



**MAHARASHTRA
NATURAL GAS LIMITED**

**TENDER FOR ITEM RATE CONTRACT FOR A PERIOD
OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187




**MAHARASHTRA NATURAL GAS LIMITED
(MNGL)**

**TENDER DOCUMENT
FOR
ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR
FOR LAYING OF UNDERGROUND PE PIPELINE &
ABOVEGROUND GI / Cu INSTALLATION FOR CITY
GAS DISTRIBUTION PROJECTS OF PUNE &
NASHIK GA**


**UNDER OPEN DOMESTIC COMPETITIVE
BIDDING
(THROUGH E-TENDERING MODE)**

Bid Document No.: MNGL/CP/2022-23/187 Dated 20.01.2023

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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PART A

1.0 INVITATION FOR BIDS (IFB)


BID DOCUMENT NO.: MNGL/CP/2021-22/187

Date: 20.01.2023

M/s Maharashtra Natural Gas Ltd., Pune invites online bids (Technical & Financial) **UNDER TWO BID SYSTEM** from eligible bidders for the item(s) in complete accordance with the Bid Documents.

1.0 TENDER INFORMATION

Tender document number	MNGL/CP/2021-22/187 dated 20.01.2023
ITEM(S)	ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA
TYPE OF BID	Open Domestic Competitive Bidding
TIME SCHEDULE	As per Scope of Work
EARNEST MONEY/ BIDSECURITY	Rs.2,00,000/- in the form of Demand Draft/BG to be in favor of "Maharashtra Natural Gas Ltd." payable at Pune . Account Details for NEFT / RTGS for EMD: Name of the Beneficiary: M/s Maharashtra Natural Gas Limited Name of the Bank & Address: State Bank of India Branch: Industrial Finance Branch, "Tara Chambers", Pune-Mumbai Road, Wakadewadi, Pune-411 003 A/c No: 35310073625 IFSC Code: SBIN0008966
TENDER FEE ((Non-refundable)	Not applicable
BID VALIDITY	4(four) months from the bid due date
Pre-bid meeting date and time	27.01.2023, 11:00 Hrs.
Bid submission due date and time	10.02.2023 till 15:00 Hrs. IST
Bid Submission at	https://etenders.gov.in
Techno-commercial bid opening date and time	13.02.2023 at 16:00 Hrs. IST
Price bid opening date and time	Date and time shall be intimated later
Address for submission of EMD/Bid Security and venue for pre-bid meeting and opening of bids	Chief Manager (C&P) C&P Department, Maharashtra Natural Gas Limited, Pride Purple Coronet, 2 nd Floor, Baner Road, Baner, Pune – 411045
Contact details	Telephone: +91 (20) 25611000/1190/1157 Email: gasaid@mngl.in / manan.gupta@mngl.in
BIDDER ELIGIBILITY CRITERIA & BID EVALUATION CRITERIA	As per Annexure – I to IFB

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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NOTE: Bidders are advised to complete the registration with e-tender portal (<https://etenders.gov.in>) at least two working days prior to bid submission date.

Please note that in accordance with the general conditions of tender, MNGL may amend these dates of the tender process at its sole discretion. In case any of the specified dates are declared a public holiday, the deadline shall be the next working date.

2.0 BIDDING PROCEDURE

Bidding will be conducted through Open Domestic Tendering. Single Stage Two Bid system is adopted for this tender. The submission and opening of bids will be through e-tendering mode at <https://etenders.gov.in/eprocure/app>. Tender document can be downloaded from the website <https://etenders.gov.in/eprocure/app> or from e-tender link given on official MNGL website www.mngl.in.

Note: To participate in the e-tendering, it is mandatory for the bidders to have user ID & password. For this purpose, the bidder has to register itself on CPPP's website <https://etenders.gov.in/eprocure/app>. Please also note that the bidder has to obtain digital signature token for applying in the tender and in general, activation of registration may take 24 hours subject to the submission of all requisite documents required in the process.

Note: MNGL in no way shall be responsible if the bidder fails to apply due to non-possession of Digital Signature & non registration.

(The bids have to be submitted online in electronic form on <https://etenders.gov.in/eprocure/app> only. No physical bids will be accepted.)


3.0 DOWNLOADING OF TENDER DOCUMENT

The tender document is available for downloading from CPPP's e-tendering website <https://etenders.gov.in/eprocure/app> or from e-tender link given on official MNGL website www.mngl.in for viewing / participation of the eligible bidders. Bidders meeting the bid evaluation criteria who intend to submit their bid may download the tender for submission by the bid due date and time. Bidder shall give an undertaking on his letter-head that the contents of the bidding document have not been altered or modified. Bid evaluation criteria shall be applicable for all the bidders.

Disclaimer clause: Bidders are advised to visit CPPP's e-tendering website and MNGL website regularly for any updates on the tender. The ignorance to visit the website will not be accepted as a reason for any gap / missing information like corrigenda, amendments, clarifications etc.

4.0 PRE-BID MEETING

The bidder(s) or their designated representatives, who have downloaded the bid document, or to whom tender document has been issued and intend to bid are invited to attend the pre-bid meeting. Bidder(s) queries if any, must reach Purchaser office at least one day prior to pre-bid meeting date. The pre bid meeting can be organized through video conferencing or physically. In case of physical meeting, the venue of pre bid meeting is MNGL office at Pride Purple Coronet, 2nd Floor, Baner Road, Baner, Pune – 411045.

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Non-attendance of the pre-bid meeting will not be a cause for disqualification of a bidder. Corrigendum / addendum, if any, to the tender document, shall be hosted on the website subsequent to the pre-bid meeting.

Bidders may also note that the registration process for new bidders on e-tender portal shall take a minimum of 24 hrs. Hence, bidders are advised to kindly complete their registration on e-tender portal well in advance of the pre-bid meeting.

In case of pre-bid meeting through video conferencing, Link shall be sent to all the interested bidders by the purchaser.

Instructions to bidders for Pre-bid meeting through video conferencing: All bidders intending to attend pre-bid meeting must send their interest through email (at least 2 hours prior to the scheduled time of pre-bid meeting) to the purchaser. E-mail received from bidders within specified timeline shall be invited through email to attend the meeting.

Advisories for the bidders attending the pre-bid meeting:

(1) All the Bidders who have submitted their registration details and interest to attend the pre-bid meeting will be invited to join as guests through the link shared in mail.

(2) All bidders/participants mandatorily have to pin MNGL screen on their computer screens during the pre-bid meeting.

(3) Bidders shall be allowed to discuss their queries in sequence of their responses received.

(4) Time slot shall be allotted to each bidder to ask his queries.

(5) Recording of the pre-bid meeting by the bidders is strictly prohibited. Subsequent to pre-bid meeting, corrigendum shall be issued by the purchaser regarding clarifications or queries raised during meeting.

5.0 OTHERS:

5.1 Bid Document is non-transferable.


5.2 Bids complete in all respects should reach on or before the BID DUE DATE AND TIME. Bids through Fax/ E-mail shall not be considered.

5.3 The Bid Document calls for offers on single point "Sole Bidder" responsibility basis.

Order will be placed on the "Sole Bidder" alone (in whose name the bid document has been issued) who will be responsible for all contractual purposes.

Further the bidders are advised to ensure that their offer is on single bidder responsibility basis and in total compliance of scope of supply as specified in Bid Document.

5.4 The bid should be prepared by the "Sole Bidder" and should be sent to MNGL directly. MNGL reserve the right to reject offers made by intermediaries' representatives.

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- 5.5 Bidder shall ensure that Bid Security having a validity of 6(SIX) months from the bid due date, must accompany the offer in the format made available in the Bid Document.
- 5.6 This Invitation for Bids (IFB) is an integral and inseparable part of the enclosed Bid Document.
- 5.7 MNGL reserves the right to accept or reject any or all offers without assigning any reason, whatsoever.
- 5.8 **ZERO DEVIATION TENDER**
Bidder shall note that if any deviations are taken to the under mentioned provisions of Bid Documents by the Bidder the bid is liable to be rejected:
- i) Do not meet BEC Criteria
 - ii) Bid Security
 - iii) Performance Security (Contract Performance Bank Guarantee), 3% of Contract/Order value
 - iv) Delivery Period
 - v) Terms of Payment
 - vi) Force Majeure
 - vii) Resolution of Dispute/Arbitration
 - viii) Termination of Contract,
 - ix) Warranty and Guarantee
 - x) Offer not submitted for complete scope of work
 - xi) Firm prices
 - xii) Prices not quoted as per Schedule of Rates formats.
 - xiii) Bidder have been banned by Government of India or any it's Agency/ Undertaking/ Department of Government of India.
 - xiv) Bidder is under liquidation.
 - xv) Bids not conforming to technical specification/requirements.
 - xvi) Any other such provisions if specifically stipulated elsewhere in the Bid Document.
 - xvii) Price Reduction Schedule.

However, MNGL reserve the right to request the bidder to withdraw the deviations against above-mentioned provisions of Bid Documents.

THIS IS NOT AN ORDER


Yours faithfully,
for Maharashtra Natural Gas Limited, Pune

Ganesh Said
Chief Manager (C&P)

Encl. 1. Bid Document.

Note:

Please confirm your intention to quote or not within 5(Five) days. In case not intending to quote then please give your valuable feedback to us.

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ANNEXURE-I to IFB

BIDDER'S ELIGIBILITY CRITERIA (BEC) FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA

INTRODUCTION

Maharashtra Natural Gas Limited (MNGL) is a joint venture company of M/s. GAIL (India) Limited and M/s. Bharat Petroleum Corporation Limited (BPCL). MNGL has been set up to supply natural gas to domestic, commercial, and industrial sectors including setting up of CNG filling stations to cater to the automobile sector for vehicle in Pune, Nashik – Dhule, Sindhudurg, Nanded in Maharashtra, Nizamabad in Hyderabad and Ramanagara in Karnataka.

1.0 BRIEF PROJECT DETAILS

This tender deals with item rate contract for a period of 1 year for laying of underground PE pipeline & aboveground GI/CU installation work for City Gas Distribution Projects at Pune & Nashik GA of MNGL, Pune.

Item Description	Quantity (Nos.)	Geographical Area
D-PNG Connections (FY 2023-24)	50,000	Pune GA
	1,03,311	Nashik GA


2.0 Bidder's Eligibility Criteria: The following are the BEC parameters: -

A. TECHNICAL:

A.1 The bidder must have executed as a main contractor (*) a single service order/work order/purchase order of at least 1 Km of MDPE/Steel Gas Pipeline laying & associated works (Dia.63 mm & above) or 150 Nos. PNG Domestic Meter-Cu installation and conversion/RFC or 500 Nos. MCV-I at any of the City Gas Distribution Network entity in India in preceding 5 years reckoned from the final bid due date.

A.2 Bidder to meet below mentioned minimum execution value criteria in a single service order/work order/purchase order as a main contractor (*) at any of the City Gas Distribution Network entity in India in preceding 5 years reckoned from the final bid due date:

Item No.	Item Description	Minimum Work Execution Value
1	Pune GA- Laying of underground MDPE / Steel Gas Pipeline / aboveground GI / Meter, Cu installation, conversion works for a City Gas	7.49 Lakhs.

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	Distribution company.	
2	Nashik GA- Laying of underground MDPE / Steel Gas Pipeline / aboveground GI / Meter, Cu installation, conversion works for a City Gas Distribution company.	7.49 Lakhs.

A.3 Bidder must submit documentary evidence like service order/ work order/ Purchase order/letter of award (LOA)/letter of Intent (LOI) and work execution certificate / work completion certificate issued by client in support to fulfil the criteria mentioned above.

Note:

1. In case bidder quotes for more than one Geographical Area (GA) the requirement of Eligibility Criteria shall be on cumulative basis.
2. (*) Main Contractor means a contractor/vendor who has received work order/ service order/LOI/FOI/LOA on their company/firm name directly from any of the City Gas Distribution Network entity in India.
3. In absence of requisite documents, MNGL reserves the right to reject the bid without making any reference to the bidder.

B. FINANCIAL:

B.1. Turnover


The bidder should have achieved a minimum annual turnover as under in any one of the last 3 (three) audited financial years i.e., 2019-20, 2020-21 and 2021-22: -

Part No.	Item Description	Minimum Annual Turnover Requirement
1	Laying of underground MDPE / Steel Gas Pipeline / aboveground GI / Meter, Cu installation, conversion works for a City Gas Distribution company for Pune GA	Rs.50 Lakhs.
2	Laying of underground MDPE / Steel Gas Pipeline / aboveground GI / Meter, Cu installation, conversion works for a City Gas Distribution company for Nashik GA	Rs.50 Lakhs.

Note: In case bidder quotes for more than one part, the requirement of Turnover shall be on cumulative basis.

B.2. Net worth

Net worth must be positive as per last audited financial statement i.e., for the year 2021-22

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B.3. Working Capital

The bidder should have a minimum working capital as under as per latest audited balance sheet i.e., for the year 2021-22.

Part No.	Item Description	Minimum Working Capital Requirement
1	Laying of underground MDPE / Steel Gas Pipeline / aboveground GI / Meter, Cu installation, conversion works for a City Gas Distribution company for Pune GA	Rs.10 Lakhs.
2	Laying of underground MDPE / Steel Gas Pipeline / aboveground GI / Meter, Cu installation, conversion works for a City Gas Distribution company for Nashik GA	Rs.10 Lakhs.

Note: In case bidder quotes for more than one part, the requirement of Working Capital shall be on cumulative basis.

If the bidder's working capital is inadequate, the bidder should supplement this with a letter from bidder's bank, having net worth not less than Rs.100 crores, confirming the availability of line of credit to cover the inadequacy of previous year and meet the current working capital requirement.

Bidders must submit documentary evidence such as balance sheet & Profit & Loss A/c Statement for last three audited financial years i.e. 2019-20, 2020-21 & 2021-22 in support of the above.


Note: In absence of requisite documents, MNGL reserves the right to reject the bid without making any reference to the bidder.

3.0 Bidding Philosophy & Evaluation and award of work:

Evaluation shall be done on following points:

- Bidder is required to quote for the complete SOR of the quoted Geographical Area (GA) as given in the tender failing which the offer shall not be considered for evaluation.
- Unit rates & estimated quantities shall be indicated for each item in Schedule of Rates". Bidder shall quote / mention overall discount or mark up in percentage in "Price Schedule" applicable on the unit rates in the range from -5% to +5% in terms of percentage (%), for evaluation and award. Non-acceptance of declared rates shall render the bid liable for rejection. Quoted % rates shall be applicable uniformly to all the SOR items (+ or -).

If bidders total quoted price is found lower / higher beyond 5% of declared rates, then their offer will be rejected and will not be considered for further evaluation.

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Price Bid offers not meeting the above requirement will be rejected and will not be considered for further evaluation.


- c) Evaluation & award shall be done as per complete SOR (i.e. on total evaluated price including all taxes & duties) for each Geographical Area separately.
- d) Bidders are required to get themselves acquainted with scope of work and site conditions so as to quote rates for all the items.
- e) Based on the evaluated total price, the inter-se ranking of the bidders i.e. L1, L2, L3 and so on will be made.
Note: In case of tie for two or more bidders, the inter-se ranking shall be decided on the basis of highest turnover in any one of the preceding 3 financial years i.e. 2019-20, 2020-21 & 2021-22 amongst the bidders.
- f) MNGL reserves the right to negotiate the rates with L1 bidder.
- g) Rates negotiated / accepted of L1 bidder will become uniform rates for complete scope of work for each GA separately.
- h) Bidder shall note that the quantities mentioned against each activity in Schedule of Rates are tentative only and subject to change based on actual requirement. The L-1 unit rates derived after applying quoted discount/mark up percentage shall remain fixed and firm throughout the contract period i.e. no price adjustment shall be allowed after bid submission.
- i) All the bidders of each GA (L2, L3, L4 & so on) will be asked to match the negotiated / finalized uniform rate of L1 for that particular GA. Bidders who do not match L-1 rate will not be considered for award.
- j) Successful bidders, who will be agreed to match the SOR rates of L-1 bidder, shall be considered for award of work. In first phase work shall be awarded to 25 Nos. of bidders for Pune GA, 50 Nos. of bidders for Nashik GA as under:

For Pune GA:

L-1: Rs.1 Crore
L2 to L10: Rs.75 Lakhs each
L11 to L25: Rs.50 Lakhs each


For Nashik GA:

L-1: Rs.1 Crore
L2 to L25: Rs.75 Lakhs each
L26 to L50: Rs.50 Lakhs each

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Above Service order value is inclusive of all taxes.

- k) Further as per requirement of the company, service orders may be issued to the other techno-commercially qualified bidders in sequence of ranking against the subject tender who submit their consent for execution of works at L1 rate of that particular GA for service order value of Rs.15,00,000/- at the discretion of MNGL.
- l) Additional service orders may be issued to the agencies performed satisfactorily, during the contract period of one year.

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**Annexure- I to IFB
FORMAT-A**

ANNUAL TURNOVER

Applicant's Legal Name

:

Date:

Tender No.:

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Each bidder must fill in this form (Single Entity)


Annual Turnover data for the last 3 audited financial years.

Year	Currency	Amount	Exchange Rate (*)	Amount (INR) (*)
Year 1:				
Year 2:				
Year 3:				

1. The information supplied should be the – Annual Turnover of the applicant.
2. A brief note should be appended describing details as per audited results.
3. Indicate Financial year if it is different from April to March.

Signature of Bidder

(*) To filled by Owner

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**Annexure- I to IFB
FORMAT-B**

FINANCIAL SITUATION

Applicant's Legal Name :

Date:
Tender No.:
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Each bidder must fill in this form FINANCIAL DATA FOR LAST AUDITED FINANCIAL YEAR

Sl. No.	Description	Year		
		Amount	Exchange Rate (*)	Amount (INR) (*)
1.	Current Assets			
2.	Current Liabilities			
3.	Working Capital (1-2)			
4.	Net Worth Owners funds (Paid up share capital and Free Reserves & Surplus)			
5.	Profits before taxes			
6.	Return on Equity (5/4) x 100			

- Attached are copies of the audited balance sheets, including all related notes, and income statement for the last Audited Financial year, as indicated above, complying with the following conditions.

- All such documents reflect the financial situation of the bidder and not sister or parent companies.
- Historic financial statements must be audited by a certified accountant
- Historic financial statements must be complete, including all notes to the financial statements
- Historic financial statements must correspond to accounting periods already completed and audited (no statement for partial period shall be requested or accepted).

Signature of Bidder

(*) Applicable for foreign bidders to be filled by Owner.




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2.0 ACKNOWLEDGEMENT CUM CONSENT LETTER

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ACKNOWLEDGEMENT CUM CONSENT LETTER

To,
M/s. Maharashtra Natural Gas Limited
Pride Purple Coronet, 2nd Floor,
Baner Road, Baner,
Pune – 411045
Ph.No. : 91-20-25611000
E-mail : gasaid@mngl.in

Kind Attn: Shri Ganesh Said, Chief Manager (C&P) / Shri Manan A. Gupta, Asst. Manager (C&P)

Sub:

Dear Sir,

We hereby acknowledge receipt of complete set of Bid Document along with enclosures for the subject works. We understand that documents received remain property of M/s. Maharashtra Natural Gas Limited and further undertake that the contents of the above bid documents shall be kept confidential and shall not be transferred. We indicate below our intentions with respect to the Invitation for Bid.

a) We intend to bid as requested and furnish following details with respect to our quoting office:

- I) POSTAL ADDRESS : _____
- II) TELEPHONE NO. : _____
- III) TELEFAX NO. : _____
- IV) E-MAIL : _____
- V) CONTACT PERSON : _____

b) We are hereby returning the bid document as we are unable to bid for the reasons given below.

Reasons for non-submission of Bid:

COMPANY'S NAME : _____
SIGNATURE : _____
NAME : _____
DESIGNATION : _____
DATE : _____

Note: Bidder is requested to furnish the details mentioned at (a) & (b) above as applicable, immediately after receipt of Bid Document.

(SIGNATURE OF BIDDER)




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3.0 SUBMISSION OF BID

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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SUBMISSION OF BID

From:

M/s

To:

M/s Maharashtra Natural Gas Limited


Pride Purple Coronet, 2nd Floor,

Baner Road, Baner,

Pune – 411045

Ph.No. : 91-20-25611000

1. I/We hereby tender for execution of the WORKS of **TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA** as per TENDER DOCUMENT within the Time Schedule of completion of work for jobs, as separately signed and accepted by me/us, at the Schedule of Rates quoted by me/us for the whole work in accordance with Notice/Letter Inviting Tender, General Conditions of Contract, Special Conditions of Contract, Schedule of Rates of Completion of Job, and other documents and papers, all as detailed in the Tender documents.
2. It has been explained to me/us that the time stipulated for jobs and completion of WORKS in all respects and in different stages mentioned in the "Time Schedule" of completion of jobs and signed and accepted by me/us in the essence of the CONTRACT. I/We agree that in the case of failure on my/our part to strictly observe the Time of Completion mentioned for jobs or any of them and to the Final Completion of WORK in all respects according to the schedule set out in the said "Time Schedule" of completion of jobs. I/We shall pay compensation to the OWNER as per provisions and stipulations contained in General Conditions of Contract and I/We agree to recovery being made as specified therein. In exceptional circumstances, extension of time which shall always be in writing may, however, be granted by the Engineer-in-Charge at his entire discretion for some items of work, and I/We agree that such extension of time will not be counted for the extension of completion dates stipulated for job and for the Final Completion of WORK as stipulated in the said "Time Schedule" of completion of jobs.
3. I/We agree to pay the Earnest Money and Contract Performance Bank Guarantee (CPBG) and accept the terms and conditions laid down in the memorandum below in this respect.

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MEMORANDUM

- (a) General Description of Work _____

- (b) Contract Performance Bank Guarantee (CPBG) 3% of the CONTRACT amount which will be paid in the manner set out in the General Conditions of Contract.
4. Should this tender be accepted, I/We hereby agree to abide by and fulfill all terms and conditions referred to above and in default thereof, to forfeit and pay to the OWNER or its successors or its authorized nominees such sums of money as are stipulated in conditions contained in General Tender Notice and other Tender Documents.
5. If I/We fail to commence the work specified in the Memorandum in Para (3) above, or I/We to deposit the amount of Contract Performance Bank Guarantee (CPBG) specified in the Memorandum in (3) above, I/We agree that the said OWNER or its successors without prejudice to any other right or remedy be at liberty to cancel the Notice of Acceptance of Tender if I/We fail to deposit the Contract Performance Bank Guarantee (CPBG) as aforesaid or to execute an Agreement or to start WORK as stipulated in the Tender Documents.

I/We enclose herewith evidence of my/our experiment of execution of works of similar nature and magnitude carried out by me/us in the prescribed proforma and also the Income- Tax Clearance Certificates.

Dated the _____ day of _____ 2023

Witness:

Name in Block Letters:

Address:

Yours faithfully,
 Signature of Tenderer(s) with the
 seal of the Firm.

Name and Designation of authorized person signing the
 Tender on behalf of the Tenderer(s).




**MAHARASHTRA
NATURAL GAS LIMITED**

**TENDER FOR ITEM RATE CONTRACT FOR A PERIOD
OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187

PART – B

1.0 INSTRUCTION TO BIDDERS (ITB)

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INSTRUCTIONS TO BIDDERS

A. INTRODUCTION

1.0 INTRODUCTION


- 1.1 The Owner invites bids through e-tendering mode for item rate contract for a period of 1 year for laying of Underground PE pipeline & Aboveground GI/Cu installation for CGD projects of Pune & Nashik GA as mentioned in the tender documents.
- 1.2 The bidding document specifies the contractor scope of work, terms and conditions.
- 1.3 All terms, conditions and specifications of the bidding document shall be construed as applicable in general, unless specifically indicated to the contrary.
- 1.4 Bidders shall quote in the manner as specified in the bidding document. Owner reserves the right to evaluate and accept bids at their sole discretion.

2.0 ELIGIBILITY OF BIDDERS

- 2.1 Bidders shall as part of their bid, submit a written Power of Attorney authorizing the signatory of the bid to bind the bidder.
- 2.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Owner to provide consultancy services for the preparation of the design, specifications, and other documents to be used for carrying out the Works under this Invitation for Bids.
- 2.3 The Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Owner in accordance with ITB. The bidder should not be on holiday or black listed by Owner or any Government Department/ Public Sector/ Joint Venture CGD company of PSU. If the documents were issued inadvertently/ downloaded from website, offers submitted by such bidders shall not be considered for opening/ evaluation/award.

3.0 ONE BID PER BIDDER

- 3.1 Each bidder shall submit only one bid. A bidder who submits or participates in more than one bid will be disqualified. If bid of companies which is managed & controlled by same group of individual (common owners / proprietor, common partner / common directors), the participation in a particular tender by more than one such bidder will not be allowed and bids will be disqualified.
- 3.2 Also, if this fact is known at a later stage during bid evaluation or even after finalization of contract, the award will be made null and void and appropriate action including

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forfeiting of security deposit in any form and putting the firms on holiday list will be taken.

3.3 Alternative bids are not acceptable.

4.0 COST OF BIDDING

4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Owner will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

5.0 NON-TRANSFERABILITY OF THE BID DOCUMENTS

5.1 Bid document is non-transferable. Bid received from the bidders in whose name bid document fee has been submitted shall only be considered. Bidder must submit the bid document fee in their name. Bid document fee shall be submitted by the bidder as defined in tender document.

6.0 SITE VISIT

6.1 The bidder is advised to visit and examine the site of works and its surroundings and obtain for himself at his own responsibility all information that may be necessary for preparation of the bid and entering into the Contract. The cost of visiting the site shall be at bidder's own expenses.


6.2 The bidder and any of his personnel or Agents will be granted permission by the Owner to enter upon his premises and lands for the purpose of such inspection, but only upon the explicit condition that the bidder, his personnel or agents will release and indemnify the Owner and his personnel and agents from and against all liability in respect thereof and will be responsible for personnel injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, cost and expenses incurred as a result thereof.

B. THE BID DOCUMENTS

7.0 CONTENT OF BID DOCUMENTS

7.1 The bidding procedures, and contract terms are prescribed in the bid documents. In addition to the Invitation for Bids (IFB), the bid document includes:

- Part A: Invitation for Bids (IFB)
- Part B: Instructions to Bidders (ITB)
- Part C: General Conditions of Contracts (GCC)
- Part D: Special Conditions of Contracts (SCC)
- Part E: Scope of work

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Part F: Schedule of Rates (SOR)


- 7.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bid documents. Failure to furnish all information required by the bid documents or to submit a bid not substantially responsive to the bid documents in every respect will be at the Bidder's risk and may result in the rejection of its bid.

8.0 CLARIFICATION ON BID DOCUMENTS

- 8.1 A prospective Bidder requiring any clarification of the bid documents may notify the Owner, in writing or by cable (hereinafter, the term 'cable' is deemed to include electronic mail and facsimile) at the address indicated in the tender. The Owner will respond in writing to any request for clarification of the bid documents which it receives after issue of the bid documents but prior to at least two (02) working days before the pre-bid meeting date. Owner will not entertain any queries received after 1800 HRS post one (1) day of pre-bid meeting. Written copies of the Owner's response (including an explanation of the query but without identifying the source of inquiry) will be hosted on etenders.gov.in website along with the corrigendum before the bid due date. All such clarifications issued shall deem to form a part and parcel of the Bid documents.

9.0 AMENDMENT OF BID DOCUMENTS

- 9.1 At any time prior to the deadline for submission of bids, the Owner, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, may modify the bid documents by amendment.
- 9.2 Any addendum / corrigendum / clarifications to bidders query thus issued shall be part of the bidding documents **pursuant to ITB Clause- 7.0** and shall be hosted on the website etenders.gov.in and www.mnpl.in, before bid due date. All the prospective bidders who have attended the Pre-Bid meeting / submitted bid document fee, shall be informed by email / post about the addendum / corrigendum / clarifications to bidder's query for their reference. Bidders desirous to submit its bid have to take into consideration of all the addendum(s)/ corrigendum (s)/ clarifications to bidder's query hosted on the above websites before submitting the bid.
- 9.3 In order to allow prospective bidders reasonable time to take care of the addendum/ corrigendum into account in preparing their bids, the Owner, at its discretion, may extend the deadline for the submission of bids.
- 9.4 Bidders are advised to visit <https://etenders.gov.in> & www.mnpl.in from time to time to get updated information / documents.

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C. PREPARATION OF BIDS

10.0 LANGUAGE OF BID


- 10.1 The bid prepared and submitted by the Bidder, as well as, all correspondence and documents relating to the bid exchanged by the Bidder and the Owner, shall be in English.
- 10.2 In the event of submission of any document/ certificate by the bidder in a language other than English, the English translation of the same duly authenticated by Chamber of Commerce of bidder's country shall be submitted by the bidder along with the bid.

11.0 DOCUMENTS CONSTITUTING THE BID

- 11.1 The bid prepared by the Bidder shall comprise the following components:
- Un-priced Techno-commercial bid along with the Bid Forms completed in accordance with the tender documents;
 - Price Bid having Price Schedule/SOR filled up in accordance with tender documents in a separate envelope.
 - Documentary evidence established in accordance with ITB that the goods and ancillary services to be supplied by the Bidder are eligible goods and services and conform to the bid documents; and
 - Bid security furnished in accordance with Performa given in this bid documents.
- 11.2 All pages of the bid offer to be signed and stamped by an authorized representative of the bidder.

12.0 BID FORM

- 12.1 The Bidder shall complete all the Bid Forms attached in Section-II of bid document and submit the same as a part of "Techno-Commercial Un-priced bid" as per clause no. 21.1 of ITB.
- 12.2 In two-part bidding as specified in IFB, Bidder shall furnish its sealed bid in two parts, the first part will contain all bid forms with related documents, SOR without prices and bid security but not the price schedule, the second part will contain only price schedule, each such part being furnished in two separate sealed envelopes.

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13.0 BID PRICES

- 13.1 The Bidder shall indicate percentage discount/mark up on estimated price given in the appropriate Schedule of Rates. The estimate price includes unit prices inclusive of all applicable taxes viz. GST, freight, Insurance including Transit Insurance, overheads, provision of safety gadgets to their personnel, transportation, conveyance, trainings, recruitments, communication charges, liaising work, cost for providing tools & tackles, equipment, machineries, spares, etc.
- 13.2 All corrections and alterations in the entries shall be signed in full by the bidder with date. No erasures or over-writings are permissible.

14.0 PRICE BASIS

Prices quoted by the bidder shall be considered as firm and fixed during the entire execution of the contract and not subject to variation on any account (except statutory variation in taxes for Indian bidders).

15.0 CURRENCIES OF BID


- 15.1 Bidders shall submit bid in INR only.

16.0 DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATION

- 16.1 Pursuant to IFB, the Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted.
- 16.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Owner's satisfaction:
- that the Bidder has the financial, technical, and production capability necessary to perform the contract;
 - that the Bidder meets the qualification criteria stipulated in the Tender

17.0 BID SECURITY/ EMD

- 17.1 Bid Security / EMD has been waived and a bid security declaration shall be submitted by the bidder.
- 17.2 Bidder is required to submit dully filled and signed Declaration for Bid Security as per proforma as attached in bid. (Declaration Format is attached as Format – F4)

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18.0 PERIOD OF VALIDITY OF BIDS


- 18.1 Bids shall remain valid for the period specified in the IFB after the date of bid submission as prescribed by the Owner. Owner may reject the bid having shorter validity period as nonresponsive.
- 18.2 In exceptional circumstances, the Owner may request the Bidder for an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security provided under ITB shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request for extension of its bid validity will not be required nor permitted to modify its bid.

19.0 FORMAT AND SIGNING OF BID

- 19.1 The bid shall be typed or written in indelible ink. Each page of bid offer shall be stamped and signed by the Bidder or a person or persons duly authorized by competent authority in order to bind the bidder to the contract.
- 19.2 Any interlineations, erasures, or corrections shall be valid only if the person or persons signing the bid initial them. Overwriting will not be treated as correction and may lead to rejection of bid. A correction shall be considered if a part of text or figures or dates needing corrections are deleted and a separate text or figure or date, as the case may be, is written separately having proper link to the place of correction.
- 19.3 As bidding shall be done through e-tendering, digitally signed documents to be uploaded.

20.0 DEVIATIONS

- 20.1 Owner will appreciate submission of offer based on the terms and conditions in the enclosed GCC, SCC, ITB, Scope of Work, Technical Specification etc. to avoid delay seeking clarifications on technical/ commercial aspect of the offer.
- 20.2 Deviations if any have to be listed only in the cover letter & Form F-6 of the bid submitted by the bidder. Deviations listed anywhere else will not be considered and in case of award of the job to the bidder, the job has to be completed in accordance with the tender terms and conditions without any commercial implications to the Owner.
- 20.3 Notwithstanding to the above, bids with the deviation(s) to the bid conditions shall be summarily rejected without any post bid reference to the bidder. However, Owner reserves the right to take the final decision in this regard, without assigning any reason.

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D. PREPARATION AND SUBMISSION OF BIDS


21.0 PREPARATION OF BIDS

21.1 Scanned documents (duly signed by the authorized signatory) and/or pre-formatted excel files to be uploaded by the bidder on the e-portal which shall comprise of the following:

21.1.1 Technical cover:

Scanned documents (duly signed by the authorized signatory) to be uploaded by the bidder on the portal as per list below:

- i) Covering Letter as per format "Submission of Tender" / "Submission of Bid" enclosed with Part- A of Vol-I of II.
- ii) Bidder's general/ details information as per format F-1.
- iii) Power of Attorney in favor of person(s) signing the bid that such person (s) is/are authorized to sign the bid on behalf of the bidder and any consequence resulting due to such signing shall be binding on the bidder.
- iv) Specific experience, annual turnover and equipment deployment details as called for in qualifying requirements.
- v) A Bid Form as per format F-2.
- vi) Copies of documents as required in list of enclosure.
- vii) Documents establishing the eligibility and conformity to the Bid Documents of all Goods and services, which the bidder proposes to supply under the award. Such document may be, literature, drawing or data and shall also include (a) the detailed description of the Good's essential technical and performance characteristics; (b) a clause by clause commentary on Employer's technical specification and demonstrating supplies substantial responsiveness to the specifications.
- ix) Copy of Bid security in accordance with IFB & Clause 17 of ITB to be furnished as per format F-4.
- x) Letter of authority in favor of any one or two of bidder's executives having authority to attend the un-priced and price bid opening on specified dates and venue as per format F-5.
- xi) Confirmation of no deviation as per Format F-6.
- xii) Present commitments strictly as per form F-9.
- xiii) **Indian Bidders are required to submit Employees Provident Fund registration certificate, ESIC registration certificate, Professional Tax Registration certificate, Labor welfare registration under Maharashtra Labor Welfare Fund Act and Shop Act Registration certificate.**
- xiv) Bidder's declaration that they are not under liquidation, court receivership or similar proceedings.
- xv) Any other information/details required as per bid document.

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21.1.2 Financial cover:

Price bid SOR as per prescribed format on the e-tender portal.


- 21.2 All the documents submitted shall be duly signed and stamped on each page by the bidder or an authorized signatory of the bidder.
- 21.3 Bidders are advised to submit quotations based strictly on the terms and conditions and specifications contained in the bid document and not stipulate any deviations. Should it, however, become unavoidable, deviations should be stipulated only in the prescribed Pro forma. Owner reserves the right to evaluate quotations containing deviations having financial implications after adding the cost for such deviations as determined by Owner.
- 21.4 Original schedule of rates duly filled in shall not contain any condition whatsoever. Any condition given in this part shall not be considered and shall render the offer liable for rejection.
- 21.5 All signatures in bids shall be dated, as well as all pages of bids shall be initialed at lower right hand corner by the Bidder or by a person holding power of attorney authorizing him to sign on behalf of the bidder before the submission of bids.
- 21.6 The Bidder's bid is central to the evaluation and selection process. Therefore, it is important that the Bidder carefully prepares the bid and answers all questions completely. Missing information and vague answers may delay the evaluation of a bid and may impair the Bidder's chances of success.
- 21.7 Information received by Purchaser from the Bidder will be disclosed to Purchaser's employees and/or advisers or external consultants for the purpose of evaluating the bid response.

22.0 INSTRUCTIONS FOR ONLINE BID SUBMISSION

- 22.1 The bidders are required to submit soft copies of their bids electronically on the Central Public Procurement (CPP) Portal i.e. <http://etenders.gov.in/eprocure/app>, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

22.2 REGISTRATION


- (i) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://etenders.gov.in/eprocure/app>) by clicking on the link "Online Bidder Enrolment" option available on the home page. **Enrolment on the CPP Portal is free of charge.**

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- (ii) During enrolment/ registration, the bidders should provide the correct / true information including valid email-id & mobile no. All the correspondence shall be made directly with the contractors / bidders through email-id provided.
- (iii) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- (iv) For e-tendering, possession of valid Digital Signature Certificate (Class III Certificates with signing key usage) is mandatory which can be obtained from SIFY /nCode/eMudra or any Certifying Authority recognized by CCA India on eToken/ SmartCard.
- (v) Upon enrolment on CPP Portal for e-tendering, the bidders shall register their valid Digital Signature Certificate with their profile.
- (vi) Only one valid DSC should be registered by a bidder. Bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse and should ensure safety of the same.
- (vii) Bidders can then log into the site through the secured login by entering their user ID/ password and the password of the DSC/ eToken.

22.3 SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords, etc., to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

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22.4 PREPARATION OF BIDS:


- (i) For preparation of bid, Bidders shall search the tender from published tender list available on site and download the complete tender document and should take into account corrigendum if any published before submitting their bids.

After selecting the tender document same shall be moved to the 'My favorite' folder of bidders account from where bidder can view all the details of the tender document.

- (ii) Bidder shall go through the tender document carefully to understand the documents required to be submitted as part of the bid. Bidders shall note the number of covers in which the bid documents have to be submitted, the number of documents – including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- (iii) Any pre-bid clarifications if required, then same may be obtained online through the tender site, or through the contact details given in the tender document.
- (iv) Bidders should get ready in advance the bid documents in the required format (PDF/xls/rar/dwf/jpg formats) to be submitted as indicated in the tender document/schedule. **Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.**
- (v) Bidders can update well in advance, the documents such as experience certificates, annual report, PAN, EPF & other details etc., under "My Space/ Other Important Document" option, which can be submitted as per tender requirements. This will facilitate the bid submission process faster by reducing upload time of bids.

22.5 SUBMISSION OF BIDS:

- (i) Bidder should log into the site well in advance for bid submission so that he/ she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay.
- (ii) Bidder should prepare the EMD as per the instructions specified in the NIT/ tender document. The details of the DD/BG/others physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- (iii) While submitting the bids online, the bidder shall read the terms & conditions (of CPP

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portal) and accepts the same in order to proceed further to submit their bid.


- (iv) Bidders shall select the payment option as offline to pay the EMD and enter details of the DD/BG/others.
- (v) Bidder shall digitally sign and upload the required bid documents one by one as indicated in the tender document.
- (vi) Bidders shall note that the very act of using DSC for downloading the tender document and uploading their offers is deemed to be a confirmation that they have read all sections and pages of the tender document without any exception and have understood the complete tender document and are clear about the requirements of the tender document.
- (vii) Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document. For the file size of less than 1 MB, the transaction uploading time will be very fast.
- (viii) **If price quotes are required in XLS format, utmost care shall be taken for uploading Schedule of quantities & Prices and any change/ modification of the price schedule shall render it unfit for bidding.**

Bidders shall download the Schedule of Quantities & Prices i.e. Schedule of Rates, in XLS format and save it without changing the name of the file. Bidder shall quote their rate in figures in the appropriate cells, thereafter save and upload the file in financial bid cover (Price bid) only.

If the template of Schedule of Quantities & Prices file is found to be modified/corrupted in the eventuality by the bidder, the bid will be rejected and further dealt as per provision of clause no 17.0 of ITB including forfeiture of EMD.

The bidders are cautioned that uploading of financial bid elsewhere i.e. other than in cover 2 will result in rejection of the tender.

- (ix) Bidders shall submit their bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). **The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.**

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- (x) After the bid submission (i.e. after Clicking “Freeze Bid Submission” in the portal), the bidders shall **take print out of system generated acknowledgement** number and keep it as a record of evidence for online submission of bid, which will also act as an entry pass to participate in the bid opening.
- (xi) Bidders should follow the server time being displayed on bidder’s dashboard at the top of the tender site, which shall be considered valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system.
- (xii) All the documents being submitted by the bidders would be encrypted using PKI (Public Key Infrastructure) encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology.


22.6 ASSISTANCE TO BIDDERS:

- (i) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contract person indicated in the tender.
- (ii) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24X7 CPP Portal Helpdesk. The 24 x 7 Help Desk Number 0120-4001002, 0120-6277787 and 0120-4001005. The helpdesk email id is support-eproc@nic.in

22.7 Bidders are advised to use the portal in advance so that any issue can be resolved with adequate time before any deadline.

23.0 DEADLINE FOR SUBMISSION OF BIDS

- 23.1 The bid must be submitted on the specified e-tendering portal as specified in IFB not later than the time and date as specified in IFB. The online e-tendering portal will not allow any bid or part thereof whatsoever to be submitted after the due time on the due date.
- 23.2 The Purchaser may, in exceptional circumstances and at its discretion, on giving reasonable notice by uploading on website, email or any written communication to all prospective bidders who have been issued the bid document to extend the deadline for the submission of bids in which case all rights and obligations of the Purchaser and bidders, previously subject to the original deadline will thereafter be subject to deadline as extended.

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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24.0 LATE BIDS

- 24.1 Any bid received by the Owner after the deadline for submission of bids prescribed by the Owner will be rejected.


25.0 MODIFICATION AND WITHDRAWAL OF BIDS

- 25.1 The Owner will open all bids on the e-tendering portal in the presence of Bidders' representatives who choose to attend, at the time, on the date (as specified in IFB), and at the place specified in the Tender. The Bidders' representatives, who are present, shall sign a register evidencing their attendance, if so required by the Owner / Consultant.
- 25.2 The Bidders' names, bid modifications or withdrawals, and the presence or absence of requisite bid security and such other details as the Owner, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be later returned unopened to the concerned Bidder.
- 25.3 Bids (and modifications) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances. Bidder's specific attention is drawn to this stipulation to enable the representative of the Bidder at the bid opening time to bring out to the attention for the Owner any documents pertaining to its bid is not being acknowledged and relevant portions read out.
- 25.4 The Owner will prepare a bid opening statement to be signed by all representatives present during bid opening.

E. OPENING AND EVALUATION OF BIDS

26.0 OPENING OF BIDS BY THE OWNER

- 26.1 The Owner will open all bids on the e-tendering portal, on the date (as specified in IFB), and at the place specified in the Tender.
- 26.2 Bids (and modifications) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances. Bidder's specific attention is drawn to this stipulation to enable the representative of the Bidder at the bid opening time to bring out to the attention for the Owner any documents pertaining to its bid is not being acknowledged and relevant portions read out.
- 26.3 The Owner will prepare a bid opening statement to be signed by all representatives present during bid opening, in case bid opening is held physically at MNGL.

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27.0 CLARIFICATION OF BIDS


- 27.1 During evaluation of the bids, the Owner may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification (shall be sent to e-mail ID provided in e-tendering portal) and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

28.0 PRELIMINARY EXAMINATION

- 28.1 The Owner will examine the bids to determine whether they are complete, whether required sureties have been furnished, whether the documents have been properly signed and whether the bids are generally in order.
- 28.2 The Owner may waive any minor informality, non-conformity, or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.
- 28.3 Prior to the detailed evaluation, pursuant to ITB, the Owner will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one, which conforms to all the terms and conditions of the Bid Documents without deviations.
- 28.4 If a bid is not substantially responsive, it will be rejected by the Owner and shall not subsequently be made responsive by correction of the nonconformity by the Bidder.

29.0 REJECTION CRITERIA

- 29.1 Minor unconformities may be neglected and/or bidders may be required to rectify such minor unconformities.
- 29.2 Any deviation/unconformity on following conditions will result in summarily rejection of the bid:
- Bid security declaration as attached at Format F-4
 - Contract Performance Bank Guarantee as per tender.
 - Period of validity of bid shorter than specified.
 - Price change on account of technical/ commercial clarification and/ or validity extension.
 - Resolution of Dispute/ Arbitration clause.
 - Payment terms.
 - Completion schedule
 - Price Reduction Schedule.
 - Price not quoted as per SOR
 - Warranty / Guarantee
 - Force Majeure
 - Applicable Law
 - Scope of Work

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Any other condition specifically mentioned in the tender documents elsewhere that noncompliance of the clause lead to rejection of the bid

30.0 OPENING OF PRICE BID

- 30.1 Bidders whose bids are found substantially responsive shall be informed about the date and time of opening of price bid.
- 30.2 The bid prices stated in the price schedules will be announced during price bid opening.

31.0 EVALUATION AND COMPARISON OF BIDS

Evaluation shall be carried out as per Clause No. 3.0 of Annexure – I to IFB.

32.0 CONTACTING THE OWNER

- 32.1 From the time of bid opening to the time of contract award, if any Bidder wishes to contact the Owner on any matter related to the bid, it should do so in writing.
- 32.2 Any effort by a Bidder to influence the Owner in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.


F. AWARD OF CONTRACT

33.0 POST-QUALIFICATION

- 33.1 In the absence of pre-qualification, the Owner will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB.
- 33.2 The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Owner deems necessary and appropriate.
- 33.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid.

34.0 AWARD CRITERIA

- 34.1 Award of work shall be made as per Clause No. 3.0 of Annexure – I to IFB.

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35.0 SPLIT OF AWARD

- 35.1 Tentative 25 Nos. contractors for Pune GA & 50 Nos. contractors for Nashik GA have been envisaged for this project, based on present assessment of work. In case number of qualified bidders are more than required, then additional contractors may be considered for award of contract on need basis only, in future as per Clause No. 3.0 of Annexure – I to IFB.

36.0 OWNER'S RIGHT TO VARY QUANTITIES AT TIME OF AWARD


- 36.1 Owner reserves the right to increase or decrease the quantities specified in the Schedule of Rates during contract period, without any change in unit price or other terms and conditions.
- 36.2 Bidder shall note that the quantities mentioned against each activity in Schedule of Rates are tentative only and subject to change based on actual requirement. The L-1 unit rates derived after applying quoted discount/mark up percentage shall remain fixed and firm throughout the contract period i.e. no price adjustment shall be allowed after bid submission.

37.0 OWNER'S RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS

- 37.1 The Owner reserves the right to accept or reject any bid in full or part, to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to the affected Bidder or Bidders. Owner also reserves the right not to accept lowest rates quoted by the bidder.

38.0 NOTIFICATION OF AWARD

- 38.1 Prior to the expiration of the period of bid validity, the Owner will notify the successful Bidder in writing by Letter of Acceptance (LOA) or registered letter or by cable, to be confirmed in writing by registered letter, that its bid has been accepted.
- 38.2 The date of Letter of Acceptance for notification of award will constitute effective date.
- 38.3 The bidder shall promptly, but not later than Seven (7) days of notification of award shall furnish its acceptance of award.
- 38.4 Upon the successful Bidder's furnishing of the performance Bank Guarantee pursuant to ITB Clause, the Owner will discharge the bid security of unsuccessful Bidders as early as possible.
- 38.5 Letter of Acceptance read in conjunction with bid documents shall be binding Contract.

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39.0 CORRUPT OR FRAUDULENT PRACTICES

39.1 It is required that all concerned in the entire execution process to observe the highest standard of ethics during the said process. In pursuance of this policy, the Owner:

- (a) defines for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
 - (ii) “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition;
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
- (c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Bank financed contract.

39.2 Furthermore, Bidders shall be aware of the provision stated in General Conditions of Contract (GCC).


40.0 SINGLE POINT RESPONSIBILITIES

40.1 The bidder shall submit bid on single point sole / prime bidder responsibility basis. No consortium / joint bid shall be accepted.

40.2 The status of all the other bidder(s) / collaborator(s), if any, referred / identified by the bidder in their offer shall be that of bidder's sub-bidder / Contractor / sub-service provider.

41: PROCUREMENT FROM A BIDDER WHICH SHARES A LAND BORDER WITH INDIA.

- I. Order (Public Procurement No. 1) dated 23.07.2020, Order (Public Procurement No. 2) dated 23.07.2020 and Order (Public Procurement No. 3) dated 24.07.2020, Department of Expenditure, Ministry of Finance, Govt. of


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India refers. The same are available at website <https://doe.gov.in/procurement-policy-divisions>.

- II. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. For details of competent authority refer to Annexure I of Order (Public Procurement No. 1) dated 23.07.2020. Further the above will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs, Govt. of India
- III. "Bidder" (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) for purpose of this provision means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.
- IV. "Bidder from a country which shares a land border with India" for the purpose of this:
 - a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- V. "Beneficial owner" for the purpose of above (4) will be as under:
 - i) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

Explanation—

 - a) "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company.

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b) "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholder's agreements or voting agreements.

ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.

iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals.


iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.

v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

VI. "Agent" for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons

VII. SUBMISSION OF CERTIFICATE IN BIDS: Bidder shall submit a certificate in this regard as Form-I to Section-II. If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate rejection of the bid/termination and further action as per "Procedure for Action in case of Corrupt/Fraudulent/ Collusive / Coercive Practices" of tender document.

VIII. The registration, wherever applicable, should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

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Attachment 1

UNDERTAKING ON LETTERHEAD

To,
M/s Maharashtra Natural Gas Limited,
Pride Purple Coronet, 2nd Floor,
Baner Road, Baner,
Pune – 411045

Sub:

Tender No:

Dear Sir,

We have read the clause regarding Provisions for Procurement from a Bidder which shares a land border with India, we certify that, bidder M/s _____ (Name of Bidder) is:


(i) Not from such a country []

(ii) If from such a country, has been registered []
With the Competent Authority.
(Evidence of valid registration by the
Competent Authority shall be attached)

(Bidder to tick appropriate option above)

We hereby certify that bidder M/s _____ (***Name of bidder***) fulfils all requirements in this regard and is eligible to be considered against the tender.


Place: {Signature of Authorised Signatory of Bidder}
Date: Name:
Designation:
Seal:

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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2.0 ANNEXURE TO INSTRUCTIONS TO BIDDERS (ITB)

CONTENTS

Sl. No.	Description
1)	Annexure-I : Bid Evaluation Criteria
2)	Annexure-II : List of Formats
3)	Annexure-III : Commercial Questionnaire
4)	Annexure-IV : Check List

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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BID EVALUATION CRITERIA
{Annexure – I TO Instruction to Bidder (ITB)}

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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EVALUATION / COMPARISON OF BIDS

- 1.0 The Employer will examine the bids to determine whether the bids are complete as per Check List, Stamped and signed on each page and are in order.
- 2.0 **DEVIATION TO STIPULATIONS**
"It may be noted that since this is zero deviation tender the bidder is advised to quote strictly as per terms & conditions of tender document & not to stipulate any deviation/ exception. Offers requesting deviation shall not be amended for further evaluation & shall be summarily rejected".
- 3.0 **CONFORMANCE TO SCOPE OF WORK**
Bidder will be required to confirm to the Scope of Work as mentioned in SCC, Scope of work, Schedule of Rates and Job Specification/ Technical Specifications.
- 4.0 **CONFORMANCE TO SCOPE OF SUPPLY**
Bidder will be required to confirm to the Scope of Supply as mentioned in SCC, Schedule of Rates, scope of work and Jobs Specification/ Technical Specifications.
- 5.0 **DETERMINATION OF RESPONSIVENESS**
The bid submitted by the bidder should be responsive to the requirements of the Bidding Document. A responsive bid is one which conforms to the terms, conditions and specifications of the Bidding Document and Bid Evaluation Criteria without **Deviation**.
- 6.0 Bidders are advised to quote strictly as per terms and conditions of the Bidding Document and not to stipulate any deviation/ exception as it is "No Deviation" tender. Offers with any Exception/ deviation shall be liable for rejection.
- 7.0 Bidder will be required to establish up to the satisfaction of Owner that the resources proposed to be deployed as per SCC by the bidder are in conformity with the WORK REQUIREMENT.

The following requirement must be noted while submitting the resource deployment details.
 - i) Construction Equipment
Mechanized type of construction equipment should be considered. All requisite equipment such as cranes, diesel generators, compressors, welding machines, pumps, tractor-trailer, etc. shall be considered. Deployment of minimum equipment must be furnished as per tender.
 - ii) Deployment of Supervisory/ Skilled Personnel
Bidder must furnish a site organization with qualified and experienced personnel in adequate numbers keeping in view the specific requirement for this work. Bidder will prepare & submit these details also keeping in view the minimum no. of skilled personal as per tender.
- 8.0 **EVALUATION OF PRICE BIDS**
 - i) The price part of only those bidders will be evaluated whose bid is technically and commercially acceptable to Owner.
 - ii) Quoted price for the complete scope of work and supply as per SOR shall be taken into account for arriving at the lowest evaluated price.

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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- iii) Evaluation shall be done as per Cl. No. 3 of Bidders Eligibility Criteria (Annexure – I to IFB)

9.0 BIDDERS MUST CHECK THAT THEIR BID IS COMPLETE IN ALL RESPECTS WITH ALL DETAILS AS PER VARIOUS FORMATS ENCLOSED IN INSTRUCTIONS TO BIDDERS, CHECK LIST AND COMMERCIAL QUESTIONNAIRE REPLIED

Issue of any technical/ commercial questionnaire or having any classificatory discussions, in general, is not envisaged. Bidders in their own interest must ensure that their bid is complete in all respects complying with the requirement of Instructions to Bidders and have furnished all details/ clarifications/ confirmations. Also note that all details/ documents shall be submitted in relevant SECTIONS and mentioned in CHECK LIST.




**MAHARASHTRA
NATURAL GAS LIMITED**

**TENDER FOR ITEM RATE CONTRACT FOR A PERIOD
OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187

LIST OF FORMATS

{Annexure – II TO Instruction to Bidder (ITB)}

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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CONTENT

Sl. No.	Description
1)	F-1 : Bidder's General Information
2)	F-1A : Detail information about bidder (in case of open Tender)
3)	F-2 : Bid Form
4)	F-3 : List of Enclosures
5)	F-3A : Financial Detail
6)	F-4 : Proforma for Bid Security Declaration
7)	F-5 : Letter of Authority
8)	F-6 : No Deviation Confirmation
9)	F-7 : Certificate
10)	F-8 : Details of Similar Work done during past five years
11)	F-9 : Present commitments of the Bidder
12)	F-10 : Proforma of Bank Guarantee for Contract Performance Security
13)	F-11 : Proposed Site Organization Chart
14)	F-12 : Construction Schedule with Bar Chart
15)	F-13 : Confirmation regarding schedule of labor rate
16)	F-14 : Confirmation regarding schedule of equipment rate
17)	F-15 : Rate for Extended Stay Compensation (Loading Schedule for Price Comparison Purpose)
18)	F-16 : Format for No Claim Certificate
19)	Format for Tender acceptance letter



**MAHARASHTRA
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**TENDER FOR ITEM RATE CONTRACT FOR A PERIOD
OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187

F-1

BIDDER'S GENERAL INFORMATION

To


M/s Maharashtra Natural Gas Limited
Pride Purple Coronet, 2nd Floor,
Baner Road, Baner,
Pune - 411045

- 1.1 Bidder Name : _____
- 1.2 Number of Years in Operation : _____
- 1.3 Registered Address : _____

- 1.4 Operation Address : _____
if different from above

- 1.5 Telephone Number : _____
(Country Code) (Area Code) (Telephone No.)
- 1.6 E-mail address & Web Site : _____
- 1.7 Telefax Number : _____
(Country Code) (Area Code) (Telephone No.)
- 1.8 ISO Certification, if any : {If yes, please furnish details}


(SIGNATURE OF BIDDER WITH SEAL)

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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**F-1A
DETAILED INFORMATION ABOUT BIDDERS
(In case of open Tender)**

1. IN CASE OF INDIVIDUAL
 - 1.1 Name of Business
 - 1.2 Whether his business is registered
 - 1.3 Date of commencement of business
 - 1.4 Whether he pays Income Tax over Rs.10, 000/- per year
2. IN CASE OF PARTNERSHIP
 - 2.1 Name of Partners
 - 2.2 Whether the partnership is registered
 - 2.3 Date of establishment of firm
 - 2.4 If each of partners of the firm pays Income Tax over Rs. 10,000/- per year and if so, which of them pays the same.
3. IN CASE OF LIMITED LIABILITY COMPANY OR COMPANY LIMITED BY GUARANTEE
 - 3.1 Amount of paid up capital
 - 3.2 Name of Directors
 - 3.3 Date of Registration of Company
 - 3.4 Copies of the balance sheet of the company of the last three years.

