

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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**SPECIAL CONDITIONS OF CONTRACT
(SCC)**

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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INDEX

1.0	GENERAL
2.0	THE WORK
2.1	SCOPE OF WORK
2.2	SCOPE OF SUPPLY
2.3	TIME SCHEDULE
2.4	MEASUREMENT OF WORKS
2.5	TERMS OF PAYMENT
2.6	TEMPORARY WORKS
2.7	TEMPORARY FENCING
2.8	CONTRACTOR'S TEMPORARY STRUCTURE
2.9	STATUTORY APPROVALS
2.10	QUALITY ASSURANCE
2.11	NOTICE AND LICENSES
2.12	WORKING HOURS
2.13	RESPONSIBILITY OF CONTRACTOR
2.14	ADDITIONAL WORK / EXTRA WORKS
2.15	COMPENSATION OF IDLE TIME
2.16	POWER AND WATER CONNECTION
3.0	CONSTRUCTION
3.1	RULES AND REGULATIONS
3.2	PROCEDURES
3.3	SECURITY
3.4	DRAWINGS AND DOCUMENT
3.5	EXCAVATION BY BLASTING
3.6	CONSTRUCTION EQUIPMENT & MECHANIZATION ACTIVITIES OF CONSTRUCTION
3.7	SITE ORGANIZATION
3.8	HEALTH SAFETY AND ENVIRONMENT(HSE) MANAGEMENT
3.9	GENERAL GUIDELINES DURING AND BEFORE ERECTION
3.10	CONSTRUCTION PHOTOGRAPHS
3.11	SCHEDULE OF SKILLED MANPOWER/ LABOUR
3.12	SPECIFIC REQUIREMENT
3.13	SITE CLEANING
3.14	SURVEY OF WORK
4.0	TESTS, INSPECTION AND COMPLETION
4.1	TESTS AND INSPECTION OF MATERIAL UNDER CONTRACTOR SCOPE
4.2	FINAL INSPECTION DURING EXECUTION
4.3	DOCUMENTATION
4.4	STATEMENT OF FINAL BILLS ISSUE OF NO DEMAND CERTIFICATES
4.5	ISSUE AND RECONCILIATION OF MATERIAL
4.6	DELETED
5.0	REGISTRATION OF THE CONTRACT WITH STATUTORY AUTHORITIES
6.0	LIMITATION OF LIABILITY

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

7.0	CONTRACT PERFORMANCE GUARANTEE
8.0	TAXES, DUTIES AND LEVIES
9.0	SUBSEQUENT LEGISLATION
10.0	STATUTORY VARIATIONIN TAXES & DUTIES
11.0	INCOME TAX & CORPORATE TAX
12.0	CUSTOM DUTY ON CONSTRUCTION EQUIPMENTS
13.0	ISSUE OF CERTIFICATE- PERTAINING TO IMPORT
14.0	IMPORT LICENCE
15.0	WITHHOLDING, ACCOUNTING ANDTAX REQUIREMENTS
16.0	INTELLECTUAL PROPERTY
17.0	FIRM PRICE
18.0	WORKS CONTRACT
19.0	PROVIDENT FUND ACT
20.0	TERMS OF PAYMENT
21.0	COORDINATION WITH OTHER AGENCIES
22.0	ROYALTY
23.0	SITE FACILITIES FOR WORKMEN
24.0	ARBITRATION
25.0	PROJECT PLANNING, SCHEDULING AND MONITORING SYSTEM
26.0	CHECKING OF LEVELS
27.0	STORAGE FACILITIES
28.0	COMUTERIZED BILLING SYSTEM
29.0	ABNORMALLY HIGH RATED ITEMS (AHR ITEMS)
30.0	ORDER PLACEMENT OF BOUGHT OUT ITEMS
31.0	REQUIREMENTS FOR CONTRACTOR AT SITE
32.0	COMPLIANCE WITH LAWS
33.0	NOTES TO SCHEDULE OF RATES
34.0	INSURANCE
35.0	PRICE REDUCTION SCHEDULE
36.0	DIRECT PAYMENTS TO SUB-VENDORS/ SUPPORTING AGENCIES OF MAIN CONTRACTOR
37.0	SUB-LETING OF WORKS
38.0	BONUS FOR EARLY COMPLETION
39.0	JOINTS MEASUREMENT OF WORK EXECUTED, BILLING, INVOICE AND PAYMENTS
40.0	DELETED

Annexure-1:	Scope of Work
Annexure-2:	Scope of Supply
Annexure-3:	Time Schedule
Annexure-4:	Measurement of Work
Annexure-5:	Terms of Payment
Annexure-6:	Conditions for issue & reconciliation of material
Annexure-7:	List of Minimum No's of Construction equipment's to be deployed at site.
Annexure-8:	Schedule of Labour and Skilled Manpower.
Annexure-9:	Specifications of Piping Materials.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

1.0 GENERAL

- 1.1. Special conditions of contract (SCC) 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.
- 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 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
 - iii. Schedule of Rates as enclosures to letter of acceptance
 - iv. Job / Particular Specifications
 - v. Drawings
 - vi. Technical / Material Specifications Enclosed as Annexure-9
 - 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

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

irreconcilable conflict in the contract documents before starting the work(s) of making the supply with reference which the conflict exists.

- 1.8. 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.
- 1.9. 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.
- 1.10. Owner's representative means authorized representative of GSRJL.

2.0 THE WORK

2.1. Scope of Work

The scope of work covered in this Contract will be as described in Annexure- 1 to SCC at Particular job specifications, Standard Specifications, Schedule of Rates etc.

2.2. Scope of Supply

The scope of supply covered in this Contract will be as described in Annexure- 2 to SCC Particular Job Specifications, Standard Specifications, Schedule of Rates etc.

2.3. Time schedule

- 2.3.1. The work shall be executed strictly as per time schedule given in Annexure-3 to SCC. 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.
- 2.3.2. A joint program of execution of work will be prepared by the Engineer-in- Charge and Contractor within 7 days of LOA. This program will take into account the time of completion mentioned in 2.2.1 above.
- 2.3.3. Daily/Weekly/Monthly/ 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.
- 2.3.4. Contractor shall give every day category-wise labour and equipment deployment report along with the progress of work done on previous day in the performance prescribed by the Engineer-in-Charge.

2.4. Measurement of Works

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

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. The provisions of Annexure-4.

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.

2.5. Terms of Payment

Terms of Payment will be as specified in Annexure – 5 to SCC.

2.6. 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.

2.7. 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 provide barricading as per sketch enclosed and provide proper night light as per requirement and to the satisfaction of EIC. 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.

2.8. 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 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 the site any equipment which are not

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

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.

2.9. Statutory Approvals

- 2.9.1. All associated activities required for obtaining necessary clearances, 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.

2.10. Quality Assurance

- 2.10.1. Bidder shall include in his offer. The offer/QAP must be shared with Projects after LOA. the quality assurance programmer containing the overall quality management and procedures, which is required to be adhered to during the execution of contract. After the award of contract detailed quality assurance program shall be prepared by the contractor for the execution of Contract for various works, which will be mutually discussed and agreed to.

- 2.10.2. The Contractor shall establish document and maintain an effective quality assurance system as outlined in recognized codes.

- 2.10.3. Quality Assurance System plans/procedures of the Contractor shall be furnished in the 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 an 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.

- 2.10.4. The GSRJL's representative / TPIA shall reserve the right to inspect/ witness, review any or

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

all stages of work at shop/site as deemed necessary for quality assurance.

2.10.5. The Contractor has to ensure the deployment of quality Assurance and Quality Control Engineer(s) depending upon the quantum of work. This QA /QC group shall be fully responsible for carrying out the work as per standards and all code requirements. In case the Engineer-in-charge feels that contractor's QA/QC Engineer (s) are incompetent or insufficient, contractor has to deploy other experienced Engineer(s) as per site requirement and to the full satisfaction of engineer-in-charge.

2.10.6. In case contractor fails to follow the instructions of Engineer-in-charge with respect to above clauses, next payment due to him shall not be released unless until he complies with the instructions to the full satisfaction of Engineer-in-charge.

2.11. Notice and Licenses

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.

2.12. 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.

2.13. 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 labour 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 Contractor's bill for such quantities that are misused.

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

All expenses towards mobilization at site and demobilization, including bringing in equipment, clearing the site etc. shall be deemed to be included in the prices quoted and no separate payments on account of such expenses shall be entertained.

It shall be entirely the Contractor's responsibility to provide, operate and maintain all necessary construction equipment's, scaffoldings and safety gadgets, cranes and other

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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lifting tackles, tools and appliances to perform the work in a workman like and efficient manner and complete all the jobs as per time schedules.

2.14. 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

2.15. Compensation for Idle Time

The owner shall make every reasonable effort to have the materials and working front available so as not to delay laying activities. No idle time claim shall be entertained under any circumstances.

2.16. Power and Water Connection

GSRJL will not provide any power and water during construction period. Contractor shall apply and obtain necessary power and water during connection from the relevant authority and will pay its usage charge or arrange the same from the other sources.

