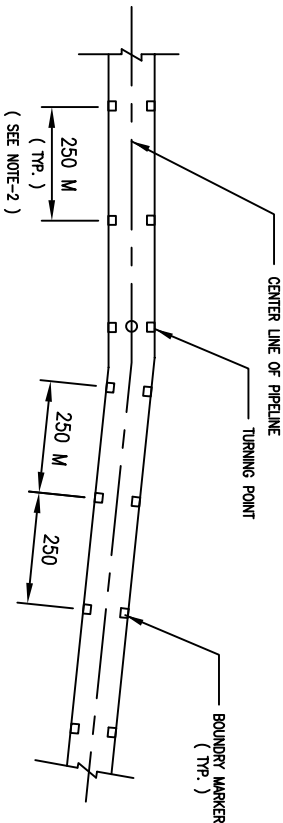
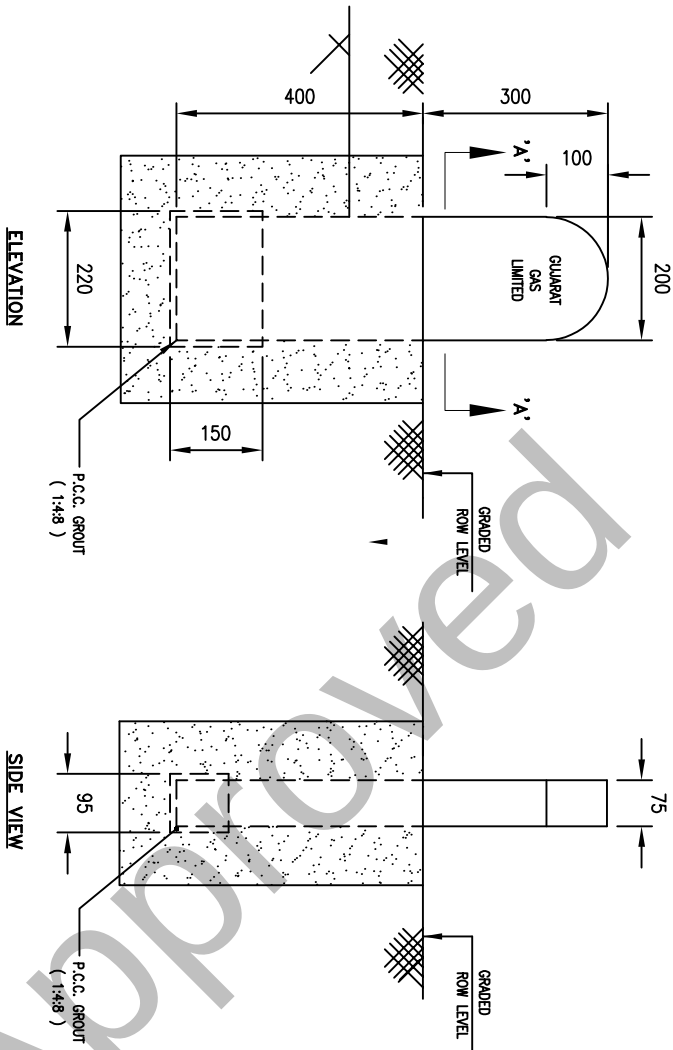
TITLE: PIPELINE WARNING SIGN

SCALE	SHEET	DRAWING NO.	REV.
NITS	1 OF 1	GGL/TS/STEEL/TP. MARKER/DWM-03	0

TYPICAL ROW BOUNDARY MARKER



- NOTE :-
- 1) ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
 - 2) BOUNDARY MARKERS SHALL BE INSTALLED AT THE ROW LIMITS ON EITHER SIDE AT 250 MTR. CENTERS AND ALSO AT ALL TURNING POINTS. AS PER SPECIFICATION AND AS DIRECTED BY COMPANY. BOUNDARY MARKERS SHALL PREFERABLY BE PLACED ON FIELD BUNDS.
 - 3) ALL BOUNDARY MARKERS SHALL BE PRECAST AND DESCRIPTIONS SHALL BE ENGRAVED CENTRALLY IN THE MOLD ON ONE FACE.
 - 4) LETTERS SHALL BE 60 MM HEIGHT AND 5 MM DEEP.
 - 5) CONCRETE FOR BOUNDARY MARKERS SHALL M 20.
 - 6) ABOVE GROUND PART OF BOUNDARY MARKERS SHALL BE PAINTED YELLOW WITH MINIMUM THREE COATS OF APPROVED QUALITY PAINTS. INSCRIPTIONS SHALL BE PAINTED BLACK.
 - 7) REFER GCL MARKER INSTALLATION GUIDELINE.