(SEAL AND SIGNATURE OF BIDDER)

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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**F-2
BID FORM**

To
M/s Maharashtra Natural Gas Limited
Pride Purple Coronet, 2nd Floor,
Baner Road, Baner,
Pune - 411045

Dear Sir,
After examining/ reviewing the Bidding Documents for **TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA** including technical specifications, drawings, General and Special Conditions of Contract and schedule of rates etc. The receipt of which is hereby duly acknowledged, we, the undersigned, pleased to offer to execute the whole of the Job of **TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA** and in conformity with, the said Bid Document, including Addenda Nos. (if any).

We confirm that this bid is valid for a period of four (4) months from the date of opening of Techno-commercial Bid, and it shall remain binding upon us and may be accepted by any time before the expiration of that period.

If our bid is accepted, we will provide the performance security equal to 3% (three percent) of the Contract Price, for the due performance with in fifteen days of such award.

Until a final Agreement is prepared and executed, the bid together with your written acceptance thereof in your notification of award shall constitute a binding Agreement between us.


We understand that Bid Document is not exhaustive and any action and activity not mentioned in Bid Documents but may be inferred to be included to meet the intend of the Bid Documents shall be deemed to be mentioned in Bid Documents unless otherwise specifically excluded and we confirm to perform for fulfillment of Agreement and completeness of the Work in all respects within the time frame and agreed price.

We understand that you are not bound to accept the lowest priced or any bid that you may receive.

SEAL AND SIGNATURE
DATE: _____

Duly authorized to sign bid for and on behalf of _____

(SIGNATURE OF WITNESS)
WITNESS NAME:
ADDRESS:

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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F-3

LIST OF ENCLOSURES


To,
Maharashtra Natural Gas Limited
Pride Purple Coronet, 2nd Floor,
Baner Road, Baner,
Pune - 411045

Dear Sir,

We are enclosing the following documents as part of the bid:

1. Power of Attorney of the signatory to the Bidding Document.
2. QA/OC Manuals.
3. Health Safety and Environment (HSE) Policy and HSE Manual.
4. Document showing annual turnover for the last three years such as annual reports, profit and loss account, net worth etc. along with information as sought in enclosed format F-3A.
5. Organization chart of the bidder and the structure assigned for execution of the work under this bid.
6. Methodology of execution of work.
7. Execution schedule with interlinking of various activities.
8. Copy of Bidding Documents along with addendum/ corrigendum no. duly signed and sealed on each page, in token of confirmation that Bid Documents are considered in full while preparing the bid and in case of award, work will be executed in accordance with the provisions detailed in Bid Documents.

(SEAL AND SIGNATURE OF BIDDER)

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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**F-3A
FINANCIAL DETAIL**

EACH BIDDER MUST FILL IN THIS FORM

a) Annual Turnover data for the last 3 years.

Year	Currency	Amount	Ex. Rate (*)	Amount (INR) (*)
Year 1				
Year 2				
Year 3				

- The information supplied should be the Annual Turnover of the Bidder.
- A brief note should be appended describing thereby details of turnover along with audited balance sheet with profit & loss account statement for the last 3 years.


b) Annual Net-worth data for the last 3 years.

Year	Currency	Amount	Ex. Rate (*)	Amount (INR) (*)
Year 1				
Year 2				
Year 3				

- Net Worth = Reserves + Capitals – Accumulated Loss

(SEAL AND SIGNATURE OF BIDDER)

(*) To be filled by Employer

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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F-4

BID BOND PROFORMA / PROFORMA FOR EMD IN THE FORM OF BG

Bank Guarantee No.:

Date:

To

M/s MAHARASHTRA NATURAL GAS LIMITED

2nd Floor, Pride Purple Coronet,

Baner Road, Pune – 411045

TENDER NO. _____ FOR CARRYING OUT _____
WHEREAS..... (HEREINAFTER CALLED 'THE Bidder') has submitted his Bid dated..... for carrying out of (Herein after called 'The Bid') KNOW ALL MEN by these presents that WE (hereinafter called 'The Bank') are bound unto MAHARASHTRA NATURAL GAS LIMITED, 2nd Floor, Pride Purple Coronet, Baner Road, Baner, Pune-411045 (herein after called 'MNGL') in the sum of for which payment well and truly made to MNGL, the BANK binds itself its successor and assigns by these presents. Sealed with the Common Seal of the said BANK this day of2023

THE CONDITIONS of this obligation are:

1. If the Bidder withdraws his Bid during the period of Bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of his bid by MNGL during the period of bid validity
 - a) Fails or refuses to execute the Contract Form, if required: or
 - b) Fails or refuses to furnish the PERFORMANCE SECURITY in accordance with the Instructions to the Bidder.

We undertake to pay MNGL up to the above amount upon receipt of its first written demand, without MNGL having to substantiate its demand, provided that in its demand MNGL will note the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions specifying the occurred condition or conditions.


The Guarantee will remain in force up to and including 60 days after the period of bid validity and any demand in respect thereof should reach the BANK not later than the above date.

(Signature of the BANK)

(Signature of the Witness)

Name & address of Witness:

Date:

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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**F-5
LETTER OF AUTHORITY
PROFORMA FOR LETTER OF AUTHORITY FOR ATTENDING AND SUBSEQUENT
NEGOTIATIONS/CONFERENCES**

No.:

Date:

To,
Maharashtra Natural Gas Limited,
Pride Purple Coronet, 2nd Floor,
Baner Road, Baner,
Pune - 411045

Dear Sir,

We _____ hereby authorize following representative(s) to attend un-priced bid opening and price bid opening and for any other correspondence and communication against above Bidding Document:

1) Name & Designation _____ Signature _____

2) Name & Designation _____ Signature _____

We confirm that we shall be bound by all commitments made by aforementioned authorized representatives.

Yours faithfully,


Signature

Name & Designation

For and on behalf of

Note: This letter of authority should be on the letterhead of the bidder and should be signed by a person competent and having the power of attorney to bind the bidder.

Not more than two persons are permitted to attend techno-commercial un-priced and price bid opening.

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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**F-6
NO DEVIATION CONFIRMATION**

(Tender/ Bid Document No. _____)

EXCEPTION AND DEVIATION STATEMENT

NAME OF WORK:

BID DOCUMENT NO.:


Bidder may stipulate exceptions and deviations to Bid Document, if considered unavoidable as per the following format:

SL. NO.	CLAUSE NO.	PAGE NO. OF TENDER DOCUMENT	DEVIATION	REASONS FOR DEVIATION

Any exceptions / deviations brought out by us elsewhere in our Offer shall not be considered as valid and should be ignored by the Owner.

NAME OF BIDDER: _____

SIGNATURE OF BIDDER: _____
& SEAL

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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**F-7
CERTIFICATE**


To,
Maharashtra Natural Gas Limited,
Pride Purple Coronet, 2nd Floor,
Baner Road, Baner,
Pune - 411045

Dear Sir,

If, we become a successful bidder and pursuant to the provisions of the Bidding Documents and contract is awarded to us the following certificate shall be automatically enforceable:

‘We agree and acknowledge that the Employer is entering into the Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood and agreed that the Government of India is not a party to the Agreement and has no liabilities, obligations or rights there under. It is expressly understood and agreed that the Employer is authorized to enter into Agreement, solely on its own behalf under the applicable laws of India. We expressly agree, acknowledge and understand that the Employer is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Agreement. Accordingly, we hereby expressly waive, release and forego any and all actions or claims, including cross claims, VIP claims or counterclaims against the Government of India arising out of the Agreement and covenants not to sue to Government of India as to any manner, claim, cause of action or things whatsoever arising of or under the Agreement.’

(SEAL AND SIGNATURE OF BIDDER)

 MAHARASHTRA NATURAL GAS LIMITED	TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA Bid No.: MNGL/CP/2022-23/187
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F-8
DETAILS OF SIMILAR WORK DONE DURING PAST FIVE YEARS

Description of the work	Location of the work	Full Post Address and Phone nos. of Client & Name of Officer-in charge	Value of Contract	Date of Commencement of work	Scheduled Completion Time (Months)	Date of Actual Completion	Reasons for delay in project completion, if any


Note: Copies of letter of award and completion certificate for the above works to be enclosed.

The work completed earlier than three years need not be indicated here.

The list of work, not of similar nature need not be indicated here.

Failing to comply aforementioned instructions may lead to rejection of bid.

(SEAL AND SIGNATURE OF BIDDER)

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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**F-9
PRESENT COMMITMENTS OF THE BIDDER**

Full Postal Address and phone nos. of Client & Name of Officer-in-charge	Description of Work	Date of Commencement of Work	Scheduled Completion Period	%Age Completion as on Date	Expected Date of Completion	Remarks

Note: This list must be a full list of all type of works in hand

(SEAL AND SIGNATURE OF BIDDER)



**MAHARASHTRA
NATURAL GAS LIMITED**

**TENDER FOR ITEM RATE CONTRACT FOR A PERIOD
OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187

Sheet 1 of 2

F-10

**PROFORMA OF BANK GUARANTEE FOR CONTRACT PERFORMANCE SECURITY
(ON NON-JUDICIAL PAPER OF APPROPRIATE VALUE)**

To:

M/s Maharashtra Natural Gas Limited
Pride Purple Coronet, 2nd Floor,
Baner Road, Baner,
Pune - 411045


Dear Sir,

M/s _____ have been awarded the work of
_____ for Maharashtra Natural Gas Limited, vide Service Order
No. _____ dated _____.

The Contracts conditions provide that the CONTRACTOR shall pay a sum of Rs. _____
(Rupees _____) as full
Contract Performance Guarantee in the form therein mentioned. The form of payment of Contract
Performance Guarantee includes guarantee executed by Nationalized Bank, undertaking full
responsibility to indemnify Maharashtra Natural Gas Limited, in case of default.

The said _____ has approached us and at
their request and in consideration of the premises we having our office at
_____ have agreed to give such guarantee as hereinafter
mentioned.

1. We _____ hereby undertake and agree with you
that if default shall be made by M/s _____ in
performing any of the terms and conditions of the tender or in payment of any money payable
to Maharashtra Natural Gas Limited we shall on demand pay without any recourse to the
contractor to you in such manner as you may direct the said amount of Rupees
_____ only or such portion thereof not exceeding the said sum
as you may from time to time require.
2. You will have the full liberty without reference to us and without affecting this guarantee,
postpone for any time or from time to time the exercise of any of the powers and rights
conferred on you under the contract with the said _____
and to enforce or to forbear from endorsing any powers or
rights or by reason of time being given to the said _____ which under
law relating to the sureties would but for provision have the effect of releasing us.
3. Your right to recover the said sum of Rs. _____
(Rupees _____) from us in manner aforesaid will not be
affected or suspended by reason of the fact that any dispute or disputes have been raised by
the said M/s _____ and/ or that any dispute or disputes are
pending before any officer, tribunal or court.

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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Sheet 2 of 2


4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
5. This guarantee shall be irrevocable and shall remain valid up to _____. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instruction from M/s _____ on whose behalf this guarantee is issued.
6. The Bank Guarantee's payment of an amount is payable on demand and in any case within 48 hours of the presentation of the letter of invocation of Bank Guarantee. Any dispute arising out of or in relation to the said Bank Guarantee shall be subject to the jurisdiction of Pune, Nashik or High Court of Mumbai.
7. We have power to issue this guarantee in your favor under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney dated _____ granted to him by the Bank.

Yours faithfully,

_____ Bank

By its Constituted Attorney

Signature of a person duly authorized
to sign on behalf of the Bank.


 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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F-11

PROPOSED SITE ORGANIZATION

The BIDDER is to indicate here the proposed site organization he proposes to set up for execution of the work. It is understood that this will be augmented from time to time depending on the requirements for timely completion of work, as directed by Engineer-in-Charge. The BIDDER is also to furnish the Bio-data of Site-in-Charge and key personnel to be deployed at site.

(SEAL AND SIGNATURE OF BIDDER)

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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F-12

CONSTRUCTION SCHEDULE WITH BAR CHART

Bidder shall submit Construction Schedule with Bar Chart for complete work covering all the following activities of work as applicable.

- 1) Mobilization:
- 2) Route Survey:
- 3) Design package Submission & Approval
- 4) Ordering for Supply Materials:
- 5) Supply of Material at site:
- 6) Installation:
- 7) Testing:
- 8) Commissioning:
- 9) Other Miscellaneous Works:

(SEAL AND SIGNATURE OF BIDDER)


 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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F-13

CONFIRMATION REGARDING SCHEDULE OF LABOUR RATES

We accept Schedule of Labor Rates attached in SCOPE OF WORK and also confirm acceptance for using the same for analyzing rates for extra items.

(SEAL AND SIGNATURE OF BIDDER)


 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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F-14

CONFIRMATION REGARDING SCHEDULE OF EQUIPMENT RATES

We accept Schedule of Equipment Rates attached in SCOPE OF WORK and also confirm acceptance for using the same for analyzing rates for extra items.


(SEAL AND SIGNATURE OF BIDDER)

 MAHARASHTRA NATURAL GAS LIMITED	TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA Bid No.: MNGL/CP/2022-23/187
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F-15

RATE FOR EXTENDED STAY COMPENSATION

Not Applicable

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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F-16

Format for No Claim Certificate
[On the Letter-head of Contractor]

NO CLAIM CERTIFICATE

We, _____, a company incorporated under the laws of India, having its Registered Office at _____ and carrying on business under the name and style M/s. _____ were awarded the Contract by Maharashtra Natural Gas Ltd. in reference to Tender No. _____ dated _____.

After completion of the above said Work under the contract, we have scrutinized all our claims, contentions, disputes, issues with the project officials and we hereby confirm that after adjusting all payments received by us against our R.A. Bills, our balance entitlement under the contract is to a sum of Rs. _____ (Rupees _____ only) as per our Final Bill dated _____ towards full and final settlement of all our claims, dues, issues and contentions from Maharashtra Natural Gas Ltd.


We confirm and declare that with the receipt of aforesaid monies, all our claims, dues, disputes, differences between M/s. _____ and Maharashtra Natural Gas Ltd. under and with reference to above said contract stands fully and finally settled.

We further absolve Maharashtra Natural Gas Ltd. from all liabilities present or future arising directly or indirectly out of the contract.

We further confirm that the present settlement has been arrived at after mutual negotiations and is freely and fairly entered into between the parties. There is no economic duress or any other compulsion on us in entering into this settlement.

Signature with Seal of Contractor

Dated:

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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FORMAT FOR TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date:

To,
M/s Maharashtra Natural Gas Limited
Pride Purple Coronet, 2nd Floor,
Baner Raod, Baner,
Pune – 411045

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: - _____

Dear Sir / Madam,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:
_____ as per your advertisement, given in the above mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department / organization too have also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We do hereby declare that our Firm has not been blacklisted/ debarred/ terminated/ banned by any Govt. Department/Public sector undertaking.
6. I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason thereof summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,
(Signature of the Bidder, with Official Seal)




**MAHARASHTRA
NATURAL GAS LIMITED**

**TENDER FOR ITEM RATE CONTRACT FOR A PERIOD
OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187

COMMERCIAL QUESTIONNAIRE
{Annexure – III to Instruction to Bidder (ITB)}


 MAHARASHTRA NATURAL GAS LIMITED	TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA Bid No.: MNGL/CP/2022-23/187
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COMMERCIAL QUESTIONNAIRE


Note:

- 1) The Bidder shall submit reply to each query.
- 2) The bidder's reply/ confirmation as furnished in the Commercial Questionnaire (CQ) shall supersede the stipulation mentioned elsewhere in the Bid.

Sl. No.	MNGL's Query	Bidder's Reply/ Confirmation
1.	Confirm that your Bid is valid for 4(four) month from the last date of submission of Bid.	
2.	Confirm that all details in unpriced part have been submitted. Bidding Document and drawings, signed and stamped on each page shall be submitted in original on e-tendering portal	
3.	Confirm that the following documents are submitted with Part-I :	
i)	All documents in relevant Section as per CHECK LIST	
ii)	Schedule of Rates/ Prices without specifying the rates/ prices are submitted in unpriced part, exactly as per the priced portion submitted in Part-II. In case some of items have not been quoted, such items should be identified in blank price format.	
iii)	Addendum duly signed and stamped on each page as a token of acceptance (applicable if issued).	
iv)	Confirm Acceptance of Labor rates submitted as per Annexure-11 of SCC.	
4.	Confirm that price has been submitted in 1 ORIGINAL only on e-tendering portal as per tender	
5.	Rates/ amount must be filled in format for 'Schedule of Rates' enclosed as part of Bidding Document. If quoted in separate typed sheets and any variation in item description, unit or quantity is noticed, the bid is liable to be rejected. In any case, Bidder shall be presumed to have quoted against the tendered description of work and the same shall be binding on the Bidder. Please confirm.	
6.	Confirm that deviation/ terms & conditions are not mentioned in the price part. In case any terms and condition is mentioned in the price part, the same shall be treated as null and void.	
7.	Confirm that you have studied complete Bidding Document including Technical and commercial part and your Bid is in accordance with the requirements of the Bidding Document.	
8.	Confirm your compliance to total Scope of Work mentioned in the Bidding Document.	
9.	Confirm your acceptance for 'Scope of Supply' as mentioned in Bidding Document.	
10.	Confirm your compliance to critical stipulations of tender document as mentioned below	
i	Defect Liability Period clause no. 80.0 of GCC	
ii	Contract Performance Security – clause no. 24.0 of GCC	
iii	Schedule of Rates – clause no. 87.0 of GCC	

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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Sl. No.	MNGL's Query	Bidder's Reply/ Confirmation
iv	Arbitration – clause no. 107.0 of GCC	
v	Termination – Clause nos. 32.0 A & B of GCC	
vi	Terms of Payment – as per Annexure-5 to SCC Technical	
vii	Price Reduction Schedule – Clause no. 27 of GCC	
11.	Confirm your acceptance for 'Time Schedule' as per Annexure – 3 to SCC (Technical).	
12.	Confirm that your quoted price includes following taxes/ duties, insurance etc.	
i)	All taxes, charges and duties assessed or levied in respect of profits earned or income receivable by the Contractor by reason of this Contract.	
ii)	All taxes, duties as per applicable for this WORK in accordance with the provision of General Conditions of Contract and Special Conditions of Contract.	
iii)	All types of insurance as per the provisions of General Conditions of Contract and Special Conditions of Contract.	
13.	Confirm that you have proposed adequate project/ site organization with qualified supervisory personnel having requisite experience including personnel responsible for safety, planning stores, QA/ QC etc.	
14.	Confirm that all costs resulting from safe execution of WORK, such as safety induction, use of protective clothing, safety glasses and helmet, safety precaution taken during monsoon, or any other safety measures to be undertaken by the Contractor for execution of work are included in the quoted rates.	
15.	Confirm the following :	
i)	The planning schedule, manpower estimates, construction equipment deployment schedule etc., submitted by the bidder with his Bid, are indicative and shall not be basis for extra compensation in case actual needs are higher.	
ii)	Detailed planning schedule developed by CONTRACTOR after contract award may be subject to fluctuations depending upon actual progress of the project and available work front.	
iii)	Co-ordination and making available by Contractor of all staff, manpower, construction equipment, tools, cranes, etc. and materials are required for a timely completion of all WORK as per Owner's construction and priority schedule and in accordance with the available work front are included in the quoted rates.	
iv)	Bio-Data of Key Personnel(s), such as Project Manager, Construction Manager, Lead Engineer for all relevant categories have been submitted in your Bid.	
16.	Please confirm that the deployment schedule of supervisory personnel(s) & deployment schedule of construction equipment shall be reviewed and firmed up after award of work	
17.	Please confirm the rate schedule of extra works and recovery rate of equipment as per SCC Technical is acceptable to you.	

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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Sl. No.	MNGL's Query	Bidder's Reply/ Confirmation
	<p>Note: Please note that Schedule of Rates/ Prices embodied in the Bidding Document is deemed to include all activities of work specified under Scope of Work, Scope of Supply, technical specifications, Conditions of Contract, drawings or any other document forming part of Bidding Document, irrespective of whether such activities of work are specified in the Schedule of Rates/ Prices or not.</p>	

(STAMP & SIGNATURE OF BIDDER)




**MAHARASHTRA
NATURAL GAS LIMITED**

**TENDER FOR ITEM RATE CONTRACT FOR A PERIOD
OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187

CHECK LIST

{Annexure – IV to Instruction to Bidder (ITB)}


 MAHARASHTRA NATURAL GAS LIMITED	TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA Bid No.: MNGL/CP/2022-23/187
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CHECK LIST FOR SUBMISSION OF BID

Bidder is requested to fill this check list and ensure that all details/ documents have been furnished as called for in the Bidding Document along with duly filled in, signed & stamped **check list with each copy of the “Unpriced Part”** of his bid.

OTHER ESSENTIAL DOCUMENTS REQUIRED (to be submitted by the bidder)

Sr. No.	Tender Clause/Item	Documents Required	Submitted (Yes/No)	Reference in Offer (Refer Page No.)
1.	Letter of Submission	As given in Part-A of the tender document		
2.	EMD/ BID GUARANTEE/ BID SECURITY	As per Tender Proforma F-4 of ITB		
3.	Past Similar work done during last five years	As per Format : F-8 of ITB		
4.	Present Commitments	As per Format : F-9 of ITB		
5.	PF & ESIC Registration Certificate	Relevant documents		
6.	Goods & Service Tax Registration Certificate	Relevant documents		
7.	Power of Attorney in favor of the person who has signed the bid on stamp paper of appropriate value.	Valid power of Attorney		
8.	Partnership Deed in case of partnership firm and Article of Association in case of limited company.	Relevant documents		
9.	Deployment List of Supervisory personnel.	As per tender		
10.	Minimum No. of major equipment	As per Annexure-9 of SCC(Technical).		
11.	Minimum no. of skilled labor	As per Annexure-10 of SCC(Technical)		
12.	A Tentative Quality Assurance Plan in line with Spec. and Format	As per Annexure-6 to SCC (Technical)		
13.	Site Organization Chart	As per Format - F-11 of ITB		
14.	Bio-Data of key supervisory personnel such as Project Manager, Construction Manager, A/ QC Manager, lead engineer, site engineer etc.:	Bio-data of all key supervisory personal to be deployed		
15.	An overall schedule in the form of Bar Chart	As per format-12		
16.	Schedule of Labor Rates	As per Format - F-13 & SCC(Technical)		

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Sr. No.	Tender Clause/Item	Documents Required	Submitted (Yes/No)	Reference in Offer (Refer Page No.)
17.	Schedule of equipment rates, Rate for Extra work and recovery rate of equipment.	As per Format – F-14 & SCC(Technical)		
18.	Health Safety and Environment (HSE) Policy and HSE Manual.	As per Annexure-7 of SCC (Technical)		
19.	A copy of SOR (without prices) duly signed & stamped as per SOR Format	-		
20.	Original copy of Bidding Document & Drawings along with Addendum, if any, has been submitted along with offer, duly signed and stamped on each page			
21.	No Deviation Confirmation	As per Format - F-6 of ITB		
22.	Reply to commercial questionnaire, with Bidder's reply/ confirmation	As per Annexure-III to ITB		

(STAMP & SIGNATURE OF BIDDER)




**MAHARASHTRA
NATURAL GAS LIMITED**

**TENDER FOR ITEM RATE CONTRACT FOR A PERIOD
OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187

PART-C

GENERAL CONDITIONS OF CONTRACT (GCC-WORKS)

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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1.0 DEFINITIONS

1.1 All the initial capitalized terms used in the Agreement shall have the meaning as ascribed to such term hereunder:

(a) **'Agreement' or 'Contract'** means the agreement entered into between the Purchaser / Owner and the Supplier, including all attachments and appendices thereto and all documents incorporated by reference therein, as modified, reinstated or amended from time to time.

(b) **'Completion Schedule'** or 'Delivery Schedule' means a schedule approved by the Owner for completion of all obligations of the Supplier under the Agreement.

(c) **'Contract Documents'** mean all the documents referred to in the Agreement for discharging the requisite obligations by respective party.

(d) **'Contract Price'** means the price payable to the Supplier under the Contract for the full and proper performance of all its contractual obligations.

(e) **'Day', 'Month' or 'Year'** means calendar day, calendar month or calendar year.

(f) **'Engineer In-charge'** means an authorized representative of the Purchaser / Owner, if any, to which the Purchaser / Owner has entrusted various tasks in relation to the carrying out of his Project and in particular the implementation of the relevant Agreement. The Engineer is fully empowered to represent the Purchaser / Owner. For avoidance of doubt, Consultant may be an Engineer. In case the Agreement does not specify the intervention by the Engineer, the rights and obligations are exercised and borne by the Purchaser / Owner, mutatis mutandis.


(g) **'Effective Date'** means a date on which Supplier's obligations will commence and thereupon Delivery Schedule and/or Completion Schedule will be drawn up.

(h) **'Goods'** means all of the equipment, machinery, and/or other materials which the Supplier is required to supply to the Purchaser / Owner under the Agreement.

(i) **'GCC'** means the General Conditions of the Contract contained in this section.

(j) **'Inspector'** means any person or outside Agency nominated by Purchaser / Owner to inspect equipment, stage wise as well as final, before dispatch, at Supplier's works and/or on receipt at Site as per terms of the Agreement.

(k) **'Notification of Award'** means date which is earlier of either a Fax of Intent (FOI) or Letter of Intent LOI) or Letter of Award (LOA) or Service Order (SO) issued to a successful bidder for award of the work pursuant to bidding process.

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(l) **‘Purchaser’ or ‘Owner’** shall mean Maharashtra Natural Gas Limited (MNGL), a company incorporated in India having its registered office at **Plot No. 27, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra 411005**. The term OWNER includes its successors & assigns.

(m) **‘Services’ or ‘Ancillary Services’** means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other such obligations of the Supplier covered under the scope of the Agreement.

(n) **‘Site’ or ‘Purchaser’s stores’** means the place or places named in tender document.

(o) **‘SCC’** means the Special Conditions of the Contract forming a part of the Contract Documents.

(p) **‘Supplier’ or ‘Seller’ or ‘Contractor’ or ‘Vendor’** means the individual person or firm or body corporate supplying the Goods and/or Services under the Agreement.

(q) **‘FOT’** – means that the Goods or supply items or services shall be delivered and done at site(s) warehouses or places mentioned by the Purchaser on FOT (Free on Terminal) basis.

2.0 APPLICATION

2.1 These General Conditions of Contract shall apply to the extent that they are not superseded by provisions of the Contract Agreement.


3.0 CONTRACTOR TO INFORM

3.1 The Contractor / Supplier / Seller shall be deemed to have carefully examined all contract documents to his entire satisfaction. Any lack of information shall not in any way relieve the Contractor / Supplier / Seller of his responsibility to fulfill his obligation under the Contract.


4.0 SCOPE OF CONTRACT

4.1 Scope of the CONTRACT shall be as defined in the Purchase Order / Contract specifications, drawings and Annexure thereto. For provisions not covered under the Purchase Order / Contract, provisions of General Conditions of Contract (GCC) and Special Conditions of Contract (SCC) of the tender document against which the Purchase Order / Contract has been placed shall prevail.

4.2 Completeness of the equipment shall be the responsibility of the Seller. Any equipment, fittings and accessories which may not be specifically mentioned in the specifications or drawings, but which are usual or necessary for the satisfactory functioning of the equipment (successful operation and functioning of the equipment being Seller’s responsibility) shall be provided by Seller without any extra cost.

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- 4.3 The Seller shall follow the best modern practices in the manufacture of high grade equipment notwithstanding any omission in the specifications. The true intent and meaning of these documents is that Seller shall in all respects, design, engineer, manufacture and supply the equipment in a thorough workmanlike manner and supply the same in prescribed time to the entire satisfaction of Purchaser.
- 4.4 The Seller shall furnish 2 nos. copies in English language of Technical documents, final drawings, preservation instructions, operation and maintenance manuals, test certificates, spare parts catalogues for all equipment's to the Purchaser.
- 4.5 The documents once submitted by the Seller shall be firm and final and not subject to subsequent changes. The Seller shall be responsible for any loss to the Purchaser / Consultant consequent to furnishing of incorrect data/drawings.
- 4.6 All dimensions and weight should be in metric system.
- 4.7 All equipment to be supplied and work to be carried out under the Contract shall conform to and comply with the provisions of relevant regulations / Acts (State Government or Central Government) as may be applicable to the type of equipment / work carried out and necessary certificates shall be furnished.
- 4.8 The Seller shall provide cross sectional drawings, wherever applicable, to identify the spare part numbers and their location. The size of bearings, their make and number shall be furnished.
- 4.9 Specifications, design and drawings issued to the Seller along with RFQ and Contract are not sold or given but loaned. These remain property of Purchaser / Consultant or its assigns and are subject to recall by Purchaser / Consultant. The Seller and his employees shall not make use of the drawings, specifications and technical information for any purpose at any time except for manufacture against the Contract and shall not disclose the same to any person, firm or corporate body, without written permission of Purchaser / Consultant. All such details shall be kept confidential.
- 4.10 Seller shall pack, protect, mark and arrange for dispatch of equipment as per instructions given in the Contract.
- 5.0 INTERPRETATION OF CONTRACT DOCUMENTS**
- 5.1 Notwithstanding the sub-divisions of the contract documents into separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the Contract so far as it may be practicable to do so.
- 5.2 Where any portion of the General Condition of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract then, unless a different intention appears the

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provisions of the Special Conditions of Contract shall be deemed to override the provisions of the General Conditions of Contract and shall to the extent of such repugnancy, or variations, prevail.

6.0 COUNTRY OF ORIGIN


- 6.1 For purpose of this Clause, 'origin' means the place where the Goods were mined, grown, or produced. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 6.2 The origin of Goods and services may be different from the nationality of the Supplier.

7.0 STANDARDS

- 7.1 The Goods supplied under this Agreement shall conform to the standards mentioned in the Technical Specifications and when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' in country of origin. Such standards shall be the latest issued by the concerned institution.

8.0 CONFIDENTIALITY

- 8.1 The Supplier cannot, without agreement of the Purchaser, disclose nor enable third parties to benefit from the documents drawn up in the course of his obligations under the Agreement or information received from the Purchaser / Consultant / Engineer / Inspector.
- 8.2 Further, Supplier is not allowed to publish copy or transmit to third parties the documents that are transmitted to him by Purchaser or Consultant or Engineer or Inspector. The Purchaser or Consultant retains the right to claim damages from the supplier in the case where these documents have been used without such written consent.
- 8.3 However, these obligations do not apply to documents for which it can be demonstrated that,
- Such documents were already public before these were communicated to the other party, or have become public since without any fault or negligence of the party concerned, or
 - Such documents were already in its possession without having obtained them directly or indirectly from the other party, or
 - Such documents were obtained from an independent source that had neither direct nor indirect secrecy commitment to the other party.
- 8.4 Regarding the application of this clause, the experts appointed by the Purchaser / Engineer are not considered as third parties, and for this reason they have to respect, towards the Supplier, the same obligations as the Purchaser in these matters.
- 8.5 Any document, other than the Agreement itself as enumerated in GCC Clause

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(a), shall remain the property of the Purchaser and shall be returned (all copies) to the Purchaser on completion of the Supplier's obligations under the Agreement.

- 8.6 The Seller shall not, without the Purchaser's prior written consent, disclose the Contract or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Seller in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purpose of such performance.


9.0 CONTRACT OBLIGATIONS

- 9.1 If after award of the contract, the Seller does not acknowledge the receipt of award or fails to furnish the performance guarantee within the prescribed time limit, the Purchaser reserves the right to cancel the contract and apply all remedies available to him under the terms and conditions of this contract.
- 9.2 Once a contract is confirmed and signed, the terms and conditions contained therein shall take precedence over the Seller's bid and all previous correspondence.
- 9.3 Any neglect or omission or failure on the part of the Contractor in obtaining necessary and reliable information upon the foregoing or any other matters affecting the Contract shall not relieve him from any risks or liabilities or the entire responsibility from completion of the works at the scheduled rates and times in strict accordance with the Contract.
- 9.4 Any change in layout due to site conditions or technological requirement shall be binding on the Contractor and no extra claim on this account shall be entertained.


10.0 MODIFICATION IN CONTRACT

- 10.1 All modifications leading to changes in the Contract with respect to technical and/or commercial aspects including terms of delivery, shall be considered valid only when accepted in writing by Purchaser by issuing amendment to the Contract. Issuance of acceptance or otherwise in such cases shall not be any ground for extension of agreed delivery date and also shall not affect the performance of contract in any manner except to the extent mutually agreed through a modification of contract.
- 10.2 Purchaser shall not be bound by any printed conditions or provisions in the Seller's Bid Forms or acknowledgment of Contract, invoices, packing list and other documents which purport to impose any conditions at variance with or supplemental to Contract.

11.0 DELAYS BY OWNER OR HIS AUTHORISED AGENTS

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- 11.1 In case the Contractor's performance is delayed due to any act or omission directly attributable to Owner or his authorized agents, then the Contractor shall be given due extension of time for the completion of the Work, to the extent such omission on the part of the Owner has caused delay in the Contractor's performance of his Work against written request by contractor and after Owner's verification.
- 11.2 No adjustment in Contract Price shall be allowed for reasons of such delays and extensions granted, except when contractor is requested by Owner to maintain the agreed time schedule of completion by engaging additional Contractor's personnel for additional time beyond stipulated working hours as also on Sundays and Holidays and achieve the completion date / interim targets.
- 12.0 PATENT RIGHTS**
- 12.1 The Supplier shall alone bear the liability and costs of any prejudicial consequence of any infringement of all or part of the patents, industrial trademarks, designs and models relating to the Goods. Therefore, the Supplier shall make the arrangements at his own expense with the holders and pay the royalties, obtain the necessary licenses and authorizations, failing which he agrees to modify the Goods to the extent needed to avoid any such infringement.
- 12.2 In case of legal action or proceedings for infringement against the Owner, the Supplier undertakes to:
- Stand up for the Owner in the defense of his rights and interests.
 - Save Purchaser harmless of any legal, financial and other consequences as may result to him from the legal action or proceedings;
 - Bear all the damages and interests as may be due to the holders of the patents, industrial trademarks, designs and models, in principal, costs and interests;
 - Reimburse to the Purchaser, at the Purchaser's first request, the costs of any nature whatsoever, including the fees of lawyers, experts and technical advisers, etc. incurred due to or on the occasion of the legal action or proceedings.
 - To modify if need to be and without delay, the incriminated Goods / equipment, or have it replaced, free of charge, by equivalent Goods / equipment free of any infringement. Supplier alone shall bear all the costs, risks and liability that result thereof including the costs of dismantling, erecting, adapting or modifying such Goods/ equipment and starting up, etc.
- 12.3 In case of legal action or proceedings for infringement brought against the Purchaser, the Supplier has the right to participate in the Owner's defense. Any transaction with the third party in such cases shall be discussed and jointly agreed by the parties, wherever feasible.
- 12.4 The modifications to be brought to the Goods must have the prior consent of the Purchaser. This consent cannot in any way lessen the obligations of the Supplier that result from the present article, also in cases when new legal action or proceedings are initiated following the modifications that were made.


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13.0 CONTRACT-CUM-EQUIPMENT PERFORMANCE BANK GUARANTEE

- 13.1 Within 21 days from the receipt of notification of award of the Contract / Purchase Order, the Seller shall furnish Performance Guarantee to the Purchaser in the form of Demand Draft or Bank Guarantee from any Nationalized / Scheduled bank, in the format provided in the Tender Document.
- 13.2 The performance guarantee shall be denominated in the currency of the Contract.
- 13.3 The Performance Bank Guarantee shall be valid for a duration of 90 days beyond the expiry of Contract period / Defect Liability Period / Warranty Period, whichever later. The claim period of the Performance Bank Guarantee (BG) shall be further one month beyond the validity of the BG. The Bank Guarantee will be discharged by Purchaser not later than 6 months from the date of expiration of the Seller's entire obligations, including any warranty obligations, under the Contract.
- 13.4 The CPBG shall be refunded after successful completion of the contract and after adjustment of any and all dues of the MNGL which may arise during the execution of the contract and a confirmation that contractor has cleared all its dues pertaining to the contract and all liabilities etc., in addition indemnifying MNGL against any future claims, if any.
- 13.5 The Company shall have the right to forfeit the security deposit in case of non-satisfactory performance of the contract.


14.0 INSPECTIONS AND TESTS

- 14.1 The Supplier will submit to Purchaser the Quality Assurance Plan (QAP) regarding design, manufacture and testing of all the items required under the Agreement within 15 days of Notification of Award. Purchaser will then review the QAP and inform the Seller, the stages when the Purchaser / Inspector / Engineer would witness the tests and/or inspect the Goods under manufacturing, beyond which the progress of the specified activity / manufacturing will not proceed, without written approval. Such points during the progress of work under the Agreement shall be called as Customer Hold Points (CHP's)
- 14.2 The Seller will inform Purchaser fifteen (15) Days in advance for readiness of material for all such identified CHP's.
- 14.3 The Purchaser or its representative shall have the right to inspect and / or to test the Goods to confirm their conformity to the requirements of the Agreement at no extra cost to the Purchaser. SCC and / or the Technical Specifications shall specify what inspections and tests the Purchaser requires and to the extent feasible, where they are to be conducted. All costs for such inspections and tests except the cost of travel, boarding and lodging of the Purchaser's representative / Inspector shall be to the account of the Supplier. The Purchaser shall notify the Supplier in writing,

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in a timely manner, of the identity of any such representatives, (if outside of Purchaser's organization) retained by it for these purposes.

- 14.4 The inspections and tests may be conducted on the premises of the manufacturer or Supplier or its sub-supplier(s), at point of delivery, and / or at the Goods' final destination. If conducted on the premises of the manufacturer or Supplier or its sub-supplier(s), all reasonable facilities and assistance, including access to drawings and production data, shall be provided by the Supplier to the inspectors at no charge to the Owner.
- 14.5 Should any inspected or tested Goods fail to conform to the Specifications, the Owner may reject the Goods, and the Supplier shall either replace the rejected Goods meeting the Specification requirements or make alterations necessary to meet Specification requirements free of cost to the Purchaser.
- 14.6 Nothing mentioned in this Inspection and Tests clause shall in any way release the Supplier from any warranty or other obligations under the Agreement.
- 14.7 Inspection & Rejection of Materials by consignees - When materials are rejected by the consignee, the supplier shall be intimated with the details of such rejected materials, as well as the reasons for their rejection, also giving location where such materials are lying at the risk and cost of the contractor/supplier. The supplier will be called upon either to remove the materials or to give instructions as to their disposal within 14 days and in the case of dangerous, infected and perishable materials within 48 hours, failing which the consignee will either return the materials to the contractor freight to pay or otherwise dispose them off at the contractor's risk and cost. The Purchaser shall also be entitled to recover handling and storage charges for the period, during which the rejected materials are not removed @ 5% of the value of materials for each month till the rejected materials are finally disposed-off.
- 15.0 ADDITIONAL TEST**
- 15.1 The Purchaser can also request for additional tests which were not identified and specified in the QAP, but considers necessary to ensure the quality of the raw materials or of the manufacturer.
- 15.2 In any case, additional tests shall be designed so as to require a minimum of time. Provided further before starting these additional tests, the Supplier defines and justifies, to the Purchaser's satisfaction, the possible effects of the duration of these tests on the contractual time-limits / schedule(s).
- 15.3 The Supplier places at the disposal of the Purchaser, or of the chosen official or approved organization, the tools and/or items of general use, which belong to him as well as the staff necessary for the additional tests decided by the Purchaser.
- 15.4 Should these additional tests reveal unacceptable faults, taking into account the features asked for and the Specifications that entail the repair or rejection of the relevant item or components, the Supplier will be responsible of the ensuing delays, inasmuch as these tests have been made in the

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shortest possible time. He shall bear, in such case, any costs he has had to incur for the carrying out of the tests.

- 15.5 If, on the other hand, the additional tests do not reveal, in the opinion of the Purchaser, unacceptable faults as indicated above, the cost borne by the supplier for the carrying out of these tests will be invoiced to the Owner, after prior justification, and the Supplier may be entitled to reasonable extension of the time limit.

16.0 PACKING

- 16.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Agreement. The packing shall be sufficient to withstand, without limitation, rough handling during transit and tropical humid conditions as exposure to extreme temperatures, salinity and precipitation during transit, and open storage. Further the size and weights of the packing cases shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.


- 16.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Agreement, including additional requirements, if any, specified in the SCC, and in any subsequent instructions of the Purchaser.

17.0 DISPATCH INSTRUCTIONS

- 17.1 At least fifteen (15) Days before the expected dispatch date, the Supplier shall obtain authorization from the Purchaser / Consultant to go ahead with the dispatching, after ensuring compliance to other requirements of the Agreement.

18.0 DELIVERY AND DOCUMENTS

- 18.1 Delivery of the Goods shall be made by the Supplier in accordance with the Delivery Schedule specified in the Agreement. The details of shipping and/or other documents are to be furnished by the Supplier.
- 18.2 The delivery terms are binding and essential and consequently, no delay is allowed without the written approval of Purchaser / Consultant. Any request concerning delay will be void unless accepted by Purchaser / Consultant through a modification to the Contract.
- 18.3 Delivery time shall include time for submission of drawings for approval, incorporation of comments, if any, and final approval of drawings by Purchaser / Consultant
- 18.4 In the event of delay in delivery, Price Reduction Schedule shall apply.

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18.5 The documentation, in English Language, shall be delivered in due time, in proper form and in the required number of copies as specified in the contract.

18.6 The Seller should comply with the Packing, Marking and Shipping Documentation Specifications enclosed.

19.0 TRANSPORTATION

19.1 Where the Supplier is required under the Scope of the Contract to transport the Goods to a specified place of destination or to Site, the Supplier shall transport to such place of destination or site, as the case may be, including insurance and storage, if required. The Contract Price will include costs of all such transportation.

19.2 The Supplier shall select such carrier which could deliver the Goods in requisite time. In such case, Supplier shall be required to check (i) Age of the carrier; (ii) scheduled and actual maintenance; (iii) payment of relevant fees; (iv) pending claims, if any; (v) past accident records etc., so as to ensure safe and timely transportation of the Goods.


19.3 In case delay occurs for reasons not attributable to Purchaser alone, the Supplier shall, if directed by Purchaser, adapt a specific way of delivery of Goods (air freight or likewise) at destination, the additional cost which will be borne by the Supplier. If such specific way of delivery is required by Purchaser to pre-pone the deliveries, nevertheless, Supplier will arrange the same and difference of justified transportation charges will also be borne by the Purchaser.

19.4 Supplier has to make necessary arrangement to deliver and load/unload the Goods to MNGL designated sites at his own arrangement after intimation of erection, installation, testing and commissioning by the MNGL Engineer-In-charge.

20.0 GUARANTEE/ WARRANTY

20.1 The Supplier warrants that the Goods supplied under the Agreement are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract Documents. The Supplier further warrants that all Goods supplied under this Agreement shall have no defect, arising from design, materials, or workmanship (except when the design and / or material is required by the Purchaser's specifications and the Supplier has given his disclaimer of warranty obligations with respect to such requirement) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the place of use / destination.

20.2 This warranty shall remain valid for at least twelve (12) months from the date of successful commissioning of individual equipment or Eighteen (18) Months after the date of last shipment whichever is earlier or as specified under the Special Conditions of Contract. However, if warranty period exceeds due to any defect observed in the equipment at site and the time taken in

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rectification and commissioning, the warranty will stand extended for at least another 12 months from the date of completion of rectification free of cost.


- 20.3 Bidder will assume responsibility for obtaining manufacturer's warranty for all bought out items and maintain sufficient stock of spares at each site to meet urgent requirements.
- 20.4 After the successful completion of Test run, Warranty phase will start and system taking over certificate shall be issued by the Owner.
- 20.5 The Owner shall promptly notify the Supplier in writing of any claims arising under this warranty.
- 20.6 Upon receipt of such notice, the Supplier shall, within a reasonable period, repair or replace the defective Goods or parts thereof, free of cost to the Purchaser, deliver at the appropriate destination. The Supplier may take over the replaced parts / Goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts / goods thereafter. In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected / replaced Goods or item or material shall be extended to a further period of twelve (12) Months from the date of such repair/replacement if put to use immediately or eighteen (18) Months.
- 20.7 If the Supplier, having been notified, fails to remedy the defect(s) within a reasonable period, the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Agreement.

21.0 LATENT DEFECT

- 21.1 If any latent defect (a defect which could not have manifested itself in the normal course of inspection and testing as per relevant codes, test procedures and contract specifications and normal usage as per industry practice will be referred to as latent defect) surfaces within five years of putting the Goods or parts thereof into operation, the Supplier shall repair or replace such Goods or parts, as the case may be, within technically reasonable period to the satisfaction of the Purchaser and without any additional liability on the Purchaser, whatsoever.

22.0 PAYMENT TERMS

- 22.1 The Seller's request(s) for payment shall be made to the Purchaser in writing accompanied by an invoice describing, as appropriate, the Goods delivered and services performed, and by shipping documents submitted, and upon fulfilment of other obligations stipulated in the Contract.
- 22.2 Payment will be made in the currency or currencies in which the Contract Price has been stated in the Seller's bid, as well as in other currencies in which the Seller had indicated in his bid that he intends to incur expenditure in the performance of the Contract and wishes to be paid. If the

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requirements are stated as a percentage of the bid price along with exchange rates used in such calculations these exchange rates shall be maintained.

22.3 General Notes:


- (a) All foreign currency payments to foreign bidder shall be released through an irrevocable Letter of Credit, which shall be opened through Government of India Nationalized Bank and hence shall not be confirmed. In case any bidder insists on confirmation, charges towards confirmation shall be borne by him. L/C shall be established within 30 days after receipt of unconditional acceptance of Fax of Intent together with Performance Guarantee as applicable.
- (b) For dispatches on FOT dispatch point (in India) basis, the payment shall be through Purchaser's bank. Payment through Bank, wherever applicable, shall be released as per normal banking procedures.
- (c) Payment shall be released within 45 days after receipt of relevant documents complete in all respects.
- (d) All bank charges incurred in connection with payments shall be to Seller's account in case of Indian bidders and to respective accounts in case of foreign bidder.
- (e) Unless otherwise specifically stated in bid document, all payments shall be made in the currency quoted.
- (f) No interest charges for delay in payments, if any, shall be payable by Purchaser.
- (g) In case of Indian bidder, variation, if any, on account of customs duty on their built-inimport content, as per terms of tender document, shall be claimed separately by bidder after receipt of goods at site(s). However, any price benefits to the Purchaser, on account of such variation as per terms specified in the tender document, shall be passed on to the Purchaser along with invoicing itself.
- (h) Agency commission, if any, to Indian agent for foreign bidders, indicated in prices, shall be paid to the agent in equivalent Indian Rupees on receipt and acceptance of material at site.

23.0 PRICES AND PRICE BASIS

- 23.1 Prices charged by the Supplier for Goods delivered and Services performed under the Agreement shall be on firm price basis and not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the tender document. Prices quoted by the Bidder, shall remain firm and fixed and valid until completion of the Contract and will not be subject to variation on any account except as per provisions of the tender document only.

24.0 FALL CLAUSE

- 24.1 The price charged for the materials supplied under the order by the supplier shall in no event exceed the lowest price at which the supplier or his agent / principal / dealer, as the case may be,

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sells the materials of identical description to any Persons / Organizations including the Purchaser or any Department of the Central Govt. or any Department of a State Govt. or any Statutory Undertaking of the Central or State Govt. as the case may be, during the currency of the order.

- 24.2 If at any time during the said period, the supplier or his agent / principal / dealer, as the case may be, reduces the sale price, sells or offers to sell such materials to any persons / organizations including the Purchaser or any Department Of Central Govt. or State Govt. as the case may be, at a price lower than the price chargeable under the order, he shall forthwith notify such reduction or sale or offer of sale to the Purchase Authority who has issued this order and the price payable under the order for the materials supplied after the date of coming into force of such reduction or sale or offer of sale shall stand correspondingly reduced.
- 24.3 The above stipulation will, however, not apply to:
- (a) Exports by the Contractor / Supplier or
 - (b) Sale of goods as original equipment at prices lower than the prices charged for normal replacement
 - (c) Sale of goods such as drugs which have expiry dates.
- 24.4 The supplier shall furnish the following certificate to the concerned Paying Authority along with each bill for payment for supplies made against this order:


“I/We certify that there has been no reduction in sale price of the items / goods / materials of description identical to those supplied to MNGL under the order herein and such items / goods / materials have not been offered/sold by me/us to any person / organizations including the Purchaser or any Dept. of Central Govt. or any Dept. of State Govt. or any Statutory Undertaking of the Central or State Govt. as the case may be up to the date of bill / during the currency of the order whichever is later, at a price lower than the price charged to MNGL under the order”. Such a certificate shall be obtained, except for quantity of items / goods / materials categories under exceptions mentioned above, of which details shall be furnished by the supplier.

25.0 ASSIGNMENT

- 25.1 The Supplier shall not assign, in whole or in part, any of its obligations to be performed under this Agreement to any third party, except with the Owner’s prior written consent.

26.0 SUB-CONTRACTING

- 26.1 The Supplier shall notify the Owner in writing of all subcontracts awarded under this Agreement if not already notified in the Supplier’s bid and incorporated in the Agreement Such notification and incorporation shall not relieve the Supplier from any liability or obligation under the Agreement. Such sub-contract shall be limited to certain bought-out items and sub-assemblies, which are not in line of Supplier’s manufacturing or proposed manufacturing unit of authorized Supplier.

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- 26.2 Such purchases and subcontracted items shall have to be necessarily in full compliance with the terms and conditions of the Agreement and do not relieve the Supplier of any of his contractual obligations. The Supplier shall be solely responsible for any action, deficiency or negligence of his sub-contractors.
- 26.3 For any subcontract, the Purchaser is entitled to demand from the Supplier, for approval of the list sub-contractors the Supplier intends to involve and of the orders he may entrust to them. The Purchaser may further demand that proposals of competitors be produced for him to examine. Approval by the Owner cannot give rise to any legal bond between the Purchaser and the sub-contractors and leaves full responsibility only to the Supplier.
- 26.4 In the event where the warranty agreed between the Supplier and his sub-Suppliers exceeds in scope or in period those required under the Agreement, the Supplier undertakes to make the Purchaser the full and direct beneficiary of such warranty.


27.0 TIME SCHEDULE & PROGRESS REPORTING

27.1 Time Schedule Network / Bar Chart


- (a) Together with the Contract confirmation, Seller shall submit to Purchaser, his time schedule regarding the documentation, manufacture, testing, supply, erection and commissioning of the Goods.
- (b) The time schedule will be in the form of a network or a bar chart clearly indicating all main or key events regarding documentation, supply of raw materials, manufacturing, testing, delivery, erection and commissioning.
- (c) The original issue and subsequent revisions of Seller's time schedule shall be sent to Purchaser.
- (d) The time schedule network / bar chart shall be updated at least every second month.

27.2 Progress Trend Chart / Monthly Report

- (a) Seller shall report monthly to Purchaser, on the progress of the execution of Contract and achievement of targets set out in time bar chart.
- (b) The progress will be expressed in percentages as shown in the progress trend chart attached to the Time Schedule specification.
- (c) The first issue of the Progress Trend Chart will be forwarded together with the time bar chart along with Contract confirmation.

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- 27.3 Purchaser's / Consultant's representatives shall have the right to inspect Seller's premises with a view to evaluating the actual progress of work on the basis of Seller's time schedule documentation.
- 27.4 Irrespective of such inspection, Seller shall advise Consultant, with copy to Purchaser, at the earliest possible date of any anticipated delay in the progress.
- 27.5 Notwithstanding the above, in case progress on the execution of contract at various stages is not as per phased time schedule and is not satisfactory in the opinion of the Purchaser / Consultant which shall be conclusive or Seller shall neglect to execute the Contract with due diligence and expedition or shall contravene the provisions of the Contract, Purchaser / Consultant may give notice of the same in writing to the Seller calling upon him to make good the failure, neglect or contravention complained of. Should Seller fail to comply with such notice within the period considered reasonable by Purchaser / Consultant, the Purchaser / Consultant shall have the option and be at liberty to take the Contract wholly or in part out of the Seller's hand and make alternative arrangements to obtain the requirements and completion of Contract at the Seller's risk and cost and recover from the Seller, all extra cost incurred by the Purchaser on this account. In such event Purchaser shall not be responsible for any loss that the Seller may incur and Seller shall not be entitled to any gain. Purchaser shall, in addition, have the right to encash Performance Guarantee in full or part.
- 28.0 DELAYS IN THE SUPPLIER'S PERFORMANCE
- 28.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Purchaser in the Delivery Schedule.
- 28.2 If at any time during performance of the Agreement, the Supplier or its subcontractor(s) encounters conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without levy of Price Reduction Schedule, in which case the extension shall be ratified by the parties by amendment of Agreement.
- 28.3 Except as provided under GCC Clause – "Force Majeure" or for the reasons solely attributable to the Purchaser, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of Price Reduction Schedule (PRS) unless an extension of time is agreed upon pursuant to above sub-clause (ii) without the application of PRS.
- 29.0 PRICE REDUCTION SCHEDULE (PRS)
- 29.1 Time is the essence of the Contract. In case the Contractor fails to complete the Work within the Contractual Completion period, then, unless such failure is due to Force Majeure as defined herewith or due to Owner's defaults, the Contractor shall pay to the Owner, by way of compensation for delay and not as penalty, a sum @ ½% (half per cent) per complete week of

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delay of the value of the “supply portion for the quantity” OR “the work portion” that is delayed per complete week subject to maximum of 5% (Five Per Cent) of the total contract value.

29.2 The parties agree that this is a genuine pre-estimate of the loss/damage which will be suffered on account of delay/breach on the part of the Contractor and the said amount will be payable on demand without there being any proof of the actual loss or damages caused by such delay/breach. The decision of Owner in regard to the actual delay shall be final and binding on the Contractor. All sums payable by way of compensation shall be considered as reasonable compensation without reference to the actual loss or damage which shall have been sustained.

29.3 In case of delay in delivery on the part of Seller, the invoice/document value shall be reduced proportionately for the delay and payment shall be released accordingly. In the event the invoice value is not reduced proportionately for the delay, the Purchaser may deduct the amount so payable by Seller, from any amount falling due to the Seller or by recovery against the Performance Guarantee.