3.0 CONSTRUCTION

GSRJL reserves the right to inspect all phases of Contractor's operations to ensure conformity to the SPECIFICATIONS. GSRJL will have Engineers, Inspectors or other duly authorized representatives, made known to the Contractor present during the progress of the WORK and such representatives shall always have free access to the WORK. The presence or absence of any GSRJL's representative does not relieve the Contractor of the responsibility for quality control in all phases of the WORK. If 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 written notice of such irregularity, rectify the work in a manner to conform to the relevant DRAWINGS, procedures and SPECIFICATIONS.

3.1. 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.

3.1.1. General:

Basically, the following are applicable:

Petroleum and Natural Gas Regulatory Board (PNGRB) Act 2006: GSR 808 (E) – “Technical Standards and Specifications including Safety Standards for Natural Gas Pipeline Regulations” – 2009.

➤ Basic Laws – Codes – Rules & Standards, mandatory by law in Delhi, NCR and India.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

- Particular Codes and Standards as per Section 3.1.2
- The “Rules of good Practice” commonly used by the worldwide gas industry.
- The “Rules of Art” and “Sound Practices” of the engineering.
- In general, the pipeline and stations have to be built in accordance with the best states of engineering practice.

3.1.2. Particular Codes & Standards

S.no.	Code No.	Description
1	ASME B.31.8	“Gas Transmission and Distribution Piping Systems” and all Codes it refers to.
2	API RP 1102	“Steel pipelines crossings Railroads and Highways”
3	API 1104	“Welding of pipelines and related facilities”
4	AS/NZS 2885.5	Pipelines – Gas and liquid petroleum – Field Pressure Testing
5	OISD 141	“Design and construction requirements for cross country hydrocarbon pipelines”
6	OISD 226	“Natural Gas Transmission Pipelines and City Gas Distribution Network”
7	DIN 30670	“Polyethylene coating for steel pipes and fittings”.
8	DIN 30671	“Thermoset plastic coating for buried steel pipes ”
9	DIN 30672	“Tape and shrinkable materials for the corrosion protection of buried or underwater pipelines without Cathodic protection for use at operating temperatures up to 50 °C.”
10	DIN 30673	“Bitumen coatings and linings for steel pipes, fittings and vessels”.
11	DIN 30675-1	“External corrosion protection of buried pipes & range of applications for steel pipes.”
12	DIN 30677	“Protection of buried valves against corrosion coating (external) with duroplastics.”
13	EN 12062	“Non-destructive examination of welds – General rules for metallic materials”.
14	EN 12068	“Cathodic Protection – External organic coatings for the corrosion protection of buried or immersed steel pipelines used in conjunction with cathodic protection – Tapes and Shrinkable materials.”
15	IS 8062	“Code of practice for Cathodic protection of steel structures”

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

16	IS 12944-5	“ Paints and Varnishes – Corrosion Protection of Steel Structures by protective paint system “
17	ISO-8502-3	“Preparation of steel substrates before application of paints and related products – Tests for the assessment of surface cleanliness”.
18	ISO 9305	“Seamless steel tubes for pressure purposes full peripheral ultrasonic testing for the detection of transverse imperfections”.
19	ISO 10124	“Seamless & welded (except submerged arc welded) steel tubes for pressure purposes. Ultrasonic testing for the detection of laminar imperfections”.
20	ISO 12094	“Welded steel tubes for pressure purposes. Ultrasonic testing for the detection of laminar imperfections in strips/plates used in the manufacture of welded tubes”.
21	ISO 15741	“Paints and varnishes – friction – reduction coatings for the interior of on – and offshore steel pipelines for non-corrosive gases.”
22	ISO 15590-1	“Petroleum and Natural Gas Industries – Induction bends, fittings and flanges for pipeline transportation system – Part I: Induction Bends”.
23	ISO 21809-3	Petroleum and natural gas industries – External coatings for buried or submerged pipelines used in pipeline transportation systems.

And all other relevant codes/standards, etc.

3.2. 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.

3.3. Security

The work being in protected area, will entry into the work area shall be restricted, the contractor will depute a security guard, only authorized person will be allowed with in the work area. All necessary entry permits/gate pass for his staff and labour and entry and exit of his men and materials shall be obtained by contractor and will be checked by the security staff.

3.4. Drawings and Documents

- 3.4.1. The drawings accompanying the bid document (if any) are of indicative nature and issued for bidding purposes only. Purpose of these drawings is to enable the bidder to make an offer in

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

line with the requirements of the GSRJL. However no extra claim whatsoever shall be entertained for variation in the "Approved for Construction" and "Bid document drawings" regarding any changes/units. Construction shall be as per drawings/specifications issued/approved by the Engineer-in-Charge during the course of execution of work. Detailed construction drawings (wherever required) on the basis of which actual execution of work is to proceed will be prepared by the contractor.

- 3.4.2. The drawings and documents to be submitted by the Contractor to GSRJL after award of the work as per the requirements enlisted in the bidding document shall be for GSRJL's review, information and record. The Contractor shall ensure that drawings and documents submitted to GSRJL are accompanied by relevant calculations, data as required and essential for review of the document/ drawings. TPIA shall review the drawings/ documents within two weeks from the date of submission provided the same are accompanied by relevant calculations, data as required and essential for review.
- 3.4.3. All documents and drawings, including those of Contractors sub-vendor's manufacturers etc. shall be submitted to GSRJL after having been fully vetted in detail, approved and co-opted by the Contractor & shall bear Contractor seal/ certifications to this effect. All documents/drawings & submissions made to GSRJL without compliance to this requirement will not be acceptable and the delay & liability owing to this shall be to the Contractor's account.
- 3.4.4. The review of documents and drawings by GSRJL shall not absolve Contractor from his responsibility to meet the requirements of specifications, drawings etc. and liabilities for mistakes and deviations. Upon receiving the comments on the drawing/documents reviewed by GSRJL, Contractor shall incorporate the comments as required and ensure their compliance.
- 3.4.5. Copies of all detailed working drawing relating to the works shall be kept at the contractors' office at the site and shall be made available to the Engineer- in-charge at any time during execution of the contract. However no extra claim what so ever shall be entertained for any variation in the "approved/issued for construction drawings" and "tender drawings" regarding any changes/units unless otherwise agreed.
- 3.4.6. The Contractor shall rectify any inaccuracies, errors and non-compliance to contractual requirements. Any delay occurring on this shall not construe a reason for delay/ extension.

3.5. Excavation by blasting

Excavation by blasting is not permitted wherever required in hard strata other mechanical tools shall be used.

3.6. Construction Equipment & Mechanization of Construction Activities

Minimum construction equipment to be deployed is enclosed as Annexure-7 to SCC. 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 in Annexure-7 is the minimum to be deployed by contractor

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

and contractor shall ensure the availability at site of listed equipment in good working condition

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.

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 leveling 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 labour 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 a minimum.

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

- a. Billing
- b. Planning & Scheduling
- c. Daily & Monthly Progress Reporting
- d. Material Control & Warehousing
- e. Safety Records
- f. Resource Deployment
- g. 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.

3.7. 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 for the satisfactory and safe execution of the Work. The workmen deployed, by the Contractor should also possess the

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

necessary license etc., if required under any law, rules and regulations.

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.

3.7.1. 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 GSRJL 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 GSRJL.

The Contractor will appoint his own supervisors as per enclosed Annexure-8 or instructed by EIC. These personnel will be responsible to the Site Engineer 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 Site Engineer, and will provide the Site Engineer 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 to ensure that they can be always contacted. 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 GSRJL/TPIA as is required. The normal day to day issue of work instructions, communication between GSRJL/TPIA and the Contractor's supervisor and the Site Engineer. No deviation from the approved technical specification / issued construction drawings shall be undertaken without written approval of EIC.

3.8. Health Safety and Environment (HSE) Management

After the award of the contract, detailed Health, Safety and Environment (HSE) program to be followed for execution of contract under various divisions of works will be mutually discussed and agreed between Contractor, Client & PMC/TPI.

The Contractor shall establish document and maintain an effective Health, Safety and Environment (HSE) management system.

In case contractor fails to follow the instructions of Engineer-in-charge with respect to above clauses, next payment due to him shall not be released unless until he complies with the instructions to the full satisfaction of Engineer-in-charge.

The Contractor shall adhere to the Health, Safety and Environment (HSE) management system as per GSRJL, 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 GSRJL safety standards. In addition, and

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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before any work takes place, all the Contractor's operatives shall be given training in site safety by the trained person under supervision of GSRJL/TPIA. If the Contractor wishes to start any new operatives on site, he must first inform the Site Engineer, who will arrange for such training to be arranged.

3.9. General Guidelines During and Before Erection

3.9.1. 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's are kept open.

3.9.2. 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.

3.9.3. Manufacturer's recommendations and detailed specifications for the installation of the various equipment and machines shall be fulfilled by the Contractor.

3.9.4. Various tolerances required as marked on the drawings and as per specifications and instructions of the Engineer-in-Charge, shall be maintained.

Verticality shall be maintained. Verticality shall be verified with the Theodolite/advanced instruments,

3.10. Construction Photographs

The Owner desires to have two sets of monthly progress reports with photographs showing the progress of construction. Before utilizing any photograph for publicity, the Contractor shall obtain prior approval of the Owner.