NO.	DATE	REVISION	REV. BY.	SIGN.

PREPARED BY	CHECKED BY	APPROVED BY
SIGN.		
NAME	HZ/HPS	SB
DATE	23.02.2023	
FOR	GCL	GCL

GUARAT GAS LIMITED
TECHNICAL SERVICES

TYPICAL DRAWING FOR PIPELINE CONSTRUCTION

PROJECT NAME: TYPICAL DRAWINGS

STATUS: ISSUED FOR INFORMATION CUM CONSTRUCTION

TITLE: TYPICAL ROW BOUNDARY MARKER

SCALE SHEET DRAWING NO. REV.

NTS 1 OF 1 GCL/TS/STEEL/TYP. MARKER/DRW-04 0

ISMC 125

18 # HOLE FOR 140 BOLT

40

5 (gap)

ISA 75x75x5

2400

3 THK

MS PLATE

SECTION C-C

SECTION B-B

10x

10 # 200 G/S BOTH WAYS

200x200x10 HMK
U.S. FLANGE

1300

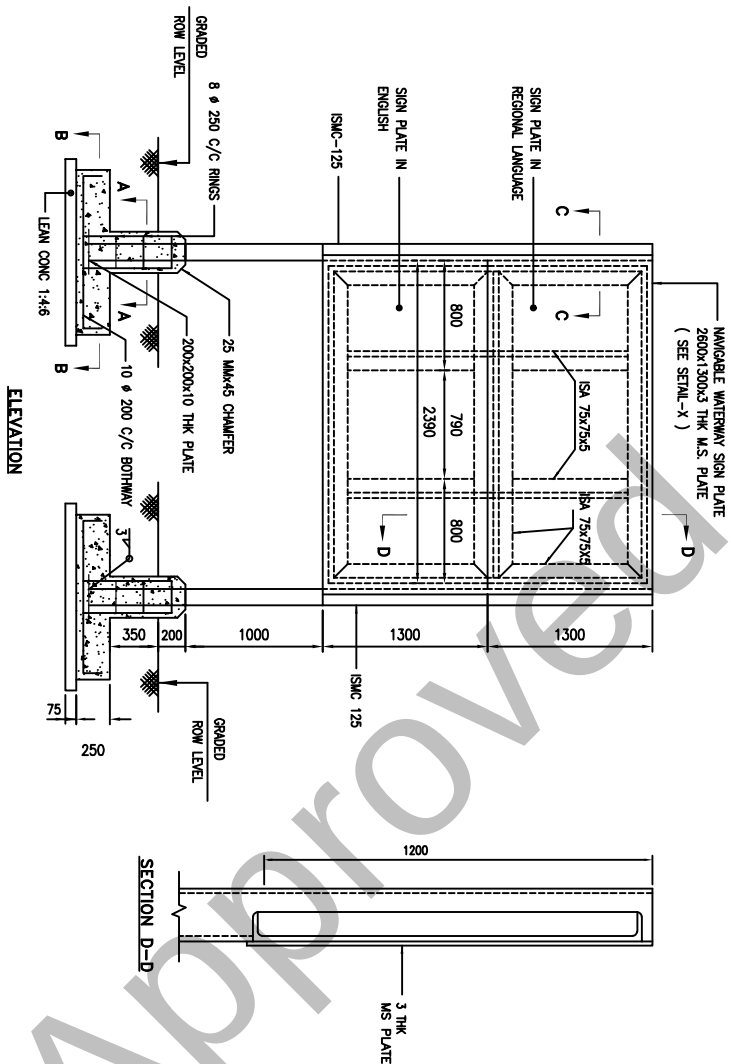
1300

300

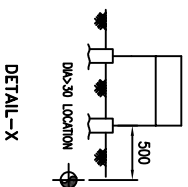
300

194

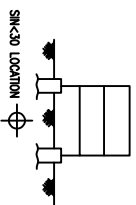
SECTION B-B



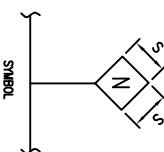
SECTION D-D



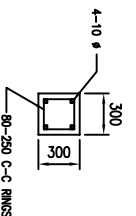
DETAIL-X



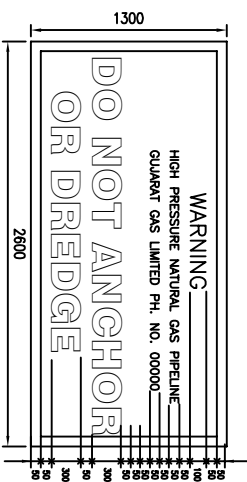
DETAIL--X



MBOL



SECTION A-A



DETAIL-X

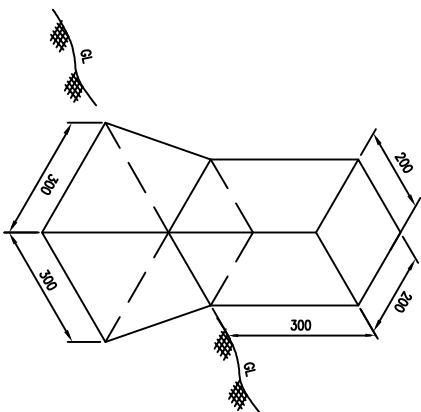
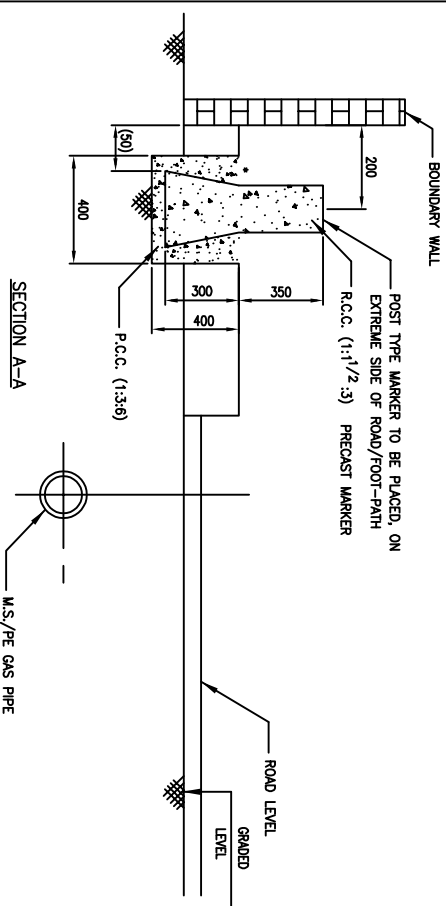
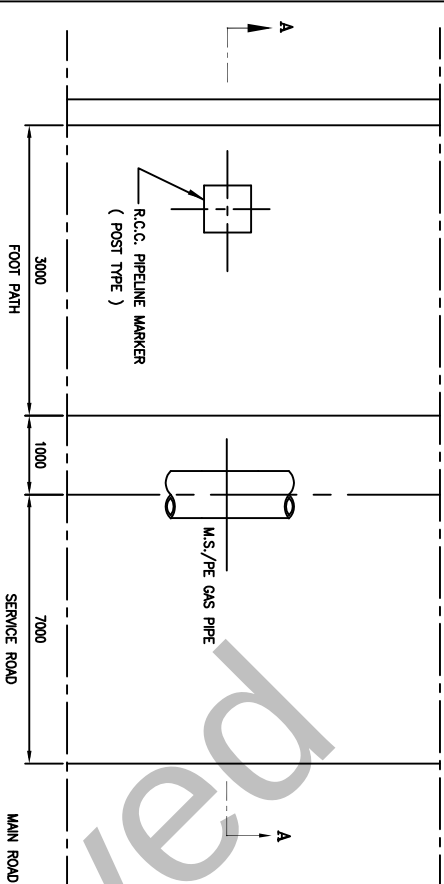