30.0 TERMINATION FOR DEFAULT


30.1 Except for the cases provided for in Clause” Force Majeure”, if the Supplier fails to execute the work or any part thereof with such diligence as will ensure its completion within the time specified in the contract or extension thereof or fails to perform any of his obligation under the contract or in any manner commits a breach of any of the provisions of the contract it shall be open to the owner at its option by written notice to the supplier

(a) TO DETERMINE THE CONTRACT in which event the Contract shall stand terminated and shall cease to be in force and effect on and from the date appointed by the Owner on that behalf, where upon the Contractor shall stop forthwith any of the Contractor's work then in progress, except such Work as the Owner may, in writing, require to be done to safeguard any property or WORK, or installations from damage, and the Owner, for its part, may take over the work remaining unfinished by the Contractor and complete the same through a fresh Contractor or by other means, at the risk and cost of the Contractor, and any of his sureties if any, shall be liable to the Owner for any excess cost occasioned by such work having to be so taken over and completed by the Owner over and above the cost as worked out in terms of the contract.

(b) WITHOUT DETERMINING THE CONTRACT to take over the work of the Contractor or any part thereof and complete the same through a fresh Contractor or by other means at the risk and cost of the Contractor and any of his sureties are liable to the Owner for any excess cost over and above the cost as worked out in terms of the contract, occasioned by such works having been taken over and completed by Owner.


30.2 Before determining the Contract, provided in the judgment of the Owner, the default or defaults committed by the Contractor is/are curable and can be cured by the Contractor if an opportunity is given to him, then the Owner may issue notice in writing calling the Contractor to cure the default within such time specified in the notice.

30.3 The Owner shall also have the right to proceed or take action as per above, in the event that the Contractor becomes bankrupt, insolvent, compounds with his creditors, assigns the Contract in


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favor of his creditors or any other person or persons, or being a company or a corporation goes into voluntary liquidation, provided that in the said events it shall not be necessary for the Owner to give any prior notice to the Contractor.

- 30.4 Termination of the Contract as provided for above shall not prejudice or affect the rights of the Owner which may have accrued up to the date of such termination.
- 30.5 In case of termination of CONTRACT herein set forth except under conditions of Force Majeure and termination after expiry of contract, the CONTRACTOR shall be put under holiday [i.e. neither any enquiry will be issued to the party by Maharashtra Natural Gas Limited against any type of tender nor their offer will be considered by MNGL against any ongoing tender (s) where contract between MNGL and that particular CONTRACTOR (as a bidder) has not been finalized] for three years from the date of termination by Maharashtra Natural Gas Limited to such CONTRACTOR.
- 31.0 OWNER MAY DETERMINE / TERMINATE CONTRACT**
- 31.1 Owner shall, at any time, be entitled to determine and terminate the Contract, in whole or in part for any cause whatsoever. A notice in writing from the Owner to the Contractor shall be issued giving 30 (Thirty) days' time for such determination including the reason thereof.
- 31.2 The Contractor upon receipt of such notice shall discontinue the Work on the date and to the extent specified in the notice, make all reasonable efforts to obtain cancellation of all orders and contracts to the extent they are related to works terminated and upon terms satisfactory to Owner, stop all further sub-contracting or purchasing activity related to the works terminated and assist the Owner in maintenance, protection and disposition of the works acquired under the Contract by the Owner.
- 32.0 TERMINATION FOR INSOLVENCY**
- 32.1 The Purchaser, may at any time, terminate the Contract by giving written notice to the Seller, without compensation to the Seller, if the Seller becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.
- 33.0 TERMINATION FOR OWNER'S CONVENIENCE**
- 33.1 The Owner, by written notice sent to the Contractor, may terminate the Agreement, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Owner's convenience, the extent to which performance of the Contractor under the Agreement is terminated, and the date upon which such termination becomes effective.
- 33.2 The Goods that are complete and ready for shipment / dispatch as on the date of Contractor's receipt of notice of termination shall be accepted by the Owner on the terms and prices mutually agreed at that time.
- 33.3 For the remaining Goods, the Owner may elect:
- (a) To have any portion completed and delivered at the Agreement terms and prices and / or

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- (b) To cancel the remainder and pay to the Contractor an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Contractor; and/or
 - (c) To pay any reasonable and demonstrable otherwise non-recoverable expenses incurred by the Contractor.
- 33.4 MNGL reserves the right to award the contract for a shorter duration than the specified or foreclose it with adequate advance notice not less than 30 days due to change in its business requirement.
- 34.0 FORCE MAJEURE
- 34.1 For purposes of this clause, 'Force Majeure' means an event beyond the control of the Supplier or Purchaser and not involving the Supplier's fault or negligence and not foreseeable, all having impact on the performance of the respective obligations as detailed hereinafter. Such events may include, but are not restricted to:
- a) War, whether declared or not, civil war, unrest and revolution, piracy, terrorism, sabotage;
 - b) Natural disasters such as tornadoes, earthquakes, tidal waves, floods, destruction by lightning, etc.
 - c) Explosions, fires, destruction of machinery, plant and installations of any nature
 - d) Arbitrary action, if any of the Government of India or a relevant State;
 - e) Refusal by government authority of Government of India to grant the necessary permits needed to carry out the Agreement, provided such refusal is not the result of the doing of the parties.
 - f) Boycotts, strikes and lock-outs of any nature, disruptive, occupation of plant and premises, work stoppages occurring at the premises of the party requesting to be relieved of its liability, so long such cause is not effected by such party's controlled administration or employees.
- 34.2 Should any one or more of the events referred to in this clause occur, affecting the performance of the obligations of either of the parties, under the Agreement, such party shall notify to the other party the existence of a cause for force majeure as soon as it has knowledge of such event but not later than fifteen (15) Days from such date the event has arisen. The notification shall contain the details regarding the nature, starting date, presumed end date, as well as the estimated effects of the case of force majeure or other cause of force majeure on the obligations of the party which has incurred the event.
- 34.3 As soon as the cause for exoneration has ended, the party, the performance of which has been affected shall notify, in writing, to the other party the precise date of the end of the cause of force majeure and the extent, with justification, to which it has actually been affected in the performance of its obligations. It adds to this statement the necessary certificates issued by an authorized entity.
- 34.4 Any case of force majeure suspends the carrying out of the obligations affected. However, the party which claims force majeure shall show every diligence towards reducing as much as feasible the effects thereof. It is exonerated only for the minimum period, which may (in no event exceed the period of existence of the force majeure itself) have actually occurred as a result of the force majeure.

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34.5 The parties may request that the Agreement be deemed cancelled if it's carrying out has become totally impossible.

35.0 SETTLEMENT OF DISPUTES

35.1 The rules of procedure for arbitration proceedings shall be as per Indian Arbitration and Conciliation Act 1996 or as amended.

35.2 If any dispute or difference arising between the Parties in respect of or concerning or connected with the interpretation or implementation of this Agreement or otherwise arising out of this Agreement, the parties hereto shall promptly and in good faith negotiate with a view to bring out and amicable resolution and settlement.

35.3 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Owner or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

35.4 Maharashtra Natural Gas Limited will nominate three independent persons who can be the Sole Arbitrator and intimate the same to Vendor. The Vendor needs to choose one person from the said nominees as Sole Arbitrator. If Vendor fails to choose the arbitrator within thirty (30) days from receipt of a nomination by Maharashtra Natural Gas Limited, Maharashtra Natural Gas Limited will have right to choose the Sole Arbitrator.


35.5 The Arbitration proceedings shall be held in Pune and shall be conducted in English Language. The decision of such arbitration shall be binding and conclusive upon the Parties. The Parties to the arbitration shall equally share the costs and expenses of any such arbitration.

35.6 It is hereby clarified that the Courts at Pune alone shall have jurisdiction to try and entertain any and all suits or other proceedings in respect of, relating to or otherwise arising out of this Agreement.

35.7 Notwithstanding any reference to arbitration herein, the parties shall continue to perform their respective obligations under the Agreement unless they otherwise agree. The WORK under the CONTRACT shall continue during the Arbitration proceedings and no payment due or payable to the Seller shall be withheld on account of such proceedings.

36.0 LIMITATION OF LIABILITY

36.1 Except in cases of willful negligence or willful misconduct, and in the case of infringement, the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits provided that this exclusion shall not apply to any obligation of the Supplier to pay Price Reduction to the Purchaser and the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

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37.0 PUBLICITY AND ADVERTISEMENT

37.1 Seller shall not without the written permission of Purchaser / Consultant make a reference to Purchaser / Consultant or any Company affiliated with Purchaser / Consultant or to the destination or the description of goods or services supplied under the contract in any publication, publicity or advertising media.

38.0 GOVERNING LANGUAGE

38.1 The agreement shall be written in English language unless specified otherwise in the SCC. All correspondence and other documents pertaining to the agreement which are exchanged by the parties shall be written in the same language. Printed literature in other language shall only be considered, if it is accompanied by an English translation. In case, any document/brochure etc. Is written in any other language then its English translation shall govern.

39.0 APPLICABLE LAW

39.1 The Contract shall be governed and interpreted in accordance with laws of India and Courts at Pune shall have exclusive jurisdiction.


40.0 NOTICES

40.1 Any notice given by one party to the other pursuant to this Agreement shall be sent to the other party in writing by registered mail and confirmed in writing to the other party's address specified in the Agreement.


40.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

41.0 TAXES, DUTIES AND LEVIES

41.1 The Contractor agrees to and does hereby accept full and exclusive liability for the payment of any and all Taxes, Duties now in force and hereafter increased, imposed or modified from time to time in respect of Works and materials and all contributions and taxes for unemployment compensation, insurance and old age pensions or annuities now or hereafter imposed by any Central or State Government authorities which are imposed with respect to or covered by the wages, salaries, or other compensations paid to the persons employed by the Contractor. The Contractor shall be responsible for the compliance with all obligations and restrictions imposed by the Labor Law or any other law affecting employer-employee relationship The Contractor further agrees to comply and to secure the compliance of all Sub-Contractors with all applicable Central, State, Municipal and local law and regulation, and requirement of any central, State or Local Government agency or authority. Contractor further agrees to defend, indemnify and hold Owner harmless from any liability or penalty which may be imposed by the Central, State or Local authorities by reason of any violation by Contractor or Sub-Contractor of such laws, regulations or requirements and also from all claims, suits or proceedings that may be brought against the Owner arising under, growing out of, or by reason of the work provided for by this Contract, by third parties, or by Central or State Government authority or any administrative sub-division thereof.


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- 41.2 Owner shall directly pay the Customs Duty and Tax to concerned Authorities in case of foreign bidders.
- 41.3 Owner shall make from contractor's bills such tax deductions as are required as per rules and regulations in force from time to time.
- 41.4 Bidder shall be entirely responsible for scope of work, all taxes, GST, license fees, any other duty on services or any other tax payable and/ or other levies etc. imposed by Central, state, municipal and local law and regulatory agency or authority. The rate in SOR is inclusive of all the above referred taxes/duties.
- 41.5 Any statutory variation in GST within the contractual period for the SOR items shall be to MNGL's account. However, in case the contractual completion period gets extended for reasons solely attributable to contractor, the statutory variation shall be limited to contractual completion period only.
- 41.6 Any new taxes & duties, if imposed by the State / Central Govt. of India after due date of bid submission but before the Contractual Delivery Date, shall be paid / reimbursed to the contractor on submission of copy of notification(s) issued from State / Central Govt. Authorities along with submission of documentary evidence for proof of payment of such taxes / duties to State / Central Govt. Authorities and after ascertaining its applicability with respect to the contract.
- 41.7 Returns and details required to be filled under GST laws & rules should be timely filed by Supplier of Goods / Service Provider with requisite details to enable the Owner to avail tax credits including input tax credit. Payments to Service Provider claiming GST amount will be made provided the above formalities are fulfilled. Further, MNGL may seek copies of challan and certificate from Chartered Accountant of Supplier / Service Provider for deposit of GST collected from Owner. Any loss or non-availability of input tax credit by the Owner due to non-compliance of applicable tax laws (including but not limited to GST laws in force or otherwise) or for any reason which is not attributable to MNGL, then MNGL shall not be obligated or liable to pay or reimburse GST charged in the invoice(s) and an amount equivalent to any tax liability accruing to the Owner and/or to the extent of any loss accrued to the Owner together with all penalties, costs, liabilities, dues, fees and interest if any, shall be deducted from the payment due to the Vendor or shall be reimbursed by the Vendor, as the case may be, till such default is either rectified or made good by the Vendor and the Owner is satisfied that it is in a position to claim valid input tax credit within the time-lines as per applicable laws.
- 41.8 Supplier of Goods / Service Provider providing taxable service shall issue an Invoice / Bill, as the case may be as per rules / regulation of GST. GST, if applicable, shall be paid after verifying GST Registration number. Each item's cost and GST as applicable shall be provided in all the invoices along with GST registration no. & HSN/SAC codes for the services provided.
- 41.9 In case of statutory variation in GST, other than due to change in turnover, payable on the contract value during contract period, the Supplier of Goods / Services (Service Provider) shall submit a

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copy of the 'Government Notification' to evidence the rate as applicable on the Bid due date and on the date of revision. In case GST is not applicable to the vendor at the time of Contract / Order placement, as per turnover criteria, GST due to change in turnover is not payable. If applicable in future, the same shall be borne by vendor.


- 41.10 In case of delay in completion period beyond the contractual date, for reasons attributable to contractor, any increase in these rates or any new taxes and duties introduced during the period beyond the contractual completion date shall be borne by the contractor, whereas any decrease shall be passed on to MNGL.
- 41.11 The base date for the purpose of applying statutory variation shall be the Bid Due Date.
- 41.12 Claim for payment of GST / Statutory variation, should be raised within two (02) months from the date of issue of 'Government Notification' for payment of differential GST, otherwise claim in respect of above shall not be entertained for payment of arrears.
- 41.13 Beyond the contract period, in case MNGL is not entitled for input tax credit of GST, then any increase in the rate of GST beyond the contractual delivery period shall be to Service Provider's account whereas any decrease in the rate GST shall be passed on to the Owner.
- 41.14 Beyond the contract period, in case MNGL is entitled for input tax credit of GST, then statutory variation in applicable GST on supply and on incidental services, shall be to MNGL's account.
- 41.15 MNGL will prefer to deal with registered supplier of goods / services under GST. All Vendors shall have GST registration in the concerned State from where he intends to supply the goods. Therefore, bidders are requested to get themselves registered under GST, if not registered yet.
- 41.16 In case CBEC (Central Board of Excise and Customs) / any equivalent Central Government agency / State Government agency brings to the notice of MNGL that the Supplier of Goods / Service Provider has not remitted the amount towards GST collected from MNGL to the government exchequer, then MNGL shall have the right to put that Supplier of Goods / Service Provider under Holiday List.
- 41.17 Bidders are required to strictly consider the following key points while preparing the bid document as the following shall be applicable in all awarded Contracts and Purchase Orders:
 - (a) If prior to the placement of award, vendor realizes that the actual applicable rates of taxes are higher than the GST rates quoted in the bid against any particular HSN Code, then the vendor shall do reverse calculation and reduce the "basic unit price" of the product / service accordingly to match the "total price inclusive of taxes" of that product / service. Whereas, in case the vendor realizes that the actual applicable rates of taxes are lower than the GST rates quoted in the bid against any particular HSN Code, then the vendor shall reduce the "GST rate" of the product / service accordingly without changing the

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“basic unit price” of that product / service and the invoices shall be raised as per the actual applicable GST.

- (b) The tax rates shall only be changed under statutory variation if there is a change in the GST rates after the due date of bid submission as per government notification in the applicable HSN code which is quoted in the bid only and not in any other HSN Code. The differential tax amount will be paid / recovered depending upon whether the revised rate notified by government has increased / decreased as compared to the existing rates.

- 41.18 Bidders are required to quote and comply with all applicable statutory requirements for invoicing.
- 42.0 TIME FOR PERFORMANCE
- 42.1 The effective date of Contract shall be the date of Notification of Award (Fax of Intent) or as mentioned therein. The completion period specified in the Bid Document shall be reckoned from such date of effectiveness.
- 42.2 Contractor shall furnish bar charts specifying intermediate milestones to achieve the final completion period as per contract. The bar chart agreed shall be for reference purpose only & shall in no way release the contractor's responsibility to complete the work within the completion period.
- 43.0 TRANSFER OF TITLE
- 43.1 The title of Ownership in respect of equipment, materials etc. supplied by Contractor for incorporation in permanent works for execution of contract shall pass on to Owner on the date of issue of completion certificate.
- 43.2 However, Owner shall have the lien on all such equipment, materials, etc. at any time during the performance of the contract after the date on which Owner releases any advance payment towards the said equipment, materials, etc. and contractor shall thereafter be bound to use the same only for the purpose intended under the contract.
- 43.3 Ownership of goods supplied by domestic / foreign seller will transfer to purchaser on receipt of Goods at MNGL stores.
- 44.0 CONTRACTOR REMAINS LIABLE TO PAY COMPENSATION IF ACTION NOT TAKEN UNDER CLAUSE ENTITLED TERMINATION FOR DEFAULT**
- 44.1 In any case in which any of the powers conferred upon the Owner by the clause entitled "Termination for Default" hereof shall have become exercisable and the same had not been exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any further case of default by the Contractor for which by any clause or clauses hereof he is declared liable to pay

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compensation amounting to the whole of his Performance guarantee and the liability of the Contractor for past and future Compensation shall remain unaffected.

- 44.2 In the event of the Owner putting in force the power vested in him under the preceding clause he may, if he so desires, take possession of all or any tools, and plants, materials and stores in or upon the works or the site thereof belonging to the Contractor or procured by him and intended to be used for the execution of the Work or any part thereof paying or allowing for the same in account at the Contract prices or in case of these not being applicable at current market prices to be certified by the Engineer-In-Charge may give notice in writing to the Contractor or his authorized agent, requiring him to remove such tools, plant, materials or stores from the premises (within a time to be specified in such notice), and in the event of the Contractor failing to comply with any such requisition, the Engineer- In-Charge may remove them at the Contractor's expense or sell them by auction or private sale on account of the Contractor and at his risk in all respects without any further notice as to the date , time or place of the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the Contractor.

45.0 CHANGE IN CONSTITUTION


- 45.1 The prior approval, in writing, of the Owner shall be obtained before any change is made in the constitution of the contractor. If prior approval is not obtained, the Contract shall be deemed to have been allotted in contravention of Clause entitled "sub-letting of works" hereof and the same action may be taken and the same consequence shall ensure as provided in the said clause.

46.0 MEMBERS OF THE OWNER NOT INDIVIDUALLY LIABLE

- 46.1 No Director, or Official or employee of the Owner shall in any way be personally bound or liable for the acts or obligations of the Owner under the Contract or answerable for any default or omission in the observance or performance of any of the acts, matters or things which are herein contained.

47.0 CONTRACTOR TO INDEMNIFY THE OWNER

- 47.1 The Contractor shall indemnify the Owner and every member, officer and employee of the Owner, also the Engineer-In-Charge and his staff against all actions, proceedings, claims, demands, costs and expenses whatsoever arising out of all actions, proceedings, claims, demands, costs and expenses which may be made against the Owner for or in respect of or arising out of any failure by the Contractor in the performance of his obligations under the Contract. The Owner shall not be liable for or in respect of consequence of any accident or injury to any workmen or other person in the employment of the Contractor or his Sub- Contractor and Contractor shall indemnify and keep indemnified the Owner against all such damages and compensations and against all claims, damages, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereof.

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- 47.2 Should the Owner have to pay any money in respect of such claims or demands as aforesaid the amount so paid and the costs incurred by the Owner shall be charged to and paid by the Contractor and the Contractor shall not be at liberty to dispute or question the right of the Owner to make such payments notwithstanding the same may have been made without the consent or authority or in law or otherwise to the contrary.

48.0 SAFETY REGULATIONS

- 48.1 In respect of all labor, directly or indirectly employed in the Work the Contractor shall at his own expense arrange for all the safety provisions and abide by all labor laws, safety codes, and all fire and statutory regulation and keep owner indemnified in respect thereof.

49.0 OWNER MAY DO PART OF WORK

- 49.1 Upon failure of the Contractor to comply with any instructions given in accordance with the provisions of this Contract the Owner has the alternative right, instead of assuming charge of entire Work, to place additional labor force, tools, equipment's and materials on such parts of the Work, as the Owner may designate or also engage another Contractor to carry out the Work. In such cases, the Owner shall deduct from the amount which otherwise might become due to the Contractor, the cost of such Work and materials with fifteen percent (15%) added to cover all Owners charges and should the total amount thereof exceed the amount due to the Contractor, the Contractor shall pay the difference to the Owner.

50.0 POSSESSION PRIOR TO COMPLETION

- 50.1 The Engineer-In-Charge shall have the right to take possession of or use any completed or partially completed Work or part of the Work. Such possession or use shall not be deemed to be an acceptance of any work completed in accordance with the Contract agreement. If such prior possession or sue by the Engineer-In-Charge delays the progress of Work, equitable adjustment in the time of completion will be made and the Contract agreement shall be deemed to be modified accordingly.


51.0 DEFECTS IN WORK

51.1 DEFECTS PRIOR TO TAKING OVER

If at any time, before the Work is taken over, the Engineer-In-Charge shall:

(a) Decide that any work done or materials used by the Contractor or by any Sub- Contractor is defective or not in accordance with the Contract, or that the works or any portion thereof are defective, or do not fulfil the requirements of Contract (all such matters being hereinafter, called "Defects" in this clause), and

(b) As soon as notice is given to the Contractor in writing of the said decision, specifying particulars of the defects alleged to exist or to have occurred, then the Contractor shall at his own expenses and with all speed make good the defects so specified.

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In case Contractor shall fail to do so, the Owner may take, at the cost of the Contractor, such steps as may in all circumstances, be reasonable to make good such defects. The expenditure so incurred by the Owner will be recovered from the amount due to the Contractor. The decision of the Engineer-in-Charge with regard to the amount to be recovered from the Contractor will be final and binding, on the Contractor. As soon as the WORK have been completed in accordance with the Contract (except in minor respects that do not affect their use for the purpose for which they are intended and except for maintenance thereof and have passed the tests on completion, the Engineer-In-Charge shall issue a certificate (hereinafter called Completion Certificate) in which he shall certify the date on which the Work have been so completed and have passed the said tests and the Owner shall be deemed to have taken over the Work on the date so certified. If the Work has been divided into various groups in the Contract, the Owner shall be entitled to take over any group or groups before the other or others and there upon the Engineer-In-Charge shall issue a Completion Certificate which will, however, be for such group or groups so taken over only. In such an event if the group/section/part so taken over is related to the integrated system of the work, notwithstanding date of grant of Completion Certificate for group/section/part, the period of liability in respect of such group/section/part shall extend 12 (twelve) months from the date of completion of Work.


51.2 DEFECTS AFTER TAKING OVER:

In order that the Contractor could obtain a Completion Certificate he shall make good, with all possible speed, any defect arising from the defective materials supplied by the Contractor or workmanship or any act or omission of the Contractor that may have been noticed or developed, after the works or groups of the works has been taken over, the period allowed for carrying out such Work will be normally one month. If any defect be not remedied within a reasonable time, the Owner may proceed to do the Work at Contractor's risk and expense and deduct from the final bill such amount as may be decided by the Owner.

If by reason of any default on the part of the Contractor a Completion Certificate has not been issued in respect of any portion of the Work within one month after the date fixed by the Contract for the completion of the Work, the Owner shall be at liberty to use the Work or any portion thereof in respect of which a completion certificate has not been issued, provided that the Work or the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completing these works for the issue of Completion Certificate.

52.0 REPLACEMENT OF DEFECTIVE PARTS AND MATERIALS

- 52.1 If during the progress of the Work, Owner shall decide and inform in writing to the Contractor, that the Contractor has manufactured any plant or part of the plant unsound or imperfect or has furnished plant inferior to the quality specified, the Contractor on receiving details of such defects or deficiencies shall at his own expenses within 7 (seven) days of his receiving the notice, or otherwise within such time as may be reasonably necessary for making it good, proceed to alter, re-construct or remove such work and furnish fresh equipment up to the standards of the specifications. In case the Contractor fails to do so, Owner may on giving the Contractor 7 (seven) days' notice in writing of his intentions to do so, proceed to remove the portion of the Work so complained of and at the cost of Contractor perform all such works or furnish all such equipment's

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provided that nothing in the clause shall be deemed to deprive the Owner of or affect any rights under the Contract, the Owner may otherwise have in respect of such defects and deficiencies

52.2 The Contractor's full and extreme liability under this clause shall be satisfied by the payments to the Owner of the extra cost, of such replacements procured including erection/installation as provided for in the Contract; such extra cost being the ascertained difference between the price paid by the Owner for such replacements and the Contract Price portion for such defective plants and repayments of any sum paid by the Owner to the Contractor in respect of such defective plant. Should the Owner not so replace the defective plant the Contractor's extreme liability under this clause shall be limited to the repayment of all such sums paid by the Owner under the Contract for such defective plant.

53.0 DEFENCE OF SUITS:

53.1 If any action in court is brought against the Owner or an officer or agent of the Owner, for the failure, omission or neglect on the part of the Contractor to perform any acts, matters, covenants or things under the Contract, or damage or injury caused by the alleged omission or negligence on the part of the Contractor, his agents, representatives or his Sub- Contractor's, or in connection with any claim based on lawful demands of Sub-Contractor's workmen, suppliers or employees, the Contractor, shall in such cases indemnify and keep the Owner and/or their representatives harmless from all losses, damages, expenses or decrees arising out of such action.

54.0 PACKING, FORWARDING AND SHIPMENT

54.1 The Contractor, wherever applicable, shall, after proper painting, pack and crate all items in such a manner as to protect them from deterioration and damage during rail and road transportation to the Site and storage at the Site till the time of erection. The Contractor shall be held responsible for all damages due to improper packing.


54.2 The Contractor shall notify Owner of the date of each shipment from his works and expected date of arrival at the Site for the information of Owner.

54.3 The Contractor shall also give all shipping information concerning the weight, size and content of each packing including any other information Owner may require.


54.4 Fragile articles shall be packed with special precaution and shall bear the marking like 'Fragile Handle with Care and/or 'this side up' etc. Items shipped in bundle must be securely tied with steel wire or straps at suitable intervals.

54.5 All delicate surfaces on equipment/materials shall be carefully protected and painted with protective paint/compound and wrapped to prevent rusting and damage.

54.6 Attachments and parts of equipment and small pieces shall be packed in wooden cases with adequate protection inside the case and wherever possible should be sent along with the major equipment. Each item shall be tagged so as to identify it with the main equipment and part number and reference number shall be indicated.

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- 54.7 All protrusions shall be suitably protected and openings shall be blocked by wooden covers.
- 54.8 Wherever required, equipment/material shall be packed in polythene bags and silica gel or similar dehydrating compound shall be put inside the bags for protecting them
- 55.0 DEDUCTIONS FROM THE CONTRACT PRICE**
- 55.1 All costs, damages or expenses which Owner may have paid or incurred for which under the provisions of the Contract, the Contractor is liable/will be liable, will be deducted from contractors bills or from any moneys due or becoming due to the Contractor.
- 56.0 COMPLETION CERTIFICATE**
Application for Completion Certificate:
- 56.1 When the Contractor fulfils his obligation under the contract he shall be eligible to apply for Completion Certificate in respect of the Work by submitting the completion documents along with such application for Completion Certificate.
- 56.2 The Engineer-In-Charge shall normally issue to the Contractor the Completion Certificate within one month after receiving an application thereof from the Contractor after verifying from the completion documents and satisfying himself that the Work has been completed in accordance with and as set out in the construction and erection drawings and the Contract Documents.
- 56.3 The Contractor, after obtaining the Completion Certificate, is eligible to present the final bill for the Work executed by him under the terms of Contract.
- 56.4 Issue of Completion Certificate:
- 56.5 Within one month of the completion of the Work in all respects, the Contractor shall be furnished with a certificate by the Engineer-In-Charge of such completion, but neither Completion Certificate shall be given nor shall the Work be deemed to have been executed until all scaffolding, surplus materials and rubbish is cleared off the Site completely. The Work will not be considered as complete and taken over by the Engineer-In-Charge, until all the Temporary Work, labour and staff colonies etc. Constructed are removed and worksite cleared to the satisfaction of the Engineer-In-Charge.
- 56.6 If the Contractor shall fail to comply with the requirements of this clause on or before the date fixed for the completion of the Work, the Engineer-In-Charge may at the expense of the Contractor remove such scaffolding, surplus materials and rubbish and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the Contractor shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

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57.0 FINAL DECISION AND FINAL CERTIFICATE

57.1 Upon the expiration of the Defect Liability Period and subject to the Engineer-In-Charge being satisfied that the WORK has been duly completed by the Contractor and performed all his obligations under the Contract, the Engineer-In-Charge shall (without prejudice to the rights of Owner to retain the provisions of relevant clause thereof) otherwise give a certificate herein referred to as the Final Certificate to that effect and the 'Contractor shall be not considered to have fulfilled the whole of his obligations under the Contract until Final Acceptance Certificate shall have been given by the Engineer-In-Charge notwithstanding any previous entry upon the Work and taking possession, working or using of the same or any part thereof by the Owner.

58.0 CERTIFICATE AND PAYMENTS ON EVIDENCE OF COMPLETION

58.1 Except the Final Certificate no other certificates or payment against a certificate or on general account shall be taken to be an admission by Owner of the due performance of the Contract or any part thereof or of occupancy or validity of any claim by the Contractor.

59.0 VOID


60.0 INSURANCE

60.1 Contractor shall at his own expense arrange secure and maintain insurance with reputable insurance companies to the satisfaction of the Owner as follows:

60.2 Contractor at his cost shall arrange, secure and maintain insurance as may be necessary and to its full value for all such amounts to protect the works in progress from time to time and the interest of Owner against all risks as detailed herein. The form and the limit of such insurance, as defined herein together with the under writer works thereof in each case should be as acceptable to the Owner. However, irrespective of work acceptance, the responsibility to maintain adequate insurance coverage at all times during the period of Contract shall be that of Contractor alone. Contractor's failure in this regard shall not relieve him of any of his responsibilities and obligations under Contract.

60.3 Any loss or damage to the equipment, during ocean transportation, port/custom clearance, inland and port handling, inland transportation, storage, erection, testing and commissioning till such time the work is taken over by Owner, shall be to the account of Contractor. Contractor shall be responsible for preferring of all claims and make good for the damage or loss by way of repairs and/or replacement of the parts of the work damaged or lost. Contractor shall provide the Owner with a copy of all insurance policies and documents taken out by him in pursuance of the Contract. Such copies of documents shall be submitted to the Owner immediately upon the Contractor having taken such insurance coverage. Contractor shall also inform the Owner at least 60 (Sixty) days in advance regarding the expiry cancellation and/or changes in any of such documents and ensure revalidation/renewal etc., as may be necessary well in time.

60.4 Statutory clearance, if any, in respect of foreign supply required for the purpose of replacement of equipment lost in transit and/or during Testing & Commissioning, shall be made available by the Owner. Contractor shall, however be responsible for obtaining requisite licenses, port clearances

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and other formalities relating to such import. The risks that are to be covered under the insurance shall include, but not be limited to the loss or damage in handling, transit, theft, pilferage, riot, civil commotion, weather conditions, accidents of all kinds, fire, war risk (during ocean transportation only) etc. The scope of such insurance shall cover the entire value of supplies of equipment, plants and materials to be imported from time to time.

60.5 All costs on account of insurance liabilities covered under Contract will be to Contractor's account and will be included in Value of Contract. However, the Owner may from time, during the currency of the Contract, ask the Contractor in writing to limit the insurance coverage risk and in such a case, the parties to the Contract will agree for a mutual settlement, for reduction in Value of Contract to the extent of reduced premium amounts.

60.6 Contractor as far as possible shall cover insurance with Indian Insurance Companies, including marine Insurance during ocean transportation.

61.0 COMPLIANCE OF LAWS


61.1 The contractor deploying contract labor shall obtain license from appropriate licensing authority as per prevailing rules & regulation and as modified from time to time during contract period.

61.2 The contractor (which shall include the contracting firm / company) shall be solely liable to obtain and to abide by all necessary licenses from the concerned authorities as provided under the various Labor Laws / legislations including labor license from the competent authority under the Contract Labor ("Regulation & Abolition") Act 1970 and Acts made thereafter.


61.3 The Contractor shall also be bound to discharge obligations as provided under various statutory enactments including the Employees Provident Fund and Miscellaneous Provisions Act 1952, ESI Act 1948, Contract Labor ("Regulation & Abolition") Act 1970, Minimum Wages Act 1948, payment of wages Act 1936, Workmen's Compensation Act 1923 and other relevant Acts, Rules & Regulations in force from time to time.

61.4 The Contractor shall be responsible for necessary contributions towards PF, Family Pension, ESIC or any other statutory payments to Government Agencies as applicable under the laws in respect of the contract and of personnel deployed by the contractor for rendering services to Owner and shall deposit the required amount with the concerned statutory authorities on or before due dates. The contractor shall obtain a separate PF number from the concerned Regional Provident Fund Commissioner and submit necessary proof of having deposited the employees as well as the Owner's contribution to the Provident Fund. The contractor shall also be responsible for payment of any administration / inspection charges thereof, wherever applicable, in respect of personnel deployed by him relating to the work of Owner.

61.5 The Contractor shall not engage / deploy any person of less than 18 years under this contract, and the person(s) to be deployed should be physically and mentally fit.


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- 61.6 The installations where job is to be carried out are live and have hydrocarbon environment. Contractor shall comply with all safety and security rules and regulations and other rules laid down by Owner for its operation. Contractor shall follow best Engineering practice and relevant international safety standards. It shall be duty / responsibility of the Contractor to ensure the compliance of fire safety, security and other operational rules and regulations by his personnel. Disregard to these rules by the Contractor's personnel will lead to the termination of the Contract in all respects and shall face penal / legal consequences.
- 61.7 Personnel protective items like safety helmets, safety shoes, hand gloves, eye protection, cotton working overalls / dresses (not synthetic materials) and other required materials for the safety of the contractor's personnel shall be arranged by the contractor himself. However firefighting equipment shall be arranged by Owner.
- 61.8 The Contractor shall arrange for life insurance for all his personnel deployed on the job as per the relevant Acts, rules and regulations, etc. In case by virtue of provisions of Workers Compensation Act, 1923 or any other law in force, Owner has to pay compensation for a workman employed by the Contractor due to any cause whatsoever, the amount so paid shall be recovered from the dues payable to the Contractor and/or security deposit with Owner. General third party insurance for CNG Station shall be arranged by Owner.
- 62.0 THE ENGINEER-IN-CHARGE**
- 62.1 Issue the contractor from time to time during the running of the Contract such further instructions as shall be necessary for the purpose of proper and adequate execution of the Contract and the Contractor shall carry out and bound by the same.
- 62.2 During the currency of this Contract, Owner can increase and / or decrease the number of the services required & quantity of work /services shown in from the Schedule of Rates.
- 62.3 Order the Contractor to remove or replace any workmen whom the Owner considers incompetent or unsuitable and opinion of the Owner representative as to the competence of any workman engaged by the contractor shall be final and binding on the Contractor. Key personnel can be deployed at site only after getting approval from the Owner.
- 63.0 INDEMNITY**
- 63.1 Contractor shall exclusively be liable for non-compliance of the provisions of any act, laws rules and regulations having bearing over engagement of workers directly or indirectly for execution of Contract and the Contractor hereby undertake to indemnify the Owner against all actions, suits, proceedings, claims, damages demands, losses, etc. which may arise under Minimum Wages Act 1948, payment of wages Act 1936, Workmen's Compensation Act 1923, Personnel Injury (Compensation Insurance) Act, ESI Act, Fatal accident Act, Industrial Dispute Act, Shops and Establishment Act, Employees Provident Fund Act, Family Pension and deposit Linked Insurance schemes or any other act or statutes not herein specifically mentioned but having direct or indirect application for the persons engaged under this contract.


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64.0 LABOUR LAWS

- 64.1 No labor below the age of 18 (eighteen) years shall be employed on the Work.
- 64.2 The Contractor shall not pay less than what is provided under law to laborers engaged by him on the Work.
- 64.3 The Contractor shall at his expense comply with all labor laws and keep the Employer indemnified in respect thereof.
- 64.4 The Contractor shall pay equal wages for men and women in accordance with applicable labor laws.
- 64.5 If the Contractor is covered under the Contract labor (Regulation and Abolition) Act, he shall obtain a license from licensing authority (i.e. office of the labor commissioner) by payment of necessary prescribed fee and the deposit, if any, before starting the Work under the Contract. Such fee/deposit shall be borne by the Contractor.
- 64.6 The Contractor shall employ labor in sufficient numbers either directly or through Sub-Contractor's to maintain the required rate of progress and of quality to ensure workmanship of the degree specified in the Contract and to the satisfaction of the Engineer-In-Charge.
- 64.7 The Contractor shall furnish to the Engineer-In- Charge the distribution returns of the number and description, by trades of the work people employed on the works. The Contractor shall also submit on the 4th and 19th of every month to the Engineer-In-Charge a true statement showing in respect of the second half of the preceding month and the first half of the current month (1) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them and (2) the number of female workers who have been allowed Maternity Benefit as provided in the Maternity Benefit Act 1961 on Rules made thereunder and the amount paid to them.
- 64.8 The contractor shall comply with the provisions of the Payment of Wage Act 1936, Employee Provident Fund Act 1952, Minimum Wages Act 1948, Employers Liability Act 1938, Workmen's Compensation Act 1923, Industrial Disputes Act 1947, the Maternity Benefit Act 1961, Contract Labor Regulation and Abolition Act 1970, Employment of Children Act 1938 and any modifications thereof or any other law relating thereto and rules made thereunder from time to time.
- 64.9 The engineer-in-charge shall on a report having been made by an Inspecting Officer as defined in Contract Labor (Regulation and Abolition) Act 1970 have the power to deduct from the money due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non- fulfilment of the Conditions of the Contract for the benefit of workers, non-payment of wages or of deductions made from his or their wages which are not justified by the terms of the Contract or non-observance of the said regulations.


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- 64.10 The contractor shall indemnify the employer against any payments to be made under and for the observance of the provisions of the aforesaid acts without prejudice to his right to obtain indemnity from his Sub-Contractor's. In the event of the contractor committing a default or breach of any of the provisions of the aforesaid acts as amended from time to time, of furnishing any information or submitting or filling and form/ register/ slip under the provisions of these acts which is materially incorrect then on the report of the inspecting officers, the contractor shall without prejudice to any other liability pay to the employer a sum not exceeding rs.50.00 as liquidated damages for every default, breach or furnishing, making, submitting, filling materially incorrect statement as may be fixed by the engineer-in- charge and in the event of the contractor's default continuing in this respect, the liquidated damages may be enhanced to rs.50.00 per day for each day of default subject to a maximum of one percent of the estimated cost of the work put to tender. The engineer-in-charge shall deduct such amount from bills or contract performance security of the contractor and credit the same to the welfare fund constitute under these acts. The decision of the engineer-in-charge in this respect shall be final and binding Implementation of Apprentices Act, 1961:
- 64.11 The contractor shall comply with the provisions of the apprentices' act, 1961 and the rules and orders issued thereunder from time to time. If he fails to do so, his failure will be a breach of the contract and the engineer-in-charge may, at his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions, of the act. Contractor to indemnify the employer:
- 64.12 The contractor shall indemnify the employer and every member, office and employee of the employer, also the engineer-in-charge and his staff against all actions, proceedings, claims, demands, costs and expenses whatsoever arising out of or in connection with the matters referred to in clause 102.0 and elsewhere and all actions, proceedings, claims, demands, costs and expenses which may be made against the employer for or in respect of or arising out of any failure by the contractor in the performance of his obligations under the contract document. The employer shall not be liable for or in respect of or arising out of any failure by the contractor in the performance of his obligations under the contract document. The employer shall not be liable for or in respect of any demand or compensation payable by law in respect or in consequence of any accident or injury to any workmen or other person. In the employment of the contractor or his sub-contractor the contractor shall indemnify and keep indemnified the employer against all such damages and compensations and against all claims, damages, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.
- 64.13 Payment of claims and damages: should the employer have to pay any money in respect of such claims or demands as aforesaid the amount so paid and the costs incurred by the employer shall be charged to and paid by the contractor and the contractor shall not be at liberty to dispute or question the right of the employer to make such payments notwithstanding the same, may have been made without the consent or authority or in law or otherwise to the contrary.
- 64.14 In every case in which by virtue of the provisions of section 12, sub-section (i) of workmen's compensation act, 1923 or other applicable provision of workmen compensation act or any other

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act, the employer is obliged to pay compensation to a workman employed by the contractor in execution of the work, the employer will recover from the contractor the amount of the compensation so paid, and without prejudice to the rights of employer under section 12, sub-section (2) of the said act, employer shall be at liberty to recover such amount or any part thereof by deducting it from the contract performance security or from any sum due to the contractor whether under this contract or otherwise. The employer shall not be bound to contest any claim made under section 12, sub-section (i) of the said act, except on the written request of the contractor and upon his giving to the employer full security for all costs for which the employer might become liable in consequence of contesting such claim. Health and sanitary arrangements for workers:

- 64.15 In respect of all labor directly or indirectly employed in the works for the performance of the contractor's part of this agreement, the contractor shall comply with or cause to be complied with all the rules and regulations of the local sanitary and other authorities or as framed by the employer from time to time for the protection of health and sanitary arrangements for all workers.
- 64.16 The contractor shall provide in the labor colony all amenities such as electricity, water and other sanitary and health arrangements. The contractor shall also provide necessary surface transportation to the place of work and back to the colony for their personnel accommodated in the labor colony.
- 65.0 EVALUATION OF PERFORMANCE**
- 65.1 Performance against the contract awarded (if any) shall be evaluated on half yearly basis or earlier on need basis as per approved MNGL policy.
- 66.0 CONTRACTOR SAFETY MANUAL**
- 66.1 The contractor / vendor needs to ensure all the safety conditions as mentioned in the Contractor Safety manual.

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Annexure-I to GCC


**PROFORMA OF INDEMNITY BOND FOR SUPPLY OF MATERIALS BY EMPLOYER
(To be executed on non-judicial stamped paper of appropriate value)**

WHEREAS MAHARASHTRA NATURAL GAS LIMITED (hereinafter referred to as MNGL) which expression shall unless repugnant to the context includes their legal representatives, successors and assigns having their registered office at Pune has entered into a CONTRACT with _____ (hereinafter referred to as the CONTRACTOR which expression shall unless repugnant to the context include their legal representatives, successors and assigns) for _____ on the terms and conditions as set out, inter-alia, in the CONTRACT No..... Dated..... and various documents forming part thereof hereinafter collectively referred to as the "CONTRACT" which expression shall include all amendments, modifications and/or variations thereto.

AND WHEREAS

- i) MNGL has agreed to supply to the CONTRACTOR, equipment, plants and materials (finished, semi-finished and raw) for the purpose of EXECUTION of the said CONTRACT by the CONTRACTOR (the equipment, plants and materials to be supplied by MNGL to the CONTRACTOR, hereinafter for the sake of brevity referred to as the "said materials") and pending execution by the CONTRACTOR of the CONTRACT incorporating the said materials, the said materials shall be under the custody and charge of the CONTRACTOR and shall be kept, stored, altered, worked upon and/or fabricated at the sole risk and expense of the CONTRACTOR.
- ii) As a pre-condition to the supply of the said materials by MNGL to the CONTRACTOR, MNGL has required the CONTRACTOR to furnish to MNGL an Indemnity Bond in the manner and upon terms and conditions hereinafter indicated.
 NOW, THEREFORE, in consideration of the premises aforesaid the CONTRACTOR hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified MNGL from and against all loss, damage and destruction (inclusive but not limited to any or all loss or damage or destruction to or of the said materials or any item or part thereof by theft, pilferage, fire, flood, storm, tempest, lightning, explosion, storage, chemical or physical action or reaction, binding, warping, exposure, rusting, faulty workmanship, faulty fabrication, or faulty method or technique of fabrication, strike, riot, civil commotion, or other act or omission or commission whatsoever within or beyond the control of the CONTRACTOR, misuse and misappropriation (inclusive but not limited to the misuse or misappropriation by the CONTRACTOR and the Contractor's servants and/or agents) whatsoever to, or of in the said materials or any part of them thereof from the date that the same or relative part of item thereof was supplied to the CONTRACTOR up to and until the date of return to MNGL of the said materials or relative part of item thereof or completed fabricated works(s) incorporating the said material and undertake to pay to MNGL forthwith on demand in writing without protest or demur the value as specified by MNGL of the said material or item or part thereof, lost, damaged, destroyed, misused and/or misappropriated, as the case may be or, together with MNGL 'S costs and expenses (inclusive of but not limited to handling, transportation, cartage, insurance, freight, packing and inspection costs/or expenses up to) and aggregate limit of
 Rs. _____ (Rupees _____).

AND THE CONTRACTOR hereby agrees with MNGL that:

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- i) This Indemnity/Undertaking shall be a continuing Indemnity/ Undertaking and shall remain valid and irrevocable for all claims of MNGL arising hereunder up to and until the midnight of _____. However, if the CONTRACT for which this Indemnity/Undertaking is given is not completed by this date, the CONTRACTOR hereby agrees to extend the Indemnity/Undertaking till such time as is required to fulfill the CONTRACT.
- ii) This Indemnity/Undertaking shall not be determined by any change in constitution or upon insolvency of the CONTRACTOR but shall be in all respects and for all purposes be binding and operative until payment of all moneys payable to MNGL in terms of hereof.
- iii) The mere statement of allegation made by or on behalf of MNGL in any notice or demand or other writing addressed to the CONTRACTOR as to any of the said material or item or part thereof having been lost , damaged, destroyed, misused or misappropriated while in the custody of the CONTRACTOR and/or prior to completion of the completed fabricated work(s) and delivery to job site thereof incorporating the said materials shall be conclusive of the factum of the said material or item or part thereof having been supplied to the CONTRACTOR and/or the loss, damage, destruction, misuse or misappropriation thereof, as the case may be, while in the custody of the CONTRACTOR and/or prior to the completion of the completed fabricated work(s) and delivery to job site thereof incorporating the said materials without necessity on the part of MNGL to produce any documentary proof or other evidence whatsoever in support of this.
- iv) The amount stated in any notice of demand addressed by MNGL to the CONTRACTOR as to the value of such said materials lost, damaged, destroyed, misused or misappropriated, inclusive relative to the costs and expenses incurred by MNGL in connection therewith shall be conclusive of the value of such said materials and the said cost and expenses as also of the amount liable to be paid to MNGL to produce any voucher, bill or other documentation or evidence whatsoever in support thereof and such amount shall be paid without any demur and on demand and no dispute shall be raised concerning the same.


The undersigned has full power to execute this Indemnity Bond on behalf of the CONTRACTOR under the Power of Attorney dated_____.

(SIGNED BY COMPETENT AUTHORITY)

Place:

Dated:

Official seal of the CONTRACTOR

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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Annexure-II to GCC

PROFORMA FOR CONTRACT AGREEMENT

SO No.

dated -----


Contract Agreement for the work of ----- of Maharashtra Natural Gas Limited made on ----- between (Name and Address)-----, hereinafter called the "CONTRACTOR" (which term shall unless excluded by or repugnant to the subject or context include its successors and permitted assignees) of the one part and MAHARASHTRA NATURAL GAS LIMITED hereinafter called the "EMPLOYER" (which term shall, unless excluded by or repugnant to the subject or context include its successors and assignees) of the other part.

WHEREAS

- A. The EMPLOYER being desirous of having provided and executed certain work mentioned, enumerated or referred to in the Tender Documents including Letter Inviting Tender, General Tender Notice, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, Plans, Time Schedule of completion of jobs, Schedule of Rates, Agreed Variations, other documents has called for Tender.
- B. The CONTRACTOR has inspected the SITE and surroundings of WORK specified in the Tender Documents and has satisfied himself by careful examination before submitting his tender as to the nature of the surface, strata, soil, sub-soil and ground, the form and nature of site and local conditions, the quantities, nature and magnitude of the work, the availability of labor and materials necessary for the execution of work, the means of access to SITE, the supply of power and water thereto and the accommodation he may require and has made local and independent enquiries and obtained complete information as to the matters and thing referred to, or implied in the tender documents or having any connection therewith and has considered the nature and extent of all probable and possible situations, delays, hindrances or interferences to or with the execution and completion of the work to be carried out under the CONTRACT, and has examined and considered all other matters, conditions and things and probable and possible contingencies, and generally all matters incidental thereto and ancillary thereof affecting the execution and completion of the WORK and which might have influenced him in making his tender.
- C. The Tender Documents including the Notice Letter Inviting Tender, General Conditions of Contract, Special Conditions of Contract, Schedule of Rates, General Obligations, SPECIFICATIONS, DRAWINGS, PLANS, Time Schedule for completion of Jobs, Letter of Acceptance of Tender and any statement of agreed variations with its enclosures copies of which are hereto annexed form part of this CONTRACT though separately set out herein and are included in the expression "CONTRACT" wherever herein used.

AND WHEREAS

The EMPLOYER accepted the Tender of the CONTRACTOR for the provision and the execution of the said WORK at the rates stated in the schedule of quantities of the work and finally approved by EMPLOYER (hereinafter called the "Schedule of Rates") upon the terms and subject to the conditions of CONTRACT.

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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NOW THIS AGREEMENT WITNESSETH AND IT IS HEREBY AGREED AND DECLARED AS FOLLOWS: -

1. In consideration of the payment to be made to the CONTRACTOR for the WORK to be executed by him, the CONTRACTOR hereby covenants with EMPLOYER that the CONTRACTOR shall and will duly provide, execute and complete the said work and shall do and perform all other acts and things in the CONTRACT mentioned or described or which are to be implied there from or may be reasonably necessary for the completion of the said WORK and at the said times and in the manner and subject to the terms and conditions or stipulations mentioned in the contract.
2. In consideration of the due provision execution and completion of the said WORK, EMPLOYER does hereby agree with the CONTRACTOR that the EMPLOYER will pay to the CONTRACTOR the respective amounts for the WORK actually done by him and approved by the EMPLOYER at the Schedule of Rates and such other sum payable to the CONTRACTOR under provision of CONTRACT, such payment to be made at such time in such manner as provided for in the CONTRACT.


A N D

3. In consideration of the due provision, execution and completion of the said WORK the CONTRACTOR does hereby agree to pay such sums as may be due to the EMPLOYER for the services rendered by the EMPLOYER to the CONTRACTOR, such as power supply, water supply and others as set for in the said CONTRACT and such other sums as may become payable to the EMPLOYER towards the controlled items of consumable materials or towards loss, damage to the EMPLOYER'S equipment, materials construction plant and machinery, such payments to be made at such time and in such manner as is provided in the CONTRACT.

It is specifically and distinctly understood and agreed between the EMPLOYER and the CONTRACTOR that the CONTRACTOR shall have no right, title or interest in the SITE made available by the EMPLOYER for execution of the works or in the building, structures or work executed on the said SITE by the CONTRACTOR or in the goods, articles, materials etc., brought on the said SITE (unless the same specifically belongs to the CONTRACTOR) and the CONTRACTOR shall not have or deemed to have any lien whatsoever charge for unpaid bills will not be entitled to assume or retain possession or control of the SITE or structures and the EMPLOYER shall have an absolute and unfettered right to take full possession of SITE and to remove the CONTRACTOR, their servants, agents and materials belonging to the CONTRACTOR and lying on the SITE.

The CONTRACTOR shall be allowed to enter upon the SITE for execution of the WORK only as a licensee simpliciter and shall not have any claim, right, title or interest in the SITE or the structures erected thereon and the EMPLOYER shall be entitled to terminate such license at any time without assigning any reason.

The materials including sand, gravel, stone, loose, earth, rock etc., dug up or excavated from the said SITE shall, unless otherwise expressly agreed under this CONTRACT, exclusively belong to the EMPLOYER and the CONTRACTOR shall have no right to claim over the same and such excavation and materials should be disposed off on account of the EMPLOYER according to the instruction in writing issued from time to time by the ENGINEER-IN-CHARGE.

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In Witness whereof the parties have executed these presents in the day and the year first above written.

Signed and Delivered for and on
on behalf of EMPLOYER.

Signed and Delivered for and
on behalf of the CONTRACTOR.

MAHARASHTRA NATURAL GAS LIMITED

(NAME OF THE CONTRACTOR)

Date: _____

Date: _____

Place: _____

Place: _____

IN PRESENCE OF TWO WITNESSES

1. _____

1. _____

2. _____

2. _____




**MAHARASHTRA
NATURAL GAS LIMITED**

**TENDER FOR ITEM RATE CONTRACT FOR A PERIOD
OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187

PART – D

SPECIAL CONDITIONS OF CONTRACT

 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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SPECIAL CONDITIONS OF THE CONTRACT (SCC)

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of the Contract. The corresponding clause number of the GCC is indicated in parentheses.

1.0 DEFINITIONS

Bid Documents: shall mean documents issued to the bidder pursuant to IFB and listed in ITB Clause 7.

GCC 1.1 (h): Effective Date: shall mean the date on which Contractor's obligations will commence and that will be the date of first intimation of award / Letter of Acceptance.

2.0 INTERPRETATIONS

2.1 Where any portion of the GCC is repugnant to or at variance with any provisions of the SCC then, unless a different intention appears, the provisions of the SCC shall be deemed to govern the provisions of the GCC and SCC provisions shall prevail to the extent of such repugnancy, or variations exist.

2.2 In Contract Documents unless otherwise stated specifically, the singular shall include the plural and vice versa wherever the context so requires.

2.3 Notwithstanding the sub-division of the Contract Documents into separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the Agreement so far as it may be practicable to do so.

2.4 All headings, subtitles and marginal notes to the clauses of the GCC, SCC or to the Specifications or to any other part of Bid Document are solely for the purpose of giving a concise indication and not a summary of the contents thereof, and they shall never be deemed to be part thereof or be used in the interpretation or construction thereof.


2.5 The terms fully capitalized and/or initial capitalized shall be interchangeable and shall have the meaning as assigned to fully capitalized term or initial capitalised term.

3.0 INSPECTIONS AND TESTS

The SCC provisions shall supplement GCC Clause 14 as detailed below.

3.1 During execution of work, the works shall be inspected by the Owner or its authorised representative for acceptance of the same.

3.2 For contractor's supplied items, Third Party Inspection report shall be submitted by the

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contractor.

- 3.3 The Owner or its representative shall have the right to inspect and/ or to test the material to confirm their conformity to the specifications
- 3.4 If any inspected or tested material fail to conform the specifications, the Owner may reject them and the Contractor shall either replace the rejected materials or make all the alterations necessary to meet the specifications, free of cost to the Owner.
- 3.5 Contractor shall hire Third Party Inspection Agency (TPIA) for carrying out the inspection of contractor supplied material as per approved ITP. TPIA charges shall be borne by contractor.

Name of approved TPIA are as under:

1. Moody International (India) Pvt. Ltd.,
2. Dr. Amin Controllers Pvt. Ltd.,
3. Certification Engineers International Ltd.,
4. International Certification Service Pvt. Ltd.,
5. Bureau Veritas (India) Pvt. Ltd.,
6. Hertz Inspection & Services Pvt. Ltd.,
7. Quality Evaluation and Systems Team Pvt. Ltd.
8. TUV SUD South Asia,
9. Apave Assessment India Pvt. Ttd. (Formely Vincotte International India Assessment Service Pvt. Ltd.),
10. TUV India Pvt. Ltd.,
11. Llyod Register,
12. SGS India Pvt. Ltd.,
13. TUV – Nord,
14. DNV-GL,
15. ABS,


- 3.6 Contractor shall obtain MNGL's approval before finalizing the TPIA

4.0 STATUTORY VARIATIONS IN TAXES


- 4.1 The entire work covered under this contract shall be treated as works contract services. Bidder shall be required to quote their unit rates for all the SOR items inclusive of all applicable taxes viz. GST freight, Insurance including Transit Insurance as defined in the tender document. Any statutory variation in the GST during the scheduled completion period only shall be considered by the owner against documentary evidence.