3.11. Schedule of Skilled Manpower / Labour

Schedule of Skilled Manpower/ Labour attached as Annexure-8 to SCC shall be used for analyzing for extra items.

3.12. Specific Requirements

Specific requirements spelt out in various technical parts of the Bidding Document shall be followed by Contractor.

3.13. Site Cleaning

3.13.1. The contractor shall take care for cleaning the working site from time to time for easy access to work site and also from safety point of view.

3.13.2. Working site should be always kept cleaned up to the entire satisfactions of the Engineer-in-charge.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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3.13.3. Before handing over and work to owner, the contractor in addition to other formalities to be observed as detailed in the document shall clear the site to the entire satisfaction of Engineer-in-charge.

No extra payment shall be paid on this account.

3.14. SURVEY OF WORK

Before the WORK or any part thereof are begun, the Contractor's agent and the Engineer-in-Charge's representative shall together survey the SITE and decide the tentative route considering all obstructions on which the pipeline is to be laid and on which measurements of the WORK are to be based. Such particulars shall be plotted by the contractor and trial pits started thereon.

The Contractor shall be entirely responsible for the 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.

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

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

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

4.0 TESTS, INSPECTION AND COMPLETION

4.1. Tests and Inspection of Material under Contractor's Scope

Inspection and test prior to shipment of material and at final acceptance shall be as specified in Technical Specification. However, without prejudice to the provision of Technical Specification following shall hold good.

The Owner/Consultant or its representative shall have the right to inspected or to test the material to conform their conformity to the specification.

If any inspected or tested material fail to conform the specification, the Owner/Consultant may reject them and the contractor shall either replace the rejected materials or make all the alteration necessary to meet the specification, free of cost to GSRJL.

GSRJL / TPIA right to inspect, test and where ever necessary reject the material after the material's arrival in the GSRJL site shall in no way be limited to or waived by reason of the material having previously been inspected, tested and passed by GSRJL / TPIA or their representative prior to the material shipment from the material supplier.

4.1.2 Tests and Inspection during execution

The Contractor shall carry out the various tests as enumerated in the technical specifications of this Bidding Document and technical documents that will be furnished to

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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him during the performance of the work at no extra cost to the Owner.

All the tests either on the field or at outside laboratories concerning the execution of the work and supply of materials by the Contractor shall be carried out by Contractor at his own cost.

The work is subject to inspection at all times by the Engineer-in-Charge. The Contractor shall follow all instructions given during inspection and shall ensure that the work is being carried out according to the technical specifications of this Bidding Document, the technical documents that will be furnished to him during performance of work and the relevant codes of practice.

The Contractor shall provide for purposes of inspection access ladders, lighting equipment for testing, necessary instruments etc. at his own cost, low voltage lighting equipment for tray fixing and inspection work.

Compressed air for carrying out works shall be arranged by the Contractor at his own cost.

For material supplied by Owner, Contractor shall carry out the tests, if required by the Engineer-in-Charge, and the cost of such tests shall be reimbursed by the Owner at actual to the Contractor on production of documentary evidence.

Contractor shall inspect carefully all equipment before receiving them from Owner for installation purposes. Any damage or defect noticed shall be brought to the notice of Engineer-in- Charge immediately.

All results of inspection and tests will be recorded in the inspection reports, proforma of which will be approved by the Engineer-in-Charge. These reports shall form part of the completion documents. Any work not conforming to execution drawings, specifications or codes shall be rejected and the Contractor shall carryout the rectifications at his own cost.

Inspection and acceptance of the work shall not relieve the Contractor from any of his responsibilities under this Contract.

4.2. Final Inspection during execution

After completion of all tests as per specification the whole work will be subject to a final inspection to ensure that job has been completed as per requirement. If any defect is noticed, the Contractor will be notified by the Engineer-in-Charge and he shall make good the defects at his own cost and risk with utmost speed. If, however, the Contractor fails to attend to these defects within a reasonable time (time period shall be fixed by the Engineer-in-Charge) then Engineer-in-Charge may have defects rectified at Contractor's cost.

When these works are carried out at the risk and cost of the Contractor, the Engineer- in-charge would recover the actual cost incurred towards labour, supervisions and material, consumables or otherwise, plus 100% towards overheads from any pending bill of the Contractor or the security deposit.

4.3. Documentation

4.3.1. As - Built Drawings

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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Notwithstanding the provisions contained in standard specifications, upon completion of commissioning, the BIDDER shall complete all of the related approved drawings along with bill of materials to the "AS BUILT" stage provided to a scale of 1:200 and submit to GSRJL/TPIA, the following:

- a. One complete set in reduced size (841 mm x 432 mm).
- b. Soft Copy of all As Build drawings Prepared in AutoCAD (PDF) in one set of Compact Disc / RT and Photograph Covering measure activity at site.
- c. Two complete set (original (1 No's Color Drawing and 1 No's of Black white Drawing) of approved prints in A0 / A1 sizes.
- d. The cost of same shall be deemed to be inclusive in the rates and no separate payment shall be made.

4.3.2. Completion Document

The following documents shall be submitted in hard binder by the BIDDER in two sets One complete set (original) for site office and one set for GSRJL, as a part of completion documents: -

- a. Copies of the Inspection reports, Laying Graphs, HDD Profiles (IF ANY), RT/UT Reports and valve pit drawings.
- b. Pretesting, final Hydrostatic / pneumatic and other Test results and reports.
- c. Material Consumption statements of C S/ Elbow / Flange e t c. certified by Owner's / Consultant's Site Engineer.
- d. Final Material Reconciliation, stores issue & return statements
- e. All other requirements as specified in the respective specifications.
- f. Completion Certificate issued by Owner's Site Engineer.
- g. No claim certificate by the BIDDER.
- h. Completion certificate for embedded and covered up works wherever applicable.
- i. Recovery statement, if any.
- j. Deviation statement.
- k. Statement for reconciliation of all the payments and recoveries made in the progress bills.
- l. Copies of deviation statement and order of extension of time, if granted.
- m. Any other contractual documents required on completion.
- n. Total material consumption report.
- o. Material reconciliation with respect to the materials issued.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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- p. Test reports & test certificates of gauges.
- q. Any other documents / records required.

4.4. 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. (IF REQUIRED)

The Contractor shall obtain such no-demand certificates from the concerned authorities and furnish the same to the Engineer-in-Charge.

4.5. Issue and Reconciliation of Material

Refer Annexure-6 to SCC for details.

4.6. Deleted

5.0 REGISTRATION OF THE CONTRACT WITH STATUTORY AUTHORITIES (FOR FOREIGN BIDDER (if applicable))

Within 30 days of execution of the Contract agreement, the Contractor shall register themselves and the Contract at their own cost with the Reserve Bank of India, Income Tax, and such other statutory authorities, as may be required under the rules and regulations governing in India. The Contract Price shall be deemed to include all costs towards the same. A copy of all documents related to all such registrations shall be submitted to GSRJL for record.

6.0 LIMITATION OF LIABILITY

The final payment by the GSRJL in pursuance of the Contract terms shall not mean release of the Contractor from all of his liabilities under the Contract. The Contractor shall be liable and committed under this contract to fulfil all his liabilities and responsibilities till the time of release of contract performance guarantee by GSRJL.

Notwithstanding anything contrary contained herein, the aggregate total liability of Contractor under the Contract or otherwise shall be limited to 100% of Contract value. However, neither party shall be liable to the other party for any indirect and consequential damages, loss of profit or loss of production.

7.0 CONTRACT PERFORMANCE GUARANTEE

Please refer clause no. 4.0 of GCC (General Condition of Contract). In addition to above, following will also apply:

- a. In the event completion of works is delayed beyond the Scheduled Completion Date for any reasons whatsoever, the Contractor shall have the validity of the guarantee suitably extended to cover the period mentioned above.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

- b. GSRJL shall have an unqualified option under this guarantee to invoke the Banker's Guarantee and claim the amount there under in the event of Contractor failing to honors any of the commitments entered into under this Contract and/or in respect of any amount due from the Contractor to GSRJL. In case Contractor fails to furnish the requisite Bank Guarantee as stipulated above, then GSRJL shall have the option to terminate the Notification of Award of Work and forfeit the Bid Security/Earnest Money amount and compensation for the works performed shall be payable upon such termination.
- c. Upon completion of the Works as per Completion Schedule stipulated in Contract, the above said guarantee shall be considered to constitute the Contractor's warranty/guarantee for the work done by him or for the Works supplied and performance as per the specifications and any other conditions against this Contract. The warranty/guarantee shall remain in force for 12 months from the date of issuance of certificate of Completion and Acceptance against this Contract as per GCC. Contractor shall also arrange for the Performance Guarantee to remain valid until expiration of the guarantee period for entire works covered under the contract.
- d. In the event of Completion of Project being delayed beyond the Scheduled Completion Date, GSRJL may without prejudice to any other right or remedy available to GSRJL, operate the Bank Guarantee to recover the Compensation for delay leviable as per Clause 7 of GCC. The Bank Guarantee amount shall thereupon be increased to the original amount, or the Contractor may alternatively submit a fresh Bank Guarantee for the equivalent amount of compensation for delay recovered.

