

Part II

Draft Form of Contract

for

**Enhancement of Side Slopes of Storm
Water Drainage Canal in Activation
Area in DSIR**

Dholera Industrial City Development Limited (DICDL)

6th Floor, Block No. 1 and 2, Udhog Bhavan,

Sector-11, 'GH-4' Circle, Gandhinagar – 382017

Gujarat, India

February' 2020

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Section 1. Standard Form of Contract

STANDARD FORM OF CONTRACT

CONTRACT FOR

Between

[Name of Employer]

[Name of Contractor]

[Date]

I Draft Form of Contract

Contract to undertake [name of assignment]

This CONTRACT (hereinafter called the “Contract”) is made on the [Date in words] day of the month of [month] [year in ‘yyyy’ format], by and between

The Dholera Industrial City Development Limited, a company incorporated under the Companies Act, 1956, having its Registered Office at 6th Floor, Block No. 1 and 2, Udyog Bhavan, Sector-11, ‘GH-4’ Circle, Gandhinagar – 382017 Gujarat, India, hereinafter referred to as the “Employer” which expression unless repugnant to context or meaning thereof shall include its successors, affiliates and assigns) of the First Part.

AND,

[Name of Contractor and registered address]

(Hereinafter called the “Contractor”) which expression unless repugnant to context or meaning thereof shall include its successors, affiliates and assigns) of the Second Part

WHEREAS

- a) The Employer has requested the Contractor to provide certain construction services as defined in the General Conditions attached to this Contract (hereinafter called the “Services”);
- b) The Contractor, having represented to the Employer that they have the required professional skills, construction personnel and technical resources, have agreed to provide the services on the terms and conditions set forth in this Contract.

NOW THEREFORE the parties hereto hereby agree as follows:

- a) The following documents attached hereto shall be deemed to form an integral part of this Contract:
- b) The General Conditions of Contract (hereinafter called “GC”);
- c) The following Appendices:

Appendix A: Bill of Quantities (BOQ)

Appendix B: Copy of Letter of Award

Appendix C: Copy of letter of Award/ acceptance by Consultant

Appendix D: Specifications

Appendix E: Copy of Bank Guarantee for Performance Security and insurances

Appendix F: Response to queries and Addendum issued during bid processing

Appendix G: Correspondences

1. The mutual rights and obligations of the Employer and the Contractor shall be as set forth in the Contract; in particular:
 - a) The Contractor shall carry out the work in accordance with the provisions of the Contract; and
 - b) The Employer will make payments to the Contractor in accordance with the provisions of the Contract.
2. Priority of documents: The Parties expressly agree that in the event of any conflict, inconsistency or contradiction between any clauses forming part of the documents constituting the Contract, and more particularly mentioned in Clause 1 (of this contract) hereinabove, the documents shall be interpreted in the following order of precedence:
 - a) The provisions of this Contract shall override all provisions of other documents comprising the Contract.
 - b) the provisions of the GCC shall be subject to the Contract, but shall override all provisions of other documents comprising the Contract;
 - c) the Appendices shall subject to each of the Contract, and the GCC.
 - d) Any decision of the Employer in relation to the priority of documents shall be final and binding upon the Contractor.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

FOR AND ON BEHALF OF DICDL

[Signature]

[Name]

[Designation]

FOR AND ON BEHALF OF CONTRACTOR

[Signature]

[Name]

[Designation]

Witness:

1. [Signature, name and address]

2. [Signature, name and address]

II General Conditions of Contract

1.1 Definitions

In the contract (as hereinafter defined) the following words and expression will have the meanings hereby assigned, to them:

- a. Approved/ Approval means approved in writing.
- b. Construction plant means all equipment, appliance or things of whatsoever nature required for the execution, completion or maintenance of the works or temporary works but do not include materials or other things intended to form or forming part of the permanent work.
- c. Contract means the contract Agreement entered between the Employer and Contractor. The instruction and information, general rules and direction for tenderers, terms and conditions of contract, specification, drawings, the schedules of quantities and tender prices, the formal agreement and all addenda (including corrigendum if any) and attachments related to the above, referred in the contract agreement shall constitute the contract.
- d. Contractor means the particular person, firm or Company or Group of firms or Companies or his designated representative with whom the contract has been made for executing the works and includes his legal successors.
- e. Day means a day from midnight to midnight.
- f. Defects liability period shall mean 24 (Twenty-four) months from the certified date of completion. (The certified date of completion shall be in accordance with Clause – 1.43.).
- g. Drawings means the drawings referred to in the specifications, any modification of such drawings approved in writing and such other drawings as may from time to time be furnished or approved in writing by the Employer.
- h. Employer/ Owner mean Dholera Industrial City Development Ltd and include its legal successor.
- i. Employers Representative: Person/Agency appointed by the Employer to Discharge its Obligations under this Contracts.
- j. IS means Indian Standards, prescribed by the Bureau of Indian Standards
- k. Month means period from the beginning of a given date of a calendar month to the end of the preceding date of the next calendar month.
- l. Site means the lands and other places on, under, in or through which, the works are to be executed or carried out and any other lands or places provided by the owner for the purposes of the contract together with such other places as may be specifically designated in the contract or subsequently approved as forming part of site.

- m. Temporary Works means all temporary works of every kind required for the performance of the contract.
- n. Tended Amount means the total tender amount indicated in the letter of acceptance of the tender.
- o. The expression “work” or “Works” where used in these conditions shall, unless, there be something in the subject or context repugnant or such construction be construed to mean the work, or the works contracted to be executed under or in virtue of contract, whether temporary or permanent, and whether original, altered, substituted or additional.
- p. Week means seven consecutive days.
- q. S.O.R. means Schedule Of Rates.

1.2 Interpretations

Words imparting the singular only, also include the plural, he includes she and vice versa unless this is repugnant to the context. Wherever the term “Specification” is used apart from a specified standard specification, it shall mean the specification or plan prepared for a particular item as per the instruction to the Contractor in executing that item of works.

1.3 Language of Contract

All written matter and correspondence in connection with the Contract shall be in English.

1.4 Contract Document and Matters to be treated as Confidential

All documents, correspondence, decision and order concerning the contract shall be considered as confidential and/or restricted in nature by the Contractor and he shall not divulge or allow access to them by any unauthorized person.

1.5 Stamp Duty

The Stamp Duty for entering into agreement shall have to be paid by the Contractor.

1.6 Performance security

- a. The Contractor shall, for the performance of its obligations hereunder during the Construction Period, provide to the Employer, within 30 (Thirty) days of the date of issue, of letter accepting the tender, an irrevocable and unconditional guarantee from a Bank in the form set forth in Part II, section 2 Annexure I -A (the “**Performance Security**”) for an amount equal to 5% (Five Percent) of the Contract Price in case of sole bidder and 4 % (Four percent) in case with JV Partner.

In addition to above the JV partner, if so, shall, for the performance of its obligations hereunder during the Construction Period, provide to the Employer, within 30 (Thirty) days of the date of issue, an irrevocable and unconditional guarantee from a Bank in the form set forth in Part II, section 2 Annexure I – B (the

“**Performance Security**”) for an amount equal to 2% (Two Percent) of the Contract Price.

- b. In addition to the above, the Employer shall deduct security deposit from the intermediate bills i.e. the running account bills an amount at the rate of 5% (five percent) of the total amount of each bills, as a remaining Security Deposit subject to the condition that the total amount of such deductions shall not exceed 5% (Five percent) of the Tendered amount put to Tender as mentioned in the letter of acceptance of the tender.
- c. The Bank Guarantee must remain valid for at least three months after the Defect Liability Period is over.
- d. Fifty percent (50%) of the Security Deposit less any amount due shall be returned to the contractor after completion of the Works as per clause no 1.43 and the remaining Fifty percent (50%) of the security deposit shall be returned only after three months of the defect liability period is over and subject to the Employer certifying that no liability is attached to the contractor.
- e. Additional security deposit shall be furnished by the bidder as decided by the Employer’s authority at the time of entering into contract, if any.

1.7 Actions When Performance Security is forfeited

1.7.1 In any case, in which under any clause or clauses of this contract, the Contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit (Whether paid in one sum or deducted by instalments) or in the case of abandonment of the work owing to serious illness or death of the Contractor or any other cause, the Employer’s Representative on behalf of the Employer, shall have powers:

- a. To rescind the contract (of which rescission notice in writing to the Contractor under the hand of Employer’s Representative shall be conclusive evidence) and in that case the security deposit of the Contractor shall stand forfeited and be absolutely at the disposal of the Employer.
- b. To employ labour paid by Employer and to supply materials to carry out work , or any part of the work, debiting the Contractor with the cost of the labour and the price of the materials (as to the correctness of which cost and price, the certificate of the Employer’s Representative shall be final and conclusive against the Contractor) and crediting him with the value of the work done in all respects in the same manner and at the same rate as if it had been carried out by the contractor under the terms of this contract and in that case the certificate of the Employer’s Representative to the value of the work done shall be final and conclusive against Contractor.
- c. To order that the work of the Contractor be measured up and to take such part thereof as shall be unexecuted out of hands, and to give it to another Contractor to complete, in which case any expenses which may be incurred in excess of the sum which would have been paid to the original Contractor if the whole work had been executed by him (as to the amount to which excess expenses

the certificate in writing of the Employer's Representative shall be final and conclusive) shall be borne and paid by the original contractor and shall be deductible from any money due to him by the Employer under this contract from his security deposit or the proceeds of sale thereof or a sufficient part thereof.

- 1.7.2 In the event of any of the course being adopted as per clause 1.7.1 above by the Employer's Representative, the Contractor shall not claim to compensate for any loss sustained by him by reason of his having purchased or procured any materials, or made any advances on this account or with a view to the execution of the work or the performance of the contract and in case the contract shall be rescinded under the provision aforesaid, the Contractor shall not be entitled to recover or be paid any sum for any work thereof actually performed by him under this contract unless and until the Employer's Representative shall have certified in writing the performance of such work and the amount payable in respect thereof and shall only be entitled to be paid amount so certified.
- 1.7.3 If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies than unless the accepting authority is satisfied that legal heirs or representatives of the individual Contractor or of proprietary concern, are capable of carrying out and complete the contract, as the accepting authority shall be entitled to cancel the contract, as to its uncompleted part by forfeiting the security deposit under clause 1.7.1(a) without Employer being in anyway liable to pay any compensation to the heirs of the deceased contractor on account of the cancellation of the contract. The decision of the Accepting Authority that the legal representatives of the deceased contractor cannot carry out and complete the contract shall be final and binding on the parties. In the event of such a cancellation, Employer shall not hold the heirs of the deceased Contractor liable for damages for not carrying out the work remaining incomplete as on the date of death of individual Contractor or the proprietor.
- 1.7.4 In any case in which any of powers conferred upon the Employer's Representative under clause 1.7.1 hereof shall have become exercisable and the same shall not have been exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable at any future date.
- 1.7.5 In the event of the Employer's Representative taking action under clause 1.7.1 to 1.7.4 he may if so desires, take possession of all or any tools, plants, machineries, materials and stores in or upon the work or the site thereof or belonging to the Contractor or procured by him and intended to be used for the execution of the work or any part thereof, by paying or allowing for the same in account at the contract-rate or in case of contract rates not being applicable at such reasonable rates, as may be comparable with current market rates where ascertainable of similar articles and comparable condition, to be certified by the Employer's Representative. In the alternative the Employer's Representative may by notice, in writing to the Contractor or his clerk of the works. Foreman or other authorized agent require him to remove such tools, plants, machineries, materials or stores from the premises within a time to be specified in such notice and in the event of the Contractor failing to comply with any such requisitions, remove them at the Contractor's expenses or shall remove them by auction or private sale at the risk and cost of the Contractor in all respect, and the certificate of the Employer's Representative as to the expenses of any such removal and the amount of the proceeds shall be final and conclusive against the Contractor.

1.8 Setting Out

The Contractor shall establish at his cost reference points, reference lines and bench marks at suitable points as may be considered necessary by the Employer's Representative. The Contractor shall be responsible for the proper setting out of the works and the correctness of positions. Levels, dimensions and alignments of all parts of the work and for the provision of all necessary instrument, appliance and labour in connection therewith. If, at any time, during the progress of the work any errors, appear or arise in the positions, levels, dimensions or alignments of any part of the work, the contractor on being required to rectify such errors by the Employer's Representative shall rectify it at his own expense to the satisfaction of the Employer's Representative. The checking of and setting out of any line or level by the Employer's Representative or the representative shall not in any way relieve the contractor of his responsibilities for the correction of the error. The Contractor shall carefully protect and observe all bench marks, site nails, pegs and other things used in setting out of the work(s).

1.9 Progress Schedule

- a. The Contractor shall furnish to the Employer's Representative within one week micro level planning from the date of the order to start the work, the progress schedule in quadruplicate indicating the date of starting, the monthly progress expected to be achieved and the anticipated completion date of each major item of work to be done by him, also indicating dates of procurement and setting up the materials, plants and machinery. The schedule should include a statement of proposed general and detailed arrangements for carrying out works, and of item, order and manner in which it is proposed that these shall be executed. The schedule should be framed keeping in view the requirement of the terms and conditions and be such as in practice to the achievement towards completion of the work in the time limit and of the particular items on the dates specified in the contract and shall have the approval of the Employer's Representative. Further, the dates for the progress, indicated in the schedule shall be adhered to.
- b. The Employer's Representative shall have, at all times, the right, without in any way vitiating this contract forming grounds for any claim, to alter the order of the work or any part thereof and the Contractor shall after receiving such direction, proceed in the order directed. The Contractor shall also revise the progress schedule accordingly and submit four copies of the revised schedule to the Employer's Representative within seven days of the said Engineer's direction to alter the order of works.
- c. The Contractor shall furnish sufficient plant, equipment and labour and shall work such hours and shifts as may be necessary to maintain the progress of the works as per approved progress schedule. The working and shift hours shall comply with all the Employer's regulations in force and shall be such, as may be approved by the Employer's Representative and the same not be varied without the prior approval of Employer's Representative.
- d. The Contractor shall from time to time as may be required by the Employer's Representative, furnish the Employer's Representative with a statement in writing of the arrangements he proposes to adopt for the execution of this contract and the

Employer's Representative, may if he considers necessary at any time advice alteration in the same, which the Contractor shall adopt on notice thereof.

- e. The progress schedule(s) shall be in the form of progress chart, forms, statements and/ or reports prepared in latest version of Microsoft Project or Primavera as may be approved by the Employer's Representative.
- f. In case it is found necessary, at any stage to alter the schedule, the Contractor shall submit in good time a revised schedule incorporating necessary modifications proposed and get the same approved from the Employer's Representative.

Revised schedule shall not be operative without such acceptance in writing. The Employer's Representative is further empowered to ask for more detailed schedule or schedules say week by week, for any item or items and the Contractor shall supply the same as and when asked for. The approval of the progress-schedules by the Employer's Representative shall not relieve the contractor of any of his duties, responsibilities under the contract. The adoption of any modification in the schedule required by the Employer's Representative shall not entitle the Contractor to any extra payment. The contractor shall submit four copies showing the progress of work in the form of a chart etc. at periodical intervals as may be specified by the Employer's Representative.

1.10 Action when the progress of the work is unsatisfactory

If the progress of any particular portion of the work is unsatisfactory, the Employer's Representative shall, notwithstanding that the general progress of the work is satisfactory, in accordance with clause 1.56, be entitled to take action under clause 1.7.1(b) after giving the Contractor 10 days' notice in writing and the Contractor will have no claim what so ever for any compensation or loss sustained by him in owing to such action.

1.11 Commencement of work, Time for completion and extension of time

The contractor shall commence the work immediately upon the Signing of Contract Agreement and proceed in accordance with the time schedule furnished pursuant to Clause 1.9 and complete the work in all respects within 12 (Twelve) months from notification of award. If the contractor desires for an extension of time for completion of the work on the ground of his having been unavoidable hindered in its execution or any other ground, he shall apply in writing to the Employer's Representative before the expiry of the period stipulated in the tender or the expiry of 30 days from the date on which he was hindered whichever is earlier and the Employer may, if in their opinion, believes that there are reasonable grounds for granting the extension, grant such extension, as he thinks necessary or proper. The decision of the Employer in this matter shall be communicated to the Contractor by the Employer's Representative and shall be final.