5.0 PAYMENT TERMS AND MODE OF PAYMENT

GCC clause 22.0 is modified as below:

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- 5.1 1st running bill (RA bill) shall be processed only after submission of statutory documents like Workmen Compensation (WC) policy, Insurance policies (Open transit policy), labour license, BOCW registration, Contractor All Risk (CAR) policy, GST registrations of Maharashtra / Karnataka. Running bill shall be processed only after submission of RPFC/ESI challans of previous month and BOCW Challan.
- 5.2 The Payment terms for Execution of Work shall be as stipulated in scope of work. The contractor shall submit material reconciliation statement. Contractor will raise the RA bill on monthly basis and payment shall be made on certification of bill by Engineer- in-Charge as stipulated in scope of work.
- 5.3 The Payment shall be released through RTGS only.
- 5.4 Contractor to note that they can raise RA bills up to 90% of total awarded value of individual Purchase/ Work Order, balance amount will be paid on closure of Purchase / Work Order.
- 5.5 DEFECT LIABILITY PERIOD
 - a) The Contractor warrants that the work carried out under the Agreement are meeting the requirement of the Bid document and will rectify/ repair any defective work on receipt of instructions from Owner.
 - b) The Owner shall promptly notify the Contractor in writing of any claims/recovery arising under this warranty.
 - c) Upon receipt of such notice, the Contractor shall, within a reasonable period, repair or replace the defective Goods or parts thereof, free of cost to the Owner. No claim whatsoever shall lie on the Owner for the replaced parts/ goods thereafter. In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected / replaced Goods or item or material shall be extended to a further period of twelve (12) Months from the date of such repair/replacement if put to use immediately or eighteen (18) Months. Defect liability period shall be 12 months from the date of handing over of the system to MNGL. The defect liability period shall be 12 months from the date of installation & commissioning of network.
 - d) If the Contractor, having been notified, fails to remedy the defect(s) within a reasonable period, the Owner may proceed to take such remedial action as may be necessary, at the Contractor's risk and expense and without prejudice to any other rights which the Owner may have against the Contractor under the Agreement.

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6.0 PAYMENT METHODOLOGY

- 6.1 The contractor shall raise invoices on monthly basis for works carried out duly certified by Engineer-in- Charge in triplicate. The contractor to ensure that the invoices of completed work should be raised & duly certified by Engineer-in-charge within one month to avoid any statutory penalties on delay in paying taxes.
- 6.2 The payments to the Contractor will be released within 30 days from the date of receipt of invoice, duly certified by EIC as per the terms and conditions of the Contract.
- 6.3 Owner will release payment as per SCC clause 5.

7.0 COMPENSATION FOR IDLE TIME


- 7.1 The Owner shall make every reasonable effort to have free issue materials and right - of - use (ROU) available so as not to delay laying activities. No Idle time claim shall be entertained under any circumstances.

8.0 PRICE REDUCTION SCHEDULE (PRS) GCC clause 29.0 is modified as below:

- 8.1 In case contractor fails to complete the work/ services within stipulated period as defined in Contract then unless such failure is due to force majeure as defined in Bid document, there will be reduction in order value @ 0.5% per week of delay or part thereof "on the delayed work portion" subject to maximum of 5% of order value.
- 8.2 Owner may without prejudice to any methods of recovery, deduct the amount of such PRS from any money due or which may at any time become due to contractor from its obligations or liabilities under the contract or by recovery against the performance bank guarantee. Both Owner and contractor agree that the above percentage of price reduction are genuine pre-estimates of the loss/ damage which Owner would have suffered on account of delay/ breach on the part of contractor and the said amount will be payable on demand without there being any proof of the actual loss/ damage caused by such delay/ breach. Owner decision in the matter of applicability of price reduction shall be final and binding.

9.0 ALTERATIONS IN SPECIFICATIONS, DESIGN AND EXTRA WORKS

- 9.1 The ENGINEER-IN-CHARGE shall have to make any alterations in, omission from, additions to or substitutions for, the Schedule of Rates, the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the WORK and the CONTRACTOR shall be bound to carry out the such altered/ extra/ new items of WORK in accordance with any instructions which may be given to him in writing signed by the ENGINEER-IN-CHARGE, and such alterations, omissions, additions or substitutions shall not

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invalidate the CONTRACT and any altered, additional or substituted work which the CONTRACTOR may be directed to do in the manner above specified as part of the WORK shall be carried out by the CONTRACTOR on the same conditions in all respects on which he agreed to do the main WORK. The time of completion of WORK may be extended for the part of the particular job at the discretion of the ENGINEER-INCHARGE, for only such alterations, additions or substitutions of the WORK, as he may consider as just and reasonable. The rates for such additional, altered or substituted WORK under this clause shall be worked out in accordance with the following provisions: -

For Item Rate Contract


- (a) If the rates for the additional, altered or substituted WORK are specified in the CONTRACT for the WORK, the CONTRACTOR is bound to carry on the additional, altered or substituted WORK at the same rates as are specified in the CONTRACT.
- (b) If the rates for the additional, altered or substituted WORK are not specifically provided in the CONTRACT for the WORK, the rates will be derived from the rates for similar class of WORK as are specified in the CONTRACT for the WORK. The opinion of the ENGINEER-INCHARGE, as to whether or not the rates can be reasonably so derived from the items in this CONTRACT will be final and binding on the CONTRACTOR.
- (c) If the rates for the altered, additional or substituted WORK cannot be determined in the manner specified in sub-clause (a) and (b) above, then the CONTRACTOR shall, within 7 days of the date of receipt of order to carry out the WORK, inform the ENGINEER-INCHARGE of the rates which it is his intention to charge for such class of WORK, supported by analysis of the rate or rates claimed, and the ENGINEER-INCHARGE shall determine the rate or rates on the basis of the prevailing market rates, labour cost at schedule of labour rates plus 10% to cover contractor's supervision, overheads and profit and pay the CONTRACTOR accordingly. The opinion of the ENGINEER-INCHARGE as to current market rates of materials and the quantum of labour involved per unit of measurement will be final and binding on the CONTRACTOR.
- (d) Where the item of work will be executed through nominated specialist agency as approved by the ENGINEER-IN-CHARGE, then the actual amount paid to such nominated agency supported by documentary evidence and as certified by ENGINEER-IN-CHARGE shall be considered plus 10% (ten percent) to cover all contingencies, overhead, profits to arrive at the rates.

10.0 HEALTH SAFETY AND ENVIRONMENT (HSE)


- 10.1 The Contractor will strictly adhere to Health Safety and Environment policy as stated in Technical Specifications Vol. II of II of this Bid document and/ or the policies followed by the Owner.

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- 10.2 All the safety rules and regulations prevailing and applicable from time to time at the installations as directed by OWNER will be strictly adhered to by the Contractor.
- 10.3 Contractor has to ensure the safety of man and machine all the times. Damages to equipment due to bad workmanship/negligence will be recovered as per the decision of Engineer-in-Charge, which will be final and binding upon the contractor.
- 10.4 The contractor shall supply all the protective safety equipment like helmets / hard head hats, gumboots / safety shoes, hand gloves, safety belts, eye protection, ear protection etc. to his workmen at his own cost as required by operations.
- 10.5 Carrying / striking of matches, open flames, lighters or smoking or other such acts, which may cause fire hazards at the work site / in the terminals / installations, is strictly prohibited.
- 10.6 Tobacco/ Ghutka chewing or other such acts, are strictly prohibited at the site.
- 10.7 In addition to the PRS clause, penalties for violation of HSE shall be imposed as per "PENALTIES" clause of SCC.
- 10.8 Contractor shall follow MNGL's Safety Manual.
- 11.0 PROVIDENT FUND
- 11.1 The Contractor shall strictly comply with the provisions of Employees Provident Fund Act applicable in India and register them with Regional Provident Fund Commission (RPFC) before commencing the work. The Contractor shall deposit employees and Owners contributions to the RPFC every month. The Contractor shall furnish along with each running bill, the challan / receipt for payment made to the RPFC for the preceding months.
- 11.2 In case the RPFC's challan / receipt, as above, is not furnished, Owner shall deduct 5% (Five percent) of the payable amount from Contractor's running bill and retain the same as a deposit such retained amount shall be refunded to Contractor on production of RPFC Challan /receipt for the period covered by the related running bill.
- 11.3 In case it is observed that contractor fails to submit requisite RPFC Challans along with bills more than once during the tenancy of the contract and submits subsequently a token penalty per instance may be imposed by owner as per clause 24.
- 12.0 POWER AND WATER CONNECTION
- 12.1 The Owner will not provide any power and water during construction period. Contractor shall apply and obtain necessary power and water connection from relevant authority and will pay its uses charges or arrange the same from the other sources.

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- 13.0 CONSTRUCTION AIDS, EQUIPMENTS, TOOLS & TACKLES
- 13.1 CONTRACTOR shall be solely responsible for making available for executing the WORK, all requisite CONSTRUCTION EQUIPMENTS, Special Aids, Barges, Cranes and the like, all Tools, Tackles and Testing Equipment and Appliances, including Customs of such equipment etc. as required. In case of Customs of the same the rates applicable for levying of Custom Duty on such Equipment, Tools, & Tackles and the duty drawback applicable thereon shall be ascertained by the CONTRACTOR from the concerned authorities of Government of India. It shall be clearly understood that OWNER shall not in any way be responsible for arranging to obtain Custom Clearance and/or payment of any duties and/or duty draw backs etc. for such equipment so imported by the CONTRACTOR and the CONTRACTOR shall be fully responsible for all taxes, duties and documentation with regard to the same.
- 14.0 CONDITIONS FOR ISSUE OF MATERIALS
- 14.1 Whenever any material is issued by Owner, following conditions in addition to other conditions as specified in the contract shall be applicable.
- 14.2 Necessary indents will have to be raised by the Contractor as per procedure laid down by the Engineer in- charge from time to time, when he requires the above material for incorporation in permanent works.
- 14.3 Materials will be issued only for permanent works and not for temporary works, enabling works etc. unless specifically approved by the Engineer-in-charge and the same shall not be taken into account for the purpose of materials reconciliation.
- 14.4 The contractor shall bear all other cost including lifting, carting from issue points to work. Site/ contractor's store, custody and handling etc. and return of surplus/ serviceable scrap materials to Owner's storage points to be designated by the Engineer-in-charge etc. No separate payment for such expenditure will be made.
- 14.5 No material shall be allowed to be taken outside the plant without a gate pass.
- 14.6 The contractor shall be responsible for proper storage, preservation and watch & ward of the materials.
- 14.7 All free issue material shall be issued to contractor against submission of indemnity bond against each PO (as per Format attached in bid document) for 150% value of the initial PO value.
- 14.8 In case manufacturing defect found in free issue material, same shall be communicated to Engineer-In-Charge within one month from the date of issue of material and material shall be return to MNGL store within 45 days from the date of issue of material. In case contractor fail to return the defective materials to MNGL store, penalty equal to twice of landed cost of defective materials shall be imposed by Engineer in Charge & his decision will be final & binding on the contractor.

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- 14.9 Contractor to ensure that all free issue material shall be installed within a maximum period of 30 days from the date of issue.
- 14.10 Unconsumed free issue material value at any point of time against any PO should not exceed 20% of the maximum PO Value.
- 14.11 FIM will be issued to contractor against PO only after receipt of CPBG & Indemnity bond.
- 15.0 BUILDING AND OTHER CONSTRUCTION WORKERS (BOCW), ACT 1996
- 15.1 Applicability – the said act is applicable to every establishment which employs or had employed on any day often preceding twelve months, 10 or more building workers in any 'Building or other construction work' (Building or other construction work means the construction, repairs, maintenance or demolition of or in relation to building , streets, roads, railways, tramways, airfields, drainages, embankment, transmission and distribution of power, water works, oil and gas installations, pipeline etc.(refer section 2(d) of the act). It does not include any building and other construction work to which the factory act 1948 and the mines act 1952 is applicable).
- 16.0 CONTRACTOR'S OBLIGATION AT SITE
- 16.1 Contractor shall establish site office in the respective areas, allotted to them with adequate facilities like three tables, six chairs, telephone, computer with mailing (internet), printer (including consumables), file rack etc. for effective communication and documentation.
- 16.2 In addition to above, contractor shall provide separate space with facilities like two tables, six chairs, two computers with mailing (internet), printer with consumables, file racks, AC etc. and one office boy within the site office for MNGL for effective monitoring & documentation of the project.
- 16.3 Contractor shall provide as and when required a wagon(s) suitable for soil removal, for the delivery or reinstatement materials and for the transport of pipe to and from site.
- 16.4 Contractor shall provide transport for their technical staff and operatives to move from site to site, and to move tools and equipment from site to site, this vehicle will also be fitted with a tow bar suitable for the towing of a mobile air compressor or pipe trailer.
- 16.5 Contractors shall make appropriate arrangements to ensure that their supervisor(s) are adequately mobile and can attend sites or meetings with MNGL, other authorities or customers as required, without any undue delay.
- 16.6 Contractors shall provide cell phones to their supervisors for day-to-day communication with MNGL and site representatives of MNGL.

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- 16.7 Contractor shall employ a Project Manager / Coordinator, Billing engineer and site engineers on company roll. Contractor shall submit Electronic Challan cum Return (ECR) of PF deposit of all employees deployed on MNGL site as proof that employees are on company pay role. The Project Manager / Coordinator must have qualification of BE Mech / Diploma in Mech Engineering with min. 7 years, Billing engineer must be Graduate with minimum 3 years' experience & Site Engineers must have minimum Diploma in Mechanical Engineering with 3 years of work experience in gas pipe line job.
- 16.8 Project Manager/ Coordinator shall be single point of contact for all the works and must represent company in the meetings. However, for all monthly review meetings, Owner of the contractor company shall have to be present as and when called by MNGL
- 16.9 Any change in key persons working at site shall be informed to the Owner promptly
- 16.10 Owner will not allow switching/swapping of key personnel of any contractor working at site from one contractor to another during the continuity of the contract.
- 16.11 Contractor shall deploy Equipment, Tools & tackles etc., at site as defined in tender documents.
- 16.12 1 No. commercial vehicle (four wheelers with driver) shall deployed at site. It shall be well equipped with tools and tackles for attending online connections, VIP cases/ urgent installation and on-going execution work.
- 17.0 IT RELATED RESOURCES:
- 17.1 Contractor is required to arrange for Smartphones/Tablets for its teams/supervisor/Plumbers which would be required to capture the connection details through field mobility software provided by MNGL. The tentative requirement for smartphone shall be as follows:
- o 4GB RAM.
 - o 5.3-inch Screen (minimum).
 - o 2G/3G/ 4G (2300 MHz) Connectivity (4G for video uploads).
 - o GPS Chip (for Location Tracking) with A-GPS (for accuracy during absence of internet).
 - o GHz Quad Core Processor.
 - o 8MP+ Back Camera.
 - o 5MP+ Front Camera.
 - o 3,500+ mAh Battery Size.
 - o Android Version 6.0 and above.
- 17.2 Contractor shall arrange a high speed scanner at his office to ensure scanning and uploading of documents prepared on site as per MNGL requirement.

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- 17.3 Contractor shall arrange to provide the optical code scanner with option for connectivity with smartphone to ensure automatic scanning and meter serial no. capturing in the smartphone application.
- 18.0 RECONCILIATION OF OWNER SUPPLIED MATERIALS
- 18.1 The Contractor is responsible for completing the “Material Used” section of the worksheet for each job completed. This record will be used for the reconciliation of material at the end of the job or contract.
- 18.2 The full replacement or repair costs of all damages items will be recharged to the contractor.
- 18.3 It is mandatory that the contractor is required to undertake and submit inventory details of free issue and purchased materials on fortnightly basis to Owner/ Owner's representative as per the approved format of the owner. The inventory details shall be in correlation with the Daily progress chart and material reconciliation sheet. Material reconciliation statement of all free issue materials shall be carried out on every month & reconciliation statement shall be submitted to MNGL
- 18.4 After the final reconciliation is carried out, the variances in materials issued against materials used and returned, will be assessed. All unused, scrap materials and salvageable materials shall be the property of the Owner and shall be returned by the Contractor category-wise at his cost to the Owner's designated store yard (s). In case the Contractor fails to do so or exceeds the limits of allowances specified below for scrap/ serviceable materials, then recovery for such quantities not returned as well as returned in excess of permitted limit by the Contractor will be done at the penal rate i.e. 125% of landed cost at the time of final bill/ closing of contract by Engineer-in-charge shall be effected from the Contractor's bill (s) or from any other dues of the Contractor to the Purchaser. Contractor shall be responsible for the adjustment and measurement of the surplus materials to be returned to the store. Contractor shall also be responsible for suitable segregation of returned materials into separate stacks of serviceable and scrap materials. Wherever certain material is covered under Contractor's scope of supply whether part or in full for any item of work covered under SOR, no allowance towards wastage/ scrap etc. shall be accounted for during execution stage.


Item	Scrap	Unaccountable
Gas Meters	0%	0%
Regulators	0%	0%
Gas Isolation, Appliance Valves	0%	0%
MDPE Pipes	2% (Less than the length defined below)	2%

Note: "Pipe length less than 5.0 m for Dia- 125mm & 180mm shall be considered as nonreturnable scrap. Pipe length less than 10 m for Dia- 20mm/32mm/63mm shall be considered as non-returnable scrap."

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- 18.5 Material consumption will be recorded on area wise basis. Material issued from the MNGL stores shall be consumed, recorded and returned using the same MNGL item code.
- 18.6 Any payments due to the Contractor may be withheld to cover these charges.
- 18.7 All waste materials, part lengths of pipe and other partly used items are the property of MNGL and must be returned to the stores with the appropriate documentation so that they can be considered as part of the material reconciliation.
- 19.0 COMPLIANCE WITH LAW
- 19.1 Contractor shall abide by all prevailing Laws of India including but not limited to:
- Apprentices Act.
 - Contract labour (Regulation & Abolition) Act.
 - Employers Liability Act.
 - Environment Protection Act.
 - Factory Act.
 - Industrial Dispute Act.
 - Minimum Wages Act.
 - Payment of Wages Act.
 - Workman Compensation Act.
 - Building and Other Construction Workers (Regulation of Employment and Condition of service) Act, 1996
 - Any other Statute, Act, Law as applicable.
- 20.0 INSURANCE
- The SCC provisions shall supplement GCC Clause 60 as detailed below.
- 20.1 Contractor shall at his own expense arrange, secure and maintain insurance with reputed insurance companies to the satisfaction of the Owner as may be necessary and to its full value for all such amounts to protect the works in progress and his personnel from time to time and the interest of Owner against all risks as detailed in bid document. The form and the limit of such insurance as defined herein together with the under writer works thereof in each case should be as acceptable to the Owner. However, irrespective of work acceptance, the responsibility to maintain adequate insurance coverage at all times during the period of Contract shall be that of Contractor alone. Contractor's failure in this regard shall not relieve him of any of his responsibilities and obligation under the Contract.

Any loss or damage to the work/ material, during transportation, storage, erection and completion of work till such time the WORK is taken over by OWNER, shall be to the account of CONTRACTOR. CONTRACTOR shall be responsible for preferring of all claims and make good for the damage or loss by way of repairs and/or replacement of the parts of the Work damaged or lost. CONTRACTOR shall provide the OWNER with a copy of all insurance policies and documents taken out by him in pursuance of the

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CONTRACT. Such copies of document shall be submitted to the OWNER immediately upon the CONTRACTOR having taken such insurance coverage. CONTRACTOR shall also inform the OWNER at least thirty days in advance regarding the expiry cancellation and/or changes in any of such documents and ensure revalidation/renewal etc., as may be necessary well in time.


All costs on account of insurance liabilities covered under CONTRACT will be to CONTRACTOR's account and will be included in VALUE OF CONTRACT. However, the OWNER may from time to time, during the currency of the CONTRACT, ask the CONTRACTOR in writing to limit the insurance coverage risk and in such a case, the parties to the CONTRACT will agree for a mutual settlement, for reduction in VALUE OF CONTRACT to the extent of reduced premium amounts.

CONTRACTOR as far as possible shall cover insurance with Indian Insurance Companies.

(a) **EMPLOYEES STATE INSURANCE ACT:**

The CONTRACTOR agrees to and does hereby accept full and exclusive liability for the compliance with all obligations imposed by the Employee State Insurance Act 1948 and the CONTRACTOR further agrees to defend, indemnify and hold OWNER harmless for any liability or penalty which may be imposed by the Central, State or Local authority by reason of any asserted violation by CONTRACTOR or SUBCONTRACTOR of the Employees' State Insurance Act, 1948, and also from all claims, suits or proceeding that may be brought against the OWNER arising under, growing out of or by reasons of the work provided for by this CONTRACTOR, by third parties or by Central or State Government authority or any political sub- division thereof.

The CONTRACTOR agrees to fill in with the Employee's State Insurance Corporation, the Declaration Forms, and all forms which may be required in respect of the CONTRACTOR's or SUB- CONTRACTOR's employees, who are employed in the WORK provided for or those covered by ESI from time to time under the Agreement. The CONTRACTOR shall deduct and secure the agreement of the SUBCONTRACTOR to deduct the employee's contribution as per the first schedule of the Employee's State Insurance Act from wages and affix the Employee's Contribution Card at wages payment intervals. The CONTRACTOR shall remit and secure the agreement of SUB-CONTRACTOR to remit to the State Bank of India, Employee's State Insurance Corporation Account, the Employee's contribution as required by the Act. The CONTRACTOR agrees to maintain all cards and Records as required under the Act in respect of employees and payments and the CONTRACTOR shall secure the agreement of the SUBCONTRACTOR to maintain such records. Any expenses incurred for the contributions, making contributions or maintaining records shall be to the CONTRACTOR's or SUB-CONTRACTOR's account.

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The OWNER shall retain such sum as may be necessary from the total VALUE OF CONTRACT until the CONTRACTOR shall furnish satisfactory proof that all contributions as required by the Employees State Insurance Act, 1948, have been paid. This will be pending on the CONTRACTOR when the ESI Act is extended to the place of work.

(b) WORKMEN COMPENSATION AND OWNER'S LIABILITY INSURANCE:

Workmen Compensation and Owner's Liability Insurance shall be taken by the CONTRACTOR at its own cost covering all its employees who are engaged in the performance of this CONTRACT. If any of the work is sublet, the CONTRACTOR shall require the SUB-CONTRACTOR to provide workman's Compensation and Owner's liability insurance for the latter's employees if such employees are not covered under the CONTRACTOR's Insurance.

The policy shall indicate:

1. Contract No./ Work Order no.
2. Complete scope of work
3. Site/ location details
4. Details of workmen to be insured
5. Validity period of the insurance coverage


(c) TRANSIT INSURANCE

Open transit policy of all items to be transported by the CONTRACTOR to the SITE of WORK, shall be taken by the CONTRACTOR and monthly declaration of the materials to be transported or transported to be declared to the insurance agency. This will include the materials to be supplied by the CONTRACTOR to MNG site and or any free issue materials issued by MNG, to be transported to site for execution of work. The cost of transit insurance should be borne by the CONTRACTOR and the quoted price shall be inclusive of this cost.

(d) CONTRACTOR'S ALL RISK INSURANCE POLICY (CAR)

The contractor shall take all risk insurance policy at its own cost to cover physical loss or damage to the works at the site occurring prior to acceptance of work or part hereof taken over by the owner at its sole discretion with an extended maintenance coverage for the contractor's liability including Third Party Liability in respect of any loss or damage during the warranty period. Endorsements to the policy shall include coverage for faulty workmanship and materials.

Contractor will be required to take insurance coverage of minimum 1.5 times the order value to cover the cost of free issue material/items issued by the Owner and the cost of materials being procured by the CONTRACTOR.

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The policy shall indicate:

1. Contract No./ Work Order no.
2. Complete scope of work
3. Site/ location details
4. Type of risks covered
5. Validity period of the insurance coverage

The contractor shall take all risk insurance policy at its own cost to cover physical loss or damage to the works at the site occurring prior to acceptance of work or part thereof taken over by the owner at its sole discretion with an extended maintenance coverage for the contractor's liability in respect of any loss or damage during the warranty period. Endorsements to the policy shall include coverage for faulty workmanship and materials.


The policy shall indicate complete scope of work, site, location details of work, type of risks covered and validity of the insurance

(e) ANY OTHER INSURANCE REQUIRED UNDER LAW OR REGULATIONS OR BY OWNER:

CONTRACTOR shall also carry and maintain any and all other insurance(s), which he may be required under any law or regulation from time to time without any extra cost to OWNER. He shall also carry and maintain any other insurance which may be required by the OWNER

21.0 STATUTORY APPROVALS

- 21.1 General permissions shall be obtained by the Purchaser. However, working approval from any authority required as per statutory rules and regulation of Central/ State Government/Local Bodies shall be the Contractor's responsibility unless otherwise specified in the bid document. The application on behalf of the Purchaser for submission to relevant authorities along with copies of required certificates complete in all respects shall be prepared and submitted by the Contractor well ahead of time so that the actual construction/commissioning of the work is not delayed for want of the approval/ inspection by concerned authorities.
- 21.2 The Contractor shall be responsible for arranging the inspection of the work by the authorities and necessary co-ordination and liaison work. However, Owner will reimburse the statutory fees paid by the contractor at actual on production of documentary evidence.
- 21.3 Any change/ addition required to be made to meet the requirements of the statutory authorities shall be carried out by the Contractor without additional cost to Owner. The inspection and acceptance of the work by statutory authorities shall however, not absolve the Contractor from any of his responsibilities under this Contract.

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22.0 SITE CLEANING

22.1 Contractor shall clean and keep clean (Housekeeping and cleanliness) the work site always to the satisfaction of the Engineer-in-charge for easy access to work site and to ensure safe passage, movement and working.

22.2 The Contractor shall dispose of the unserviceable materials, debris etc. to any area, as decided by the Engineer-In-Charge.

22.3 No extra payment shall be paid on this account.

23.0 WORKMANSHIP

23.1 Regarding work completion, the decision of the Engineer-in-Charge will be final and binding.

23.2 The work executed and material supplied shall be to the satisfaction of Engineer-in-Charge and contract price shall include for any incidental and contingent work although not specifically mentioned in the contract but is necessary for its completion in an efficient and workman like manner.

23.3 The Engineer-in-Charge or his authorized representative shall approve the quality of all the materials used by contractor from time to time.


24.0 **PENALTIES** – Penalties shall be as specified in scope of work.

25.0 VOID

26.0 COMPLETION DOCUMENT

26.1 Contractor in three sets shall submit the following documents in hard binder, as a part of completion documents:

- a) Copies of the Inspection reports, welding, lowering etc, HDD Profiles, Approved construction drawing, As-built drawing, Pre testing, final Hydrostatic and other Test reports.
- b) Consumption statements of PE Line Pipes certified by Owner's Site Engineer.
- c) Material Reconciliation.
- d) All other requirements as specified in the respective specifications.
- e) Completion Certificate issued by Owner's Site Engineer.
- f) No claim and No dues certificate by the Contractor.
- g) Recovery statement, if any.
- h) Statement for reconciliation of all the payments and recoveries made in the progress bills.
- i) Copies of deviation statement and order of extension of time, if granted.
- j) Copies of all documents related to statutory requirements like Labour License, CAR Policy, WCP, EPF, ESI challans etc.
- k) Any other contractual documents required on completion.
- l) Soft copy of Isometric drawing and other relevant documents.

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27.0 TIME LIMIT FOR CLAIMS

27.1 Under no circumstances whatsoever, shall the contractor be entitled to any compensation from Owner on any account unless the contractor shall have submitted claim pertaining to the contract in writing to the Engineer-in-Charge within 30 days of cause of such a claim occurring. Contractor shall be deemed to have waived off its writes rights to claim the same, if the claim is not raised within this period.

28.0 VOID

29.0 MATERIAL TO BE SUPPLIED BY THE CONTRACTOR

29.1 Contractor will place timely orders on Owner's specified manufacturers/agencies so as to receive the material in accordance with the execution of project activities. The orders to be placed by the contractor shall incorporate certain clauses with respect to delivery schedule, guarantee/warranty, inspection and despatch clearance by Owner. The items and quantities shall be in accordance with the work to be executed and shall be verified by Owner for its appropriations.

29.2 All material will be manufactured as per approved Quality Assurance Plan (QAP) only to be specified by Owner. Material will be inspected by owner's approved third party inspection (TPIA), the charges of which shall be borne by contractor.


29.3 After approval of QAP, Contractor will submit a schedule production plan mentioning qty's of production along with inspection call at-least one week in advance from the date of commencement of production.

29.4 Contractor will submit a written request to Owner for dispatch clearance of material. For this purpose, he will be required to submit detailed material test inspection report and release note issued by the TPIA. On getting the dispatch clearance, the contractor will arrange material dispatch to the designated project site(s).

29.5 Contractor shall arrange for proper storage of his material distinctly separate from free issued material. Contractor shall require appraising Owner regarding cover area, lock & key arrangement of its safe custody, resources marked safe and proper receiving, stocking, issuing, and maintaining all verifying records on regular basis.


29.6 Contract shall invariably submit copies of order placed by them on various agencies for sourcing material and shall ensure submission of invoices, challans/packing lists, LR Copy, material inspection report and guarantee/warranty certificate for each lot of material received at Owner's site.

29.7 All material should be covered under warranty for satisfactory performance for maximum period of defect liability of executed work. Any defect noticed during defect liability period shall be promptly attended as faulty material must be contractor's responsibility to take-up the matter with material supplier. Any delay on account of non-availability of ordered material or replacement of faulty material shall not be

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waived by the reason of material having ordered to and inspected by Owner's recommended agencies. Faulty material must be contractor's responsibility to take-up the matter with material supplier. Any delay on account of non-availability of ordered material or replacement of faulty material shall not be waived by the reason of material having ordered to and inspected by Owner's recommended agencies.

- 29.8 In case of non-availability of required material to be provided by the contractor and the material being available with MNGL, it can be issued to the contractor on chargeable basis. The charges payable by the contractor shall be in advance and at the last PO rate plus 15% overhead charges. However, any delay on account of non-availability of material shall be to contractor's account for applicability of PRS clause.
- 29.9 Before award of works order/ starting of work at allotted site, contractor shall provide details of stores and site office established by him for the intended work. Failing which the allocation of work may be deferred by Owner. Also, the contractors shall submit details of tools & tackles under his procession required for execution of the work. Owner shall verify all these aspects before allocating work to the contractor.
- 29.10 The networking work includes Horizontal Directional Drilling (HDD) at various locations by means of HDD machines of appropriate capacities. Contractor advised to apprise himself of all such requirements and confirm in writing to the owner of having HDD machines with him or having tie-up with some reputed contractor. Any delay during the executing due to nonavailability of HDD machine shall not be accepted by Owner.
- 29.11 Contractor will not transfer any free issue as well as his supplied material to any other site/ any other contractor without prior written approval of the Engineer- In-charge
- 30.0 **STC TRAINING**
- 30.1 STC Training is compulsory for each contractual manpower which shall be arranged by MNGL and cost of same shall be recovered from contractor @ Rs. 500 in their RA bills in case of absenteeism as per schedule provided by MNGL if the reason of absenteeism is attributable to contractor, the cost shall be recovered as per the expenditure of MNGL for arranging training on per person per training basis.
- 31.0 **CONTRACT CUM EQUIPMENT PERFORMANCE BANK GUARANTEE**
- 31.1 Within thirty (30) Days of receipt of the Letter of Acceptance / Notification of Award, the successful bidder shall furnish to the Purchaser the Contract-Cum-Equipment Performance Bank Guarantee (CPBG) of 3% of order value / contract value (Total order value will be inclusive of all taxes, duties and charges towards transportation, unloading etc. up to MNGL site/store).
- 31.2 All bank guarantees will also have 30 day's claim period beyond expiry date.

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- 31.3 The proceeds of the Contract-Cum-Equipment Performance Bank Guarantee shall be payable to the Purchaser as compensation for any loss or damage resulting from the Supplier's failure to complete its obligations under the Agreement.
- 31.4 The Contract-Cum-Equipment Performance Bank Guarantee shall be denominated in the currency of the Contract/ Letter of award.
- 31.5 A bank guarantee issued by a nationalized bank or a scheduled Indian bank or by the branch of a reputable international bank located in India and registered with RBI.
- 31.6 The Contract Performance Guarantee will be discharged by the Owner and returned to the Supplier not later than thirty (30) days following the date of completion of all the Supplier's performance obligations under the Contract, including any warranty obligations.
- 31.7 The Contract-Cum- Equipment Performance Bank Guarantee should be kept valid for 90 days beyond the completion of contract performance period. Additional one-month claim period shall be included in CPBG. For the format of the CPBG please refer Format F-10.
- 32.0 **FALL CLAUSE**
GCC clause 24 i.e. Fall Clause is not applicable.
- 33.0 **GENERAL**
- 33.1 All personnel of the contractor entering the work premises shall be properly and neatly dressed and shall wear uniform badges while working on premises of the Purchaser including work sites. Non-compliance of this clause shall attract a penalty of Rs. 1000 per instance.
- 33.2 Contractor shall provide all labour and necessary supervision to carry out the work as per the scope of work as defined in tender document, which forms part of this contract in accordance with the conditions of the contract laid down in this part of contract read in conjunction with General Conditions of Contract.
- 34.0 **CLOSING OF PO**
- 34.1 It is contractor's obligation to close the PO within 3 months, once the value is consumed or validity is expired. In case contractor fails to close the PO within this period, MNGL will short close the PO as per data available on the record. MNGL reserves the right to adjust any pending liability of the closed PO/contract from the any other running PO/contract.



**MAHARASHTRA
NATURAL GAS LIMITED**

**TENDER FOR ITEM RATE CONTRACT FOR A PERIOD
OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187

PART E SCOPE OF WORK



**MAHARASHTRA
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A) TECHNICAL

1. INTRODUCTION


Maharashtra Natural Gas Limited (MNGL) is a Joint Venture company between Gail (India) Limited and Bharat Petroleum Corporation Ltd. (BPCL). MNGL has been setup to provide CNG (Compressed Natural Gas) as fuel vehicles through CNG filling stations and PNG (Piped Natural Gas) to Industrial, Commercial & Domestic Sectors in Pune including PMC, Pimpri-Chinchwad, Dapodi, Chakan, Hinjewadi and surrounding areas like Talegaon, Nashik-Dhule & Valsad(excluding already authorized areas),Sindhudurg,Ramanagara, Nanded-Parbhani-Buldhana & Nizamabad,Kamareddy,Nirmal,Adilabad,Asifabad and Mancherial GA.

For that, MNGL plans to install a PNG Distribution network in Pune and Nashik GA. MNGL through this tender is seeking contractors to lay an underground Medium Density Polyethylene (MDPE) pipelines and provide Natural Gas connections to domestic, commercial and industrial consumers in Pune and Nashik GA.

The main scope of this specification comprises of laying of underground Medium Density Polyethylene (MDPE) main pipelines and services pipelines from the DRS to PE / GI transition fitting (inclusive). All the materials shall be supplied by contractor except MDPE pipes, GI and Cu pipes, meters, regulators and valves (MCV, RIV and appliance valve), rectification (if any). The scope covers the activities associated with supply laying, testing and commissioning of MDPE main pipelines and services pipelines of sizes ranging from 20 mm to 180 mm OD up to and including the PE / GI transition fitting above ground level.

MNGL is planning to connect domestic, commercial and Industrial customers through this tender for City Gas Distribution Projects at Pune and Nashik, GA. However, the pipe route & number of connections planned is tentative & may undergo changes as per actual requirement as decided by the Engineer-in-Charge.

- 1.1 Special conditions of contract shall be read in conjunction with the General Conditions of Contract (GCC). Schedule of rates, specifications of work, drawings and any other document forming part of this contract wherever the context so requires.
- 1.2 Notwithstanding the sub-division of the document into these separate sections and volumes, every part of each with and into the contract so far as it may be practicable to do so.
- 1.3 Where any portion of the GCC is repugnant to or at variance with any provisions of the special conditions of contract, then unless a different intention appears, the provision(s) of the special conditions of contract shall be deemed to override the provision(s) of GCC only to the extent that such repugnancies of variations in the special conditions of contract are not possible of being reconciled with the provisions of GCC.
- 1.4 Wherever it is stated in this Bidding Document that such and such a supply is to be effected or such and such a work is to be carried out, it shall be understood that the same shall be effected/carried out by the contractor at his own cost, unless a different intention is specifically and expressly stated herein or otherwise explicit from the context. Contract value (also referred to as Contract price) shall be deemed to have included such cost.

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1.5 The materials, design and workmanship shall satisfy the applicable relevant Indian Standards, the job specifications stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied. In the absence of any Standard/ Specifications/codes of practice for detailed specifications covering any part of the work covered in this Bidding on the contractor.

1.6 In partial modification to Clause No.21.0 of GCC the following shall apply:

In case of contradiction between Indian or other applicable Standards, General Conditions of Contract, Special Conditions of Contract, Specifications, drawings, Schedule of Rates, the following shall prevail in order of precedence:

- i) Letter of acceptance along with statement of Agreed variations.
- ii) Fax / Letter of Intent / Fax of Acceptance / Item Rate Contract
- iii) Schedule of Rates as enclosures to letter of acceptance
- iv) Job / Particular Specifications
- v) Drawings
- vi) Technical / Material Specifications
- vii) Special Conditions of Contract
- viii) General Conditions of Contract
- ix) Indian Standards
- x) Other Applicable Standards

1.7 It will be contractor's responsibility to bring to the notice of Engineer-in-charge any irreconcilable conflict in the contract documents before starting the work(s) of making the supply with reference which the conflict exists.

In the absence of any specifications covering any material, design of work(s) in the same shall be performed / supplies / executed in accordance with Standards Engineering Practice as per the instructions / directions of the Engineer-in-charge, which will be binding on the Contractor.


1.8 The requirements of any statutory body and authority like Indian boiler regulation, Tariff Advisory Committee, Chief controller of Explosives, etc, shall govern where these are more stringent than the requirements specified above.

1.9 Owner's representative means authorized representative of Owner (i.e. M/s MNGL).

2. PROJECT DESCRIPTION

Maharashtra Natural Gas Limited (MNGL) is a Joint Venture company between GAIL (India) Limited and Bharat Petroleum Corporation Ltd. (BPCL). MNGL has been setup to provide CNG (Compressed Natural Gas) as fuel to vehicles through CNG filling stations and PNG (Piped Natural Gas) to Industrial, Commercial & Domestic Sectors in PMC, PCMC, Chakan, Talegaon, Hinjewadi and surrounding area, Nashik-Dhule & Valsad (excluding already authorized areas), Sindhudurg, Ramanagara, Nanded-Parbhani-Buldhana and Nizamabad-Nirmal-Nirmal-Adilabad, Mancheria, Asifabad GA.

MNGL through this tender is seeking contractors to lay an underground Medium Density Polyethylene (MDPE) pipelines, above ground GI/ Cu works and provide Natural Gas connections to Commercial/ Industrial & Domestic consumers in PMC, PCMC, Chakan,

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Talegaon, Hinjewadi and surrounding area, Nashik-Dhule & Valsad (excluding already authorized areas) GA.

The main scope of this specification comprises of Laying, testing and commissioning of underground Medium Density Polyethylene (MDPE) pipelines of sizes ranging from 20 mm to 180 mm OD from the DRS to PE / GI transition Fitting & installation of GI/Cu Pipelines for Natural Gas supply to Domestic and commercial/ industrial consumers. The scope also covers supply & installation of the GI fitting & other associated fittings for aboveground installation and all MDPE Pipeline's associated Fittings, Valves, HDPE Casing, Warning Mat, etc. for underground installation for City gas project of Maharashtra Natural Gas Limited (MNGL) for Pune area. The scope also covers the laying of MDPE service pipelines and GI & Copper piping to connect new customers in the charged areas. The scope also includes the residual engineering of MDPE Pipeline network from the downstream of Service Regulators within the colonies.

Project Details

A brief description of the proposed facilities is given below:

- 1) **Pune GA- PMC, PCMC, Chakan, Talegaon, Hinjewadi & surrounding area**
- 2) **Nashik-Dhule & Valsad (excluding already authorized areas) GA**

MDPE Pipeline Diameter	: 180 mm to 20 mm
Pipe Material	: MDPE PE-80/100, SDR-11
Operating Pressure/ Rating	: 4 kg/cm ² (g) in Main pipeline and 100 mbar in LP Pipeline

3.0 WORK TENDERED


Work tendered in this bid package pertains to laying of underground MDPE Pipeline (including supply of casing pipe, associated fittings, valves, etc.) and GI Service pipe installation (including supply of GI fitting) to domestic & commercial/ industrial consumers complete with associated facilities.

The Contractor is to broadly carry out the following activities:

- 3.1 Laying of the underground MDPE Pipeline, supply & installation of valves & fittings (wherever required) along with associated facilities from the proposed DRS for each industry / commercial consumer / housing society / cluster as indicated in drawings or as directed by the owner/EIC.
- 3.2 Complete aboveground installation of GI/Cu piping system including Meters, Regulators, Valves, etc.
- 3.3 Valve chamber wherever required.
- 3.4 Installation of MDPE pipeline including supply of casing pipe (with or without casing) at all crossing of rail, road, utilities, underground pipeline & water bodies (drain, stream & nala etc.).


4.0 SCOPE OF WORK

The scope of work covered in this Contract will be as described in to SCC, Particular job specifications, Standard Specifications, Schedule of Rates etc. & various other parts of this Bidding Document.


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The scope of work shall generally be, but not limited to the following:

- 4.1 Plan and prepare a schedule for execution and work implementation as per QA/QC plans to be issued by MNGL. Contractor has to submit the Construction/ Execution procedures before commencement of work.
- 4.2 **Primary responsibility of obtaining permissions from various authorities, management of sites, land owning agencies for road cutting / excavation for laying of pipeline to complete the job is contractor's responsibility. Liaoning with concerned authorities (Government / Private) during the execution of the job is the scope of the Contractor.**
- 4.3 Receipt of free issue items from MNGL's designated stores, loading, transportation, unloading at Contractor's stores near project sites.
- 4.4 Proper storing, stacking, identification, providing security, and insurance, during storage, laying and up to handing over of pipelines.
- 4.5 Making trial pits to determine the underground utilities /services such as existing pipelines, Cables (Electrical/Communication), Conduits, U/G drainage, Sewers, tunnels, Subways foundations etc., and deciding optimum routes and depths for laying the pipelines based on the route plans provided in the tender.
- 4.6 Obtaining the approval for optimum route and ROU from the concerned authority and EIC. Grading the ROU as per requirement for proper movement of workmen, equipment and QA/QC personnel.
- 4.7 Wherever required the grass/turfing, pavement, linings, drains roads and other such 'pucca' area shall be locally removed to facilitate trenching and pipe laying works. The same is to be reinstated as original.
- 4.8 Supply & Installation of Safety/ Warning Signs, barricading of the entire route to be trenched. Pits to be similarly barricaded along the warning sign.
- 4.9 To make trenches with stable slopes but restricting minimum disturbance to above ground/underground services/ installation as per specifications and approved route plans; keep the trenches free from water and soil till placement of pipes;
- 4.10 Uncoiling/ stringing the PE pipes of required sizes (i.e. 20, 32, 63, and 90, 125 & 180 mm) pipes into trenches as per specification.
- 4.11 Joining the pipe ends with fittings and valves by approved electro-fusion techniques as per specification.
- 4.12 Removal (if any in GI-Cu work), Installation of pipe fittings/installation like elbow, tee, reducers, tapping saddles, joints, connectors, transition fittings, valves etc. including construction of supports, valves pits, inspection chambers etc. as per specification.
- 4.13 Laying pipeline using trench less technology methods with or without casing pipes as per specification and as directed by EIC.


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- 4.14 Supply & Laying of HDPE duct as casing pipe wherever applicable, along with MDPE Pipe.
- 4.15 Supply of good quality GI sleeves, Transition Fitting Guard, MS enamel coated sleeves, concrete casing pipes, sand and other material, fittings to be supplied by the Contractor as per provisions of tender.
- 4.16 Back filling and compaction by jumping jack compactor using approved 'good' soil or using excavated earth or borrow earth as per requirement and specification and replacement of tiles, slabs removed during the excavation. Cleaning all unserviceable material, debris, excess earth near trenches etc. to designated disposal area.
- 4.17 Carrying out pneumatic testing and purging as per specifications and approved procedures; providing all tools, tackles, instruments, manpower and other related accessories for carrying out the testing of pipes.
- 4.18 Nitrogen purging (including supply), commissioning & gas charging of tested pipeline as per approved procedure.
- 4.19 Restoration of existing ground features such as grass/ turfing, paving, roads, drains, concrete, floral beds, fencing, tiles, flooring masonry etc. to original condition and to match with adjoining conditions- functionally and aesthetically up to the entire satisfaction of MNGL any other third party agency designated by MNGL and local authorities, failing which, it will be done at the risk and cost of the contractor. Obtaining satisfactory completion certificates for the restoration work done from the concerned authorities.
- 4.20 Installing of permanent site markers, warning signs, valve chamber etc.
- 4.21 Returning surplus material to MNGL stores, reconciliation of free issue material/ consumables and obtaining 'no objection certificates' from MNGL
- 4.22 Handing over the completed works to MNGL for their operation / use purposes.
- 4.23 Maintaining the completed pipelines/installation for any defect, failures during defect liability period.
- 4.24 Preparation and submission of as-built drawings, details of crossings, utility graphs, measurement sheets and deviation statements on completion / commissioning of work by way of drawing, sketches and tables.
- 4.25 Any other activity(s) not mentioned/ covered explicitly above, but otherwise required for satisfactory completion/ operation/ safety/ statutory/ maintenance of the works shall also be covered under the Scope of work and has to be completed by the Contractor within specified schedule at no extra cost to MNGL.
- 4.26 **Procurement**
 - 4.26.1 CONTRACTOR shall procure and supply all the materials other than OWNER supplied materials, required for permanent installation of main pipeline and aboveground GI/Cu Installation in sequence and at appropriate time. All equipment, materials, components etc. shall be suitable for the intended service. Approved vendor list has been indicated in the bid

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package for various items. For items which are not covered in the vendor list, CONTRACTOR shall obtain OWNER's prior approval for the vendor.

- 4.26.2 CONTRACTOR shall procure all materials, components, equipment, consumable etc. required for successful completion of the pipeline system. CONTRACTOR shall also procure and supply spares required for pre-commissioning and commissioning/ start up as recommended for all items supplied by him as per specifications provided in the bid package. Where no specification is available in the contract, the same shall be prepared by the CONTRACTOR based on the piping material specification and shall be subject to OWNER's approval.
- 4.26.3 Material take-off with complete description of size, rating, material, thickness and specifications.
- 4.26.4 Only single offer shall be provided by the bidder fully complying to specifications/ drawings/ requirements for OWNER's review and approval. CONTRACTOR shall provide for inspection of the items at vendor's works by the OWNER/ OWNER's REPRESENTATIVE or by a reputed inspection agency and shall submit inspection reports for OWNER's clearance.
- 4.26.5 Stores management including receipt, warehousing, preserving the material in good condition, issue of material to construction site, reconciling/ handing over surplus material to OWNER for OWNER supplied items.
- 4.26.6 Carryout proper documentation of inspection and quality assurance programs for all equipment and bulk materials duly approved by OWNER. CONTRACTOR shall maintain an accurate and traceable listing of procurement records for the location, quality and character of all permanent materials in the Project.
- 4.26.7 CONTRACTOR shall immediately report to the OWNER of all changes which will affect material quality, and recommend any necessary corrective actions to be taken.
- 4.26.8 Submit periodic manufacturing progress reports highlighting hold ups and slippages, if any, to OWNER and take remedial measures.
- 4.26.9 Interact with authorities such as Sales Tax, Octroi / LBT, Excise, Customs etc. as necessary and arrange for transportation of the materials under his scope of supply to site.
- 4.26.10 All purchase requisitions including purchase orders shall be approved by OWNER/ OWNER's REPRESENTATIVE.
- 4.26.11 Compliance with vendor's and supplier's instructions and recommendations for transportation, handling, installation & commissioning.
- 4.27 **Construction**
 - 4.27.1 All construction works shall be carried out as per "Approved for Construction" drawings, procedures, specification and applicable codes and standards. Any changes at site shall also need prior approval from the OWNER and revision of drawings. Construction drawings will be submitted by the Contractor in a phased manner for owner's approval in accordance with the procurement and construction plan prepared and furnished by contractor & agreed by Owner.

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Owner will take minimum 7 working days from the date of submission of the documents / drawings submitted by the contractor for owner's comments / approval.

4.27.2 **Statutory Approvals**


The Owner shall provide to the Contractor the basic / in principal approval for laying the pipeline. However, the Contractor at his own initiative shall obtain all permissions, permits and licenses necessary for the performance of the work. If any such permission, permit or license required for the performance of the work by the contractor can only be granted at the request or recommendation of the Owner, the Owner shall at the request of the Contractor, provide recommendatory letters to the contractor to obtain or procure the same. The contractor shall not, however be entitled to any additional compensation over and above contracted rates of services for any hardship or increased cost caused by any idleness, suspension or disruption of work or any other account whatsoever as a result of the inability of the contractor to obtain the permission(s), permit(s), license(s) aforesaid to match with the progress of the work nor shall the same constitute a ground for extension of time.

- a) The approval from any authority required as per statutory rules and regulations of Central/ State Government, PWD, Irrigation Dept. etc. shall be the contractor's responsibility unless otherwise specified in the tender document. The application on behalf of the Owner for submission to relevant authorities along with copies of required certificates complete in all respects shall be prepared and submitted by the Contractor well ahead of time so that the actual construction/ commissioning of the work is not delayed for want of the approval/ inspection by concerned authorities. The Contractor shall arrange the inspection of the works by the authorities and necessary coordination and liaison work in this respect shall be the responsibility of the Contractor. However statutory fees paid, if any, for all inspections and approvals by such authorities shall be reimbursed at actuals by the Owner to the Contractor on production of documentary evidence.
- b) The defective work resulting from poor workmanship and/ or material supplied by contractor, as pointed out by any statutory authority shall be rectified by the contractor at no extra cost to the Owner. Any change/ addition required to be made to meet the requirements of the statutory authorities, the same shall be carried out by the contractor free of charge. The inspection and acceptance of the work by statutory authorities shall, however, not absolve the contractor from any of his responsibilities under this contract.

4.27.3 The Contractor shall comply with all the conditions and requirements issued by Authorities having jurisdiction in the area where the work is to be performed.

It shall be the Contractor's sole responsibility to make arrangements for land for setting up of its string fabrication yards, all storage areas for line pipe and other materials, wherever required, and all other work areas.

The Contractor shall make all arrangements for access to his work site at his own cost and responsibility. If no public road exists Contractor shall arrange on his own for access to his work area at no extra cost to the COMPANY.

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The CONTRACTOR shall be responsible for claims if any arising out of damage/ obstruction to public utilities like lines of DOT etc. where the claims will cover the restoration costs as well as loss of revenue due to down time.

- 4.27.4 Providing schedules, progress reporting, organization chart at construction site, quality assurance plan and developing quality control procedures, as per requirements indicated elsewhere in the bid package.
- 4.27.5 Coordination and supervising the work of sub-contractors.
- 4.27.6 Transportation of appropriate materials and taking delivery of Company supply materials, store, worksite, intermediate storage points, maintaining and operating an adequate material control procedure at worksite.
- 4.27.7 Fabrication of all GI piping, structural components as per approved drawings.
- 4.27.8 All civil/ structural works, electrical and instrumentation, laying and commissioning works shall be performed in accordance with relevant specifications and requirements enclosed elsewhere in the bid package.
- 4.27.9 CONTRACTOR shall provide complete details of manpower, equipment etc. to be deployed. Mobilizing and providing all equipment's, manpower (skilled and unskilled), consumable and other resources etc. for each spread as required for the execution of the complete job defined herein and thereafter demobilizing the same upon completion of work.
- 4.27.10 Provide, maintain and operate all temporary facilities required for the construction related works and remove after completion of work. Providing barricades along the trench in city area as per instruction of Engineer-in-charge for safety.
- 4.27.11 Hook up/ tie-in of pipeline and piping system with other facilities like DRS/MRS etc.
- 4.27.12 All works related to cleaning, testing, pre-commissioning and commissioning of the work tendered.
- 4.27.13 Idle time preservation of pipeline, if required.
- 4.27.14 All incidental and associated works and any other works not specifically listed therein but are required to be carried out to complete entire work related to pipelines and terminals.

4.28 Main Pipeline

4.28.1 Topographic Survey

The contractor shall be deemed to have familiarized themselves with route prior to quoting and take care of all the eventualities. No extra cost shall be admissible in any form at a later date. Any additional survey/ route survey and their details required either for local detours during execution or for which the survey work for sections of pipeline have not been carried out by owner, shall be carried out by contractor in similar manner without any extra cost to the owner. However, laying and construction of entire pipeline including detoured portion and pipeline section/ sections of pipeline for which survey work has not been carried out by Owner, shall be

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within the scope of contractor without any cost implication. **Contractor shall be deemed to have considered such survey works while formulating his bid.**

Preliminary schematic layout of MDPE pipeline route and other standard drawings are included in the Bid Package. These drawings are indicative & tender purpose only and are furnished to enable Bidder to estimate the quantum of work and to quote a firm price for the work. Final construction drawings of all type shall be prepared and submitted for approval to Owner by successful bidder / contractor at or before project execution stage. Approved for Construction drawings may vary to some extent from the drawings included in the Bid Package. Contractor shall carry out all works in accordance with the construction drawings duly approved by Owner without any extra time & cost implication to the Owner.

4.28.2 **Familiarization of Pipeline Route**

Bidders are advised to make site visits to familiarize themselves with all the salient features of terrain and available infrastructure along the pipeline route. Contractor shall be deemed to have considered all constraints and eventualities on account of site conditions along pipeline route while formulating his bid. Contractor shall not be eligible for any compensation in terms of cost and/ or time, on account of site conditions along pipeline route varying to any extent from whatever described in the Bid Package and the drawings furnished along with the Package.

4.28.3 **Soil Investigation**


Work will be in Pune GA & Nashik GA, hence the pipeline route and its major crossing location in general may encounter hard soil area / rocky area while excavating by open cut / trenchless method. It shall be Bidder's responsibility to familiarize himself with sub-soil conditions along the pipeline route, and work out the lengths of pipeline to be laid in different subsoil conditions including quantum of rock excavation by control blasting (Permission / approval / NOC / work permit will however be obtained by the contractor) / cutting and chiseling of hard soil / rock / stone, that would be necessary and shall be required while formulating their bid. **Unit rates for pipeline construction as quoted by Bidder shall include the above and be inclusive of all excavation. Contractor shall not be entitled for any extra compensation in terms of time and cost for any kind of excavation and variation in actual site condition from the data furnished in the tender document, whatsoever.**

The survey drawings / documents detail to the extent available are being furnished to the bidder along with tender document. It shall be bidder's responsibility to verify the available data and satisfy himself with regard to accuracy and utility of data.

- 4.28.4 The city condition field / other fields may have lots of PVC; PE & utility pipelines or other pipelines & cables being used for city utility / other utilities purposes. CONTRACTOR shall ensure that these lines shall not be damaged/ cut affecting the water / power / communication / other supply to concerned Users / Owners / Authorities. Wherever required temporary necessary precautions had to be maintained for uninterrupted supply.

