

NIT No: BSCL/ICCCB/2021/53

Date: 15.04.2021

Notice Inviting Short Term E-Tender

Work Descriptions: Request for Proposal (RFP) for Construction of ICCB Building (B+G+5 floors) including utility services under Smart City Mission on Item Rate basis for remaining work.

Estimated Cost (In Rs.): 24,88,52,582/- (Twenty-four crore and eighty-eight lakh fifty two thousand five hundred and eighty two only) inclusive of all taxes and GST.

Tender Processing Fee: As per e-proc norms <https://www.eproc2.bihar.gov.in>

Tender Documents fee (In Rs.): 25,000/- (Twenty-five thousand only).

Earnest Money Deposit (In Rs.): 34,88,600/- (Thirty-four lakh eighty-eight thousand and six hundred only).

Tender Schedule:

Sr. No.	Activity	Date and Time
1	Bid Submission Due Date https://eproc2.bihar.gov.in/	08-05-2021 11:00 PM
2	Bid Open Date https://eproc2.bihar.gov.in/	10-05-2021 04:00 PM
3	Submission end date of hard copy/ Physical documents mentioned in RFP. Address: Chief Executive Officer, Bhagalpur Smart City Limited, Swami Vivekanand Path, Near Ghuran Peer Baba Chowk, Bhagalpur – 812001.	10-05-2021 03:00 PM
4	Prebid Meeting Start Date. Venue Details: Conference Hall, Bhagalpur Smart City Limited.	22-04-2021 11:45 AM
5	Prebid Meeting End Date.	22-04-2021 01:00 PM
6	Prebid Query Submission end date and time. Email: info@smartcitybhagalpur.org	22-04-2021 10:00 AM

Note: NIT, RFP, Corrigendum (if any) etc. are also available on Company website <http://www.smartcitybhagalpur.org> for reference purposes only.


Chief Executive Officer,
Bhagalpur Smart City Limited.



Request for Proposal (RFP)

For

CONSTRUCTION OF ICCC BUILDING (B+G+5 FLOOR) INCLUDING UTILITY SERVICES IN BHAGALPUR, BIHAR WITH 2 YEARS DEFECT LIABILITY PERIOD (DLP)

Under

**SMART CITY MISSION (SCM) ON ITEM RATE BASIS FOR REMAINING WORK
in Bhagalpur, Bihar**

Issued By:

**Chief Executive Officer (CEO),
Bhagalpur Smart City Limited**

DISCLAIMER

The information contained in this Request for Proposal (“RFP”) document or subsequently provided to bidders, verbally or in documentary or any other form by or on behalf of the Bhagalpur Smart City Limited (henceforth referred to as “BSCL” in this document) or any of its employees or advisers, is provided to bidders on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP is not an agreement and is not an invitation by the Employer to the prospective Consultants or any other person. The purpose of this RFP is to provide interested bidders with information that may be useful to them in the formulation of their Proposals pursuant to this RFP.

This RFP includes statements, which reflect various assumptions and assessments arrived at by the Employer in relation to the Consultancy. Such assumptions, assessments and statements do not purport to contain all the information that each bidder may require. This RFP may not be appropriate for all persons, and it is not possible for the Employer, its employees or advisers to consider the objectives, technical expertise and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in this RFP, may not be complete, accurate, adequate or correct. Each bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this RFP and obtain independent advice from appropriate sources. Information provided in this RFP to the bidder (consultant/contractor/developer/manufacturer/supplier etc.) is on a wide range of matters, some of which depends upon interpretation of law. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law.

The Employer accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.

The BSCL and its employees and advisers make no representation or warranty and shall have no liability to any person including any bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way in this Selection Process.

The BSCL also accepts no liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any bidder upon the statements contained in this RFP. The BSCL may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this RFP. The issue of this RFP does not imply that the Employer is bound to select a bidder or to appoint the selected bidder, as the case may be, for the Consultancy and the BSCL reserves the right to reject all or any of the Proposals without assigning any reasons whatsoever.

The bidder shall bear all its costs associated with or relating to the preparation and submission of its Proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the BSCL or any other costs incurred in connection with or relating to its Proposal.

All such costs and expenses will remain with the bidder and the BSCL shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a bidder in preparation or submission of the Proposal, regardless of the conduct or outcome of the Selection Process.

Sd/
Chief Executive Officer (CEO),
Bhagalpur Smart City Limited

**INSTRUCTIONS TO BIDDERS
AND
QUALIFICATION INFORMATION**

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VOLUME-I

SECTION-1

INVITATION FOR BID (IFB)

NIT No:		BSCL/ICCCBUILDING/2021/52
1.	(a) Name of the work	Construction of ICCC Building in Bhagalpur, Bihar with 2 Years defect liability period under Smart City Mission on Item Rate Contract for remaining work.
	(b) Scope of Work	Construction of remaining work of B + G + 5 Floor Building including water supply and sanitation, sewer network, Internal & External Electrification works, storm water drainage, rain water harvesting, landscaping, boundary wall with barbed wire fencing, street lighting, Construction of internal roads & parking, 1000 KVA Generator sets in two nos., Firefighting System, HVAC & Office Furniture etc. for ICCC Building on Item Rate Contract (complete in all respect internal and external finish) including two (2) years of defect liability period.
2.	Mode of Bid Submission	e-tendering (http://www.eproc2.bihar.gov.in)
3.	Estimated Cost (Rs.)	Rs. 24,88,52,582/- (Twenty four crore eighty eight lakh fifty two thousand five hundred and eighty two only).
4.	Online Tender Fee	https://www.eproc2.bihar.gov.in/
5.	EMD/Bid Security	As per NIT. (The EMD/Bid Security should be submitted through Internet Payment Gateway (IPG) / Challan / Bank Guarantee. Bank Guarantee shall be drawn in favour of “Chief Executive Officer, Bhagalpur Smart City Limited”.)
6.	Tender Document Fee	As per NIT
7.	Date / Time of Publication of Tender on e-Proc Website	As per NIT
8.	Last Date / Time of for Bid Submission	As per NIT
9.	Last Date / Time of Submission of Tender Fee & EMD	As per NIT
10.	Date of Bid Opening	As per NIT
11.	Bid Submission Address	Bhagalpur Smart City Limited, Municipal Corporation, Court Compound, Bhagalpur – 812001

Note: Only e-Tenders shall be accepted.

Further details are available on Bihar Government e-Procurement website and select Bhagalpur Smart City and can be seen on the website <http://www.eproc2.bihar.gov.in>

Sd/-
Chief Executive Officer (CEO),
 Bhagalpur Smart City Limited

Instructions to Bidders for Online Submission of Bids

Detailed instructions & documents to be furnished for online bidding:

1. Guidelines for online submission of bids can be downloaded from the website <http://www.eproc2.bihar.gov.in>
2. Bidders in order to participate in the online bidding process have to get 'Digital Signature Certificate (DSC)' as per Information Technology Act-2000. This Certificate will be required for digitally signing the bid. Bidders can get the above-mentioned digital signature certificate from any vendor approved by Controller of Certifying Authorities (CCA). Bidders, who already possess valid Digital Certificates, need not procure new Digital Certificate.
3. Bidders should submit their bids online in electronic format with digital signature. Bids without Digital Signature will not be accepted. No proposal will be accepted in physical form.
4. Bids will be opened online as per time schedule mentioned in the Invitation for Bids (IFB).
5. Bidders should be ready with the scanned copies of cost of documents & bid security as specified in the tender document. Before submission of bids online, bidders must ensure that scanned copies of all the necessary documents have been attached with the bid.
6. Bidders should produce original Demand Draft/Bank Guarantee towards tender fee & bid security as mentioned in the Invitation for Bids (IFB) to the BSCL, Bhagalpur office during the period & time as mentioned in the IFB, failing which bid will not be accepted. The details of cost of documents, bid security specified in the tender documents should be the same as submitted online (scanned copies), otherwise bid will summarily be rejected.
7. The Department will not be responsible for delay in online submission of bids due to any reason, whatsoever.
8. All required information for bid must be filled and submitted online.
9. Other details can be seen in the bid documents.
10. Only online withdrawal or modification of bids, if any, in pursuance of relevant clauses of the (Standard Bidding Document) SBD is acceptable.
11. Details of documents to be furnished for online bidding:
(Scanned copies of the following documents to be up-loaded in pdf format on the website <https://www.eproc2.bihar.gov.in> in technical bid folder).
 - i. Demand Draft towards Tender fee.
 - ii. Bid security (Bank Guarantee) in the form specified in Section-10 of RFP.

- iii. Qualification information and supporting documents, as specified in Section-3. of RFP.
 - iv. Certificates, undertakings, affidavits as specified in Section-3 of RFP.
 - v. Any other information pursuant to Clause-4.3 of Section-2 ITB.
 - vi. Undertakings that the bid shall remain valid for the period specified in Clause-15.1 of Section-2 ITB.
12. Scanned copies of the following documents are required to be uploaded on the website <http://www.eproc2.bihar.gov.in> in financial bid folder:
- i. Form of bid as specified in Section-8 of RFP in pdf format.
 - ii. Duly filled Price Bid.
13. Uploaded documents of successful bidder will be verified with the original before signing of the agreement. The successful bidder should provide the originals to the concerned authority on receipt of such a letter in this regard, which will be sent through registered post or speed post or by e-mail or delivered by hand.
14. Each uploading shall be digitally signed by the bidder.
15. For rates quoted below the estimated cost, additional performance bank guarantee shall be deposited by the tenderer as per government circulars at the time of agreement.

Sd/-
Chief Executive Officer (CEO),
Bhagalpur Smart City Limited.

INVITATION FOR BIDS (IFB)

NATIONAL COMPETITIVE BIDDING

NIT No. BSCL/ICCC Building/2021/52

The undersigned, on behalf of the BSCL, Bhagalpur invites Item rate bids for the work mentioned in table below through e-Procurement from eligible Contractors, registered in appropriate class with Central/State Govt. Departments/CPSU/CPSE/State PSU's/Autonomous Bodies, Govt. of Bihar/Govt. of India or an entity incorporated under Indian Companies act or any appropriate law engaged in the construction of Building projects or any public sector undertaking either of central or of state engaged in construction activities specially building works can also participate. The bid shall be submitted online in the website <http://www.eproc2.bihar.gov.in>. The bidder(s) should have necessary portal enrolment with their own Digital Signature Certificate:

Sl. NO.	Name of the work	Estimated Cost (Rs.) Inclusive of all taxes and GST.	Bid Security* (Rs.)	Cost of Document	Period of Completion
1	2	3	4	5	6
1	Construction of ICCC Building in Bhagalpur, Bihar with defect liability period of two years under Smart City Mission on Item Rate basis for remaining work	Rs. Rs. 24,88,52,582/- (Twenty four crore eighty eight lakh fifty two thousand five hundred and eighty two only).	As per NIT	As per NIT	15 Months

Scope of work:

The Broad scope of work to be carried out by the agency/contractor will include; Construction of remaining work of ICCC Building (B+G+5floors) as per supplied GFC (Good for Construction) drawings and as per PWD/CPWD approved specifications and relevant IS codes; getting required statutory approvals from concerned authority at each stage, including carrying out of the following associated works:

1. Construction of remaining work of ICCC Building (B + G + 5 Floor)
2. Water Supply and sanitation (internal as well as external) including overhead water tanks over roof top and sump at the ground level
3. Storm water drainage
4. Rainwater harvesting structures

5. Internal roads
6. Landscaping with provision of park etc.
7. Development of vehicle parking area
8. Boundary wall with barbed wire fencing
9. HVAC & Firefighting works
10. 1000 KVA of 2 No's of Generator Sets
11. Office Furnitures.
12. Complete in all respect internal and external finish etc.

1.0 INTRODUCTION

1.1 About BSCL

Bhagalpur Smart City Limited (BSCL) is the special purpose vehicle created under the Bhagalpur Municipal Corporation to deliver several Pan City and Area Based Development initiatives with a focus on both infrastructure and ICT advancements in the city and at strategic locations.

1.2 Introduction to Bhagalpur Smart City Project

The Ministry of Housing and Urban Affairs (MoHUA), Government of India (GoI) has initiated Smart Cities Mission (SCM), under which selected cities will be developed as smart cities with a focus on improving citizen services with ICT intervention. Smart Cities Mission is an urban renewal and retrofitting programme by the Government of India with a mission to develop 100 cities all over the country making them citizen friendly, sustainable and investment destination. Under the Smart City Scheme, Government has emphasized to improve the basic civic amenities of the cities on one hand and the provision of modern technological advances for ease of living on the other hand.

The Smart City Proposal for Bhagalpur envisions to implementing a number of projects categorized into Area Based Development (ABD) projects and Pan City components. The ABD projects focuses on physical infrastructure components, whereas the Pan City components focuses on the ICT interventions in the city. To achieve Bhagalpur's vision for a smart city, large numbers of measures are required to be implemented. Considering the priorities echoed by city stakeholders during the consultative process and practical feasibility, the main project umbrella initiatives shortlisted are:

- SUSHASIT BHAGALPUR (Smart and Quality Governance)
- SAMRUDH BHAGALPUR (Promoting Tourism in Silk City of India)
- GATIMAAN BHAGALPUR (Enhanced public transport)
- SUDRID BHAGALPUR (A well-functioning, smart, and efficient city)
- SARVABHOUMIKVIKAS (Socially Inclusive Growth)

To bridge the gap and provide a society in line with the vision of inclusive growth the Smart City mission has been launched in India. The purpose of the Smart Cities Mission is to drive economic growth and improve the quality of life of people by enabling local

area development and harnessing technology, especially technology that leads to Smart outcomes. Area based development will transform existing areas (retrofitting and redevelopment), including slums into better planned ones, thereby improving livability of the whole City. New areas (Greenfield) will be developed around city to accommodate the expanding population in urban areas. Pan-city development is oriented towards application of selected Smart Solutions to the existing city-wide infrastructure. Application of Smart Solutions will involve the use of technology, information and data to make infrastructure and services better and be fitting with demand coming up in the next decades.

SUSHAASIT BHAGALPUR

Bhagalpur Municipal Corporation recognizes the importance of addressing the needs of a growing population and an expanding city. It would strive to make Bhagalpur ‘a city for people’ where continuous engagement of local government with citizens is institutionalized in the decision-making architecture. It would provide safe, accessible, and lively public spaces the city living experience and the river bank. Bhagalpur Municipal Corporation is committed to excellence in every sector, providing its staff opportunities of growth by learning and adopting state of the art technologies and methods to better their performance in every way. Its goal is to become financially self-sufficient and sustainable moving towards increased private investments and partnerships.

SAMRUDH BHAGALPUR

Promoting Tourism in Silk City of India: A historically and culturally significant city with ever- growing number of visitors, Bhagalpur Municipal Corporation is committed to preserve and promote its multi-faceted built heritage ranging from ancient Hindu rock-cut sculptures to Jain pilgrimage sites to archaeological remains of one of the biggest universities of Buddhist times to architecture from Mughal and British periods. Bhagalpur’s identity and image as a culturally and historically significant place will be promoted on regional, national and international level. The city will support regular religious festivals and celebrations and also design new city level events for residents and tourists. Bhagalpur will be the most visited place in Bihar in the years to come.

GATIMAAN BHAGALPUR

A well-connected city with enhanced public transport, BMC will develop multi-modal transport system and provide more intra and inter-city roadways and buses to ease people’s arrival to the city. It will improve vehicular movement and decongest roads. It will encourage NMT and pedestrian safety. Intelligent Transport System to be adopted to improve mobility especially of public transport and IPT. The city will have greens links connecting places of different land use to enhance walkability.

SUDRIDH BHAGALPUR

A well-functioning, smart, and efficient city: Bhagalpur Municipal Corporation

recognizes the current gaps in services especially Water supply, sanitation, SWM, and public transport. For a smoothly functioning city, new technology and ICT will be adopted. The power infrastructure will be robust and promote energy efficiency and use of renewable energy. The sub-goals are –

(i) Bhagalpur will not stop moving due to traffic jams; (ii) every resident and visitor to Bhagalpur will have access to clean drinking water; (iii) All streets will be clean and municipal waste will be treated and disposed scientifically; (iv) Every household will be connected to a functional sanitation system; (v) city will have robust IT enabled infrastructure; (vi) All power cables to be underground.

SARVABHOUMIK VIKAS

Socially Inclusive Growth: Bhagalpur will be more sensitive towards social infrastructure by improving quality of Health, Education, and Safety. All sections of society of Bhagalpur especially the old, children and differently able will be taken care of in design and development of projects. The city will put in efforts to alleviate urban poverty and increase livelihood opportunities. The city will provide livable conditions for slum dwellers by up gradation of physical infrastructure. The informal sector will be regularized by providing basic infrastructure and facilities and formal vending zones.

2. Period of availability of tenders online/date & time of bidding on-line/last date of seeking clarification/date of opening of tender papers are as given below–

Sl. No.	Procurement Officer	Place of Opening	Availability of tender on- line for bidding		Date & Time of opening of technical bid
			From	To	
1	2	3	4	5	6
1	Chief Executive Officer (CEO),	Bhagalpur Smart City Limited, Municipal Corporation, Court Compound, Bhagalpur -812001	As per NIT	As per NIT	As per NIT

3. Cost of bidding document, which is non-refundable, shall be paid through **Internet Payment Gateway (IPG) / Challan.**
4. Bids must be accompanied by Security amount specified for the work in the table, payable at Bhagalpur and drawn in favour of “Chief Executive Officer”, Bhagalpur Smart City Limited. Bid Security will have to be in any one of the forms as specified in

the bidding document and shall have to be valid for 45 days beyond the validity of the bid.

5. Cost of Bid Security shall be deposited in the office of the Chief Executive Officer, BSCL, Municipal Corporation, Court compound, Bhagalpur, Bihar - 812001, on the time & date mentioned as per NIT/Corrigendum by post / hand. Only those applications will be entertained whose bid security is received on or before time & date mentioned as per NIT/Corrigendum. BSCL will not be held responsible for postal delay, if any, in the delivery of the document or non-receipt of the same in BSCL.
6. Tenderer(s) shall upload scanned copy in pdf format/Digitally Signed copy of his/her Valid DD, Bid Security, Credit Facility, GST, PAN, Five Years Audited Turnover, Five Years Income Tax Return, Work Experience, Partnership Deed or Article of Association / Memorandum, Undertakings, Affidavits, Power of Attorney, Undertaking & Solvency Certificate failing which the bid shall be rejected.
7. EPF, ESI & Labour license registration/undertaking in case award of work.
8. Uploaded documents of successful bidder will be verified with the original before signing the agreement. The successful bidder has to provide the originals to the concerned authority on receipt of such a letter, which can be sent through registered post or speed post or can be delivered by hand or email.
9. Bidders in order to participate in the bidding process have to get 'Digital Signature Certificate (DSC)' as per Information Technology Act-2000 to participate in online bidding. This certificate will be required for digitally signing the bid. Bidders can get the above-mentioned digital Signature certificate from any approved vendors (CCA). Bidders, who already possess valid Digital Certificates, need not procure new Digital Certificate.
10. Bidders have to submit their bid online in electronic format with Digital Signature. Bids without Digital Signature will not be accepted.
11. The work shall have to be completed in time, failing which penalty for non-completion of work in time shall be imposed, as stated in the Bid Document. Please note that there is a provision of Bonus for early completion of work.
12. Bidders who have rescinded work in any department/PSU shall not be eligible to participate in the bidding process.
13. Bidders shall provide their Banker's contact details, so that BSCL can contact the Bank, if required.
14. If any work is awarded to a bidder after submission of bid to BSCL, his bid capacity shall be reduced by that bid amount as indicated in Para 1.4 of Qualification Information & Other Forms (Section-3 of ITB).
15. Successful bidder shall have to take all necessary approvals and clearances from the competent authority such as Ministry of Environment and Forest (MoEF)/ Central Pollution Control Board/ State Pollution Control Board etc.

16. Deleted

17. Other details can be seen in the bidding documents.

Sd/-

Chief Executive Officer (CEO),
Bhagalpur Smart City Limited.