- 1) ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED
- 2) SCHEME OF PAINTING AND COLOURING:
 - a) ABOVE GROUND STEEL—ONE COAT OF PRIMER & TWO COATS OF SPECIFIED COLOR PAINT.

- b) LETTERS SHOWN
☐ ARE TO BE PAINTED BLACK
☒ ARE TO BE PAINTED RED
- c) POST SHALL BE PAINTED WITH 250 WIDE ALTERNATE BANDS OF BLACK & WHITE PAINT.
- d) ALL OTHER ABOVE GROUND STEEL TO BE PAINTED YELLOW.
- e) LOCATION OF NAVIGABLE WATERWAY WARNING SIGN SHALL BE AS BELOW:
o) ON BOTH THE BANKS & FACING THE WATER WAY AS CLOSE AS POSSIBLE TO THE BANK.
- f) LOCATION OF WARNING SIGN BOARD FROM VIEWING IN THE DIRECTION OF FLOW SHALL BE AS INDICATED IN DETAIL 'X'.
- 4) THE FOUNDATION SHALL BE MADE OF CONC. M 20 CONFORMING TO IS : 454 LATEST EDITION
- 5) STRUCTURAL STEEL SHALL CONFIRM TO IS : 226 LATEST EDITION.
- 6) M.S. PLATE 3 MM THICK SHALL HAVE A STITCH EWLD WITH THE ANGLE FRAME AT 100 MM C/C.
- 7) SIGN PLATE IN REGIONAL LANGUAGE SHALL BE PREPARED BY CONTRACTOR SIMILAR TO LINES IN ENGLISH AND APPROVED BY GGL SITE IN-CHARGE.
- 8) REFERENCE OF MARKER INSTALLATION GUIDELINE.