4.28.5 **Right of Way (ROW) / Right of Use (ROU)**

For MDPE laying (Mainline/4 Bar pressure) construction purposes, in Pune & Nashik GA pipeline restricted ROU / Corridor and ROU acquisition / principal permission from respective OWNER's like PMC, PCMC, PMRDA, ZP, NMC, MIDC, KIDB, Municipal Council, Nagarpanchayat, Grampanchayat, NHAI, PWD, Railway, Metro, Private land owner (if required) etc. for laying the pipeline including permission for all crossing i.e. rail, road,


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river, foreign hydrocarbon & utility pipelines, utility cables etc. and day to day coordination on site during execution, will be in the scope of contractor. For LP pipeline (100 mbar operating pressure) construction purposes, permissions from the societies, Bungalows, individual houses, authority (for tapping etc.) & other private parties for laying of pipelines and day to day coordination, will be the scope of contractor.

Where the pipeline passes through city areas / industrial areas / forest areas etc., the ROU will be restricted to required width may reduce up to 1 meter as made available by concerned department. Contractor shall carry out construction work in the width as made available to him with no time and cost implication to the Owner. It shall be Contractor's sole responsibility to make arrangement for any additional land required for fabrication, construction, storage and all other work areas, if required.

The contractor shall notify the owner the probable date of commencement of work at ROU site at least three (3) weeks in advance to enable the owner to arrange handing over of the ROU/ site on the date requested. Should contractor fail in such notification, the owner shall not be liable for any claim by contractor, of whatsoever nature, for delay in the available of a ROU/ site.

- 4.28.6 "Receiving and Taking-over" as defined in the specifications of OWNER supplied pipes at OWNER's designated stacking yards/ dump site. Management of dumpsite after receiving and taking over of pipes transportation including loading/ unloading, handling, stacking, hauling and stringing of pipes from OWNER's stacking yards to CONTRACTOR's worksite(s)/ workshop(s)/ pipeline Right-of-use (ROU), including arranging all necessary intermediate storage area(s) required thereof till the pipes are installed in permanent installation.
- 4.28.7 Carrying out inspection of OWNER supplied pipes, fitting & valves etc. at the time of receiving and taking-over. Carrying out all handling, lifting, stacking of above materials required during inspection.
- 4.28.8 Loading, unloading, handling, stacking, storing and transportation to workshop/ work site of all materials that may be used for the construction of pipeline system either supplied by OWNER at their designated stack yard/ dump site/ store and/ or by CONTRACTOR as the case may be.
- 4.28.9 All necessary approvals, work permits and Liaoning / coordination works for ROU acquisition / permission for laying of pipeline and it's all crossing from concerned local authorities and respective OWNER's having jurisdiction, as applicable for performing the work including shifting/ relocation and restoration of telephone/ electrical poles and underground pipes and other utilities etc. as required by local authorities and as directed by OWNER shall be responsibility of contractor.
- 4.28.10 Stacking, clearing, grading, fencing of Right-of-Use (ROU) as required, trenching to all depths in all types of soil including soft & hard rock, controlled rock blasting (if permitted, however, permission / approval / NOC / work permit will be obtained by the contractor) by special techniques, chiseling or otherwise cutting etc. to a width to also accommodate the MDPE pipeline as per relevant standards, drawings, specification etc. transportation of MDPE pipes to ROU along the route, stringing, aligning, bending, jointing including testing, inspection, field jointing including supply of all materials as per specifications, sand padding, laying and lowering of the pipeline, back filling, slope breakers as required, carrying out road, canal, utility and submerged minor water course crossings including bank stabilization of water course

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crossings as required, crossing of nallah/ canal by HDD / conventional method. Supply and installation of anti buoyancy measures viz. extra cover etc. on pipeline as shown in approved drawings and as directed by OWNER, installation of supports wherever required, supply of select backfill material as required, clean-up, pigging, flushing, pneumatic testing, nitrogen purging / pre-commissioning and commissioning of complete pipeline system, including all associated works as per relevant specifications, standards and approved drawings.

- 4.28.11 Installation of casing pipes (by open cut/ moling/ HDD) assembly, including supply of all materials (excluding free issue material if any) viz. as per the drawings/ specifications enclosed with bid package.

Cased crossings shall be installed at locations indicated in alignment sheets or as per instruction of Engineer-in-charge. The number of crossings indicated in drawings is subject to change based on engineering, construction and statutory requirements or the requirements of the authority having jurisdiction over a utility crossing.

- 4.28.12 All works/ provisions including installation of slope breakers to be provided in the trench in areas where slope is more than 1 in 10.

- 4.28.13 Sand / soft soil padding around pipe wherever required in areas where trenching has been done in hard soil area / rocky area including supply of sand/ soft soil. The thickness of sand/ soft soil padding at the top of coated pipe shall be minimum 150 mm and bottom of coated pipe shall be minimum 150 mm or as per standard drawing no. **MNGL/PLNG/DWG-09**, whichever is more.

- 4.28.14 Installation of all inline/ online instruments/ valves/ fittings/ transition fittings/ appurtenances etc. as per requirements of approved drawings.


4.28.15 Crossings

4.28.15.1 Railway Crossings (If applicable as per SOR)

The general arrangement drawings for railway crossings shall be approved by Indian Railways and construction shall be carried out accordingly. These drawings shall be made available to the Contractor at appropriate time during the execution of the project. Pipeline at railway crossings shall be provided with a casing pipe. The casing pipe shall be at least three nominal pipe sizes larger than carrier and shall be installed by boring/ jacking. It should be noted that the extent of casing pipe generally specified by Railways, is 15.0m beyond centerlines of the outermost tracks on either side or 0.6 meter beyond the ROU limits of railways on either side, whichever is more. All railway crossings shall be cased crossings. The railway crossing shall comply with the requirements of API 1102 and Indian Railway regulations. The crossing angle shall be as close to 90° as possible.

4.28.15.2 Road Crossings

- i) The method of crossing of roads such as open cut/ boring shall be firmed up by Contractor in consultation with concerned authorities and Company. The Contractor shall also take due care to identify and take due precautions so as not to disturb or damage the utilities like cables, water lines and other structures.
- ii) After laying the pipeline in a road crossing by open cut method, the Contractor shall completely restore the road to its original condition.

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- iii) While laying the pipeline in road crossings by open cut method the Contractor should ensure that the traffic is not stopped during the execution of work. This may be done by cutting half of the road at a time so as to enable the traffic to pass on the remaining half of the road. Alternatively, the Contractor can provide diversion roads to maintain the flow of traffic.
- iv) The Contractor shall provide proper caution boards during day time and danger lights during night time when the cutting operation of the road is going on.

For cased crossings, the pipeline should be taken through the casing pipe which should be at least 1.5 meters below the road top as specified or as per the requirements of local authorities, whichever is higher. All national highway and state highway as indicated in relevant drawings/ alignment sheets/ or as directed by Engineer-in-charge shall be cased crossing.

4.28.15.3


Crossings of rivers/ streams/ canals by conventional method:

- i) No damage should be caused to any irrigation sources, while laying the pipeline through canal crossings.
- ii) The flood banks of the River/ Canal should be brought to the original condition, if they are damaged by the laying of the pipeline. Stabilization of banks shall be carried out as per requirements of concerned authorities.
- iii) In general the top of the pipeline shall be taken at least 2.5 meter below the scour level of river crossing. If scour level is not known minimum 3.5 m cover should be kept unless specified otherwise.
- iv) The top of pipeline shall be at least 1.5m to 2.0m below the drain/ canal bed unless specified otherwise.
- v) Pre-construction survey, preparation of the detailed construction methodology/ plan and time etc. shall have to be finalized by Contractor in consultation with concerned authorities having jurisdiction over canals/ rivers. Company shall provide assistance by providing introductory letters.
- vi) Pre-construction surveys, preparation of detailed construction method statement and calculations for OWNER's approval.
- vii) Geo-technical investigations, if required.
- viii) Site preparation, arranging required land for setting up of string fabrication yard and obtaining necessary permissions from concerned authorities.
- ix) The major canals with lining/ perennial canals need to be crossed by HDD/ boring method only.

4.28.15.4

Laying/Crossings by Horizontal Directional Drilling (HDD)

Contractor shall cross the roads / water crossings by HDD method at various depth in different locations as directed by Owner / Consultant either as per site conditions or as per instruction received from concerned authorities, whichever will be higher / stringent and decision of Owner / Consultant in this regard shall be final & binding to the contractor. Before start of HDD, the contractor shall ascertain by pre-construction survey all underground obstacles namely electrical/ telecommunication cable, foreign pipeline, water line, drain/ sewerage line and prepare crossing profile drawings showing all elevations & levels. The contractor shall also ascertain the type of soil & their terrain whether rocky or normal by way of trial pit etc. before start of job. The contractor shall submit procedure; profile drawing with complete design calculations of HDD as per requirement of ASME B31.8/ OISD norms and safety requirement that

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pipe is not under stress during and after crossing for Owner/ Consultant's approval prior to start the execution of works.

Contractor shall determine the minimum allowable elastic bend radius for pipe from the following considerations:

- i) Maximum longitudinal stress during installation
Total maximum longitudinal stress in the pipeline due to tension and bending at any location shall not exceed 90% of the SMYS of the pipe material.

Contractor shall in order to check this requirement evaluate the maximum tensile forces to which the pipeline is subjected to at any phase of its installation during the pulling operation.


- ii) Maximum equivalent stress during final hydrostatic test
After installation the pipeline shall be hydrostatically tested (for 6 hours) at a pressure stipulated in the Special Conditions of Contract. During hydrostatic testing the combined equivalent stress in the pipeline due to bending and test pressure shall not exceed 90% of the SMYS of pipe material.

- iii) Maximum equivalent stress during service
Permissible values of maximum equivalent stress during service shall be governed by the requirements of ANSI N31.8/ B31.4 as applicable. The details of pipeline operating parameters are provided in the Special Conditions of Contract.

The minimum allowable radius of curvature for the pipeline shall be the highest value of the minimum pipeline elastic radius as computed from the considerations outlined in clause no. i), ii) & iii) above after correction for drilling inaccuracies whichever results in the highest permissible value of minimum elastic bend radius.

Contractor shall ensure all safety norms regarding distances from end point or from bottom of crossing and also ensure that external coating of pipe is not damaged during pulling & handling of pipe for crossing. For field joint coating in pipeline string made for HDD, special type of heat shrink sleeve shall be used as per specification enclosed with the tender. For line pipe coating repair, special type of high shear strength repair patch material shall be used which characteristic shall be same or equivalent as original wraparound heat shrink sleeve used in pipeline string for HDD crossing.

The contractor shall ensure that no any u/g existing utilities/ pipelines/ cable etc. are damaged. It shall be responsibility of contractor to compensate any loss or damage to other agency if damaged while crossing. All statutory permission from concerned authority shall be arranged by Contractor before start of job. Contractor shall deploy only MNGL's approved HDD Agency and approval of agency shall be sought before deploying HDD agency.

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4.28.16

A)

Testing & Purging

Testing

Pressure testing will be carried out with compressed air. Compressed air will be provided by Contractor for testing purposes and is to be included in the SOR rates.

For main pipelines work (MP & LP) the Contractor shall perform progressive pressure testing with two pressure gauges to avoid having to find leaks in long lengths of pipe.

For GI pipelines work the Contractor shall perform progressive pressure testing with digital pressure gauge.

For Cu tubing work the Contractor shall perform progressive pressure testing with digital pressure gauge.

Measuring instruments shall have been calibrated and their accuracy and sensitivity confirmed (**least count of pressure gauge shall be 1 mbar OR 3 decimal pressure gauge (0.000 barg) of suitable range for MDPE main pipeline testing**). For testing of Network, calibrated pressure gauges of suitable range shall be supplied by the contractor. The pressure gauges shall be calibrated from time to time as desired by Engineer-in-Charge. All testing shall be witnessed and approved by the EIC or his delegated representative. Tie-in joints may be tested at working pressure following commissioning.

Supply of all kind of fittings, gauges etc. which is required to perform the testing of MDPE, GI, Cu pipeline is in the scope of contractor.

B)

Purging


Purging shall be carried out in accordance with the principles defined in the American Gas Association publication 'Purging Principles and Practice'.

Nitrogen required for purging will also be provided by the Contractor. Nitrogen shall be supplied in labeled, tested and certified cylinders, and completed with all necessary regulators, hoses and connections, which will be in good condition and working order.


In addition, the Contractor shall submit and get approved a Purging Plan before commencing any purging work. The Plan shall include, but not be limited to, the provision of the following materials and equipment: Personal safety equipment, Fire extinguisher, purging adaptor, Purge stack with flame trap and gas sampling point, Gas sampling equipment (may be gas leak detector), squash-off tool, Polyethylene connecting pipe work.

The Plan shall also include the purging process along with detail on the sequence of events. The process is to also specifically mention the need to lay a wet cloth over the PE main and in contact with the ground, to disperse static electricity during the purging work.


A purge stack with flame trap shall be used when purging services. Care shall be taken to ensure that the purge outlet is so located that vent gas cannot drift into buildings.

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- 4.28.17 **Markers**
Installation of all types of markers including all associated civil works. Any other work not specifically mentioned above but required for making the entire pipeline system ready for operation.
- 4.28.18 **Priorities**
The Contractor shall start the execution work for entire length of mainline simultaneously and shall deploy adequate manpower, machinery, tool & tackles etc. accordingly.
- However, Owner may, at its sole option, assign priority of construction to either any spread or any section in spread of total pipeline length or to any part/ segment of the work. Contractor shall comply with such priority of execution and their deployment without any time and cost implication to the Owner.
- 4.28.19 **Survey Pillars**
Owner has got the entire pipeline route surveyed and survey pillars have been established along the pipeline centerline or the ROW centerline and along the pipeline route. However, the pipeline route survey had been carried out sometime back and when Contractor mobilize at site, the survey pillars may be missing from ground. It shall be Contractor's responsibility to re-establish all missing survey pillars based on the survey data furnished by the Owner. Such work shall be done at no extra cost or time to Owner.
- 4.28.20 **Forest/ Plantation Areas**
Where the pipeline route passes through forest/ plantation areas, Contractor shall clear only the minimum width required for laying the pipeline as per Owner approved procedure for pipeline construction. Number of trees/ plants to be felled down shall be restricted to a minimum.
- 4.28.21 **Restoration of ROU**
Clean-up and restoration of ROW and other conveniences like road, rail, canals, cultivable land etc. to original conditions as per specification and drawings to the entire satisfaction of OWNER and/ or Authorities having jurisdiction over the same, including disposal of surplus construction materials to a location identified by CONTRACTOR approved by local authority without causing any disturbance to environment, locals and to the entire satisfaction of OWNER.
- Upon restoration of ROU the Contractor shall furnish documentary evidence in support of acceptance of the same duly signed by land Owner without any extra cost.
- 4.28.22 Preparation and submission of as built drawings, pipe books, documents, photographs of major activities, and project records as per specification and instructions of the OWNER including furnishing of all Test Certificates/ Inspection Reports for all materials used for permanent installation in requisite numbers as mentioned elsewhere in this document.

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- 4.28.23 **ROW Clearing**
During ROU clearing, the vegetation shall be cut off at ground level leaving the roots intact. Only stumps and roots directly over the trench shall be removed for pipeline installation.
- 4.28.24 **Pre-commissioning and Commissioning Assistance**
- 4.28.24.1 Pre-commissioning including supply of all materials, consumables and manpower of the complete pipeline system
- 4.28.24.2 Making the entire system ready for commissioning and providing assistance during the complete duration of commissioning operations.
- 4.28.24.3 Completion of all mainline activities as detailed in SOR.
- 4.28.25 **Civil Works**
Civil works shall be carried out as per scope mentioned at SOR and as per Indian Standard norms.
- 4.28.26 **Other Works**
- Obtaining all necessary approvals and work permits, as applicable, for performing the work.
 - Carrying out all additional surveys, test and collection of data not furnished by company but required for construction of facilities.
 - Any other work not specifically listed herein but required for the construction of the terminals and making it ready for the operation.
- 4.29 **Temporary Works**
All temporary works, ancillary works, enabling works, including dewatering of surface and subsoil water, temporary drains at the work site, preparing approaches to working areas, wherever required, for execution of the work, shall be the responsibility of Contractor.
- 4.30 **Temporary Fencing**
The Contractor shall, at his own costs and expenses, erect and maintain in good condition temporary fences and gates along the boundaries of the site assigned to him wherever required as per instruction of Engineer-in-charge. Wherever trenching is being done specially at crossing site near habitation and public movement. The contractor shall fence with bamboo or other materials of sufficient strength for all excavations and shall light the same at night. The Contractor shall, except when authorized by the Engineer-in-Charge, confine his men, materials and plant etc. within the site of which he is given possession. The Contractor shall not use any part of the site for purpose not connected with the works unless prior written permission or consent of the Owner/Engineer-in-Charge has been obtained. Access to site shall be made only through the approved gateways. The Contractor shall maintain sufficient watchmen at site to the satisfaction of the Owner/Engineer-in-Charge.
- 4.31 **Contractor's Temporary Structure**
The Contractor may, at his own costs and expenses and subject to the approval of the Engineer-in-Charge and statutory authorities, construct offices, stores, workshop and remove the same as per the orders of the Engineer-in-Charge on completion of the contract. Whenever

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required the Contractor shall furnish such details of his temporary works as may be called for by the Owner/Engineer-in-Charge as to their safety and efficiency. The Owner/Engineer-in-Charge may direct those temporary works which he considers unsafe or, inefficient be removed and replaced in a satisfactory manner. The Contractor shall immediately follow Owner/Engineer-in-Charge's direction/instruction, on maintenance of all the equipment and he shall ensure that they are suitable for the work and is maintained in such a manner as to ensure their efficient working. The Owner/Engineer-in-Charge, may if they deem fit, direct the Contractor to remove from site any equipment which are not efficient and/or prejudicial to the quality of work to be replaced by equipment to their satisfaction. The Contractor shall immediately follow Owner/Engineer-in-Charge's direction/instruction.

4.32 **Statutory Approvals**


All associated activities required for obtaining necessary clearances, permissions, approvals, all licenses from all concerned authorities in respect of pipeline crossing & all related works shall be the responsibility of the Contractor and the cost of the same shall be deemed to have been included in the quoted prices.

The approval from any authority required as per statutory rules and regulations of Central/State Government shall be the Contractor's responsibility unless otherwise specified in the Bidding Document. The application on behalf of the Owner for submission to relevant authorities along with copies of required certificate complete in all respects shall be prepared and submitted by the Contractor well ahead of time so that the actual construction of the work is not delayed for want of the approval/inspection by concerned authorities. The inspection of the works by the authorities shall be arranged by the Contractor and necessary coordination and liaison work in this respect shall be the responsibility of the Contractor. However statutory fees paid, if any, for all inspections and approvals by such authorities shall be reimbursed at actual by the Owner to the Contractor on production of documentary evidence.

Any change/addition required to be made to meet the requirements of the statutory authorities shall be carried out by the Contractor free of charge. The inspection and acceptance of the work by statutory authorities shall however, not absolve the Contractor from any of his responsibilities under this Contract.

4.33 **SURVEY AND LEVEL/SETTING OUT WORK**

- 4.33.1 Before the WORK or any part thereof are begun, the CONTRACTOR's agent and the Engineer-in-Charge's representative shall together survey and take levels of the SITE and decide all particulars on which the survey is to be made, and on which measurements of the WORK are to be based. Such particulars shall be plotted by the CONTRACTOR and after agreement the drawings shall be signed by the Engineer-in-Charge.
- 4.33.2 The CONTRACTOR shall be entirely responsible for the horizontal and vertical alignment, the level and correctness of every part of the WORK and shall rectify any errors or imperfections therein. Such rectifications shall be carried out by the CONTRACTOR at his own cost, when instructions are issued to this effect by the Engineer-in-Charge or his representative.
- 4.33.3 The Engineer-in-Charge shall furnish the relevant existing grid point with Bench Mark on the land. It shall be CONTRACTOR's responsibility to set out the necessary control points in and to set out the alignment of the various works. The CONTRACTOR shall have to employ efficient survey team for this purpose and the accuracy of such setting out work shall be CONTRACTOR's responsibility.

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4.33.4 The CONTRACTOR shall give the Engineer-in-Charge not less than 24 (twenty-four) hours' notice in writing of his intention to set out or give levels for any part of the WORK so that arrangements may be made checking the same.

4.33.5 WORK shall be suspended for such times as necessary for checking lines and levels on any part of the WORK.

4.33.6 The CONTRACTOR shall at his own expense provide all assistance, which the Engineer-in-Charge may require for checking the setting out of WORKS.

4.33.7 Before commencement of any activity, contractor's quality control set up duly approved by company must be available at site.

4.34 ORDER OF WORKS/PERMISSIONS/RIGHT OF ENTRY/CARE OF EXISTING SERVICES.

4.34.1 The order in which the WORK shall be carried out shall be subject to the approval of the Engineer-in-charge and shall be so as to suit the detailed method of construction adopted by the CONTRACTOR, as well as the agreed joint program. The WORK shall be carried out in a manner so as to enable the other contractors, if any, to work concurrently.

OWNER reserves right to fix up priorities which will be conveyed by Engineer-in-Charge and the CONTRACTOR shall plan and execute work accordingly.

4.34.2 Existing Service

4.34.2.1 Drains, pipes, cables, overhead wires and similar services encountered in course of the works shall be guarded from injury by the CONTRACTOR at his own cost, so that they may continue in full and uninterrupted use to the satisfaction of the Owners thereof, or otherwise occupy any part of the SITE in a manner likely to hinder the operation of such services.


4.34.2.2 Should any damage be done by the CONTRACTOR to any mains, pipes, cables or lines (whether above or below ground etc.), whether or not shown on the drawings the CONTRACTOR must make good or bear the cost of making good the same without delay to the satisfaction of the Engineer-in-Charge.

4.35 MAKE OF MATERIAL/BOUGHT OUT ITEMS

Approved vendors for various major items are enclosed as Appendix-I to Particular Job Specification with this tender document. The bidder shall consider such names only as indicated in the aforesaid list and clearly indicate in the bid the name(s) as selected against these items. For any other item not covered in the list enclosed with this tender document, prior approval shall be obtained by the contractor for its make/ supplier's name.

4.36 INSPECTION OF SUPPLY ITEMS

All inspections and tests shall be made as required by the specifications forming part of this contract. Contractor shall advise Owner/ Consultant in writing at least 10 days in advance of the date of final inspection/tests. Manufactures inspection or testing certificates for equipment and materials supplied, may be considered for acceptance at the discretion of Owner/ Consultant. All costs towards testing etc. shall be borne by the contractor within their quoted

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rates. All inspection of various items shall be carried out based on Quality Assurance Plan, which will be submitted by the Contractor and duly approved by Owner/ Consultant.

4.37 ESCALATION

The Unit Rates quoted shall be kept firm till completion of work/contract and no price Escalation shall be paid.

4.38 Construction Equipment & Mechanization of Construction Activities

Contractor shall, without prejudice to his overall responsibility to execute and complete the Work as per specifications and time schedule, adopt as far as practicable, mechanized construction techniques for major site activities. However, Contractor agrees that he will deploy the required numbers and types of the part & machinery applicable for different activities in consultation with the Engineer-In-Charge during execution of works.

The Contractor shall mechanize the construction activities to the maximum extent by deploying all necessary construction equipment/machinery in adequate numbers and capacities.

Wherever Structural/Piping works are included in the scope, the Contractor's responsibilities shall include establishing and maintaining of a proper fabrication workshop with transportation facilities to site to carryout fabrication of steel structures, piping specials etc., preparing approaches working areas for the movement/operation of cranes and levelling the areas for assembly/erection to ensure effective mechanization on the works. The Contractor shall acquaint himself with availability of access, facilities such as railway siding, local labor etc. and the Contractor may have to build temporary access roads to aid his work and the quoted and agreed rates shall be deemed to include the same. It may be noted that all fabrication work shall be carried out in fully mechanized workshops to reduce site fabrication to minimum.


For speedy execution of work, Contractor shall also ensure use of computer software for at least the following:

- (i) Billing
- (ii) Planning & Scheduling
- (iii) Progress Reporting
- (iv) Material Control & Warehousing
- (v) Safety Records
- (vi) Resource Deployment
- (vii) Communication

Contractor further agrees that Contract price is inclusive of all the associated costs) which he may incur for actual mobilization, required in respect of use of mechanized construction techniques and that the Owner/Consultant in this regard shall entertain no claim whatsoever.

4.39 Site Organization

The Contractor shall provide all necessary superintendence during the design and execution of the Works and as long thereafter as the Engineer-in-Charge may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. Such superintendence shall be given by sufficient persons having adequate knowledge of the operations to be carried out including the methods and techniques required, the hazards likely to be encountered and methods of preventing accident(s) for the satisfactory and safe execution of the Work. The workmen deployed, by the Contractor should also possess the necessary license etc., if required under any law, rules and regulations.

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Subject to the provisions in the Contract Document and without prejudice to Contractor's liabilities and responsibilities to provide adequate qualified and skilled personnel on the Work, Contractor shall augment the same as decided by the Engineer-in-Charge depending on the exigencies of Work.

4.39.1 **SUPERVISION**

All construction work will be carried out as per direction of EIC, and this will be the primary point of contact between the Contractor and MNGL on site. All work will be issued and sanctioned through the EIC and site control exercised by site engineers. The Contractor shall ensure that technical quality standards are maintained, that construction is carried out cost effectively and that a good customer and public image is maintained for MNGL.

The Contractor will appoint his own supervisors of minimum number instructed by EIC. These personnel will be responsible to the SE for monitoring construction standards and for ensuring that all detailed technical requirements are met on each and every job which is undertaken. The Contractor's supervisor(s) will have day to day liaison with the SE, and will provide the SE with technical reports and audits, and other management information as is required on work progress and construction quality standards.

The Contractor's supervisor shall have mobile telephones or pagers to ensure that they can be contacted at all times. The Contractor will also nominate one person who can be contacted if necessary out of hours, for the duration of the works. The Contractor's supervisor will have access to transport at all times to allow them to visit sites and attend meetings with MNGL as is required. The normal day to day issue of work instructions, communication between MNGL and the Contractor's supervisor and the SE. No deviation from the approved technical specification / issued construction drawings shall be undertaken without written approval of EIC.

5.0 **SCOPE OF SUPPLY**

5.1 **Owner's Scope of Supply (Free Issue Item)**

Free Issue Materials shall be issued to the Contractor from the designated store(s) of Owner. Contractor shall be responsible for lifting the free issue materials from Owner's storage point(s) and transporting the same to work site(s) at his own cost.

MNGL's storage point for free issue material of this project shall be located in Pune City or its nearby region.

Contractor shall also return materials after completion of work to MNGL's designated store in Pune City or its nearby region or as directed by MNGL / Engineer-in-charge.

The following free issue item will be supplied by the owner.

- A) **MDPE Pipes PE 100 SDR 11**
 - i) MDPE pipe (20mm)
 - ii) MDPE Pipes (32mm OD)
 - iii) MDPE Pipes (63mm OD)
 - iv) MDPE Pipes (90mm OD)
 - v) MDPE pipes (125 mm OD)
 - vi) MDPE pipes (180 mm OD)




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- B) **GI Pipes bare/painted/power coated**
i) GI Pipes (1/2 ")
ii) GI Pipes (3/4")
iii) GI Pipes (1")
iv) GI Pipes (1 1/2")
v) GI Pipes (2")
- C) **Copper Pipes**
i) Copper Pipes (12 mm OD)
- D) **Isolation & Appliance Valves**
i) 1/2" Isolation Ball Valve
ii) 3/4" Isolation Ball Valve
iii) 1" Isolation Ball Valve
iv) 1 1/2" Isolation Ball Valve
v) 1/2" Appliance Ball Valve
vi) 1/4" Appliance Ball Valve etc.
- E) **Meters**
Commercial Meter (Diaphragm Meter) – 16 m³/hr
Commercial Meter (Diaphragm Meter) – 10 m³/hr
Commercial Meter (Diaphragm Meter) – 6 m³/hr
Commercial Meter (Diaphragm Meter) – 2.5 m³/hr
Domestic Meter (Diaphragm Meter) – 2.5 m³/hr etc.
RPD/Diaphragm meter -25m³/hr
RPD/Diaphragm meter -40m³/hr
- F) **Regulator**
Commercial Regulator 4 kg/cm² to 300 mbar, Flow rate of 6, 10, 15, 25,50,100 & 200 m³/hr
Service Regulator 4 kg/cm² to 100 mbar, Flow rate of 25 & 50 m³/hr
Domestic Regulator 100 mbar to 21 mbar, Flow rate of 2.5 m³/hr etc.
Domestic Regulator 4 bar to 21 mbar, Flow rate of 2.5 m³/hr etc.
- G) **Service Regulator**
i) 25 SCMH
ii) 50 SCMH
iii) 100 SCMH
iv) 200 SCMH
- H) **DRS**
i) 5000 SCMH
ii) 10000 SCMH
iii) 15000 SCMH
- I) **MDPE Stop off Valves**
i) MDPE Stop off Valves dia 125 mm
ii) MDPE Stop off Valves dia 90 mm
iii) MDPE Stop off Valves dia 63 mm

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5.1 Conditions for issue of Company Supplied Material

Whenever any material is issued by Owner, following conditions for issue of material in addition to other conditions specified in the contract shall be applicable.

Contractor shall prepare and submit Material Issue Vouchers to enable stage wise issue of materials. All materials shall be issued for incorporation in permanent works only and shall not be used for any temporary or ancillary works without the written consent of Engineer-in-charge. These materials shall be issued to the contractor from the Owner's storage points. Contractor shall be responsible, at this own cost, for lifting of the materials from Owners issue points, measuring, weighing, loading, unloading, transportation and return of materials to designated storage points. Contractor shall also be responsible for constructing covered godowns with adequate supports and clearances for safe storage of materials.

In every RA bill contractor shall submit an account for all the materials issued by the owner in the proforma prescribed by the Engineer-in-charge. On completion of the work, the contractor shall submit materials appropriation statement for all materials issued by Owner.

All materials issued by the COMPANY to the CONTRACTOR shall be preserved against deterioration and corrosion. Any damages/losses suffered on account of poor or improper storage while under CONTRACTOR'S custody and non-compliance with the requirements stipulated herein shall be considered as losses suffered due to willful negligence on the part of the CONTRACTOR and he shall be liable to compensate the COMPANY, for the losses suffered, at penal rates as elaborated elsewhere in the bid document.

Various equipment/ materials intended for the installation will be received by COMPANY in unpacked, skidded, crated, packed or loose condition and will be stored in the COMPANY warehouses & open yards. In general, material will be issued to the CONTRACTOR in "as-received" condition. It will be the CONTRACTOR'S responsibility to draw, load and transport all materials from Company's designated place (s) of issue to the point of installation.


All materials supplied by the COMPANY shall be duly protected by the CONTRACTOR at his own cost with appropriate preservative like primer/lacquer coating, grease etc., if required.

The Contractor shall be required to take Insurance Cover in terms of general conditions of contract.

The CONTRACTOR shall check that valves, fittings and specials are not subject to corrosion from hydrostatic test liquid remaining saturated in the packings. Any such conditions when detected should be brought to the notice of the Engineer-in-charge and remedial measures taken as directed. Small and medium size pipe fittings shall be stored in rack to be constructed from this purpose in a covered godown. When large size pipe fittings are to be stored, these may be kept in the open on surfaced storage yards on proper wooden supports.

All machined surfaces shall be properly greased and shall be maintained and protected from damages.

Openings of equipment, machinery, valves etc. shall be kept blocked/ covered with blinds to prevent entry of foreign matter.

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All valves supplied independently, as well as along with equipment and machinery shall be stored separately, inside the covered godown on racks.

As far as possible materials shall be transported to the erection site, just prior to their actual erection and shall not be left lying around indefinitely. Instructions for the Engineer-in-charge shall be followed strictly in this regard.

Necessary indents will have to be raised by the Contractor as per procedure laid down by the Engineer-in-charge from time to time, when he requires the above material for incorporation in permanent works.

Materials will be issued only for permanent works and not for temporary works, enabling works etc. unless specifically approved by the Engineer-in-charge and the same shall not be taken into account for the purpose of materials reconciliation.

The contractor shall bear all other cost including lifting, carting from issue points to work site/ contractor's store, custody and handling etc. and return of surplus/ serviceable scrap materials to Owner's storage points to be designated by the Engineer-in-charge etc. No separate payment for such expenditure will be made.

No material shall be allowed to be taken outside or transfer to other contractor, site etc. without prior approval from EIC.


The contractor shall be responsible for proper storage, preservation and watch & ward of the materials.

Maximum material stock allowable in contractor's storage location for issuing further material:

Sl. No.	Material	Qty	Unit
1.	Meter	75	No.
2.	Copper Pipe	300	Meter
3.	Domestic Regulator	75	No.
4.	Appliance Valve	75	No.
5.	GI Pipe 1/2"	800	Meter
6.	Isolation Ball Valve 1/2"	200	No.
7.	MDPE Pipe 32mm	800	Meter
8.	Service Regulator	2	No.

Maximum material quantity to be issued by AIC:

Sl. No.	Material	Qty	Unit
1.	Meter	200	No.
2.	Copper Pipe	1000	Meter
3.	Domestic Regulator	200	No.
4.	Appliance Valve	200	No.
5.	GI 1/2"	1500	Meter
6.	Isolation Ball Valve 1/2"	500	No.
7.	MDPE 32mm	1500	Meter
8.	Service Regulator	5	No.

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If contractor required the material quantity over the quantity mentioned in above table, EIC approval is required.

5.3 Reconciliation of Owner supplied materials

5.3.1 In every RA bill, the contractor shall submit an account for all materials issued by Owner in the proforma prescribed by the Engineer-in-charge. On completion of the work the contractor shall submit "Material Appropriation Statement" for all materials issued by the Owner in the proforma prescribed by the Engineer-in-charge.

Also after every 3 months' physical verification of Material supplied by MNGL shall be shown to MNGL AIC/EIC/GET/CSA and in case of any shortfall of material recovery will be done in immediate basis in next RA/Final bill as per actual cost of material plus 25% administrative charges by MNGL.

In case of any faulty Domestic/Commercial Diaphragm Meters and Regulators found within warranty period., it shall be returned to MNGL store with proper reasons of fault/condition with AIC/EIC approval.

For missing Domestic/Commercial Diaphragm Meter a penalty of Rs.5000 in addition to actual cost and 25% administrative charges will be deducted by MNGL.

Waste materials part lengths of pipes and other partly used items are the property of MNGL and must be returned to the store with the appreciate documentation so that they can be considered as part of the material reconciliation.


Item	Unaccountable	Accountable-Scrap
Gas Meters	0%	0%
Regulators	0%	0%
GI Service Pipes	1%	1% (less than 0.5 mtrs)
Cu Pipes	1%	1% (less than 0.3 mtrs)
PE Pipes	1%	1% (less than 2.0 mtrs)

Accountable scrap shall be at actual as per site assessment subject to maximum as stated above.

For unused pipe from a standard coil/length of MDPE, GI and Cu pipe must be returned to the store as good/standard length or by giving the fitting additionally.

The percentage allowance shall be accounted on the basis of final measurement book/ consumption.

5.3.2 All unused, scrap materials and salvageable materials shall be the property of the Owner and shall be returned by the Contractor category-wise at his cost to the Owner's designated store yard(s). In case the Contractor fails to do so/ or exceeds the limits of allowances specified above for scrap/ serviceable materials, then recovery for such quantities not returned as well as returned in excess of permitted limit by the Contractor will be done at the penal rate i.e. 125% of landed cost at the time of final bill/ closing of contract by Engineer-in-charge shall be effected from the Contractor's bill(s) or from any other dues of the Contractor to the Owner.

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Contractor shall be responsible for the adjustment/ weighment / measurement of the surplus materials to be returned to the store. Contractor shall also be responsible for suitable segregation of returned materials into separate stacks of serviceable and scrap materials.

- 5.3.3** Wherever certain material is covered under Contractor's scope of supply whether part or in full for any item of work covered under SOR, no allowance towards wastage/ scrap etc. shall be accounted for during execution stage.

5.4 Contractor's Scope of Supply

All materials except what is under Owner's scope of supply as mentioned in above, and required for successful completion of works in all respects shall be supplied by the Contractor with the submission of all TC and the cost of such supply shall be deemed to have been included in the quoted price without any additional liability on the part of Owner.

The procurement and supply, in sequence and at the appropriate time, of all materials and consumables required for completion of the work as defined in this Bid document except the materials specifically listed below, shall be entirely the CONTRACTOR'S responsibility and item rates quoted for the execution of the CONTRACT shall be inclusive of supply of all these materials. The material to be supplied by the Contractor shall be as per specification and preferred make as indicated in Appendix-I or duly approved / recommended for use by MNGL. The materials will be, but not by way of limitations, as follows:

All materials except what is under Owner's scope of supply (Free Issue Materials) as mentioned below, and required for successful completion of works in all respects shall be supplied by the Contractor and the cost of such supply shall be deemed to have been included in the quoted price without any additional liability on the part of Owner.

The following indicative materials to be supplied by the contractor **as required** to complete the work. The contractor shall submit the Test Certificates of all the free issue materials used at site. **The materials shall be procured as per the standards specified in the PNGRB Regulations for Technical Standards and Specifications including Safety Standards for City or Local Natural Gas Distribution Networks.**

Unless otherwise specified contractor will supply all size of HDPE casing pipe GI fittings (powder coated) and other materials as per SOR & scope of supply necessary to complete the laying of gas main pipelines and service pipelines. However free issue item would be supplied to the contractor as per Owner's scope of supply mentioned in the tender documents.

The contractor is to procure all bought out items from approved vendors and accordingly keep MNGL informed. The inspection of bought out items would be carried out by MNGL / Third Party Inspection or as instruction by EIC.

In general PE pipe shall be of the following lengths indicated.

20mm/32mm	100 to 300 Mtrs. coils
63 mm	100 Mtrs. coils
90 mm	50 Mtrs. coils
125 mm	50 Mtrs. coils
180 mm	10 to 12 Mtrs. lengths



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The Contractor shall provide the skilled labor, tools, material and equipment necessary for the proper execution of the Work. This will include but not be limited to list of specialized items included in the enclosure furnished herewith.

Material under Contractor's Scope of Supply

A) HDPE Casing Pipes PE 63, PN 6

- i) HDPE Ducting Pipes (50mm)
- ii) HDPE Ducting Pipes (75mm)
- iii) HDPE Ducting Pipes (125mm)
- iv) HDPE Ducting Pipes (250mm) etc.

B) MDPE Valves

- i) MDPE Ball Valve 32mm OD
- ii) MDPE Ball Valve (with Stem) 63 mm OD
- iii) MDPE Ball Valve (With Stem) 90 mm OD
- iv) MDPE Ball Valve (With Stem) 125 mm OD
- v) MDPE Ball Valve (With Stem) 125 mm OD etc.

C) Warning Grid

Warning Mat 300mm Wide-1mm Thick

D) MDPE Fittings:

a) Bends

- i) Bends (90 Degree), 180mm, 125mm, 90mm, 63mm, 32mm (MDPE)
- ii) Bends (45 Degree), 180 mm, 125 mm, 90mm, 63mm, 32 mm (MDPE)

b) Coupler

- i) Coupler 20mm (MDPE)
- ii) Coupler 32 mm (MDPE)
- iii) Coupler 63mm (MDPE)
- iv) Coupler 90mm (MDPE)
- v) Coupler 125mm (MDPE)
- vi) Coupler 180mm (MDPE) etc.

c) End Caps

- i) Ends caps 20mm (MDPE)
- ii) Ends caps 32mm (MDPE)
- iii) Ends caps 63mm (MDPE)
- iv) Ends caps 90mm (MDPE)
- v) Ends caps 125mm (MDPE)
- vi) Ends caps 180mm (MDPE) etc.

d) Equal Tee

- i) Equal Tee 20mm OD (MDPE)
- ii) Equal Tee 32mm OD (MDPE)
- iii) Equal Tee 63mm OD (MDPE)
- iv) Equal Tee 90mm OD (MDPE)
- v) Equal Tee 125mm OD (MDPE)



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vi) Equal Tee 180mm OD (MDPE) etc.

e) Saddle Tapping Tee

- i) Saddle Tapping Tee 32x20 (MDPE)
- ii) Saddle Tapping Tee 63x20 (MDPE)
- iii) Saddle Tapping Tee 63 x32 (MDPE)
- iv) Saddle Tapping Tee 90x20 (MDPE)
- v) Saddle Tapping Tee 90x32 (MDPE)
- vi) Saddle Tapping Tee 125x32 (MDPE)
- vii) Saddle Tapping Tee 125x63 (MDPE)
- viii) Saddle Tapping Tee 180x32 (MDPE)
- ix) Saddle Tapping Tee 180x63 (MDPE) etc.

f) Reducer

- i) Reducers 32x20 (MDPE)
- ii) Reducers 63x32 (MDPE)
- iii) Reducing Tee 90x63 (MDPE)
- iv) Reducing Tee 125x63 (MDPE)
- v) Reducing Tee 125x90 (MDPE)
- vi) Reducing Tee 180x63 (MDPE)
- vii) Reducing Tee 180x125 (MDPE) etc.

g) Transition Fitting

- i) PE to G.I. (20 mm to 1/2")
- ii) PE to G.I. (20 mm to 3/4")
- iii) PE to G.I. (32 mm to 1")
- iv) CS to PE (4" to 125mm) - Steel weld adaptor
- v) CS to PE (4" to 180mm) - Steel weld adaptor etc.

E) GI Fittings (powder coated)

- i) Elbows F End (1/2") (GI)
- ii) Elbows F End (3/4") (GI)
- iii) Elbows F End (1") (GI)
- iv) Elbows F End (1 1/2") (GI)
- v) M & F Elbows End (1/2") (GI)
- vi) M & F Elbows End (3/4") (GI)
- vii) M & F Elbows End (1") (GI)
- viii) M & F Elbows End (1 1/2") (GI)
- ix) Equal Tee (1/2") (GI)
- x) Equal Tee (3/4") (GI)
- xi) Equal Tee (1") (GI)
- xii) Equal Tee (1 1/2") (GI)
- xiii) Union (1/2") (GI)
- xiv) Union (3/4") (GI)
- xv) Union (1") (GI)
- xvi) Union (1 1/2") (GI)
- xvii) Sockets (1/2") (GI)
- xviii) Sockets (3/4") (GI)
- xix) Sockets (1") (GI)
- xx) Sockets (1 1/2") (GI)



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- xxi) Reduced Elbows ($\frac{3}{4}$ " x $\frac{1}{2}$ ") (GI)
- xxii) Reduced Elbows (1" x $\frac{3}{4}$ ") (GI)
- xxiii) Reduced Elbows ($1\frac{1}{2}$ " x $\frac{3}{4}$ ") (GI)
- xxiv) Reduced Elbows ($1\frac{1}{2}$ " x 1") (GI)
- xxv) Reduced Elbows (2" x $1\frac{1}{2}$ ") (GI)
- xxvi) Hex Nipple Size ($\frac{1}{2}$ " x 2") Long (GI)
- xxvii) Hex Nipple Size ($\frac{1}{2}$ " x 3") Long (GI)
- xxviii) Hex Nipple Size ($\frac{3}{4}$ " x 2") Long (GI)
- xxix) Hex Nipple Size (1" x 2") Long (GI)
- xxx) Hex Nipple Size ($1\frac{1}{2}$ " x 2") long (GI)
- xxxi) Reduced Sockets ($\frac{3}{4}$ " x $\frac{1}{2}$ ") long (GI)
- xxxii) Reduced Sockets (1" x $\frac{3}{4}$ ") (GI)
- xxxiii) Reduced Sockets ($1\frac{1}{2}$ " x $\frac{3}{4}$ ") (GI)
- xxxiv) Reduced Sockets ($1\frac{1}{2}$ " x 1") (GI)
- xxxv) Reduced sockets (2" x $1\frac{1}{2}$ ") (GI)
- xxxvi) GI Plugs $\frac{3}{4}$ " etc.


- F) Copper Tube associated fittings
It including brass fittings at the inlet/outlet of the meter, entry/exit of isolation valve/Appliance Valves, $\frac{1}{4}$ " end plug with washer (female thread).
- G) HDPE Ducts, 40 mm OD, # 6 kg/cm².
- H) All supports and fixture for GI Raisers, Copper Tube, Regulators and Meters as approved by the EIC
- I) Steel braided hose of min 1.0 Mtr length (Suraksha/equivalent make as per ISI standard)
- J) Burner nozzles for conversion of burners as approved by the EIC
- K) Pipeline route markers and RCC Protection tiles as approved by the EIC
- L) Transition fitting Guard / GI Sleeve / Concrete Sleeves / MS Sleeve as per the instructions of EIC etc.

The contractor's supply of material is not limited up to above, it covers all the fittings, material etc. which is requires to complete the job in all respect as per scope of works.

In case of non-availability of contractor's scope of material and contractor fails to arrange material in time and any site/works/activities get delayed then suitable penalty upto Rs.10,000 will be applicable and will be deducted from upcoming RA/Final bill/bills of contractor.

5.6 Equipment & Machinery

All vehicular type machinery shall be in good working order and shall not cause spillage of oil or grease. To avoid damage to paved surfaces the Contractor will provide pads of timber or thick rubber under the hydraulic feet or outriggers of machinery.

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In addition to above, the contractor must have dedicated bar coded electrofusion (Automatically readable) machine with power generator (at any point of time minimum 2 nos.), Pipe Cutters (like circular guillotine), End Scrapers, Pipe Straightener, approved Top loading clamp for fusing saddle tapping tee, clamps of all sizes for Electro-fusion fittings, re-rounding tools and test ends etc. for pipes of following diameters 180mm, 125mm, 90mm 63mm, 32mm & 20mm for this project. Contractor has to arrange his own all equipment for trenchless crossings such as HDD, Moling & rock cutting equipment, HDPE fusion equipment at the site whenever required.

Contractor must also have to arrange his own equipment for restoration work like water tanker and jumping jack compactor for compaction of backfilled trenches and roller and other required equipment/ machinery for asphaltting/ road works.

5.7 **Imported Backfill and Material**

The Contractor shall be responsible to arrange the supply of any imported backfill including approved Sweet earth/ Coarse Sand and aggregate etc. Payment for the supply of sand only is included in Schedule of Rates. The other soils shall be supplied without any cost implication to Owner.

In case specified trench depths are not achieved & if directed by Engineer-in-charge Contractor to provide concrete casing pipes/ slabs or cement concrete, without any cost implication to Owner.

5.8 **Other Materials**

The Contractor shall supply the following items where required.


- All materials required for form work, trench support, temporary trench crossings.
- All sign boards, barricades, tin sheets, lights and protective equipment.
- All minor items not expressly mentioned in the Contract but which are necessary for the satisfactory completion and performance of the Work under this Contract.
- Permanent markers as shown in the drawings enclosed in the tender.

5.9 **INSURANCE FOR FREE ISSUE MATERIAL**

5.9.1 Insurance for Free Issue Material

Contractor shall at his own expense arrange, secure and maintain insurance cover for Owner's supplied free issue materials as defined in Tender Document. Contractor's quoted price shall be inclusive of all costs on account of insurance liabilities covered under the Contract. Contractor to note that the beneficiary of insurance cover shall be MNGL. (The approximate cost of free issues material is Rs. 50.0 Lakhs). The Contractor may take the insurance as per the following schedule.

Upto 12 months – 40.0% of the value
Upto 18 months – 80.0% of the value
Upto 24 months – 100.0% of the value

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5.9.2 Insurances in India

- 5.9.2.1 In addition to the insurance covers specified in the General conditions of Contract to be obtained and maintained by the Contractor, Contractor shall at his own expense arrange, secure and maintain insurance with Indian insurance companies to the satisfaction of the owner as may be necessary and to its full value for all such amounts to protect the works in progress from time to time and the interest of Owner against all risks as detailed herein. The form and the limit of such insurance as defined herein together with the under writer works thereof in each case should be as acceptable to the Owner. However, irrespective of work acceptance the responsibility to maintain adequate insurance coverage at all times during the period of Contract shall be that of Contractor alone. Contractor's failure in this regard shall not relieve him of any of this responsibilities and obligations under Contractor.
- 5.9.2.2 Any loss of damage to the equipment during inland transportation, storage, erection and commissioning till such time the Work is taken over by Owner shall be to the account of Contractor. Contractor shall be responsible for preferring of all claims and make good for the damage or loss by way of repairs and/ or replacement of the parts of the Work damaged or lost. Contractor shall provide the Owner with a copy of all insurance policies and documents shall be submitted to the owner immediately upon the Contractor having taken such insurance coverage. Contractor shall also inform the Owner regarding the expiry cancellation and/ or changes in any of such documents and ensure revalidation/ renewal etc., as may be necessary well in time.
- 5.9.2.3 The risks that are to be covered under the insurance shall include, but not be limited to the loss or damage in handling, transit, theft, pilferage, riot, civil commotion, weather conditions, accidents of all kinds, fire, war risk etc. The scope of such insurance shall cover the entire value of supplies of equipments, plants and materials.
- 5.9.2.4 All cost on account of insurance liabilities covered under this Contract will be to Contractor's account and will be included in Contract Price. However, the Owner may from time to time, during the currency of the Contract, ask the Contractor in writing to limit the insurance coverage risk and in such a case, the parties to the Contract will agree for a mutual settlement, for reduction in Value Of Contract to the extent of reduced premium amounts.
- 5.9.2.5 Contractor as far as possible shall cover insurance with Indian Insurance Companies.

6.0 LIST OF APPROVED SUPPLIER FOR BOUGHT OUT ITEMS

PE FITTINGS & PE VALVES

- 1) M/s Friatech AG, Germany (represented by M/s Sherman Sales in India)
- 2) M/s Jain Irrigation systems Ltd. Jalgaon (Fusion, UK)
- 3) M/s George Fisher Piping Systems Pvt. Ltd., Mumbai
- 4) M/s Plasson Ltd.
- 5) M/s Agru, Australia
- 6) M/s Kimplas Piping Systems Ltd., Nashik
- 7) M/s. Al-Aziz Plastics Pvt. Ltd., Mumbai (For Electrofusion fittings upto 125 mm)
- 8) M/s. Aliaxis Utilities and Industry Pvt. Ltd., New Delhi (Formerly Glynwed Pipe Systems (India) Pvt. Ltd.)



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- 9) M/s. Daeyoun Co. Ltd., **South Korea Make (For PE Valves only)** (represented by M/s. Rhino Services Pvt. Ltd., Mumbai)

HDPE PIPES & DUCT

- 1) M/s Climax Synthetics (P) Ltd., Vadodra
- 2) M/s Indian Poly Pipes, Calcutta
- 3) M/s Jain Irrigation Systems Ltd., Jalgaon
- 4) M/s Kirti Industries (India) Ltd., Indore
- 5) M/s Ori Plast Limited, Calcutta
- 6) M/s Phoel Industries Limited, Delhi
- 7) M/s Sangir Plastics (P) Ltd., Mumbai
- 8) M/s Veekay Plast, Jaipur
- 9) M/s Kisan Irrigation
- 10) M/s Dutron Polymers Ltd.
- 11) M/s Manikya Plastichem (P) Ltd

WARNING GRID

1. M/s. Bina Enterprises, Mumbai
2. M/s. K.B. Industries, Nashik
3. M/s. M.N.C. Industrial Corporation, New Delhi
4. M/s. Pooja Packaging, Mumbai
5. M/s. Rolls Packs Pvt. Ltd., Mumbai
6. M/s. Shubham Paperplas, Mumbai
7. M/s. Sparco Multiplast Pvt. Ltd., Ahmedabad
8. M/s. Shree Enterprises, Silvassa (Make – Shree Plastometch)

GI FITTINGS

- 1 M/s Jainsons Industries, Jalandhar
- 2 M/s RAJNESH Malleables Ltd., Delhi
- 3 M/s Industrial Valves & Components, Delhi
- 4 M/s Sarin industries Ltd., Delhi
- 5 M/s. Mehta Brothers & Co., Mumbai (Jinan Mech Brand)
- 6 M/s. Jupiter Metal Industries Ltd.

Copper FITTINGS

- 1 M/s Jay Banas Metals Pvt. Ltd., Gandhinagar
- 2 M/s Mehta Tubes Ltd., Mumbai
- 3 M/s Rajco Metal Industries Pvt. Ltd., Mumbai

FORGED FITTINGS

1. M/s Commercial Supplying Agency, Mumbai
2. M/s Dee Development Engineers Ltd.
3. M/s Eby Industries, Mumbai
4. M/s Flash Forge Pvt. Ltd., Vishakhapatnam



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5. M/s Gujarat Infra Pipes Pvt. Ltd., Vadodara
6. M/s M.S. Fittings Mfg. Co. Pvt. Ltd., Kolkata
7. M/s Stewarts & Lloyds of India Ltd., Kolkata
8. M/s Teekay Tubes Pvt. Ltd., Mumbai
9. M/s Pipe Fit, Baroda
10. M/s Sawan Engineers, Baroda
11. M/s Sky Forge, Faridabad
12. M/s Vijay Cycle & Steel Industries, Jalandhar

Brass Fittings

1. M/s. Chandan Enterprises, Mumbai
2. M/s. Greenglobe Fuel Solutions, Mumbai
3. M/s. NSSL Ltd., Mumbai
4. M/s. Umesh Enterprises, Mumbai
5. M/s. Paras Industries, Jamnagar
6. M/s. Om Brass Industries, Jamnagar
7. M/s. Radiant Corporation, Pune.

Notes:

- 1) For procuring bought out items from vendors other than those listed above, the same may be acceptable subject to the following:-
 - a) The vendor/supplier of bought out item(s) is a regular and reputed manufacturer/supplier of said item(s) for intended services and the sizes being offered is in their regular manufacturing/supply range.
 - b) The vendor/supplier should not be in the Holiday list of MNGL.
 - c) Should have supplied at least 50% of required quantity or minimum 1 number whichever is higher of maximum size and rating of item(s) as required for intended services.

The bidder should enclose documentary evidences i.e. PO copies, Inspection Certificate, end-user certificate etc. for all the bought out components, alongwith their bids.

- 2) For any other item(s) for which the vendor list is not provided, bidders can supply those item(s) from reputed vendors/ suppliers who have earlier supplied same item(s) for the intended services in earlier projects and the item(s) offered is in their regular manufacturing/ supply range.

The bidder is not required to enclose documentary evidences (PO copies, Inspection Certificate, end-user certificate etc.) alongwith their offer. However in case of successful bidder, these documents shall be required to be submitted by them for prior approval of MNGL within 30 days from date of Placement of Order.

7 TIME SCHEDULE

- 7.1 The work shall be executed strictly as per time schedule given below table. The period of completion given includes the time required for mobilization as well as testing, rectifications, if any, retesting, demobilization and completion in all respects to the satisfaction of the Engineer-in-Charge.