8.0 TAXES, DUTIES AND LEVIES IN INDIA

- a. The Contractor agrees to and does hereby accept full and exclusive liability for the payment of any and all taxes, duties, including GST, custom duty, etc. 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 and the Contractor shall be responsible for the compliance with all obligations and restrictions imposed by the Labour Law or any other law affecting employer-employee relationship and the Contractor further agrees to comply, and to secure the compliance of all subcontractors 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 GSRJL 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 Subcontractor of such laws, regulations or requirements and also from all claims, suits or proceedings that may be brought against GSRJL arising under, growing out of, or by reason of the work provided for by this Contract, by third parties,

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

or by Central or State Government authority or any administrative sub-division thereof. The prices shall also be inclusive of Works Contract Tax/ VAT/ Trade tax/ turnover tax as applicable.

- b. GSRJL shall make from Contractors bills such tax deductions as are required as per rules and regulations in force from time to time.
- c. If GST or other duty is applicable during site fabrication, the same must be assessed and deemed to be included by the bidder in the quoted prices. The bidder in this regard shall arrange all required formalities

9.0 SUBSEQUENT LEGISLATION

All duties, taxes (including sales tax on works contract/ trade tax/ turnover tax/GST as applicable), fees, charges, expenses, etc. (except where otherwise expressly provided in the Contract) as may be levied/ imposed in consequence of execution of the works or in relation thereto or in connection therewith as per the Acts, Laws, Rules, Regulations in force shall be to Contractor's account. However, any new taxes/duties imposed after the date of submission of last price bid & up to Contractual Completion date shall be to the GSRJL account but such Taxes /duties imposed beyond Contractual Completion date shall be to the Contractor's account. However, if such new taxes etc. is in substitute of existing taxes, the same will be considered on merit of each case.

10.0 STATUTORY VARIATION IN TAXES & DUTIES

Refer Clause no. 9 & 10 of GCC (General Condition of Contract).

11.0 INCOME TAX & CORPORATE TAX

- a. Income Tax deductions shall be made from all payments made to the Contractor as per the rules and regulations in force in accordance with the Income Tax Act prevailing from time to time.
- b. Corporate Tax liability, if any, shall be to the contractor's account.
- c. Works Contract tax/ VAT shall be deducted as per the trade tax act, If applicable.

12.0 CUSTOMS DUTY ON CONSTRUCTION EQUIPMENTS

- a. Contractor is liable to pay custom duty on the equipment's brought into India for executing the project. The Contractor shall be fully liable for observing all the formalities in this regard as well as to pay the custom duty chargeable on the equipment's, including any deposit payable for such purposes. No adjustment in contracted rates shall be permissible for any change in duty drawback applicable in respect of equipment & machinery brought in India for the use of the project and for re-export of equipment and machinery, on completion of the project.
- b. If the Custom Authorities require the Contractor to furnish a bond to secure payment of any custom duty in respect of any import and that such Bond shall be furnished by /Consultant, GSRJL may at the request of the Contractor furnish the said Bond against the Contractor furnishing a Bank Guarantee to GSRJL, of the like amount in

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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the form and from a Bank in India approved by GSRJL.

- c. If for any reason GSRJL is required by the Customs Authorities during pendency of Contract to pay any customs duty due to the importation or retention by the Contractor of any imports, the Contractor shall forthwith on demand by the GSRJL pay the same to GSRJL, with the right in GSRJL (without prejudice to any other mode of recovery or right of GSRJL) to deduct the same from the on account and other payments due and/or becoming due or payable to the Contractor from time to time. The payments under such a case shall be subject to submission of Bank Guarantee from a Bank approved by GSRJL, by the Contractor in favor of GSRJL for an amount equivalent to amount of custom duty.
- d. The obligations undertaken and/or any bond or facility provided by GSRJL Consultant to the Contractor shall be based on the clear understanding that the said equipment shall be utilized by the Contractor only for the performance of the work covered under this contract and that GSRJL shall be discharged forthwith from all said obligations and shall be entitled forthwith to discontinue and recall any bond or other facility to the Contractor if the Contractor shall utilize or permit to be utilized the said equipment(s) or any of them for the performance of any work other than the work covered by the Contract in which event any amount due from Contractor in this connection shall also carry interest @22% (Twenty two percent) per annum from the date of relative payment by GSRJL up to the date of recovery in full.

13.0 ISSUE OF CERTIFICATE- PERTAINING TO IMPORT

GSRJL shall not provide any kind of certificate in this regard.

14.0 IMPORT LICENCE (Not applicable for this Contract)

Contractor shall arrange import of all materials required for permanent incorporation in the works as well as construction equipment as per the guidelines laid down by the Government of India. GSRJL shall not provide import license.

15.0 WITHHOLDING, ACCOUNTING AND TAX REQUIREMENTS

Contractor agrees for withholding from wages and salaries of its agents, servants or employees all sums, required to be withheld by the laws of the Republic of India or any other agency having jurisdiction over the area where Contractor is conducting operations, and to pay the same promptly and directly when due to the proper authority. Contractor further agrees to comply with all accounting and reporting requirements of any Nation having jurisdiction over the subject matter hereof and to conform to such laws and regulations and to pay the cost of such compliance. If requested, Contractor will furnish the evidence of payment of applicable taxes, in the country(ies) of the Contractor's and his sub-contractor(s) and expatriate employees.

16.0 INTELLECTUAL PROPERTY

Neither GSRJL/TPIA nor Contractor nor their personnel, agents nor any sub-contractor shall divulge to any one (other than persons designated by the party disclosing the information)

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

any information designated in writing as confidential and obtained from the disclosing party during the course of execution of the works so long as and to the extent that the information has not become part of the public domain. This obligation does not apply to information furnished or made known to the recipient of the information without restriction as to its use by third parties or which was in recipient's possession at the time of disclosure by the disclosing party. Upon completion of the works or in the event of termination pursuant to the provisions of the contract, Contractor shall immediately return to GSRJL all drawings, plans, specifications and other documents supplied to the Contractor by or on behalf of GSRJL or prepared by the Contractor solely for the purpose of the performance of the works, including all copies made thereof by the Contractor.

17.0 FIRM PRICE

The quoted prices shall be firm and shall not subjected to price escalation till the work is completed in all respects.

18.0 WORKS CONTRACT

The work covered under this contract shall be treated as "Works Contract".

19.0 PROVIDENT FUND ACT

The Contractor shall strictly comply with the provisions of Employees Provident Fund Act and register themselves with Regional Provident Fund Commissioner (RPFC) before commencing work. The Contractor shall deposit Employees and GSRJL contributions to the RPFC every month. The Contractor shall furnish along with each running bill, the challan/ receipt for the payment made to the RPFC for the preceding months.

20.0 TERMS OF PAYMENT

Terms of payment shall be as set out in Annexure-5 to SCC.

21.0 COORDINATION WITH OTHER AGENCIES

Work shall be carried out in such a manner that the work of other agencies operating at the site is not hampered due to any action of the Contractor. Proper coordination with other agencies will be Contractor's responsibility. In case of any dispute, the decision of Engineer-in-Charge shall be final and binding on the Contractor.

22.0 ROYALTY

The contractor's quoted rate should include the royalty on different applicable items as per the prevailing Government rates. In case GSRJL is able to obtain the exemption of Royalty from the State Government, the contractor shall pass on the same to GSRJL for all the items involving Royalty.

23.0 SITE FACILITIES FOR WORKMEN

Following facilities are to be ensured at all work places where workmen are deployed/ engaged by Contractor & any other, as required by law at the time of execution.

- Arrangement of first aid

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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- Arrangement for clean drinking water
- Toilets
- Canteen where tea & snacks are available
- A crèche where 10 or more women workmen are having children below the age of 6 years.

24.0 ARBITRATION

- If any dispute of difference of any kind whatsoever shall arise between the parties in connection with or arising out of this agreement, parties shall promptly and in good faith negotiate with a view to its amicable resolution and settlement. In the event no amicable resolution or settlement is reached within a period of 15 days from the date on which the dispute or difference arose, such dispute or difference shall be referred to arbitration. The arbitrators shall be appointed mutually in accordance with the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof for the time being in force. The arbitration proceedings shall be in New Delhi. The award of the Arbitrators shall be final and binding on both the parties.
- The existence of any dispute or difference or the initiation or continuance of the arbitration proceedings shall not postpone or delay the performance by the Parties of their respective obligations pursuant to this Agreement. It is agreed that the arbitrator shall also determine and make an award as to the costs of the arbitration proceedings.
- Notwithstanding anything contained herein, the Parties shall have a right to institute legal proceedings to prevent any continuing breach of the provisions of this Agreement to seek an injunctive or any other specific relief.
- GSRJL shall suggest a panel of three independent and distinguished persons to the party (Bidder/Contractor/ Supplier/Buyer as the case may be) to select any one among them to act as the sole Arbitrator.
- In the event of failure of the other party to select the sole Arbitrator within 15 days from the receipt of the communication suggesting the panel of arbitrators, the right of selection of sole Arbitrator by the other party shall stand forfeited and GSRJL shall have discretion to proceed with the appointment of the sole Arbitrator. The decision of GSRJL on the appointment of Sole Arbitrator shall be final and binding on the parties.