1.12 Action where no specifications

- 1.12.1 In the case of any type of work for which there is no specifications, such work shall be carried out in accordance with the Employers specifications and in the event of there being no Employers specifications, then, in such case the work shall be carried out in all respects in accordance with the instructions, and requirements of the Employer's

Representative.

1.12.2 Purpose of Drawings and specifications and conformance thereto shall be treated as under:

- a. The contract drawings read together with the contract specifications are intended to show and explain the manner of executing the work and to indicate the type or class of materials to be used.
- b. The work shall be carried out in accordance with the directions of the Employer's Representative in accordance with such further drawings, details and instructions as may be given by the Employer's Representative, from time to time.
- c. It shall be the responsibility of the contractor to promptly bring to the notice of the Employer's Representative any error or discrepancy in the contract documents and obtains his orders thereon. Only stated dimensions are to be taken and not those obtained from scaling the drawings. In case of any discrepancy between the description of an item in the Appendix-A and the specifications, the later shall prevail and in case any discrepancy between the specification and drawings, the drawings shall prevail. In case any feature of the work is not fully described and set forth in the item drawings and specification, the contractor shall forthwith apply to the Employer's Representative for further instructions, drawings or specifications.

1.12.3 Modifications

- a. The Employer's Representative may order modifications at any time before completion of the work. No modification shall be made unless so ordered in writing.
- b. For all modification, the Employer's Representative will issue revised plans.

1.12.4 Signed Drawings – No Authority to the contractor

Signed drawings alone shall not be deemed to be an order for the work unless it is entered in the agreement or schedule of drawings under proper attestation of the contractor and the Employer's Representative or unless it has been sent to the contractor by the Employer's Representative with a covering letter conforming that the drawings is an authority for the work under the contractor.

1.12.5 Copies of drawings and specifications

Copy of the typical modified or supplementary drawings and the specifications shall be furnished to the contractor.

1.13 Land required by the Contractor

The Contractor shall have to make his own arrangement for land required by him for his camp, workshops, labour camps, stock-piling of materials and machineries etc.

1.14 Entering Upon or Commencement of Work

The contractor shall not work upon or commence any portion of work except with the written authority and instruction of the Employer's Representative of the work, failing

which the contractor shall have no claim to ask for measurement or payment for work.

1.15 Accesses to Site and Work

The Employer/ Employer's representative may, if he consider fit from time to time, enter upon any land(s), which may be in possession of the Contractor under this contract for the purpose of executing any work not included in this contract and may execute such work not included in this contract by agents or by other Contractor in his opinion and the Contractor shall, in accordance with the requirements of the Employer's Representative, afford all reasonable facilities for execution of the work including occupation of lands by structure or otherwise for any other Contractor employed by the Employer and his workmen or for the workmen of the Employer who may be employed in the execution on or near the site of the work not included in the contract or of any contract-in connection with or ancillary to the work and in default, the Contractor shall be liable to the Employer for any delay or expense incurred by reason of such default, provided always that if the exercise of these powers shall cause any damage to the construction, he may, within, fifteen days of such damage arising make statement of the same to the Employer's Representative who shall, from time to time, assess the value in his judgment of such damage and the Employer shall from time to time pay to the Contractor the amounts (if any) accepted as justified by the Employer's Representative.

1.16 Works to be executed under direction of Employer's Engineer

The Employer shall, at its own cost and expenses, appoint an Employer's Engineer to assist in due discharge of its obligations. All communications related to contract management on this project shall be submitted to Employer's Engineer for final approval of employer.

All works to be executed under the Contract shall be executed under the direction of Employer's Engineer and subject to approval in all respect of the Employer who shall be entitled to direct at what point or points and in what manner they are to be commenced and from time to time carried on.

1.17 Materials and Workmanship

1.17.1 Materials

a. All materials, articles and workmanship shall be of the most suitable quality for the work. The unit rates quoted shall deem to have included procurement, transport, handling, storage etc.

b. Equivalency of Standards and Codes

Wherever reference is made in the Contract to the respective standards and codes in accordance with which goods and materials are to be furnished, and works is to be performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly set forth in the Contract. Where such standards and codes are national in character, or relate to a particular country or region, other authoritative standards which ensure an equal or higher quality than the standards and codes specified will be accepted subject to the Employer's Representative prior review and written

approval. Differences between the standards specified and the proposed alternative standards must be fully described in writing by the Contractor and submitted to the Employer's Representative at least 30 days prior to the date when Contractor desires the Employer's Representative's approval. In the event the Employer's Representative determines that such deviations do not ensure equal or higher quality, the Contractor shall comply with the standards set forth in the contract documents.

- c. The Contractor shall without extra cost provide sample for the testing of materials and facilitate inspection of the works. The Employer's Representative shall have access at all times to the places of storage and to the places where materials are being manufacture or processed for use on the works under the Contract, to determine whether their manufacture and process are proceeding in accordance with the drawings and specifications.
- d. All materials, articles shall be specified and in accordance with the instructions of Employer's Representative.

1.17.2 Workmanship

The Contractor shall execute the whole and every part of the work in substantial and workman-like manner and both as regards materials and in other respects in strict accordance with specifications. The Contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing for the work signed by the Employer's Representative.

The Contractor will be entitled to receive the certified copy of the accepted tender along with the work order free of cost and will also be entitled to receive, on request two sets of working drawings, according to the progress of work, as and when needed, free of cost.

1.17.3 Employment of Qualified Engineer

The contractor shall employ a full time technically qualified staff during the execution of this work. The engineers so employed for the work must have sufficient experience to handle the work independently. Such Engineers shall have to stay at the site of work and they shall not be entrusted with any other duty except of this work.

Even if the contractor or a partner of the contractor, firm is a graduate Civil Engineer, employment of adequate number of engineers will however be necessary for the execution of the work on site as may be decided by the Employer's Representative.

1.17.4 Work to be open for inspection - Contractor or Responsible Agent to be present

All works under or in course of execution or executed in pursuance of the contract shall, at all times be open for the inspections and supervision of the Employer's Representative and his sub-ordinate and the contractor shall, at all times during the usual working hours and all other times at which reasonable notice of the intimation of the Employer's Representative or his sub-ordinate to visit the works shall have been given to the Contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing present for that purpose. Orders given to the Contractor's duly authorized agent shall be considered to have the same force and effect as if they had been given to the Contractor himself.

1.17.5 Notice to be given before work is covered up

The contractor shall give not less than five days' notice in writing to the Employer's Representative or his subordinate in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof taken before the same is so covered up or placed beyond the reach of measurement, any work without the consent in writing of the Employer's Representative or his subordinate in charge of the work and if any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained, the same shall be uncovered at the Contractor's expense and in default thereof no payment or allowance shall be made for such work or for the materials with which the same was executed.

1.17.6 Action and Compensation for Bad Work

If at any time before the expiry of Defects Liability period as detailed in clause 1.17.7, it shall appear to the Employer's Representative or his subordinate in charge of the work, that any work has been executed with unsound, imperfect or unskilled workmanship or with materials of inferior quality or that any materials or articles provided by him for execution of the work are unsound, or of a quality inferior to that contracted for or are otherwise not in accordance with the contract, it shall be lawful for the Employer's Representative to intimate this fact in writing to the Contractor and then notwithstanding the fact that the work, materials or articles complained of may have been passed. Certified and paid for, the Contractor shall be bound forthwith to rectify, or remove and reconstruct the works so specified in whole or in part as the case may be required or if so required shall remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost, and in the event of his failing to do so within a period to be specified by the Employer's Representative in the written intimation aforesaid, the Contractor shall be liable to pay compensation at the rate of one percent of the amount of the estimate of the rectification for every day not exceeding ten days during which the failure so continues and in the event of any such failure as aforesaid continuing beyond ten days, the Employer's Representative may rectify or remove and re-execute the work or remove and replace the materials complained as the case may be at the risk and expense in all respects of the Contractor. Should the Employer's Representative consider that any such inferior work or materials as described above may be accepted or made use of, it shall be within his discretion to accept the same at such reduced rates as he may fix thereof. However, the contractor shall be responsible for normal maintenance of the work till the final bill for the work is prepared by the Employer.

1.17.7 Defect Liability Period

The contractor shall be responsible to make good and remedy at his own expense any defect which may develop or may be noticed before the period mentioned hereunder from the certified date of completion. The Employer's Representative shall give a notice in writing to the contractor about the defect and the Contractor shall make good the same within 15 days of receipt of the notice. In the case of failure on the part of the contractor, the Employer's Representative may rectify or remove or re-execute the work at the risk and cost of the Contractor. The Employer's Representative shall be entitled to appropriate the whole or any part of the amount of security deposit towards the expenses, if any, incurred by him in rectification, removal or re-execution. The Defects Liability period shall be 24 Months from the certified date of completion (The certified date of completion shall be as per clause 1.43)

1.18 Testing of Materials

- a. All materials before being utilized in works shall be inspected and tested, if found necessary, by the Employer's Representative or his representative. The nature of testing and periodical intervals at which such testing is to be done etc. shall be as per the latest editions of relevant IS Codes and determined by the Employer's Representative. The day-to-day and periodical tests to be carried out on materials mixes and placed concrete, mortar etc. shall be specified by the Employer's Representative from time to time and the Contractor shall provide free of cost all facilities towards collections of samples etc. unless otherwise specified. Labours for collecting samples and transportation of the samples to quality control authorities for test shall be provided free cost of by the contractor. Also electricity, fuel, water curing tank and stores etc. shall be provided free of cost by the contractors.
- b. The materials shall be tested at any place directed by the Employer's Representative. The Contractor shall obtain the test results from the concern authority and the results given by such authorities shall be considered to determine whether all materials, workmanship are of respective standard described in contract and in accordance with the instructions of the Employer's Representative. The Contractor's representatives shall, however, be given access to all operations and tests that may be carried out as aforesaid so that he may satisfy himself regarding the procedure and methods adopted. It shall then be the Contractor's responsibility to produce on the work, materials and finished item to the standard as determined by the laboratory tests or to take follow up action to rectify the quality.

All Testing charges shall, however, be borne by the Contractor.

- I. When the supply of the samples and the carrying out of such test at Contractor's cost is provided for or clearly intended in the Contract and is carried out either at the site of work or at place of manufacturer.
 - II. When the supply of the samples and the carrying out of such tests is not provided for or clearly intended in the contract, but on testing the material is found defective and has to be rejected.
 - III. Testing charges for testing of Cement, TMT bars, RCC pipes, M.S. pipes and all materials to be used in the works including cost of samples and its collection shall be borne by the Contractor.
- c. The Contractor shall, however, supply all materials, required for tests and also make good at his cost, materials, mixes and bore/ core hole with similar or other materials as may be directed by and to the satisfaction of the Employer's Representative.
 - d. The Contractor shall make suitable arrangements to see that one of his representatives remains present at the time of taking samples and shall authenticate the facts. If the Contractor, fails to keep his representative present at site at the time of taking samples or fail to provide required labours and other equipment to collect the samples, the same shall be taken by the Employer, and the samples selected shall be considered as authentic. The cost incurred by the Employer when the Contractor fails to provide required men and materials for collecting samples and or their transport shall be recovered from the Contractor.

1.19 Quality Assurance

1.19.1 Assurance Programme

In addition to the testing procedure as laid down in clause -1.18 (Testing of Materials), the contractor shall submit a detailed field Quality Assurance Programme containing the overall quality management and procedures which he proposes to be followed during various phases of constructions as detailed in the relevant clause of the technical specifications of the contract and get it approved from the Employer's Representative within week after the letter of intent is issued. This shall include arrangements of testing apparatus/ instruments covering the requirements of items envisaged in the contract and details of the testing programme. The documents of Quality Assurance Programme shall generally cover but not limited to the following:-

- I. Contractor's organizational structure for the management and implementation of the quality assurance programme.
- II. Sources of various materials.
- III. Inspection and test procedure, both for material and their product and field activities.
- IV. System of handling storage and delivery of material.
- V. Laboratory testing facilities along with test of equipment's proposed to be installed along with a laboratory building plan.
- VI. System of preparation and maintenance of test records.

The Quality Assurance Programme shall also include the programme proposed to be followed by his sub-contractor. Contractor shall bear all cost / expenditure for implementation of provisions made under quality assurance clause.

1.19.2 Testing of Materials

All materials, before bringing to the site of work shall be inspected and tested by the Contractor. For testing, the contractor may set up his own laboratory at his own cost. The place (Laboratory) of testing should be got approved from Employer's Representative. Test results shall be furnished by the contractor to the Employer's Representative. The cost of all such testing shall be borne by the contractor.

After materials are brought to site, if necessary, Employer's Representative or his sub-ordinate shall test in accordance with relevant clauses of contract. In case of discrepancy in the Employer's and contractor's results, the Employer's result shall be final and binding to the contractor. Materials which test result does not conform to the standards and is not acceptable to the Employer's Representative, shall be rejected and removed from the site.

1.19.3 Testing Procedure

The Contractor shall carryout all sampling and testing in accordance with the relevant Indian Standard and / or International Standard or as stipulated in the contract, where

no specific testing procedure is mentioned, the test shall be carried out as per the prevalent accepted engineering practice and direction of the Employer's Representative.

The Frequency of sampling and testing of all materials and products of construction shall be as mentioned in the technical specifications and relevant IS codes used in Practice. In case of discrepancy in the standards, the decision of the Employer's Representative will be final. In case due to changes in the codal provisions during course of execution if the acceptance criteria of the test gets changed, the Contractor shall have to follow the revised criteria of acceptance. The contractor shall not claim for any compensation as a result of rejection of his material or product of construction due to inferior quality on account of such changes. The testing frequencies set forth in different technical specification are the desirable minimum and Employer's Representative shall have a full authority to revise it as he finds necessary to satisfy himself that the quality of materials and the works together comply with appropriate specification requirement.

- 1.19.4 The contractors shall have to use such materials which must fulfil the required qualities as per the specifications. The Employer is not going to compromise with the quality of the work in any case. The Employer may carry out in situ testing for the quality of earth, zoning of earthwork and other important components wherever required. The contractor will be held responsible for poor quality of work if the work is not done as per the specification.

1.20 List of Machinery to be brought and used on works by the Contractor

The Contractor shall furnish list of machinery immediately available with him for use on the work and which they propose to procure for the work.

1.21 Construction at existing utilities

- 1.21.1 Where the work to be performed under these specifications crosses or otherwise interferes with water, sewer, gas or oil pipelines, buried cable or other public or private utilities, the Contractor shall preserve and protect such utilities and shall perform such construction during the progress of the work so that no damage will result to either public or private interests till alternative arrangement for relocating such facilities are made. The term "Watercourses" included ditches, terraces, furrows or other features of surface irrigation systems

It shall be the responsibility of the Contractor to determine the actual locations of and make provision for all watercourses and utilities.

- 1.21.2 Before any watercourse or utility is taken out of service, permission shall be obtained from the Employer by the Contractor. The Contractor shall be liable for all damages that may result from failure to preserve and protect watercourses or utilities during the progress of the work and the Contractor shall indemnify and hold harmless the Employer from claims of whatsoever nature or kind arising out of or connected with damage to water courses or utilities encountered during Construction, damages resulting from disruption of service and injury to persons or damage to property resulting from the negligent, accidental or intentional breaching of watercourses or utilities.

- 1.21.3 If the Contractor does not maintain the existing watercourse and utilities in such condition that no damage will result to either public or private interests, the Employer will make the necessary repairs to be made and recover charges from the Contractor for such work.
- 1.21.4 Except as otherwise provided below, the cost of all work described in this paragraph, shall be included in the price bid in the schedule for relevant other items of work.
- 1.21.5 Where construction of new structures or modification of existing structures are required to render the watercourses or utilities operative beyond the period of the Contract, the Contractor shall notify the Employer's Representative so that the arrangements can be made with the owners for the construction of modifications required. When it is determined that such works are to be performed by the Contractor, and such item of work is not provided for in the schedule, the Contractor shall perform the necessary work in accordance with clause 1.35.
- 1.21.6 In case of watercourses and utilities in addition to those for which details are available with the Employer, all additional work required to be performed by the Contractor as a result of encountering the watercourse or utilities shall be performed in accordance with clause 1.35.
- 1.21.7 In case of forest, nursery or plantation near state highways and National highway for which details are available with the Employer, all care shall be taken by the contractor to preserve the plantation during Construction. If the contractor does not take care to preserve the plantation, the Employer may recover the loss, to forest department, from the contractor.