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Name of Work	Time of Completion
Item rate contract for Laying of Underground MDPE Pipelines & Aboveground GI / Cu Installation in Pune GA and Nashik GA , for City Gas Distribution Network of MNGL, Pune	<p>i) Contract Period: Contract period shall be One year from the date of Notification of Award. Also, this contract may be extended up to further 6 months at the sole discretion of MNGL.</p> <p>SO will be issued against the contract. The period of the SO Value from the date of award shall be as per following-</p> <p>Pune GA-</p> <p>1) 1 Cr - 4.5 months 2) 75 Lacs- 4 months 3) 50 Lacs- 3.5 months</p> <p>Nashik GA-</p> <p>1) 1 Cr - 4.5 months 2) 75 Lacs- 4 months 3) 50 Lacs- 3.5 months</p> <p>Work front will be provided to the contractor through written communication.</p> <p>The initial mobilization time shall be 15 days as per the Annexure-9 of SCC (Technical).</p> <p>ii) The completion date of the Contract shall be considered as the last date on which MDPE pipeline / domestic connections is tested and commissioned. It shall be the Contractor's responsibilities to hand over each line separately vide proper written communication.</p> <p>iii) MNGL reserves the rights to extend the Work Order validity date with same terms & conditions if the total work could not be completed within the stipulated time period due to unforeseen reasons.</p> <p>Note: Contractor shall be required to mechanically complete the pipeline in part as per the requirement of the Company / EIC before the scheduled completion date.</p>



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Note:

- 1) The time of completion shall be reckoned from the date of award of SO.
- 2) The time indicated is for completing all the works in all respects as per specifications, codes, drawings and instructions of Engineer-in-charge.
- 3) It should be noted that the period of construction given above includes permission preconstruction survey, preparation of design, other execution document / drawings, procurement and supply of materials including their inspection & testing, mobilization at site, installation, construction, laying, fabrication, erection inspection, testing, rectification (if any), pre-commissioning, commissioning and demobilization works etc. complete in all respects to the entire satisfaction of Owner/ Engineer-in-charge.

- 7.2 A joint program of execution of work will be prepared by the Engineer-in-Charge and Contractor. This program will take into account the time of completion mentioned in 2.3.1 above.
- 7.3 Monthly/Weekly execution program will be drawn up by the Engineer-in-Charge jointly with the Contractor based on availability of materials, work fronts and the joint program of execution as referred to above. The contractor shall scrupulously adhere to the Targets/Programs by deploying adequate personnel, Construction Equipment, Tools and Tackles and also by timely supply of required materials coming within his scope of supply as per Contract. In all matters concerning the extent of target set out in the weekly/monthly program and the degree of achievement, the decision of the Engineer-in-Charge will be final and binding on the Contractor.
- 7.4 Contractor shall give every day category-wise labor and equipment deployment report along with the progress of work done on previous day in the proforma prescribed by the Engineer-in-Charge.
- 8.0 **MEASUREMENT OF WORKS**
In addition to the provisions of Clause 88.1 of the General Conditions of Contract and associated provisions thereof, the following shall apply.
- 8.1 The mode of measurement shall be as mentioned in relevant standard specification incorporated in the Bidding Document. Any other mode of measurements not covered in above specifications shall be followed in accordance with relevant BIS codes/ Schedule of Rates/ Specifications etc. and/ or as decided by Engineer-in-charge.
- 8.2 Payment will be made on the basis of joint measurements taken by Contractor and certified by Engineer-in-charge. Measurement shall be based on "Approved for Construction" drawings, to be the extent that the work conforms to the drawings and details are adequate.
- 8.3 Wherever work is executed based on instructions of Engineer-in-charge or details are not adequate in the drawings, physical measurements shall be taken by Contractor in the presence of Engineer-in-charge.
- 8.4 Measurements of weights shall be in metric tons corrected to the nearest Kilogram. Linear measurements shall be in meters corrected to the nearest centimeters.

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- 8.5 The weights mentioned in the drawing or shipping list shall be the basis for payment. If mountings for panels etc. are packed separately, their erection weights shall include all mountings.
- 8.6 Welds, bolts, nuts, washers etc. shall not be measured. Rates for structural steel work shall be deemed to include the same.
- 8.7 No other payment either for temporary works connected with this Contractor for any other item such as weld, shims, packing plates etc. shall be made. Such items shall be deemed to have been included for in the rates quoted.
- 8.8 Measurement will be made for various items under schedule of rates on the following basis as indicated in the unit column.
- i) Weight : MT or Kg
 - ii) Length : M (Metre)
 - iii) Number : No.
 - iv) Volume : Cu.M
 - v) Area : Sq.M
- 8.9 Length of pipes shall be measured along the curvilinear center of the pipelines laid / installed and shall include all types of specials, fittings, bends etc. but excluding all types of valves. Length of valves shall be excluded from piping measurement and shall be considered on number basis.

9.0 TERMS OF PAYMENT

Pending completion of the whole works, provisional progressive payments for the part of work executed by the contractor shall be made by Owner on the basis of said work completed and certified by the Owner's representative as per the agreed milestone payment schedule and the percentage break-ups given below.


Contractor shall submit his invoices to the Owner's representative monthly in the manner as instructed by Owner. Each invoice will be supported by documentation acceptable to Owner and certified by the Owner's representative. Payments made by owner to the contractor for any part of the work shall not deem that the Owner has accepted the work.

The Contractor has to raise the RA bill on monthly basis or as per instructions of MNGL with all HR compliance supporting documents as per check list with each RA/Final bill and payment shall be made as per the following terms:

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The Contractor has to raise the RA bill on monthly basis or as per instructions of MNGL with all HR compliance supporting documents as per check list with each RA/Final bill and payment shall be made as per the following terms:

9.1 MDPE Laying

For SOR item 1.1,1.2,1.3


60%	MDPE pipeline should in continuation from 00.00 point and complete the Trenching, lowering, jointing of pipeline, back-filling, crossings, compaction, permissions, Liaoning, Testing & flushing of network & restoration of the trench as per scope of work for the complete stretch. Submission of all TC, Area wise Material consumption, periodic material reconciliation etc.
25%	Installation of Permanent Markers/Plate Markers, Valve chamber and SR installation etc as per the scope of work for the complete stretch & submission of Auto-CAD check print drawings.
10%	Certified As-Built drawing submission, closing of punch points (if any), N ₂ Purging, Commissioning of the system/Pipeline, Handing over of documents to O&M Dept.
5%	Submission of documents, Final material reconciliation, Closure of Service order.

For SOR item 1.4, 1.6, 1.7,1.10, 1.11, 1.12, 1.13,1.14,1.16

90%	<p>Testing & flushing of network, jointing of pipeline, installation of Permanent Markers, Valve chambers, SR & restoration of the trench etc., irrespective of any scenario/weather to complete all works, permissions, Liaoning, restoration, Completion of Restoration of trench inside the society & submission of Society NOC, authority NOC in case of public roads, Submission of all TC, Area wise Material consumption, Periodic material reconciliation etc.</p> <p>For Safety barricade: Colored photographs with location identification/landmark is required with back filling report, Gap between two safety barricade shall not be more than 1m and shall be covered by caution tape at minimum three location.</p>
10%	Completion of all other associated works/Repair/rework, Submission of documents, Final material reconciliation, Closure of Service order

For SOR item 1.5,1.17,1.18,1.19,1.20,1.21

90%	Testing & flushing of network, jointing of pipeline, commissioning, installation of Permanent Markers, Valve chambers, SR & restoration of the trench etc., irrespective of any scenario/weather to complete all works, permissions, Liaoning, restoration, Completion of Restoration of trench
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	inside the society & submission of Society NOC, NOC in case of public roads, Submission of all TC, Area wise Material consumption, Periodic material reconciliation, Certified As-Built drawing submission, Handing over of documents to O&M Dept. etc.
10%	Completion of all other associated works/Repair/rework, Submission of documents, Final material reconciliation, Closure of Service order,

For SOR item 1.8, 1.9,1.15

85%	After successful testing of the system/pipeline, After completion of all respective work and submission of TC, Submission of NOC in all respects.
10%	After successful commissioning in respective area/line/network. Certified As-Built drawing submission etc., After submission of all documents.
5%	Submission of documents, Closure of Service order

For SOR item 1.22 and 1.23

90%	After complete works in all respect as per scope work and as per the instructions of EIC/AIC, Submission of documents, TC, Handing over of skid in all respect.
10%	Completion of all other associated works/Repair/rework, Submission of documents, Final material reconciliation, Closure of Service order


For SOR item 1.24

85%	MDPE pipeline should in continuation from 00.00 point and complete the Trenching, lowering, jointing of pipeline, back-filling, crossings, compaction, permissions, Liaoning, Testing & flushing of network & restoration of the trench as per scope of work for the complete stretch. Submission of all TC, Area wise Material consumption, periodic material reconciliation, Installation of Permanent Markers/Plate Markers, Valve chamber and SR etc as per the scope of work for the complete stretch & submission of Auto-CAD check print drawings.
10%	After successful commissioning in respective area/line/network. Certified As-Built drawing submission etc., After submission of all documents.
5%	Submission of documents, Closure of Service order

9.2 GI and Cu laying:

For SOR item 2.1, 2.2, 3.1,

85%	After completion of GI installation up to MCV-I, GI testing, Complete details of installation till MCV-I, Submission of TC. Installation of plate markers, Painting.
10%	Purging, Commissioning of the system, Submission of documents, Submission of all documents etc. (Before Commissioning testing is required)
5%	Submission of documents, Final material reconciliation, Closure of Service order.

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For SOR item 2.3 (a), 3.2

80%	Meter cu installation, testing, MJC submission to AIC/EIC
15%	Purging, Commissioning of the system, After submission of documents, completion of all works including conversion of all types of appliances and submission of JMR to AIC/EIC.
5%	Submission of documents, Final material reconciliation, Closure of Service order

For SOR item 2.3 (b)

95%	After successful testing of already installed Meter, Cu and conversion work of all type of appliances with supply of rubber tube and necessary Cu fittings, Clips and submission of JMR to AIC/EIC.
5%	Submission of documents, Closure of Service order

For SOR item 2.4, 2.5,

75%	Meter & Regulator installation, testing, MJC submission to AIC/EIC, Permission, Liaoning, restoration which needs to complete the job, Submission of TC.
20%	Purging, Commissioning of the system, After submission of documents, completion of all works including conversion of appliance and submission of JMR to AIC/EIC.
5%	Submission of documents, Final material reconciliation, Closure of Service order

For SOR item 2.6


90%	After completion of GI testing, purging, commissioning, Complete details of GI installation till MCV-I, Submission of TC. Installation of plate markers, Painting. (Before Commissioning testing is required)
10%	Submission of documents, Final material reconciliation, Closure of Service order.

For SOR item 3.3, 3.4

85%	After supply & installation of the fitting, Submission of JMR along with TC, Completion of the job with required patch up (restoration) etc. and successful completion of testing & flushing of the pipeline.
10%	Purging, Commissioning of the system, After submission of documents, completion of all works.
5%	Closure of Service order.

10.0 QUALITY ASSURANCE

- 10.1 Detailed quality assurance program to be followed for the execution of Contract under various divisions of works will be mutually discussed and agreed to in line with SCC-Technical. Bidder shall prepare the QAP and get it approved by EIC.
- 10.2 The Contractor shall establish document and maintain an effective quality assurance system as outlined in recognized codes.

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- 10.3 Quality Assurance System plans/procedures of the Contractor shall be furnished in the form of QA manual. This document should cover details of the personnel responsible for the quality assurance, plans or procedures to be followed for quality control in respect of Design, Engineering, Procurement, Supply, Installation, Testing and Commissioning. The quality assurance system should indicate organizational approach for quality control and quality assurance of the construction activities, at all stages of work at site as well as at manufacturer's works and dispatch of materials.

The Owner/Consultant or their representative shall reserve the right to inspect/witness, review any or all stages of work at shop/site as deemed necessary for quality assurance.

- 10.4 The Contractor has to ensure the deployment of quality Assurance and Quality Control Engineer(s) depending upon the quantum of work.

11 NOTICE AND LICENCES

The Contractor shall at his costs and expenses give to the Municipal or Panchayat, Police and other authorities all notices etc., that may be required in law to be given and obtain all necessary permissions and licenses etc., for temporary obstructions, enclosures and pay all fees, taxes charges etc. which may be leviable by such authorities for that purpose. The Contractor shall make good any damage to the adjoining property whether public or private.

12 WORKING HOURS

Depending upon the requirements, time schedule/ drawn up programs and the target set to complete the job in time the works may have to continue beyond normal working hours to the extent of round the clock and on holidays also for which no extra claim shall be entertained.

13 RESPONSIBILITY OF CONTRACTOR


Preparing approaches and working area for the movement and operation of the cranes, leveling the area for assembly and erection shall also be the responsibility of the Contractor. The Contractor shall acquaint himself with access availability, facilities such as railway siding, local labor etc.

The procurement and supply in sequence and at the appropriate time of all materials and consumables covered under Contractor's scope of supply, shall be entirely the Contractor's responsibility. Contractor shall not use any of the equipment or materials issued to him by Owner for temporary works, manufacturing erection aids etc. Misuse of materials will be seriously viewed and deduction at penal rates will be made from the Contractors bill for such quantities that are misused.

Contract Price is deemed to be inclusive of all expenses towards above responsibilities.

14 ADDITIONAL WORKS/EXTRA WORKS

Owner reserve their right to execute any additional works/ extra works, during the execution of Work, either by themselves or by appointing any other agency, even though such works are incidental to and necessary for the completion of works awarded to the Contractor. In the event of such decisions taken by Owner, Contractor is required to extend necessary cooperation and act as per the instructions of Engineer-in-Charge

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15.0 CONSTRUCTION

OWNER reserves the right to inspect all phases of Contractor's operations to ensure conformity to the SPECIFICATIONS. Owner will have Engineers, Inspectors or other duly authorized representatives, made known to the Contractor present during progress of the WORK and such representatives shall have free access to the WORK at all times. The presence or absence of a OWNER's representative does not relieve the Contractor of the responsibility for quality control in all phases of the WORK. In the event that any of the WORK being done by the Contractor or any Sub-Contractor is found by OWNER's representatives to be unsatisfactory or not in accordance with the DRAWINGS, procedures and SPECIFICATIONS, the Contractor shall, upon verbal notice of such, revise the work in a manner to conform to the relevant DRAWINGS, procedures and SPECIFICATIONS.

15.1 Rules and Regulations

Contractor shall observe in addition to Codes specified in respective specification, all national and local laws, ordinances, rules and regulations and requirements pertaining to the work and shall be responsible for extra costs arising from violations of the same.

15.2 Procedures

Various procedures and method statements to be adopted by Contractor during the construction as required in the respective specifications shall be submitted to Engineer-in-Charge in due time for approval. No construction activity shall commence unless approved by Engineer-in-Charge in writing.

15.3 Security

The work being in protected area, entry into the work area shall be restricted and governed by issue of photo gate passes by the Security/CISF. The Contractor shall arrange to obtain through the Engineer-in-Charge, well in advance, all necessary entry permits/gate pass for his staff and labor and entry and exit of his men and materials shall be subject to vigorous check by the security staff. The Contractor shall not be eligible for any claim or extension of time whatsoever on this account.

15.4 Field Inspection


CONTRACTOR shall have at all times during the performance of the WORK, a Competent Superintendent on the premises. Any instruction given to such superintendent shall be construed as having been given to the CONTRACTOR.

15.5 Erection and Installation

The CONTRACTOR shall carry out required supervision and inspection as per quality Assurance plan and furnish all assistance required by the OWNER in carrying out inspection work during this phase. The OWNER will have engineers; inspectors or other authorized representatives present who are to have free access to the WORK at all times. If an OWNER's representative notifies the CONTRACTOR's authorized representative not lower than a Foreman of any deficiency, or recommends action regarding compliance with the SPECIFICATIONS, the CONTRACTOR shall make every effort to carry out such instructions to complete the WORK conforming to the SPECIFICATIONS and approved DRAWINGS in the fullest degree consistent with best industry practice.

15.6 Construction Aids, Equipment, Tools & Tackles

CONTRACTOR shall be solely responsible for making available for executing the work, all requisite Construction Equipment, Special Aids, Tools, Tackles and testing equipment and

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appliances. Such construction equipment etc. shall be subject to examination by owner and approval for the same being in first class operating condition. Any discrepancies pointed out by OWNER shall be immediately got rectified, repaired or the equipment replaced altogether, by CONTRACTOR. OWNER shall not in any way be responsible for providing any such equipment, machinery, tools and tackles.

The OWNER reserves the right to rearrange such deployment depending upon the progress and priority of work in various sections.

Tie-end between main line and starting point of terminal is included in the scope of contract, as and when main line section is available for Tie-ins.

15.7 RESOURCES FACILITIES

15.7.1 Recruitment of Personnel by Contractor

The Contractor shall not recruit personnel of any category from among those who are already employed by the other agencies working at the sites but shall make maximum use of local labor available.

15.7.2 Construction Water and Power Supply

No water and power will be provided by the owner. It should be the responsibilities of the contractor to arrange water and power at his own cost.

15.7.3 Land for Residential Accommodation

Owner shall not provide any land for residential accommodation of contractor's staff and labor.

16.0 DOCUMENTS, SPECIFICATION, STANDARDS AND DRAWINGS


- 16.1 Owner shall furnish tender purpose drawings as listed in content of the tender document and other typical standard drawings attached with respective technical specifications of the tender document. Contractor shall prepare detail engineering drawing, bill of materials and all construction drawings and submit to Consultant/CSA/GET/AIC/EIC for approval prior to start of the job / any procurement.

Contractor shall ensure the timely certification of all measurement book/inspection reports form CSA, GET, AIC & EIC at least once in a week or as directed/communicated by AIC/EIC, if fails a deduction of Rs 100.00 per inspection report will be applicable for delay in submission.

- 16.2 Contractor shall prepare isometric drawings, any specific detail drawings (if required by Engineer-in-charge) & bill of materials and submit the same for Owner/ Consultant's approval/ record.

Contractor shall prepare drawing for utilities line as required or as per SOR and submit the same for Owner/ Consultant's approval/ record.

- 16.3 No construction small or big shall be carried out without proper construction / standard drawings duly approved by Owner's Engineers at Delhi or site office or Owner's representative duly authorized to do so.

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However, detail pipeline route alignment sheets, detail-crossing drawings with crossing methodology shall be submitted by Contractor for prior approval after survey carried out by contractor at site before execution of pipeline work. Any additional survey and data required to complete above shall be also done by Contractor without any extra time & cost implementation to Owner.

- 16.4 After Completion of construction & commissioning of pipeline system, Contractor shall incorporate all the correction in drawings, prepare and issue the drawings "as built drawings" as listed below to Owner as final submission of drawings. For Mainline pipeline alignment sheet, all block valves location & details, all X-ing details, pipe book etc. and for tap-off point & consumer's premises, various DRS, MRS/SRM at Industrial / Commercial Consumer's Stations – layout drawing, piping GAD, Isometric and all civil drawings including hook-up arrangement with DPRS / IPRS / Meter Regulator. For final submission only 4 sets of documents plus the original transparencies shall be handed over by Contractor. Any construction done by Contractor without duly approved drawings shall be wholly at his risk and cost. Soft copy of all as-built drawings shall be also submitted in AutoCAD. **Please refer guidelines attached for preparation of as-built drawing.** For details of documentation to be submitted for mainline and terminal refer enclosed specification for documentation for pipeline construction enclosed elsewhere with the tender.

16.5 Specifications

The work shall be carried out by CONTRACTOR strictly in accordance with the following specifications :


- 1) PNGRB guideline (T4S)
- 2) Laying of Underground MDPE Main Pipeline
- 2) Installation of Aboveground GI Piping for Domestic & Commercial Consumers
- 3) GI Fittings
- 4) HDPE Pipes etc.

The contractor shall carry out the work in accordance with the requirement of latest relevant applicable standards, this specification, MNGL's Engineering Standards; relevant Oil India Safety Directorate (OISD) norms, PNGRB Regulations for Technical Specifications(T4S), ASME B31.8 – Gas Transmission and Distribution Piping Systems; Australian Standard 3723 – Installation and Maintenance of Plastics Pipe Systems for Gas; and the American Gas Association Document – Purging Principles and Practice. ISO:4437/ IS:14885 for underground polyethylene pipes and MNGL's approved procedures.

Should the contractor find any discrepancy, ambiguity or conflict in or between any of the Standards and the contract documents, then this should be promptly referred to the Engineer-in-Charge (EIC) for his decision, which shall be considered binding on the contractor.

The manpower deployed on the respective work shall be adequately trained & shall have necessary skills to executive / supervise the work. However, the assessment on the qualification of the personal shall be at the discretion of EIC.

Fusion operators and other skilled personnel shall be approved by MNGL and identification cards duly signed by EIC shall be issued to them. Only those personnel who are approved by EIC shall be allowed to execute the critical activities like joining of PE Pipes.

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16.6 Drawings/ "As Built" Drawings

Notwithstanding the provisions contained in standard specifications, upon completion of WORK, the CONTRACTOR shall complete all of the related drawings to the "AS BUILT" stage and provide the OWNER, the following:


- a) One complete set of all original tracings.
- b) Five complete bound sets of CONTRACTOR's specifications including design calculations.
- c) Five complete sets, in the form of hand bound volumes, of the manufacturer's data book for all the equipment's; instruments etc. including certified prints and data. Data books shall be completed with index as to tag numbers associated with manufacturer's data shown, Equipment data shall include as a minimum requirement the principle and descriptions of operations, installation and maintenance instructions, drawings and dimensions, parts list and priced purchase orders including those of major sub-vendors and suppliers. Requirements pertaining to "VENDOR DATA REQUIREMENT" attached with standard specifications for the documents to be included in the Data Book for each equipment, instruments etc. shall also be complied with.
- d) Soft copy of all the as built drawings prepared in AutoCAD in one set of rewritable compact Disc and photographs covering measure activities at site.
- f) The Contractor shall submit colored photographs covering all the activities of pipeline constructions highlighting the progress or other areas of work in 2 sets to Engineer-in-charge at site office along with monthly progress report. Similarly photographs for problem areas should be submitted well in advance with a proposed methodology to execute the works and meet the construction schedule. The cost of same shall be deemed to be inclusive in the rates and no separate payment shall be made.
- g) All as-built drawings as mentioned in specification for documentation enclosed elsewhere in the tender.

Guidelines for preparation of As-laid/ As-built Drawings:

A) Preparation of As-laid/ As-built drawings:

a. Medium pressure network:

- i. The as laid drawing for MP laying should be in the scale of 1:500. For smaller stretches/ tap offs, scale of 1: 50 or as suggested by MNGL engineer should be used. It is mandatory to mention "scale used" in the drawing.
- ii. Diameter, pipe material, length and location of pipeline whether on road or on footpath, should be clearly indicated.
- iii. Distance of pipeline from electric pole/ permanent property, i.e. boundary wall, gate of the society, manhole of other utility (Manhole owner name to be mentioned) should be provided at every 25 meters and at every change in alignment/ orientation of pipeline.
- iv. Trench details (i.e. top cover of the pipe) at every 50 meters, details of every change in depth (increase or decrease), details and offset distance from other utilities present (e.g. MSEB, BSNL, MIDC water line etc.) and details (material,


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size and length) of additional protection like sleeve (if any) provided to our pipeline should be clearly indicated.

- v. Details of PE stop off valve and other fittings used (i.e. tee, elbow, coupler, transition fittings etc.) should be shown with adequate information on chainage, orientation and offsets (X and Y coordinates) from permanent structure in the immediate vicinity.
- vi. Technical deviation (if any) should be provided with reference to the building/ permanent structures around, and the same should be cited clearly with all the relevant details, including separate sketches.
- vii. Total as laid length (size wise), bill of materials with a standard legend approved by MNGL (attached herewith) should be mentioned in each sheet.
- viii. Complete details of nallah crossings should be shown in separate sketch.
- ix. Names of roads, major landmarks and buildings should be mentioned appropriately for reference.
- x. Details like name and exact location of the society/ commercial customer/ industrial customer in which SR/ MRS module is installed should be provided.
- xi. Proper chainage (with reference to the distance from DRS/ starting point) and mention of all the drawings to be referred in continuation should be cited correctly.
- xii. Distance from at least 3 permanent structures should be provided for starting point, end points and for tap off locations.
- xiii. Direction of gas flow should be indicated in each of the drawing.
- xiv. Text on the as laid drawings should be clearly visible etc. as directed by EIC.

b. Low Pressure network:

- i. The as laid drawing should be in the scale of 1:200 (or as suitable). It is mandatory to mention "scale used" in the drawing.
- ii. Diameter, pipe material, length and location of pipeline whether on road or on footpath (inside society) should be clearly indicated.
- iii. Distance of pipeline from electric pole/ permanent property, i.e. boundary wall, gate of the society, manhole of other utility (Manhole owner name to be mentioned) should be provided at every 25 meters and at every change in alignment/ orientation of pipeline.


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- iv. Trench details (i.e. top cover of the pipe) at every 50 meters, details of every change in depth (increase or decrease), details and offset distance from other utilities present (e.g. MSEB, BSNL, MIDC water line etc.) and details (material, size and length) of additional protection like sleeve (if any) provided to our pipeline should be clearly indicated.
- v. Details of fittings used (i.e. tee, elbow, coupler, transition fittings etc.) should be shown with adequate information on distance, orientation and offsets (X and Y coordinates) from permanent structure in the immediate vicinity.
- vi. Details of crimp position, kitchen positions and riser nos. to be mention in the drawing.
- vii. Technical deviation (if any) should be provided with reference to the building/ permanent structures around, and the same should be cited clearly with all the relevant details, including separate sketches.
- viii. Total as laid length (size wise), bill of materials with a standard legend approved by MNGL (attached herewith) should be mentioned in each sheet.
- ix. Complete details of nallah crossings should be shown in separate sketch.
- x. Names of roads, major landmarks and buildings should be mentioned appropriately for reference.
- xi. Details like name and exact location of the society in which SR module is installed should be provided.
- xii. Proper distances and mention of all the drawings to be referred in continuation should be cited correctly.
- xiii. Distance from at least 3 permanent structures should be provided for starting point, end points and for tap off locations.
- xiv. Direction of gas flow should be indicated in each of the drawing.
- xv. Text on the as laid drawings should be clearly visible. etc. as directed by EIC.

16.6.1 The As-built is an essential document for MNGL, thus contractor shall ensure the submission of Approved as-built drawing within 15 days from date of commissioning. If fails a penalty of Rs 10,000.00 per MP line stretch/ society will be applicable.

16.7 DOCUMENTS TO BE SUBMITTED/ PRODUCED ALONGWITH R.A. BILLS

- i) Covering letter.
- ii) Tax invoice.
- iii) Abstract of cost.
- iv) Final measurement cum consumption sheet.

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- v) Material reconciliation.
- vi) HR compliance documents- Legal and statutory compliance as per requirement. (like. Labor License No./ ESIC/ PF Challan/ECR, Wedge register, muster roll, payment proof, professional tax, receipt of Labor welfare fund, Copy of BG etc.
- vii) Insurance Policy/WCP as per relevant clauses of Contract Agreement.
- viii) Consumption sheet along with certified inspection reports.
- viii) Material inspection report with TC (if any)
- vi) Any other document required for the purpose of processing the bills.

Contractor shall submit scan copy also of all the documents in each RA bills to AIC/EIC on monthly basis along with hard copy.

16.8 **COMPLETION DOCUMENT – MDPE & GI**

The following documents shall be submitted in hard binder by the BIDDER in two sets (one original and one copy), as a part of completion documents:

- a) Copy of complete approved RA bills.
- b) Final Bill with all documents as defines in clause no 16.7 of SSC.
- c) Material Reconciliation, stores issue, total material consumption report. & return statements
- d) No Due and NO claim certificate by the BIDDER
- e) Statement for reconciliation of all the payments and recoveries made in the progress bills
- f) Recovery, PRS statement if any.
- g) SOR Deviation statement.
- h) Work and Claim Status.
- i) Delay analysis (If required).
- j) Copies of Time extension. if granted.
- k) All other requirements as specified in the respective specifications.
- l) Any other contractual documents required on completion.
- m) Total list of total houses & commercial establishments in the area allotted to him giving details of connections provided & reasons where connection could not be given / completed.
- n) Test reports & test certificates of gauges etc.
- o) Any other documents / records required by EIC.


Note: All the material issue / consumption reports shall be submitted along with SAP generated statements.

16.9 **STATEMENT OF FINAL BILLS-ISSUE OF NO DEMAND CERTIFICATE**

The final bill of Contractor shall be accompanied by no-demand certificate from the following departments of the Owner:

- i) Administration & Personnel Department regarding vacation of land, housing accommodation, recovery of tents etc.
- ii) Fire and Safety Officer and CISF.

The Contractor shall obtain such no-demand certificates from the concerned authorities and furnish the same to the Engineer-in-Charge.

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16.10 ORDER PLACEMENT OF BOUGHT OUT ITEMS

The contractor is required to place firm order for all bought out items within 15 days from the date of placement of order, failing which owner reserves the right to procure the same at the risk & cost of the contractor.

17.0 HEALTH SAFETY AND ENVIRONMENT (HSE) MANAGEMENT

After the award of the contract, detailed Health, Safety and Environment (HSE) programmed to be followed for execution of contract under various divisions of works will be mutually discussed and agreed between Contractor, Client & PMC.

The Contractor shall establish document and maintain an effective Health, Safety and Environment (HSE) management system.

The Contractor shall adhere to the Health, Safety and Environment (HSE) management system as per MNGL Specification and General Conditions of Contract.

It will be the Contractor's responsibility to acquaint his site staff and operatives of all current safety legislation, statutory requirements and MNGL's safety standards. In addition, and before any work takes place all the Contractor's operatives shall be given training in site safety by the trained person under supervision of MNGL. If the Contractor wishes to start any new operatives on site, he must first inform the SE, who will arrange for such training to be arranged.

The Contractor shall conform to the requirements outlined elsewhere in the tender document. In addition, the Contractor shall observe safe working practices in the storage and handling of cleaning fluids, flammable fluids, etc., and ensure smoking or naked flames are not permitted in the vicinity when these materials are being used.

Trench walls shall be battered with sufficient slope in order to minimize a trench collapse. Where there is a danger of an earth slide or collapse, the trench shall remain open for the minimum time possible with proper barricading. The Contractor is to ensure that no person enters a trench, which is of a depth of 1.5 meters or greater, unless the trench has adequate shoring or the sides are battered to such an extent as to prevent a trench collapse


The Contractor shall also protect all work sites with warning signs, barricades and night lighting. The Contractor shall inspect all fenced excavations daily, and maintain them in good order.

The trenches/ pits shall not be kept open in night times. However, in case the same is essential the same shall be properly barricaded with proper lighting arrangements & manned.

The Contractor shall provide all safety equipment like helmets, boots, insulated crowbar etc. to the labor which are necessary for safe working practice.

Contractor shall ensure the use of Full Body Safety harness belt with ascender-descender and three life line. All other kind of equipment and tools like only belt, Jhula etc are prohibited.

Any accident causing injury to any person or damage to property or equipment shall be reported to the EIC.

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Where the EIC determines that the work is being performed by the Contractor in an unsafe manner, he may suspend the Work until corrective action is taken by the Contractor.

- 17.1 The contractor should make First Aid Box available at all the sites. The contents of the kit shall include the following items as a minimum.

1	Triangular bandages 90 cm wide x 127 cm base	8 Nos
2	First Aid Dressings	6Nos (3med+3Large)
3	Burn Dressings	3 Nos
4	Roller Bandages	4 Nos
5	Absorbent white Gauze	1 Roll
6	Water proof Adhesive Tape	1 Roll
7	Premeditated Adhesive Dressing Strips	10 Nos
8	Cotton Wool, Sterilized	3 Pkts
9	Ophthalmic pads	2 Nos
10	Antiseptic & Burn Ointment	1 Tube
11	Aspirin Tablets	1 Strip
12	Mouth to mouth Resuscitator, plastic consisting of a short oral airway with a non-return valve.	2 Nos
13	Rust less Safety Pins on a card	10 Nos
14	Scissors	1 Pair
15	Inflatable splints, arm	1 Set
16	Leg	1 Set
17	Tweezers	1 Pair
18	Silica-gel or any other dehumidifier	1 Capsule
19	First aid manual containing instructions for first aid as well as mouth to mouth resuscitation	1 No

- 17.1.1 All the items shall be contained in a weatherproof box. The container shall be suitable for mounting on as well as being carried in hand.
- 17.1.2 All the contents shall be kept in clearly marked and easy to remove cartons stored in such a manner that there is no rattling or spilling over even when the container is being moved. Whenever applicable the cartons shall bear instructions for use, dosage etc.
- 17.1.3 The contractor must provide PPEs to all the workmen, PPE will include


Sr. No.	Item	Standard/Inspection Criteria	Salient Feature
1	Safety Shoe	IS5852-77 For steel toe IS 10667-83 Guide for selection	Safety shoe with injection molded PVC / nitrile rubber sole, collar cushion, fully leather lined with steel toe cap as per BIS. Shoe sole to be anti-skid and provide adequate insulation. No nails be used on sole.






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PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**


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Sr. No.	Item	Standard/Inspection Criteria	Salient Feature
2	Gum Boot	IS 12254-1999	Full size (up to Knee height) Molded foot wear made up of PVC and cotton fabric with Fiber toe cap
3	Safety helmet	IS2925-84	Made of high density polyethylene thermoplastic with radium Should have head harness and chin strapped for fixing Polyester fiber reinforced polycarbonate /polyester fiber glass material shall also be considered.
4	Hand Gloves		
	Cotton	IS6994(PT 1)-73	Should be PVC dotted for grip
	Rubber (Elect Resistant)	IS6994-73	 <p>Suitable for 11 KV Working potential</p>
5	Overall / dangri/ Boiler Suit -	IS8519-77	One-piece apparel of cotton material.
6	Safety goggles X: For Drilling & Grinding	IS7524	Impact resistant & thermally toughened glass, suitable to be worn over normal spectacles.
7	Ear muff with head band-	IS6229-80	Noise protection should be made of high impact polypropylene for rugged use. No metal parts to be used. Should attenuate sound level by 30 to 30 db.
8	Ear plug	IS9167-79	Moisture & heat resistant. Should be made of soft pliable, non-allergic rubber should reduce sound level by minimum 17 db.

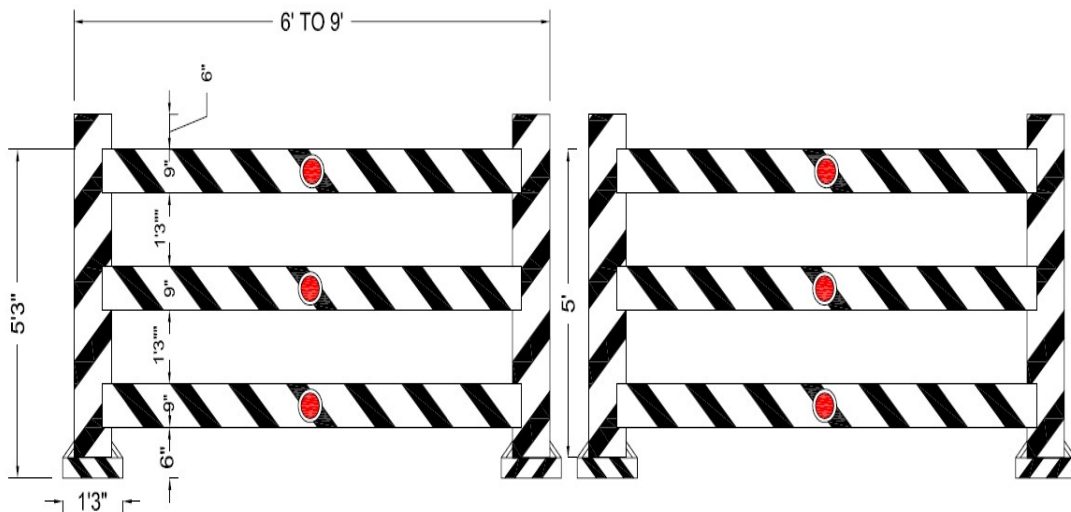
 <p>MAHARASHTRA NATURAL GAS LIMITED</p>	<p>TENDER FOR ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE & NASHIK GA</p> <p>Bid No.: MNGL/CP/2022-23/187</p>
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Sr. No.	Item	Standard/In spection Criteria	Salient Feature
9	High Visibility Jackets	EN 471	<p>The vest of jacket shall be made of net type cloth and must be made of dual colour, vertically to give more visibility and the glass bed reflective fabric mounted on fluorescent organic fabric around the vertical band of each shoulder and horizontally tape around the chest and back to create 360 degree visibility as per EN 471</p>  <p>Cross belt 2 inch "Glass Bead EN – 471 reflective tape having cross at back & two vertical bands in front having Velcro opening both sides.</p> 

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Sr. No.	Item	Standard/In specion Criteria	Salient Feature
			

17.1.4 The contractor must provide barricades and safety sign boards at and around open trench, working area:



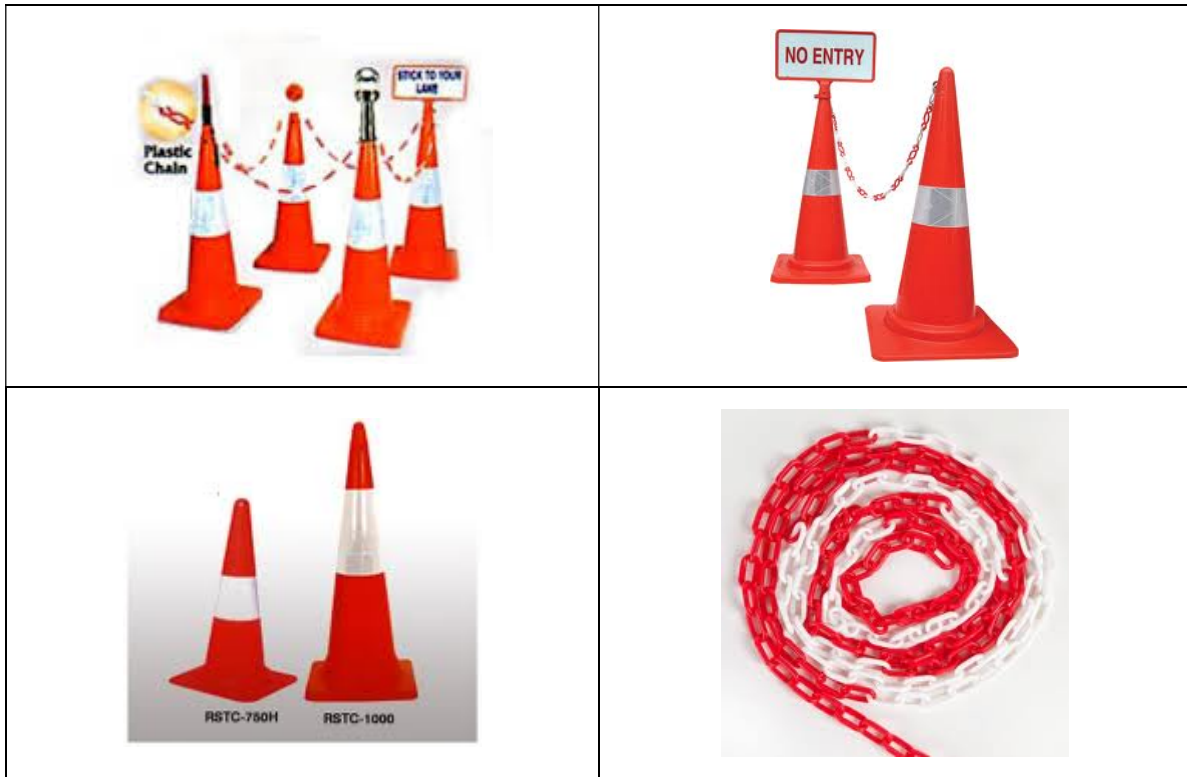
DETAILS OF BARRICADE




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Category	Hard Hat	Gum Boot	Safety Shoes	Hand Gloves		High Visibility Jacket	Safety Goggles	Coverall	Ear plug/ Ear Muff
				A type	B type				
Labor	<input type="checkbox"/>	<input type="checkbox"/>	--	<input type="checkbox"/>	--	<input type="checkbox"/>	--	--	--
Helper	<input type="checkbox"/>	--	<input type="checkbox"/>	<input type="checkbox"/>	--	<input type="checkbox"/>	--	--	--
GI Plumber	<input type="checkbox"/>	--	<input type="checkbox"/>	<input type="checkbox"/>	--	<input type="checkbox"/>	<input type="checkbox"/>	--	<input type="checkbox"/>
Cu Plumber	<input type="checkbox"/>	--	<input type="checkbox"/>	--	--	<input type="checkbox"/>	<input type="checkbox"/>	--	<input type="checkbox"/>
CV technician	<input type="checkbox"/>	--	<input type="checkbox"/>	--	--	<input type="checkbox"/>	--	--	--
PE technician	<input type="checkbox"/>	<input type="checkbox"/>	--	--	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Breaker Operator	<input type="checkbox"/>	<input type="checkbox"/>	--	--	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compressor Operator	<input type="checkbox"/>	--	<input type="checkbox"/>	<input type="checkbox"/>	--	<input type="checkbox"/>	--	--	<input type="checkbox"/>
Supervisor/ Engineer/ Safety officer	<input type="checkbox"/>	--	<input type="checkbox"/>	--	--	<input type="checkbox"/>	--	--	<input type="checkbox"/>

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A type hand gloves: Cotton hand gloves with PVC dotted for grip

B type hand gloves: Rubber hand gloves (11 KvA)

Ear plug/ Ear muff should be available with all the site people during flushing/ purging/ commissioning activities.

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17.2 General Guidelines During and Before Erection

17.2.1 The Contractor shall be responsible for organizing the lifting of the structural element, equipment in the proper sequence, that orderly progress of the work is ensured and access routes for erecting the other structures/ equipment are kept open.

17.2.2 During the performance of the work the Contractor at his own cost, shall keep structures, materials and equipment adequately braced by guys, struts or otherwise approved means which shall be Supplied and installed by the Contractor as required till the installation work is satisfactorily completed.

Such guys, shoring, bracing, strutting, planking supports etc. shall not interfere with the work of other agencies and shall not damage or cause distortion to other works executed by him or other agencies.

17.2.3 Manufacturer's recommendations and detailed specifications for the installation of the various equipment and machines shall be fulfilled by the Contractor.

17.2.4 Various tolerances required as marked on the drawings and as per specifications and instructions of the Engineer-in-Charge, shall be maintained.

17.2.5 Verticality shall be maintained. Verticality shall be verified with the Theodolite/advanced instruments.

17.2.6 Contractor shall ensure safety at site as define above or as required by the authority if noncompliance found at site, MNGL may take following action without any prior notice.

i) **If MNGL will provide the PPEs and Barricades etc from third party, the cost of the same will be recovered from upcoming RA bill with addition of 25% administration charges.**

Or


ii) **A penalty of Rs 10,000.00 shall be applicable for each written communication (e-mail, letter, audit report etc.) of non- compliance of safety.**

17.3 Construction Photographs

The Owner desires to have area wise/ society wise/ stretch wise photographs showing the progress of construction. Contractor has to keep all the photographs in hard or soft form and submit the same to EIC as per requirement. Before utilizing any photograph for publicity, the Contractor shall obtain prior approval of the Owner.

17.4 Following points shall be taken care by the contractor before during execution works.

- i) Contractor shall be responsible for taking necessary precautions regarding traffic (installation of notice / warning boards).
- ii) Contractor shall be totally responsible for the occurrence of any accident during excavation of road and shall be liable for damages / expenses due to the same.
- iii) Concerned authority / Owner shall not be responsible for any loss / damage.
- iv) One copy of the permission shall be made available with contractor's responsible workman at the place where excavation is undertaken.

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- v) While executing the subject work, excavation shall be done in consultation with the concerned authority engineer of that area.
- vi) Necessary safety measures shall be taken for the gas pipeline, since high tension lines and other services carriers are running along with in gas pipeline route in the area.


18.0 SCHEDULE OF LABOUR & EQUIPMENT

Schedule of Labor Rates as follow shall be used for analyzing rates for extra items.

Sl. No.	Classification Personnel	Rates in INR for 8 hours
		Standard Time (Rs)
1.	Engineer	2500/-
2.	Surveyor Foreman	2000/-
3.	Pipe Fitter	750/-
4.	Pipe Welder	850/-
5.	Gas Cutter	700/-
6.	Grinder	700/-
7.	Mason	520/-
8.	Plumber	500/-
9.	Carpenter	500/-
10.	Painter	500/-
11.	Electrician	600/-
12.	Cable Jointer	780/-
13.	Instrument Technician	1000/-
14.	Rigger	400/-
15.	Watchman/Helper	390/-
16.	Concrete Mixer Operator	520/-
17.	Heavy Machine Operator	700/-
18.	Fusion Operation/ Jointer	500/-

NOTES:

Rates are final and Tenderer is to sign only without deviation.

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Schedule of equipment rates as following shall be used for analyzing rates for extra items.

SL. NO.	DESCRIPTION OF EQUIPMENT	HOURLY RENTAL RATES FOR EXTRA WORKS INCLUDING CONSUMABLES
1)	Dozers	Rs. 1100/-
2)	Back Hoe 1.2 m3	Rs. 1500/-
3)	Back Hoe 0.7 m3	Rs. 1000/-
4)	Side Boom 45 ton	Rs. 2000/-
5)	Side Boom 15 ton	Rs. 1200/-
6)	Moling machine	Rs. 1200/-
7)	Bending machine	Rs. 400/-
8)	Welding machine	Rs. 300/-
9)	Compressors 210 CFM	Rs. 500/-
10)	Crane up to 15 T	Rs. 1100/-
11)	Dewatering Pumps	Rs. 125/-
12)	Fusion Jointing Machine	Rs. 250/-
13)	Diesel operated power generators	Rs. 200/-
14)	Grinding machine	Rs. 50/-
15)	Gas cutting set with cylinders	Rs. 100/-
16)	Compressor 600 CFM Capacity	Rs. 750/-
17)	Trucks	Rs. 225/-
18)	Car/Jeep	Rs. 200/-
19)	Pipe beveling m/c	Rs. 150/-
20)	Tractor with trolley	Rs. 225/-
21)	Tripod with 5 Tons Chain Pulley Block	Rs. 100/-
22)	Pipe Trailor 20 T capacity	Rs. 450/-
23)	High pressure test pump up to 200 Bar capacity	Rs. 450/-
24)	Dumper	Rs. 350/-
25)	External x-ray with generator	Rs. 500/-

19.0 CONSTRUCTION EQUIPMENT

19.1 Minimum construction equipment to be deployed by contractor. However, any other equipment required for completion of pipeline laying work but not specifically mentioned here, shall be deployed by contractor without any additional cost. The list of equipment mentioned below are the minimum to be deployed by contractor and contractor shall ensure the availability at site of listed equipment in good working condition.

Sl. No.	Description of Item	Qty. to be Deployed*
1	Electro-fusion machine with Bar Code and control box with leads	1 No's
2	Moling Equipment, HDD Equipment	As per requirement
3	MDPE Squeeze Tools for 180 & 125mm pipe (Hydraulic)	2 No's
4	MDPE Squeeze Tools for 125, 90, 63mm Pipes	2 No's each

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5	MDPE Squeeze Tools for 32 and 20mm Pipes	1 No's each
6	Universal pipe scrapper 20mm – 180mm/ hand scrappers	1 No's
7	Tapping tools for PE service tees (if required)	1 No's
8	PE pipe cutter 125, 90, 63 mm pipe	1 No's each
9	PE pipe cutter/ Guillotine 180, 125 mm	1 No's
10	Pipe alignment clamps for jointing of elbow, tee etc. 180, 125, 90,63,32 & 20mm pipe	1 No for each
11	Jumping Jack compactor	1 No
12	Power Generator (5.5 kVA)	1 No
13	Conversion Kit	1 No per technician and 1 No's extra
14	Pneumatic Test Pumps	1 No per plumber team
15	Die sets for thread preparation (1", ¾", ½")	1 No per plumber team
16	Pipe Cutter for GI (1", ¾", ½") & Cu	1 No each for per plumber team
17	Pressure Gauge 7 Kg	2 No's
18	Pressure Gauge 400 mbar	2 No's
19	Manometer	2 No's
20	Full body Safety harness belt with ascender & descender	1 No's
<p>Any other equipment required for completion of pipeline laying work but not specifically mentioned above here, shall be deployed by contractor without any additional cost. Contractor shall deploy above mentioned equipment in good working condition. Contractor shall indicate the quantities to be deployed against each item / equipment.</p>		

19.2 **Contractor shall ensure the availability of above maintain minimum construction equipment, For Non-Compliance a penalty of Rs 5,000.00 shall be applicable against each written communication (e-mail, letter, audit report etc.) by MNGL.**

20.0 **MINIMUM REQUIREMENT OF SKILLED MANPOWER**

20.1 Minimum No. of Skilled Manpower to be deployed by contractor. The below proposed list of skilled manpower is the minimum to be deployed by Contractor and Contractor shall ensure the availability of these at site.

Sl. No.	Description	Educational qualification	Manpower requirement
1	Project Manager (Pune site)	BE/Engg. Diploma/Graduate with minimum 5/8/10 year experience in the relative field	1
2	Computer operator-cum-Back office	Good computer knowledge.	1
3	Site Supervisor MDPE	Graduate with good experience in the relative field	1
4	Site Supervisor (M/cu)		1
5	Conversion Technician	Good experience in relative field	1
6	MDPE Technician	2-3 years' experience in relative field	1

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7	Plumber	-	As required
9	Labor	-	As required
<p>The above proposed list of skilled manpower is the minimum to be deployed by Contractor.</p> <p>NOTE:</p> <p>(1) Crew as required shall be deployed based on the Scope of Work finalized and as per instruction of EIC.</p> <p>(2) The details of minimum manpower required to be mobilized by the execution contractor to complete the entire work within schedule given above is not exhaustive. Contractor is required to augment the above list with additional numbers/categories of workmen as required and directed by Engineer-In charge to complete the work within the completion time schedule and quoted price.</p> <p>(3) The Manpower as identified above should have required qualification and adequate relevant experience.</p> <p>(4) These man-powers are to be mobilized within 15 days of award of work.</p>			

20.2 Specific Requirements

Specific requirements of manpower as communicated by EIC shall be mobilize within 15 days by Contractor.

20.3 Contractor shall ensure the mobilization of maintain minimum manpower, for non-compliance a penalty of Rs 5,000.00 per person shall be applicable against each written communication (e-mail, letter, audit report etc.) by MNGL.

21.0 PROJECT SCHEDULING & MONITORING

The Contractor shall proceed with the Work under the Contract with due expedition and without delay.

The EIC may direct in what order and at what time the various stages or parts of the work under the Contract shall be performed.

Contractor has to regularly submit daily progress reports, weekly progress reports, graphs with utilities, testing reports, material consumption and inventory reports, deviation statements etc.


The following schedules/documents/reports shall be prepared and submitted by the Bidder/Contractor for review/approval at various stages of the contract.

21.1 Along with Bid

a) Time Schedule

The Completion Time Schedule for the work (including mobilization period) as per time schedule to Invitation for bid, PART-A of Tender in all respect, from the date of issue of telex/telegram/letter/Fax of Intent.

The Bidder is required to submit a Project Time Schedule in Bar Chart Form, along with the Bid. The Schedule shall cover all aspects like sub-ordering, manufacturing and delivery, indicated in the Bid Document. The Owner interface activities shall be clearly identified with their latest required dates. Owner reserves the right to

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disqualify the Bidder if the above Schedule submitted by the Bidder is not in line with the overall Project requirement.

- b) **Scheduling & Monitoring System**
The Bidders should describe their system of Project Scheduling and monitoring, the extent of computerization, level of detailing, tracing methodology etc. with the name of computer package and sample outputs.

21.2 **After the Award of Contract**

- a) **Overall Project Schedule**
The Contractor shall submit within 1 week of LOA, a sufficiently detailed overall Project Schedule in the activity network form, clearly indicating the major milestones, interrelationship/ interdependence between various activities together with analysis of critical path and floats.


The network will be reviewed and approved by Engineer- in-Charge and the comments if any shall be incorporated in the network before issuing the same for implementation. The network thus finalized shall form part of the contract document and the same shall not be revised without the prior permission from Engineer-in-Charge during the entire period of contract.

- b) **Progress Measurement Methodology**
The contractor is required to submit within 1 week of award of WORK, the methodology of progress measurement of sub-ordering, manufacturing/ delivery, sub-contracting construction and commissioning works and the basis of computation of overall services/physical progress informed. Owner reserves the right to modify the methodology in part or in full.
- c) **Functional Schedules**
The contractor should prepare detailed functional schedules in line with network for functional monitoring and control and submit scheduled progress covers for each function viz. ordering, delivery and construction.

21.3 **Project Review Meetings**

The Contractor shall present the program and status at various review meetings as required.

- a) **Weekly Review Meeting**
- | | | |
|------------------------|---|--|
| Level of Participation | : | Contractor's/Consultant's RCM/ Site-in-charge & Job Engineers. |
| Agenda | : | a) Weekly program v/s actual achieved in the past week & program for next week.
b) Remedial Actions and hold up analysis.
c) Client query/ approval. |
| Venue | : | Site Office |
- b) **Monthly Review Meeting**
- | | | |
|------------------------|---|--|
| Level of Participation | : | Senior Officers of MNGL and Contractors. |
| Agenda | : | a) Progress Status/ Statistics
b) Completion Outlook
c) Major holds up/slippages
d) Assistance required |

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Venue : e) Critical issues
f) Client query/ approval
MNGL Office/ Site at the discretion of Owner

21.4 Progress Reporting Proforma


- A) Monthly Progress Report
This report shall be submitted on a monthly basis within 10(ten) calendar days from cut-off date, as agreed upon covering overall scenarios of the work. The report shall include, but not limited to the following:
- a) Brief Introduction of the work.
 - b) Activities executed/ achievements during the month.
 - c) Schedule versus actual percentage progress and progress curves for Detail Engg. Sub-ordering, Manufacturing/ Delivery, Subcontracting, Construction, Commissioning and Overall and quantum wise status & purchase orders against schedule.
 - d) Area of concern/ problem/ hold-ups, impacts and action plans.
 - e) Resources deployment status.
 - f) Annexures giving status summary for drawings, MRs, deliveries, sub-contracting and construction.
 - g) Procurement status for items to be supplied by Contractor.
- B) Weekly Reports
The report will be prepared and submitted by the Contractor on weekly basis and will cover following items:
- a) Activities programmed and completed during the week.
 - b) Resource deployed men and machines.
 - c) Quantities achieved against target in construction
 - d) Record of Mondays lost.
 - e) Construction percentage progress schedule and actual.
- C) Daily Repots
- a) Activity program for the day
 - b) Progress of the previous day and commutative progress.
 - c) Manpower & machinery deployed.

21.4.1 Contractor shell ensure the submission of DPR by end of the day or up to 10AM of next day to MNGL through email on daily basis

21.4.2 Contractor has to prepare and update the progress data like Society status, Customer complaint status etc. and kept it in hard or soft. MNGL can ask for such reports or data at any time or it may require in review meeting. Contractor shell ensure the timely submission or availability of such required data in review meeting or time as communicated. if fails penalty of Rs 5000.00 shall be applicable in each such case for non-submission of data.


21.5 Progress Reports

21.5.1 CONTRACTOR shall make every effort to keep the OWNER adequately informed as to the progress of the WORK throughout the CONTRACT period.

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CONTRACTOR shall keep the OWNER informed well in advance of the construction schedule so as to permit the OWNER to arrange for requisite inspection to be carried out in such a manner as to minimize interference with progress of WORK. It is imperative that close coordination be maintained with the OWNER during all phases of WORK.