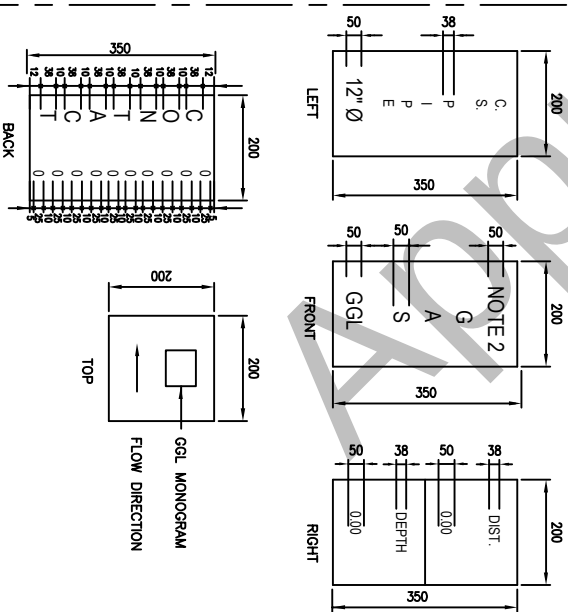
NO.	DATE	REVISION	REV./BY.	SIGN.

	PREPARED BY	CHECKED BY	APPROVED BY
SIGN.			
NAME	HZ/HPS	SB	US
DATE	23.02.2023		
FOR	GGL	GGL	GGL

 GUARAT GAS LIMITED GUARAT GAS TECHNICAL SERVICES			
TYPICAL DRAWING FOR PIPELINE CONSTRUCTION			
PROJECT NAME: KG INTAKE FACILITY			
STATUS: ISSUED FOR INFORMATION CUM CONSTRUCTION			
TITLE: NAVIGABLE WATERWAY PIPELINE CROSSING WARNING SIGN			
SCALE	SHEET	DRAWING NO.	RED.
NTS	1 OF 1	GA./TS/STEEL/TP. MARKER/DHW-05	0



ABOVE GROUND PART OF PIPELINE MARKER SHALL BE PAINTED YELLOW WITH MINIMUM THREE COATS APPROVED QUALITY PAINTS INSCRIPTIONS SHALL BE PAINTED BLACK.



1) ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED
2) * R.C.C.:1:1^{1/2}:3 PRECAST MARKER WITH USING 6 MM M.S. BAR INCL. EXCAVATION OF SIZE 400 L X 400 H PIT PLACING POST IN POSITION (IN PLUMB) AND REMAIN EXCAVATED PORTION TO BE FILLED, WITH P.C.C. 1:3:6 CURING ETC. COMPLETE EXCESS EARTH SHALL BE SPREADED OUT.

- 3) WRITE GGL DIAL BEFORE DIG PHONE NUMBER AS DIRECTED BY GGL ENGINEER IN CHARGE.
- 4) LOCATION OF PIPELINE MARKER SHALL BE AS SHOWN IN DRAWING.
- 5) REFER MARKER INSTALLATION GUIDLINE.

NO.	DATE	REVISION	REV. BY :	SIGN.

	PREPARED BY	CHECKED BY	APPROVED BY
SIGN.			
NAME	HZ/HPS	SB	US
DATE	23.02.2023		
FOR	GCL	GCL	GCL



GUJARAT GAS LIMITED
TECHNICAL SERVICES
 GUJARAT GAS

TYPICAL DRAWING FOR PIPELINE CONSTRUCTION

PROJECT NAME: TYPICAL DRAWING

STATUS: ISSUED FOR INFORMATION CUM CONSTRUCTION

TITLE: PIPELINE MARKER (RCC)

SCALE	SHEET	DRAWING NO.	REEL
NTS	1 OF 1	GGL/TS/STEEL/TYP. MARKER/DRAW--06	QC