25.0 PROJECT PLANNING, SCHEDULING AND MONITORING SYSTEM

The Contractor shall follow the specifications with respect to Project Planning, Scheduling and Monitoring system as giving in Bidding Document.

26.0 CHECKING OF LEVELS

- The Contractor shall be responsible for checking levels, orientation plan of all foundations, foundation bolts, etc., well in advance of taking up the actual erection work and bring to the notice of Engineer-in-Charge discrepancies, if any. In case of minor variations in levels etc. the Contractor shall carry out the necessary rectifications to the foundations within his

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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quoted price.

- b. The Contractor shall also be responsible for checking with templates, wherever necessary, the disposition of foundation bolts with the corresponding bases of structure and shall effect rectifications, as directed, within his quoted rate.

27.0 STORAGE FACILITIES

The Storage of Pipe will be in the scope of the contractor, the contractor shall maintain proper yard for stacking of CS pipe. The cost of maintaining the yard and Loading / Un loading and transportation of pipe to site will be considered in the quoted price.

The Contractor shall maintain an air-conditioned (If required) room for the storage of the instruments as well as for calibration and testing of the instruments at his own cost. The contractor shall provide these facilities within the quoted price.

28.0 COMPUTERIZED CONTRACTORS BILLING SYSTEM

- a. Without prejudice to stipulation in General Conditions of Contract, Contractor should follow following billing system.
- b. The bills will be prepared by the contractors based on joint measurement carried out by the contractor and TPIA on their own PCs as per the standard formats and codification scheme proposed by GSRJL / TPIA. The contractors will be provided with data entry software to capture the relevant billing data for subsequent processing. Contractors will submit these data to GSRJL / TPIA in an electronic media along with the hard copy of the bill, necessary enclosures and documents. The contractor will also ensure the correctness and consistency of data so entered with the hard copy of the bill submitted for payment.
- c. GSRJL/ TPIA will utilize these data for processing and verification of the Contractor's bill and payment."

29.0 ABNORMALLY HIGH RATED ITEMS (AHR ITEM)

"In items rate contract where the quoted rates for the items exceed 50% of the owners / estimated rates, such items will be considered as Abnormally High Rates Items (AHR) and payment of AHR items beyond the SOR stipulated quantities shall be made at the least of the following rates: Rates as per SOR, quoted by the Contractor.

Rate of the item, which shall be derived as follows:

- a) Based on rates of machine and labour as available from the contract (which includes contractor's supervision, profit, overheads and other expenses).
- b) In case rates are not available in the contract, rates will be calculated based on prevailing market rates of machine, material and labour plus 15% to cover contractor's supervision profit, overhead & other expenses.

30.0 ORDER PLACEMENT OF BOUGHT OUT ITEMS

- a. The contractor is required to place firm order for all bought out items of adequate quantity (including 1st lot in those cases where items are required to be procured in

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

more than one lot, if so stated in SOR/ SCC) within 30 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. However, the contractor shall always take prior approval of the owner and consultant for items required to be procured.

- b. Further lots (for those cases where items are required to be procured in more than one lot, if so, stated in SOR/ SCC) shall be procured after a suitable period so as to ensure adequate availability of material at site throughout the execution period).

31.0 REQUIREMENTS FOR CONTRACTOR AT SITE

- a. Contractors shall establish site office in the respective areas with adequate facilities like tables, chairs, telephones, and computer with mailing facility etc. for effective communication and documentation.
- b. Contractors shall provide as and when required a wagon(s) suitable for soil removal, for the delivery or reinstatement materials and for the transport of pipes to and from site.
- c. Contractor shall supply 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.
- d. Contractor shall make appropriate arrangements to ensure that their supervisor(s) are adequately mobile and can attend sites or meeting with GSRJL/ TPIA & other authorities or customers as required, without any undue delay.
- e. Contractors shall provide cell phones to their supervisors for day to day communication with GSRJL/ TPIA.
- f. The site in-charge must be a permanent employee of the contractor having desired qualification and work experience- At least BE with 5 Years' experience or Diploma with 10 years relevant experience, any change in key persons working at site shall be informed to the Owner promptly.
- g. 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.

32.0 COMPLIANCE WITH LAWS

The Contractor shall abide by all applicable rules, regulations, statutes, laws governing the performance of works in India, including but not limited to the following:

- Contract Labour (Regulation & Abolition) Act 1970 & the center rules, 1971 framed there under.
- Payment of Wages Act.
- Minimum Wages Act.
- Employer's Liability Act.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

- Factory Act.
- Apprentices Act.
- Workman's Compensation Act.
- Industrial Dispute Act.
- Environment Protection Act.
- Wildlife Act.
- Maritime Act.
- Any other Statute, Act, Law as may be applicable.
- PNGRB Act.

33.0 NOTES TO SCHEDULE OF RATES (SOR)

- a. The SOR items are to be operated as per job requirement and shall be decided by Engineer- In- Charge.
- b. The quantities stated in SOR are tentative and may vary considerably on ± side depending upon site condition, methodology adopted as per site requirement. The payment will be made as per actual certified Measurement at site and as instructed by EIC.
- c. 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 specifications attached and other relevant documents enclosed with tender.
- d. Any other materials & activities not mentioned/covered in SOR, but otherwise required for satisfactory completion/safety of work as defined in tender has to be supplied /done by contractor within the specified schedule at no extra cost to owner.

34.0 INSURANCE

All kind of Insurances including transit Insurance shall be borne & arranged by the bidder in line with clause no. 35 of GCC-Works. Price quoted in SOR shall be inclusive of this cost.

35.0 PRICE REDUCTION SCHEDULE

The Price reduction schedule shall be applicable at the rate mentioned as per the following:

- a. In case of delay in completion of work as per total scope of work within the completion schedule, Price Reduction Schedule shall be applicable at the rate of ½ % of the total contract value per week of delay or part thereof.
- b. The maximum PRS shall be 5% of total contract value.
- c. For PRS purpose, Contract value shall be excluding of GST.
- d. The compensation on account of any liability (lies) including penalties other than above shall be as per provisions of bidding documents and shall be applicable in

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
--	---	----------------------

addition to PRS.

36.0 DIRECT PAYMENTS TO SUB-VENDORS/ SUPPORTING AGENCIES OF MAIN CONTRACTOR

Normally, the payment is to be made to vendor/ contractor only as per provision of contract. During execution, in case of financial constraints, GSRJL may make direct payment to their sub-vendor/ supporting agencies as an exception from the amounts due to the vendors/ contractors from any of their bills under process upon certification by EIC subject to receipt of such request from the vendor/ contractor. Further, the request for direct payments to the sub-vendor/ sub- contractor shall be considered in performance evaluation of such vendor/ contractor.

37.0 SUB-LETTING OF WORKS

The contractor shall not, sublet with previous consent in writing of the Engineer-in- charge, sublet, transfer or assign the contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever. Provided, nevertheless, that any such consent shall not relieve the contractor from any obligation, duty or responsibility under the contract.

However, subletting of WHOLE WORKS is prohibited. Vendor/ Contractor shall submit undertaking to this effect along with each invoice/ bill.

38.0 BONUS FOR EARLY COMPLETION- - NOT APPLICABLE

Works for Bonus for early completion shall not be applicable in this Contract.

39.0 JOINTS MEASUREMENT OF WORK EXECUTED, BILLING, INVOICE AND PAYMENTS.

Measurement shall be recorded as per the methods of measurement spelt out in Specification/Contract Documents/ Procedure of GSRJL.

40.0 Deleted

ANNEXURES TO SCC

C O N T E N T S

Annexure-1	:	Scope of Work
Annexure-2	:	Scope of Supply
Annexure-3	:	Time Schedule
Annexure-4	:	Measurement of Work
Annexure-5	:	Terms of Payment
Annexure-6	:	Conditions for issue & reconciliation of material
Annexure-7	:	List of Minimum No's of Construction equipment's to be deployed at site.
Annexure-8	:	Schedule of Labour and Skilled Manpower.
Annexure-9	:	Specifications of Piping Materials in BIDDER SCOPE.

SCOPE OF WORK

ANNEXURE-1 TO SCC**1.0 SCOPE OF WORK**

Scope of work shall be as detailed in Particular Job Specification, Technical Specifications, Schedule of Rates & various other parts of this Bidding Document.

1.1 Procurement

- a) CONTRACTOR shall procure and supply all the materials other than OWNER supplied materials, required for permanent installation of main pipeline and terminals 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 package for various items. For items which are not covered in the vendor list, CONTRACTOR shall obtain Owner's prior approval for the vendor. Equipment requiring specialized maintenance or operation shall be avoided as far as possible. Equipment offered shall be field proven.
- b) 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 the Owner's approval.
- c) Carry out proper documentation of inspection and quality assurance programs for all equipment and bulk materials duly approved by OWNER. The CONTRACTOR shall maintain an accurate and traceable listing of procurement records for the location, quality and character of all permanent materials in the Project.
- d) The CONTRACTOR shall immediately report to the OWNER of all changes which will affect material quality, and recommend any necessary corrective actions to be taken.
- e) Compliance with vendors and supplier's instructions and recommendations for transportation, handling, installation & commissioning.