SECTION 2

INSTRUCTIONS TO BIDDERS

(ITB)

Instructions to Bidders

Sr. No.	Clause
A.	General
1	Scope of Bid
2	Source of Funds
3	Eligible Bidders
4	Qualification of Bidder
5	One Bid per Bidder
6	Cost of Bidding
7	Site visit
B.	Bidding Documents
8	Content of Bidding Documents
9	Clarification of Bidding
10	Amendment of Bidding Documents
C.	Preparation of Bids
11	Language of Bid
12	Documents Comprising the Bid
13	Bid Prices
14	Currencies of Bid and Payment
15	Bid Validity
16	Bid Security
17	Alternative Proposals by Bidders
18	Format and Signing of Bid
D.	Submission of Bids
19	Method of Submission
20	Deadline of Submission of Bids
21	Late Bids
22	Modification and Withdrawal of Bids
E.	Bid Opening and Evaluation
23	Bid Opening & Evaluation of Bids
24	Process to be Confidential
25	Clarification of Financial Bids
26	Examination of Bids and Determination of Responsiveness
27	Correction of Errors
28	Evaluation and Comparison of Financial Bids
F.	Award of Contract
29	Award Criteria
30	Employer's right to Accept any Bid and reject any Bid
31	Notification of Award and Signing of Agreement
32	Performance Security
33	Advance Payment and Security
34	Corrupt or Fraudulent Practices
35	Dispute Resolution

A. GENERAL

1. Scope of Bid

- 1.1 The Employer (named in appendix to ITB) invites bids for the construction of works (as defined in these documents and referred to as “the works”) detailed in the table given in IFB. The bidders need to submit bids for entire work detailed in the table given in IFB.
- 1.2 In this project, the estimated cost of the project is given in the documents and bidders should submit their bid amount with regard to the entire work as per the scope as indicated above complete in all respect internal and external finish etc., approval of the same from competent authorities (BSCL) for the entire project.
- 1.3 The successful bidder will be expected to complete the works by the intended completion date specified in the Contract data.
- 1.4 Throughout these bidding documents, the terms ‘bid’ and ‘tender’ and their derivatives (bidder/ tenderer, bidding/tendering, etc.) are synonymous.

2. Source of Funds

The expenditure on this project will be meet from fund allocated to Bhagalpur Smart City Limited from Govt. of Bihar & Govt. of India under Smart City Mission.

3. Eligible Bidders

- 3.1 This invitation for Bids is open to all bidders as mentioned in IFB.
- 3.2 All bidders shall provide in Section 3, Forms of Bid and Qualification Information, a statement in para 1.12, that the Bidder is neither associated, nor has been associated, directly or indirectly, with the Consultant or any other entity that has prepared the tender design, specifications and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the works, and any of its affiliates, shall not be eligible to bid.

4. Qualification of the Bidder

- 4.1 All bidders shall provide in Section-3, Forms of Bid and Qualification Information, a preliminary description of the proposed work method and schedule as necessary. The proposed methodology should include programme of construction duly supported with quality assurance procedures proposed to be adopted justifying their capability of execution and completion of work as per technical specifications, within stipulated period of completion.
- 4.2 Deleted.
- 4.3 All bidders shall include the following information and documents with their bids in

Section-3 of RFP:

- a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bidder;
- b) Total monetary value of construction work performed for each of the last five years.
- c) The contractor/firm must have achieved a minimum annual financial turnover equal to 50% of estimated cost in any one financial year during last five completed financial years (from 2015-16 to 2019-20).
- d) The contractor/firm must have satisfactory completed as a prime contractor at least one similar work of value not less than 25% of estimated cost during last five completed financial years between 2015-16 and 2019-20 (work of 90% or more of contract value executed will be taken as completed work).
- e) Experience in similar works means: -
Construction of ICC Building / Auditorium / Convention Centre / Community Hall / Commercial Building / Multiplex / Shopping Complex / Residential Building (G+3 Floor) or Building height of at least 10 meters.
- f) Major items of construction equipment proposed to carry out the Contract.
- g) Qualifications and experience of key site management and technical personal proposed for Contract.
- h) Reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years.
- i) Evidence of access to line (s) of credit and availability of other financial resources facilities (10% of contract value), certified by the approved Bankers (not more than 03 months old).
- j) Undertaking that the bidder will be able to invest minimum cash up to 25% of contract value of work, during implementation of work.
- k) Authority to seek references from the Bidders' bankers;
- l) Self-attested copy of information regarding any litigation, current or during the last five years, in which the Bidder is involved, the parties' concerned, and disputed amount;
- m) Proposals for sub-contracting components of the works amounting to more than 10 percent of the Bid Price shall not be permitted, except for specialized nature of work in which new emerging engineering methodology is proposed to be used with the prior approval of implementing agency. Use of such new technologies should be indicated while submitting the bid.
- n) The proposed work programme and methodology of construction with Operation & Maintenance/Defect liability period of two years required to be furnished, quality control procedures proposed to be adopted, justifying their capability of supply, installation and commissioning of the work as per scope within the stipulated period of completion as per milestones.
- o) Any bidder debarred from work or blacklisted from any Govt./Semi Govt./Central PSU/State PSU will not be allowed to participate in this tender.

4.4 Joint ventures are not acceptable.

4.5 A. To qualify for award of the contract, each bidder in its name must have in the last five years as referred to in Appendix.

- a) The contractor/firm must have achieved a minimum annual financial turnover equal to 50% of estimated cost in any one financial year during last five completed financial years (from 2015-16 to 2019-20).
- b) The contractor/firm must have satisfactory completed as a prime contractor at least one similar work of value not less than 25% of estimated cost during last five completed financial years between 2015-16 and 2019-20 (work of 90% or more of contract value executed will be taken as completed work).

The sole contractor/firm must have experience in similar work means:-

Construction of ICC Building / Auditorium / Convention Centre / Community Hall / Commercial Building / Multiplex / Shopping Complex / Residential Building (G+3 Floor) or Building height of at least 10 meters.

Even though the bidder meets the above qualifying criteria, he is subject to be disqualified, if he has made a misleading or false representation(s) in the forms, statements and attachments in proof of the qualifying requirements.

- c) The contractor or his identified sub-contractor should possess required valid electrical licenses for executing the electrification works.
- d) The contractor or his identified sub-contractor should have executed any water supply/sanitary Engineering works.
- e) Engineering methodology is proposed to be adopted, the contractor or his identified sub-contractor or Experienced Vendor of that particular field shall produce Experience Certificate for executing the similar nature of work.

B. Each bidder should further demonstrate

- a) availability (either owned or by procurement against mobilization advances) of the key and critical equipment for this work given in Annexure-I of section-2 which is indicated the studies, carried out by client equipment to attain the completion of works in accordance with the prescribed work schedule.

The bidders should, however, undertake their own studies and furnish with their bid, a detailed planning and methodology as per their experience provided in clause 4.3(C) above in order to allow the employer to review their proposals. The numbers, types and capacities of each equipment shall be shown in the proposals along with the cycle time for each operation for the given production capacity to match the requirements.

- b) Availability of personnel/ service engineer for this work with adequate experience as required; as per RFP.

- c) Liquid assets and/or availability of credit facilities of no less than amount indicated in para 5 of Appendix to ITB (Section-2) (credit lines/letter of credit/certificates from Banks for meeting the funds requirements etc.-usually the equivalent of the estimated cash flow for 03 months period.)

C. Deleted

4.6 Deleted

- 4.7 Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the total bid value. The available bid capacity will be calculated as under:

$$\text{Available Bid capacity} = (A * 3 * N - B)$$

where,

A = Maximum value of similar nature of works executed in any one year during the last five financial years between 2015-16 and 2019-20 (updated to the price level of the year indicated in para-15 of Appendix to ITB) taking into account the completed as well as works in progress.

N=Number of years prescribed for completion of the works for which bids are invited up to two places of decimals.

B=Value (updated to the price level of the year as indicated in para-15 of Appendix to ITB) of existing commitments and ongoing works to be completed during the next 12 months.

Note:

1. The statements showing the value of existing commitments and on-going works as well as the stipulate period of completion remaining for each of the works listed should be countersigned by the Engineer in charge, not below the rank of Executive Engineer or equivalent.
 2. Escalation factor (for computing common base value for works completed) is given in para-15 of Appendix to ITB.
- 4.8 Even though the bidders meet the above qualifying criteria, they are subject to be disqualified, if they have:
- made misleading or false representations in the forms, statements and attachments in proof of the qualification requirements; and/or
 - Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

5. One Bid per Bidder

- 5.1. Each bidder shall submit only one bid for one package. A bidder who submits or participates in more than one Bid (other than as a sub contractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.

6. Cost of Bidding

- 6.1 The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.

7. Site Visit

- 7.1 The Bidder, at the Bidder's own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for supply, installation, commissioning and operation & maintenance/defect liability of the works. The costs of visiting the Site shall be at the Bidder's own expense.

7.2 General Terms and Conditions for E-tendering:

- a) The detail tender notice and Tender Document can be seen on website: <https://www.eproc2.bihar.gov.in> and downloaded online from the Portal: <https://www.eproc2.bihar.gov.in> by the Firms / Individual registered on the Portal.
- b) As the proposals are to be submitted online and are required to be encrypted and digitally signed, the Bidders are advised to obtain Digital Signature Certificate (DSC) at the earliest.
- c) The payment for Tender Document Fee shall be made by the bidder in the mode of Internet Payment Gateway (IPG) / Challan only.
- d) The undersigned reserves the right to reject any or all the tenders without assigning any reason what so ever and no conditional and postal tenders will be accepted.
- e) If the date on which the tenders are to be received is declared a public holiday, the tender will be received on the next working day.
- f) The offer will remain valid up to 120 days from the due date of submission of tenders.
- g) Any amendment to a tender after opening of tender made by the tenderer according to his own will is liable to be ignored altogether and such tenderer will be debarred from tendering for a period of six months.

Sd/-

Chief Executive Officer (CEO),
Bhagalpur Smart City Limited.

B. BIDDING DOCUMENTS

8. Content of Bidding Documents

8.1 The set of bidding documents comprises the documents listed below and addenda issued in accordance with Clause 10:

Section	Particulars	Volume No.
1	Invitation for Bids (IFB) including Instructions to Bidders for Online Submission of Bids	
2	Instruction to Bidders	I
3	Qualification Information and other forms	
4	General Conditions of contract – General and Special Conditions of Contract	
5	Special Conditions of Contract & Additional Conditions of Contract	
6	Contract Data	
7	Technical Specifications	II
8	Form of bid	III
9	Price Bid	
10	Securities and other forms	
11	Drawings	IV
12	Documents to be furnished by bidder	V

8.2 Documents to be furnished by the bidder in compliance to Section-2 will be prepared by him in two parts viz Part 1 – Technical Bid, Part 2- Financial Bid and furnished as Volume- V in two parts (refer clause 12).

8.3 The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms/terms, technical specifications, price bid form, Annexes and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 26 hereof, bids which are not substantially responsive to the requirements of the Bid Documents shall be rejected.

9. Clarification of Bidding Documents

9.1 Clarification of Bidding Refer to sub-Clause 9.2 of IFB

9.2 Pre-bid meeting

9.2.1 The bidder or his official representative is invited to attend a pre-bid meeting which will take place at the address, venue, time and date as mentioned in NIT.

9.2.2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

9.2.3 The bidder may request a clarification on any clause of the RFP documents up to the Pre-bid query submission date and time indicated in the NIT. Clarification should be submitted in the following table in excel format otherwise the queries shall not be entertained:

Sr. No.	RFP Page No.	Clause No.	Description as per RFP	Queries/ Suggestions

9.2.4 Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be transmitted without delay to all purchasers of the bidding documents. Any modification of the bidding documents listed in sub-Clause 8.1 which may become necessary as a result of the pre- bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 10 and not through the minutes of the pre-bid meeting.

9.2.5 Non-attendance at the pre-bid meeting will not be a clause for disqualification of a bidder.

10. Amendment of Bidding Documents

10.1 Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda/corrigenda.

10.2 Any addendum/corrigendum thus issued shall form part of the bidding documents and shall be communicated in writing or by cable to all the purchasers of the bidding documents. Prospective bidders shall acknowledge receipt of each addendum in writing or by cable to the Employer. The Employer will assume no responsibility for postal delays.

10.3 To give prospective bidders reasonable time to take appropriate action in accordance to the addendum/corrigendum while preparing their bids, the Employer may, at his discretion, extend as necessary the deadline for submission of bids, in accordance with Sub-Clause 20.2 below.

C. PREPARATION OF BIDS

11. Language of the Bid

All documents relating to the bid shall be in English language.

12. Documents Comprising the Bid

12.1 The bid to be submitted by the bidder will be as Volume-V of the bid document (refer Clause 8.1) and shall be in two separate parts viz part I and part II detailed below:

Part I shall be “Technical Bid” and shall comprise

- i. Bid security (Bank Guarantee etc.) in the form specified in Section 10.
- ii. Qualification Information and supporting documents as specified in Section 3.
- iii. Certificates, undertaking, affidavits as specified in Section 3.
- iv. Any other information pursuant to Clause 4.3 of these instructions.
- v. Undertakings that the bid shall remain valid for the period specified in Clause 15.1 of section -2

Part II shall be “Financial Bid” and shall comprise

- vi. Form of Bid as specified in Section 8.
- vii. Price Bid as specified in Section 9

12.2 Priced Bid for whole work as specified in Section 9, read together with clause 19. The bidder shall submit bid online in the correct slot prescribed in the e-Procurement website by using digital signature.

12.3 Following documents, which are not submitted with the bid, will be deemed to be part of the bid.

Section	Particulars		Volume No.
1.	Invitation for Bids (IFB)		
2.	Instruction to Bidders		
3.	Qualification Information and other forms		
4 & 5.	Conditions of Contract (General and Special Conditions of Contract)		I
6.	Contract Data		
7.	Technical Specifications		II
8.	Form of Bid		III
9.	Price Bid		
10.	Securities and other forms		
11.	Drawings		IV
12.	Documents to be furnished by bidder		V

12.4 Bidders have to submit their bids as per below instructions otherwise it may result in the rejection of the Bid;

Name of Documents	Content	Mode of Submission
Bid Security/ Earnest Money Deposit (EMD)	Bid Security/Earnest Money Deposit (EMD) receipt in Original.	Online and Hard Copy
All Declarations / Affidavit / Agreements / Authorization	All Declarations / Affidavit / Agreements / Authorization in Original.	Online Only
Qualification Bid	All the documents for Submission of the Qualification Bid, its sub sections and any other applicable documents as per RFP.	Online Only
Technical Bid	All the documents for Submission of the Technical Bid, its sub sections and any other applicable documents as per RFP.	Online only
Financial Bid	All the formats for Submission of the Commercial Bid, its sub sections and any other applicable documents as per RFP.	Online Only

13. Bid Prices

- 13.1 The contract shall be for the whole works as described in Sub-Clause 1.1. and table given in IFB (Section-1) as per the price bid.
- 13.2 The bidder shall fill in rates both in figure and words. In case of any difference, the rate quoted in words will be taken as the quoted rate.
- 13.3 All taxes including GST payable by the contractor under the contract, or for any other cause shall be included in Bid Price submitted by the Bidder.
- 13.4 The prices quoted by the bidder shall not be changed up to 10 % variation of quantity and beyond that contractor may claim for extra item as this is an item rate contract to be completed in a time bound manner.
- 13.5 Bid Price submitted by the Bidder shall be included of 2 (two) years defect liability period.

14. Currencies of Bid and Payment

- 14.1 The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees. All payment shall be made in Indian Rupees.

15. Bid Validity

- 15.1 Bids shall remain valid for a period not less than 120 days after the deadline date for bid submission specified in Clause 20. A bid valid for a shorter period shall be rejected by the Employer as non-responsive. In case of discrepancy in bid validity period between that given in the undertaking pursuant to clause 12.1 (indicated as sl.no v of Part 1- Technical Bid) and the Form of Bid submitted by the bidder, the latter shall be deemed to stand corrected in accordance with the former and the bidder has to provide for any additional security that is required.
- 15.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for a period of the extension, and in compliance with Clause-16 in all respects.
- 15.3 Bid evaluation will be based on the bid prices.

16. Bid Security

The Bidder shall furnish, as part of his Bid, a Bid security in the amount as shown in column 4 of the table of IFB for this particular work. This bid security shall be in favour of Employer as named in Appendix and may be in one of the following forms:

Internet Payment Gateway (IPG) / Challan / Bank Guarantee

Bank Guarantee from any Scheduled Indian Bank from any of the branches Nationalized / Scheduled Bank situated **within the territory of India** in the form given in Section-9.

16.1 Bank guarantees (and other instruments having fixed validity) issued as surety for the bid shall **be valid for 45 days beyond the validity of the bids**

16.2 Any bid not accompanied by an acceptable Bid Security and not secured as indicated in Sub-Clauses-16.1 and 16.2 above shall be rejected by the Employer as non- responsive.

16.3 The Bid security of unsuccessful bidders will be returned within 30 days of the end validity period specified in sub-Clause15.1.

16.4 The Bid security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required Performance Security.

16.5 The Bid security may be forfeited

- a) if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
- b) if the Bidder does not accept the correction of the Bid Price, pursuant to Clause 27; or
- c) in the case of a successful Bidder, if the Bidder fails within the specified time limit to
 - i) sign the Agreement; or
 - ii) Furnish the required Performance Security.

17. Alternative Proposals by Bidders

17.1 Bidders shall submit offers that fully comply with the requirements of the bidding documents, including the conditions of contract (including mobilization advance or time for completion), basic technical design as indicated in the drawing and specifications. **Conditional offer or alternative offers will not be considered further in the process of tender evaluation.**

18. Format and Signing of Bid

19.1 The bidder shall submit the bids as per “Instructions to Bidders for Online Submission of Bids”.

19.2 Instruction to Bidders to be followed. Bids submitted online should be digitally signed by the bidder.

19.3 Bidders shall follow the Method of submission of bid as mentioned in Instruction to Bidders and Instructions to Bidders for Online Submission of Bids.

SUBMISSION OF BIDS

19. Method of Submission

- 19.1 Bidders shall follow the Method of submission as per Instructions to Bidders for Online Submission of Bids given in Section-1 (IFB) in so far this bid is considered whose identification is given in item no. 10 Appendix to ITB.

20. Deadline for Submission of the Bids

- 20.1 Bidders shall follow the Method of online submission of bid as mentioned in Instruction to Bidders in section-1 and the bid should be submitted online latest by the date and time given at item 12 Appendix to ITB.
- 20.2 The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 10, in which case all rights and obligations of the employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

21. Late Bids

- 21.1 Any Bid received by the Employer after the deadline prescribed in Clause 20 will be returned to the bidder.

22. Modification and Withdrawal of Bids

- 22.1 Bidders may modify or withdraw their bid(s) before the deadline prescribed in Clause 20 or pursuant to Clause 23.
- 22.2 Bidders shall follow the Method of submission modification & withdrawal of bid as mentioned in Instruction to Bidders as per RFP.
- 22.3 No bid may be modified after the deadline for submission of Bids except in pursuance of Clause-23.
- 22.4 Withdrawal or modification of a Bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in Clause 15.1 above or as extended pursuant to clause 15.2 may result in the forfeiture of the Bid security pursuant to Clause 16.

D. BID OPENING AND EVALUATION

23. Bid Opening

23.1 The Employer will open all the Technical Bids submitted online including modification made pursuant to Clause 22, in the manner specified in Clause 20 and 23.3. In the event of the specified date of Bid opening being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day. A notice for the same shall be posted on the website.