- 21.5.2 By the 10th (tenth) of each month, CONTRACTOR shall furnish the OWNER a detailed report covering the progress as of the last day of the previous month. These reports will indicate actual and scheduled percentage of completion of construction as well as general comments of interest or the progress of various phases of the WORK. The frequency of progress reporting by the CONTRACTOR shall be weekly.
- 21.5.3 Once a week, CONTRACTOR shall submit a summary of the WORK accomplished during the preceding week in form of percentage completion of the various phases of the WORK, to the OWNER.
- 21.5.4 Progress reports shall be supplied by CONTRACTOR with documents such as chart, networks, photographs, test certificate etc. Such progress reports shall be in the form and size as may be required by the OWNER and shall be submitted in at least 3 (three) copies.
- 21.5.5 Contractor shall prepare daily progress report (DPR) in the desired format and submit along with schedule/planning of next day to Engineer-in-charge.
- 21.5.6 All progress or activity performed by the contractor shall be recorded in measurement card/inspection report. The format of the same will be provided by MNGL.
- 21.5.7 Contractor has to submit the activity plan one day before. Contractor cannot start or perform any activity without TPI/CSA and prior information.**
- 21.5.8 Contractor shall ensure the preparation of all inspection report/ measurement card, immediate after the completion of the activity and also ensure the timely certification of measurement / other inspection reports by TPIA/CSA and MNGL.**
- 21.5.9 It is Contractors responsibility to get the measurement / inspection reports certified from TPIA/CSA and MNGL within three days from the completion date of respective activity. (MJC and JMR shall be prepared on spot get the signature of TPIA/CSA and Customer), If fails Contractor has to take approval from EIC to get the inspection report certified from TPIA/CSA & MNGL with proper justification.**
- 22.0 ROUTE SURVEY**
- 22.1 Plans detailing the size, operating pressure and approximate location of the proposed mains, connections and associated regulator installations will be issued to the contractor at the start of the works.
- 22.2 The final alignment of mains will be worked out at site in consultations with the site engineers after route survey and trial pits, at his cost, have been carried out. Any change in routing from the issued drawings due to site constraint will be notified to EIC & his specific written approval shall be obtained before carrying out the job.

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22.3 Service Lines

22.3.1 A survey will be conducted jointly by MNGL/ third party inspection and the contractor at each premises or housing colony to be supplied. The survey record will note customer details, the potential gas supply points and proposed regulator positions and estimates of material quantities. The contractor's representatives will make as sketch of the agreed pipe routes if necessary.

22.3.2 The contractor will be responsible for contacting the customer and making the necessary arrangements for access, and appointments to carry out the work. Contractor shall maintain job card and complaint books at site. MNGL will not be responsible for any time lost due to broken appointments or disputes with customers.

23.0 ORGANIZATION OF WORK

23.1 All construction work will be carried out as per direction of EIC, and this will be the primary point of contact between the contractor and MNGL on site. All work will be issued and sanctioned through the EIC and site control exercised by Site Engineer MNGL. The contractor shall ensure that technical quality standards are maintained, that construction is carried out cost effectively and that a good customer and public image of MNGL is maintained.

23.2 The contractor will appoint his own supervisors of minimum number instructed by EIC. These personnel will be responsible to the SE for monitoring construction standards and for ensuring that all detailed technical requirements are met on each and every job which is undertaken. The contractor's supervisor(s) will have day to day liaison with the SE, and will provide the SE with technical reports and audits, and other management information as is required on work progress and construction quality standards.


23.3 The contractor's supervisor shall have mobile telephones to ensure that they can be contacted at all times. The contractor will also nominate one person who can be contacted if necessary out of hours, for the duration of the works. The contractor's supervisor will have access to transport at all times to allow them to visit sites and attend meetings with MNGL as is required. The normal day to day issues of work instructions, communication between MNGL and the contractor's supervisor and the SE. No deviation from the approved technical specification / issued construction drawings shall be undertaken without written approval of EIC.

24.0 STRUCTURES, SERVICES AND OTHER PROPERTY

24.1 Location of Underground Utilities

The contractor shall locate all buried utility pipes, underground cables, water mains and other obstructions intersecting or adjacent to the Works, and shall make available the necessary labor to expose and record the depth of cover over all obstructions in advance of excavation. This shall be done far enough in advance of excavation to facilitate gradual change in grade or position found necessary to clear any obstructions.

In addition, the contractor shall excavate trial pits as necessary to determine the pipe route. The number of trial pits will be agreed with the EIC in advance of any excavation. In any event, trial pits shall be made at intervals of a maximum of 30 meters. Restoration of the abandoned trial pits and trenches shall be the contractor's responsibility. No payments shall be made for such type of jobs.

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There will be no additional payments in respect of abandoned trenches incurred because of insufficient or inadequate trial pits, or any associated lost time or delays.

24.2 Protection of Structures and Utilities

The Contractor shall at his own cost, support and protect all buildings, walls, fences or other structures and all utilities e.g. Electrical cables, Telephone Cables, Water pipelines, Sewer pipelines etc., and property which may, unless so protected, be damaged as a result of the execution of the works. He shall also comply with the requirements in the specification relating to protective measures applicable to particular operations or kind of work. Special care shall be taken while laying Pipelines near the trees.

24.3 Interference with Traffic, Street Drainage and General Public

The Work shall be executed in such a manner as to cause a minimum of inconvenience to persons requiring to use public or private roads, lanes, thoroughfares, walkways, rights-of use or passages through which the Works are to be executed. The trench shall be back filled, compacted, leveled and extra earth shall be removed immediately after laying of pipeline to avoid public inconvenience. Closure of roads, etc., shall not be permitted without the approval of the EIC.

The Contractor shall comply with all local Authorities requirements to traffic, and keep roads open to traffic, and maintain access to and within any private property.

Wherever the pipe route crosses driveways, access tracks or entrances to private properties, the Contractor shall give the owner, occupier or relevant authority at least 24 hours' prior notice of intended commencement of excavation and shall be restricted to pass through.

The Contractor shall not, in any circumstance, use a private driveway, access track or entrance without the prior approval of the EIC.

The Contractor shall provide suitable access where necessary in the form of temporary bridges, culverts, flumes, etc., of a size and type approved by the EIC.

The Contractor shall comply with all relevant road Laws. Where limits and/or speed limits have been placed in the vicinity of the Works, the Contractor shall provide for the necessary movement of plant and equipment in accordance with the requirements of the relevant authority.


The Contractor shall not obstruct any drainage pipes or channels in any road but shall deviate them where necessary and use all proper measures to provide for the free passage of water.

The Contractor shall deliver the completed works after proper cleaning of the site.

The contractor shall conduct his operations at all times, with a view to minimizing as far as practicable noise from plant and other objectionable nuisance (e.g. oil leakage).

25.0 TRENCHING

The schematic diagram with the detail of trench is enclosed as Annexure.

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The Contractor shall perform the excavation works so as to enable the pipe to be laid in conformity with the levels, depths, slopes, curves, dimensions and instructions shown on the Drawings, Specifications or as otherwise directed by the EIC.

The cost of breaking of surface like PCC, RCC, Asphalt, Blocks, tiles, bricks etc. for laying of MDPE pipeline is already covered under the SOR of MDPE laying.

Contractor shall excavate and maintain the pipeline trench on staked centerline as per approved alignment sheets taking into account the horizontal curves of the pipelines.

While trenching care shall be taken to ensure that all underground structures and utilities are disturbed to the minimum. Suitable crossing shall be provided and maintained over the ROU wherever necessary to permit general public, property owners or his tenants to cross or move stock or equipment from side of the trench or another.

Trenching shall be made with sufficient slopes on sides in order to minimize collapsing of the trench. On slopes wherever there is danger of landslides, the pipeline trench shall be maintained open only for the time strictly necessary. MNGL may require excavation by hand tools, local rerouting and limiting the period of executing of the works. Before trench cuts through water table, proper drainage shall be ensured, both near the ditch and ROU in order to guarantee the soil stability.

The Contractor shall ensure that trench bottom is maintained in the square form as far as possible, with equipment, so as to avoid/ minimize the hand grading at the bottom of the trench. The Contractor shall do all such handwork in the trench as required to free the bottom of trench from loose rock, pebbles and to trim protruding roots from the bottom and sidewalls of the trench.

Excavation by blasting is not permitted wherever required in hard strata other mechanical tools shall be used.

The contractor shall ensure that excavated soil is stacked at a distance of minimum 300 mm from trench edge. Contractor shall provide proper walk over plates for pedestrian crossing.


25.1 **Depth of Trench**

The minimum depth of cover shall be measured from top of pipe to the top of undisturbed surface of the soil or top of the graded working strip or top of road or top of rail, whichever is lower.

The depth of the trench will be such as to provided minimum cover as stipulated below:

- | | | |
|------|---|-----------|
| a) | For Distribution Main and Service Lines | |
| i) | Major Water Crossing/ Canal | 2.5 meter |
| ii) | Uncased/ Cased Road Crossing | 1.5 meter |
| iii) | Rail/ Road/nala Cased Crossing | 1.5 meter |
| iv) | Normal Areas | 1.0 meter |

The minimum depth as mentioned above may be greater than as may be required by Government/ Public authorities under jurisdictions. The Contractor shall perform such work without extra compensation, according to the requirement of concerned authorities.

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In cases of Drain/ Culvert crossing through open cut where excavation cut is more than 1.5m, the extra excavation shall be paid in quantity basis. The rate shall include backfilling as specified.

In case the depth could not be achieved due to practical problems and the same is demonstrated, EIC after examining thoroughly and considering the codes and standards may allow the contractor to provide suitable protection by way of concrete casing pipes, HDPE pipe or slabs without extra cost to MNGL.

Sr. no.	Deviation details	Control measures	Approving authority
1	Medium Pressure PE pipeline network (4 bar)		
A	Top cover between 0.80 to 0.99 meter	Additional protection of RCC/HDPE Pipe + 4" PCC below warning mat.	AIC
B	Top cover between 0.6 to 0.80 meter	Additional protection of RCC/HDPE pipe + 6" thick PCC	EIC/HOD
C	Top cover less than 0.6 meter	Based on risk assessment on case to case basis	
2	Low Pressure PE pipeline network (100 bar)		
A	Top cover between 0.75 to 1.0 meter	Additional protection of RCC/HDPE Pipe below warning mat.	AIC
B	Top cover between 0.5 to 0.75 meter	Additional protection of RCC/HDPE Pipe + 4" PCC below warning mat.	EIC/HOD
C	Top cover less than 0.5 meter	Additional protection of RCC/HDPE pipe + 6" thick PCC Or Based on risk assessment on case to case basis	

25.2 Width of Trench


The width of the trench shall be wide enough to provide bedding around the pipe and to prevent damage to the pipe inside the trench. Unless otherwise directed by the EIC and where ground conditions permit, the minimum distance from the inside edge of the trench wall to the outside of the pipe shall be as per drawing enclosed herewith.

The minimum trench width (at bottom) should be:

Dia. 20 and 32 mm: 350 mm
Dia. 63 to 180 mm: 400mm

25.3 Trench Base

The trench bottom shall be cut or trimmed to provide a uniform bedding for the pipe, and shall be free of stones, metal, wood, vegetation, clods of earth or other debris before placement of the pipe.

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Hard rock is defined as trench material with a single piece dimension exceeding 1.5 m in length in any direction which cannot be removed other than by the use of pneumatic chisel/drill or sledge hammer and chisel. Additional Rates will be paid for hard rock excavation as per the SOR.

Excavation through soil mixed with boulders that have been used for a road base, Road surface, PCC, RCC etc. will not be considered as hard rock for the purposes of payment.

25.4 Clearances

Unless otherwise approved, the following clearances shall be maintained between the external wall of the gas pipe and the external surface of other underground assets in the vicinity of the Works.

- 150 mm, where the gas pipe crosses other assets, other than electric cables, whereupon the clearance shall be 300 mm.
- 300 mm, where the gas pipe is on a similar alignment to the other assets.

Where the above clearances cannot be achieved, or in other special circumstances, the EIC may approve/specify protection with concrete/MS coated pipe, HDPE pipe etc. The protective material shall be supplied and installed by the Contractor at his cost.

25.5 Under Ground Interferences

The Contractor shall locate and expose manually all underground facilities (if any) during trenching. Safety barriers, if required shall be erected to prevent any damages or accident. On locations where pipeline is laid under the existing facilities and near the approaches to the crossing, the trench shall be gradually deepened to avoid sharp bends.


All sewers, drains, ditches and other natural waterways encountered while trenching shall be maintained open and functional by providing proper temporary installations if required. Suitable dewatering pumps shall be deployed to dewater, if required.

Whenever it is permitted by Authorities and/ or MNGL to open cut paved road crossing, or where line is routed within the road pavement, the Contractor shall remove the paving in accordance with the restrictions and requirements of the authorities having jurisdiction thereof as directed by MNGL. After laying the pipeline, backfilling shall be immediately performed and all the areas connected with the works shall be temporarily restored.

In case of damage to any above referred structures/ utilities the contractor shall be responsible for repairs/ replacement immediately at his own cost, which shall be carried out to satisfaction of concerned authorities / resident / MNGL. If contractor fails to attend it on immediate basis or showing his unwillingness, MNGL may complete the job from another agency at risk & cost of executing agency / contractor with additional 50% administrative charges.

25.6 Others

Throughout the period of execution of such work, the Contractor shall provide and use warning signs, traffic lights or lanterns, barricades, fencing, watchman etc. as required by the local authorities having jurisdiction and/ or MNGL.

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For all roads, paths, walkways etc. that are open-cut, the Contractor shall provide temporary diversions properly constructed to allow the passage of normal traffic with the minimum of inconvenience and interruptions.

The paving shall be restored to its original condition after the pipeline is installed.

The Contractor shall excavate to additional depth at all the points where the contour of the earth may require extra depth, or where as deep trench is required at the approaches to crossings of roadways, railroads, rivers, streams, drainage ditches without any extra cost implication to MNGL.

The Contractor shall excavate all such aforesaid depths as may be required at no extra cost of MNGL.

The trench shall be cut to a grade that will provide a firm, uniform and continuous support for the pipe.

The Contractor shall take conducive measures to ensure the protection of underground utilities as per the instructions of MNGL or relevant authorities.

Where the pipeline crosses underground utilities/ structures, Contractor shall first manually excavate to a depth and in such a manner that the utilities/ structures are located, then proceed with the conventional methods.

The locations, where the pipeline has to be laid more or less parallel to an existing pipeline cable and/ or other utilities in the Right-of-way the Contractor shall maintain proper distances and perform the work to the satisfaction of MNGL and other utility agencies. In such locations, the Contractor shall perform work in such a way that even under the worst weather and flooding conditions, the existing pipeline/ utilities remain stable and shall neither become undermined nor have the tendency to slide towards the trench.

25.7 Bedding


The contractor shall ensure that the pipe when placed in the trench is supported and surrounded by a bed of screened excavated soil, which shall be stone free and have a maximum grit size of 5mm in order to ensure no damage occurs to the pipe.

However, in case of rocky soil, the bedding shall be done with approved/ good quality packing sand, subject to the approval of the EIC, the size distribution of the sand/ shall be the same as per soil. The packing sand shall be placed to a minimum thickness of 150mm around the pipe in case of rocky terrain. The payment for supply of sand will be as per SOR item.

Unless directed by the EIC the quantity of bedding & surrounding sand shall confirm to specifications. There shall be no void space in packing sand around the pipe.

26.0 LAYING

Laying of MDPE pipelines shall commence only after ensuring proper dimensions and clean surface of the trench. The trench bottom shall be free from the presence of cuts, stones, roots, debris, stakes, rock projections up to 150mm below underside of pipe and any other material which could lead of perforation/ tearing of the pipe wall. After ensuring above the MDPE pipe coil shall be uncoiled smoothly through proper equipment's/ care inside the

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trench ensuring no damage to pipe coil during laying. The Contractor must ensure that pipe caps are provided before lowering of pipeline. The trench after this can be released for back filling leaving adequate lengths open at the ends, for jointing.

Where given specific approval by the EIC a pipe may pass through an open drain or nala. Where this is permitted the pipe shall be installed inside a concrete or steel sleeve for protection. The sleeve material shall be procured and laid by the Contractor. In general, the GI Sleeve and MS sleeves material specification shall be confirming to IS 1239 (Heavy Duty) specification of reputed make. The payment for the length of pipe in the sleeve will be made as per SOR. All other work necessary to break through the walls of the obstruction, and to seal the annulus between the pipe and the sleeve and the sleeve and the wall, shall be deemed to be included in the rates.

Open ends of pipe placed in the trench shall be securely capped or plugged to prevent the ingress of water or other matter. The Contractor is to ensure that nothing enters the inside of the pipe during the laying process as this could cause a future blockage or regulator malfunction due to dust, etc.

Service lines shall be installed in accordance with the drawing enclosed. Note that the service pipe rises out of the ground at the customer's premises within a GI sleeve pipe. The vertical portion of the sleeve shall be fixed to the wall of the premises in a secure manner. A bending tool shall be used to bend the GI sleeve pipe so that it has the appropriate curvature and is free of kinks. The bending of the sleeve, its fitting and clamping, and the installation of the transition fitting excluding service-isolating valve, is all included in the service connection rate. A rate is included in the SOR for the provision of sleeves for PE laying.

The installation of the GI sleeve (2 ½" and 3") for service lines shall be done by sealing the annulus, between the pipe and the sleeve and the wall shall be deemed to be included in the rates. Making of pedestal of size 150x150x150 mm around the sleeve, excavation & restoration within the size of the pedestal and vertical length of pipe shall be deemed included in the rates of MDPE laying.


Valves shall be installed at locations shown on the Design Plan or as directed by the EIC and joined with PE pipes by electro-fusion techniques. The valves shall be supported on a bed of fine fill of grit size not greater than 5mm to achieve equivalent support as the incoming and outgoing pipe work.

Laying graphs with details of depth, length, offsets from fixed references, other utility crossings, fittings, size of casing pipe used for the pipeline shall be prepared on daily basis and submitted to Site Engineers of the Owner for approval. These details will be further incorporated into As-Built Drawings.

For any deviation, contractor has to take prior approval from EIC as per approved format of MNGL.

27.0 JOINTING OF POLYETHYLENE PIPE

The procedure for jointing of PE pipe and fittings is enclosed. Only Bar coded electro-fusion machine (Automatically Readable) that can read the bar code of the fittings automatically shall be used for jointing of MDPE pipe / fittings. Manual feeding electro-fusion machines are not acceptable for jointing purpose

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The contractor shall flush the Pipeline with air to remove dust, water, mud etc. before fusing the joints. Before jointing, the Contractor shall place packing sand under the pipes on both sides of the joint to keep the pipes in line and at the correct alignment during the jointing process. Alignment clamps with the correct size shells should be used to align the pipe during the electro-fusion cycle.

The Contractor shall ensure that polyethylene pipe is only cut with an approved plastic pipe cutting tool (Rotary cutter up to 32 mm / Guillotine cutter for 63mm and above). Before fusion is attempted he shall remove the oxidized surface of the pipe using Universal scrapper up to 63mm / rotary Peeler for 63 mm and above inserted into the electro-fusion coupling. The tool must remove a layer of 0.1 mm to 0.4 mm from the outer surface of the polyethylene pipe. It may also be **noted that no fusion will be allowed without clamping device and only the approved cutting tools** (Hack Saw shall not be allowed for cutting the Pipe) shall be used.

The contractor has to supply all the consumables required for carrying fusion of the joints (like cloth/ paper napkin, acetone etc.).

If, upon inspection, the EIC determines a joint is defective, Contractor shall remove the joint by an approved method. The cost of this work shall be borne by the Contractor.

For electro-fusion jointing, the contractor must bring own tools, tackles and equipment.

Contractors has ensured that first he get the approval for his Jointer to perform on site. Only, approved Jointer shall carry out the fusion of all joints. Contractors shall provide the list of jointers to be used on the job and make arrangements for qualification testing of the jointers in presence of MNGL/Consultant/TPIA. Contractors have to issue the identity cards signed by MNGL/Consultant to qualified jointer. Applicable penalties shall be levied, in case; it is found that fusion is being carried by non-qualified jointers as per the provisions made in SCC.


Contractor shall arrange generator for power supply for fusion machine. Taking power connection from electric poles, connections without written permission from concerned authorities or residential premises is strictly not permitted.

28.0 BACKFILLING

Backfilling shall be done after ensuring that appurtenance have been properly fitted and the pipe is following the ditch profile at the required depth that will provide the required cover and has a bed which is free of extraneous material and which allows the pipe to rest smoothly and evenly. Dewatering shall be carried out prior to backfilling. No backfilling shall be allowed if the trench is not completely dewatered.

Prior to backfilling it should be ensured that the post padding where required of compacted thickness 150mm is put over and around the pipe immediately after lowering.

Backfilling shall be carried out immediately after the post padding where required has been completed in the trench, inspected and approved by MNGL, so as to provide a natural anchorage for the pipe, avoiding, sliding down of trench sides and pipe moment in the trench. If immediate backfilling is not possible, a padding of at least 200mm of earth, free of rock and hard lumps shall be placed over and around the pipe and coating.

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The backfill material shall contain no extraneous material and/ or hard lumps of soil, which could damage the pipe and/ or coating or leave voids in the backfilled trench. In case, it is required and directed by EIC, screening of the backfill material shall be carried out with specified equipment before backfilling the trench.

The surplus material shall be neatly crowned directly over the trench and the adjacent excavated areas on both sides of the trench to such a height which will, in MNGL opinion of provide adequately for future settlement of the trench backfill during the maintenance period and thereafter. The down shall be high enough to prevent the formation of the depression in the soil when backfill has settled into its permanent position should depression occur after backfill, Contractor shall be responsible for remedial work at no extra cost to Company. Surplus material, including rock, left from this operation shall be disposed off to the satisfaction of land owner or authority having jurisdiction at no extra cost to MNGL.

Where rock, gravel, lumps of hard soil or like materials are encountered at the time of trench excavation, sufficient earth or select backfill materials shall be placed around and over the pipe to form a protective cushion extending at least to a height of 150mm above the top of the pipe. Select backfill materials for padding that are acceptable shall be screened soil, containing no gravel. All these works shall be carried out by Contractor at no extra cost to MNGL. Loose rock may be returned to the trench after the required selected backfill material has been placed, provided the rock placed in the ditch will not interfere with the use of the land by landowner, or tenant.


In case where hard rock is encountered or as desired by EIC sand padding is to be provided up to height of 150mm around the pipe and the same shall be paid as per SOR. When the trench has been dug through drive ways or roads, all backfilling shall be executed with suitable material in layers as approved by MNGL and shall be thoroughly compacted. Special compaction methods as specified may be adopted. All costs incurred there upon shall be borne by the Contractor.

Trenches excavated in dikes which are the properties of railways or which are parts of main roads shall be graded and backfilled in their original profile and condition. If necessary, new and/ or special backfill materials shall be supplied and worked-up to.

PE Warning Grid/Mat 1mm thick and 300mm wide will be placed on distribution main and on service lines inside premises, after backfill of the trench up to a height of 300mm on the top of the carrier pipes. The warning grid is to be unrolled centrally over the pipe section and thereafter further backfilling will commence.

Backfilling activity shall include proper compaction by jumping jack compactor and watering in layers of 150mm above the warning mat. Proper crowning of not more than 150mm shall be done. All the excavated material required to be used during the Restoration process shall be stacked and kept separately and properly. Wherever Road cutting/ Tiles removal/ PCC cutting has been done during excavation for laying, the area shall be back filled and compacted immediately so that no inconvenience is caused to the general public.

Electro-fusion of joints is to be undertaken immediately after lowering and the activity shall not be kept pending for lack of Electro-fusion jointing. The backfilling shall be considered complete only after the joint in completed.

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Debris and other surplus material shall be removed immediately after the back filling. If contractor fails to attend it on immediate basis or showing his unwillingness, MNGL may complete the job from another agency at the risk & cost of executing agency / contractor with additional 50% administrative charges.

The contractor shall not be entitled for payment on laying & backfilling till the above activities are completed.

29.0 CASING PIPE

The tentative sizes of the HDPE casing pipe for Moling/ HDD/deviation/extra protection etc. shall be as follows:

Size of MDPE pipe	Size of HDPE pipe
20 mm	50mm
32 mm	75/90 mm
63 mm	90/125 mm
90 mm	200 mm
125 mm	250 mm
180 mm	315 mm

However, size of the casing pipe may vary according to length of the carrier pipe and requirement of laying of OFC Duct.

30.0 RESTORATION


Clean-up and restoration of ROW and other conveniences like road, rail, canals, cultivable land etc. to original conditions as per specification and drawings to the entire satisfaction of OWNER and / or Authorities having jurisdiction over the same, including disposal of surplus construction materials to a location identified by CONTRACTOR approved by local authority without causing any disturbance to environment, locals and to the entire satisfaction of Land Owner.

Upon restoration of ROU the Contractor shall furnish documentary evidence in support of acceptance of the same duly signed by land Owner without any extra cost.

Restoration of existing ground features such as grass / turfing, paving, roads, drains, concrete, floral beds, fencing, titles, flooring masonry etc. to original condition and to match with adjoining conditions - functionally and aesthetically up to the entire satisfaction of MNGL any other third party agency designated by MNGL and local authorities, failing which, it will be done at the risk and cost of the contractor. Obtaining satisfactory completion certificates for the restoration work done from the concerned authorities.

Contractor must also have to arrange his own equipment for restoration work like water tanker and jumping jack compactor for compaction of backfilled trenches and roller and other required equipment / machinery for restoration work of roads by asphaltting / concreting / tiles.

Restoration activity shall include proper compaction by jumping jack compactor and watering. All the excavated/excess material required to be stacked and kept separately and properly. Wherever Road cutting/ Tiles removal/ PCC cutting has been done during excavation for restoration, the area shall be restored and compacted immediately so that no inconvenience is caused to the general public.

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Debris and other surplus material shall be removed immediately after the restoration. If the contractor fails, MNGL may get the work done from third party and will recover from RA bill.

RESTORATION by concrete/blocks:

Wherever the restoration is required, the roads, footpaths (including roads and footpaths inside colonies) shall be restored to original condition, and the same shall be done as per concerned local authorities' norms and to the satisfaction of the concerned local Authority. To retard curing of the installed concrete, wet sack cloth is to be placed on the finished surface and kept damp for a period of 36 hours.

Where slabs and blocks are to be restored, the level of the compacted sub-base is to be adjusted according to the slab/block thickness. The slabs or blocks should be laid on moist bedding material, which should be graded sand, mortar or mortar mix. The slabs or blocks should be tapped into position to ensure they do not rock after laying.

The restored slabs or blocks should match the surrounding surface levels. Joint widths should match the existing conditions, and be filled with a dry or wet mix of mortar.

The sketch for restoration of Road, Footpath and Channel is enclosed herewith and is indicative. However, the restoration shall be done in accordance with the norms of concerned land owning agencies.

Turf shall be replaced in highly developed grassed area. In lesser-developed grassed areas topsoil should be replaced during the restoration process.


Where permanent surface restorations cannot be completed immediately, the Contractor shall provide and maintain a suitable temporary running surface for vehicular traffic and pedestrians. The Contractor will be responsible for the maintenance of all restoration carried out, for the duration of the Contract guarantee period.

The Contractor is to ensure the restoration work is properly supervised, and that the material used is suitable for the purpose and properly compacted. Where the required standards are not achieved the Contractor will be required to replace the defective restoration work.

Note that Payment for pipe laying will only be authorized on satisfactory restoration, and where the sites has been cleared of all surplus materials, etc.

Contractor has to obtain the clearance certificate from the concerned local authorities after completion of the restoration work. The restoration specification specified in the tender is only a typical specification and the contractor has to carry out restoration as per latest version of the (PWD/ IRC) specification to its original condition and also to the entire satisfaction of land owner (Private/Public).


The expenditure incurred towards testing of the material used for restoration as per applicable standards, shall be borne by the contractor.

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Restoration Procedure/Guide line:

1. Purpose and Objective:
The main purpose and objective of this document is to ensure that all the works are carried out with proper specifications and standards with high quality and timely accomplishment & the restoration of infrastructure is according to standards Aimed at achieving the original condition of the road infrastructure.
2. Documents to be maintained:
The following documents shall be maintained during the execution of the job and shall be handed over to MNGL/consultant/TPIA after completion the job;
 - Copy of permission letter obtained by authority.
 - Drawing/Sketch showing the details of stretch to be cut, highlighting the type of surface and its chainage/length (area).
 - Stage wise photographs of the stretch.
 - TC of the construction materials to be used.
 - Routine Test certificates for construction materials during progress of job.
 - NOC from land owning authority
3. Restoration of the trenches/Pits:
After completion of backfilling activity by the gas pipeline laying contractor / agency, restoration work shall be carried out by the restoration agency, depending upon the surface types the following specification shall be adopted;

Sr. No	Surface Types	Specification Recommended
1	Restoration of trenches for Asphalted / Bituminous Roads	i. Excavation over areas up to 0.37 m deep in any soil/murum/existing road surface & getting out and removing (disposed) the excavated material away from site etc. ii. Rolling and consolidating formation surface in cutting with power roller 2-4 tonne etc. iii. Soling with broken boulders interstices filled, surface formed and rolled with power roller and consolidated to reqd. gradient & camber 200 mm spread thk. iv. Kankar or laterite spread rolled & consolidated 100 mm spread thk to gradient and camber reqd. v. Surface dressing by spraying evenly paving bitumen @ 20 kg/10 sqm blinding with 12.5 mm stone chippings @ 0.14 cum/10sqm and rolling to reqd gradient and camber. vi. Preparing surfaces by brushing with wire brushes on any surface for removing caked mud etc. sweeping with brooms etc. vii. Applying evenly priming tack coat @ 5 kg/10 sqm of paving bitumen. viii. Premix bituminous macadam laid/rolled & compacted with vibratory roller to reqd. gradient & camber (consolidated thickness 40 mm thk.) binder content 4% by weight of total mix.

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		ix. Bituminous premix asphaltic dense concrete (25 mm consolidated thickness) with 6% binder content by wt. of total mix rolled & compacted with vibratory roller to reqd. gradient & camber complete incl. tack coat 5 kg/10 sqm bituminous.
2	Cement Concrete Surface	Top Surface- PCC 1:2:4, Min as original thickness compacted with plate vibrator shall be laid over base course. Base course- PCC 1:5:10, min 75mm thick laid over compacted backfilled earth.
3	Chequered Cement Concrete Tiles/Pre-cast CC Tiles/Kota stone floor/red stone floor. Inter locking CC/paver black	Top Surface- Tiles/floor (as per original surface) shall be laid over cement Sand Mortar 1:6, min 20mm thick over base course. Base course- PCC 1:5:10, min 75mm thick laid over compacted backfilled earth.
4.	Groove cutting	Groove cutting in RCC/CC/PCC etc. with supply of all type of tools, material, manpower, helper etc. as required and bitumen filling (if required) in the gap after the trench restoration as per specifications and cleaning the area complete to the satisfaction of EIC.

Note: During the execution of underground pipeline contractor has ensure the convenience of the customers/peoples etc. To reduce the inconvenience, contractor shall have to complete the restoration work of the society, Building, Loop etc. as soon as possible. if contractor is not willing to perform the job or there will be any delay from the given date as communicated, a penalty of Rs 10,000.00 per written communication for noncompliance will be applicable.


31.0 TESTING OF MDPE PIPELINE

Pressure testing will be carried out with compressed air and minimum two pressure gauges. Compressed air will be provided by Contractor for testing purposes and is to be included in the rates.

For main pipelines work the Contractor shall perform progressive pressure testing to avoid having to find leaks in long lengths of pipe. The test pressure shall be 6.0 bar(g), and there shall be no unaccountable pressure loss during the test period.

Test procedure with sketches showing the pipeline to be tested, vent points, gauge location, and inlet pressure print is to prepared & got approved by EIC.

For main line the test duration shall be 24 hrs. With these tests the pressure should be allowed to stabilize for a period of 30 minutes after pressurization. The holding period may then commence and continue for 24 hours. Measuring instruments shall have been calibrated and their accuracy and sensitivity confirmed (**least count of pressure gauge shall be 1 mbar OR 3 decimal pressure gauge (0.000 barg) of suitable range for MDPE main pipeline testing**). For testing of Network, calibrated pressure gauges of suitable range shall be supplied by the contractor. The pressure gauges shall be calibrated from time to time as desired by Engineer-in-Charge. All testing shall be witnessed and approved by the EIC or his

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delegated representative. Tie-in joints may be tested at working pressure following commissioning.

For service/short length lines (100 mtrs or less) in some cases testing will be carried out independently of the testing of the mains for which the test duration may be reduced to 4 hrs. The service testing in this case will be performed after the service installation is complete but before the service tee has been tapped. Also in some cases the tapping of the service tee/elbow/coupler will be delayed pending the completion and purging of the main pipelines.

32.0 PURGING

Purging shall be carried out in accordance with the principles defined in the American Gas Association publication **‘Purging Principles and Practice’**.

Nitrogen required for purging will also be provided by the Contractor. Nitrogen shall be supplied in labeled, tested and certified cylinders, and completed with all necessary regulators, hoses and connections, which will be in good condition and working order.

In addition, the Contractor shall submit and get approved a Purging Plan before commencing any purging work. The Plan shall include, but not be limited to, the provision of the following materials and equipment: Personal safety equipment, Fire extinguisher, purging adapter, Purge stack with flame trap and gas sampling point, Gas sampling equipment (may be gas leak detector), squash-off tool, Polyethylene connecting pipe work.

The Plan shall also include the purging process along with detail on the sequence of events. The process is to also specifically mention the need to lay a wet cloth over the PE main and in contact with the ground, to disperse static electricity during the purging work.

A purge stack with flame trap shall be used when purging services. Care shall be taken to ensure that the purge outlet is so located that vent gas cannot drift into buildings.

33.0 VALVE PIT

The valve pit shall be constructed in accordance with enclosed drawing & payment shall be as per SOR item.

The construction of RCC valve chambers shall be taken up immediately after installation of valve pit. Chamber cover shall be SFRC as per dimensions provided in drawing.


“MNGL-Stop off Valve” name shall be embossed on valve chamber cover for easy identification.

33.1 Workmanship

The excavation work shall be done at a location given by Engineer-in-Charge. All care shall be taken not to damage existing facilities and surface of construction shall be restored to its original state.

Sandbags to be placed below pipeline without disturbing the laid pipe. Gunny bags and Sand should be of approved quality.

Precast RC slab shall be placed as indicated in the drawing issued to the contractor. PCC to be placed below the pipe as indicated. Once PCC is set sand is to be filled and properly rammed so that pipe and pre-cast concrete blocks are firmly placed.

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Valve will be supplied without the operating stem. Contractor has to supply the operating stem with a handle for the valves of the different sizes. The Contractor has to take prior approval for design and material specification of the stem for installation. Approved quality sand is to be placed in between area.

Surrounding area to be properly cleared and PCC to be placed around the location where precast slab with CI Manhole cover is placed. The RC precast slab to be laid in level and finished smooth.

34.0 PERMANENT MARKERS

- 34.1 Permanent Marker (As per typical Drawings Placed at Tender) shall be installed on the ROU at every 50m as shown below and as per the instructions of the EIC immediately after laying of the pipeline. The installation of the type of the Permanent Marker shall be decided by the EIC depending on the site condition. The Markers shall be painted before installation as per the approved procedure. The supply of the paint and painting as per the specification is in contractor's scope. Separate payment for installation of the markers shall be paid to the Contractor as per the SOR item.



- 34.2 The artwork shown in the drawing is typical for all the markers. The contractor must take prior approval for the artwork from EIC before installation of Markers. The artwork must have MNGL's logo and specify the location of the pipeline from the marker.
- 34.3 Markers should be installed properly. Plate markers are installed inside the societies and other locations, where installation of RCC route marker or pole marker is not possible.

35.0 ASSISTANCE IN COMMISSIONING


Contractor shall provide the required personnel, Vehicles, labor, supervision, tools, equipment, instruments and technical assistance for performance tests and commissioning activities as per requirement of MNGL.

Prior to commissioning Contractors has to take the written approval from EIC and O&M. For approval contractor has to submission a copy of planning of commissioning, testing report, line diagram/ approved as built, pre-commission report, closer of chick points etc. to EIC before 3 days of schedule date.

Contractor has to ensure the submission of all commissioning record as define above (like approved as built, copy of testing reports, pre-commissioning reports etc.) within 2 days to O&M. if fails it will attract the penalty as define in contract.

36.0 RESIDUAL ENGINEERING

The contractor is required to carry out the design of the LP Network in case there are any minor changes in the routing and change in the location of the Service Regulator without any additional cost to MNGL. The contractor shall submit the same to EIC for approval before commencement of the work.

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37. TECHNICAL SPECIFICATION FOR HDPE PIPES

1.0 INTENT OF SPECIFICATION

The intent of this specification is to establish minimum requirements to manufacture and supply of HDPE Pipes used for casing purpose of carrier pipe, supplying natural gas.

2.0 SCOPE OF WORK

2.1 The scope of the tenderer will include manufacture/ supply, inspection/ testing/ marking/ packaging/ handling and dispatch of HDPE Pipes of ratings and grades as indicated in the Material Requisition & Schedule of Rates, as per IS:4984 (Specification for HDPE Pipes for water supply).

2.2 All codes and standards for manufacture, testing, inspection etc. shall be of latest edition.

2.3 Purchaser reserves the right to delete or order additional quantities during execution of order, based on unit rates and other terms & conditions in the original order.

3.0 INSTRUCTION OF TENDERER

3.1 Length of the Pipes and their supply will be as per following:

- DN 50
- DN 75
- DN 125
- DN 250
- DN 315

3.2 Protection

- i) The ends shall be protected by proper end caps to prevent from shocks and ingress of the foreign body.
- ii) Coils shall be covered by black PVC/ PE Film to prevent exposure to direct sun light.

3.3 The successful bidder shall submit following for approval of Purchaser/ Consultant after placement of order

- a) The Quality Assurance Plan (QAP & Sampling Plan)
- b) Material test report as per clause 5 of IS:4984.
- c) Performance Requirements (clause 8 of IS:4984)
- d) Type Test (clause 9.1 of IS:4984).

3.4 The bidder shall submit following documents at the time of bidding,


- a) BIS Certification
- b) List of current orders in hand for similar items with full details such as specification, name of purchaser etc.
- c) Details of the largest supply executed
- d) Name and address of proposed test laboratories along with their credentials/ past records for carrying out all required tests.

38.0 TECHNICAL SPECIFICATION FOR WARNING MATS

Purpose : For using as a warning sign for Under Ground Natural Gas Pipeline

Width : 300mm

Thickness : 1.0mm thick

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Material of the mat	:	The material shall be of high density Polyethylene
Color of the mat	:	Golden Yellow
Mechanical Properties of HDPE	:	
Tensile Strength	:	Minimum 1.8 kg/cm ²
Elongation at Break	:	Minimum 125%
Bundle Length	:	1.0mm thick warning mat shall be supplied as 50 mtrs. bundle.
Test Certificates	:	Vendor has to submit the all test certificates to Purchaser
Inspection	:	The manufacturer has to submit the QAP before commencement of production
Art Work	:	A sample piece of 30mm wide and 200mm long of every batch shall be checked by immersing in 20% solution of Ammonium Sulphide for period of 2 weeks at a temperature of 15°C for color intactness of the strip. Copy of Art work shall have English/Marathi Languages alternatively is as follows:

HIGHLY INFLAMMABLE GAS PIPELINE BELOW

MAHARASHTRA NATURAL GAS LIMITED




**IN EMERGENCY PLEASE CONTACT
PHONE NOS.**

GA wise Emergency numbers are as follows-

Pune – 9011676767 / 9604015444 Toll Free No. 1800 266 2696

Nashik- 7410071006

Toll Free No. 1800 233 2410

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For each GA Emergency contact numbers/Toll Free No. to be confirmed with AIC/EIC before start of laying works/placing order of Warning Mat.

39.0 TECHNICAL SPECIFICATION FOR MDPE FITTINGS INCLUDING TRANSITION FITTINGS

1.0 SCOPE AND FIELD OF APPLICATION

This specification elaborates the requirements for Electrofusion fittings in the nominal size range 16 to 180 mm made from PE compound used with PE pipes for supply of natural gas and to be used at operating temperature not more than 40°C.

The material grades to be used are PE 80 and PE 100. The fittings shall be yellow or black in color.

2.0 SYMBOLS & DEFINITIONS

2.1 Symbols for Electrofusion Fittings

2.1.1 Symbols for Electrofusion Socket Fittings

The dimensions and main symbols used in this part of ISO 8085 are shown in figure 1, where D1 is the mean inside diameter in the fusion zone comprising the mean inside diameter measured in a plane parallel to the plane of the mouth at a distance of $L3 + 0.5 L2$ from the plane at the mouth.

D2 is the minimum bore comprising the minimum diameter of the flow channel through the body of the fitting.

L1 is the depth of penetration of the pipe or of the male end of a spigot fittings.

L2 is the nominal length of the fusion zone corresponding to the heated length.

L3 is the nominal unheated entrance length of the fitting comprising the distance between the mouth of the fittings and the near end of the fusion zone.

2.1.2 Symbols for Electrofusion Tapping Tees

The main symbols used for tapping tees are shown in Figure 2, where. **h** is the height of the service pipe and comprising the distance between the axis of the main pipe and the axis of the service pipe.



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OF 1 YEAR FOR LAYING OF UNDERGROUND PE
PIPELINE & ABOVEGROUND GI/Cu INSTALLATION
FOR CGD PROJECTS OF PUNE & NASHIK GA**

Bid No.: MNGL/CP/2022-23/187

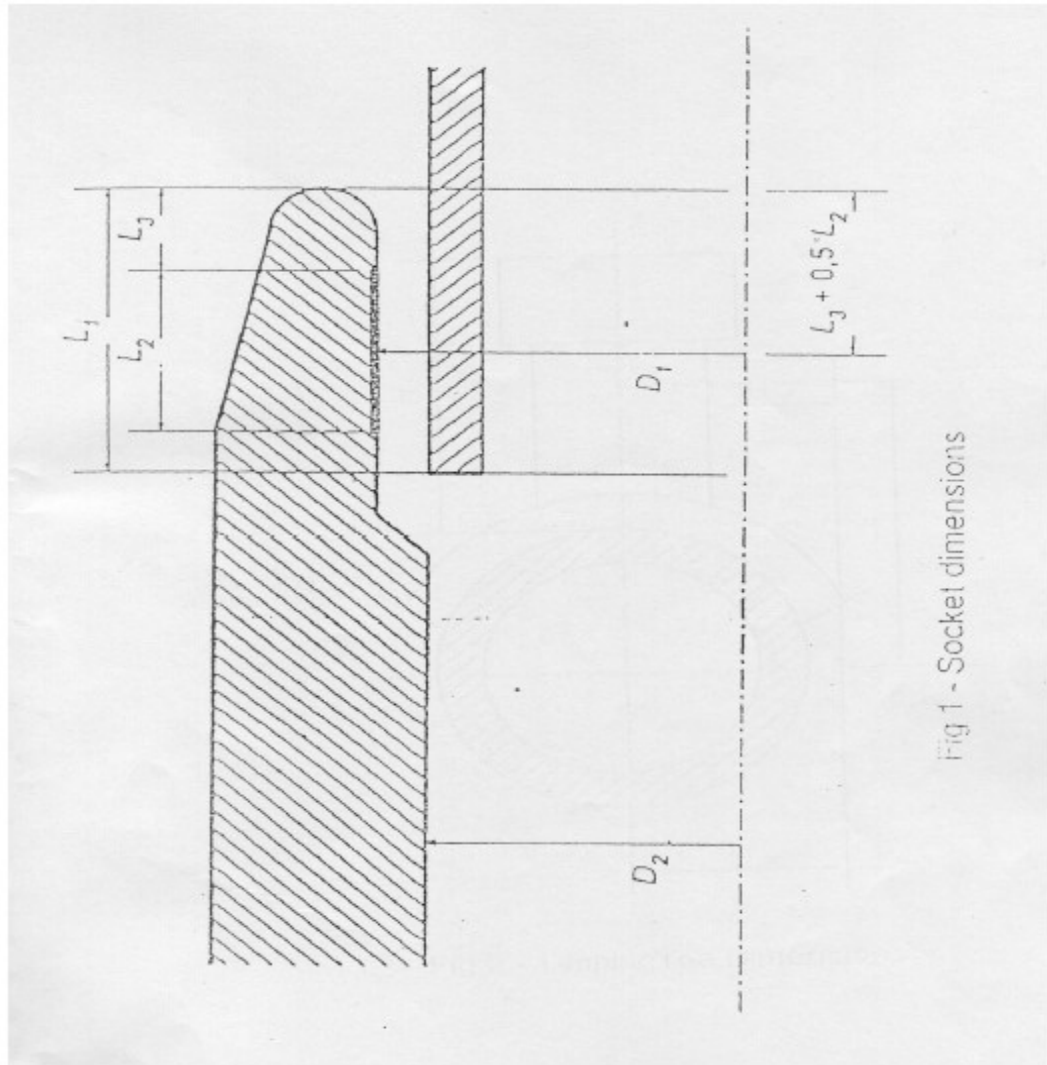
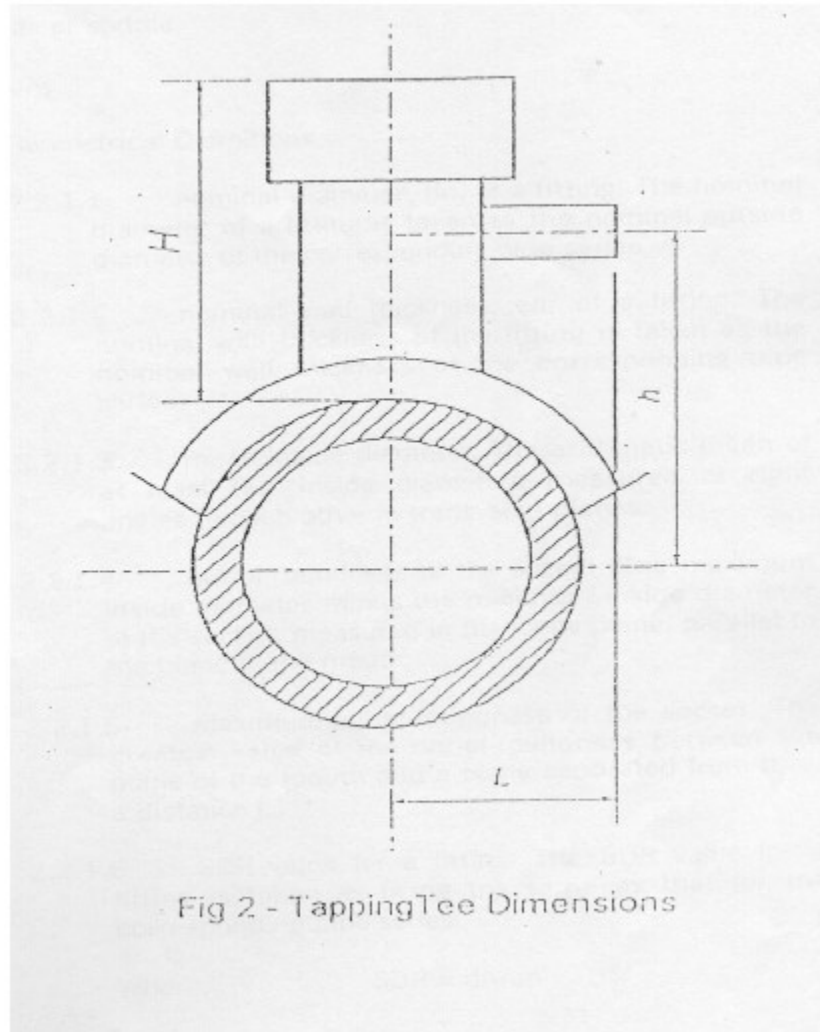


Fig 1 - Socket dimensions



L is the width of the tapping tee and comprising the distance between the axis of the main pipe and the plane of the mouth of the service pipe.

H is the height of the saddle which comprises the distance from the top of the main to the top of the tapping tee or saddle.


2.2 Definitions

2.2.1 Geometrical Definitions

2.2.1.1 Nominal diameter, d_n , of a fitting:

The nominal diameter of a fitting is taken as the nominal outside diameter of the corresponding pipe series.

2.2.1.2 Nominal wall thickness, e_n , of a fitting:

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The nominal wall thickness of the fittings is taken as the nominal wall thickness of the corresponding pipe series.

2.2.1.3 Mean inside diameter:

The arithmetic mean of at least two inside diameter measured at right angles to each other in transverse planes.

2.2.1.4 Out of roundness of the Socket:

The maximum inside diameter minus the minimum inside diameter of the socket, measured in the same plane, parallel to the plane of the mouth.

2.2.1.5 Maximum out of roundness of the socket:

The greatest value of the out of roundness between the plane of the mouth and a plane separated from it by a distance L1.

2.2.1.6 SDR value for a fitting:

The SDR value for a fitting is taken as being the same as that for the corresponding pipe series.

Where, $SDR = d_n/e_n$

2.2.1.7 Wall thickness, E of a fitting:

The wall thickness of a fittings at any point of the body of the fitting which could be submitted to a stress induced by the pressure of the gas in the piping system.

2.2.2 Material Definition

2.2.2.1 Virgin Material:

Materials in form such as granules or powder that has not been subjected to use or processing other than that required for its manufacturer and to which no reprocess-able or recyclable materials have been added.

2.2.2.2 Own Reprocess-able Material:


Material prepared from rejected unused pipes, fittings or valves, including trimmings from the production of pipes, fittings or valve, that will be reprocessed in a manufacturer's plant after having been previously processed by the same manufacturer by a process such as injection moulding or extrusion.

2.2.2.3 Compound:

A homogenous mix of base polymer (PE) and additives, i.e. antioxidants, pigments, UV-stabilizers and others..., at a dosage level necessary for the processing and of components of this standards. The additives shall not have a negative influence on the performance with respect to feasibility. All additives shall be uniformly dispersed.

2.2.3 Definition related to Material Characteristics

2.2.3.1 Lower Confidence Limit (LCL):

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A quantity with the unit in mega pascals (MPa), which can be considered as a property of the material representing the 97.5% lower confidence limit of the predicted long-term hydrostatic strength at a temperature 20° C for 50 years in water.

2.2.3.2 Overall Service (Design) Coefficient (C):

An overall coefficient with a value larger than 1.0 which takes into consideration service conditions as well properties of the components of a piping system other than those represented in Icl. For gas applications, C can have any value equal to or greater than 2.0.

2.2.3.3 Minimum Required Strength (MRS):

The value of the LCL rounded down to the next lower value of the R 10 series when the LCL is less than 10 Mpa, or to the next lower value of the R 20 series when the LCL is greater than or equal to 10 Mpa.

Note: R10 and R 20 series are the Renard number series according the ISO 3 and ISO 497

2.2.3.4 Melt Mass Flow Rate (MFR):

A value relating to the viscosity of the molten material at a specified temperature and rate of shear.

2.2.4 Definitions Related to Service Conditions

2.2.4.1 Gaseous Fuel:

Any fuel which is in the gaseous state at a temperature of + 15° C and a pressure of 1 bar.

2.2.4.2 Maximum Operating Pressure (MOP)

The maximum effective pressure of the gas in the piping system, expressed in bar, which is allowed in continuous use. It takes into account the physical and the mechanical characteristics of the components of a piping system.

20 * MRS

Note: It is given by the equation: MOP = -----

C*(SDR-1)

2.2.5 Definition on Design of Electrofusion Fittings:

2.2.5.1 Electrofusion Socket Fitting:


A polyethylene (PE) fittings which contains one or more integral heating elements, that are capable of transforming electrical energy into heat to realize a fusion joint with a spigot – end or a pipe.

2.2.5.2 Electrofusion Saddle Fitting:

A polyethylene (PE) fitting (top loading or wrap around) which contains one or more integral heating elements, that are capable of transforming electrical energy into heat to realize a fusion joint onto a pipe.

2.2.5.3 Tapping Tee:

An Electrofusion saddle fitting which contains an integral cutter, to cut through the pipe wall. The cutter remains in the body of the saddle after installation.

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2.2.5.4 Branch Saddle:

An Electrofusion saddle fitting which requires an ancillary cutting tool for drilling a hole in the adjoining main pipe.

2.2.5.5 U Regulation:

Control of the energy supplied during the fusion process of an Electrofusion fitting, by means of the voltage parameter.

2.2.5.6 I Regulation:

Control of the energy supplied, during the fusion process of an electrofusion fitting by means of the current parameter.

3.0 **DESIGNATION**

3.1 Fittings shall be designed according to the grade of material, nominal diameter and Standard Dimension Ratio (SDR).

3.2 **Grade of Material:**

3.2.1 Fittings shall be classified according to the grade of material as given in following table:

Table-1

Material	M.R.S. Mpa	LCL (20° C, 50 Yrs 97.5%) Mpa	Maximum allowable Operating Pressure
PE 80	8.0	$8.00 \leq LCL \leq 9.99$	5.5 Bar
PE 100	10.0	$10.00 \leq LCL \leq 11.19$	7.0 Bar

3.3 **Nominal Diameter**

The Nominal Diameter for fittings covered in this standard are 16, 20, 25, 32, 40, 63, 75, 90, 110, 125, 140, 160, 180 mm.


3.4 **Material**

3.4.1 Polyethylene Compound:

The Polyethylene compound used in the manufacture of fitting shall be a cadmium free compound. It shall be free from visible water, shall comply with the requirements as specified in Table – 2.

Table-2: Characteristics of PE Compound

Characteristics	Units	Requirements	Test Parameters	Test Method
Conventional Density	Kg/m ³	≥ 930 (base polymer)	23 °C	ISO 1183 - ISO 1872/1
Melt Mass-flow Rate	g/10 min	$\pm 20\%$ of value nominated by compound producer	190 °C condition 18	ISO 1133
Thermal Stability	Minutes	> 20	200 °C (2)	ISO TR 10837
Volatile Content at Extrusion	mg/kg	≤ 350		ISO 4437 Annex. A


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Water Content (3)	mg/kg	≤ 300		ASTM D 4019
Carbon Black Content	% (m/m)	2,0 ≤.....≤ 2,5		ISO 6964
Carbon Black Dispersion (4)	Grade	≤ 3		ISO DIS 11420
Pigment Dispersion (5)	Grade	≤ 3		ISO DIS 13949
Resistance to Gas Constituents	h	≥ 20	80 °C 2 Mpa	ISO 4437 Annex. B
Resistance to rapid crack propagation (RCP) (6)	Mpa	The critical pressure in the FS test shall be greater than or equal to the value of the MOP of the system multiplied by 1:5	0°C	ISO DIS 13478
Full Scale (FS) test : d ≥ 250mm				
Or	Mpa	The critical pressure in the S4 test shall be equal to or greater than the value of the MOP of the system divided by 2,4 (8)	0°C	ISO DIS 13477
S4 Test : in principle according to all diameters (7)				
Resistance to slow crack growth en > 5mm	h	165	165 80 °C, 8,0 bar (f) (9) 80 °C, 9,2 bar (f) (10)	ISO DIS 13479

- 1) Nonblack compound shall conform to the weathering requirements to ISO 4437
- 2) Test may be carried out at 210°C providing that there is a clear correlation to the results at 200°C, in case of dispute the reference temperature shall be 200°C
- 3) Only applicable if the compound does not conform to the requirement for volatile content. In case of dispute the requirements for water content shall apply
- 4) Carbon black dispersion for black compounds only.
- 5) Pigment dispersion method for non-black compounds only.
- 6) Only applicable for fittings which incorporate extruded pipe elements.
- 7) Shall be performed on pipe with a wall thickness of ≥15 mm.
- 8) This factor 2.4 is still under study and may be subject to change. If the requirement is not met, then retesting by using the Full Scale (FS) test shall be performed
- 9) Test parameter for PE 80.
- 10) Test parameter for PE 100.