1.2 Construction**1.2.1 General**

All construction works shall be carried out as per, 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. 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.

1.2.2 Statutory Approvals

- a) The approval from any authority required as per statutory rules and regulations of

Central/ State Government, PWD, Irrigation Deptt. etc. shall be the contractor's responsibility. The application on behalf of the Owner for submission to relevant authorities along with copies of required certificates completed 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 actual 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(s), 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. 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.
- c) The inspection and acceptance of the work by statutory authorities shall, however, not absolve the contractor from any of his responsibilities under this contract.
- d) The Contractor shall make all arrangements for access to his work site at his own cost and responsibility. If no public road exists the Contractor shall arrange on his own for access to his work area at no extra cost to the COMPANY.
- e) All civil / structural works, laying and preservation / commissioning of pipeline works shall be performed in accordance with relevant specifications and requirements enclosed elsewhere in the bid package.
- f) CONTRACTOR shall provide complete details of manpower, equipment etc. to be deployed. Mobilizing and providing all equipments, manpower (skilled and unskilled), consumable and other resources etc. as required for the execution of the complete job defined herein and thereafter demobilizing the same upon completion of work.
- g) Provide, maintain and operate all temporary facilities required for the construction related works and remove after completion of work. Providing barricading at trench in city area as per instruction of engineer in charge for safety
- h) Hook up/ tie-in with GASNET existing facilities, wherever required and tie-in of pipeline and SV stations buried / aboveground piping system.
- i) All works related to testing, dewatering, swabbing, drying, pre-commissioning and preservation / commissioning of the work tendered.
- j) Idle time preservation of pipeline, if required.

- k) 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.

1.2.3 Main Pipeline

Topographic Survey

Bidders are advised arrange to carry out survey and preparation of Alignment sheets, 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.

1.2.4 Familiarization of Pipeline Route

Soil Investigation and Soil Resistivity survey

- a) Carry out soil investigation (visual classification/ stratification) and resistivity survey along the entire pipeline route. It shall be Contractor's responsibility to familiarize himself with sub-soil conditions along the pipeline route and workout the lengths of pipeline to be laid in different subsoil conditions including the quantum of rock excavation that would be necessary.
- b) 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.

1.2.5 Right-of-use (ROU)

- a) Obtaining all necessary approvals, work permits and Liaisoning / coordination works for ROU acquisition / permission for laying of pipeline and its 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.
- b) "Receiving and Taking-over" as defined in the specifications of OWNER supplied externally corrosion coated and bare line 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.

- c) Carrying out inspection of OWNER supplied line pipes and pipe corrosion coating at the time of receiving and taking-over. Carrying out all repairs, to pipe and pipe coating, including supply of all materials. All handling, lifting, stacking of coated/ bare pipes required during inspection.
- d) Carrying out repairs (including supply of all materials) of line pipe and pipe coating which will include repair of all defects/ damages occurring during transportation and / or handling after receiving and taking over.
- e) 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.
- f) Welding of all tie-in joints including tie-in joints and bends on either side of major river crossings/ with adjoining pipeline installed by others/ other facilities as required, cutting of test header, re-levelling and tie-in with adjacent pipeline segments.

1.2.6 Railway Crossings

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 installed by boring/ jacking. It should be noted that the extent of casing pipe generally specified by Railways, is 15.0m beyond centrelines 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.

1.2.7 Road Crossings

- (a) Contractor shall firm the method of crossing of roads such as open cut/ boring up 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.
- (b) After laying the pipeline in a road crossing by open cut method, the Contractor shall either completely backfill the road & make ready for restoration or completely restore the road to its original condition depending upon instructions of Owner / EIC.
- (c) 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.
- (d) 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.

- (e) No damage should be caused to any irrigation sources, while laying the pipeline through canal crossings.
- (f) 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 the requirements of the authorities concerned.
- (g) In general, the top of the pipeline shall be at least 1.5 m below the scour level of river crossing. If scour level is not known minimum 2.5 m cover should be kept unless specified otherwise.
- (h) The top of pipeline shall be at least 1.5 m to 2.0 m below the drain/ canal bed unless specified otherwise.
- (i) 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.
- (j) Pre-construction surveys, preparation of detailed construction method statement and calculations for Owner's approval.
- (k) Site preparation, arranging required land for setting up of string fabrication yard and obtaining necessary permissions from concerned authorities.
- (l) Preparation of pipeline Launch way, continuous concrete coating of pipes, repair of damages to corrosion and concrete coating, string preparation, field welding, NDT including radiography, pretest of completed strings, corrosion and concrete coating of field joints. Trenching, laying at approved depth, stabilization of banks, post installation hydro-test, capping, providing and installing of markers, etc.
- (m) The major canals with lining/ perennial canals need to be crossed by HDD/ boring method only.

1.2.8 Crossings by Horizontal Directional Drilling (HDD)

- a) Contractor shall cross the roads / water crossings by HDD method at various depth in different locations as directed by Owner either as per site conditions or as per instruction received from concerned authorities, whichever will be higher / stringent and decision of Owner 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 etc. 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 or by geo-technical survey in case of river 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 pipe is not under stress during and after crossing for Owner's approval prior to start the execution of works.
- b) 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 Specified Minimum Yield Strength (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 service

Permissible values of maximum equivalent stress during service shall be governed by the requirements of ASME B31.8. The details of pipeline operating parameters are provided in the Special Conditions of Contract.

- c) 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) above after correction for drilling inaccuracies (or multiplication by the factor 1.85) whichever results in the highest permissible value of minimum elastic bend radius.
- d) 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.
- e) The contractor shall ensure that no any underground 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. Contractor shall arrange all statutory permission from concerned authority before start of job.

1.2.9 Hydrostatic Testing, Dewatering, Swabbing and Drying of Pipeline

- a) The test duration shall be minimum 24 hours. After successful completion of hydrostatic testing of the pipeline, Contractor shall dewater the pipeline. As a minimum, Contractor shall continue the dewatering operation until the volume of water removed is less than volume of 2 meters of full pipe length.
- b) After completion of dewatering operations, Contractor shall carry out swabbing of pipeline by running high/ medium/ low density foam pigs propelled by compressed air through the pipeline. Prior to their launching, Contractor shall weigh the pigs. On arrival of the pigs at the receiving end they shall be re- weighed. The swabbing operation shall be repeated till the weight of the last received foam pig does not increase by more than 50% or 10 runs of foam pigs whichever is earlier.
- c) The pipeline/ section(s) of pipeline shall never be left empty (filled with air) after dewatering/ swabbing. Contractor shall take up dewatering and swabbing of pipeline after hydrotesting only when Contractor is ready for carrying out the

drying operation immediately following pipeline swabbing. Till such time Contractor is ready to start drying of pipeline, the pipeline/ section(s) of pipeline after hydro testing shall be kept filled with inhibited water or the pipeline/ section(s) of pipeline shall not be dewatered. Preservation of pipeline using inhibited water from the time of completion of hydro testing till Contractor is ready for drying of pipeline, shall be carried out by Contractor as part of his scope of work at no extra cost to Owner.

- d) After the results of swabbing operation has been accepted by Owner, nitrogen purging of line may be started for pre-commissioning activities as per specification.
- e) Pre-hydrotesting of aboveground mainline section shall be carried out separately and test duration shall be minimum 4 (four) hours.

1.2.10 Leak Detection

- a) Contractor shall submit a detailed procedure for detection of anticipated/ probable leak which is likely to be found during hydro test. Such method of detection shall consume minimum possible time to complete the hydrotest activity within contractual completion schedules. This procedure needs prior approval.

1.2.11 Hydrostatic Test Pressure

- a) The pipeline shall be hydrostatically tested to a minimum test pressure 1.4 times the design internal pressure and in no case test pressure of the pipeline shall exceeds 1.5 times the design internal pressure.
- b) All tie-in joints including tie-ins with existing facilities, if any. All tie-ins shall be welded tie-ins.

1.2.12 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.

1.2.13 CATHODIC PROTECTION

- a) The Contractor shall start the execution work for entire length of mainline simultaneously and shall deploy adequate manpower, machinery, tool & tackles etc. accordingly.
- b) However, Owner may, at its sole option, assign priority of construction of any section 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.

1.2.14. SURGE DIVERter GROUNDING CELL AND POLARISATION CELL

- 1.2.14.1. At the crossing or parallel run of pipeline and overhead HT line of 66kV and above, the pipeline shall be grounded through polarization cell. Alternatively, grounding could also be done with galvanic anodes and Surge diverter at the discretion of the owner. The grounding shall be done at regular intervals (i.e. at 1000 M). where transmission

line run parallel within 25 M of the pipeline; to ground any surges in the pipeline potential that may appear in case of transmission line faults.