23.2 Evaluation of Bid

- i. Subject to confirmation of the bid security by the issuing bank, the bids accompanied with valid security will be taken up for evaluation with respect to the Qualification Information and other information furnished in Part I of the bid pursuant to ITB clause-12.1.
 - ii. After receipt of confirmation of the bid security, the bidder will be asked in writing/ e-mail (usually within 10 days of opening of the Technical Bid) to clarify his technical bid, if necessary, with respect to any rectifiable defects.
 - iii. The bidders will respond by e-mail in not more than 7 days of issue of the clarification letter, which will also indicate the date, time and venue of opening of the Financial Bid (usually on the 21st day of opening of the Technical bid)
 - iv. Immediately (usually within 3 or 4 days), on receipt of these clarifications the Evaluation Committee will finalize the list of responsive bidders whose financial bids are for consideration.
- 23.3 After the technical evaluation, these will be put to the Employer, which will find technically responsive bids. The financial of those bids will be opened who are found technically responsive. The financial bids of remaining bidders will remain unopened.
- 23.4 In case bids are invited in more than one package, the order for opening of the “Financial Bid” shall be that in which they appear in the “Invitation for Bid”.
- 23.5 The Employer shall prepare disclose information regarding bid opening to those present.
- 23.6 The Employer shall open the bid and the information regarding bid opening may be disclosed to those present as representative of the bidder.

24. Process to be Confidential

24.1 Information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Employer's processing of bids or award decisions may result in the rejection of his Bid.

25. Clarification of Financial Bids

25.1 To assist in the examination, evaluation and comparison of bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, justification, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price of substance of the Bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with ITB Clause-27.

25.2 Subject to ITB sub-clause 25.1, no Bidder shall contact the Employer on any matter relating to his bid from the time of the bid opening to the time the contract is awarded. If the bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.

25.3 Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidders' bid.

26. Examination of Bids and Determination of Responsiveness

26.1 During the detailed evaluation of 'Technical Bids', the Employer will determine whether each Bid:

26.1.1 meets the eligibility criteria defined in ITB Clause 3 and 4;

26.1.2 has been properly signed digitally;

26.1.3 is accompanied by the required securities; and

26.1.4 Is substantially responsive to the requirements of the bidding documents. During the detailed evaluation of the 'Financial Bid' the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e. price bid, technical specifications, and drawings.

26.2 A substantially responsive 'Financial Bid' is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the works; (b) which limits in any substantial way, inconsistent with the bidding documents, the Employer's rights or the bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

26.3 If a 'Financial Bid' is not substantially responsive, it will be rejected by the Employer

and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

27. Correction of Errors

27.1 'Financial Bids' determined to be substantially responsive will be checked by the Employer for any arithmetical errors. Errors will be corrected by the Employer as follows:

- (a) where there is a discrepancy between the rates in figures and in word, the rate in words will govern; and
- (b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.

27.2 The amount stated in the 'Financial Bid' will be corrected by the Employer in accordance with the above procedure and the bid amount adjusted with the concurrence of the Bidder in the following manner:

- i. If the Bid price increases as a result of these corrections, the amount as stated in the bid will be the 'bid price' and the increase will be treated as rebate;
- ii. If the bid price decrease as a result of the corrections, the decreased amount will be treated as the 'bid price'. Such adjusted bid price shall be considered as binding upon the bidder. If the Bidder does not accept the corrected amount the Bid will be rejected, and the Bid Security shall be forfeited in accordance with ITB Sub-clause 16.6(b).

28. Evaluation and Comparison of Financial Bids

28.1 The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Sub-Clause-26.2.

28.2 In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:

- a. making any corrections for errors pursuant to clause 27; or
- b. making an appropriate adjustment for any other acceptable variations, deviations
- c. In case lowest quote is made by more than one bidder, then the bidder who has successfully completed and attached completion certificate while submitting online bid for more number of similar projects in the last 3 years would be awarded the work. Still, if there is a tie, lottery system will be followed to award the contract.

28.3 If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analysis, the Employer

may require that the amount of the performance security set forth in Clause 32 be increased at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.

E. AWARD OF CONTRACT

29. Award Criteria

29.1 Subject to Clause 30, the Employer will award the Contract to the Bidder whose Bid has been determined

- i. To be substantially responsive to the bidding documents and who has offered the lowest evaluated Bid Price; and
- ii. To be within the available bid capacity adjusted to account for his bid price which is evaluated the lowest in any of the packages opened earlier than the one under consideration. In no case, the contract shall be awarded to any bidder whose available bid capacity is less than the evaluated bid price, even if the said bid is the lowest evaluated bid. The contract will in such cases be awarded to the next lowest bidder at the L1 cost if accepted by next lowest bidder otherwise tender stands cancelled.

30. Employer's Right to Accept or Reject any Bid

30.1 Notwithstanding Clause 29, the Employer reserves the right to accept or reject any Bid, to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Employer's action.

30.2 After award of contract, if the Bidder is found to have concealed any fact relevant to experience, information, Bank Guaranty, etc. the employer may terminate and blacklist the Bidder.

31. Notification of Award and Signing of Agreement

31.1 The Bidder whose Bid has been accepted will be notified of the award by the employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by letter. This letter (herein after and in the Conditions of Contract called the "Letter of Acceptance") will state the sum that the Employer will pay the contractor in consideration of the execution, completion, and maintenance of the Works by the contractor as prescribed by the contract (hereinafter and in the contract called the "Contract Price").

31.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause 32.

31.3 The Agreement will incorporate all agreements between the Employer and the successful Bidder. This agreement will be signed only after furnishing of the performance security by the successful bidder within 15 (Fifteen) days of issue of Letter of Acceptance. The Employer will promptly notify the other bidders that their Bids have been unsuccessful.

32. Performance Security

- 32.1 Within 15 (Fifteen) days of receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a Performance security in any of the forms given in 32.2 for an amount equivalent to 2% (Two Percent) of the Contract price as per the provisions of Government of Bihar Finance
- 32.2 A bank guarantee from any of the branches of Nationalized/Scheduled Bank situated within territory of India in the form given in Section 10; or Certified Cheque / Bank Draft payable to employer as indicated in item no. 16 Appendix to ITB.
- 32.3 If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued from any of the branches of Nationalized/Scheduled Bank situated within the territory of India.
- 32.4 Failure of the successful Bidder to comply with the requirements of Sub-Clause 32.1 shall constitute grounds for cancellation of the award and forfeiture of the Bid Security.
- 32.5 The validity of the performance security is 30 days beyond the defect liability period / Operation and maintenance.
- 32.6 Additional Performance Guarantee: -**
Provision for taking Additional Performance Guarantee for rate quoted below estimated rate shall be made as follows: -
- a) Additional Performance Guarantee will be charged at the rate of 0.25% for every 1% rate quoted below bill of quantity for rated quoted 0% to 5% below bill of quantity.
 - b) Additional Performance Guarantee will be charged at the rate of 0.5% for every 1% rate quoted below bill of quantity for rated quoted 5% to 15% below bill of quantity.
 - c) Additional Performance Guarantee will be charged at the rate of 01% for every 1% rate quoted below bill of quantity for rated quoted 15% to 20% below bill of quantity.
 - d) Additional Performance Guarantee will be charged at the rate of 02% for every 1% rate quoted below bill of quantity for rated quoted 20% below bill of quantity.

33. Advance Payment and Security

The Employer will provide contract or an interest-bearing mobilization advance (as per CVC guidelines in this regard) on the Contract Price in two stages of 5% each subject to maximum amount of 10% of contract price from date of agreement/commencement/appointed date. The second and subsequent installment shall be released by the Engineer-in-Charge only after the contractor furnishes a proof of the satisfactory utilization of the earlier installment to the entire satisfaction of the Engineer-In-Charge.

34. Corrupt or Fraudulent Practices

The Employer will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question and will declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract with BSCL, UD & HD, Government of Bihar, and any other state agencies, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for the contract, or in execution of the

work related to contract.

35. Dispute Resolution

The dispute arising between the employer and the contractor, if not resolved amicably shall be referred to appointed expert mediator of Bihar State Legal Services Authority (BSLSA). If the matter does not get resolved it will finally go for arbitration. Arbitration in such a case will be done in accordance to Indian Arbitration and Conciliation Act, 1996 and amended provisions thereof. The place of arbitration shall be Bhagalpur and the language of arbitration shall be English. This may be read in conjunction with clause 20.2 of Condition of Contract.

APPENDIX to ITB

S · N o.	Description	Clause Reference with respect to Section- 2
1.	Name of the Employer is Chief Executive Officer, Bhagalpur Smart City Limited, Bhagalpur	[C1. 1.1]
2.	The last five years	[Cl. 4.5 A (a)]
	2015 – 2016	
	2016 – 2017	
	2017 – 2018	
	2018 – 2019	
	2019 – 2020	
3.	Minimum annual financial turnover amount is 50% of estimated cost (all class of similar nature of work as defined in any one financial year from last five years).	[C1.4.5A(a)]
4.	Minimum work Completion Experience	[C1.4.5A(b)]
5.	Liquid and/or availability of assets of credit facilities is 25 % of the project cost.	[C1.4.5B(c) & Cl.4.3(h)]
6.	Deleted.	
7.	The pre-bid meeting will take place at – BSCL Office, Municipal Corporation, Court Compound, BSCL, Bhagalpur	[C1. 9.2.1]
8.	The Technical bid will be opened at BSCL Office, Bhagalpur	[C1 .23.1.]
9.	Address of the Employer: Bhagalpur Smart City Limited, Municipal Corporation, Court Compound, Bhagalpur	
10.	Submission of Bid:	[Cl. 19]
11.	NIT No.	BSCL/ICCC Building/2021/52
12.	The bid should be submitted online	[C1. 20.1]

1 3.	The bid will be opened at the time, date and venue mentioned in NIT	[C1.23.1]
1 4.	The Bank Guarantee shall be in favor of Chief Executive Officer, Bhagalpur Smart City Limited.	[C1.32.2]
1 5.	Escalation factors (For bringing the cost of works executed in different financial year to a common base value)	
	Years before	Multiply factor
	2015-16	1.61
	2016-17	1.46
	2017-18	1.33
	2018-19	1.21
	2019-20	1.10

ANNEXURE – I

List of Indicative Equipment to be supplied and installed on Contract work

[Reference Cl. 4.5 (B) (a)]

1. Indicative list of equipment to be deployed

Sl.	Type of Equipment (leased or owned)	Maximum age as on 01.01.2020 (in Years)	Minimum no. of Equipment required
1.	JCB	5	1
2.	Water Tank	5	1
3.	Bar Cutting Machine	5	2
4.	Bar Bending Machine	5	2
5.	Welding Machine	5	1
6.	Vibrator (Needle)	5	4
7.	Well-equipped Laboratory facility for quality test apparatus		One
8.	Concrete Batching Mix Plant (15 cum / hour)	5	2
9.	Steel Prop	5	For 1000 Sqm
10.	Concrete Pump with 100 mts pipe line	5	1
11.	Steel Plate with fitting	5	For 1000 Sqm
12.	Staging pipe with fitting	5	For 1000 Sqm
13.	Cube Testing Machine (CTM having capacity 200 Tone)	5	1
14.	Cube Moulds	5	50

ANNEXURE – II

List of Minimum Key Personal to be deployed on Contract Work by the Contract Agency:

[Reference Cl.4.5 (B) (b)]

1. During Construction Period

S.No.	Personnel	Qualification	No. of Person
1	Project Manager	B.E/B.Tech/B.Sc. in Civil Engineering or equivalent with 07 Years Exp. (2 years as Project Manager)	1
2	Site Engineer	B.E/B.Tech/Bsc. in Civil Engineering with 5 Years Exp. (including 3 years in Building Construction) or Diploma Civil with 07 Years Exp. (including 5 years in Building Const.)	2
3	Electrical Engineer	B.E. Electrical + 5 Years Exp. Or Diploma in Electrical + 07 years Exp.	1
4	Quantity Surveyor	B.E/B.Tech/Bsc. in Civil Engineering with 5 Years Exp. Or Dip. Civ. + 7 years Exp.	1
5	Quality Control Engineer	B.E/B.Tech/Bsc./Dip. in Civil Engineering with 5 years' Experience in Quality Control or Material Engineer	1
6	HSE (Health, Safety & environment) Supervisor	Diploma in Industrial HSE management with 5 years experience in site safety.	1
Total			7

All the bio data of the proposed staffs shall be duly signed by the Authorized Signatory of the bidder.

SECTION 3

QUALIFICATION INFORMATION

&

OTHER FORMS

QUALIFICATION INFORMATION

The information to be filled in by the bidder in the following pages will be used for purposes of post qualification as provided for in Clause-4 of the Instructions to Bidders. This information will not be incorporated in the Contract.

1. For Individual Bidders

1.1. Constitution or legal status of Bidder [Attach copy]

Place of registration:

Principal place of business:

Power of attorney of signatory of Bid [Attach]

1.2. Total value of similar nature of work performed in the last five financial years** (in Rs. Lakhs)

2015-16	
2016-17	
2017-18	
2018-19	
2019-20	

- 1.3. Work of similar nature performed as prime contractor, work performed in the past as a nominated sub- contractor will also be considered provided the sub-contract involved supply, installation, commissioning of all works which comes under similar projects, provided further that all other qualification criteria are satisfied (in the same name) on works of a similar nature over the last five financial years (2015-16 to 2019-20) and the current financial year till date.

Project Name	Name of the Employer *	Description of Work	Contact Number	Value of Contract (Rs. Crore) (β)	Date of issue of Work Order	Period of Completion	Actual Time of Completion *	Explaining Reasons for Delay and Work Completed	Remarks
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* Attach certificate(s) from the Engineer(s)-in-Charge/EE/Employer.

β Attached certificate from Chartered Accountant (CA)

In case lowest quote is made by more than one bidder, then the bidder who has successfully completed and attached completion certificate while submitting online bid form or the number of similar projects in the last 3 years would be awarded the work. Still, if there is a tie, lottery system will be followed to award the contract.

1.4 Information on Bid capacity (works for which bids have been submitted and works which are yet to be completed) as on the date of this bid.

(A). Existing commitments and on-going works:

Descript ion of works	Pla ce & Sta te	Contr act No.	Name & Addre ss Of Emplo yer	Value Contr act (Rs Lakh)	Period of Comp leti on	Value of Works * Of remaini ng To be comple ted (Rs Lakh)	Anticipa ted date of complet ion
1	2	3	4	5	6	7	8

* Attach certificate(s) from the Engineer(s)-in-Charge/EE/Employer. The item of work for which data is requested should tally with that specified in ITB clause 4.7.

(B). Works for which bids already submitted:

Descriptio n of work	Plac e & State	Name & Address of Employe r	Estimate d value of works (Rs Lakh)	Period of Completi on	Date when decisio n is expecte d	Remark s If any
1	2	3	4	5	6	7

1.5 Availability of key items of Contractor's Equipment essential for carrying out the Works [ref. Clause 4.5(B)(a). The Bidder should list all the information requested below. Refer also to Sub Clause 4.3(d) of the Instructions to Bidders.

Item of Equipm ent	Requirement	Availability Proposals	Remar ks (from
--------------------------	-------------	------------------------	----------------------

	N o.	Capac ity	To be procur ed	Nos. / Capac ity	Age/ Condi tion	whom to be purchas ed

- 1.6 Qualifications and experience of key personnel required for administration and execution of the Contract [Ref. Clause 4.5(B)(b)]. Attach biographical data. Refer also to sub Clause 4.3(e) of Instructions to Bidders.

Pos itio n	Name	Qualification	Years of Professional Experience	Years of experience in Proposed position

1.7 Proposed sub-contracts and firms involved. [Refer ITB Clause 4.3(k)]

Sanctions of the works	Value of Sub- contract	Sub-contractor (Name & Address)	Experience in similar Work

Attach copies of certificates on possession of valid license for electrification [Reference Clause 4.5A(c) of ITB].

- 1.8 Financial reports for the last five financial years: balance sheets, profit and loss statements, auditors' reports (in case of companies/corporation), etc. List them below and attach copies. (Attach certificate from Chartered Accountant)

1.9 Evidence of access to financial resources to meet the qualification requirements:

Cash in hand, lines of credit, etc. List them below and attach copies of support documents.

1.10 Name, address, and telephone, telex, and fax numbers of the Bidders' bankers who may provide references if contacted by the Employer.

1.11 Information on litigation history of current and last 05 financial years starting 2015-16 in which the Bidder is involved.

Other Party (ies)	Employer	Cause of Dispute	Amount involved	Remarks showing Present Status

1.12 Statement of compliance under the requirements of Sub Clause 3.2 of the Instructions to Bidders.
(Name of Consultant engaged for project preparations)

1.13 Proposed work methods and schedule. The Bidder should attach descriptions, drawings and charts as necessary to comply with the requirements of the Bidding documents. [Refer ITB Clause 4.1 & 4.3(a)]

1.14 Programme

1.15 Quality Assurance Programme

2. **Additional Requirements.**

2.1. Affidavit as provided in Section 3

2.2. Undertaking as provided in Section 3

2.3. Bidders should provide any additional information required to fulfill the requirements of Clause 4 of the Instructions to the Bidders, if applicable.

2.4. Copy of letter of association in the form of agreement with subcontractor for the work defined or for any specializes /Engineering methodology work.

2.5. **Note: Even though the bidder meets the above qualifying criteria, he is subject to be disqualified, if he has made a misleading or false representation(s) in the forms, statements and attachments in proof of the qualifying requirements.**

**SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO
OR
AVAILABILITY OF CREDIT FACILITIES**

(Clause 4.3 (g) OF ITB)

BANK CERTIFICATE

This is to certify that
M/s.
Company with a good financial standing.

If the contract for the work, namely..... is

awarded to	above	We	shall	Able	to provide	overdraft/credit
the	firm,		be		facilities	
to the	of	To	meet	their	working capital requirements for	
extent	Rs.....					

executing the above contract during the contact period.

(Signature)

Name of Bank
Senior Bank Manager
Address of the Bank

AFFIDAVIT

Also refer qualification information format para 2.1 in the same Section

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that neither our firm M/S_____ Has been blacklisted nor has abandoned any work in any government department, India or any contract awarded to us for such work have been rescinded, during last five years prior to the date of this bid.
3. The undersigned hereby authorize(s) and request(s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Department to verify this statement or regarding my (our) competence and general reputation.
4. The undersigned understand and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the Department/Project implementing agency.

(Signed by an authorized Officer of the Firm)

Title of officer

Name of Firm

Date

UNDERTAKING

Also refer qualification information format para 2.2 in the same Section

I, the undersigned do hereby undertake that our firm M/s.....

Would invest a minimum cash up to 25% of the value of the work during implementation of the Contract.

(Signed by an authorized Officer of the Firm)

Title of officer

Name of Firm

Date

SECTION 4

GENERAL CONDITIONS OF CONTRACT

General Conditions of Contract

ARTICLES

1. Definitions of Interpretation
2. Scope of Work
3. Obligation of the Contractor
4. Obligation of the Authority
5. Representation & Warranties
6. Disclaimer
7. Performance Security
8. Site of Project
9. Utilities & Trees
10. Design & Construction of the Project
11. Quality Assurance, Monitoring & Supervision
12. Completion Certificate
13. Change of Scope
14. Traffic Regulation
15. Defects Liability
16. Authority's Engineer
17. Financial Covenants
18. Insurance
19. Force Majeure
20. Suspension of Contractor's Rights
21. Termination
22. Assignment & Charges
23. Liability & Indemnity
24. Dispute Resolution
25. Miscellaneous
26. Definition

ARTICLE 1

DEFINITIONS AND INTERPRETATION

1.1 Definitions

The words and expressions beginning with capital letters and defined in this Agreement (including those in Article 26) shall, unless the context otherwise requires, have the meaning ascribed thereto herein, and the words and expressions defined in the Schedules and used therein shall have the meaning ascribed thereto in the Schedules.