1.22 Construction at Telephone and Power line Crossings

- 1.22.1 The details of telephone and power-line crossings are available with the office of the Employer's Representative. The concern authorities under agreement with the Employer will remove or raise these lines and relocate them permanently at other locations which will permit the Contractor to proceed with his construction operations without delay.
- 1.22.2 Equipment and vehicles shall not be operated where, it is possible to bring such equipment or vehicles or any part thereof within 5 meters of any high voltage line or installation unless Electricity company/Service provider, has been notified the line de-energized and grounded, and positive control measures taken to prevent points along the conductor will vary due to changing ambient and operating temperatures.
- 1.22.3 The Contractor shall notify Employer's Representative immediately when removal and/or raising and relocation of the utility are required so that he can proceed with construction of the M.S. Pipeline work and roadway relocation at that location in accordance with his sequence of operations. The Electricity company/Service provider, and Telephones Authorities under agreement with the Employer, will perform all work required before, during and after project work and road construction to remove, relocate, and maintain them in service at all times at no cost to the Contractor. The Contractor will not be required to perform any work for the crossings but shall co-operate with The Electricity company/Service provider and Telephone Authorities so that they may perform the required work with as little interference from

the Contractor's operations as is practicable.

1.22.4 If, for his convenience the Contractor wishes the Electricity company/Service provider, and Telephone Authorities to make temporary relocations or minor alterations at existing utility crossing, it will be the Contractor's responsibility to make arrangements with the Electricity company/Service provider, and Telephone Authorities for performing such work and the costs thereof shall be paid to the Electricity company/Service provider, and Telephone Authorities by the Contractor.

1.22.5 The Contractor shall provide for the utility crossings so that no damage will result there to.

1.23 Work during Night or on Sundays and Holidays

The work shall not be carried out during night or on Sunday and authorized holidays without the prior written consent of Employer's Representative. However, it will be allowed to be carried out the work during night, Sundays or authorized holidays subject to:

- a. The provisions of relevant labour laws being adhered to.
- b. Adequate lighting, supervision and safety measures established to the satisfaction of the Employer's Representative.
- c. The Construction programme given by the Contractor and agreed upon by the Employer's Representative envisages such working.
- d. If it is necessary or required to ensure the safety of work, protection of life, or to prevent loss or damage to property.

1.24 Maintaining Public Traffic

1.24.1 The Contractor shall make all necessary provisions including diversion for maintaining the flow of public traffic and conduct his operations so as to offer the least possible obstruction and inconvenience to public traffic. Temporary approaches to crossings or intersecting roads shall be provided and kept in good condition. Public traffic shall be permitted to cross over and pass through construction operations at all times with as little inconvenience and delays as possible and the Contractor shall, when so directed, provide and station competent flagman whose sole duties shall consist of directing and controlling the movement of public traffic either through or around the work operation shall be so conducted as to provide a reasonably smooth, even dustless and unobstructed passage for traffic at all times. Water shall be sprinkled as directed for the abatement of dust in connection with maintaining public traffic. The Contractor shall construct temporary connection of sufficient width for traffic between the existing road way and new construction where necessary. At any and all points along with the work where the nature of the construction operations in progress and the equipment and machinery in use are of such character as to endanger passing traffic, the Contractor shall provide such personnel as may be necessary to safeguard against accidents and avoid damage or injury to passing traffic. At night times, the Contractor should provide barricades around the portion of excavation and have some arrangement in form of posts, warning signboards etc. painted in fluorescent paint to

see that the public traffic moves smoothly without any accident happening to moving traffic and if it is found conclusively that it was because of contractor's mistake in providing adequate arrangement, the contractor shall be responsible for the damage done and will have to compensate the aggrieved persons Employer will not be responsible for such accidents.

1.25 Local and Haul Roads

- 1.25.1 The Contractor shall acquaint himself with the existing public roads and construction road parallel to the Canal near the site of work. The Contractor may construct and maintain additional roads parallel to the Canal and additional roads as required at his expense. Maintenance of these roads including construction road (already constructed and / or to be constructed) shall be done by the Contractor at his own cost till completion of the entire work, under the scope of this contract. The construction roads used by the contractor of this work should be maintained by them with mutual understanding.
- 1.25.2 The Contractor's heavy construction traffic or tracked equipment's shall not travel on any public roads or bridges unless the Contractor has made arrangements with the authority concerned and approval of the Employer's Representative to such arrangements has been obtained.
- 1.25.3 The Contractor shall plan transportation of construction materials to work site in such a way that road accidents are avoided.
- 1.25.4 The Contractor shall construct and maintain at his own cost all suitable temporary haul roads at the work site as may be found necessary by him for execution of the works. The location of all such haul roads and any subsequent modifications thereof shall be got approved by the Employer's Representative.
- 1.25.5 During the period of the Contract, the Employer and other Contractors employed by the Employer will be engaged on other works in the vicinity of the works covered by this contract, the contractor shall allow the Employer and other contractors free and reasonable use of all temporary haul roads except vital haul roads upon which the Contractor may impose restriction to prevent, interruptions to concrete hauling operations. Any such restrictions must be approved by the Employer's Representative.
- 1.25.6 Separate payment will not be made for the construction and maintenance of the temporary haul roads including any necessary special protections or strengthening required and all cost of such works shall be deemed to have included in the cost of the items included in the Appendix 'A'.

1.26 Electric Power & Water

The contractor shall make his own arrangements for electric power supply at his own cost. The Employer shall not take any responsibility for power connection from Electricity Board. The Contractor shall provide and operate generating sets of suitable capacity at required locations at his own cost to meet with the situations arising out of interruptions of electric power supply either or short or long duration. The Contractor shall not raise any claim against the Employer for failure or stoppage of power supply for any reasons whatsoever. Demand charges and any other charges over and above

energy charges as levied by the Electricity Company shall also be borne by the Contractor.

The contractor shall make his own arrangements for water supply at his own cost. The Employer shall not take any responsibility for water connection from the competitive Authority. The Contractor shall provide water storage of suitable capacity at required locations at his own cost to meet with the situations arising out of interruptions of water supply either or short or long duration. The Contractor shall not raise any claim against the Employer for failure or stoppage of water supply for any reasons whatsoever. Demand charges and any other charges over and above water charges as levied by the water supply Authority shall also be borne by the Contractor.

1.27 Other Contractors

1.27.1 When two or more Contractors are engaged on work in the same vicinity, they shall work together in a spirit of co-operation and accommodation. The Contractor shall not take or cause to be taken any steps or actions that may cause disruptions, discontent or disturbance to the works, labour and arrangements of other Contractor in the neighbouring project localities. In case of any difficulties amongst the Contractors, the Employer's Representative shall direct the manner in which each Contractor shall conduct his works so far as it does not affects the others.

1.27.2 It is possible that work at, or in the vicinity of the site of work will be performed by the Employer or by other Contractors engaged in work for the Employer during the Contract period. The Contractor shall without charge permit the Employer and such other Contractor's and other workmen to use the access facilities including roads, lighting installation and any other facilities constructed or acquired by the Contractor for use in the performance of the works till they are required to be maintained for the purpose of this work.

1.28 Ecological Balance

1.28.1 The Contractor shall maintain ecological balance by preventing deforestation, water pollution and defacing of natural landscape. The Contractor shall so conduct his construction operations as to prevent any unnecessary destruction, scarring or defacing of the natural surroundings in the vicinity of the work. In respect of ecological balance, Contractor shall observe the following instructions.

- a. Where unnecessary destruction, scarring, damage or defacing may occur as a result of the operations the same shall be repaired, replanted or otherwise corrected at the Contractor's expense. The Contractor shall adopt precautions when using explosives which will prevent scattering of rocks or other debris outside the work area. All work areas shall be smoothed and graded in a manner to conform to the natural appearance of the landscape as directed by the Employer's Representative.
- b. All trees and shrubbery which are not specifically required to be cleared or removed for construction purposes shall be preserved and shall be protected from any damage that may be caused by the Contractor's construction operations and equipment. The removal of trees or shrubs will be permitted only after prior approval of the Employer's Representative. Special care shall be exercised where trees or shrubs are exposed to injuries by construction equipment, blasting,

excavating, dumping, chemical damage or other operation and the Contractor shall adequately protect such trees by use of protective barriers or other methods approved by the Employer's Representative. Trees shall not be used for anchorages. The Contractor shall be responsible for injuries to trees and shrubbery caused by his operations. The terms 'injury' shall include, without limitation, brushing scarring, tearing and breaking of roots trunks or branches. All injured trees and shrubs shall be restored as nearly as practicable without delay to their original condition at the Contractor's expenses.

- c. The Contractor's construction activities shall be performed by methods that will prevent entrance or accidental spillage of solid matter contaminants, debris and other objectionable pollutants and wastes into Canal. Such pollutants and wastes include earth and earth products, garbage, cement concrete, sewage effluent, industrial wastes, radio-active substances, mercury, oil and other petroleum products, aggregate processing, tailings much products, minerals, salts and thermal pollution. Pollutants and wastes shall be disposed off in a manner and at sites approved by the Employer's Representative.
- d. In the conduct of construction activities and operation of equipment's, the Contractor shall utilize such practicable methods and devices as are reasonably available to control, prevent and otherwise minimize air pollution.
- e. Excessive emission of dust into the atmosphere will not be permitted during the manufacture, handling and storage of concrete aggregate and the Contractor shall use such methods equipment as are necessary for collection and disposal or prevention of dust during these operations. The Contractor's method of storing and handling cement shall also include means of eliminating atmospheric discharge of dust. Equipment and vehicles that give objectionable emission of exhaust gases shall not be operated. Burning of materials resulting from clearing of trees, brush, combustible construction materials and rubbish may be permitted only when atmospheric conditions for burning are considered favorable.

1.28.2 Separate payment will not be made for complying with provisions of this Clause and all costs shall be deemed to have been included in costs of items included in Appendix 'A'.

1.29 Contractors Liability for Damage and Imperfection after Completion Certificate

If the contractor or his workmen, or servant shall break, deface, injure or destroy any part of the work in question in / on which they may be working or any building, road, fence, enclosure or grass land or cultivated ground continuous to the premises on which the work or any part thereof is being executed or if any damage shall occur to the work from any cause whatever before completion of the work or before the completion of the Defect liability period whichever is later or damage occurred / caused due to normal flood or rain or if any imperfection become apparent in it within twelve months from grant of a certificate of completion, final or otherwise by the Employer's Representative the contractor shall make good the same at his own expenses or in default, the Employer's Representative may cause the same to be made good by other contractor and deduct the expenses (of which the certificate of the Employers' Representative shall be final) from any sums that may there after become

due to the Contractor or from his security deposit or the proceeds of sale thereof or a sufficient portions thereof.

1.30 Liability of Contractor for Damage Done in or Out Side Work Area

Compensation for all damage done intentionally or unintentionally by Contractor's labours whether in or beyond limit of the Employer's property including any damage caused by the spreading of fire shall be estimated by the Employer's Representative, or such other officer as he may appoint and the estimates of the Employer's Representative, subject to the decision of the Employer, on appeal, shall be final and the Contractor shall be bound to pay the amount of the assessed compensation on demand, failing which the same will be recovered from the Contractor as damages in the manner as decided by the Employer's Representative and deducted from any sums that may be due or become due from the Employer to the Contractor or under this contract or otherwise.

The Contractor shall bear the expenses of defending any action or other legal proceeding that may be brought by any person for injury sustained by him owing to neglect of precautions to prevent the spread of the fire and he shall also pay the damages and cost that may be awarded by the Court in Consequence.

1.31 Liability of Contractor for Accidents to Persons

In addition to responsibilities and liabilities of the Contractor under workmen's Compensation Act given in clause 1.47 following shall also apply:

- a. On the occurrence of an accident, which results in death of workmen employed by the Contractor or which is as serious as is likely to result in death of any such workmen, the Contractor shall within 24 hours of happening of such accident(s), intimate in writing to the Employer's Representative, the fact of such accident(s). The Contractor shall indemnify the Employer against all loss or damage sustained by the Employer resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or fines, if any, payable by the Employer as a consequence of Employer's failure to give notice under the Workmen's Compensation Act or otherwise to conform to the provisions of the said Act regard to such accident(s).
- b. In the case of an accident, in respect of which compensation may become payable under workmen's Compensation Act, whether by the Contractor or by the Employer, it shall be lawful for the Employer's Representative to retain out of money due and payable to the Contractor such sum or sums of money as may, in the opinion of the Employer's Representative be sufficient to meet such a liability. The opinion of the Employer's Representative shall be final in regard to all matters arising under this Clause.

1.32 Liability of Contractor for Taking over Completed Portion of Work

In the event the Employer takes over portions of works as they are completed, the liability of the Contractor for those portions shall extend to a period of twenty four months from the actual date on which such portions of the works were taken over.

1.33 Indemnities

The Contractor shall indemnify the Employer against all actions, suits, claims and demands, through or made against the Employer in respect of work of this contract and against any loss or damage to Employer in consequence of any action or suit being brought against the Contractor for anything done or omitted to be done in execution of the work of this contract.

1.34 Variation of Quantities and Extra Items

The Employer's Representative shall have authority to make any alterations in the original specifications, drawings, designs and issue instructions that may appear to him to be necessary or advisable during the progress of the work and the Contractor shall be bound to carry out the work in accordance with any instructions in this connection which may be given to him in writing and signed by the Employer's Representative and such alteration shall not invalidate the contract and additional work which the Contractor may be directed to do in the manner specified as part of the work shall be carried out by the Contractor on the same conditions in all respects on which he agreed to do the work and rate as specified below. The quantities shown in the tender are approximate and no claim shall be entertained for quantities of work executed being less than those entered in the Tender.

1.35 Variation in Schedule of Quantities

1.35.1 Increase in Quantities

- a. If the quantity for any individual item increases by a quantity limited to 30 % of tender quantity, such quantity shall be executed only after written approval of the Employer's Representative and paid at tendered rate with price adjustment, if applicable. The contractor shall not undertake any excess beyond 30% / extra work without written orders from the Employer's Representative and any violations to this shall lead to non-payment to the contractor.
- b. No payment shall be entertained for excess quantity, if any, beyond the 30% of the tendered quantity (that means total 130% of the tendered quantity) on individual items until such executed quantity and the rates thereof are correctly derived afresh with mutual agreement and approved by the Employer.

1.35.2 Decrease in Quantity

If the quantity for any individual item decreases to any extent such executed quantity shall be paid at tendered rate.

1.35.3 Extra Item

Extra item of work shall not vitiate the contract. The contractor shall be bound to execute extra items of work as directed by Employer's Representative.

No payment shall be entertained for extra item until such executed quantity and the rates thereon are correctly derived and approved by the Employer.

The Contractor's quotation of costs for the Change of Scope/Extra Items shall be determined on the following principles:

- (a) the latest available edition of Gujarat State Schedule of Rates (GSSR) Published by R&B applicable to Ahmedabad will be adopted for the valuation of any works which are not already covered by the items included in Bill of Quantity. Payments for the Extra Items shall be made in INR only.
- (b) in the event that items are not covered in the GSSR, then the latest edition of the Gujarat Water Supply and Sewerage Board applicable for Ahmedabad and then the Delhi Schedule of Rates related to Ahmedabad Circle will be used in that order.
- (c) the market rates substantiated with 3 quotations, followed by work order and Tax Invoice shall be considered only when the executed items are not covered under Price Schedule or the above referred schedule of rates. A fixed percentage of 15% shall be added to cover the Contractor's Overhead and Profit for the rates evaluated under this category (c).