- 1.2.14.2. Locations along pipeline where continuous induced over-voltage due to HT line etc., is expected or observed during commissioning, the pipe line shall be earthed through polarization cell to the HT tower earth system causing the voltage induction or to a separate earthing system. Alternatively, the pipe line shall be grounded with galvanic anodes and Surge diverter at the discretion of the owner.
- 1.2.14.3. The polarization cell shall be installed in a vandal proof steel housing by the Contractor.
- 1.2.14.4. Spark gap Surge diverter with Grounding cell shall be provided for the protection of insulating joints located at the ends of the pipe line/at terminals. Owner on his own discretion may permit use of magnesium or zinc galvanic anodes for protection of insulating joints. Choice between magnesium or zinc anodes shall depend upon the potential values on either side of the insulating joint.
- 1.2.14.5. Surge diverter shall be provided for the protection of insulating joints located at the ends of the pipeline / at terminals. Alternatively, owner on his own discretion may permit use of magnesium or zinc galvanic anodes for protection of insulating joints. Choice between magnesium or zinc anodes shall depend upon the potential valve on either side of the insulating joint. Surge Diverter, Polarization Cell, Galvanic anodes and Grounding cell shall be sized for the specified design life of permanent cathodic protection system.
- 1.2.14.6. The total system including cable, cable termination, galvanic anodes / grounding cell and surge diverter shall be suitable for the anticipated fault current at the location of its installation.

1.2.15. 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.

1.2.16. Pre-commissioning and Commissioning Assistance

- a) Drying and pre-commissioning including supply of all materials, consumables including Nitrogen for purging and manpower of the complete pipeline system and terminal piping work.
- b) Making the entire system ready for commissioning and providing assistance during the complete duration of commissioning operations.
- c) Completion of all mainline activities as detailed in SOR.
- d) Complete N2 purging before the start of welding at all hook up works.

1.2.17. Terminals (Tap-off Point / DRS)

- Supply and installation of assorted pipe, fasteners, gaskets, fittings, flanges, utility piping & piping supports as per Owner verification.
- All fabrication, erection, testing and commissioning of piping above ground at all

elevations and below ground at all depths including provision shall be kept for installation of temporary flanged end header for Pig Launching, all valves, insulating joints, barred tee and other fittings and associated piping works.

- All mechanical works of underground and above ground, complete piping including fabrication, welding, all non-destructive testing of welds repairs/ pretesting, hydrostatic testing, cleaning/ flushing, functional testing, cutting of mainline and beveling (if required), excavation in all types of soil for installation of piping and pipe supports.
- Installation of all inline/ online instruments.
- Obtaining all necessary approvals and work permits from concerned local authorities having jurisdiction including hot work permit as applicable for performing the work.
- Carrying out welding including cutting, edge preparation (inclusive of grinding the edges on fittings, flange, etc. to match with the matching edges of different thickness wherever required, bending, pre-heating wherever required, NDT including radiography by X-ray / Gamma-ray and other non-destructive tests specified. NDT requirements for process and other piping shall be in accordance with relevant specifications enclosed with the tender document.
- Preparation of plot plan cum piping CAD based on schematic drawings for tap-off station / DRS & SV stations. Preparation of isometric drawings and final Bill of Material based on piping detail GA drawings prepared by contractor & duly approved by Owner.
- Cleaning and servicing of all free issue materials including equipment, valves to make it suitable for installation.
- Completion of all mechanical works as detailed in SOR.
- SV station, branch piping shall be hydrostatically tested to the test pressure in accordance with Specification for piping fabrication, erection. Test pressure shall be 1.4 times design pressure and minimum duration of test shall be four (4) hours. All ball and plug valves in the piping network being hydro tested shall be kept in the partially open position.

1.2.18. Civil & Structural Works

Civil & Structural Works shall be carried out as per the scope detailed in SOR and Technical Specification.

1.2.19. 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.
- Provision is to be kept in the terminal for installation of Permanent Cathodic System.

- Extension/ provision of the utilities at desired locations from the consumers battery limit, the utilities are fire water, instrument air, plant air, drinking water, service water and electrical power.
- Any other work not specifically listed herein but required for the construction of the terminals and making it ready for the operation.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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SCOPE OF SUPPLY

ANNEXURE-2 TO SCC

1.SCOPE OF SUPPLY

1.1. Owner's Scope of Supply (Free Issue Item)

The following items shall be issued as free issue material:

1. 8" NB/6.4 MM/ API 5L GR. X-52
2. 4" NB/6.4 MM/API 5L GR. X-52, CS
3. Isolation Valve, CL300 For (UG)
4. Insulation Joint (IJ)

All items and accessories, other than above, shall be in Contractor's Scope of Supply.

Owner's scope of supply shall be as specified in Particular Job Specification, Technical Specifications, Schedule of Rates & various other parts of the Bidding Document.

In order to speed up the project Free Issue Materials and also the material on replacement basis shall be issued to the Contractor from the designated store(s) of GSRJL/and 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.

Conditions for Issue and Reconciliation of Materials shall be as per Document enclosed as Annexure-6 to Special Conditions of Contract.

1.2. Contractor's Scope of Supply

All materials, equipment's, components required for completions and successfully commissioned of entire pipeline shall be procured and supplied by the Bidder.

- All Bare Pipe conforming to for A/G piping
- CS fitting (Shall confirm by Schedule-40 & 80)
- Flange. (Shall be confirmed by CL-300)
- TLP and TCP
- Warning Mat (width 300 MM X 1.0 THK)
- Pole Marker and RCC route marker
- Bolts, Nuts, Welds, Washer.
- Electrode (specification shall be confirmed by E6010 & E7010)
- 2" Seamless pipe (Shell confirm by ANSI B36.10)
- Fitting Material of Size 8", 4", 2" and 1" (Elbow, Tee, Reducing Tee, Flanges, Ball Valve, Globe valve, Y- strainer, Filter, etc. shell supplied by Contactors for Above ground piping and Hook Up connectivity.

All equipment, material components etc. shall be new and specially purchased for this job from the company approved vendor, duly inspected by the approval of the third party inspection agency.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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Bidder shall submit all details to company for review and approved before placement of order.

TIME SCHEDULE

ANNEXURE-3 TO SCC

TIME SCHEDULE

The time schedule for Completion is **10 (Ten) weeks** from the date of intimation by Engineer-in-charge (EIC) by written communication.

- 1) The time of completion shall be reckoned from the date of the award of contract, which shall be the date of issue email of Acceptance.
- 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 preparation of drawings (if required), procurement and supply of materials including their inspection & testing, mobilization at site, 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.

Note: The above time schedule is inclusive of a mobilization period of 7 days

(STAMP & SIGNATURE OF BIDDER)

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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MEASUREMENT OF WORK

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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ANNEXURE-4 TO SCC

MEASUREMENT OF WORK

1. GENERAL

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.

- 1.1. Payment will be made on the basis of joint measurements taken by Contractor and certified by TPIA Engineer. Measurement shall be based on “Approved for Construction” drawings, to be the extent that the work conforms to the drawings and details are adequate. Checking of measurement shall be 100% by TPIA, 15% by Site Engineer and 5% by Engineer- In- Charge/Work-In-Charge.
- 1.2. 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.
- 1.3. Measurements of weights shall be in metric tons corrected to the nearest Kilogram. Linear measurements shall be in meters corrected to the nearest centimeters.
- 1.4. Welds, bolts, nuts, washers etc. shall not be measured. Rates for structural steel work shall be deemed to include the same.
- 1.5. 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.
- 1.6. 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 (Meter)
 - iii) Number : No.
 - iv) Volume : Cu.M
 - v) Area : Sq.M

2. PIPING

Length of pipes shall be measured along the curvilinear centre of the pipelines laid/ installed and shall include all types of fittings, bends etc. but excluding all types of valves. Length of valves shall be excluded from piping measurement and shall be considered on a number basis.

3. FOR PIPELINE CROSSINGS BY HDD (if required) / BORING / MOLING METHOD

Payment shall be made as specified in SOR, PJS and Technical Specification.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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TERMS OF PAYMENT

ANNEXURE-5 TO SCC

1. 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 Engineer-In-Charge as per the agreed milestone payment schedule and the percentage break-ups given below.

Contractor shall submit his invoices to the Engineer-In-Charge monthly in the manner as instructed by Owner. Each invoice will be supported by documentation acceptable to Engineer-In-Charge and certified by the Engineer-In-Charge. 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 and payment shall be made as per the following terms: -

A. SOR Item for Pipeline laying and Valve Installation:

- **Milestone – 1:** 65% on completion of installation & laying work and testing of all joints (RT, Ultrasonic etc.).
- **Milestone – 2:** 25% on completion of hydrotest, nitrogen purging, Commissioning & charging of steel pipeline.
- **Milestone – 3:** 10% after completion of all work, submission of all documents and final closure.

Notes:

- a. For submission of any RA, minimum stretch executed in continuity / continuous span shall be 2 kms.
- b. For clearance of Milestone -2 of 25% payment, CONTRACTOR shall submit all reports, pipe book, As Built drawing, RT, installed Route Marker/Pole Marker, Construct Wall Chamber etc.