1.2 Interpretation

1.2.1 In this Agreement, unless the context otherwise requires,

- a. references to any legislation or any provision thereof shall include amendment or re-enactment or consolidation of such legislation or any provision thereof so far as such amendment or re-enactment or consolidation applies or is capable of applying to any transaction entered into hereunder;
- b. References to laws of India or Indian law or regulation having the force of law shall include the laws, acts, ordinances, rules, regulations, bye laws or notifications which have the force of law in the territory of India and as from time to time may be amended, modified, supplemented, extended or re- enacted;
- c. references to a “**person**” and words denoting a natural person shall be construed as a reference to any individual, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and shall include successors and assigns;
- d. the table of contents, headings or sub-headings in this Agreement are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;
- e. the words “**include**” and “**including**” are to be construed without limitation and shall be deemed to be followed by “without limitation” or “but not limited to” whether or not they are followed by such phrases;
- f. references to “**construction**” include, unless the context otherwise requires, survey and investigation, design, developing, engineering, procurement, supply of plant, materials, equipment, labour, delivery, transportation, installation, processing, fabrication, testing, and commissioning of the Project, including maintenance during the Construction Period, removing of defects, if any, and other activities incidental to the construction and “**construct**” or “**build**” shall be construed accordingly;
- g. references to “**development**” include, unless the context otherwise requires, construction, renovation, refurbishing, augmentation, up-gradation and other activities incidental thereto during

the Construction Period, and “develop” shall be construed accordingly;

- h. any reference to any period of time shall mean a reference to that according to Indian standard time;
- i. any reference to day shall mean a reference to a calendar day;
- j. reference to a “**business day**” shall be construed as reference to a day (other than a Sunday) on which banks in the State are generally open for business;
- k. any reference to month shall mean a reference to a calendar month as per the Gregorian calendar;
- l. references to any date, period or Project Milestone shall mean and include such date, period or Project Milestone as may be extended pursuant to this Agreement;
- m. any reference to any period commencing “from” a specified day or date and “**till**” or “**until**” a specified day or date shall include both such days or dates; provided that if the last day of any period computed under this Agreement is not a business day, then the period shall run until the end of the next business day;
- n. the words importing singular shall include plural and vice versa;
- o. references to any gender shall include the other and the neutral gender;
- p. “**lakh**” means a hundred thousand (100,000) and “**crore**” means ten million (10,000,000);
- q. “**indebtedness**” shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;
- r. references to the “**winding-up**”, “**dissolution**”, “**insolvency**”, or “reorganization” of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganization, dissolution, arrangement, protection or relief of debtors;
- s. save and except as otherwise provided in this Agreement, any reference, at any time, to any agreement, deed, instrument, licensee or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference; provided that this Sub-clause(s) shall not operate so as to increase liabilities or obligations of the Authority hereunder or pursuant hereto in any manner whatsoever;
- t. any agreement, consent, approval, authorization, notice, communication, information or report required under or pursuant to this Agreement from or by any Party or the Authority’s Engineer shall be valid and effective only if it is in writing under the hand of a duly authorized representative of such Party or the Authority’s Engineer, as the case may be, in this behalf and not otherwise;
- u. the Schedules and Recitals to this Agreement form an integral part of this Agreement and will be in

full force and effect as though they were expressly set out in the body of this Agreement;

- v. references to Recitals, Articles, Clauses, Sub-clauses, Provisos or Schedules in this Agreement shall, except where the context otherwise requires, mean references to Recitals, Articles, Clauses, Sub-clauses, Provisos and Schedules of or to this Agreement; reference to an Annex shall, subject to anything to the contrary specified therein, be construed as a reference to an Annex to the Schedule in which such reference occurs; and reference to a Paragraph shall, subject to anything to the contrary specified therein, be construed as a reference to a Paragraph of the Schedule or Annex, as the case may be, in which such reference appear; the damages payable by either Party to the other of them, as set forth in this Agreement, whether on per diem basis or otherwise, are mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by the Party entitled to receive the same and are not by way of penalty (the “**Damages**”);and
 - w. Time shall be of the essence in the performance of the Parties’ respective obligations. If any time period specified herein is extended for the reasons specified in the Agreement, such extended time shall also be of the essence.
- 1.2.2 Unless expressly provided otherwise in this Agreement, any Documentation required to be provided or furnished by the Contractor to the Authority shall be provided free of cost and in three copies, and if the Authority is required to return any such Documentation with its comments and/or approval, it shall be entitled to retain two copies thereof.
 - 1.2.3 The rule of construction, if any, that a contract should be interpreted against the parties responsible for the drafting and preparation thereof, shall not apply.
 - 1.2.4 Any word or expression used in this Agreement shall, unless otherwise defined or construed in this Agreement, bear its ordinary English meaning and, for these purposes, the General Clauses Act, 1897 shall not apply.

1.3 Measurements and arithmetic conventions

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being rounded down.

1.4 Priority of agreements and errors/discrepancies

- 1.4.1 This Agreement, and all other agreements and documents forming part of or referred to in this Agreement are to be taken as mutually explanatory and, unless otherwise expressly provided elsewhere in this Agreement, the priority of this Agreement and other documents and agreements forming part hereof or referred to herein shall, in the event of any conflict between them, be in the following order:
 - 1. this Agreement; and all other agreements and documents forming part hereof or referred to herein;
 - i.e. this Agreement at (a) above shall prevail over the agreements and documents at (b).

1.4.2 Subject to the provisions of Clause 1.4.1, in case of ambiguities or discrepancies within this Agreement, the following shall apply:

- i. between two or more Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in other Clauses;
- ii. between the Clauses of this Agreement and the Schedules, the Clauses shall prevail and between Schedules and Annexes, the Schedules shall prevail;
- iii. between any two Schedules, the Schedule relevant to the issue shall prevail;
- iv. between the written description on the Drawings and the Specifications and Standards, the latter shall prevail;
- v. between the dimension scaled from the Drawing and its specific written dimension, the latter shall prevail; and
- vi. between any value written in numerals and that in words, the latter shall prevail.

1.5 Deleted

Part II

Scope of the Project

ARTICLE 2

SCOPE OF THE PROJECT

2.1 Scope of the Project

- i. Under this Agreement, the scope of the Project (the “**Scope of the Project**”) shall be defined as scope of work as indicated in Invitation for Bids (IFB) with the Specifications and Standards set forth in RFP.
- ii. Performance and fulfillment of all other obligations of the Contractor in accordance with the provisions of this Agreement and matters incidental thereto or necessary for the performance of any or all of the obligations of the Contractor under this Agreement.

ARTICLE 3

OBLIGATIONS OF THE CONTRACTOR

3.1 Obligations of the Contractor

- 3.1.1 Subject to and on the terms and conditions of this Agreement, the Contractor shall undertake the complete construction of the Project and observe, fulfill, comply with and perform all its obligations set out in this Agreement or arising hereunder.
- 3.1.2 The Contractor shall comply with all Applicable Laws and Applicable Permits (including renewals as required) in the performance of its obligations under this Agreement.
- 3.1.3 Save and except as otherwise provided in this Agreement or Applicable Laws, as the case may be, the Contractor shall, in discharge of all its obligations under this Agreement, conform with and adhere to Good Industry Practice at all times.
- 3.1.4 The Contractor shall remedy any and all loss or damage to the Project, occurring on or after the Appointed Date and until the date of Provisional Certificate, with respect to the Works completed prior to the issuance of the Provisional Certificate and/or Completion Certificate, with respect to the Works referred to in the Punch List, at its own cost, save and except to the extent that any such loss or damage shall have arisen from any default of the Authority or on account of a Force Majeure Event in which case the provisions of Clause 19 shall apply.
- 3.1.5 The Contractor shall remedy any and all loss or damage to the Project during the Operation & Maintenance Period/Defect Liability Period at its own cost, to the extent that such loss or damage shall have arisen out of the reasons specified in Clause 15.3.
- 3.1.6 The Contractor shall, at its own cost and expense, in addition to and not in derogation of its obligations elsewhere set out in this Agreement:
- a. make, or cause to be made, necessary applications to the relevant Government Instrumentalities with such particulars and details as may be required for obtaining Applicable Permits set forth and obtain and keep in force and effect such Applicable Permits in conformity with Applicable Laws;
 - b. procure, as required, the appropriate proprietary rights, licences, agreements and permissions for Materials, methods, processes, know-how and systems used or incorporated into the Project;
 - c. make reasonable efforts to maintain harmony and good industrial relations among the personnel employed by it or its Sub-contractors in connection with the performance of its obligations under this Agreement;
 - d. ensure and procure that its Sub-contractors comply with all Applicable Permits and Applicable Laws in the performance by them of any of the Contractor's obligations under this Agreement;
 - e. always act in a manner consistent with the provisions of this Agreement and not cause or fail to do any act, deed or thing, whether intentionally or otherwise, which may in any manner be violative of any of the provisions of this Agreement;

- f. support, cooperate with and facilitate the Authority in the implementation and operation of the Project in accordance with the provisions of this Agreement;
- g. ensure that the Contractor and its Sub-contractors comply with the safety and welfare measures for labour in accordance with Applicable Laws and Good Industry Practice;
- h. keep, on the Site, a copy of this Agreement, publications named in this Agreement, any modified Drawings, Documents relating to the Project, and Change of Scope Orders and other communications sent under this Agreement, and provide access to all these documents at all reasonable times to the Authority's Engineer and its authorised personnel;
- i. cooperate with other contractors employed by the Authority and personnel of any other public authority; and
- j. not interfere unnecessarily or improperly with the convenience of the public, or the access to and use and occupation of all the existing facilities within the Right of Way, irrespective of whether they are public or in the possession of the Authority or of others.

3.1.7 The Contractor shall undertake all necessary superintendence to plan, arrange, direct, manage, inspect and test the Works.

3.2 The bidder should not outsource the contract to the sub-contractor. An undertaking from the bidder to be submitted.

3.3 Obligations relating to employment of foreign nationals

The Contractor acknowledges, agrees and undertakes that employment of foreign personnel by the Contractor and/or its Sub-contractors and their sub-contractors shall be subject to grant of requisite regulatory permits and approvals including employment/residential visas and work permits, if any required, and the obligation to apply for and obtain the same shall and will always be of the Contractor. Notwithstanding anything to the contrary contained in this Agreement, refusal of or inability to obtain any such permits and approvals by the Contractor or any of its Sub-contractors or their sub-contractors shall not constitute Force Majeure Event, and shall not in any manner excuse the Contractor from the performance and discharge of its obligations and liabilities under this Agreement.

3.4 Obligations relating to Contractor's personnel

3.4.1 The Contractor shall ensure and procure that the personnel engaged by it or by its Sub-contractors for performance of its obligations under this Agreement are at all times appropriately qualified, skilled and experienced in their respective functions in conformity with Applicable Laws and Good Industry Practice.

3.4.2 The Authority's Engineer may, for reasons to be specified in writing, direct the Contractor to remove any member of the Contractor's or Sub-contractor's personnel from the Project. Provided that any such direction issued by the Authority's Engineer shall specify the reasons for the removal of such person.

3.4.3 The Contractor shall, on receiving a direction from the Authority's Engineer under the provisions

of Clause 3.4.2, ensure and procure the removal of such person or persons from the Project with immediate effect. The Contractor shall further ensure that such persons have no further connection with the Project.

3.5 Obligations relating to advertisement on Project

The Contractor shall not use the Project or any part thereof in any manner for branding or advertising purposes including for advertising any commercial product or services or companies.

3.6 Obligations relating to Contractor's care of the Works

The Contractor shall bear full risk in and take full responsibility for the care of Works, and of Materials, goods and equipment for incorporation therein, on and from the Appointed Date and until the date of Provisional Certificate, with respect to the Works completed prior to the issuance of the Provisional Certificate, and/or Completion Certificate, with respect to the Works referred to in the Punch List, save and except to the extent that any such loss or damage shall have arisen from any default or neglect of the Authority.

3.7 Obligations relating to electricity, water and other services

The Contractor shall be responsible for procuring of all power, water and other services that it may require for the Project.

3.8 Unforeseeable difficulties

Except as otherwise specified in the Agreement:

- a. the Contractor accepts complete responsibility for having foreseen all difficulties and costs of successfully completing the Works;
- b. the Contract Price shall not be adjusted to take account of any unforeseen difficulties or costs; and
- c. the Scheduled Completion Date shall not be adjusted to take account of any unforeseen difficulties or costs.

For the purposes of this Clause, unforeseeable difficulties include physical conditions like man-made or natural physical conditions including sub-surface and hydrological conditions which the Contractor encounters at the Site during execution of the Works.

ARTICLE 4

OBLIGATIONS OF THE AUTHORITY

4.1 Obligations of the Authority

- 4.1.1 The Authority shall, at its own cost and expense, undertake, comply with and perform all its obligations set out in this Agreement or arising hereunder.
- 4.1.2 The Authority shall be responsible for the correctness of the Scope of the Project, Project Facilities, Specifications and Standards and the criteria for Testing of the completed Works.
- 4.1.3 The Authority shall, upon receiving the Performance Security under Clause 7.1.1, provide to the Contractor:
- a. The land for construction in accordance with the provisions of Clauses 8.2 and 8.3, within a period of 15 (fifteen) days from the date of this Agreement.
 - b. approval of the general arrangement drawings (the “**GAD**”) from BSCL authorities to enable the Contractor to start construction of Project in accordance with the Specifications and Standards, and subject to the terms and conditions specified in such approval, within a period of 30 (thirty) days from the Appointed Date; and
 - c. All environmental and forest clearances as required under Clause 4.3.
- 4.1.4 Deleted.
- 4.1.5 Notwithstanding anything to the contrary contained in this Agreement, the Parties expressly agree that the aggregate Damages payable under Clauses 4.1.4, 8.3 and 9.2 shall not exceed 3% (three percent) of the Contract Price. For the avoidance of doubt, the Damages payable by the Authority under the aforesaid Clauses shall not be additive if they arise concurrently from more than one cause but relate to the same part of the Project.
- 4.1.6 The Authority agrees to provide support to the Contractor and undertakes to observe, comply with and perform, subject to and in accordance with the provisions of this Agreement and Applicable Laws, the following:
- a) upon written request from the Contractor, and subject to the Contractor complying with Applicable Laws, provide reasonable support to the Contractor in procuring Applicable Permits required from any Government Instrumentality for implementation of the Project;
 - b) upon written request from the Contractor, provide reasonable assistance to the Contractor in obtaining access to all necessary infrastructure facilities and utilities, including water and electricity at rates and on terms no less favorable than those generally available to commercial customers receiving substantially equivalent services;
 - c) procure that no barriers that would have a material adverse effect on Works are erected or placed on or about the Project by any Government Instrumentality or persons claiming through or under it, except for reasons of Emergency, national security or law and order;
 - d) not do or omit to do any act, deed or thing which may in any manner be violative of any of the provisions of this Agreement;

- e) support, cooperate with and facilitate the Contractor in the implementation of the Project in accordance with the provisions of this Agreement; and
- f) upon written request from the Contractor and subject to the provisions of Clause 3.3, provide reasonable assistance to the Contractor and any expatriate personnel of the Contractor or its Sub-contractors to obtain applicable visas and work permits for the purposes of discharge by the Contractor or its Sub- contractors of their obligations under this Agreement and the agreements with the Sub-contractors.

4.2 Deleted

4.3 Obligations relating to Environmental and Forest Clearances

All the clearances shall be taken by selected bidder from the competent authority such as Ministry of Environment and Forest (MoEF) / Central Pollution Control Board / State Pollution Control Board etc. at their own cost.

ARTICLE 5

REPRESENTATIONS AND WARRANTIES

5.1 Representations and warranties of the Contractor

The Contractor represents and warrants to the Authority that:

- a) it is duly organized and validly existing under the laws of India, and has full power and authority to execute and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;
- b) it has taken all necessary corporate and other actions under Applicable Laws to authorize the execution and delivery of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
- c) this Agreement constitutes its legal, valid and binding obligation, enforceable against it in accordance with the terms hereof, and its obligations under this Agreement will be legally valid, binding and enforceable obligations against it in accordance with the terms hereof;
- d) it is subject to the laws of India, and hereby expressly and irrevocably waives any immunity in any jurisdiction in respect of this Agreement or matters arising there under including any obligation, liability or responsibility hereunder;
- e) the information furnished in the Bid and as updated on or before the date of this Agreement is true and accurate in all respects as on the date of this Agreement;
- f) the execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of the terms of its memorandum and articles of association or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- g) there are no actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it at law or inequity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform any of its obligations under this Agreement;
- h) it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of any Government Instrumentality which may result in any material adverse effect on its ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement;
- i) it has complied with Applicable Laws in all material respects and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have a material adverse effect on its ability to perform its obligations under this Agreement;

- j) no representation or warranty by it contained herein or in any other document furnished by it to the Authority or to any Government Instrumentality in relation to Applicable Permits contains or will contain any untrue or misleading statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading;
- k) no sums, in cash or kind, have been paid or will be paid, by it or on its behalf, to any person by way of fees, commission or otherwise for securing the contract or entering into this Agreement or for influencing or attempting to influence any officer or employee of the Authority in connection there with;
- l) all information provided by the {selected bidder} in response to the Request for Qualification and Request for Proposals or otherwise, is to the best of its knowledge and belief, true and accurate in all material respects;
- m) all undertakings and obligations of the Contractor arising from the Request for Qualification and Request for Proposals or otherwise shall be binding on the Contractor as if they form part of this Agreement; and
- n) Nothing contained in this Agreement shall create any contractual relationship or obligation between the Authority and any Sub-contractors, designers, consultants or agents of the Contractor.

5.2 Representations and warranties of the Authority

The Authority represents and warrants to the Contractor that:

- a) it has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated herein and that it has taken all actions necessary to execute this Agreement, exercise its rights and perform its obligations, under this Agreement;
- b) it has taken all necessary actions under Applicable Laws to authorize the execution, delivery and performance of this Agreement;
- c) it has the financial standing and capacity to perform its obligations under this Agreement;
- d) this Agreement constitutes a legal, valid and binding obligation enforceable against it in accordance with the terms hereof;
- e) It has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Government Instrumentality which may result in any material adverse effect on the Authority's ability to perform its obligations under this Agreement;
- f) it has complied with Applicable Laws in all material respects;
- g) it has good and valid right to the Site and has the power and authority to grant the site in respect thereof to the Contractor; and
- h) it shall have procured, as on the Appointed Date, site so that the Contractor can commence.

5.3 Disclosure

In the event that any occurrence or circumstance comes to the attention of either Party that renders any of its aforesaid representations or warranties untrue or incorrect, such Party shall immediately notify the other Party of the same. Such notification shall not have the effect of remedying any breach of the representation or warranty that has been found to be untrue or incorrect nor shall it adversely affect or waive any obligation of either Party under this Agreement.

ARTICLE 6
DISCLAIMER

6.1 Disclaimer

- 6.1.1 The Contractor acknowledges that prior to the execution of this Agreement, the Contractor has, after a complete and careful examination, made an independent evaluation of the Request for Qualification, Request for Proposals, Scope of the Project, Specifications and Standards, Site, local conditions, physical qualities of ground, subsoil and geology, traffic volumes, suitability and availability of access routes to the Site and all information provided by the Authority or obtained, procured or gathered otherwise, and has determined to its satisfaction the accuracy or otherwise thereof and the nature and extent of difficulties, risks and hazards as are likely to arise or may be faced by it in the course of performance of its obligations hereunder. Save as provided in Clause-4.1.2 and Clause-5.2, the Authority makes no representation whatsoever, express, implicit or otherwise, regarding the accuracy, adequacy, correctness, reliability and/or completeness of any assessment, assumptions, statement or information provided by it and the Contractor confirms that it shall have no claim whatsoever against the Authority in this regard.
- 6.1.2 The Contractor acknowledges and hereby accepts to have satisfied itself as to the correctness and sufficiency of the Contract Price.
- 6.1.3 The Contractor acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth in Clause 6.1.1 above and hereby acknowledges and agrees that the Authority shall not be liable for the same in any manner whatsoever to the Contractor, or any person claiming through or under any of them, and shall not lead to any adjustment of Contract Price or Scheduled Completion Date.
- 6.1.4 The Parties agree that any mistake or error in or relating to any of the matters set forth in Clause 6.1.1 above shall not vitiate this Agreement, or render it voidable.
- 6.1.5 In the event that either Party becomes aware of any mistake or error relating to any of the matters set forth in Clause 6.1.1 above, that Party shall immediately notify the other Party, specifying the mistake or error.
- 6.1.6 Except as otherwise provided in this Agreement, all risks relating to the Project shall be borne by the Contractor; and the Authority shall not be liable in any manner for such risks or the consequences thereof.