1.36 Lumpsum in Estimates

When the estimate on which a tender is made includes lump sum in respect of part of the work, the Contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not in the opinion of the Employer's Representative capable of measurement, the Employer's Representative at his discretion, pay the lump sum amount entered in the estimate and the certificate in writing of the Employer's Representative shall be final and conclusive against the Contractor with regard to any sum or sums payable to him under the provisions of this clause.

1.37 Submission of Bills

- 1.37.1 The Contractor on submitting a monthly bill be entitled to receive payment proportionate to the part of the work then approved and at the rates quoted in Appendix – A and passed by the Employer's Representative, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the Contractor. Such payments made by the Employer shall form basis for determining progress achieved and imposing Liquidated damages if any.

The Contractor shall also be paid part payment between 50 to 70 percentage depending on type of materials as per reasonability to be determined by the Employer Engineer on supply of materials and Plant brought by the Contractor to the Site for incorporation in the Permanent Works subject to following conditions:

- a) The materials and Plant are in accordance with the specifications for the Works;
- b) The materials and Plant are properly stored and protected against loss, damage or deterioration;
- c) The materials and Plant are insured by the contractor during storage and construction for full value.
- d) The Contractor's records of the requirements, orders, receipts and use of materials

- and Plant are kept in a form approved by the Employer Engineer and such records are available for inspection by the Employer Engineer;
- e) The Contractor has submitted a statement of his cost of acquiring and delivering the materials and Plant to the Site, together with such documents as may be required for the purpose of evidencing such cost; and the Contractor has agreed to indemnify the Employer against loss or damage to the materials and Plant during the period between delivery to the site and incorporation into the Works.
 - f) Payment by the Employer under this Clause for materials and Plant delivered to the Site does not, in any way, relieve the Contractor of his responsibility to ensure the safety and protection of such materials and Plant during the period between delivery to the site and their incorporation into the Permanent Works. In the event that any materials and Plant are lost, damaged or deteriorated between their delivery to the site and their incorporation into the Permanent Works, the Contractor shall be fully responsible to replace such materials and Plant, or to make such repairs as may be required to restore the materials and Plant to the specified condition, at his own cost.
 - g) In case of unrealistically high price of any individual or more items, the contractor shall furnish proper justification with breakup/backup calculation of the rates of such items and shall be subject to Employer Engineer approval. If the Employer Engineer so determines may ask the contractor to furnish additional Bank Guarantee depending on risk perception of Employer, as per Bank Guarantee format to be provided later during execution.
 - h) In any of the above conditions, price analysis provided by the bidder cannot be substantiated satisfactorily, the Employer reserves the rights to reject the bid of preferred bidder without assignment any reason whatsoever.

The balance payments after accounting of above part payments against supply of materials and plants shall be paid after incorporation in the permanent works. Such interim payments as above on supply of materials and plants and balance payments after incorporation in the permanent works shall also form basis for determining progress achieved and imposing Liquidated damages, if any.

All such intermediate payments shall be regarded as payments by way of advance against, the final payment only and not as payments for work actually done and completed and shall not preclude the Employer's Representative from requiring bad, unsound, imperfect or unskilled work to be removed and taken away and reconstructed or re-erected, nor shall any such payments be considered as an admission of the due performance of the contract or any part thereof in any respect or the accruing of any claims, not shall it conclude, determine or affect in any way the power of Employer's Representative as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affects the contract.

- 1.37.2 The rates for items of work shall be valid only when the item concerned is accepted as having been completed fully in accordance with the sanctioned specifications. In case where the items of work are accepted as not so completed, the Employer's Representative may make payment on account of such items at such reduced rates as he may consider reasonable in preparation of running account or final account bill.
- 1.37.3 A bill shall be submitted by the contractor each month on or before the date fixed by the Employer's Representative for all works executed in the previous month and the Employer's Representative shall take or cause to be taken the requisite measurements for the purpose of having the same verified and the claim so far as it is admissible,

shall be adjusted within fifteen days from the submission of the bill.

1.37.4 The Contractor shall submit all the bills on the printed forms to be had on application at the office of the Employer's Representative. The charges to be made in the bills shall always be entered at the rates specified in the agreement or at the part / reduced rates subject to the approval by the Employer's Representative in the case of items not completed/executed as per agreements.

1.37.5 Payment to the Contractor shall be made within 45 days of receipt of the invoice and certification of the work done by the Employer's Representative in the approved format. However, the final bill payment shall be made on Completion of Completion of Works within 75 days of receipt of invoice by the Employer.

1.37.6 Amount due for recovery on other facilities as well as also for other services, water supply and electricity charges and for other expenditure, if any, incurred by the Employer on Contractor's behalf on labours and materials which may become due from the Contractor as per the Contract as well as under any other laws prevailing which may become due, will be recovered from the payments to the Contractor, as and when due.

1.38 Price Adjustment

1.38.1 No Price Adjustment is applicable due to increase or decrease in input cost of the works.

1.38.2 Changes in cost due to legislation:

- a. If the law of any local or duly constituted authority, or the introduction of any such state statute, Ordinance, decree, law regulations or bye-law which causes additional or reduced cost to the contractor other than two sub- clauses of the clause (b) here below, in the execution of the works, such additional or reduced cost shall be certified by the Employer's Representative after examining the records provided by the claimant and shall be paid by or credited to the Employer.
- b. Notwithstanding the foregoing such additional or reduced cost shall not be separately paid or credited if:
 - I. The same shall have been reflected in the indexing of any of the inputs to the price adjustment in accordance with the provision of this clause 1.38.
 - II. The same shall have been taken into account by any other clauses of the contract.

1.39 Deleted

1.40 Non-Refund of Quarry Fees and Royalties

The Contractor shall pay the royalty directly to the competent authority /local body as per rules and shall produce "No Due Certificate" from the Royalty Inspector having jurisdiction over the work site area to Employer's Representative. The royalty charges shall be borne by the contractor and shall not be refunded. The contractor shall produce 'no due certificate' once in a year as under:

- I. For time limit less than 1 year at the time of final bill and
- II. For time limit more than 1 year, after end of every year and at the time of final bill, otherwise the Employer's Representative shall deduct the royalty charges from the next running account bill at the prevailing rates.

1.41 Income Tax

Deduction will be made at source from the contractor's bill towards income Tax by the Employers as per prevailing rules of the Income Tax Authority.

1.42 VAT/ Service Tax/ Other Taxes/Local Taxes/GST

- 1.42.1 The rate quoted by the Contractor shall be deemed to be inclusive of all Taxes prevailing as on 30 days prior to submission of bid where applicable on materials that have to be purchased / availed for performance of the contract including completed items of work.
- 1.42.2 All Taxes leviable for the work (including material component) under the Contract shall be borne by the Contractor and it shall not be reimbursed by the Employer.
- 1.42.3 If the Contractor is assessed of VAT/ Service Tax/Other State Taxes/ Local Taxes, he should produce valid VAT/ Other State Taxes / Local Taxes/GST clearance certificate before the payment of the final bill, otherwise the final payment to the Contractor shall be withheld. The contractor even after completion of the work and final payment have been made to him will be liable to pay any VAT/ Service Tax/ Other State Taxes/ Local Taxes liability and The Employer shall not be responsible for any VAT/ Tax/Other State Taxes / Local Taxes/GST liability of the contractor.
- 1.42.4 Deleted
- 1.42.5 Difference of payment due to any upward revision of GST Taxes (Except on those components whose price rise is fully compensated as per Clause No. 4.38, Price Adjustment) during the period of contract shall be borne by the Employer. Such tax shall be paid by the Contractor and it will be reimbursed by the Employer upon production and verification of proof of payment. Similarly, in the event of reduction GST on any or all materials purchased by the Contractor for completion of the work under contract, the Contractor shall pass on this benefit to the Employer. For above purpose, the Contractor shall produce a certificate from their auditor/ Chartered Accountants/ Tax consultants giving year wise details of purchases, along with the proof. The Employer will reimburse or deduct as the case may be such amount, after scrutiny of the claim at the time of final payment of the bill.

1.43 Completion Certificate of Work and Final Payment

As soon as the work is completed, in all respect as specified in the contract document the Contractor shall give a notice of such completion to the Employer's Representative and on receipt of such notice, the Employer's Representative shall inspect the work, and if he is satisfied that the work is completed in all respects then:

- I. The final measurements shall be recorded within 30 days from the date of physical completion of the work and the final bill shall be submitted by the contractor within

45 days from the date of recording final measurements, otherwise the Employer's Representative's certificate of the measurements and of the total amount payable for the work shall be final and binding on all parties.

- II. The completion certificate shall be issued within one months from the date of final measurements subject to the Contractor fulfilling his obligations as provided in the contract and subject to the work being complete in all respects. When separate periods of completion have been specified for items or groups of items, the Employer's Representative shall issue separate completion certificate for such items or groups of items.

No certificate of completion shall be issued, nor shall the work be considered to be completed till the Contractor shall have removed from the premises, on which the work has been executed, all scaffoldings, sheds and surplus materials, except such as are required for rectification of defects, rubbish and all huts and sanitary arrangements required for his workmen on the site in connection with the execution of the work, as shall have been created by the Contractor for the workmen and cleared all dirt from all parts of building(s) in, upon or about which the work has been executed or of which he may have/ had possession for the purpose of the execution thereof and cleared floors, gutters, and drains, cased doors and sashes oiled lock and fastenings, labelled keys clearly and handed them over to the Employer's Representative or his representative and made the whole premises fit for immediate occupation or use to the satisfaction of the Employer's Representative. If the Contractor fails to comply with any of aforesaid requirements of these on or before the date of completion of the works, the Employer's Representative may, at the expense of the Contractor, fulfil such requirements and dispose of the scaffolding or surplus materials and rubbish etc. as he thinks fit and the Contractor shall have no claim in respect of any such scaffolding or surplus materials except for any sum actually realized by the sale thereof less the cost of fulfilling the requirements and any other amount that may be due from the Contractor. If the expense of fulfilling such requirements is more than the amount realized on such disposal as aforesaid, the Contractor shall forthwith, on demand, pay such excess. The Employer's Representative shall also have the rights to adjust the amount of excess against any amounts that may be payable to the Contractors. No Payment shall be entertained in the intervening period of last R.A. Bill and before the pre-audit of the final bill and before excess / extra item approved by the Employer.

1.44 Errors, Omissions and Discrepancies

1.44.1 The several documents forming the contract are essential parts of the contract and a requirement occurring in one is as binding as through occurring in all they are intended to be mutually explanatory and complementary and to describe and provide for a complete work. In the event of any discrepancy in the several documents forming the contract or in any one document, the following order of precedence should apply.

- I. Between the written description of the item in the Appendix-A or written dimensions on the drawing and the corresponding one in the specifications, the later shall apply.
- II. Figured dimensions shall supersede scaled dimensions. The drawing on a large scale shall take precedence over those on smaller scale.

III. Drawing issued as construction drawings from time to time shall supersede the corresponding drawings previously issued.

In the case of defective description or ambiguity, the Employers representative is entitled to issue further instructions directing in what manner the work is to be carried out. The contractor shall point out any apparent error or omission in the tender documents while submitting the tender and particularly while signing the contract. The contractor cannot take any advantage of any apparent error or omission in the tender document and if the contractor fails to bring out the apparent error or omission to the notice of the Employer in writing, he shall have no right to claim which may arise due to such error or omission subsequently and the decision of the Employer in this regard shall be final and binding to the contractor.

1.44.2 Typographical error leading to absurdity shall be ignored and correct technical, financial and legal meaning of such errors shall be considered.

1.44.3 Any variation in the price quoted by the contractor for the similar item mentioned in the BoQ, the lowest quote shall be considered for the final payment purpose.

1.45 Old Curiosities

In the event of discovery by the contractor or his employees during the progress of work, of any gold, silver, oil or other minerals of any description and precious stones, treasures, coins, antiques, relic, fossil or other articles or value of interest whether geological, archaeological or any other such treasure and other things shall be deemed to be the absolute property of the Employer and the contractor shall duly preserve the same to the satisfaction of the Employer's Representative, from time to time and deliver the same to such persons as the Employer's Representative may appoint.

The Contractor shall take all reasonable precautions to prevent his workmen or any other person from removing or damaging any such articles or things, immediately after the discovery there of and before removal acquaint the Employer's Representative with such discovery and carry out his order for the disposal of the same.

1.46 Safety Provisions

1.46.1 The Contractor in his operations shall arrange for the safety measure as required inclusive of the provisions in the latest safety manual published by the Central Water and Power Commission, New Delhi (January-1962 edition Reprinted in November 1986) In case the Contractor fails to make such arrangements, the Employer's Representatives shall be entitled to cause them to be provided and to recover the costs there of from the Contractor.

1.46.2 For failure to comply with the provisions of the Safety Manual the Contractor shall, without prejudice to any other liabilities, pay to the Employer a sum not exceeding Rupees one thousand per day for each day default.

1.47 Labour Compensation under the Workman's Compensation Act

a. The contractor shall be responsible for and shall pay any compensation to his workmen payable under the workmen's compensation Act 1923 (VIII of 1923) (hereinafter called the said Act) for injuries causes to the workmen. If such

compensation is paid by Employer as principle employer under sub-section (1) of section 12 of the said Act, on behalf of the Contractor, it shall be recoverable by the Employer from the Contractor under sub-section (2) of the said section. Such compensation shall be recovered in the manner as decided by the Employer's Representative.

- b. The Contractor shall be responsible for and shall pay the expenses of providing medical aid to any workmen who may suffer a body injury as a result of an accident. If such expenses are incurred by Employer, the same shall be recoverable from the Contractor forthwith and be deducted without prejudice to any other remedy of Employer from any amount due or that may become due to the Contractor.
- c. The Contractor shall provide all necessary personal safety equipment and first aid apparatus available for the use of the persons employed on the site and shall maintain the same in suitable condition for immediate use at any time and shall comply with the following regulations in connection therewith:
 - I. The workers shall be required to use the equipment so provided by the Contractor and the Contractor shall take adequate steps to ensure proper use of the equipment by those concerned;
 - II. When work is carried out in proximity of any place where there is risk of drowning, all necessary steps shall be taken for the prompt rescue of any person in danger;
 - III. Adequate provision shall be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
- d. Employment of famine or other labour. The Contractor shall employ any famine, convict or other labour of particular kind or class, if ordered in writing to do so by the Employer's Representative.
- e. Details of labourers employed
 - I. The contractor shall not employ in connection with the works any person who has not completed his Eighteen (18) years of age.
 - II. The Contractor shall furnish to the Employer's Representative information about various categories of labours employed by him in the form and at such interval as may be specified.
 - III. The contractor shall in respect of labour employed by him comply with or cause to be complied with the provisions of the various labour laws and rules and regulations as applicable to them in regard to all matters provided therein and shall identify the Employer in respect of all claims that may be made against the Employer for non-compliance thereof by the Contractor.
- f. Notwithstanding, anything contained herein the Employer's Representative may take such action as may be necessary for compliance of the various labour laws and recover the costs thereof from the Contractor.

- I. In the event of the Contractor committing a default or breach any of the provisions of the labour laws and rules and regulations applicable, the Contractor shall, without prejudice to any other liability under the Act, pay to Employer a sum not exceeding Rupees one thousand per day for each of the defaults subject to a maximum of one percent of the tendered amount.
- g. The Contractor should, as far as possible, obtain his requirement of labours, skilled and unskilled, from the nearest Employment Exchanges so as to utilize the local employment potential. If there are no local Employment Exchanges or such Exchanges are not able to provide the required labour locally, suitable available labours should be utilised to the maximum extent possible. The contractor shall have to engage local labour and person seeking employment where available on normal rate.
- h. Fair Wages
 - I. If a Contractor fails to pay within '7' (Seven) days to any the labour(s)/worker(s) the minimum wages prescribed by the Government under the minimum wages Act 1948 as in force from time to time, the Employer's Representative shall be at liberty to deduct the amount payable by the contractor to the labour/worker from his (Contractor's) bills or deposit(s) after making due inquiries and establishing claims of the labour(s)/worker(s).
 - II. The Contractor shall not be entitled to any payment of compensation on account of any loss that the Contractor may have to incur on account of the action as aforesaid. Before the action as aforesaid, is enforced, a notice in writing to the Contractor shall be issued by the Employer's Representative to pay the wages as per Minimum wages Act in force at the relevant time. If Contractor does not act as aforesaid within seven days then the action contemplated as above shall be taken against him.
- i. Local labour on normal rates. The contractor shall have to engage local and person seeking employment where available on normal rates.