4.0 DESIGN

- Fittings shall be designed for system operation at the pressures given in Table – I
- Fittings shall be free from cracks, voids, blisters, distortion, dent or other defects.
- Fittings shall be capable of being fusion jointed to pipes using control boxes. The fittings shall exhibit the strengths and fusion compatibility with, pipes of respective sizes.
- Each fitting shall be bar coated and shall have a permanent fusion indicator.
- Heating coil design shall be such that it should not be damaged during assembly leading to short circuit of heating coil.

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4.1 Electrofusion Socket Fittings

Electrofusion Socket Fittings shall incorporate a method of controlling pipe penetration within each socket. The inner cold zone of each socket shall not be less than $(0.1 d + 5)$ mm for sizes up to 125 mm & 0.1 d for sizes greater than 125 mm.

4.2 Tapping Tees

Tapping tees shall be capable of installation by a force between 1 kN and 1.5 kN applied from above and on the center line of the tapping tees stack. The tapping tees shall provide a means of cutting through the pressurised main pipe and allowing the gas flow into the outlet pipe.

4.3 Transition Pieces

To make connection between steel pipe and MDPE pipe specially fabricated transition pieces consisting of steel and MDPE pipes should conform to the requirements mentioned herein.

4.3.1 MDPE Pipe:

The MDPE pipe with one end plain should conform to the specification (IS:14885/ SDR 11)

4.3.2 Steel Pipe:

Black ERW steel pipe should conform to the specifications as laid in API STD 5L (latest revision)

4.3.2.1 Pipe End:

One end of the pipe should be beveled for welding angle of bevel should be $30^\circ + 5^\circ$.

4.3.3 Jointing between Steel and MDPE Pipes:

Steel and MDPE pipes should be so jointed in the factory so as to have a monolithic joint which is leak free and should be mechanically as strong or stronger than the PE Pipe.

4.4 Transition Fittings (MDPE Pipes to threaded G.I. Fitting):

Transition fitting for jointing of MDPE Pipes confirming to specification IS:14855/ SDR 11 to threaded G.I. tubing confirming to specification. The MDPE end of the transition fitting shall be jointed with MDPE Pipe with the electrofusion method.


5.0 ELECTRICAL CHARACTERISTICS

For each size and type of fitting, the manufacturer shall declare the nominal resistance of the heating element and specify the production tolerances.

The manufacturer shall demonstrate that satisfactory joint can be made using the extremes of these tolerances.

All fittings shall have mechanically shrouded male electrical terminals. The fittings terminals connections shall be suitable for use with voltage less than or equal to 48 volts. Considerations should be given to the design of the shroud with respect to impact damage. When hollow terminal pins are used, the hole at the top of the pin shall be less than 1 mm diameter. The terminal pin material shall be corrosion resistant and the surface finish shall be N7.

Fittings incorporation two electrofusion sockets shall have both sockets fused in a single operation.

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The heating elements shall be suitable designed to prevent short circuiting or local overheating/ under heating during the fusion operation. Protective coating applied to the heating element shall not have a detrimental effect on the joint. The heating element wire shall not be disturbed during assembly.

6.0 DIMENSIONS

6.1 Measuring Temperature

Fittings shall not be measured within 24 hrs. of manufacturer to allow for normalization. The fittings shall be measured at an ambient temperature of $23 \pm 2^{\circ}\text{C}$, after a conditioning period of 5 Hrs.

Methods of measurements shall provide the appropriate degree of accuracy, and the reference conditions specified in this clause 6 apply in case of disputes in dimensional measurement.

6.2 Dimensional Stability

6.2.1 Couplers (Including all forms of socket fittings)

All coupler dimensions shall conform to their specified value when the fitting has been stored for a period of 12 months at a temperature of $30 \pm 2^{\circ}\text{C}$.


6.2.2 Tapping Tees and Branch Saddles:

All tapping tee and branch saddle dimensions shall conform to their specified agreed values when the fitting has been stored for a period of 12 months at a temperature of $30 \pm 2^{\circ}\text{C}$.

TABLE 3: SOCKET DIMENSIONS

Pipe Size d mm	Limits for average diameter d on each fitting measured over apparent fusion length L mm		Apparent fusion length L mm	Penetration depth L mm
	Maximum	Minimum		
16	16.6	16.4	15	41
20	20.6	20.4	16	41
25	25.6	25.4	18	41
32	32.9	32.5	18	41
40	41.0	40.6	18	49
50	51.1	50.7	20	55
55	56.1	55.7	21	63
63	64.1	63.7	23	63
75	76.3	75.9	25	70
90	91.5	91.1	28	79
110	111.3	111.1	32	82
125	126.7	126.2	35	87
140	141.7	141.2	38	92
160	162.1	161.4	42	98
180	182.1	181.5	46	105

Notes: The apparent fusion length, L, is the length of the integral heating elements, from the first regular section of the element to the end of the regular edge section, on one side of the fitting. This dimension to be measured from outside edge to outside edge of wire.

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- Any protrusions into the bore of the fitting (e.g. centralization ribs) shall not prevent easy assembly in the field.
- The overall length of a straight coupler is equal to twice the quoted maximum penetration depth L.

TABLE 4: OVERALL LENGTH OF REDUCERS

Major Diameter mm	Maximum Length mm
25	90
32	90
63	120
90	180
125	215
180	280
200	245
225	260
250	280
280	300
315	320

TABLE 5: BRANCH SADDLE ASSEMBLY OUTLET LENGTH

Off-take Size mm	Shut-off method	Dimension from flange face to crown of main		Dimension from pipe end to crown of main	
		Class B fitting mm	Class B fitting mm	Class B fitting mm	Class B fitting mm
63	Valve	-	-	-	-
63	Squeeze	-	260*	-	-
90	Valve	-	-	400	-
90	Squeeze	400	180**	-	-
125	Valve	-	-	550	-
125	Squeeze	360	180***	-	-
180	Valve	-	-	750	-
180	Squeeze	360	180+	-	-
250	Valve	-	-	-	-
250	Squeeze	360	180++	-	-


* Flange size DN 50

** Flange size DN 100

*** Flange size DN 150

+ Flange size DN 250

++ Flange size DN 250

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7.0 **PERFORMANCE REQUIREMENTS**


7.1 **Mechanical Characteristics**

Fittings shall be tested using pipes, which conform to ISO 4437, Test samples shall be assembled in accordance with ISO DIS 11413, following the technical instruction of the manufacturer and using fusion equipment conforming ISO DIS 12176.2.

When tested in accordance with the test methods as specified in table – 6 using the indicated parameters, the fittings have mechanical characteristics confirming to the requirements given in Table 6.

TABLE 6: MECHANICAL PROPERTIES

Characteristics	Units	Requirements	Test	Parameters	Test Method
Hydrostatic strength at 20°C	H	Failure time \geq 100	End caps orientation conditioning time. Type of test circumferential (hoop) stress pipe PE 80, PE 100, Test temperature.	Type a) free 1 h 9 Mpa, 12.4 Mpa, 20°C	ISO DIS 9356
Hydrostatic strength at 80°C	H	Failure time \geq 165	End caps orientation conditioning time. Type of test circumferential (hoop) stress pipe PE 80, PE 100, Test temperature.	Type a) free 12 h water-in water 4.6 Mpa 5.5 Mpa 80°C	ISO DIS 9356
Hydrostatic strength at 80°C	H	Failure time \geq 1000	End caps orientation conditioning time. Type of test circumferential (hoop) stress pipe PE 80, PE 100, Test temperature.	Type a) free 12 h water-in water 4 Mpa, 5 Mpa, 80°C	ISO DIS 9356
Cohesive resistance	mm	Length of initiation of brittle fracture L/3	Test temperature choice of method	23°C	ISO 13954 (A) ISO 13955 (A) ISO 13956 (B)
Impact strength (B)		No failure No leakage	Test temperature Falling height Mass of the striker	20°C 23°C 5m 5kg	ISO DIS 13957

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(A) Electrofusion Socket Fittings

(B) Tapping Tees

For hydrostatic strength test at 80°C only brittle failure shall be taken into account. If ductile failure occurs before the required time, a lower stress shall be selected and the minimum test time will be obtained from the line through the stress/ time points given in Table – 7.

TABLE 7
Hydrostatic strength (80°C) – Stress/
Minimum Failure Time Correlation

PE-80		PE-100	
Stress Mpa	Minimum Failure Time h	Stress Mpa	Minimum Failure Time h
4.6	165	5.5	165
4.5	219	5.4	233
4.4	293	5.3	332
4.3	394	5.2	476
4.2	533	5.1	688
4.1	727	5.0	1000
4.0	1000		

7.2 Physical Characteristics

When tested in accordance with the test methods as specified in Table 8 using the indicated parameters, the fittings shall have physical characteristics conforming to the requirements given in Table 8.


TABLE 8: Physical Characteristics of Fittings

Property	Units	Requirements	Test Parameters	Test Method
Thermal Stability	minutes	> 20	200° C (1)	ISO TR 10837
Melt Mass Flow Rate (MFR)	g/10 min	0.2 ≤ MFR ≤ 1.4 and after processing maximum deviation of ± 20% of the value measured on the batch compound	Condition 18	Rate ISO 4440.1

- (1) Test may be carried out at 210 °C providing that there is a clear correlation to the results at 200 °C, in case of dispute the reference temperature shall be 200 °C.

7.3 Technical File

The manufacturer of the fittings shall make availability of a technical file (generally confidential) with all relevant data to prove the conformity of the fittings to this specification. It shall include all results of the type testing and shall conform to the specification relevant technical brochure (e.g. ISO 12093 for electro fusion fittings).

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The technical description of the manufacturer shall include the following information:

1. Field of appliance (pipe and fitting temperature limits SDR's and out of roundness):
2. Assembly instructions:
3. Fusion instruction (fusion parameters with limits)
4. For saddles and tapping tee:
 - The means of attachment (tools and/ or under clamp).
 - The need to maintain the under clamp in position in order to ensure the performances of the assembly.

For electro fusion fitting, the format of the technical brochure shall conform to ISO DIS 12093.

In the event of modification of the fusion parameters, the manufacturer shall ensure that the joint conforms to this standard.

8.0 MARKING

Following information shall be embossed up to height of 0.15 mm onto the fitting and also in the form of bar code:

- a) The manufacturer's identity
- b) The size of the fitting in mm
- c) Material and Designation
- d) The date of manufacturer (code may be used)
- e) Fusion time in seconds
- f) Cooling time in minutes
- g) Fusion parameters in BAR code
- h) Lot Number.

The information may be printed on a label associated with the fitting.

9.0 PACKAGING

The fittings shall be packaged in bulk or individually protected where necessary in order to prevent deterioration. Whenever possible, they shall be placed in airtight plastic bags in cardboard boxes or cartons.


The cartons and/or individual bags shall bear at least one label with the manufacturer's name, date of manufacturer, type and dimensions of the part, number of units in the box, and any special storage conditions and storage time limits.

Note:

All the fittings required shall be bar coded electro fusion fitting type. In case bidder is quoting for spigot fittings, the necessary electro fusion coupler for all non-Electrofusion ends shall be included in the complete package.

The transition fittings shall also be bar coded electro-fusion type for PE connection, NPT Female threading conforming to ANSI B1.20.1 for G.I connection & butt welded for carbon steel end.

The carbon steel material of transition fittings shall be confirming to APL 5L x 42 and thickness shall be of 4.8 mm.

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All the fittings shall be used for the network operating at 4.0 Bar (g) Pressure.

40.0 TECHNICAL SPECIFICATION FOR INSTALLATION OF ABOVE GROUND GI /Cu PIPING

40.1 INTRODUCTION

The main intent of the specification is removal (if any), installation of above ground GI pipes, fittings, valves, meters and regulators, from the outlet of 'PE/GI transition fitting' up to the DOMESTIC consumers 'Appliance / stove/ oven valve' including the supply of Hose pipe as per the Distribution Schedule enclosed herewith.

The scope for commercial consumer includes removal (if any), installation of above ground GI pipes and associated fittings, valves, regulator up to and including meter. However, the piping may have to be carried out up to Appliance valve, in case of some commercial customers.

In case of large commercials, completely assembled metering skids would be supplied to the contractor who would be required to install and provide inlet & outlet connection.


This technical specification defines the basic guidelines to develop an acceptable design and suitable construction methodology for carrying out different activities listed out in the schedule of rates of this tender.

Compliance with these specifications and / or approval of any of the Contractor's documents shall in no case relieve the Contractor of his contractual obligations.

40.2 SCOPE OF WORK

Generally, the following shall constitute the contractor's scope of work:

- 40.2.1 Plan and prepare a detailed execution schedule and procedure for implementation based on QA / QC formats plans issued by MNGL.
- 40.2.2 Receipt of Appliance Valve, Isolation Valves from MNGL's stores, providing security, and insurance, during and before installation and commissioning of pipelines. Obtaining the approval for optimum route and permission for work from the society/owner, concerned authority and EIC.
- 40.2.3 Selection of route and marking on walls / floors between 'transition fitting' to 'cooking oven / stove / appliance' making openings and making provisions for fixing clamps. Making temporary but stable platforms / scaffolding / rope ladder etc., required for installation of pipes / fittings at all heights / multi storied flats and locations. Providing safety equipment to workers / plumbers.
- 40.2.4 Installation of GI pipes of ½", ¾", 1", 1½" dia. between transition fittings (installed by PE contractor) and customer's kitchen appliances which would include NPT threading of pipes, and jointing of fittings such as elbows, tees, connectors, regulators, meters, isolation valves etc., as per laid procedures and specification including supply of GI fittings (powder coated) & Teflon tapes for sealing of joints. Painting of GI Pipes & fittings as per specification, if GI pipe is supplied. Painting of GI fittings only in case painted GI Pipe supplied. Scope covers the installation of GI pipes up to MCV2.

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- 40.2.5 Installation of Copper pipes of ½" (12 mm) OD from the downstream of Meter up to the isolation valve prior to the customer's appliance, including the installation of valves including application of lacquer paint etc. to the satisfaction of EIC.
- 40.2.6 Supply, removal (if any) & Installation of clamps for fixing pipes, box for regulator wherever required, painting of steel pipes & fittings. Providing consumables grout material, repair / restoration of walls / floors / holes including the materials required for conversions along with tools and tackles etc., complete as per specification.
- 40.2.7 Conversion of all types of LPG kitchen appliances to NG based appliances inclusive of supply of nozzles. Signing of Joint Meter Records (JMRs) with customers.
- 40.2.8 To demonstrate to the customer regarding use, safety and maintenance related aspects of NG based appliances and installations.
- 40.2.9 Testing & Commissioning of installations including purging as per specification and handling over the installation of MNGL / customer to the entire satisfaction of MNGL.
- 40.2.10 Dismantling of scaffolding / temporary structures and cleaning of site.
- 40.2.11 Restoration of walls, flooring and other damages while executing the above ground installation.
- 40.2.12 Preparation and submission of above ground installation card for each house / commercial establishment indicating the list of materials used, reasons of not providing connections, testing pressure and date etc. Deviation statements, if any, on completion / commissioning of work.
- 40.2.13 Any other activity (s) not mentioned / covered explicitly above, but otherwise required for satisfactory completion / operation / safety / statutory/ maintenance of the works shall also be covered under the Scope of work and has to be completed by the Contractor within specified schedule at no extra cost to MNGL.

40.3.0 MATERIAL, LABOUR, PLANT AND EQUIPMENT


40.3.1 SUPPLIED BY MNGL

Unless otherwise specified MNGL will supply to the contractor, free of charge, Appliance Valves ¼" & ½" and isolation Valves ½" & ¾" only, necessary to complete the laying of above ground service pipes. The contractor shall not use the said material from any other source of supply other than MNGL except with written approval from the EIC.

MNGL would also supply metering skid as free issue materials to be installed in large commercials.

Free Issue materials are as mentioned below:

GI Pipe – ½", ¾", 1" & 1½"
Copper Tube – 12 mm OD & 0.6mm thk
Isolation Valves – ½", ¾", 1", 1½"
Appliance Valves – ¼" & ½"
All types of Meters & Regulators

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40.3.2 SUPPLIED BY THE CONTRACTOR

The contractor to supply all GI Fittings (only powder coated), Valves, Fittings, Clamps, Fixtures for Meters/Regulators etc. and other materials required for completion of said works.

The contractor shall provide the labor, tools (such as Hammer Drill, Piston Drill, Pipe cutters, Dies for threading, Pipe wrenches, spanners, all types of clamps, Plant and equipment necessary for the proper execution of the work. This will include but not be limited to list of specialized tools & tackles enclosed herewith. Contractor shall submit the specification of all the material to be supplied by him to EIC for approval and get the material checked & approved by him before commencement of execution.

The contractor is to be procure all bought out items from approved vendors and accordingly keep MNGL informed. The inspection of bought out items would be carried out by MNGL / Third Party Inspection or as instruction by EIC.

The contractor shall use forged fittings as per IS 1239 Part2. All forged fittings & pipes should be pure polyester powder coated of min.70-micron thickness.

40.3.2.1 Plant and Equipment

All vehicular type machinery shall be in good working order and shall not cause spillage of oil or grease. To avoid damage to paved surfaces the contractor will provide pads of timber or thick rubber under the hydraulic feet or outriggers of machinery.

40.3.2.2 Sealant, grout

The contractor shall be responsible to arrange the supply of any consumable sealant or ready mix grout material required for execution of work. The sealant / grout supplied by the contractor shall be compatible with the area to be restored / rectified. No separate payment for the supply of sealant and grout shall be made to the contractor.

40.3.2.3 Clamps, Rawal Plugs, Screws, Nozzles etc.

The locking Clamps, Rawal Plugs, Screws, Nozzles, etc. shall be approved lot wise by EIC prior to installation. Re-drilling of existing appliance nozzles is strictly not permitted. Clamps shall be GI & powder coated or Aluminum. Screw shall be of SS in order to avoid rusting.


40.3.2.4 Other Materials

The contractor shall supply the following items where required.

- All materials required for formwork, NPT threading, testing etc.
- All signs, barricades, lights and protective equipment.
- All material required for working at higher floor levels (i.e., scaffolding, Ladder, safety belts etc.).
- Special consumable such as grease for maintenance of domestic appliances and all paints or painting of G.I pipes, clamps, sleeves, brackets for meters, consumables such as Teflon Tapes, Petrol, diesel, fuels and oils required are to be supplied by the contractor and are included for within the rates.
- All minor items not expressly mentioned in the contract but which are necessary for the satisfactory completion and performance of the work under this contract.

40.4.0 ISSUE OF WORK INSTRUCTIONS

40.4.1 The contractor will be required to carry out GI installation in the areas where MDPE laying is under progress. However, testing of GI installation shall be done in conjunction with laying of

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MDPE Service Lines to respective premises. A general scheme of distribution to domestic consumer is indicated in the sketch enclosed herewith, for reference. It may vary in case of individual and multistoried flats. A general scheme of distribution to small commercial consumers is indicated in the sketch enclosed herewith for reference.

40.4.2 All skilled personnel like plumbers, conversion technicians shall be approved and certified by EIC. Those who are certified and possess the identify cards duly signed by EIC shall only be authorized to take up respective jobs. The contractor has to arrange the identify cards.

40.4.3 The rates to be quoted by contractor shall be inclusive of all preparatory / bye works, platforms, materials, labor, skills, supervision, tools, taxes, duties, levies, salaries, wages, overheads, profits, escalations, fluctuations in exchange rates and no change in the rates shall be admissible during tenancy of the contract.

40.4.4 The schedule of items of SOR have been described in brief and shall be held to be complete in all respect including safety requirements as per clause 9.0, tests, inspection, QA/ QC works, enabling and sundry works. The payment shall be made against completed and measured works only. No extra works whatsoever shall be considered in execution of these items.

40.5.0 PROGRESS OF WORK

The contractor shall proceed with the work under the contract with due expedition and without delay.

The EIC may direct in what order and at what time the various stages or parts of the work under the contract shall be performed.

Weekly progress reports shall be submitted in the formats approved by MNGL, indicating broadly the laying, testing, RFC, conversions and extra piping.

40.6.0 WORK SHEETS

40.6.1 The quantities and other details will be checked by MNGL 's site engineer and the same shall be incorporated in measurement cards, signed & dated as certified on site. The cards will then be approved by the EIC.

40.6.2 Measurement sheets shall be prepared based on the measurement cards and checked and certified by the site engineers for billing purpose.


40.6.3 If measurement sheets submitted are illegible, incomplete or incorrectly booked, they will be returned to the contractor.

40.7 PERMISSIONS / APPROVALS

Contractor shall be responsible for obtaining approval from authorities like ADA / LDA and any other concerned authority, if required for completion of the work. Contractor must take the prior appointment from the resident for carrying out the work.

40.8 RIGHT-OF-USE SURVEY AND MARKING

The route of the pipeline to be installed shall be decided with consent of the consumer and SE / EIC. Contractor must ensure that the persons/ workers/ supervisors/workers at site shall have proper identity cards prior to entering the premises of the consumer.

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No temporary or permanent deposit of any kind of material resulting from the work shall be permitted in the approach and any other position which might hinder the passage and / or natural water drainage or any area where there is objection from consumer.

The contractor shall obtain necessary permissions from landowners and tenants and shall be responsible for all damages caused by the construction and use of such approaches, pavements, gardens, rooms, walls, roof etc., at no extra cost to MNGL.

A survey will be conducted jointly by MNGL and the contractor at each premises or housing colony to be supplied. The survey record will note customer details, the potential gas supply points and proposed meter positions and estimates of material quantities. The contractor's representatives will make as sketch of the agreed pipe routes, if necessary.

The contractor will be responsible for contacting the customer and making the necessary arrangements for access, and appointments to carry out the work. MNGL will not be responsible for any time lost due to broken appointments or disputes with customers.

The contractor shall confine its operations within limits of the Right - in-use. The contractor shall restore any damage to property outside ROU, attributable to him.

The contractor shall also carry out all necessary preparatory work if needed to permit the passage of men and equipment. Lights, curbs, signs shall be provided wherever and / or required by the MNGL necessary to protect the public.

40.9 **PROTECTION OF STRUCTURES AND UTILITIES**


The contractor shall at his own cost, support and protect all buildings, walls, fences or other structures and all utilities and property which may, unless so protected, be damaged as a result of the execution of the works. He shall also comply with the requirements in the specification relating to protective measures applicable to particular operations or kind of work.

While painting contractor must take care of the consumer premises while carrying out the job/ such as spillage on floor, walls, ceilings, sun shades etc. if the same does occur, the contractor is to immediately make good to original.

40.10 **GI ABOVE GROUND SERVICE PIPE**

The GI service pipe installation work includes all work necessary to connect from the PE / GI transition fitting on the down-stream of the PE service, to the customer's appliance, including the installation of appliance valve and insulated valves, except meters Regulator. The contractor shall be required to provide all equipment, tools and materials necessary to execute the work in an efficient and effective manner. Amongst other things he will be required to provide ladders, scaffolding pipe, dies, tripods, vices, fittings and teflon tape, drills for concrete and other masonry, drills for timber and laminated surfaces inside customer's property, bending tools, clamps, sleeves to facilitate the pipe passing through floors and walls, paint for pipe marking etc. GI pipes, valves and regulator shall be provided by MNGL.

All GI risers on the outside of buildings shall be fully supported to carry the weight of piping. Risers shall be supported by a flanged foot, or similar device, capable of supporting the total weight of the riser. The riser shall rise in a vertical line from its point of support to its highest

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point with a minimum of changes in direction. The threading of GI pipe shall be NPT and conforming to ASME / ANSI B1. 20.1.

Contractor has to supply different types / sizes of approved bracket clamps (Mild Steel) for fixing GI pipes suiting to the site conditions and the same shall be painted before fixing, as per the painting specifications. Every fresh lot of the clamps, brackets, regulators boxes and other consumables shall be approved by the EIC prior to start of installation. All riser and lateral pipe shall be clamped to the building at intervals not exceeding two meters.

Where pipe passes through a balcony floor, the floor surface shall be made slightly elevated around the service pipe or its surrounding sleeve to prevent the accumulation of water at that point. Where a short piece of sleeve is used around the gas pipe, the sleeve should be embedded in the concrete with a mix of mortar and the void between the pipe and sleeve filled with a suitable sealant. The sealant should be beveled such as to prevent an accumulation of water. Supply of clamps for all sizes of the GI pipes is in contractor's scope. Contractor has to take prior approval for design of clamps, paintings etc.

Pipe shall preferably enter a building aboveground and remain in a ventilated location. The location for entry shall be such that it can be routed to the usage points by the shortest practicable route.

The rates are to be paid in bands as shown in SOR which includes the supply of all fittings, clamps, drill holes, painting and installation of regulator in case 4 bar to 21 m bar etc.

INSTALLATION OF WELDED GI PIPES


The rest of materials other than the above mentioned like all types of fittings, all types of brass adaptors, meter/regulator supports/brackets, Anaconda, clamps, Screws, Rawal Plugs, etc. are in the scope of the contractor, which includes all the consumables.

Laying of GI pipe riser up to 40 mtr. Height with threaded joints and any riser having length more than 40 mtr. Height from the ground level should have welded type joint for complete length of pipe line in place of conventional threaded joints. In above said welded type risers Contractors shall use forged fittings GI pipe as per IS 1239 Part 1, Heavy class. All forged fittings should be painted min. 70-micron thickness after completion of welding, testing, etc. Supply of necessary equipment, electrodes and other consumables is in the scope of the contractor. Contractor may conduct survey to assess the requirement of GI pipe (of height more than 40 mtr.).

Supply of welding rectifier/generator, and consumables like welding electrodes, wire brush, grinding wheels leather gloves etc shall be in the scope of contractor. The contractor shall ensure the removal of Zinc coating/painting before carrying of the seal welding.

Welding shall be performed with Advani orlikon, ESAB, D&H electrodes of size 2.5 mm dia for SMAW welding. Batch/Test certificates shall be furnished before welding.

The entire fillet welding shall be done using 2.5mm size electrodes for all size of pipes upto 50 NB pipe.

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The pipeline shall be supported at average 1 mtrs length and at the bottom of the riser. The pipe shall be supported properly using angle supports, anchor fasteners and U/C-clamps as directed by EIC.

Leak testing: The inside surface of pipe shall be cleaned/flushed properly before testing. After successful cleaning, the pipeline shall be tested pneumatically, **test pressure of 250 mbar (g) shall be held for a minimum period of 15 min for threaded risers and 1 bar (g) pressure shall be held for a minimum period of 60 min for welded risers (stabilization period of 5 min should be provided at test pressure before taking initial reading in all the cases). No leakage shall occur during the test.**

The contractor shall complete the touch up job with red oxide coating and subsequently with canary yellow paint, to be supplied by the contractor, after successful testing.

PAINTING OF Forged/GI Fittings

The entire length of the pipeline along with fittings and clamps are to be painted after proper surface preparation and painting as follows.

- One coat of Primer application (Appropriate Zinc based primer)
- Two coats of synthetic enamel paint – canary yellow of minimum of 30 microns per coat of reputed make like Asian, Berger, Nerolac.

All painting materials including primers and thinners brought to site by contractor for application shall be procured directly from manufacturers/ dealers as per specifications and shall be accompanied by manufacturer's test certificates. Paint formulations without certificates are not acceptable.

Engineer-in-Charge at his discretion may call for tests for paint formulations. Contractor shall arrange to have such tests performed including batch wise test of wet paints for physical & chemical analysis. All costs there shall be borne by the contractor.

The painting work shall be subject to inspection and certification by Engineer-in-Charge at all times.

After installation of the entire piping system, final touching shall be done to the satisfaction of EIC.

Supply by the Contractor of all ladders, scaffolding and other equipment necessary to provide access to install the pipes.

Supply by the Contractor of all tools and equipment necessary to carry out cutting and threading of GI pipes to NPT Threading confirming to ANSI B1.20.1 wherever required. Contractor will be required to cut the G.I. pipe at suitable length to match with site requirement.

Supply by the Contractor of all tools and equipment necessary to install GI pipes. The Contractor will also be required to supply portable tripods and vices for pipe fabrication work on site. All consumables are in the scope of the contractor.

Supply of Teflon tape and its use by the contractor for all joints in GI pipe work for leakage free joint.

Installation of pipe saddle/ clamps/ supports (supplied by contractor) at 1.0 meter intervals.



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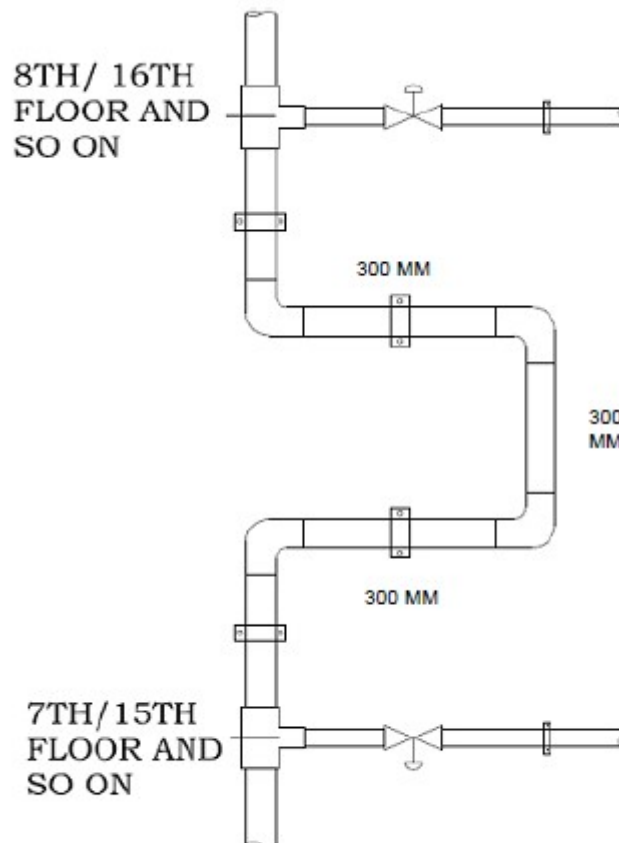
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Cleaning of pipes identification marking after installation. Any paint or identification tapes/ markers required will be supplied by contractor. Breaking through or drilling of RCC/ brick walls, etc. and the subsequent making good. Where required, suitable protection for the pipe will be provided, in the form of mastic, tape, or a protective sleeve. Mastic tape/ protective sleeve shall be in scope of contractor. The rates include for this and any necessary grouting or sealing.

Supply by the Contractor of all tools, equipment and power required to drill the above holes. A power drill and portable generator must be supplied by the Contractor for this operation.

Final testing, purging and commissioning of riser from riser Isolation valve to Meter Isolation Valve as per MNGL requirement.

The contractor will also be required to submit the as laid drawings for GI/ERW pipe network, duly certified by concurred Third Party Inspector and MNGL, in the format given by MNGL.



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Typical Riser and lateral installation

The scope of GI service covers the pipe removal (if any, as per site condition and as directed & satisfactory of EIC), installation includes all work necessary to connect from the PE / GI transition fitting on the down-stream of the PE service, to the customer's appliance, including the installation of appliance valve and insulated valves, except meters Regulator.

40.11 SPECIFICATIONS FOR WELDING OF GI PIPES

The requirements stated herein shall be followed for the fabrication of fillet (sealing) type of welded joints of carbon steel (IS 1239 heavy class) piping systems connected with pipeline and related facilities.

The welded pipe joints shall include the following:

- a) All line pipe joints of the circumferential fillet(seal) welded type
- b) Contractor shall ensure removal of GI coating / painting before carrying out the seal welding
- c) Attachments of fittings and other support pipes.

Base Material:

In general carbon steel (IS 1239 Heavy Class) is used in this specification.

Welding consumables:

The welding electrodes shall confirm to the class AWS E 6013. All electrodes shall be purchased in sealed containers and stored properly to prevent deterioration. The electrodes shall be handled with care to avoid any damage to the flux coating.

Welding Equipment:

Welding rectifiers OR welding generators shall be used.

Welding process:

Welding of carbon steel material under this specification shall be carried out using Shielded Metal Arc Welding process (SMAW).

Cleaning:

Before welding all rust and foreign matter shall be removed from the ends of pipe and fittings by wire brush. Cleaning shall be carried out for the surfaces to be welded and for a minimum distance of 25mm from the edge.

Alignment and Spacing:

Pipe shall be set up correctly spaced, allowing for temperature changes during welding. In correct alignment and shall in no circumstances be sprung into position. Temporary attachments of any kind shall not be welded to the pipe.

Weather conditions:

The parts being welded and the welding personnel shall be adequately protected from rain and strong winds. In the absence of such a protection no welding shall be carried out. The completed welds shall be suitably protected in case of bad weather conditions.



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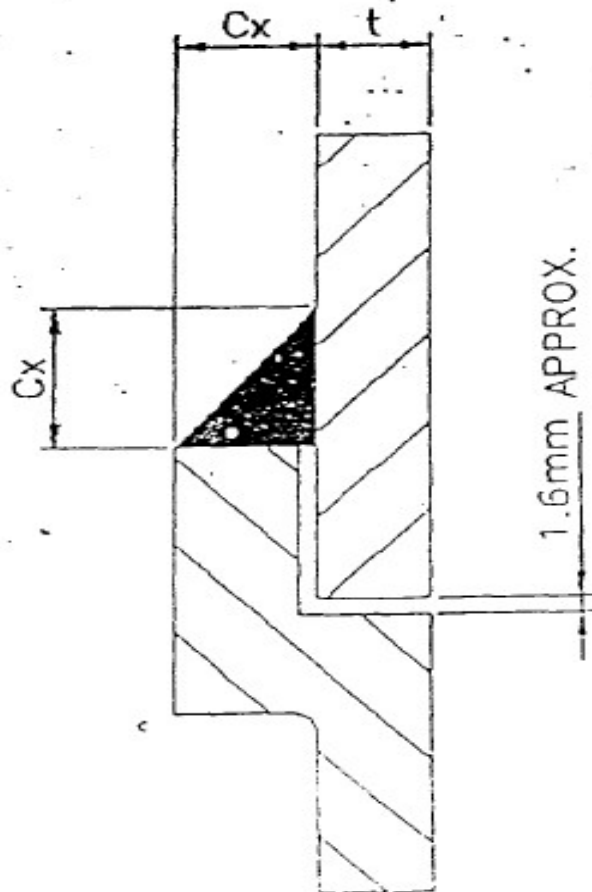
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Welding:


Root pass and final pass shall be made with 2.5mm dia. electrode. Position and roll welding may be permitted. Welding shall be continuous and uninterrupted during a pass. On completion of each run, craters, welding irregularities, slag etc. shall be removed by grinding and chiseling. While welding is in progress care shall be taken to avoid any kind of the movement of the components, shocks, vibration and stresses to prevent occurrence of weld cracks.

Fillet welds shall be made by SMAW process. Welding to be carried out in line with the approved PQR/WPS. PQR/WPS to be approved by MNGL/MNGL's representatives. Welding to be done by the qualified welders who have undergone welder test. All welders shall possess welder identification cards duly approved by MNGL representative.

Joint Design:



Note: C_x (min) = $1.25 t$ But not less than 3.2mm.
 t = Design pressure thickness

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40.12 PAINTING OF GI PIPES (if supplied without painting) & Fittings

The entire length of the pipeline along with fittings and clamps are to be painted after proper surface preparation and painting as follows.

- ☐ One coat of Primer application (Appropriate Zinc based primer)
- ☐ Two coats of synthetic enamel paint – canary yellow of minimum of 30 microns per coat of reputed make like Asian, Berger, Nerolac.

All painting materials including primers and thinners brought to site by contractor for application shall be procured directly from manufacturers/ dealers as per specifications and shall be accompanied by manufacturer's test certificates. Paint formulations without certificates are not acceptable.

Engineer-in-Charge at his discretion may call for tests for paint formulations. Contractor shall arrange to have such tests performed including batch wise test of wet paints for physical & chemical analysis. All costs there shall be borne by the contractor.

The painting work shall be subject to inspection and certification by Engineer-in-Charge at all times.

After installation of the entire piping system, final touching shall be done to the satisfaction of EIC.

41.0 ABOVE GROUND SERVICES PIPE: METER-COPPER INSTALLATION


The Copper service pipe dismantling work (if any, as per site condition and directed & satisfactory of EIC), installation work includes all work necessary to connect from the downstream of Meter up to the isolation valve prior to the customer's appliance, including the installation of valves including application of lacquer paint etc. The contractor shall be required to provide all equipment, tools and material necessary to execute the work in an efficient and effective manner. Amongst other things he will be required to provide ladders, scaffolding pipe, drills for concrete and other masonry, drills for timber and laminated surfaces inside customer's property, bending tools, clamps, sleeves to facilitate the pipe passing through floors and walls, etc. Meter, Copper pipes, valves and regulator shall be provided by MNGL.

During installation the COPPER pipe is to be cut to proper length with a tube cutter, the burrs removed with a file, cleaning of outside surface of pipe & inside surface of fitting, applying flux to the tube and fitting around the outer / inner ends, inserting the tube in to the fitting, applying heat to the assembled joints using conventional Blow torch to melt Solder wire and lacquering.

Installation of copper pipeline will be limited to kitchen premises.

Lacquer is to be applied to the copper tubes by mixing lacquer with thinner in approved proportions and applied by dipping method or with brush. It should be applied only once at a time and drying time of minimum one hr. is to be given.

Contractor has to supply different types / sizes of approved locking clamps for fixing COPPER pipes suiting to the site conditions at maximum 0.5 m distance. Contractor has to take prior approval of EIC for quality of the clamps, solder, flux, lacquer, thinner etc. The approval shall be taken for every fresh lot of clamps from EIC before installation at site.

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Supply of clamps for all sizes of the COPPER pipes is in contractor's scope. Contractor has to take prior approval for design of clamps, painting etc.

Contractor has to ensure the following activity, if customer is not willing for conversion:

- Disconnection of inlet copper pipe.
- Isolation valve (MCV-II) shall be closed and properly plugged.
- Installation of Brass end plug rather than appliance valve.

Contractor has to ensure the installation of PVC sleeve for any crossing by copper pipe and GI like wall crossing etc. Supply of PVC pipe is in the scope of contractor.

41.1 TESTING OF COPPER INSTALLATION

The Cu installation from downstream of meter to appliance valve or already installed cu pipe shall be tested at a pressure of 32.0 mbar (g) for a hold period of 15 min and all the joints shall be checked with soap solution.

The meter shall be removed while carrying out the testing and joints of the meter shall be tested on line with soap solution after completion of the work. Proper test ends shall be made along with mercury manometer or any other gauge approved by EIC. Valves supplied by MNGL, shall not be used for testing purpose.

The calibrated pressure gauges// mercury manometer of suitable range shall be supplied by the contractor for testing.

The details of testing shall be properly recorded in the measurement cards / inspection report.

41.2 INSPECTION


Any defect noticed during the various stages of inspection shall be rectified by the contractor to the entire satisfaction of Engineer-in-Charge before proceeding further. Irrespective of the inspection, repair and approval at intermediate stages of work, contractor shall be responsible for making good any defects found during final inspection/ guarantee period/ defect liability period as defined in general condition of contract.

41.3 PURGING & COMMISSIONING

Payment for the tapping of live mains and GI piping prior to the actual purge is included in normal laying & testing. The connection may involve the fitting of a temporary bypass, disconnection etc. Purging shall be carried in accordance with the principles defined in the American Gas Association Publication "Purging Principles and Practice".

In addition, the contractor shall submit and have approved Purging Plan before commencing any purging work. The plan shall include, but not be limited to the provision of the following materials and equipment: personal safety equipment, fire extinguisher, purging adapter, Purge stack with flame trap and gas sampling point, Gas sampling equipment (may be gas leak detector), squeeze-off tool, Polyethylene connecting pipe work etc.

The plan shall also include the purging process along with detail on the sequence of events. The process is to also specially / mentions the need to lay a wet cloth over the GI pipe and in contact with the ground, to disperse static electricity during the purging work.

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A purging stack with flame trap shall be used when purging services. Care shall be taken to ensure that the purge outlet is so located that vent gas cannot drift into buildings.

The purging work should be performed as follows:

- Ensure the method of purging is such that no pockets of air are left in any part of the customer's piping.
- Ensure that all appliance connections are gas tight, all appliance gas valves are turned off and there are no open ends.
- Where possible, select an appliance with an open burner at which to commence the purge i.e., a hotplate burner.
- Ensure the area is well ventilated, and free from ignition sources.
- Ensure branches that do not have an appliance connected are fitted with a plug or cap.
- Turn on one burner control valve until the presence of gas is detected. A change in the audible tone and smell is a good indication that gas is at the burner. Let the gas flow for a few seconds longer, then turn off and allow sufficient time for any accumulated gas to disperse.
- Turn on one gas control valve again and keep a continuous flame at the burner until the gas is a light and the flame is stable.
- Continue to purge until gas is available at other appliances.


42.0 INSTALLATION OF METERS & REGULATOR

The work in this section includes:

- 42.1 Removal & installation (if any), Installation of domestic and non-domestic / small commercial meters with associated inlet and outlet connections, on the wall with approved meter brackets and angles.
- 42.2 Supply of approved meter brackets and angle brackets, properly painted with one coat of Zinc primer and two coats of synthetic enamel paint of approved make. A sketch of the brackets is enclosed herewith. It is required that one sample of each type of bracket is got approved beforehand.
- 42.3 Firmly securing the meters on the wall with good quality supply of proper rowel plugs, screws etc. In case the rowel plugs are not holding than wooden blocks or other fixing arrangements like cement etc. to be used for proper grouting.
- 42.4 The above activities along with restoration of the area to original shall be carried out to the complete satisfaction of consumer and EIC.
- 42.5 **It is contractor's responsibility to ensure the submission of MJC/JME to MNGL AIC/EIC at least once in a week or as directed/communicated by EIC, if fails a deduction of Rs 100 per MJC is applicable for delay in submission of MJC/JMR.**

43.0 RESTORATION

Contractor has to restore the area where ever he has carried out drilling, clamping etc. to its original condition to the satisfaction of the consumer and to ensure no passage to the premises and seepage. If the work was carried out in Govt. Flats (PWD, Banks, CPWD, Defense etc.), contractor has to restore the area according to CPWD specifications. For

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government flats the contractor has to obtain a clearance certificate from the concerned authorities maintaining the flats, after completion of the work.

Where slabs and brick work are to be reinstated, the level of the compacted subbase is to be adjusted according to the slab / block thickness. The slabs or brick work should be laid on moist bedding material, which should be graded sand, mortar or mortar mix. The slabs or brick work should be tapped into position.

The restored slabs or brick work should match the surrounding surface levels. Joint widths should match the existing conditions, and be filled with a dry or wet mix of mortar.

Wherever any items of the consumer is damaged / broken during working, the same will be made good or replaced to the total satisfaction of the consumer.

The contractor will be responsible for the maintenance of all restoration carried out, for the duration of the contract guarantee period.

The contractor is to ensure the restoration work is properly supervised, and that the material used is suitable for the purpose and proper. Where the required standards are not achieved the contractor will be required to replace the defective reinstatement work.

Note that Payment for GI piping will only be authorized on satisfactory restoration, and where the sites has been cleared of all surplus materials etc.,


44.0 CONVERSION OF DOMESTIC APPLIANCES

The work in this section includes,

- The changing of nozzles and associated controls in accordance with manufactures instructions for both domestic and imported burners/ ovens/grills/hotplate.
- The changing of old appliance connection hoses and nozzles and re-greasing taps as necessary.
- The contractor has to supply all types of nozzles / jets required for all types of appliances including imported burners, Grills, Ovens.
- Cleaning and performing minor maintenance of appliances.
- Testing for gas escapes and the soundness and performance of the appliance.
- Instructing the customer in the safe use of natural gas and for fixing of safety and conversion labels.
- Contractor must attend the complaints regarding appliances till the total area is handed over to MNGL's operation and maintenance.
- All consumables (Nozzles, greases etc.) are in contractor's scope.
- Changing or repairing of any items damaged during conversion.
- Supply and installation of steel braided hose (Suraksha or equivalent as per ISI standard), wherever required as per the EIC instructions.

It may be noted that the rates will apply to all appliance found in both domestic and commercial premises. The contractor will be required under the Rates to provide both Pin gauges and standard sized nozzles.

Contractor shall ensure the priority of installation of MCV-Meter-Cu-conversion in gasified area/society, customer complaints etc. Contractor has to take immediate action on such cases as & when came in to notice. If it is found that contractor is not willing to approach such cases after the written communication from AIC/EIC. MNGL

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can take suitable action against such contractor or no front will be released till the completion of such cases as communicated.

It is contractor's responsibility to ensure the submission of JMR to MNGL AIC/EIC at least once in a week or as directed/communicated by EIC, if fails a deduction of Rs 100 per JMR is applicable for delay in submission.

Contractor shall submit scan copy of all the JMR documents with BP numbers to AIC/EIC as per instructions of AIC/EIC.

45.0 TECHNICAL SPECIFICATION FOR COPPER FITTINGS (ENDFEED) FOR NATURAL GAS USE UP TO 100 mbar

1.0 SCOPE

This specification covers the requirements for Copper Capillary fittings (End feed). Unless modified by this specification requirement of BS 864 of the new European EN 1254 Part-I & part-II shall be valid. Copper Pipe will be supplied by MNGL and contractor is required to supply the Copper fittings.

2.0 MATERIAL

- The material used for the manufacturer of Copper Capillary Fittings shall confirm to BS EN 1057: 1996. Half Hard.
- Material used for the solder should conform to BS 219 & BS EN 29453 or equivalent and should be lead free.

3.0 DIMENSIONAL TOLERANCES

Dimensions tolerances of various types of copper capillary fittings (End feed) shall be as per BS 864 Part-2 (latest) & EN 1254 (Open tolerances on dimensions shall be +/-0.1 mm).

The tolerances as specified in EN 1254 in nominal diameter are as follows (Ref Table 2).


Nominal Diameter	Tolerance on the mean diameter with respect to the nominal diameter		Resulting Difference	Diametrical
D	Outside Dia. of male end (mm)	Inside Dia. of Socket (mm)	Max. (mm)	Min. (mm)
12 mm	+ .0.04 – .0.05	+ 0.15 – 0.06	0.20	0.02

The minimum wall thickness of a fitting shall be in accordance as given below (Ref. Table 5 of EN 1254).

Nominal Dia. mm D	Minimum wall thickness (mm) Wrought Coppers
12	0.6

4.0 CARBON IN BORE

The internal surface of copper capillary fittings for soldering or brazing shall not contain any detrimental film nor present a carbon level high enough to allow the formation of such a film during installation. The maximum total carbon level on internal surfaces shall not exceed 1.0 mg/dm² when tested in accordance with the specification.

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5.0 CHEMICAL PROPERTIES

Each heat no. of the copper fitting will be tested for chemical properties to conform to non-arsenical copper DHP grade C 106 as per BS EN 1057 & BS 2871 to have the following chemical composition:

Copper Percentage	:	Min 99.9%
Phosphorus Percentage	:	0.015 to 0.040%

6.0 FREEDOM FROM DEFECTS

The fittings shall be free from internal fins, blow holes, skin defects etc. or other irregularities which might restrict the free flow of fluid, and shall be designed that resistance to the flow of fluid through the fittings is minimized.

7.0 PRESSURE TEST

All fittings shall be leak tested at the option of MNGL at a pressure of 1 bar (g) for a period of 2 minutes and no leakage is permitted during this period Manufacturer's Test Certificate is necessary with supply.

8.0 MARKING

Each tube shall be embossed with manufacturers name or trade mark BS 864 or EN 1254. Each packing containing fittings shall carry the following stamped or written in indelible ink.


- a) Manufacturers name or trade mark
- b) Designation of tubes
- c) BS Symbol mentioning as 864 or EN 1254 to be used.

9.0 INSPECTION / DOCUMENTS

- i) Inspect shall be carried out as per MNGL Technical Specification and Inspection Plan / QAP.
- ii) MNGL representative or third party inspection agency appointed by MNGL shall carry out stage wise inspection during manufacturing / final inspection.
- iii) Vendor shall furnish all the material test certificates, proof of approval / license from specified authority as per specified standard, if relevant, internal test / inspection reports as per MNGL Technical Specification and specified code for 100% material, at the time of final inspection of each supply lot of material.
- iv) Even after third party inspection, MNGL reserves the right to Select a sample of tube randomly from each manufacturing batch and have these independently tested. Should the results of these tests fall outside the limits specified in MNGL Technical specification, then MNGL reserves the rights to reject all production supplied from the batch.

46.0 TECHNICAL SPECIFICATION FOR FLUX

- I) Flux should be Non-Acidic, Lead Free as per ANSI / NSF 6 or equivalent to be approved by MNGL.
- II) The Flux should be supplied in paste form packed in small tin container of 500 gms. & should have compatibility to use with solder wire (Lead free & as per BS 219 or equivalent).
- III) Certificate of confirmation with the specified standard & relevant material test certificate should be furnished by vendor.
- IV) Vendor should supply branded material.

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47.0 TECHNICAL SPECIFICATION FOR SOLDER WIRE


- I) Solder wire ϕ 3.25 mm, lead free, should be as per BS 219 or Equivalent to be approved by MNGL.
- II) Solder wire should be supplied in 500 gms. coil.
- III) Certificate of confirmation with the specified standard & relevant material test certificate should be furnished by the vendor.
- IV) Vendor should supply branded material.

48.0 TECHNICAL SPECIFICATION FOR GI FITTINGS (POWDER COATED)

Service	: Natural Gas
Standard/ Code	: Malleable Cast Iron Pipe Fittings as per IS:1879-1987 (re-affirmed 1996)
Working Pressure	: 4 bar (g)
Test Pressure	: 6 bar (g)
Working Temperature	: 0°C to 50°C
Material Description	: Malleable Cast Iron as per IS:2108-1977 or equivalent
Min. Tensile Strength	: 30 kgf/sq.mm
Min. Elongation	: 6%
End Threads	: NPT ANSI B.1.20.1
Alignment of Threads	: Variations not more than 0.5%
Protective Coating	: Galvanized uniformly to protect from corrosion both inside and outside except on Threaded portion as per standards/ codes for hot dipping IS:4759-1985 and for mass of Zinc coating IS:6745-1972 / EQ.
Minc. Zinc Coating	: 610 gms/ sq.m
Reinforcement	: Additional material at outside diameter of an internally threaded fitting
Inspection	: 100% Pressure Testing shall be carried out at factory

49.0 SPECIAL NOTES PERTAINING TO SCHEDULE OF RATES (SOR)


- i) **SOR has three parts first: MDPE PIPELINE, second: GI-Cu installation and third: rectification work.**
- ii) **The quantities mentioned in the SOR are indicative and shall not be binding on MNGL. The quantities may be increased, decreased or deleted at the time of actual execution and as per discretion of Owner/ Engineer-in-charge. The unit rate shall be operated to work out for the payment to Contractor.**
- iii) **The payment will be made as per actual certified measurement at site.**
- iii) **The scope as mentioned in the SOR is of indicative nature only and shall include all activities as detailed in the relevant clauses of the respective Particular Job Specifications, Technical Specifications, Data Sheets & drawings, etc. and include all works/jobs which needs to be done as per instructions of EIC/AIC as per site conditions/requirements.**

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50.0 PENALTY

The below penalty is additional to the Price reduction schedule define in GCC clause No: 27.

1	Safety	<p>If MNGL will provide the PPEs and Barricades etc. from third party, the cost of the same will be recovered from upcoming RA bill with addition of 25% administration charges.</p> <p>Or</p> <p>A penalty of Rs 10,000.00 shall be applicable for each written communication (e-mail, letter, audit report etc.) of non- compliance of safety.</p>
2	Minimum construction equipment	<p>Contractor shall ensure the availability of minimum construction equipment as mentioned in Special conditions of contract- Technical- Point no. 19.0, For non-compliance a penalty of Rs 5,000 shall be applicable against each written communication (e-mail, letter, audit report etc.) by MNGL.</p>
3	Minimum requirement of skilled manpower	<p>Contractor shall ensure the mobilization of minimum manpower as mentioned in Special conditions of contract- Technical- Point no. 20.0, for non-compliance a penalty of Rs 5,000 per person shall be applicable against written communication (e-mail, letter, audit report etc.) by MNGL.</p>
4	DPR, MIS, Data for review meetings & any report required by MNGL.	<p>Contractor has to prepare and update the progress data like Society status, Customer complaint status etc. and kept it in hard or soft. MNGL can ask for such reports or data at any time or it may require in review meeting. Contractor shall ensure the timely submission or availability of such required data in review meeting or time as communicated. if fails penalty of Rs 5000 shall be applicable for non-submission of data.</p>
5	Laying & Backfilling	<p><u>Damage during Execution:</u></p> <p>In case of damage to any buildings/structures/ utilities/cables/vehicles the contractor shall be responsible for repairs/ replacement immediately at his own cost, which shall be carried out to satisfaction of concerned authorities / resident / MNGL. If contractor fails to attain it on immediate basis or showing his unwillingness, MNGL may complete the job from another agency at risk & cost of executing agency / contractor with additional 50% administrative charges etc.</p> <p><u>Debris etc. removal:</u></p> <p>Debris and other surplus material shall be removed immediately after the back filling. If contractor fails to attain it on immediate basis or showing his unwillingness, MNGL may complete the job from another agency at risk & cost of executing agency / contractor with additional 50% administrative charges etc.</p>

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6	Restoration of Trench	During the execution of underground pipeline contractor has ensure the convenience of the customers/peoples etc. To reduce the inconvenience, contractor shall have to complete the restoration work of the society, Building, Loop etc. as soon as possible. if contractor is not willing to perform the job or there will be any delay from the given date as communicated, a penalty of Rs 10,000 per written communication for noncompliance will be applicable.
7	As-built submission	The As-built is an essential document for MNGL, thus contractor shall ensure the submission of Approved as-built drawing within 15 days from date of commissioning. If fails a penalty of Rs 10,000 per MP line starch/ society /As-built will be applicable.
8	Data uploading in SAP	<p>Inspection report (Material Consumption): Contractor shall ensure the timely certification of all measurement book/inspection reports form CSA/TPIA, GET, AIC & EIC at least once in a week or as directed/communicated by GET/AIC/EIC, if fails a deduction of Rs 100 per inspection report will be applicable for delay in updating.</p> <p><u>MJC/JMR submission to AIC/EIC:</u> It is contractor's responsibility to submit the MJC/JMR papers to his GET/AIC/EIC for the further updating in the MNGL system (SAP) at least once in a week or as directed/communicated by AIC/EIC, if fails a deduction of Rs 100 per MJC/JMR is applicable for delay in submission.</p>

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PART – F

SCHEDULE OF RATES (SOR)

Schedule of Rates(SOR) is enclosed on e-tendering portal.

Following to be submitted along with Technical Bid duly filled in quoted / not quoted:

Sl. No.	Work Description	Quoted / Not Quoted
BOQ1	ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF PUNE GA	
BOQ2	ITEM RATE CONTRACT FOR A PERIOD OF 1 YEAR FOR LAYING OF UNDERGROUND PE PIPELINE & ABOVEGROUND GI/Cu INSTALLATION FOR CGD PROJECTS OF NASHIK GA	

Evaluation Formula: Evaluation shall be done as per Clause No. 3.0 of Annexure – I to IFB.

Note: The quantities given above against individual items are indicative and shall not be considered to be binding. The quantities may increase or decrease at site at the time of actual execution and as per the discretion of Owner/ Engineer-in-charge. The unit rate shall be operated to work out the final payment due to Contractor.

General Note:

- A bidder may quote for any one Geographical Area / more than one Geographical Area.**
- Prices quoted shall be inclusive of all taxes/duties and nothing extra shall be payable by the owner except for statutory variation in Goods & service tax rate during the contractual period.**

Seal & Signature of Bidder