ARTICLE 7

7.1 Performance Security

- 7.1.1 The Contractor shall, for the performance of its obligations hereunder, provide to the Authority, within 15 (Fifteen) days of the date of this LoI / LoA, an irrevocable and unconditional guarantee, for an amount equal to 2% (Two percent) of the Contract Price, from a Bank in the form set forth in Annex-I of Schedule-F (the “**Performance Security**”). The Performance Security shall be valid until 30 (thirty) days of the expiry of the Defects Liability Period (DLP) specified in Clause 15.1.1. Until such time the Performance Security is provided by the Contractor pursuant hereto and the same comes into effect, the Bid Security shall remain in force and effect, and upon such provision of the Performance Security, the Authority shall release the Bid Security to the Contractor. For the avoidance of doubt, the Parties expressly agree that the Contractor shall provide, no later than 30 (thirty) days prior to the expiry of the Performance Security for the Defects Liability Period specified in Clause 15.1.1, a Performance Security in respect of the extended Defects Liability Period/ Operation & Maintenance as specified in Clause 15.1.2, for an amount equal to 2% (two percent) of the Contract Price.
- 7.1.2 Notwithstanding anything to the contrary contained in this Agreement, the Parties agree that in the event of failure of the Contractor to provide the Performance Security in accordance with the provisions of Clause 7.1.1 and within the time specified therein or such extended period as may be provided by the Authority, in accordance with the provisions of Clause 7.1.3, the Authority may encash the Bid Security and appropriate the proceeds thereof as Damages, and there upon all rights, privileges, claims and entitlements of the Contractor under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased with the concurrence of the Contractor, and this Agreement shall be deemed to have been terminated by mutual agreement of the Parties.
- 7.1.3 In the event the Contractor fails to provide the Performance Security within 15 (Fifteen) days, it may seek extension of time for a period not exceeding a further 15 (fifteen) days on payment of Damages for such extended period in a sum calculated at the rate of 0.05% (zero point zero five percent) of the Contract Price for each day until the Performance Security is provided.
- 7.1.4 Contractor will have to deposit additional performance guarantee for below estimated rate quoted by him at the time of agreement.

7.2 Extension of Performance Security

The Contractor may initially provide the Performance Security for a period of 15 (fifteen) months provided that it shall procure the extension of the validity of the Performance Security, as necessary, at least 2 (two) months prior to the date of expiry thereof. Upon the Contractor providing an extended Performance Security, the previous Performance Security shall be deemed to be released and the Authority shall return the same to the Contractor within a period of 7 (seven) business days from the date of submission of the extended Performance Security.

7.3 Appropriation of Performance Security

- 73.1 Upon occurrence of a Contractor Default, the Authority shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to encash and appropriate from the Performance Security the amounts due to it as Damages for the Contractor's Default.
- 73.2 Upon such encashment and appropriation from the Performance Security, the Contractor shall, within **30** (thirty) days thereof, replenish, in case of partial appropriation, to its original level the Performance Security, and in case of appropriation of the entire Performance Security provide a fresh Performance Security, as the case may be, and the Contractor shall, within the time so granted, replenish or furnish fresh Performance Security as aforesaid failing which the Authority shall be entitled to terminate the Agreement in accordance with Article 21 Upon such replenishment or furnishing of a fresh Performance Security, as the case may be, the Contractor shall be entitled to an additional Cure Period of 30 (thirty) days for remedying the Contractor Default, and in the event of the Contractor not curing its default within such Cure Period, the Authority shall be entitled to encash and appropriate such Performance Security as Damages, and to terminate this Agreement in accordance with Article 21.

7.4 Release of Performance Security

The Authority shall release the Performance Security within 60 (sixty) days of the expiry of the DLP period, as the case may be, under this Agreement. Notwithstanding the aforesaid, the Parties agree that the Authority shall not be obliged to release the Performance Security until all Defects identified during the DLP Period, as the case may be, have been rectified.

7.5 Retention Money

- 75.1 From every payment for Works due to the Contractor in accordance with the provisions of Clause-17.5, the Authority shall deduct 8% (eight percent) thereof as Guarantee money for performance of the obligations of the Contractor during the Construction Period (the "**Retention Money**") subject to the condition that the maximum amount of Retention Money shall not exceed 8% (eight percent) of the Contract Price.
- 75.2 Upon occurrence of a Contractor's Default, the Authority shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to appropriate the relevant amounts from the Retention Money as Damages for such Contractor's Default.
- 75.3 On completion of the whole work, half of the total retention money shall be released to the contractor after six months and balance half will be paid after completion of Operation & Maintenance period/Defect Liability Period provided that all defects notified by Engineer as rectified by Contractor and Engineer has issued certificate for the same (Annex-II of Schedule-F).
- 75.4 Within 15 (fifteen) days of the date of issue of the Completion Certificate, the Authority shall discharge the bank guarantees, if any, furnished by the Contractor under the provisions of Clause 7.5.3 and refund the balance of Retention Money remaining with the Authority after adjusting the amounts appropriated under the provisions of Clause 7.5.2 and the amounts refunded under the provisions of Clause 7.5.3.
- 75.5 The Parties agree that in the event of Termination of this Agreement, the Retention Money and the

bank guarantees specified in this Clause7.5 shall be treated as if they are Performance Security and shall be reckoned as such for the purposes of Termination Payment under Clause21.6.

ARTICLE 8

SITE OF PROJECT

8.1 The Site

The site of the Project (the “**Site**”) shall comprise the site described in respect of which the land shall be provided by the Authority to the Contractor. The Authority shall be responsible for acquiring and providing land on the Site in accordance with the [alignment] finalized by the Authority, free from all encroachments and encumbrances, and free access thereto for the execution of this Agreement.

8.2 Deleted

8.3 Deleted.

8.4 Deleted.

8.5 Deleted.

8.6 Deleted

8.7 Deleted

8.8 Geological and archaeological finds

It is expressly agreed that mining, geological or archaeological rights do not form part of this Agreement with the Contractor for the Works, and the Contractor hereby acknowledges that it shall not have any mining rights or interest in the underlying minerals, fossils, antiquities, structures or other remnants or things either of particular geological or archaeological interest and that such rights, interest and property on or under the Site shall vest in and belong to the Authority or the concerned Government Instrumentality. The Contractor shall take all reasonable precautions to prevent its workmen or any other person from removing or damaging such interest or property and shall inform the Authority forthwith of the discovery thereof and comply with such instructions as the Authority or the concerned Government Instrumentality may reasonably give for the removal of such property. For the avoidance of doubt, it is agreed that any reasonable expenses incurred by the Contractor hereunder shall be reimbursed by the Authority. It is also agreed that the Authority shall procure that the instructions hereunder are issued by the concerned Government Instrumentality within a reasonable period so as to enable the Contractor to continue its Works with such modifications as may be deemed necessary.

ARTICLE 9

UTILITIES AND TREES

9.1 Deleted.

9.2 Deleted.

9.3 New utilities

93.1 The Contractor shall allow, subject to such conditions as the Authority may specify, access to, and use of the Site for laying telephone lines, water pipes, electric cables or other public utilities. Where such access or use causes any financial loss to the Contractor, it may require the user of the Site to pay compensation or damages as per Applicable Laws. For the avoidance of doubt, it is agreed that use of the Site under this Clause-9.3 shall not in any manner relieve the Contractor of its obligation to construct the Project in accordance with this Agreement and any damage caused by such use shall be restored forthwith at the cost of the Authority.

932 In the event the construction of any Works is affected by a new utility or works undertaken in accordance with this Clause 9.3, the Contractor shall be entitled to a reasonable Time Extension as determined by the Authority's Engineer in accordance with the provisions of Clause10.4.

933 Deleted.

934 Deleted.

9.4 Felling of trees

The Authority shall assist the Contractor in obtaining the Applicable Permits for felling of trees to be identified by the Authority for this purpose if and only if such trees cause a Material Adverse Effect on the construction of the Project. The cost of such felling and of the compensatory plantation of trees, if any, shall be borne by the Selected Bidder. In the event of any delay in felling thereof for reasons beyond the control of the Contractor; it shall be excused for failure to perform any of its obligations hereunder if such failure is a direct consequence of delay in the felling of trees. The Parties hereto agree that the felled trees shall be deemed to be owned by the Authority and shall be disposed in such manner and subject to such conditions as the Authority may in its sole discretion deem appropriate. For the avoidance of doubt, the Parties agree that if any felling of trees result any period of delay in providing the Applicable Permits, the Contractor shall be entitled to Time Extension.

ARTICLE 10
CONSTRUCTION OF THE PROJECT

10.1 Obligations prior to commencement of Works

10.1.1 Within 20 (twenty) days of the Appointed Date/date of agreement, the Contractor shall:

- i) appoint its representative, duly authorised to deal with the Authority in respect of all matters under or arising out of or relating to this Agreement;
- ii) appoint a service engineer (the “**Service Engineer**”) who will head the Contractor’s supply, installation and commissioning unit and shall be responsible for supply, installation and commissioning;
- iii) undertake and perform all such acts, deeds and things as may be necessary or required before commencement of Works under and in accordance with this Agreement, Applicable Laws and Applicable Permits; and
- iv) Make its own arrangements for quarrying of materials and procurement needed for the Project under and in accordance with Applicable Laws and Applicable Permits.

10.1.2 Deleted

10.1.3 Within 30 (thirty) days of the Appointed Date/Date of agreement, the Contractor shall submit to the Authority a programme (the “Programme”) for construction of the Works, developed using networking techniques and giving the following details:

Part I Contractor’s organization for the Project, the general methods and arrangements for construction, environmental management plan, Quality Assurance Plan including traffic management and safety plan covering safety of users and workers during construction, Contractor’s key personnel, and equipment.

Part II Programme for completion of all stages of construction and Project Milestones of the Works as specified in Project Completion Schedule set forth in Schedule-I. The Programme shall include:

- i. the order in which the Contractor intends to carry out the Works, including the anticipated timing of design and stages of Works;
- ii. the periods for reviews under Clause 10.2; and
- iii. The sequence and timing of inspections and tests specified in this Agreement.

The Contractor shall submit a revised programme whenever the previous programme is inconsistent with the actual progress or with the Contractor’s obligations.

Part III Monthly cash flow forecast for the Project.

For the avoidance of doubt, the Contractor acknowledges and agrees that the Authority may, within

a period of 15 (fifteen) days of receipt of the Programme, convey its comments to the Contractor stating the modifications, if any, required for compliance with the provisions of this Agreement, and the Contractor shall carry out such modifications, to the extent required for conforming with the provisions of this Agreement.

10.1.4 For the avoidance of doubt, the sum of payments to be computed in respect of all the items of work shall not exceed the Contract Price, as may be adjusted in accordance with the provisions of this Agreement.

10.1.5 Deleted.

10.1.6 Deleted

10.2 Deleted

10.3 Construction of the Project

10.3.1 The Contractor shall construct the Project in conformity with the Drawings, Specifications and Standards set forth in this RFP. The Contractor shall be responsible for the correct positioning of all parts of the Works, and shall rectify any error in the positions, levels, dimensions or alignment of the Works. The 15 (fifteen) months from the Appointed Date/Date of agreement shall be the scheduled completion date (the “**Scheduled Completion Date**”) and the Contractor agrees and undertakes that the construction shall be completed on or before the Scheduled Completion Date, including any extension thereof.

10.3.2 The Contractor shall construct the Project in accordance with the Project Completion Schedule set forth in Schedule-I. In the event that the Contractor fails to achieve any Project Milestone set forth in Schedule-I, unless such failure has occurred due to Force Majeure or for reasons attributable to the Authority, it shall pay Damages to the Authority in a sum calculated from the date specified in Schedule -I and until such Project Milestone is achieved or the Works are completed; provided that if the period for any or all Project Milestones or the Scheduled Completion Date is extended in accordance with the provisions of this Agreement, the dates set forth in Schedule-I shall be deemed to be modified accordingly and the provisions of this Agreement shall apply as if Schedule-I has been amended as above; provided further that in the event the Works are completed within or before the Scheduled Completion Date including any Time Extension, the Damages paid under this Clause 10.3.2 shall be refunded by the Authority to the Contractor, but without any interest thereon. For the avoidance of doubt, it is agreed that recovery of Damages under this Clause 10.3.2 shall be without prejudice to the rights of the Authority under this Agreement including the right of Termination thereof. The Parties further agree that Time Extension hereunder shall only be reckoned for and in respect of the affected Works as specified in Clause 10.4.2.

10.3.3 The Authority shall notify the Contractor of its decision to impose Damages in pursuance of the provisions of this Clause 10.3. Provided, however, that no deduction on account of Damages shall be effected by the Authority without taking into consideration the representation, if any, made by the Contractor within 20 (twenty) days of such notice. The Parties expressly agree that the total amount of Damages under Clause 10.3.2 shall not exceed 10% (ten percent) of the Contract Price.

10.4 Extension of time for completion

10.4.1 Without prejudice to any other provision of this Agreement for and in respect of extension of time, the Contractor shall be entitled to extension of time in the Project Completion Schedule (the “**Time Extension**”) to the extent that completion of any Project Milestone is or will be delayed by any of the following, namely:

- a) delay in providing site, environmental clearances specified in Clause 4.1.4;
- b) Change of Scope, unless an adjustment to the Scheduled Completion Date has been agreed under Article 13;
- c) occurrence of a Force Majeure Event;
- d) any delay, impediment or prevention caused by or attributable to the Authority, the Authority’s personnel or the Authority’s other contractors on the Site; and
- e) Any other cause or delay which entitles the Contractor to Time Extension in accordance with the provisions of this Agreement.

10.4.2 The Contractor shall, no later than 15 (fifteen) business days from the occurrence of an event or circumstance specified in Clause 10.4.1, inform the Authority by notice in writing, stating in reasonable detail with supporting particulars, the event or circumstances giving rise to the claim for Time Extension in accordance with the provisions of this Agreement. Provided that the period of 15 (fifteen) business days shall be calculated from the date on which the Contractor became aware, or should have become aware, of the occurrence of such an event or circumstance.

Provided further that notwithstanding anything to the contrary contained in this Agreement, Time Extension shall be due and applicable only for the Works which are affected by the aforesaid events or circumstances and shall not in any manner affect the Project Completion Schedule for and in respect of the Works which are not affected thereby.

10.4.3 In the event of the failure of the Contractor to issue to the Authority’s Engineer a notice in accordance with the provisions of Clause 10.4.2 within the time specified therein, the Contractor shall not be entitled to any Time Extension and shall forfeit its right to any such claims in future. For the avoidance of doubt, in the event of failure of the Contractor to issue notice as specified in this Clause 10.4.3, the Authority shall be discharged from all liability in connection therewith.

10.4.4 The Authority’s Engineer shall, on receipt of a claim in accordance with the provisions of Clause 10.4.2, examine the claim expeditiously within the time frame specified herein. In the event the Authority’s Engineer requires any clarifications to examine the claim, the Authority’s Engineer shall seek the same within 15 (fifteen) days from the date of receiving the claim. The Contractor shall, on the receipt of the communication of the Authority’s Engineer requesting for clarification, furnish the same to the Authority’s Engineer within 10 (ten) days thereof. The Authority’s Engineer shall, within a period of 30 (thirty) days from the date of receipt of such clarifications, forward in writing to the Contractor its determination of Time Extension. For the avoidance of doubt, the Parties agree that the Authority’s Engineer shall, in accordance with the provisions of this

Agreement, notify the Contractor of the aforesaid Time Extension no later than 60 (sixty) days from the date of receipt of the Contractor's claim for Time Extension.

Provided that when determining each extension of time under this Clause 10.4, the Authority's Engineer shall review previous determinations and may increase, but shall not decrease, the total Time Extension.

10.4.5 If the event or circumstance giving rise to the notice has a continuing effect:

- f) the detailed claim shall be considered as interim;
- g) the Contractor shall, no later than 10 (ten) days after the close of each month, send further interim claims specifying the accumulated delay, the extension of time claimed, and such further particulars as the
Authority's Engineer may reasonably require; and
- h) the Contractor shall send a final claim within 30 (thirty) days after the effect of the event or the circumstances.

Upon receipt of the claim hereunder, the Authority's Engineer shall examine and determine the same in accordance with the provisions of Clause 10.4.4 within a period of 60 (sixty) days of the receipt thereof.

10.5 Incomplete Works

In the event the Contractor fails to complete the Works in accordance with the Project Completion Schedule, including any Time Extension granted under this Agreement, the Contractor shall endeavor to complete the balance work expeditiously and shall pay Damages to the Authority in accordance with the provisions of Clause 10.3.2 for delay of each month until the Works are completed in accordance with the provisions of this Agreement. Recovery of Damages under this Clause shall be without prejudice to the rights of the Authority under this Agreement including the right to termination under Clause-21.1.

ARTICLE 11

QUALITY ASSURANCE, MONITORING AND SUPERVISION

11.1 Quality of Materials and workmanship

- 11.1.1 The Contractor shall ensure that the Construction, Materials and workmanship are in accordance with the requirements specified in this Agreement, Specifications and Standards and Good Industry Practice.
- 11.1.2 The Contractor warrants that all Materials shall be new, unused, not reconditioned and in conformity with Specification and Standards, Applicable Laws and Good Industry Practice, and that the Contractor shall not use any materials which are generally recognized as being deleterious under Good Industry Practice.

11.2 Quality control system

- 11.2.1 The Contractor shall establish a quality control mechanism to ensure compliance with the provisions of this Agreement (the “**Quality Assurance Plan**” or “**QAP**”).
- 11.2.2 The Contractor shall, within 30 (thirty) days of the Appointed Date/ Date of agreement, submit to the Authority’s Engineer its Quality Control & Quality Assurance Plan which shall include the following:
- i) Organization, duties and responsibilities, procedures, documentation inspections and test plan etc.
 - ii) Quality control site laboratory with all basic test facilities for the sampling and testing of Material within the test frequencies, standards, acceptance criteria, testing facilities, reporting, recording and interpretation of test results, approvals, check list, RFI for site activities, and test format for testing and calibration in accordance with the Specifications and Standards and Good Industry Practice; and
 - iii) Internal quality audit system.
The Authority’s Engineer shall convey its comments to the Contractor within a period of 21 (twenty-one) days of receipt of the QAP stating the modifications, if any, required, and the Contractor shall incorporate those in the QAP to the extent required for conforming with the provisions of this Clause 11.2.
- 11.2.3 The Contractor shall procure all documents, apparatus and instruments, fuel, consumables, water, electricity, labour, Materials, samples, and qualified personnel as are necessary for examining and testing the Project Assets, Materials and workmanship in accordance with the Quality Assurance Plan.
- 11.2.4 The cost of testing of Construction, Materials and workmanship under this Article 11 shall be borne by the Contractor.

11.3. Methodology

The Contractor shall, at least 15 (fifteen) days prior to the commencement of work/date of agreement, submit to the Authority’s Engineer for review the methodology proposed to be adopted

for executing the Works, giving details of equipment to be deployed, traffic management and measures for ensuring safety. The Authority's Engineer shall complete the review and convey its comments, if any, to the Contractor within a period of 10 (ten) days from the date of receipt of the proposed methodology from the Contractor.

11.4. Inspection and technical audit by the Authority

The Authority or any representative authorized by the Authority in its behalf shall inspect and review the progress and quality of the Works and issue appropriate directions to the Contractor for taking remedial action in the event the Works are not in accordance with the provisions of this Agreement.

11.5 External technical audit

At any time during construction, the Authority may appoint an external technical auditor to conduct an audit of the quality of the Works. The findings of the audit, to the extent accepted by the Authority, shall be notified to the Contractor and the Authority's Engineer for taking remedial action in accordance with this Agreement. The Contractor shall provide all assistance as may be required by the auditor in the conduct of its audit hereunder. Notwithstanding anything contained in this Clause 11.5, the external technical audit shall not affect any obligations of the Contractor or the Authority's Engineer under this Agreement.

11.6 Inspection of construction records

The Authority shall have the right to inspect the records of the Contractor relating to the Works.

11.7 Monthly progress reports

During the Construction Period, the Contractor shall, no later than 10 (ten) days after the close of each month, furnish to the Authority's Engineer a monthly report on the progress of Works and shall promptly give such other relevant information as may be required by the Authority's Engineer.