1.48 Labour Reports

The contractor shall submit the following reports to the Employer's Representative:

- I. A daily report in the form as may be prescribed of the strength of labour both skilled and unskilled employed by him on the work(s). The Contractor shall increase or decrease the strength both skilled and unskilled, if directed by the Employer's Representative. The submission of such report shall not, however relieve the Contractor of his responsibilities and duties regarding progress or any other obligations under the contract.
- II. A classified weekly return in the prescribed form of the number of person employed on the works during the preceding week.
- III. A weekly medical report in the prescribed form showing the health of the Contractor's camp, the number of person ill or incapacitated and the nature of their illness.

IV. A report of any accident, which may have occurred to be sent within 24 hours of the occurrence.

1.49 Deleted

1.50 Employment of Scarcity Labour

If Government declares a state of scarcity or famine to exist in any village situated within 16 kilometres of the work, the Contractor shall employ upon such parts of the works, as are suitable for unskilled labour, any person, certified to him by the Employer's Representative or by any persons to whom, the Employer's Representative may have delegated this duty in writing to be in need of relief and shall be bound to pay to such persons, wages not below the minimum which Government may have fixed in this behalf. Any dispute which may arise in connection with the implementation of the Clause shall be decided by the Employer's Representative whose decision shall be final and binding on the contractor.

1.51 Insurance

1.51.1 The Contractor shall secure and maintain throughout the duration of this Contract insurance of such types and in such amounts as may be necessary to protect himself against all the usual hazards or risks or loss. The form and limits of such insurance and the company together with the under writing thereof in each case, shall be such as will be acceptable to the Employer but, regardless of such acceptance, it shall be the responsibility of the contractor to maintain adequate insurance at all-time at least to cover:

- I. Workmen's compensation in accordance with the law in force from time to time.
- II. Third party liability including Employer's personnel on duty with a cover of minimum Rs. 5 lac for each person in case of fatal accident/permanent disability.
- III. All plant and equipment of the Contractor hypothecated to the Employer and all Employers material and machinery handed over to the contractor till they are properly installed.
- IV. Failure of the Contractor to maintain adequate insurance coverage shall not relieve him of any contractual responsibility.

1.51.2 Attested copies of certificate or policies of insurance shall be filed with the Employer prior to starting any construction work on this contract. The certificates shall state that fifty days advance written notice will be given to the Employer before any policy covered thereby is changed, cancelled or expired.

1.52 Camp Regulations

1.52.1 Huts

The Contractor shall build a sufficient number of huts on a suitable plot of land for the use of the labours according to the following specifications:

- I. Deleted.

- II. A good site shall be selected; high ground removed from jungle but well provided with trees shall be chosen wherever it is available. The neighbourhood of rank jungle, grass or weeds should particularly be avoided. Camp should not be established close to large cutting of earth-work.
- III. The lines of huts shall have open spaces of at least 10 m between rows. When good natural site cannot be procured, particular attention should be given to the drainage.
- IV. There should be no over-crowding floor spaces at the rates of 2.8 square meter per head shall be provided. Care should be taken to see that the huts are kept clean and in good order.
- V. The contractor must find out land for the hut and if he wants Employer land, he should apply for it and pay assessment for it.

1.52.2 Drinking Water

The Contractor shall, as far as possible, provide an adequate supply of chlorinated pure potable drinking water for the use of labours. This provision shall be at the rate of not less than 45 litres per head.

1.52.3 Deleted

1.52.4 Deleted

1.52.5 Drainage

The Contractor shall make sufficient arrangement for draining away the sewage water as well as water from the bathing and washing places and shall dispose of this waste water in such a way as not to cause nuisance. The Contractor would put malarial oil once in a week in stagnant water round about the residence.

1.52.6 Medical Facilities

The Contractor shall engage a medical officer with a travelling dispensary for a camp having 500 or more persons if there is no Government or other private dispensary situated within 6 Km from the camp.

1.52.7 Conservancy and Cleanliness

The Contractor shall provide the necessary staff for effecting the satisfactory conservancy and cleanliness of the camp to the satisfaction of the Employer's Representative.

1.52.8 Health Provisions

The District Health Officer of the District or the Deputy Director of Health Services shall be consulted before opening a labour camp and his instructions on matters, such as water supply, sanitary convenience, camp-site, accommodation and food supply shall be followed by the Contractor.

1.52.9 Deleted.

1.52.10 Rest Rooms

- a. In every place wherein contract labour is required to halt at night in connection with the contract works and in which employment of contract is likely to continue for three months or more, the Contractor shall provide and maintain rest rooms or other suitable alternative accommodation within fifteen days of the coming in to force of the rules in the case of existing establishment, and within fifteen days of the employment of contract labour in new establishment.
- b. If the amenity referred to in sub rule is not provided by the Contractor within the period prescribed, the principal employer shall provide the same within a period of fifteen days of the expiry of the period laid down in the sub-rule.
- c. Separate rooms shall be provided for women employees.
- d. Effective and suitable provision shall be made in every room for securing and maintaining adequate ventilation for the circulation of fresh air and there shall also be provided and maintained sufficient and suitable natural or artificial lighting.
- e. The rest room or other suitable alternative accommodation shall be of such dimension so as to provide at least floor area of 1.1 sq.mt. for each person making use of rest room.
- f. The rest room or rooms or other suitable alternative accommodation shall be so constructed so as to afford adequate protection against heat, wind, rain and shall have smooth, hard and impervious surface.
- g. The rest room or other suitable alternative accommodation shall at a convenient distance from the establishment and shall have adequate supply of wholesome drinking water.

1.52.11 Canteen Facilities

- a. In every establishment of contract work and where in work regarding the employment of contract labour is likely to continue for six months and where in contract labour numbering one hundred or more ordinarily employed, the adequate canteen facilities shall be provided by the contractor for the use of such contract labour within sixty days of the date of coming in to force of the rules in the case of existing establishment and within 30 days of the commencement of the employment of contract labour in the case of new establishment.
- b. Deleted.
- c. The canteen shall be maintained by the Contractor.

1.53 Observance of Laws, Local Regulations

The Contractor shall conform to all laws of the land and regulations and bye- laws of any local authority and of any water or electricity supply companies with whose system the structure is proposed to be constructed. He shall before making any variations from the drawings or specifications that may be necessitated for so conforming, give to the Employer's Representative a written notice, specifying the variations proposed to be

made and the reasons for the Contractor does not receive such instructions within seven days, he shall proceed with the work conforming to the provisions, regulations or bye laws in question and any variation in the drawing or specifications so necessitated shall be dealt with under the clause 1.35. The Contractor shall give notices required by the said Acts, regulations or bye-laws and bear the required fees in connection therewith. He shall also ensure that no attachments are made against materials for works related to the Contracts. The Contractor shall protect and indemnify the Employer against all claims or liabilities arising from or based on the violation of such laws, ordinances regulations, bye-laws, decrees or attachments by him or by his employees. The contractor shall also notify Employer in case any other unforeseen permit / NOC required to carry out the work.

1.54 Force Majeure

1.54.1 Neither party shall be liable to the other for any loss or damage occasioned / caused by or arising out of act of God and in particular "Unprecedented floods", volcanic eruption, earthquake or other convulsion of nature and other acts, such as but not restricted to invasion, the act of foreign countries, hostilities or war like operations before or after declaration of war rebellion military or usurped power (but excluding strikes and lockouts) which prevent performance of the contract and which could not have been foreseen or avoided by a prudent person.

Note: "Unprecedented flood" means the flood crossing the highest observed flood level which is on the available record.

1.54.2 If any loss of damage happens to the works, or any part thereof, or materials or plant for incorporation therein, during the period for which the contractor is responsible for the care thereof, from any cause whatsoever, other than the risk defined in the clause 1.54.1 as above, the Contractor shall at his own cost, rectify such loss of damage so that the permanent works conform in every respect with the provisions of the contract to the satisfaction of the Employer's Engineer.

1.55 No Compensation for Delay in Availability of Land

No Compensation shall be allowed for any delay caused in execution of the work on account of delay in making available the full site of land at a time.

1.56 Liquidated Damages

a. The time allowed as stipulated in the Tender for carrying out the work is 19 (Nineteen) months and it shall be strictly observed by the Contractor and reckoned from the date on which the order to commence work is given to the Contractor. The work throughout the stipulated period of the contract shall be proceeded with all due diligence (time being deemed to be the essence of the contract on the part of the Contractor). To ensure good progress during the execution of the work, the Contractor shall be bound in all cases to achieve the milestones as under:

A) MS-I 10% of the total contract value (covering maximum Priority Stretch between road G7 to A6 – Approximately length 1210 m) within 4 months as per Employer engineer direction.

- B) MS-II 40% of the total contract value within 11 (Eleven) months.
- C) MS-III 100% of total contract value within 19 (Nineteen) months.
- b. In the event of the Contractor failing to achieve interim/ final completion dates as in para (a) above within a period of 30 days from the date set forth as per above schedule, the contractor shall be liable to pay as liquidated damage an amount equal to zero point one percent (0.1%) per day of delay for the cost of unexecuted work for each interim/ final completion up to the date of actual completion subject to the maximum amount of ten percent (10%) of total contact price. Such unexecuted work shall be determined based on contractor invoices as found good for payment as certified by Employer Engineer up to the respective date(s) of respective interim/ final completion. In the event Liquidated Damages are levied the same shall be computed wef such respective date(s) of respective interim/ final completion considering 30 days grace period as above.
- c. The penalty levied due to non-completion of work at interim/ final targets will be refunded if the contractor has achieved subsequent target within the specified respective time limit till next target date to the satisfaction of the Employer's Representative/ Engineer. No interest shall be payable on the amount so refunded.
- d. The first milestone as at (A) above of 10 % shall apply on total Contract value and subsequent milestones as at (B & C) above shall apply on such value of works as approved by the Employer Representative/ Engineer for execution of milestones II & III based on contractor proposal of BOQ to be executed based on Tender / GFC drawings.
- e. Failure in completion of work in stipulated time limit shall be sufficient cause for termination of Contract and forfeiture of security deposit.

1.57 No Compensation for Delay in the Execution of Work Due to Water Pools

No compensation shall be allowed for any delay in execution of the work on account of water standing in borrow pits / borrow area, work site or compartment. The rates are inclusive of hard or cracked soil, excavation in mud, subsoil water or water standing in borrow-pits / borrow area and no claim for an extra rate shall be entertained unless otherwise expressly specified.

1.58 No Compensation for Change or Restriction of Works

If at any time after the execution of the Contract documents, the Employer's Representative shall for any reason whatsoever, required the whole or part of the work as specified in the tender be stopped for any period or shall not require the whole or part of work to be carried by the contractor, he shall give notice in writing stating the fact to the contractor who shall there upon suspend or stop the work totally or partially as the case may be. In such case except provided hereunder the contractor shall have no claim to any payment or compensation whatsoever except as provided hereunder. on account of any profit or advantage which he might in consequence of the full amount of work not having been carried out on account of the any loss that he may put to on account of material purchased or agreed to be purchased or for unemployment of labour recruited by him. He also shall not have any claim for compensation by

reason of any alternation having been made in the original specifications, drawings, designs and instructions which may involve any curtailment of the work as originally contemplated.

- a. During the period of suspension, the contractor shall not remove any plant or equipment from the site and any part of the work without prior written consent of the Employer's Representative.
- b. The contractor shall not be entitled for loss of expected profit from such work.

1.59 Claims

The Contractor shall not be entitled to any claim/claims from the Employer on any account unless where allowed by the condition of this contract. In such cases, the Contractor shall have to submit a claim in writing to the Employer's Representative within one month on the cause of such claim occurring. All claims arising as a dispute of any kind out of the contract shall be governed by clause 1.60.

1.60 Arbitration

If any dispute or difference of any kind whatsoever arises between the parties in connection with or arising out of or relating to or under this Contract, the 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 thirty (30) days from the date on which the above-mentioned dispute or difference arose, such dispute or difference shall be finally settled by arbitration. The arbitral tribunal shall consist of a sole arbitrator appointed by mutual agreement of the parties. In case of failure of the parties to mutually agree on the name of a sole arbitrator, the arbitral tribunal shall consist of three arbitrators. Each party shall appoint one arbitrator and the two arbitrators so appointed shall jointly appoint the third arbitrator. The seat of arbitration shall be Gandhinagar, Gujarat and the arbitration shall be conducted in the English language. The Arbitration and Conciliation Act, 1996 shall govern the arbitral proceedings. The award rendered by the arbitral tribunal shall be in writing and final & binding on the parties.

Rescinding of Contract in Case of Subletting Contract or Contractor Becomes Insolvent

The entire contract shall not be assigned or sublet. The Employer may allow subletting the part or portion of the work not exceeding up to 40% (Forty percentages) of Tender cost, if the sub-contractor satisfies the requirement of the work to be sublet. If the Contractor shall assign or sublet his contract or attempt to do so or become insolvent or commence any proceedings to get himself adjudicated and insolvent or make any compromise with his creditors, or attempt to do so, the Employer's Representative may by notice in writing, rescind the contract. Also if any bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given, promised or offered by the Contractor or any of his servants or agents to any public officer or person in the employment of Employer in any way relating to his office or employment or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Employer's Representative may thereupon by notice in writing rescind the contract. In the event of contract being rescinded, the security deposit of the Contractor shall thereupon stand forfeited and by

absolutely at the disposal of Employer and the same consequence shall ensue as if the Contract had been rescinded under clause 1.7 here of and in addition the Contractor shall not be entitled to recover or be paid for any work thereof actually performed under the contract.

1.61 Deleted

1.62 Change in Constitution of Firm to be notified

In the case of a Tender by firm partnership or limited company, any change in its constitution shall be forthwith notified by the Contractor to the Employer's Representative for his information.

1.63 Mobilization Advance

- a. The Employer shall make an interest-bearing advance payment @ Bank Rate + 5% per annum (the "Advance Payment"), equal in amount to 10 (ten) percent of the Contract Price, for mobilization expenses and for acquisition of equipment. The Advance Payment shall be made in two installments. The first installment shall be an amount equal to 5% (Five percent) of the Contract Price, and the second installment shall be equal to 5% (five percent) of the Contract Price. Here the Bank Rate means the Repo rate of interest announced by the Reserve Bank of India for all its lending operations on the Base Date that is 28 days before the Bid submission date. The Contractor may apply to the Employer for the first installment of the Advance Payment at any time after the commencement date and signing of Contract Agreement, against an irrevocable and unconditional guarantee from a Scheduled Bank for an amount equivalent to 110% (one hundred and ten per cent) of such installment, substantially in the form provided, to remain effective till the complete and full repayment thereof.
- b. At any time after 30 (thirty) days from the commencement Date, the Contractor may apply for the second installment of the Advance Payment against an irrevocable and unconditional guarantee from a Scheduled Bank for an amount equivalent to 110% (one hundred and ten per cent) of such installment, substantially in the form provided, to remain effective till the complete and full repayment thereof.
- c. The first and second installments shall be paid by the Employer to the Contractor within 15 (fifteen) days of the receipt of its respective requests.
- d. The recovery of all Advances shall commence when 20% of the original Contract Price of the work has been paid, and it will be completed by the time 80% of the original contract value has been paid or by the time of original Completion Date whichever is earlier.