B. SOR Item for TCP/ Restoration/ Permanent Markers/ DRS Installation/Supply of Material etc.

- **Milestone – 1:** 90% on supply of materials at site including submission of inspection & test reports along with Approved QAP, installation & commissioning of material and certification by Engineer-in-Charge.
- **Milestone – 2:** 10% after completion of all work, submission of all documents and final closure.

C. ANY OTHER WORK (NOT MENTIONED ABOVE)

- a) Completion of individual work as per SOR including supply (wherever applicable): 90%
- b) Completion of all activities and their acceptance submission of final documents, final bill and acceptance of these by owner thereafter for successful closure of work order: 10 %

Note: Any further breakup of each activity for the payment purpose can be done depending upon the site situation / requirement and recommendation by EIC and approval of construction in-charge

2. PAYMENT METHODOLOGY

- i. The Contractor shall raise invoices on monthly basis. Bidder shall enclose all documents as per checklist issued by GSRJL/TPIA including during Kickoff meeting
- ii. The payment of the contractor will be released within 15 days from the date of receipt of bill duly certified by TPIA/Site Engineer and EIC. GSRJL will release payment through e-payments only as detailed in bidding document.
- iii. All payments against running bills are advance against the work and shall not be taken as Final acceptance of work / measurement carried out till the final bill.
- iv. Further break-up of Lumpsum Prices, if deemed necessary for any progressive payment of individual item may be mutually arrived at between Engineer-in-Charge and the Contractor.
- v. Successful bidder(s) to submit material reconciliation certificate along with each bill.
- vi. Bills shall be raised by contractors in line with check list attached in Tender document.

Payment of supplier/ contractor / service provider/ consultant shall be processed only after fulfillment of above requirement.

- vii. Gasonet Services (RJ) Ltd. (GSRJL) PAN No. is AAJCG7695R

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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CONDITIONS FOR ISSUE AND RECONCILIATION OF MATERIAL

ANNEXURE-6 TO SCC**CONDITIONS FOR ISSUE OF MATERIALS**

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.

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 the plant without a gate pass.

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

Reconciliation of Owner supplied materials:

Every month, the contractor shall submit an account for all materials issued by Owner in the Performa 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 Performa prescribed by the Engineer-in-charge.

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

All Pipe in length of 2 Meter and above shall be considered as serviceable material provide the material is in good and acceptable condition and has clear identification and traceability (Manufactures name, heat Number / batch number and test certificate). Pipe in Length less than 2 Meter shall be treated as Scrap.

The scrap allowance for pipes issued by the Owner shall be 3% (2½% accountable + ½% non accountable) of the actual consumption as incorporated in the works.

For the non-account of pipes drawn by the Contractor over and above the actual consumption as determined by the Engineer-in-Charge, plus 3% (2½% accountable + ½% non-accountable) thereof to cover the scrap allowance, recovery at penal rate shall be effected from the Contractor's bill(s) or from any other dues of the Contractor to the

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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Owner.

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. 200% 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. 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.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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**LIST OF MINIMUM NOS. OF CONSTRUCTION EQUIPMENT TO BE
DEPLOYED AT SITE**

ANNEXURE-7 to SCC

LIST OF MINIMUM NOS. OF CONSTRUCTION EQUIPMENT TO BE DEPLOYED AT SITE.

S. No.	Equipment Description	Required Qty
1	JCB Or, Excavator / Back-Hoe (Hitachi 60 or equivalent)	3
2	Hydra-(8-10MT)	2
3	Diesel Welding Machine	10
4	DGSet120kVA+Stabilizer	As Required
5	Bevelling Machine	1
6	External Clamp ND 8"/4"/2"	2 No's for each size
7	External X-ray Unit (Complete)	2
8	Gamma Ray Unit(Complete)	1
9	Radiography Film Viewer	1
10	Sand Blasting Unit(Complete)	1
11	Air Compressor (Minimum300CFM)	1
12	Air Compressor(Minimum600CFM)	1
13	Holiday Detector	2
14	Dewatering Pump	3
15	Water Filling Pump of Adequate Capacity	1
16	Dosing Pump of Adequate Capacity	1
17	Pressurization Pump–Motorized (Adequate capacity)	1
18	Complete hydro testing kit (dead weight tester, pressure instrument, temperature inst. Etc.)	1
19	Pipe Bending Machine	1
20	Horizontal Augur Boring Machine	1
21	HDD Machine with adequate pipe pulling capacity>10Tminimumalong with complete accessories/equipment	1
22	Pipe Trailers of adequate size	2

1. Details of minimum equipment in good working condition suitable to lay the Pipeline, required to be mobilized by the execution contractor to complete the work within schedule is given above for each Section. Bidder is required to augment the above list with additional numbers / categories of equipment as per actual requirement and instruction of Engineer-In-Charge without any additional financial implication to client.
2. Contractor to ensure WELDING & NDT procedure and welders are qualified within 15 DAYS time after award of contract.
3. Bidder shall replace any defective / damaged equipment promptly to complete the work without any time & cost implication to the client / owner.

4. After completion of certain activities, in case equipment are not required the same can be demobilised with prior approval of Engineer-In-Charge.
5. For all the above listed equipment, bidder is required to give an undertaking for deploying the equipment during execution of the contract.

**SCHEDULE OF SKILLED MANPOWER / LABOUR TO DELOYED PER
SECTION**

ANNEXURE-8 to SCC

MINIMUM NUMBER OF SKILLED MANPOWER TO BE DEPLOYED PER SECTION

Sl. No	Description	Requirement
1	Resident Construction Manager/Section In-charge	1
2	Planning engineer	1
3	QA/QC engineer	1
4	Safety officer	1
5	Qualified Surveyor	1
6	Welding/NDT engineer	2
7	Discipline Engineer's (Civil / Mech.)	2
8	Foreman/Supervisor	5
9	Civil surveyor/liaison team	1
10	Document controller	1
11	Storekeeper/store in-charge	1
12	Welder (Manual)	10
13	Fitter	2
14	Grinder	4
15	Machine operator	4
16	Blast cleaning crew	1
17	Electrician/Machine mechanic	1
18	Rigger	10
19	Drivers	As required
20	Pipe bending	1
21	Thrust/Bore Auger Boring crew	1
22	X-ray/Gamma Ray crew	1
23	Hydro testing crew	1
24	Field joint coating crew	1
25	Holiday testing crew	1
26	HDD crew	1 As required
27	HDPE Jointing Crew	1
28	Civil survey crew (with equipment)	1
29	Station civil works (carpenter/bar-bender/mason/fitter etc.)	As required
30	Unskilled workers	20
31	Station mechanical, pre-fabrication/erection crew	1

The above proposed list of skilled manpower is the minimum to be deployed by Contractor.

1. HDD equipment and Crew as required shall be deployed based on the SOW finalized and as per instruction of EIC.
2. The details of minimum manpower required to be mobilized by the execution contractor to complete the work within schedule is given above for each section and is not exhaustive.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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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.

	SPECIAL CONDITION OF CONTRACT AND SCOPE OF WORK FOR CS PIPELINE LAYING	Ref: GSL/CS/25-26/03
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SPECIFICATION OF PIPING MATERIALS

Annexure-9 to SCC

List of Specifications of Piping Materials					
S.NO.	ITEM	SHORT CODE	SIZE FROM - THRU	DIMENSION STANDARD	MATERIAL
1	PIPE	P	1/2" - 2"	ANSI B36.10	ASTM A 106 Gr. B
			4"	API 5L	API 5L Gr. X-52
			6"	API 5L	API 5L Gr. X-52
			8"	API 5L	API 5L Gr. X-52
2	ELBOWS 90 DEGREE	E90	1/2" - 8"	ASME B16.9	ASTM A 234 WPB
3	ELBOWS 45 DEGREE	E45	1/2" - 8"	ASME B16.9	ASTM A 234 WPB
4	ELBOWS 30 DEGREE	E30	1/2" - 8"	ASME B16.9	ASTM A 234 WPB
5	ELBOWS 22.5 DEGREE	E22.5	1/2" - 8"	ASME B16.9	ASTM A 234 WPB
6	ELBOWS 15 DEGREE	E15	1/2" - 8"	ASME B16.9	ASTM A 234 WPB
7	REDUCERS CONCENTRIC	RC	3/4" - 8"	ASME B16.9	ASTM A 234 WPB
8	REDUCERS ECCENTRIC	RE	3/4" - 8"	ASME B16.9	ASTM A 234 WPB
9	TEE EQUAL	TEE	3/4" - 8"	ASME B16.9	ASTM A 234 WPB
10	WELDOLETS	WD	3/4" - 8"	MANUFACTURER	ASTM A 105
11	CAPS	C	1/2" - 8"	ASME B16.9	ASTM A 234 WPB
12	WN FLANGES	WN	1/2" - 8"	ASME B16.5	ASTM A 105
13	BLIND FLANGES	BF	1" - 8"	ASME B16.5	ASTM A 105
14	STUD BOLTS	SB	1/2" - 8"	ANSI B18.2.1 ANSI B18.2.2	ASTM A194 ASTM A 193
15	GASKETS SPIRAL WOUND	GSB	1/2"-8"	ASME B16.20	ANSI 304