11.8 Inspection

11.8.1 The Authority's Engineer and its authorized representative shall at all times:

- iv) have full access to all parts of the Site and to all places from which natural Materials are being obtained for use in the Works; and
- v) During production, manufacture and construction at the Site and at the place of production, been titled to examine, inspect, measure and test the Materials and workmanship, and to check the progress of manufacture of Materials.

11.8.2 The Contractor shall give the Authority's Engineer and its authorized agents access, facilities and safety equipment for carrying out their obligations under this Agreement.

11.8.3 The Authority's Engineer shall submit a monthly inspection report (the **"Inspection Report"**) to the Authority and the Contractor bringing out the results of inspections and the remedial action taken by the Contractor in respect of Defects or deficiencies. For the avoidance of doubt, such inspection or submission of Inspection Report by the Authority's Engineer shall not relieve or

absolve the Contractor of its obligations and liabilities under this Agreement in any manner whatsoever.

11.9 Samples

The Contractor shall submit the following samples of Materials and relevant information to the Authority's Engineer for review:

- vi) manufacturer's test reports and standard samples of manufactured Materials; and
- vii) Samples of such other Materials as the Authority's Engineer may require.

11.10 Tests

11.10.1 For determining that the Works conform to the Specifications and Standards, the Authority's Engineer shall require the Contractor to carry out or cause to be carried out tests, at such time and frequency and in such manner as specified in this Agreement and in accordance with Good Industry Practice for quality assurance. The Contractor shall, with due diligence, carry out all the tests in accordance with the Agreement and furnish the results thereof to the Authority's Engineer. Of the total tests for each category or type to be undertaken by the Contractor under the provisions of this Agreement and Good Industry Practice, the Authority's Engineer shall (a) carry out or cause to be carried out, test checks equal to about 10% (ten percent) of the number of the tests required to be undertaken by the Contractor; and (b) witness or participate in at least 10% (ten percent) of the number of such tests conducted or caused to be conducted by the Contractor.

11.10.2 In the event that results of any tests conducted under this Clause 11.10 establish any Defects or deficiencies in the Works, the Contractor shall carry out remedial measures and furnish a report to the Authority's Engineer in this behalf. The Authority's Engineer shall require the Contractor to carry out or cause to be carried out tests to determine that such remedial measures have brought the Works into compliance with the Specifications and Standards, and the procedure shall be repeated until such Works conform to the Specifications and Standards. For the avoidance of doubt, the cost of such tests and the remedial measures in pursuance thereof shall be solely borne by the Contractor.

11.11 Examination of work before covering up

In respect of the work which the Authority's Engineer is entitled to examine, inspect, measure or test before it is covered up or put out of view or any part of the work is placed thereon, the Contractor shall give notice to the Authority's Engineer whenever any such work is ready and before it is covered up. The Authority's Engineer shall then either carry out the examination, inspection or testing without unreasonable delay, or promptly give notice to the Contractor that the Authority's Engineer does not require to do so. Provided, however, that if any work is of a continuous nature where it is not possible or prudent to keep it uncovered or incomplete, the Contractor shall notify the schedule of carrying out such work to give sufficient opportunity, not being less than 3 (three) business days' notice, to the Authority's Engineer to conduct its inspection, measurement or test while the work is continuing. Provided further that in the event the Contractor receives no response from the Authority's Engineer within a period of 3 (three) business days from the date on which the

Contractor's notice hereunder is delivered to the Authority's Engineer, the Contractor shall be entitled to assume that the Authority's Engineer would not undertake the said inspection.

11.12 Rejection

11.12.1 If, as a result of an examination, inspection, measurement or testing, any Plant, Material, design or workmanship is found to be defective or otherwise not in accordance with the provisions of this Agreement, the Authority's Engineer may reject such Plant, Material, design or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the Defect and ensure that the rejected it recompiles with the requirements of this Agreement.

11.12.2 If the Authority's Engineer requires the Plant, Material, design or workmanship to be retested, the tests shall be repeated on the same terms and conditions, as applicable in each case. If the rejection and retesting cause the Authority to incur any additional costs, such costs shall be recoverable by the Authority from the Contractor and may be deducted by the Authority from any monies due to be paid to the Contractor.

11.12.3 The Contractor shall not be entitled to any extension of time on account of rectifying any Defect or retesting as specified in this Clause 11.12.

11.12.4 No examination, inspection, measurement or testing of any Plant, Material, design or workmanship by the Authority's Engineer or its failure to convey its observations or to examine, inspect, measure or test shall relieve the Contractor of its obligations and liabilities under this Agreement in any manner nor shall the Authority be liable for the same in any manner.

11.13 Remedial work

11.13.1 Notwithstanding any previous test or certification, the Authority's Engineer may instruct the Contractor to:

1. remove from the Site and replace any Plant or Materials which are not in accordance with the provisions of this Agreement;
2. remove and re-execute any work which is not in accordance with the provisions of this Agreement and the Specification and Standards; and
3. execute any work which is urgently required for the safety of the Project, whether because of an accident, unforeseeable event or otherwise; provided that in case of any work which is required on account of a Force Majeure Event, the provisions of Clause 19.6 shall apply.

11.13.2 If the Contractor fails to comply with the instructions issued by the Authority's Engineer under Clause 11.13.1, within the time specified in the Authority's Engineer's notice or as mutually agreed, the Authority's Engineer may advise the Authority to have the work executed by another agency. The cost so incurred by the Authority for undertaking such work shall, without prejudice to the rights of the Authority to recover Damages in accordance with the provisions of this Agreement, be recoverable from the Contractor and may be deducted by the Authority from any monies due to be paid to the Contractor.

11.14 Delays during construction

Without prejudice to the provisions of Clause 10.3.2, in the event the Contractor does not achieve any of the Project Financial Progress Milestones within the time period stipulated in Schedule I

then in addition to the penalty deductions from running account bills the Authority's Engineer shall have reasonably determined that the rate of progress of Works is such that Completion of the Project is not likely to be achieved by the end of the Scheduled Completion Date, it may notify the same to the Contractor, and the Contractor shall, within 15 (fifteen) days of such notice, by a communication inform the Authority's Engineer in reasonable detail about the steps it proposes to take to expedite progress and the period within which it shall achieve the Project Completion Date.

11.15 Quality control records and Documents

The Contractor shall hand over to the Authority's Engineer a copy of all its quality control records and documents before the Completion Certificate is issued pursuant to Clause-12.2.

11.16 Video recording

During the Construction Period, the Contractor shall provide to the Authority for every calendar quarter, a video recording, which will be compiled into a 3 (three) hour digital video disc or any substitute thereof, covering the status and progress of Works in that quarter. The video recording shall be provided to the Authority no later than 15 (fifteen) days after the close of each quarter after the Appointed Date/ Date of agreement.

11.17 Suspension of unsafe Construction Works

11.17.1 Upon recommendation of the Authority's Engineer to this effect, or on its own volition in cases of emergency or urgency, the Authority may by notice require the Contractor to suspend forthwith the whole or any part of the Works if, in the reasonable opinion of the Authority's Engineer or the Authority, as the case may be, such work threatens the safety of the Users and or other persons on or about the Project. Provided, however, that in case of an emergency, the Authority may *suo moto* issue the notice referred to herein above.

11.17.2 The Contractor shall, pursuant to the notice under Clause 11.17.1, suspend the Works or any part thereof for such time and in such manner as may be specified by the Authority and thereupon carry out remedial measures to secure the safety of suspended works, the Users, other persons and vehicles on or about the Project including pedestrians. The Contractor may by notice require the Authority's Engineer to inspect such remedial measures forthwith and make a report to the Authority recommending whether or not the suspension hereunder may be revoked. Upon receiving the recommendations of the Authority's Engineer, the Authority shall either revoke such suspension or instruct the Contractor to carry out such other and further remedial measures as may be necessary in the reasonable opinion of the Authority, and the procedure set forth in this Clause 11.17 shall be repeated until the suspension hereunder is revoked.

11.17.3 Subject to the provisions of Clause 19.6, all reasonable costs incurred for maintaining and protecting the Works or part thereof during the period of suspension (the "Preservation Costs"), shall be borne by the Contractor; provided that if the suspension has occurred as a result of any breach of this Agreement by the Authority, the Preservation Costs shall be borne by the Authority.

11.17.4 If suspension of Works is for reasons not attributable to the Contractor, the Authority's Engineer

shall determine any Time Extension to which the Contractor is reasonably entitled in accordance with the provisions of Clause10.4.

ARTICLE 12

COMPLETION CERTIFICATE

12.1 Tests on completion

- 12.1.1 No later than 30 (thirty) days prior to the likely completion of the Project, or a Section thereof, the Contractor shall notify the Authority's Engineer of its intent to subject the Project or a Section thereof, to Tests. The date and time of each of the Tests shall be determined by the Authority's Engineer in consultation with the Contractor, and notified to the Authority who may designate its representative to witness the Tests. The Contractor shall either conduct the Tests as directed by the Authority's Engineer or provide such assistance as the Authority's Engineer may reasonably require for conducting the Tests. For the avoidance of doubt, the Parties agree that in the event of the Contractor and the Authority's Engineer failing to mutually agree on the dates for conducting the Tests, the Contractor shall fix the dates by giving not less than 10 (ten) days' notice to the Authority's Engineer.
- 12.1.2 All Tests shall be conducted in accordance with Schedule at the cost and expense of the Contractor. The Authority's Engineer shall observe, monitor and review the results of the Tests to determine compliance of the Project or a Section thereof, with Specifications and Standards and if it is reasonably anticipated or determined by the Authority's Engineer during the course of any Test that the performance of the Project or Section or any part thereof, does not meet the Specifications and Standards, it shall have the right to suspend or delay such Test and require the Contractor to remedy and rectify any Defect or deficiency. Upon completion of each Test, the Authority's Engineer shall provide to the Contractor and the Authority copies of all Test data including detailed Test results. For the avoidance of doubt, the Parties expressly agree that the Authority's Engineer may require the Contractor to carry out or cause to be carried out additional Tests, in accordance with Good Industry Practice, for determining the compliance of the Project or Section thereof with the Specifications and Standards.

12.2 Provisional Certificate

- 12.2.1 Subject to the provisions of Clause 12.2.5, upon completion of all Works forming part of the Project, save and except the Works for which Time Extension has been granted under Clause 10.5, the Authority's Engineer shall, at the request of the Contractor, issue a provisional certificate of completion substantially in the form set forth in Schedule (the "**Provisional Certificate**") if the Tests for and in respect of the completed Works are successful. The Provisional Certificate shall have appended thereto a list of outstanding items of work (the "**Punch List**") that need to be completed in accordance with the provisions of this Agreement. The Contractor undertakes to complete the minor outstanding items of works in respect of those Sections of the Project for which

the Provisional Certificate has been issued, within a period of 30 (thirty) days of the date of Provisional Certificate, and those parts of the Works in respect of which Time Extension has been granted, within the extended period thereof. For the avoidance of doubt, the Parties agree that the Punch List shall include all Works for which Time Extension has been granted and shall also include any minor outstanding items of work forming part of the completed Sections if such works do not materially affect the use of the completed Sections for their intended purpose. The Parties further agree that Provisional Certificate shall not be issued if the completed Works cannot be safely and reliably placed in service of the Users thereof.

- 12.2.2 Upon issue of Provisional Certificate, the provisions of Article 15 shall apply to the completed parts of the Project and the property and ownership of all such completed Works shall vest in the Authority.
- 12.2.3 If the Authority's Engineer determines that the Project or any completed part thereof does not conform to the provisions of this Agreement and cannot be safely and reliably placed in operation, it shall forthwith make a report in this behalf and send copies thereof to the Authority and the Contractor and withhold issuance of the Provisional Certificate until the Defects or deficiencies are rectified by the Contractor and Tests are successful in accordance with this Article 12.
- 12.2.4 Notwithstanding anything to the contrary contained in Clause 12.2.3, the Authority may, at any time after receiving a report from the Authority's Engineer under that Clause, direct the Authority's Engineer to issue a Provisional Certificate under Clause 12.2.1 and such direction shall be complied forthwith.
- 12.2.5 No Provisional Certificate shall be issued under the provisions of this Clause 12.2 until the Contractor has received at least 80% (eighty percent) of the amount arrived at after reducing the Item Rate specified in Clause-17.1.1 by the amount attributable to works which have been withdrawn under the provisions of Clause-8.3.3. For the avoidance of doubt and by way of illustration, the Parties agree that if the Contract Price specified in Clause 17.1.1 is Rs.105 cr. (Rs. one hundred and five crore) and the works withdrawn under Clause 8.3.3 have a value of Rs.5cr. (Rs. Five crore), a Provisional Certificate shall not be issued until valid claims for payment of an amount of Rs.80 cr. (Rs. eighty crore) have been submitted by the Contractor in accordance with the provisions of this Agreement. It is further agreed that all price adjustments made in pursuance of Clause 17.10 shall not be reckoned for computation of the claims for payments referred to in this Clause-12.2.5. It is also agreed that any Change of Scope effected within 30(thirty) days of the Appointed Date/ Date of agreement shall be reckoned for the purposes of determining the Contract Price hereunder.

12.3 Completion of remaining Works

All items in the Punch List shall be completed by the Contractor in accordance with the provisions of this Agreement. For any delay in their completion other than for the reasons attributable to the Authority or due to Force Majeure, the Authority shall be entitled to recover Damages from the Contractor in accordance with the provisions of Clause 10.3.2 of this Agreement.

12.4 Completion Certificate

- 12.4.1 Upon completion of all Works, including the items specified in the Punch List, and the Authority's Engineer determining the Tests to be successful, it shall forthwith issue to the Contractor and the Authority a certificate substantially in the form set forth in Schedule (the "**Completion Certificate**").
- 12.4.2 Upon receiving the Completion Certificate, the Contractor shall remove its equipment, materials, debris and temporary works from the Site within a period of 30 (thirty) days thereof, failing which the Authority may remove or cause to be removed, such equipment, materials, debris and temporary works and recover from the Contractor an amount equal to 120% (one hundred and twenty percent) of the actual cost of removal incurred by the Authority.
- 12.4.3 Without prejudice to the obligations of the Contractor specified in Article 15, the property and ownership of all the completed works forming part of the Project shall vest in the Authority.

12.5 Rescheduling of Tests

If the Authority's Engineer certifies to the Authority and the Contractor that it is unable to issue the Completion Certificate or Provisional Certificate, as the case maybe, because of events or circumstances on account of which the Tests could not be held or had to be suspended, the Contractor shall be entitled to re-schedule the Tests and hold the same as soon as reasonably practicable.

ARTICLE 13
CHANGE OF SCOPE

13.1 Change of Scope

13.1.1 The Authority may, notwithstanding anything to the contrary contained in this Agreement, require the Contractor to make modifications or alterations to the Works (“**Change of Scope**”) before the issue of the Completion Certificate either by giving an instruction or by requesting the Contractor to submit a proposal for Change of Scope involving additional cost or reduction in cost. Any such Change of Scope shall be made and valued in accordance with the provisions of this Article 13.

13.1.2 Change of Scope shall mean:

- 1) change in specifications of any item of Works;
- 2) omission of any work from the Scope of the Project excepts under Clause 8.3.3; provided that, subject to Clause 13.5, the Authority shall not omit any work under this Clause in order to get it executed by any other entity; or
- 3) Any additional work, Plant, Materials or services which are not included in the Scope of the Project, including any associated Tests on completion of construction.

13.1.3 If the Contractor determines at any time that a Change of Scope will, if adopted,

(i) Accelerate completion, (ii) reduce the cost to the Authority of executing, maintaining or operating the Project, (iii) improve the efficiency or value to the Authority of the completed Project, or (iv) otherwise be of benefit to the Authority, it shall prepare a proposal with relevant details at its own cost. The Contractor shall submit such proposal, supported with the relevant details including the amount of reduction in the Contract Price, if any, to the Authority to consider such Change of Scope. The Authority shall, within 15 (fifteen) days of receipt of such proposal, either accept such Change of Scope with modifications, if any, and initiate proceedings therefore in accordance with this Article 13 or reject the proposal and inform the Contractor of its decision. For the avoidance of doubt, the Parties agree that the Contractor shall not undertake any Change of Scope without a Change of Scope Order being issued by the Authority, save and except any Works necessary for meeting any Emergency.

13.2 Procedure for Change of Scope

13.2.1 In the event of the Authority determining that a Change of Scope is necessary, it may direct the Authority’s Engineer to issue to the Contractor a notice specifying in reasonable detail the works and services contemplated there under (the “**Change of Scope Notice**”).

13.2.2 Upon receipt of a Change of Scope Notice, the Contractor shall, with due diligence, provide to the Authority and the Authority’s Engineer such information as is necessary, together with preliminary documentation in support of:

- a) the impact, if any, which the Change of Scope is likely to have on the Project Completion Schedule if the works or services are required to be carried out during the Construction Period; and

- b) the options for implementing the proposed Change of Scope and the effect, if any, each such option would have on the costs and time thereof, including the following details:
 - c) break down of the quantities, unit rates and cost for different items of work;
 - d) deleted
 - e) Proposed modifications, if any, to the Project Completion Schedule of the Project. For the avoidance of doubt, the Parties expressly agree that, subject to the provisions of Clause 13.4.2, the Contract Price shall be increased or decreased, as the case may be, on account of Change of Scope.

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

- a) For works of similar nature compared to the Works being executed, the quotation shall be based on the rate for the item of work inclusive of all labour, Materials, equipment, incidentals, overheads and profit derived in accordance with the provisions of Clause 17.3; and the price adjustment in accordance with Clause 17.8 shall apply to the rates so worked out.
- b) For works not similar in nature to the Works being executed, the cost of work shall be derived on the basis of Bihar SOR Standard Data Book.

13.2.4 Upon reaching an agreement, the Authority shall issue an order (the "**Change of Scope Order**") requiring the Contractor to proceed with the performance thereof. In the event that the Parties are unable to agree, the Authority may:

- c) Issue a Change of Scope Order requiring the Contractor to proceed with the performance thereof at the rates and conditions approved by the Authority till the matter is resolved in accordance with Article 24;or
- d) Proceed in accordance with Clause13.5.

13.2.5 The provisions of this Agreement, in so far as they relate to Works and Tests, shall apply *mutatis mutandis* to the works undertaken by the Contractor under this Article 13.

13.3 Payment for Change of Scope

Payment for Change of Scope shall be made in accordance with the payment schedule specified in the Change of Scope Order.

13.4 Restrictions on Change of Scope

13.4.1 No Change of Scope shall be executed unless the Authority has issued the Change of Scope Order save and except any Works necessary for meeting any Emergency.

13.4.2 Unless the Parties mutually agree to the contrary, the total value of all Change of Scope Orders shall not exceed 10% (ten percent) of the Contract Price.

13.4.3 Notwithstanding anything to the contrary in this Article 13, no change arising from any default of the Contractor in the performance of its obligations under this Agreement shall be deemed to be Change of Scope, and shall not result in any adjustment of the Contract Price or the Project Completion Schedule.

13.5 Power of the Authority to undertake works

- 13.5.1 In the event the Parties are unable to agree to the proposed Change of Scope Orders in accordance with Clause 13.2, the Authority may, after giving notice to the Contractor and considering its reply thereto, award such works or services to any person on the basis of open competitive bidding from amongst bidders who are pre-qualified for undertaking the additional work; provided that the Contractor shall have the option of matching the first ranked bid in terms of the selection criteria, subject to payment of 2% (two percent) of the bid amount to the Authority, and there upon securing the award of such works or services. For the avoidance of doubt, it is agreed that the Contractor shall be entitled to exercise such option only if it has participated in the bidding process and its bid does not exceed the first ranked bid by more than 10% (ten per cent) thereof. It is also agreed that the Contractor shall provide assistance and cooperation to the person who undertakes the works or services hereunder, but shall not be responsible for rectification of any Defects in works carried out by other agencies. For the avoidance of doubt, the Authority acknowledges and agrees that it shall not undertake any works or services under this Clause 13.5.1 if such works or services cause a Material Adverse Effect on the Contractor.
- 13.5.2 The works undertaken in accordance with this Clause 13.5 shall conform to the Specifications and Standards and shall be carried out in a manner that minimizes disruption to the Project. The provisions of this Agreement, in so far as they relate to Works and Tests, shall apply *mutatis mutandis* to the works carried out under this Clause 13.5.