1.64 Termination

- 1.65.1 By the Employer: The Employer may terminate this Contract, by not less than thirty (30) days' written notice of termination to the Contractor, to be given after the occurrence of any of the events specified in this clause:

- I. if the Contractor do not remedy a failure in the performance of their obligations under the Contract, within a period of thirty (30) days', after being notified or within such further period as the Employer may have subsequently approved in writing;
 - II. within thirty (30) days, if the Contractor become insolvent or bankrupt;
 - III. if, as the result of Force Majeure, the Contractor are unable to perform a material portion of the Services for a period of not less than sixty (60) days;
 - IV. within thirty (30) days, if the Contractor fails to comply with any final decision reached as a result of arbitration proceedings pursuant to relevant clauses hereof;
 - V. within thirty (30) days, if the Contractor, in the judgment of the Employer has engaged in Corrupt or Fraudulent Practices in competing for or in executing the Contract;
 - VI. if the Employer, in its sole discretion and for any reason whatsoever, within a period of thirty (30) days' decides to terminate this Contract.
- 1.65.2 By the Contractor: The Contractor may terminate this Contract, by not less than thirty (30) day's' written notice to the Employer, such notice to be given after the occurrence of the events specified in this clause:
- I. if the Employer fails to pay any money due to the Contractor pursuant to this Contract and not subject to dispute pursuant to relevant clauses hereof within forty-five (45) days after receiving written notice from the Contractor that such payment is overdue; or
 - II. if, as the result of Force Majeure, the Contractor are unable to perform a material portion of the work for a period of not less than sixty (60) days.
- 1.65.3 Cessation of Rights and Obligations: Upon termination of this Contract pursuant to actual Termination, or upon expiration of this Contract pursuant to relevant clause hereof, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in relevant clause hereof, (iii) the Contractor's obligation to permit inspection, copying and auditing of their accounts and records (iv) the rights of indemnity of the Employer v) any right which a Party may have under the Applicable Law.
- 1.65.4 Cessation of Services: Upon termination of this Contract by notice of either Party to the other pursuant to relevant clauses hereof, the Contractor shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to the work done by the Contractor and equipment and materials furnished by the Employer, the Contractor shall handover all project documents under procedure described in this contract.
- 1.65.5 Payment upon termination: Upon termination of this Contract, the Employer will make the following payments to the Contractor:

I. Payment pursuant to satisfactorily performed work prior to the effective date of termination.

1.65.6 Disputes about Events of Termination: If either Party disputes Termination of the contract under relevant clauses hereof, such Party may, within forty-five (45) days after receipt of notice of termination from the other Party, refer the matter to arbitration under relevant clauses hereof, and this Contract shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.

Section 2. Appendices

APPENDIX – A

BILL OF QUANTITIES

Request for Qualification cum Request for Proposal for Enhancement
of Side Slope of Storm Water Drainage Canal in Activation Area in DSIR

It No.	Item Description	Unit	Total Estimated Qty
1	Carry out 1m x 1 m grid survey work by total station in reference to GTS benchmark or Benchmark suggested by engineer in charge along the corridor including marking of center line of alignment with GPS , taking ground level , details of all existing structures, Electric poles, trees, overhead electrical lines including fixing necessary reference RCC pillars, establishing bench mark, establishing day light lines on ground and submission of Survey Drawing with readable spot level, longitudinal section, cross section and drawing report of survey work as directed.	Ha	31.17
2	300 mm mechanized trimming of the canal section for preparing sub grade for laying cement concrete lining in all sort of soils and murrum including watering and compacting bed and side slopes using slope compactors including backfilling as directed and dewatering where required.	Sqm	124160.00
3	Providing and laying thermally bonded non-woven poly propylene-based geotextile made up of 70% PP and 30% PE of Tensile strength 8kN/m and having CBR puncture resistance of 1500 N on side slope as per detail drawing, specification and as directed by engineer in charge.	Sqm	179560.00
4	Providing & filling foundation with cement concrete of M -15 grade with OPC cement, sand, and coarse aggregates including centering, shuttering, batching, mixing, transporting, placing, vibrating, smooth finishing, curing etc. complete.	Cum	905.00
5	Providing & laying controlled cement concrete of M -25 grade with OPC cement, sand, and coarse aggregates including centering, shuttering, batching, mixing, transporting, placing, vibrating, smooth finishing, curing etc. complete for Toe wall, and CC panel on slope as per drawing and as directed by engineer in charge	Cum	14112.00

Request for Qualification cum Request for Proposal for Enhancement
of Side Slope of Storm Water Drainage Canal in Activation Area in DSIR

It No.	Item Description	Unit	Total Estimated Qty
6	Providing and laying TMT fe 500 D CRS reinforcement for RCC works bar with providing binding wires including cutting, bending, welding, binding in position hooking placing in position with all leads & lifts etc. complete.	MT	14.00
7	Excavation for foundation in all sorts of soil including yellow sandy gravelly soil, soft & hard murrum etc. including depositing the excavated stuff in uniform layers in banks or as and where directed etc. complete for all lead and all lift. (By machinery and suitable means) (Including dewatering)	Cum	9806.00
8	Back filling the foundation trenches around the structures etc. with selected excavated stuff including watering, ramming, compacting etc. complete.	Cum	1936.00
9	Providing and laying dry rubble pitching of 300 mm thick thickness to required grade including trimming of slope as required, hand packing the interstices with spalls, filling earth in interstices paneling with the surface pointed with cement mortar of 1:2 proportion etc. complete for all leads and lifts.	Sqm	108250.00
10	Providing and fixing in position pre moulded asphalt or bitumen cork board of approved quality and specifications as per design and drawing and as directed. (12 mm thickness)	Sqm	1481.00
11	Construction of embankment with approved material obtaining from borrow area with all leads and lifts transporting to site, spreading ,grading to required slope in accordance with requirements of lines, grades , cross sections and compacting to meet requirement to MoRTH table 300- 2 in layers not more than 200 mm thick, including rolling with vibratory roller of 8 to 12 tonnes etc. complete as per MORTH Clause 305 .	Cum	7482.00

Request for Qualification cum Request for Proposal for Enhancement
of Side Slope of Storm Water Drainage Canal in Activation Area in DSIR

It No.	Item Description	Unit	Total Estimated Qty
12	Providing & laying WBM 150 mm compacted thickness in two layer of 75 mm of using B.T. Crushed metal of size 45 mm to 63 mm @ 0.91 Cum material for 10 sqm, stone screening Grading Type A 13.2 mm @ 0.12 cum per 10 sqm, Stone dust @ 0.06 Cum per 10 Sqm, including spreading ,watering & consolidation by vibratory roller etc. complete and as directed by Engineer in Charge.	Cum	166.00
13	Hot Dip Galvanized Structural steel work in riveted, bolted or welded in built up sections, trusses and framed work including supplying, fabricating, cutting, assembling, hoisting and fixing in position at all heights of all shapes and size with all leads and lifts of YST 310 as per latest IS 4923, IS 1161, IS 806 .It should be including necessary rolled joists, channels, angles, tees, flats, angle cleats, gusset plates, position hip and jack lifters, purlins, RHS, SHS, CHS, tension cable etc. including cutting and welding the members as per detailed drawing and design. The rate shall include 1 coat of Zinc chromate primer and 2 coats of Approved Enamel Paint to over all the surfaces of the steel sections or as specified in the drawing. (Only standard measurements will be paid for as actual cut length used at site). Rate shall be inclusive of cutting, wastage, welding, bending (shop at site), fixing as per profile, bolting wherever necessary, in position welding of required length, grinding, finishing edges, filling the welded spots with metal putty. It should also include the cost of approved ISI make and size zinc coated nut-bolt and Anchor fasteners of Hilti or Fisher as approved by engineer-in-charge	Kg	2338.00

Appendix B – Form of Bank Guarantee

Annexure I A– Performance Security by successful Lead Bidder

Employer.....,
Gandhinagar, Gujarat

WHEREAS:

_____ [name and address of Contractor] (hereinafter called “the Contractor”) and [name and address of the EMPLOYER], (“the EMPLOYER”) have entered into an agreement (the “Agreement”) for “[Name of the work]_”

- (A) [Name of the work], subject to and in accordance with the provisions of the Agreement.
- (B) The Agreement requires the Contractor to furnish a Performance Security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the Construction Period and Defects Liability Period (as defined in the Agreement) in a sum of Rs. Crore (Rupees Crore) (the “Guarantee Amount”).
- (C) We,through our branch at (the “Bank”) have agreed to furnish this bank guarantee (hereinafter called the “Guarantee”) by way of Performance Security.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor’s obligations during and under and in accordance with the Agreement, and agrees and undertakes to pay to the Employer, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the guarantee amount as the EMPLOYER shall claim, without the EMPLOYER being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
2. A letter from the EMPLOYER, under the hand of an officer not below the rank of [.....of EMPLOYER], that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the EMPLOYER shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final, and binding on the Bank, notwithstanding any difference between the EMPLOYER and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.
3. In order to give effect to this Guarantee, the EMPLOYER shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.

4. It shall not be necessary, and the Bank hereby waives any necessity, for the EMPLOYER to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The EMPLOYER shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfilment and/or performance of all or any of the obligations of the Contractor contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the EMPLOYER against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the EMPLOYER, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the EMPLOYER of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the EMPLOYER or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the EMPLOYER in respect of or relating to the Agreement or for the fulfilment, compliance and/or performance of all or any of the obligations of the Contractor under the Agreement.
7. Notwithstanding anything contained herein before, the liability of the Bank under this Guarantee is restricted to the Guarantee amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the EMPLOYER on the Bank under this Guarantee all rights of the EMPLOYER under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.
8. The Performance Security shall cease to be in force and effect 60 (sixty) days after the end of the Defects Liability Period as set forth in Clauses 1.1
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the EMPLOYER in writing and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the EMPLOYER that the envelope was so posted shall be conclusive.
11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the end **** month in the year ***** or until it is released earlier by the EMPLOYER pursuant to the provisions of the Agreement.

Signed and sealed this day of 20..... at

Request for Qualification cum Request for Proposal for Enhancement
of Side Slope of Storm Water Drainage Canal in Activation Area in DSIR

SIGNED, SEALED AND DELIVERED

For and on behalf of the Bank by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

NOTES:

- (i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.

Annexure I B- Performance Security by JV Partner

Employer.....,
Gandhinagar, Gujarat

WHEREAS:

_____ [name and address of Contractor] (hereinafter called “the Contractor”) in association with Joint Venture Contractor [name and address of JV Contractor] (hereinafter called “the JV Contractor”) and [name and address of the EMPLOYER], (“the EMPLOYER”) have entered into an agreement (the “Agreement”) for “[Name of the work]”

- (A) [Name of the work], subject to and in accordance with the provisions of the Agreement.
- (B) The Agreement requires the JV Contractor to furnish a Performance Security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the Construction Period and Defects Liability Period (as defined in the Agreement) in a sum of Rs. Crore (Rupees Crore) (the “Guarantee Amount”).
- (C) We,through our branch at (the “Bank”) have agreed to furnish this bank guarantee (hereinafter called the “Guarantee”) by way of Performance Security.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor’s obligations during and under and in accordance with the Agreement, and agrees and undertakes to pay to the Employer, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the guarantee amount as the EMPLOYER shall claim, without the EMPLOYER being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
2. A letter from the EMPLOYER, under the hand of an officer not below the rank of [.....of EMPLOYER], that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the EMPLOYER shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final, and binding on the Bank, notwithstanding any difference between the EMPLOYER and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.
3. In order to give effect to this Guarantee, the EMPLOYER shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.

4. It shall not be necessary, and the Bank hereby waives any necessity, for the EMPLOYER to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The EMPLOYER shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfilment and/or performance of all or any of the obligations of the Contractor contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the EMPLOYER against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the EMPLOYER, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the EMPLOYER of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the EMPLOYER or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the EMPLOYER in respect of or relating to the Agreement or for the fulfilment, compliance and/or performance of all or any of the obligations of the Contractor under the Agreement.
7. Notwithstanding anything contained herein before, the liability of the Bank under this Guarantee is restricted to the Guarantee amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the EMPLOYER on the Bank under this Guarantee all rights of the EMPLOYER under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.
8. The Performance Security shall cease to be in force and effect 60 (sixty) days after the end of the Defects Liability Period as set forth in Clauses 1.1
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the EMPLOYER in writing and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the EMPLOYER that the envelope was so posted shall be conclusive.
11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the end **** month in the year ***** or until it is released earlier by the EMPLOYER pursuant to the provisions of the Agreement.

Signed and sealed this day of 20..... at

Request for Qualification cum Request for Proposal for Enhancement
of Side Slope of Storm Water Drainage Canal in Activation Area in DSIR

SIGNED, SEALED AND DELIVERED

For and on behalf of the Bank by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

NOTES:

- (i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.

Annexure II – Form for Guarantee for Advance Payment

.....,
.....EMPLOYER,
Gandhinagar, Gujarat

WHEREAS:

[name and address of Contractor] (hereinafter called “the Contractor”) has executed an agreement (hereinafter called the “Agreement”) with the [name and address of the EMPLOYER], (hereinafter called “the EMPLOYER”) for the “[Name of the work], subject to and in accordance with the provisions of the Agreement.

(A) in accordance with the Clause 1.64 of the Agreement the EMPLOYER shall make to the Contractor an interest bearing advance payment (hereinafter called “Advance Payment”) equal to 10% (ten per cent) of the contract price for mobilization expenses and acquisition of equipment; and that the Advance Payment shall be made in subject to the Contractor furnishing an irrevocable and unconditional guarantee by a scheduled bank for an amount equal to the 110% amount of each instalment to remain effective till the complete and full repayment of the instalment of the Advance Payment as security for compliance with its obligations in accordance with the Agreement; and the amount of instalment of the Advance Payment is Rs. **** cr. (Rupees ***** crore) (the “Guarantee Amount”).

(B) We,through our branch at (the “Bank”) have agreed to furnish this bank guarantee (hereinafter called the “Guarantee”) for the Guarantee Amount.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful repayment on time of the aforesaid instalment of the Advance Payment under and in accordance with the Agreement, and agrees and undertakes to pay to the EMPLOYER, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the guarantee amount as the EMPLOYER shall claim, without the EMPLOYER being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
2. A letter from the EMPLOYER, under the hand of an officer not below the rank of [.....of EMPLOYER], that the Contractor has committed default in the due and faithful performance of all or any of its obligations for the repayment of the instalment of the Advance Payment under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the EMPLOYER shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final, and binding on the Bank, notwithstanding any difference between the EMPLOYER and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

3. In order to give effect to this Guarantee, the EMPLOYER shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for the EMPLOYER to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The EMPLOYER shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Advance Payment or to extend the time or period of its repayment or to postpone for any time, and from time to time, any of the rights and powers exercisable by the EMPLOYER against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the EMPLOYER, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the EMPLOYER of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the EMPLOYER or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the EMPLOYER in respect of or relating to the Advance Payment.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the EMPLOYER on the Bank under this Guarantee all rights of the EMPLOYER under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.
8. The guarantee shall cease to be in force and effect 90 (ninety) days after the end of the one year from the date of payment of the instalment of the Advance Payment, as set forth in Clause 19.2 of the Agreement.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the EMPLOYER in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the EMPLOYER that the envelope was so posted shall be conclusive.

11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the end **** month in the year ***** or until it is released earlier by the EMPLOYER pursuant to the provisions of the Agreement.

Signed and sealed this day of 20..... at

SIGNED, SEALED AND DELIVERED

For and on behalf of the Bank by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

NOTES:

- (i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.

Section 3. Scope of Work and Technical Specifications

A. Scope of Work

1.0 Project Introduction

The Activation Area within the Dholera Special Investment Region (DSIR) is envisaged to trigger developmental activities in DSIR and attract local and global investments. The Activation Area lies within the TP2E with a portion in TP4, spread across an area of approximately 22.5sqkm. The Activation Area has approximately 58kms of roads and has an optimum mix of land uses with the largest being industrial.

The Canal is a 5.95km long unlined channel with a bottom width ranging from 58m to 88m, and a weir at the eastern end. The Canal runs through the Activation Area for a distance of 3.1km. It is intersected by six vehicular roads which cross the canal. The canal will function as a reservoir to collect and hold the storm water from the entire Activation Area. The side slope of canal is to be enhanced by providing the stone pitching on the side slope of canal.

2.0 Scope of Work

The scope of work includes survey, trimming of side slope, perpetration of side slope for laying of pitching, providing and fixing geotextile, stone pitching with panel, toe wall and providing pre moulded bituminous board for expansion joint etc. for the completion of the enhancement of the side slope of drainage canal as per drawing and specifications.

3.0 Obligations

During continuance of the Contract, the Contractor and shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notifications and bye laws of State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. The Contractor shall keep the Employer/ Employer's authorized representative indemnified in case any action is taken against the Employer/ Employer's authorized representative by the competent authority on account of contravention by the Contractor of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments. If the Employer/ Employer's authorized representative is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/acts/rules/regulations including amendments, if any, on the part of the Contractor, the Employer/ Employer's authorized representative shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer/ Employer's authorized representative.

B. Technical Specifications

1. General

1.1. Project Details

1.1.1. General Description

Proposed design focusses on the detailed engineering design of storm water drainage canal side slopes enhancement work.

1.2. Purpose of Specification

The specification defines the requirements and gives guidance for implementation and maintenance of the works.

1.3. List of relevant drawings and document

This specification to be read in conjunction with:

- Detailed Drawing Package submitted by CONSULTANT/ EMPLOYER'S AUTHORIZED REPRESENTATIVE;
- Bills of Quantities as prepared by appointed Quantity Surveyor;
- Relevant Indian Standards as listed in Annexure;
Note: If work item is not included in Indian Standards, appointed contractor should refer to relevant international standard (BS or equivalent). This should be approved by Employer's representative prior to commencing any works on site;
- Other documents – any documents not included above but relevant to the tender process. These should be provided/made available to Contractor by the Employer/ Employer's representative if applicable.

1.4. Terminologies

In the Specification and other Documents forming part of the Contract, the following expressions and words shall, unless the context otherwise requires, have the meaning hereby respectively assigned to them:

"Approved" or "approval"	means approved by or approval of, the Employer's Representative
"Submitted" or "submit"	means submitted to or submit to the Employer's Representative in writing prior to commencing works
"Accepted" or acceptance"	means accepted by or acceptance of, the Employer's Representative
"As shown on Drawings"	means all works required to conform with the intent shown on the drawings

whether or not specifically described in these documents/drawings but are necessary for the full and satisfactory completion of the Contract Works

"As required"

means as required to satisfactory standard match the description in the Specification and other Documents forming part of the Contract

1.5. Site Management

1.5.1. General

Prior to site handover to the Contractor, Contractor should prepare and get written approvals of Site Management Plan.

After the handover of the site to the Contractor, site preparation measures have to be taken up before the commencement of work.

1.5.2. Site Management Plan

- a) Plan to be prepared by Contractor and approved by the Employer/ Employer's representative prior to handover of the site.
- b) Plan should be followed during Construction
- c) Plan should comply with all relevant statutory regulations as well as Health and safety requirements (as per "*Section 1.6.3. Health and Safety*", of this Specification)
- d) Plan should include and detail the following items;
 - Detailed information on site preparation measures to be taken up before commencement of works as well as during the works and maintenance period;
 - Clear site arrangement layout for temporary structures, storage, water, electricity supply, vehicular circulation and parking areas etc.
 - Method statements on how site management will be carried out;
 - Details of management structure and responsibilities, with clearly stated points of contact;
 - Communication procedure within site team;
 - Procedures for informing other contractors and employees of site management issues;
 - Procedures for communications between the project team, other contractors and site operatives;
 - Procedures for keeping the records of site queries, obtained approvals, tests, any documentation that affects the site works etc.
 - Storage of the materials and equipment on site;
 - Any additional information required by statutory regulations.

1.5.3. Health and Safety

General

- a) The safe completion of the works is a primary aim of the contract. All works should be executed in compliance with all applicable statutory requirements. Below listed are general requirements and items, contractor should take care of and provide in respect to Health and Safety on site.

- b) Contractor should always liaise with Employer's Health and Safety Representative during pre-construction, construction and post construction/maintenance stage of work.
- c) Employer's Health and Safety Representative responsibilities should include the following;
 - Advise and assist the Employer, Contractor and Consultants involved in project with their Health and Safety duties,
 - Notify details of the project to respective Health and Safety authorities,
 - Co-ordinate health and safety aspects of construction work and co-operate with others involved with the project,
 - facilitate good communication between the Employer, designers and contractors,
 - liaise with the principal contractor regarding ongoing work,
 - identify, collect and pass on pre-construction information,
 - Prepare/update the health and safety file on a weekly basis.

Health and Safety Plan

- a) Health and Safety Plan to be submitted by Contractor to the Employer/
Employer's representative for written approval;
- b) Following items should be included as part of the plan:
 - Method statements on how risks from hazards identified in pre-construction information and other hazards identified by the Contractor will be addressed,
 - Details of management structure and responsibilities, with clearly stated point of contact in case of emergency,
 - Arrangements for issuing health and safety directions,
 - Selection procedures for ensuring competency of other contractors,
 - Procedures for informing other contractors and employees of health and safety hazards,
 - Procedures for communications between the project team, other contractors and site operatives,
 - Arrangements for coordination and cooperation between contractors,
 - Procedures for carrying out risk assessments and for managing and controlling the risks,
 - Emergency procedures including those for fire prevention and escape,
 - Arrangements for ensuring that all accidents, illness and dangerous occurrences are recorded,
 - Arrangements for welfare facilities,
 - Procedures for ensuring that all persons on site have all the required safety gear and have received relevant health and safety information and training,
 - Arrangements for ensuring that all visitors to site receive the required safety gear and training prior to entering the site,
 - Arrangements for consulting with and taking views of people on site,
 - Arrangements for preparing site rules and drawing them to the attention of the those affected and ensuring their compliance,
 - Monitoring procedures to ensure compliance with site rules, health and safety standards and statutory requirements.
- c) In addition, all statutory health and safety requirements should be included as part of the Health and Safety Plan.

1.5.4. Environmental Management

- a) Noise control
 - Comply with local regulations and minimise the noise level where possible.
- b) Pollution
 - Protect the site, the Works and the general environment including the atmosphere, land, streams and waterways against pollution. If pollution occurs inform immediately, including to the appropriate authorities and provide relevant information.
- c) Nuisance
 - Prevent nuisance from smoke, dust, rubbish, vermin and other causes. Prevent hazardous build-up on site, in excavations and to surrounding areas and roads,
- d) No dumping of material in the surrounding areas is permitted.
 - Asbestos containing materials
 - Report immediately any suspected materials discovered during execution of the Works. Agree methods for safe removal or encapsulation.
- e) Fire prevention
 - Prevent personal injury or death, and damage to the Works or other property from fire. Comply with local statutory fire regulations.
- f) Burning on site
 - Burning on site **NOT** permitted.

1.6 Moisture

- a) Prevent from wetness and dampness where this may cause damage to the works.
- b) Contaminated materials
 - Where instructed to remove material affected by contamination from the site, minimize the risk of infecting other parts of the site.
- c) Waste
 - Waste includes rubbish, debris, spoil, containers and surplus material. Keep site and works clean and tidy,
- d) Remove waste frequently and dispose off site in a manner approved by Waste Regulation Authority and as per Waste Management Plan.

1.7 Preservation of Existing Features, Vegetation & Services

- a) All existing features identified as to be retained by Employer's representative should be dealt with in accordance with the below listed procedures.
- b) Existing features include hard landscape structures as well as trees and other feature soft landscape elements.
- c) Hard landscape elements which have been identified as important element by the Employer shall be protected from all on going site works.
- d) No structural elements should be removed / relocated without written permission of Employer's representative.
- e) All protected elements should be clearly identified and labelled, site team should be aware of all the items to be protected.
- f) No existing trees should be cut/pruned without written permission of the Employer's representative/PM;
- g) All works shall be carried out in coordination with experienced horticulturalist;

- h) All works to trees shall be in accordance with relevant local standards;

1.7.1 Guidelines for Trees to be removed

- a) Any existing trees identified as “to be removed” or any dead trees:
- Contractor shall cut and fell, as close to the ground as possible;
 - Trunks to be cut to convenient lengths;
 - Root stumps to be removed to a minimum depth of 800mm below ground level;
 - Any debris or material that comes from the above works shall be utilised in accordance with Waste Management Plan.

1.7.2 Guidelines for Trees to be retained

- a) All retained trees should be clearly identified “TO BE RETAINED” and information signs should be displayed on site in prominent positions at each entrance;
- b) All retained trees shall be marked by visible, durable tags, lettered to tree number or symbol (if any) on the drawings.
- c) Trees should be fenced off the works area if possible, in all cases tree trunk and roots should be protected from site works;
- d) Protected area should be in a shape of a circle around each tree with radius of 3m, measured from tree trunk.
- e) Do not allow for soil compaction under the tree;
- f) Do not store any materials or site equipment under or near the trees.
- g) Do not allow for any vehicles to be parked near retained trees or to pass under the trees;
- h) Prevent damage to tree bark; do not attach any items to trees.
- i) Do not expose tree roots;
- j) When works under the tree:
- Do not add or remove topsoil within the drip line of trees, do not fill against tree trunks even temporarily;
 - Open excavation under tree canopy should be carried for as short period as possible. If exposing roots unnecessary temporarily line with polyethylene sheet to reduce evaporation;
 - Use only hand methods to locate, expose, and cleanly remove the soil around roots on the line of excavation. Root systems should be preserved intact.
 - When it is necessary to cut the roots bigger than 25mm diameter, make sure the cutting does not disturb remaining root system. Cut should be smooth with no ragged edges. Clean cut surface should be immediately treated with bituminous fungicidal sealant.

1.7.3 Guidelines for Existing Services

- a) Special precautions shall be taken by the Contractor to avoid damage to existing sewerage pipes, storm water drains, and pipes, storm water grids, and inlets, manholes, valve casings, water pipes and taps, fire hydrants, irrigation pipes and equipment, cables, completed landscaping works, telephone and light poles, vegetation and other services.
- b) Where manholes, valve castings and other services have to be adjusted to fit in with the construction work or for any other reason, the Employer’s Representative shall

be notified with 14 days' notice, so that the necessary arrangements can be made. Manholes, valve casings, meter casings, fire hydrants etc., shall always be easy to reach and visible.

1.7.4 Protection of Existing Property

- a) The Contractor shall take all necessary precautions against damage that might occur to any person, animal, building, structure, services, vegetation, vehicles etc.
- b) Enough warning signs, railings, lighting etc. shall be placed around excavations, obstacles, and heaps.
- c) Foot bridges, shall be placed over trenches, where necessary for the convenience of the public.
- d) Construction activity is to be limited to pre-designated areas and with the prior approval of the Employer's representative.

C. Detailed Specification

Item No 1

Carry out 1m x 1 m grid survey work by total station in reference to GTS benchmark or Benchmark suggested by engineer in charge along the corridor including marking of center line of alignment with GPS , taking ground level ,details of all existing structures, Electric poles, trees, overhead electrical lines including fixing necessary reference RCC pillars, establishing bench mark, establishing day light lines on ground and submission of Survey Drawing with readable spot level, longitudinal section, cross section and drawing report of survey work as directed.

- a) Item shall be executed as specified in the item description and specified as below.
- b) Conducting topographical survey in the specified area indicating all permanent features like Highways, Roads, Rivers, nallas, lakes, ponds, culverts, existing structures, transmission lines, telegraphs, telephones and electric poles, cross drainage works etc. and plotting the same showing true North including establishing survey reference stations including supply of all equipment, instruments, personnel, labours, etc., required to complete the work as directed by of Engineer - in - Charge.
- c) Spot level with respect to GTS benchmark of Survey of India or Benchmark suggested by engineer in charge in a grid of 1 meter both ways, showing true North including establishing survey reference stations and supply of equipment, instruments, personnel, labours, etc., required to complete the work. L-section, cross section shall be prepared and submitted. Centerline and all the day light lines with respect to GPS are marked on ground surface in prior to starts the work.
- d) Providing and constructing Pillars of 0.5 m x 0.5 m x 1 m at every 200m interval for TBM and PBM as required.
- e) All the Drawings and report containing all the details regarding survey shall be submitted in Hard copy and Soft copy (Drawing and PDF).
- f) Prepare and submit working drawings viz. i) Plan and Profile with daylight line, ii) cross sections (20m interval) for the entire corridor width including embankment, service lane, gutter etc. and iii) Longitudinal profile of side gutter in A2 drawings (both soft and hard copies) with the approval of Engineer in charge. Contractor has to submit as built drawings of all the components as directed by engineer in charge.
- g) The Item shall be measured in hectare.
- h) The rate includes all materials, labor, equipments, formwork, curing and painting, Printing etc. & everything required to complete this item

Item No 2

300 mm mechanised trimming of the canal section for preparing sub grade for laying cement concrete lining in all sort of soils and murrum including watering and compacting bed and side slopes using slope compactors including backfilling as directed and dewatering where required.

General.

- a) The provision of this paragraph applies to the preparation of subgrade/side slope upon which stone pitching is to be placed on side slope, if any, watering and compacting where ever required.
- b) The work of trimming the canal section up to and underside of stone pitching of thickness 30 cm or as required and preparing side slope shall be carried out by mechanical trimming machine of adequate capacity, immediately prior to laying of the pitching but in no case the time interval should exceed 3 days in normal weather and 2 days in adverse weather conditions. All along the canal alignment the rain cuts on the side slope shall be filled up with approved excavated material and shall be compacted adequately to required line and level. The material required for filling the over excavation in raincuts if not available during excavation in soils to be done under this item, shall be hauled from spoil bank and placed in position. The side slopes shall be trimmed to the required section by mechanical trimmers only.
- c) If at any point material has been excavated beyond the pay line required to receive the stone pitching , the excess excavation shall be refilled in horizontal layers with selected material moistened, if required, and compacted using rollers and slope compactors.
- d) Preparation of Subgrade Consisting Earth: The subgrade shall be prepared, dressed true to level and according to the required cross section of the canal to form a firm compacted slope for the stone pitching
- e) In other than predominantly sandy reached where the dry bulk density of the natural soil is not less than 1.8 g/cm³, initial excavation shall be done up to about 30 cm above the final section and the cutting to final shape shall be done immediately before pitching
- f) Sample profile true to the cross section of the canal shall be made at an interval of 4 to 6m to ensure correct formation of side slope. To ensure uniformity of side slopes a chord shall be stretched across two profiles over a spacer of uniform thickness of 30 cm. A third spacer shall be run under the chord to check the evenness of the surface. This process shall be repeated at short intervals along the slopes till the surface between two profiles is properly leveled and dressed from top to bottom. Suitable wooden templates may be used to layout and check the profile.
- g) If at any point material of prepared side slope has been excavated beyond the neat lines required to pitching, the excess excavation shall be filled with grade filter material compatible with subgrade material and thoroughly compacted.
- h) To cover up any lapses in the compaction of the inner core of the banks near the edges and to allow sufficient width for a labourer to work conveniently a lip cutting width of

not less than 50.0 cm horizontally shall be provide. Depending upon the nature of soil and the side slopes of the canal, the lip cutting width may be in the range of 50 to 100 cm.

i) Compaction of Subgrade in predominantly Sandy Reaches.

(i) Sides – The compaction of sides shall be done either by overcutting the subgrade by 15 cm and refilling it with sand or concrete with adequate quantities of lime or cement and compaction by vibro – compactors.

Note: Admixtures of 5 percent cement are generally found satisfactory.

j) Compaction of subgrade in other than predominantly Sandy Reaches :

All compaction shall be done at optimum moisture content in layers not more than 15 cm thick to obtain a dry bulk density of not less than 95% of the density at optimum moisture content obtained in accordance with IS : 2720 (part- VII) – 1965 (Methods of test for soils)

(i) Where the dry bulk density of the natural soil is equal to or more than 1.8g /cm³, the procedure described in para (a) shall be followed.

(ii) Sides – Construction on sides shall be done by manual labour or suitable compactors to a depth of 30 cm to obtain a minimum dry bulk density of not less than 90 percent of the density at optimum moisture content obtained in accordance with IS: 2720 (Part – VII) – 1965.

Tolerances.

Excavated profile provides the final base for pitching and tolerances i.e. departure from established alignment shall be as indicated here below.

+ 20 mm on straight section.

+ 50 mm on Tangents.

+ 100 mm on curves.

+ 20 mm Departure from established grade.

The above tolerances shall be negotiated gradually through smooth transition in a length of 50 m. No extra quantity shall be paid to the contractor. Subgrade shall be got approved from designated quality control staff. The above-mentioned tolerance limits are for the excavation only.