ARTICLE 14 - Deleted

ARTICLE 15
DEFECTS LIABILITY

15.1 Defects Liability Period

The Contractor shall be responsible for all the Defects and deficiencies, except usual wear and tear in the Project or any Section thereof, till the expiry of the “DLP” Period of 2 (two) years.

15.1.1 Deleted.

15.2 Remedy and rectification of Defects and deficiencies

Without prejudice to the provisions of Clause 15.2 the Contractor shall repair or rectify all Defects and deficiencies observed by the Authority’s Engineer during the DLP Period within a period of 15 (fifteen) days from the date of notice issued by the Authority’s Engineer in this behalf, or within such reasonable period as may be determined by the Authority’s Engineer at the request of the Contractor, in accordance with Good Industry Practice.

15.3 Cost of remedying Defects

For the avoidance of doubt, any repair or rectification undertaken in accordance with the provisions of Clause 15.2, including any additional tests, shall be carried out by the Contractor at its own risk and cost, to the extent that such rectification or repair is attributable to:

- a) the design of the Project;
- b) Works, Materials or workmanship not being in accordance with this Agreement and the Specifications and Standards;
- c) improper maintenance during construction of the Project by the Contractor; or
- d) Failure by the Contractor to comply with any other obligation under this Agreement.

15.4 Contractor’s failure to rectify Defects

In the event that the Contractor fails to repair or rectify such Defect or deficiency within the period specified in Clause 15.2, the Authority shall be entitled to get the same repaired, rectified or remedied at the Contractor’s cost so as to make the Project conform to the Specifications and Standards and the provisions of this Agreement. All costs consequent thereon shall, after due consultation with the Authority and the Contractor, be determined by the Authority’s Engineer. The cost so determined, and an amount equal to 20% (twenty percent) of such cost as Damages, shall be recoverable by the Authority from the Contractor and may be deducted by the Authority from any monies due to the Contractor.

15.5 Contractor to search cause

- 15.5.1 The Authority’s Engineer may instruct the Contractor to examine the cause of any Defect in the Works or part thereof before the expiry of the Defects Liability Period.
- 15.5.2 In the event any Defect identified under Clause 15.5.1 is attributable to the Contractor, the Contractor shall rectify such Defect within the period specified by the Authority’s Engineer and shall bear the cost of the examination and rectification of such Defect.

15.5.3 In the event such Defect is not attributable to the Contractor, the Authority's Engineer shall, after due consultation with the Authority and the Contractor, determine the costs incurred by the Contractor on such examination and notify the same to the Contractor, with a copy to the Authority, and the Contractor shall be entitled to payment of such costs by the Authority.

15.6 Extension of Defects Liability Period.

15.6.1 The Defects Liability Period shall be deemed to be extended till the identified Defects under Clause 15.2 have been remedied.

15.6.2 Any Materials or Works with Defects identified under Clause 15.2 and replaced or repaired during the Defects Liability Period or the extended Defects Liability Period, as the case may be, would be further warranted for a period of twelve (12) months from the date of completion of such repair or replacement.

15.6.3 The Contractor shall upon termination or expiry of this Agreement, or upon expiry of the Defects Liability Period, assign any outstanding benefit in respect of any subcontract or any warranty from any subcontractor, to the Authority or to such other person as the Authority may direct.

ARTICLE 16

AUTHORITY'S ENGINEER

16.1 Appointment of the Authority's Engineer

- 16.1.1 The Authority shall appoint the Authority's Engineer for the project.
- 16.1.2 The duties and functions of the Authority's Engineer shall be intimated to the contractor by the Authority after the date of agreement.

Part IV

Financial Covenants

ARTICLE17

PAYMENTS

17.1 Contract Price

- 17.1.1 The Authority shall make payments to the Contractor for the Works on the basis of the item rate accepted by the Authority in consideration of the obligations specified in this Agreement for an amount of Rs. ***** (Rs. *****) (the “**Contract Price**”), which shall be subject to adjustments in accordance with the provisions of this Agreement. The Parties further agree that save and except as provided in this Agreement, the Contract Price shall be valid and effective until issue of Completion Certificate.
- 17.1.2 The Contract Price includes all duties, taxes, royalty, and fees that may be levied in accordance with the laws and regulations in force as on the Base Date on the Contractor’s equipment, Plant, Materials and supplies acquired for the purpose of this Agreement and on the Works undertaken under this Agreement. Nothing in this Agreement shall relieve the Contractor from its responsibility to pay any tax including any tax that may be levied in India on profits made by it in respect of this Agreement.
- 17.1.3 The Contract Price shall not be adjusted for any change in duties, taxes etc. specified in Clause 17.1.2 above, save and except as specified in Clauses 17.8 and 17.13.
- 17.1.4 The Contract Price shall not be adjusted to take account of any unforeseen difficulties or costs, unless otherwise provided for in this Agreement.
- 17.1.5 Unless otherwise specified in this Agreement, the Contract Price covers all the Contractor’s obligations for the Works under this Agreement and all things necessary for the Construction thereof and for the rectification of any Defects in the Project.
- 17.1.6 All payments under this Agreement shall be made in Indian Rupees.

17.2 Advance Payment

- 17.2.1 The Authority shall make an advance payment (the “**Advance Payment**”), equal to 10% (ten percent) of the Contract Price, for mobilization expenses and for acquisition of equipment. The Advance Payment shall carry simple interest at the rate of 8% (eight per cent) per annum and shall be made in two equal installments.
- 17.2.2 The Contractor may apply to the Authority for the 1st (first) installment of the Advance Payment at any time after the Appointed Date/Date of agreement, along with an irrevocable and unconditional guarantee from a Bank for an amount equivalent to 110% (one hundred and ten per cent) of such installment, substantially in the form provided at Annex-III of Schedule-F, to remain effective till the complete and full repayment of such installment and any interest thereon.
- 17.2.3 At any time, after 30 (thirty) days from the Appointed Date/ Date of agreement, the Contractor may apply to the Authority for the 2nd (second) installment of the Advance Payment along with an irrevocable and unconditional guarantee from a Bank for an amount equivalent to 110% (one hundred and ten percent) of such installment, substantially in the form provided at Annex-III of Schedule-F, to remain effective till the complete and full repayment of such installment and any interest thereon.

- 17.2.4 The installments of Advance Payment shall be paid by the Authority to the Contractor within 15 (fifteen) days of the receipt of its respective requests in accordance with the provisions of this Clause-17.2.
- 17.2.5 The Advance Payment shall be recovered through proportionate deductions to be made in the Monthly Payments Certificates issued in accordance with the provisions of Clause-17.5.2. Deductions of Advance Payment shall commence from the Monthly Payment Certificate in which the cumulative interim payments certified shall have reached 20% (twenty percent) of the Contract Price. The total amount recovered in each Monthly Payment Certificate shall not exceed 20% (twenty percent) of the amount due and payable under such Monthly Payment Certificate, which shall include interest on the amount being recovered hereunder. For the avoidance of doubt, the Parties agree that in the event the total payment specified in any Interim Payment Certificate exceeds the limit of 20% (twenty percent) of the Contract Price, the proportion of recovery hereunder shall be restricted to the amount exceeding 20% (twenty per cent) of the Contract Price. By way of illustration, the Parties agree that if the first recovery of say, Rupees 'x' is made after 20 (twenty) months from the date of 1st (first) installment of the Advance Payment, interest on Rupees 'x' shall be due and payable for a period of 20 (twenty) months; and when the next recovery is made in the following month for say, Rupees 'y', interest on Rupees 'y' shall be due and payable for a period of 21 (twenty one) months. The Parties further agree that no payments in excess of 90% (ninety percent) of the Contract Price shall be released to the Contractor until the Advance Payment, including interest there on, has been fully recovered.
- 17.2.6 If the Advance Payment has not been fully repaid prior to Termination under Clause 19.7 or Article 21, as the case may be, the whole of the balance then outstanding shall immediately become due and payable by the Contractor to the Authority. In the event of Termination for Contractor Default, the Advance Payment shall be deemed to carry interest at an annual rate of 8% (eight per cent) of Advance Payment to the date of recovery thereof. For the avoidance of doubt, the aforesaid interest shall be payable on each installment of the Advance Payment, regardless of whether the installment or any part thereof has been repaid to the Authority prior to Termination.

17.3 Procedure for estimating the payment for the Works

- 17.3.1 The Authority shall make interim payments to the Contractor, as certified by the Authority's Engineer.
- 17.3.2 The Contractor shall make its claim for interim payment for the work completed till the end of the month for which the payment is claimed, valued in accordance with Clause 17.3.1, and supported with necessary particulars and documents in accordance with this Agreement.
- 17.3.3 Any reduction in the Contract Price arising out of Change of Scope or the Works withdrawn under Clause 8.3, as the case may be, shall not affect the amounts payable for the items thereof which are not affected by such Change of Scope or withdrawal.

17.4 Monthly Payment Statement for Works

The Contractor shall submit a statement (the "**Monthly Payment Statement**"), in 3 copies, by the

7th(seventh) day of a month to the Authority's Engineer in the form set forth in Schedule, showing the amount calculated in accordance with Clause 17.3 to which the Contractor considers itself entitled for the work progress. The Monthly Payment Statement shall be accompanied with the progress reports and any other supporting documents. In the event that there is no claim for a month in accordance with the provisions of this Clause 17.4, the Contractor shall submit a 'Nil' claim to the Authority's Engineer.

17.5 Monthly Payment for Works

- 17.5.1 Within 15 (fifteen) days of receipt of the Monthly Payment Statement from the Contractor pursuant to Clause 17.4, the Authority's Engineer shall broadly determine the amount due to the Contractor and recommend to release of 70% (seventy per cent) of the amount so determined as part payment against the Monthly Payment Statement, pending issue of the Monthly Payment Certificate by the Authority's Engineer. Within 15 (fifteen) days of the receipt of recommendation of the Authority's Engineer, the Authority shall make an electronic payment thereof directly to the Contractor's bank account.
- 17.5.2 Within 15 (fifteen) days of the receipt of the Monthly Payment Statement referred to in Clause 17.4, the Authority's Engineer shall determine and shall deliver to the Authority and the Contractor an IPC certifying the amount due and payable to the Contractor, after adjusting the payments already released to the Contractor against the said statement. For the avoidance of doubt, the Parties agree that the MPC shall specify all the amounts that have been deducted and the reasons therefore.
- 17.5.3 In cases where there is a difference of opinion as to the value of any stage of work, the opinion of the Authority's Engineer shall prevail and monthly payments shall be made to the Contractor on that basis; provided that the foregoing shall be without prejudice to the Contractor's right to raise a Dispute.
- 17.5.4 The Authority's Engineer may, for reasons to be recorded, withhold from payment:
- a) The estimated value of work or obligation that the Contractor has failed to perform in accordance with this Agreement and in respect of which the Authority's Engineer had notified the Contractor; and
 - b) The estimated cost of rectification of any Works which have not been constructed in accordance with this Agreement.
- 17.5.5 Payment by the Authority hereunder shall be deemed to be provisional and shall not be construed as the Authority's acceptance, approval, consent or satisfaction with the work done.
- 17.5.6 In the event the amounts released by the Authority under Clause 17.5.1 exceed the amount finally determined by the Authority's Engineer pursuant to Clauses 17.5.2 to 17.5.4, the difference thereof shall be accounted for in the next IPC.

17.6 Payment of Damages

- 17.6.1 The Contractor may claim Damages due and payable to it in accordance with the provisions of this Agreement.

17.6.2 The Authority's Engineer shall issue the MPC within 15 (Fifteen) days of the receipt of the claim under Clause 17.6.1, after making adjustments in accordance with the provisions of this Agreement. The Authority shall pay to the Contractor the amount due under such MPC within a period of 15 (fifteen) days from the date of the submission of the claim under this Clause 17.6.

17.7 Time of payment and interest

17.7.1 The Authority shall pay to the Contractor any amount due under any payment certificate issued by the Authority's Engineer in accordance with the provisions of this Agreement as follows:

Payment shall be made no later than 15 (fifteen) days from the date of submission of the Monthly Payment Statement by the Contractor to the Authority's Engineer for certification in accordance with the provisions of Clause 17.4 for an MPC; provided, however, that in the event the MPC is not issued by the Authority's Engineer within the aforesaid period of 30 (thirty) days, the Authority shall pay the amount shown in the Contractor's Running Account (R.A) Bill Statement and any discrepancy therein shall be adjusted in the next payment certificate; and payment shall be made no later than 30 (thirty) days from the date of submission of the Final Payment Certificate for Works along with the discharge submitted to the Authority's Engineer for certification in accordance with the provisions of Clause 17.12.

17.7.2 Deleted.

17.8 Deleted

17.9 Deleted.

17.10 Final Payment Statement

17.10.1 Within 60 (sixty) days of receiving the Completion Certificate under Clause 12.4, the Contractor shall submit to the Authority's Engineer six copies of a final payment statement (the "**Final Payment Statement**"), with supporting documents, in the form prescribed by the Authority's Engineer in respect of:

- a) The summary of Contractor's Running Account (R.A) Bill Statements for Works as submitted in accordance with Clause 17.4;
- b) the amounts received from the Authority against each claim; and
- c) any further sums which the Contractor considers due to it from the Authority.

17.10.2 If the Authority's Engineer disagrees with or cannot verify any part of the Final Payment Statement, the Contractor shall submit such further information as the Authority's Engineer may reasonably require.

17.10.3 The Authority's Engineer shall deliver to the Authority:

- 1) an MPC for those parts of the Final Payment Statement which are not in dispute, along with a list of disputed items which shall then be settled in accordance with the provisions of Article 24; or
- 2) a Final Payment Certificate in accordance with Clause 17.15, if there are no disputed items.

17.10.4 The Authority's Engineer does not prescribe the form referred to in Clause-17.10.1 within 15 (fifteen) days of the date of issue of the Completion Certificate, the Contractor shall submit the statement in such form as it deems fit.

17.11 Discharge

Upon submission of the Final Payment Statement under Clause 17.10, the Contractor shall give to the Authority, with a copy to the Authority's Engineer, a written discharge confirming that the total of the Final Payment Statement represents full and final settlement of all monies due to the Contractor in respect of this Agreement for all the Works arising out of this Agreement, except for any monies due to either Party on account of any Defect. Provided that such discharge shall become effective only after the payment due has been made in accordance with the Final Payment Certificate issued pursuant to Clause-17.12.

17.12 Final Payment Certificate

- 17.12.1 Within 30 (thirty) days after receipt of the Final Payment Statement under Clause 17.10, and the written discharge under Clause 17.11, and there being no disputed items of claim, the Authority's Engineer shall deliver to the Authority, with a copy to the Contractor, a final payment certificate (the "**Final Payment Certificate**") stating the amount which, in the opinion of the Authority's Engineer, is finally due under this Agreement or otherwise. For the avoidance of doubt, before issuing the Final Payment Certificate, the Authority's Engineer shall ascertain from the Authority all amounts previously paid by the Authority, all sums due to the Authority, and the balance, if any, due from the Authority to the Contractor or from the Contractor to the Authority, as the case maybe.
- 17.12.2 The Authority shall, in accordance with the provisions of Clause 17.7, pay to the Contractor the amount which is specified as being finally due in the Final Payment Certificate.

17.13 Change in law

- 17.13.1 If as a result of Change in Law, the Contractor suffers any additional costs in the execution of the Works or in relation to the performance of its other obligations under this Agreement, the Contractor shall, within 15(fifteen) days from the date it becomes reasonably aware of such addition in costs, notify the Authority with a copy to the Authority's Engineer of such additional costs due to Change in Law.
- 17.13.2 If as a result of Change in Law, the Contractor benefits from any reduction in costs for the execution of this Agreement or in accordance with the provisions of this Agreement, either Party shall, within 15 (fifteen) days from the date it becomes reasonably aware of such reduction in costs, notify the other Party with a copy to the Authority's Engineer of such reduction in costs due to Change in Law.
- 17.13.3 The Authority's Engineer shall, within 15 (fifteen) days from the date of receipt of notice from the Contractor or the Authority, as the case may be, determine any addition or reduction to the Contract

Price, as the case may be, due to the Change in Law.

17.14 Correction of Monthly Payment Certificates

The Authority's Engineer may in a Monthly Payment Certificate make any correction or modification in any previous Interim Payment Certificate issued by the Authority's Engineer.

17.15 Authority's claims

If the Authority considers itself to be entitled to any payment from the Contractor under any Clause of this Agreement, it shall give notice and particulars to the Contractor 20 (twenty) days before making the recovery from any amount due to the Contractor, and shall take into consideration the representation, if any, made by the Contractor in this behalf, before making such recovery.

17.16 Bonus for early completion

In the event that the Project Completion Date occurs prior to the Scheduled Completion Date, the Contractor shall be entitled to receive a payment of bonus equivalent to 1% (one per cent) of the contract price per month computed on per day basis, shall be payable to the contractor, subject to a maximum limit of 5% (five percent) of the contract price. Provided, however, that the payment of bonus, if any, shall be made only after the issue of the Completion Certificate. For the avoidance of doubt, the Parties agree that for the purpose of determining the bonus payable hereunder, the Contract Price shall always be deemed to be the amount specified in Clause 17.1.1, and shall exclude any revision thereof for any reason.

ARTICLE 18

INSURANCE

18.1 Insurance for Works

18.1.1 The Contractor shall effect and maintain at its own cost the insurances specified in Schedule-N and as per the requirements under Applicable Laws.

18.1.2 Subject to the provisions of Clause-19.6, the Contractor shall, in accordance with the provisions of this Agreement, be liable to bear the cost of any loss or damage that does not fall within the scope of this Article 18 or cannot be recovered from the insurers.

18.1.3 Save and except as provided in Clause 18.1.4, the Contractor shall fully indemnify, hold harmless and defend the Authority from and against any and all losses, damages, costs, charges and/or claims with respect to:

I. the death of or injury to any person; or

II. the loss of or damage to any property,

that may arise out of or in consequence of any breach by the Contractor of this Agreement during the execution of the Works or the remedying of any Defects therein.

18.1.4 Notwithstanding anything in Clause 18.1.3, the Authority shall fully indemnify the Contractor from and against any and all losses, damages, costs, charges, proceedings and/or claims arising out of or with respect to

a) the use or occupation of land or any part thereof by the Authority;

b) the damage to property which is the unavoidable result of the execution and completion of the Works, or the remedying of any Defects therein, in accordance with this Agreement; and

c) the death of or injury to persons or loss of or damage to property resulting from any act or neglect of the Authority, its agents, servants or other contractors, not being employed by the Contractor.

Provided, however, that in the event of any injury or damage as a result of the contributory negligence of the Contractor, the Authority shall be liable to indemnify the Contractor from and against any and all losses, damages, costs, charges, proceedings and/or claims to the extent as proportionate to the liability of the Authority, its servants or agents or other contractors not associated with the Contractor in such injury or damage.

18.1.5 Without prejudice to the provisions of Clauses-18.1.3 and 18.1.4, the Contractor shall maintain or effect such third party insurances as may be required under Applicable Laws.

18.1.6 The Contractor shall provide to the Authority, within 30 days of the Appointed Date/ Date of agreement, evidence of professional liability insurance maintained by its Design engineer and/or consultants to cover the risk of professional negligence in the design of Works. The professional liability cover shall be for a sum of not less than [3% (three per cent)] of the Contract Price and shall be maintained until the end of the Defects Liability Period.

18.2 Notice to the Authority

No later than 15 (fifteen) days after the date of this Agreement, the Contractor shall by notice furnish to the Authority, in reasonable detail, information in respect of the insurances that it proposes to effect and maintain in accordance with this Article Within 15 (fifteen) days of receipt of such notice, the Authority may require the Contractor to effect and maintain such other insurances as may be necessary pursuant hereto, and in the event of any difference or disagreement relating to any such insurance, the Dispute Resolution Procedure shall apply.