Measurement and Payment

Measurement for payment for the trimming and preparation of subgrade for stone pitching equal to the thickness of pitching i.e. 30 cm, where ever is necessary shall be made on square metre of the surface of the canal prism mechanically trimmed over which pitching is to be placed. Payment shall be at the unit rate on square metre basis. The payment shall be made on net area of trimming earth as given in drawings. Any extra works required to carry out said activity beyond the dimension shown in the drawings shall not be paid and to be borne by the contractor.

The rate includes cost of labour, equipment's, backfilling both for sides slopes if required, watering, compaction of bed and sides slopes and all incidental works to complete the work as per specifications and dewatering of the canal sections wherever required. In case manual trimming is done by the contractor, which shall normally be not allowed except in special case payment for such manually done trimming shall be paid at 50% of the quoted rates.

Item No 3

Providing and laying thermally bonded non-woven poly propylene based geotextile made up of 70% PP and 30% PE of Tensile strength 8kN/m and having CBR puncture resistance of 1500 N on side slope as per detail drawing ,specification and as directed by engineer in charge.

The geotextile should be of approved brands (1) Maccaferri (2) Tensar and (3) Polyfelt.

Item shall be executed as mentions in item description.

Mechanical, hydraulic and physical Properties, of material should follow as mention in item description.

The geotextile shall be placed immediate contact of soil ensuring slight tension, to avoid wrinkles or folds and shall be anchored on properly shaped surface as indicated in drawing.it shall be ensured that the placement of the overlaying material to be placed in such a manner that it does not tear /punctured. Adjacent geotextile sheets shall be overlap by 300 mm to 450 mm

The pitching shall begin at the toe and processed up slope.

Item shall be measured in sqm of completed work except overlap.

The rate includes cost of all material, labour, machinery required to complete the above item as per drawing, specification.

Item No 4

Providing & filling foundation with cement concrete of M -15 grade with OPC cement, sand, and coarse aggregates including centering, shuttering, batching, mixing, transporting, placing, vibrating, smooth finishing, curing etc. complete.

Item shall be executed as specified in description and as per section 1500 (except 1512 & 1513) and 1700 of MoRT&H Specification (5th revision).

Item No 5

Providing & laying controlled cement concrete of M -25 grade with OPC cement, sand, and coarse aggregates including centring, shuttering, batching, mixing, transporting, placing, vibrating, smooth finishing, curing etc. complete for Toe wall, and CC panel on slope as per drawing and as directed by engineer in charge

Item shall be executed as specified in description and as per section 1500 (except 1512 & 1513) and section 1700 of MoRT&H Specification (5th revision).

Item No 6

Providing and laying TMT fe 500 D CRS reinforcement for RCC works bar with providing binding wires including cutting, bending, welding , binding in position hooking placing in position with all leads & lifts etc. complete.

The specifications and relevant IS /BS code of Corrosion Resistant steel shall be applied to this item.

Item shall be executed as specified in description and as per section 1600 of MoRT&H Specification (5th revision).

Item No 7

Excavation for foundation in all sorts of soil including yellow sandy gravelly soil, soft & hard murrum etc. including depositing the excavated stuff in uniform layers in banks or as and where directed etc. complete for all lead and all lift. (By machinery and suitable means) (Including dewatering)

Item shall be executed as specified in description and as per Clause 301 & 304 of section 300 of MoRT&H Specification (5th revision).

Item No 8

Back filling the foundation trenches around the structures etc. with selected excavated stuff including watering, ramming, compacting etc. complete.

General

- (a) The type of material used for backfilling, and the manner of depositing the material, shall be subject to approval. As far as practicable backfill material shall be obtained from the excavation for structures or from adjacent canal excavation or from excavation of other ancillary works.
- (c) Backfill material shall contain no stones larger than 7.5 cm size.
- (d) The backfill material shall be placed to the line and grades as shown on drawings or as prescribed in this paragraph or as directed by Engineer-in-Charge.

- (f) The backfill material shall be placed carefully and spread in uniform layer not more than 15 cm thickness. The backfill shall be, brought up as uniformly as practicable on both sides of walls where ever applicable and all sides of structures to prevent unequal loading.
- (h) Backfill placement and compaction around structures shall be restricted until the structure is complete.
- (j) Compaction around the structure shall be done by pneumatic rammers in thin layers.

The embankment work shall be carried out with all precautions necessary from safety requirement and as per the method specified in the normal embankment technique.

Compaction of Backfill

When compacting the soil against steep rock abutment walls of masonry or concrete structures, the construction surface of embankment shall be sloped away from the rock or masonry or concrete structure leaving a minimum distance of 0.6 metre and at an inclination of 3:1. Rollers shall not be used close to structures as structural damage is very likely more particularly when structures have not been fully, cured. The size and weight of equipment will depend on nature of material, the height and load assumed in design of structure. The backfill close to the structure up to the rolled layer shall be compacted in suitable uniform layers using pneumatic / hand tampers at appropriate for dry density of at least 90% of Standard Proctor Density. The moisture content of the earth fill placed against the rock or the structure shall be on higher side of OMC by about 2% or so, to allow it to be compacted into all irregularities of the rock. Profused watering shall be done to pervious materials, (sand) before compaction as per instruction of the Engineer-in-Charge. Compaction at junction of earthwork and backfill around the structure shall be carried out with special care without claiming any extra cost.

Measurement and Payment

- (a) Measurement for payment for back filling foundation trenches and around structures with suitable excavated stuff will be made according to the pay lines shown on the drawings and the backfill outside of those pay lines will be at the cost of the contractor. The payment shall be made on cubic metre basis.

Item No 9

Providing and laying dry rubble pitching of 300 mm thick thickness to required grade including trimming of slope as required, hand packing the interstices with spalls, filling earth in interstices panelling with the surface pointed with cement mortar of 1:2 proportion etc. complete for all leads and lifts.

- a) The work shall consist of covering the slopes of embankment with Rubble, stone or boulders, over a layer of compacted earth work.
- b) Stone subject to marked deterioration by water or weather will not be accepted. The stone shall be sound, hard durable and fairly regular in shape and its thickness in any

one direction shall not be less than the thickness of pitching as specified in the item and thickness of the stone at any place shall not be less than 15% of the thickness specified. The largest stones procurable shall be supplied on site. The sizes of spalls shall be minimum 25 mm and shall be suitable to fill the voids in the pitching. Thickness of the pitching shall be as specified in the pitching item.

- c) Before laying the pitching, the sides of banks shall be trimmed to the required slopes and profiles put up by means of line and pegs at intervals of 3 meters to ensure regular straight work and uniform slope throughout. Depressions shall be filled and thoroughly compacted.
- d) The stone pitching shall commence below the toe of the slope. Stone shall be placed by derrick or by hand to the required length, thickness and depth conforming to the drawings. Stones shall be set normal to the slope and placed so that the largest dimensions are perpendicular to the face of the slope, unless such dimensions are greater than the specified thickness of pitching. The largest stones shall be placed in the bottom courses and for use as header for subsequent course. When full depth of pitching can be formed with a single stone, the stones shall be laid breaking joints and all interstices between adjacent stones shall be filled in with spalls of the proper size and wedged in with hammers to ensure tight packing.
- e) Cement Pointing with cement mortar 1:2 Pointing:-
 1. For a surface which is to be subsequently jointed the joints shall be squarely raked out to a depth of 15 mm while the mortar is still green. The raked joints shall be well brushed to remove dust and loose particles and the surface shall be thoroughly washed with water cleaned and wetted.
 2. Cement and sand shall be mixed in proportions as specified in the item Cement and sand shall be proportioned by volume after making due allowance for bulking. The required quantity of water shall then be added, and the mortar mixed to produce workable consistency.
 3. The mixing shall be done intimately by hand-mixing. The operation shall be carried out on a clean watertight platform and cement and sand shall be first mixed dry in the required proportion to obtain a uniform colour and then the mortar shall be mixed for at least two minutes after addition of water. In case of cement mortar that has stiffened because of evaporation of water the same shall be re-tempering shall be permitted only with thirty minutes from the time of addition of water at the time of initial mixing.
 4. For pointing the mortar shall be filled and pressed into the raked-out joints before giving the required finish. The pointing shall then be finished to proper type given on the drawings. If type of pointing after the mortar has been filled and pressed into the joints and finished off level with the edge of the stone, it shall while still green be ruled along the center with a half round tool of such width as may be specified by the Engineer-in-charge. The superfluous mortar shall then be cut off from the edges of the lines and the surface of masonry shall also be cleaned of all mortar.

5. Curing shall be started as soon as the mortar used for finishing has hardened sufficiently not to be damaged when watered. It shall be kept wet for a period of at least 7 days. During this period, it shall be suitably protected from all damage.
6. The work of pointing shall be carried out by flush pointing in CM 1:2.
7. The rate for pointing shall include erecting & the removal of scaffolding all labour materials and equipment incidental to complete the pointing raking out joints wetting filling with mortar toweling point and watering.

Mode of Measurement:

Payment shall be made on Sq.mt basis of the finished work. If directed by the Engineer in charge, for measurement the materials may have to be stacked at site before laying and nothing extra will be paid to the Contractor for this stacking. Preparation of base for laying bedding shall be deemed indicated to the work.

Rate

The rate shall include the cost for preparing the base, trimming/filling the earthwork to the profiles, as per slopes, lines, curves, slopes levels, Rubble placing, cement pointing in C.M 1:2 and all labour and materials as well as tools and plant required of the work.

Item No 10

Providing and fixing in position pre moulded asphalt or bitumen cork board of approved quality and specifications as per design and drawing and as directed. (12 mm thickness).

Providing and fixing in position pre-moulded asphalt or bitumen cork boards of approved quality and specifications as per design and drawing and as directed.

General

The bituminous pad or bitumen cork board shall be pre-moulded fibre board impregnated with bituminous materials to render it durable and rot proof. It shall be easily compressible and shall recover nearly to its original thickness after releasing the compression.

The bituminous pad shall be of the required size and standard measures and should conform to IS: 1838 – 1983. The pad shall be cut to the required size and placed in positions firmly so that it shall not be displaced at the time of concreting. The bituminous pad shall consist of large pieces. Assembly of smaller pieces to make up to required size shall not be permitted to be used.

Measurement and Payment:

Measurement, for payment will be on square metre basis of actual quantity placed in position. Thickness of expansion joint shall be 12 mm. as shown in item. Width of the expansion joint shall be as shown on drawings or as directed by the Engineer-in-Charge.

The unit rate includes cost of all materials, labour, equipment and other incidental charges for performing the work as per specifications and as shown on the drawings.

Item No 11

Construction of embankment with approved material obtaining from borrow area with all leads and lifts transporting to site, spreading ,grading to required slope in accordance with requirements of lines, grades , cross sections and compacting to meet requirement to MoRTH table 300- 2 in layers not more than 200 mm thick, including rolling with vibratory roller of 8 to 12 tonnes etc. complete as per MORTH Clause 305 .

Item shall be executed as specified in description and as per Clause 305 of section 300 of MoRT&H Specification (5th revision).

Item No 12

Providing & laying WBM 150 mm compacted thickness in two layer of 75 mm of using B.T. Crushed metal of size 45 mm to 63 mm @ 0.91 Cum material for 10 sqm, stone screening Grading Type A 13.2 mm @ 0.12 cum per 10 sqm,Stone dust @ 0.06 Cum per 10 Sqm, including spreading ,watering & consolidation by vibratory roller etc complete and as directed by Engineer in Charge.

Item shall be executed as specified in description and as per Clause 404 of section 400 of MoRT&H Specification (5th revision).

Item No 13

Hot Dip Galvanized Structural steel work in riveted, bolted or welded in built up sections, trusses and framed work including supplying, fabricating, cutting, assembling, hoisting and fixing in position at all heights of all shapes and size with all leads and lifts of YST 310 as per latest IS 4923, IS 1161, IS 806 .It should be including necessary rolled joists, channels, angles, tees, flats, angle cleats, gusset plates, position hip and jack lifters, purlins, RHS, SHS, CHS, tension cable etc. including cutting and welding the members as per detailed drawing and design. The rate shall include 1 coat of Zinc chromate primer and 2 coat of Approved Enamel Paint to over all the surfaces of the steel sections or as specified in the drawing. (Only standard measurements will be paid for as actual cut length used at site). Rate shall be inclusive of cutting, wastage, welding, bending (shop at site), fixing as per profile, bolting wherever necessary, in position welding of required length, grinding, finishing edges, filling the welded spots with metal putty. It should also include the cost of approved ISI make and size zinc coated nut-bolt and Anchor fasteners of Hilti or Fisher as approved by engineer-in-charge.

Item shall be executed as specified in description and as per section 1900 of MoRT&H Specification (5th revision).

Hot Dip Galvanized work shall be carried out as IS 2629 and IS 4726.

Request for Qualification cum Request for Proposal for Enhancement
of Side Slope of Storm Water Drainage Canal in Activation Area in DSIR

Item shall be measured in Kilogram. The rate is included of all labour, material and machinery, tools and other incidentals to complete the work as directed by Engineer in charge.

D. DRAWINGS:

1.1 CONTRACT DRAWINGS:

Contract drawings are basic but shall be closely followed as actual construction permits. Any deviations made shall be in conformity with the services drawings. Shop drawings shall be submitted by the contractor and got approved from the employers. Drawings shall take precedence over contract or other services drawings as to all dimensions. Any deviations in drawings will be brought to Employer notice before work is executed on site. Contractor shall verify all dimensions at site and bring to the notice of the Employer any or all discrepancy or deviations noticed.

1.2 Deleted

1.3 APPROVALS:

1.3.1 The contractor shall obtain all information relating to local regulations, Bye-Laws, sanction and release of electrical connection, application of any and all laws relating to his work or profession and his having to execute work as required. No additional claims shall be admissible on this account.

1.4 CODE REQUIREMENTS:

All work shall be done in accordance with the I.S. Code / IRC Codes / MoRT&H specifications or other relevant codes amended up to date.

1.5 MATERIALS:

All materials to be used in this work be new and bear the Employer label of approval.

1.6 RATES:

1.6.1 The work shall be treated as on works contract basis and the rates tendered shall be for complete items of work inclusive of all taxes (including works contract tax, if any), duties, and levies etc. and all charges for items contingent to the work, such as, packing, forwarding, insurance, freight and delivery at site for the materials to be supplied by the contractor, watch and ward of all materials for the Internal E.I. work at site etc.

1.6.2 Prices quoted shall be firm.

1.7 COMPLETENESS OF TENDER:

All sundry fittings, assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections as required, and all other sundry items which are useful and necessary for proper assembly and efficient working of the various components of the work shall be deemed to have been included in the tender, whether such items are specifically mentioned in the tender documents or not.

1.8 WORKS TO BE DONE BY THE CONTRACTOR:

- 1.8.1 Unless and otherwise mentioned in the tender documents, the following works shall be done by the contractor, and therefore their cost shall be deemed to be included in their tendered cost:-
- 1.8.2 Cutting and making good all damages caused during installation and restoring the same to their original finish.
- 1.8.3 Painting at site of all exposed metal surfaces of the installation other than pre-painted items like fittings, fans, switchgear/ distribution gear items, etc. Damages to finished surfaces of these items while handling and erection, shall however be rectified to the satisfaction of the Employer.
- 1.8.4 Temporary shed if required over the storage space and locking arrangement thereof and watch and ward of the materials and completed installation till completion of the work.
- 1.8.5 Testing and commissioning of completed installation.

1.9 TOOLS FOR HANDLING AND ERECTION:

All tools and tackles required for handling of equipment and materials at site of work as well as for their assembly and erection and also necessary test instruments shall be the responsibility of the contractor.

1.10 CARE OF THE STRUCTURES:

Care shall be taken by the contractor to avoid damage to the any buildings / structures / utilities during execution of his part of the work. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove at his cost all unwanted and waste materials arising out of his work from the site.

Section 4. Tender Drawings

Due to size constraint drawings are uploaded in tender
section of DICDL website

Section 5. Copy of Letter of Award and Acceptance

Response to Queries, Addendum and Correspondences