18.3 Evidence of Insurance Cover

18.3.1 All insurances obtained by the Contractor in accordance with this Article-18 shall be maintained with insurers on terms consistent with Good Industry Practice. Within 10(ten) days from the Appointed Date/ Date of agreement, the Contractor shall furnish to the Authority notarized true copies of the certificate(s) of insurance, copies of insurance policies and premium payment receipts in respect of such insurance, and no such insurance shall be cancelled, modified, or allowed to expire or lapse until the expiration of at least 45 (forty-five) days after notice of such proposed cancellation, modification or non-renewal has been delivered by the Contractor to the Authority.

18.3.2 The Contractor shall procure and ensure the adequacy of the insurances at all times in accordance with the provisions of this Agreement.

18.4 Remedy for failure to insure

If the Contractor shall fail to effect and keep in force all insurances for which it is responsible pursuant hereto, the Authority shall have the option to either keep in force any such insurances, and pay such premia and recover the costs thereof from the Contractor, or in the event of computation of a Termination Payment, treat an amount equal to the Insurance Cover as deemed to have been received by the Contractor.

18.5 Waiver of subrogation

All insurance policies in respect of the insurance obtained by the Contractor pursuant to this Article-18 shall include a waiver of any and all rights of subrogation or recovery of the insurers there under against, inter alia, the Authority, and its assigns, successors, undertakings and their subsidiaries, Affiliates, employees, insurers and underwriters, and of any right of the insurers to any set-off or counter claim or any other deduction, whether by attachment or otherwise, in respect of any liability of any such person insured under any such policy or in any way connected with any loss, liability or obligation covered by such policies of insurance.

18.6 Contractor's waiver

The Contractor hereby further releases, assigns and waives any and all rights of subrogation or recovery against, inter alia, the Authority and its assigns, undertakings and their subsidiaries, Affiliates, employees, successors, insurers and underwriters, which the Contractor may otherwise have or acquire in or from or in any way connected with any loss, liability or obligation covered by policies of insurance maintained or required to be maintained by the Contractor pursuant to this Agreement (other than third party liability insurance policies) or because of deductible clauses in or inadequacy of limits of any such policies of insurance.

18.7 Cross liabilities

Any such insurance maintained or effected in pursuance of this Article 18 shall include a cross liability clause such that the insurance shall apply to the Contractor and to the Authority as separately insured.

18.8 Accident or injury to workmen

Notwithstanding anything contained in this Agreement, it is hereby expressly agreed between the Parties that the Authority shall not be liable for or in respect of any damages or compensation payable to any workman or other person in the employment of the Contractor or Sub-contractor, save and except as for death or injury resulting from any act, omission or default of the Authority, its agents or servants. The Contractor shall indemnify and keep indemnified the Authority from and against all such claims, proceedings, damages, costs, charges, and expenses whatsoever in respect of the above save and except for those acts, omissions or defaults for which the Authority shall be liable.

18.9 Insurance against accident to workmen

The Contractor shall effect and maintain during the Agreement such insurances as may be required to insure the Contractor's personnel and any other persons employed by it on the Project from and against any liability incurred in pursuance of this Article-18 Provided that for the purposes of this Clause-18.9, the Contractor's personnel/any person employed by the Contractor shall include the Sub-contractor and its personnel. Provided further that in respect of any persons employed by any Sub-contractor, the Contractor's obligations to insure as aforesaid under this Clause-18.9 Shall be discharged if the Sub-contractor shall have insured against any liability in respect of such persons in such manner that the Authority is indemnified under the policy. The Contractor shall require such Sub-contractor to produce before the Authority, when required, such policy of insurance and the receipt for payment of the current premium within 10 (ten) days of such demand being made by the Authority.

18.9 Application of insurance proceeds

The proceeds from all insurance claims, except for life and injury, shall be applied for any necessary repair, reconstruction, reinstatement, replacement, improvement, delivery or installation of the Project and the provisions of this Agreement in respect of construction of Works shall apply *mutatis mutandis* to the Works undertaken out of the proceeds of insurance.

18.10 Compliance with policy conditions

The Contractor hereby expressly agrees to fully indemnify the Authority from and against all losses and claims arising from the Contractor's failure to comply with conditions imposed by the insurance policies effected in accordance with this Agreement.

Part V

Force Majeure and Termination

ARTICLE 19

FORCE MAJEURE

19.1 Force Majeure

As used in this Agreement, the expression “**Force Majeure**” or “**Force Majeure Event**” shall mean occurrence in India of any or all of Non-Political Event, Indirect Political Event and Political Event, as defined in Clauses 19.2, 19.3 and 19.4 respectively, if it affects the performance by the Party claiming the benefit of Force Majeure (the “**Affected Party**”) of its obligations under this Agreement and which act or event (a) is beyond the reasonable control of the Affected Party, and the Affected Party could not have prevented or overcome by exercise of due diligence and following Good Industry Practice, and (c) has Material Adverse Effect on the Affected Party.

19.2 Non-Political Event

A Non-Political Event shall mean one or more of the following acts or events:

- ☐ act of God, epidemic, extremely adverse weather conditions, lightning, earthquake, landslide, cyclone, flood, volcanic eruption, chemical or radio active contamination or ionizing radiation, fire or explosion (to the extent of contamination or radiation or fire or explosion originating from a source external to the Site);
- ☐ strikes or boycotts (other than those involving the Contractor, Sub-contractors or their respective employees/representatives, or attributable to any act or omission of any of them) interrupting supplies and services to the Project for a continuous period of 24 (twenty-four) hours and an aggregate period exceeding 10 (ten) days in an Accounting Year, and not being an Indirect Political Event set forth in Clause 19.3;
- ☐ any failure or delay of a Sub-contractor but only to the extent caused by another Non-Political Event;
- ☐ any judgment or order of any court of competent jurisdiction or statutory authority made against the Contractor in any proceedings for reasons other than (i) failure of the Contractor to comply with any Applicable Law or Applicable Permit, or (ii) on account of breach of any Applicable Law or Applicable Permit or of any contract, or (iii) enforcement of this Agreement, or (iv) exercise of any of its rights under this Agreement by the Authority; or (v) breach of its obligations by the Contractor under its sub-contracts;
- ☐ the discovery of geological conditions, toxic contamination or archaeological remains on the Site that could not reasonably have been expected to be discovered through a site inspection; or
- ☐ any event or circumstances of a nature analogous to any of the foregoing.

19.3 Indirect Political Event

An Indirect Political Event shall mean one or more of the following acts or events:

- a. An act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, riot, insurrection, terrorist or military action, civil commotion or politically

motivated sabotage;

- b. industry-wide or State-wide strikes or industrial action for a continuous period of 24 (twenty-four) hours and exceeding an aggregate period of 10 (ten) days in an Accounting Year;
- c. any civil commotion, boycott or political agitation which prevents construction of the Project by the Contractor for an aggregate period exceeding 10 (ten) days in an Accounting Year;
- d. failure of the Authority to permit the Contractor to continue with its Construction Works, with or without modifications, in the event of stoppage of such work after discovery of any geological or archaeological finds;
- e. any failure or delay of a Sub-contractor to the extent caused by any Indirect Political Event;
- f. any Indirect Political Event that causes a Non-Political Event; or
- g. any event or circumstances of a nature analogous to any of the foregoing.

19.4 Political Event

A Political Event shall mean one or more of the following acts or events by or on account of any Government Instrumentality:

- d) Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Clause-17.13;
- e) compulsory acquisition in national interest or expropriation of any Project Assets or rights of the Contractor or of the Sub-contractors;
- f) unlawful or unauthorized or without jurisdiction revocation of, or refusal to renew or grant without valid cause, any clearance, license, permit, authorization, no objection certificate, consent, approval or exemption required by the Contractor or any of the Sub-contractors to perform their respective obligations under this Agreement; provided that such delay, modification, denial, refusal or revocation did not result from the Contractor's or any Sub-contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such clearance, license, authorization, no objection certificate, exemption, consent, approval or permit;
- g) any failure or delay of a Sub-contractor but only to the extent caused by another Political Event; or
- h) any event or circumstances of a nature analogous to any of the foregoing.

19.5 Duty to report Force Majeure Event

19.5.1 Upon occurrence of a Force Majeure Event, the Affected Party shall by notice report such occurrence to the other Party forthwith. Any notice pursuant hereto shall include full particulars of:

- i) the nature and extent of each Force Majeure Event which is the subject of any claim for relief under this Article 19 with evidence in support thereof;
- j) the estimated duration and the effect or probable effect which such Force Majeure Event is having or will have on the Affected Party's performance of its obligations under this Agreement;
- k) the measures which the Affected Party is taking or proposes to take for alleviating the impact of

such Force Majeure Event; and

- l) any other information relevant to the Affected Party's claim.

19.5.2 The Affected Party shall not be entitled to any relief for or in respect of a Force Majeure Event unless it shall have notified the other Party of the occurrence of the Force Majeure Event as soon as reasonably practicable, and in any event no later than 10 (ten) days after the Affected Party knew, or ought reasonably to have known, of its occurrence, and shall have given particulars of the probable material effect that the Force Majeure Event is likely to have on the performance of its obligations under this Agreement.

19.5.3 For so long as the Affected Party continues to claim to be affected by such Force Majeure Event, it shall provide the other Party with regular (and not less than weekly) reports containing information as required by Clause-19.5.1, and such other information as the other Party may reasonably request the Affected Party to provide.

19.6 Effect of Force Majeure Event on the Agreement

19.6.1 Upon the occurrence of any Force Majeure

- a) prior to the Appointed Date/ Date of agreement, both Parties shall bear their respective Force Majeure costs.
- b) after the Appointed Date/ Date of agreement, the costs incurred and attributable to such event and directly relating to this Agreement (the "**Force Majeure costs**") shall be allocated and paid as follows:
- c) upon occurrence of a Non-Political Event, the Parties shall bear their respective Force Majeure costs and neither Party shall be required to pay to the other Party any costs thereof;
- d) upon occurrence of an Indirect Political Event, all Force Majeure costs attributable to such Indirect Political Event, and not exceeding the Insurance Cover for such Indirect Political Event, shall be borne by the Contractor, and to the extent Force Majeure costs exceed such Insurance Cover, one half of such excess amount shall be reimbursed by the Authority to the Contractor for the Force Majeure events; and
- e) upon occurrence of a Political Event, all Force Majeure costs attributable to such Political Event shall be reimbursed by the Authority to the Contractor.

For the avoidance of doubt, Force Majeure costs may include costs directly attributable to the Force Majeure Event, but shall not include debt repayment obligations, if any, of the Contractor.

19.6.2 Save and except as expressly provided in this Article-19, neither Party shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event or exercise of any right pursuant hereto.

19.6.3 Upon the occurrence of any Force Majeure Event during the Construction Period, the Project

Completion Schedule for and in respect of the affected Works shall be extended on a day for day basis for such period as performance of the Contractor's obligations is affected on account of the Force Majeure Event or its subsisting effects, as may be determined by the Authority's Engineer.

19.6.4 Force Majeure costs for any event which results in any off setting compensation being payable to the Contractor by or on behalf of its Sub-contractors shall be reduced by such amounts that are payable to the Contractor by its Sub-contractors.

19.7 Termination Notice for Force Majeure Event

If a Force Majeure Event subsists for a period of 60 (sixty) days or more within a continuous period of 120 (one hundred and twenty) days, either Party may in its discretion terminate this Agreement by issuing a Termination Notice to the other Party without being liable in any manner whatsoever, save as provided in this Article 19, and upon issue of such Termination Notice, this Agreement shall, notwithstanding anything to the contrary contained herein, stand terminated forthwith; provided that before issuing such Termination Notice, the Party intending to issue the Termination Notice shall inform the other Party of such intention and grant 15 (fifteen) days' time to make a representation, and may after the expiry of such 15 (fifteen) days period, whether or not it is in receipt of such representation, in its sole discretion issue the Termination Notice.

19.8 Termination Payment for Force Majeure Event

19.8.1 In the event of this Agreement being terminated on account of a Non-Political Event, the Termination Payment shall be an amount equal to the sum payable under Clause 21.5.

19.8.2 If Termination is on account of an Indirect Political Event, the Termination Payment shall include:

- any sums due and payable under Clause 21.5; and
- the reasonable cost, as determined by the Authority's Engineer, of the Plant and Materials procured by the Contractor and transferred to the Authority for use in Construction, only if such Plant and Materials are in conformity with the Specifications and Standards;

19.8.3 If Termination is on account of a Political Event, the Authority shall make a Termination Payment to the Contractor in an amount that would be payable under Clause 21.6.2 as if it were an Authority Default.

19.9 Dispute resolution

In the event that the Parties are unable to agree in good faith about the occurrence or existence of a Force Majeure Event, such Dispute shall be finally settled in accordance with the Dispute Resolution Procedure; provided that the burden of proof as to the occurrence or existence of such Force Majeure Event shall be upon the Party claiming relief and/or excuse on account of such Force Majeure Event.

19.10 Excuse from performance of obligations

If the Affected Party is rendered wholly or partially unable to perform its obligations under this Agreement because of a Force Majeure Event, it shall be excused from performance of such of its obligations to the extent it is unable to perform on account of such Force Majeure Event; provided that:

- ii the suspension of performance shall be of no greater scope and of no longer duration than is reasonably required by the Force Majeure Event;
- iii the Affected Party shall make all reasonable efforts to mitigate or limit damage to the other Party arising out of or as a result of the existence or occurrence of such Force Majeure Event and to cure the same with due diligence; and
- iv when the Affected Party is able to resume performance of its obligations under this Agreement, it shall give to the other Party notice to that effect and shall promptly resume performance of its obligations hereunder.

ARTICLE 20

SUSPENSION OF CONTRACTOR'S RIGHTS

20.1 Suspension upon Contractor Default

Upon occurrence of a Contractor Default, the Authority shall be entitled, without prejudice to its other rights and remedies under this Agreement including its rights of Termination hereunder, to (a) suspend carrying out of the Works or any part thereof, and (b) carry out such Works itself or authorize any other person to exercise or perform the same on its behalf during such suspension (the “**Suspension**”). Suspension hereunder shall be effective forthwith upon issue of notice by the Authority to the Contractor and may extend up to a period not exceeding 90 (ninety) days from the date of issue of such notice.

20.2 Authority to act on behalf of Contractor

During the period of Suspension hereunder, all rights and liabilities vested in the Contractor in accordance with the provisions of this Agreement shall continue to vest in the Contractor and all things done or actions taken, including expenditure incurred by the Authority for discharging the obligations of the Contractor under and in accordance with this Agreement shall be deemed to have been done or taken for and on behalf of the Contractor and the Contractor undertakes to indemnify the Authority for all costs incurred during such period. The Contractor hereby licenses and sub-licenses respectively, the Authority or any other person authorized by it under Clause 20.1 to use during Suspension, all Intellectual Property belonging to or licensed to the Contractor with respect to the Project and its design, engineering, construction, and which is used or created by the Contractor in performing its obligations under the Agreement.

20.3 Revocation of Suspension

20.3.1 In the event that the Authority shall have rectified or removed the cause of Suspension within a period not exceeding 60 (sixty) days from the date of Suspension, it shall revoke the Suspension forthwith and restore all rights of the Contractor under this Agreement. For the avoidance of doubt, the Parties expressly agree that the Authority may, in its discretion, revoke the Suspension at any time, whether or not the cause of Suspension has been rectified or removed hereunder.

20.3.2 Upon the Contractor having cured the Contractor Default within a period not exceeding 60 (sixty) days from the date of Suspension, the Authority shall revoke the Suspension forthwith and restore all rights of the Contractor under this Agreement.

20.4 Termination

20.4.1 At any time during the period of Suspension under this Article 20, the Contractor may by notice require the Authority to revoke the Suspension and issue a Termination Notice. The Authority shall, within 15 (fifteen) days of receipt of such notice, terminate this Agreement under and in accordance with Article 21 as if it is a Contractor Default under Clause-21.1.

20.4.2 Notwithstanding anything to the contrary contained in this Agreement, in the event that Suspension is not revoked within 90 (ninety) days from the date of Suspension hereunder, the Agreement shall, upon expiry of the aforesaid period, be deemed to have been terminated by mutual agreement of the Parties and all the provisions of this Agreement shall apply, *mutatis mutandis*, to such Termination as if a Termination Notice had been issued by the Authority upon occurrence of a Contractor Default.

ARTICLE 21
TERMINATION

21.1 Termination for Contractor Default

21.1.1 Save as otherwise provided in this Agreement, in the event that any of the defaults specified below shall have occurred, and the Contractor fails to cure the default within the Cure Period set forth below, or where no Cure Period is specified, then within a Cure Period of 60 (sixty) days, the Contractor shall be deemed to be in default of this Agreement (the “**Contractor Default**”), unless the default has occurred as a result of any breach of this Agreement by the Authority or due to Force Majeure. The defaults referred to herein shall include the following:

- a) The Contractor fails to provide, extend or replenish, as the case may be, the Performance Security in accordance with this Agreement;
- b) Subsequent to the replenishment or furnishing of fresh Performance Security in accordance with Clause-7.3, the Contractor fails to cure, within a Cure Period of 60 (sixty) days, the Contractor Default for which the whole or part of the Performance Security was appropriated;
- c) the Contractor does not achieve the latest outstanding Project Milestone due in accordance with the provisions of Schedule-I, subject to any Time Extension, and continues to be in default for 45 (forty-five) days;
- d) the Contractor abandons or manifests intention to abandon the construction of the Project without the prior written consent of the Authority;
- e) the Contractor fails to proceed with the Works in accordance with the provisions of Clause 10.1 or stops Works for 30 (thirty) days without reflecting the same in the current programme and such stoppage has not been authorised by the Authority’s Engineer;
- f) the Project Completion Date does not occur within the period specified in Schedule-I for the Scheduled Completion Date, or any extension thereof;
- g) failure to complete the Punch List items within the periods stipulated there for in Clause12.3;
- h) the Contractor fails to rectify any Defect, the non-rectification of which shall have a Material Adverse Effect on the Project, within the time specified in this Agreement or as directed by the Authority’s Engineer;
- i) the Contractor subcontracts the Works or any part thereof in violation of this Agreement or assigns any part of the Works without the prior approval of the Authority;
- j) the Contractor creates any Encumbrance in breach of this Agreement;
- k) an execution levied on any of the assets of the Contractor has caused a Material Adverse Effect;

- l) the Contractor is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the Contractor or for the whole or material part of its assets that has a material bearing on the Project;
- m) the Contractor has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the Authority, a Material Adverse Effect;
- n) a resolution for winding up of the Contractor is passed, or any petition for winding up of the Contractor is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 (ninety) days of the date thereof or the Contractor is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction; provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of the Contractor are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of the Contractor under this Agreement; and provided that:
 - o) the amalgamated or reconstructed entity has the capability and experience necessary for the performance of its obligations under this Agreement; and
 - p) the amalgamated or reconstructed entity has the financial standing to perform its obligations under this Agreement and has a credit worthiness at least as good as that of the Contractor as at the Appointed Date/ Date of agreement;
 - q) any representation or warranty of the Contractor herein contained which is, as of the date hereof, found to be materially false or the Contractor is at any time hereafter found to be in breach thereof;
- r) the Contractor submits to the Authority any statement, notice or other document, in written or electronic form, which has a material effect on the Authority's rights, obligations or interests and which is false in material particulars;
- s) the Contractor has failed to fulfill any obligation, for which failure Termination has been specified in this Agreement; or
- t) the Contractor has failed to make any payment to the Authority within the period specified in this Agreement;
- u) the Concessionaire issues a Termination Notice in violation of this Agreement; or
- v) the Contractor commits a default in complying with any other provision of this Agreement if such a default causes a Material Adverse Effect on the Project or on the Authority.

21.1.2 Without prejudice to any other rights or remedies which the Authority may have under this Agreement, upon occurrence of a Contractor Default, the Authority shall be entitled to terminate this Agreement by issuing a Termination Notice to the Contractor; provided that before issuing the Termination Notice, the Authority shall by a notice inform the Contractor of its intention to issue such Termination Notice and grant 15(fifteen) days to the Contractor to make a representation, and

may after the expiry of such 15 (fifteen) days, whether or not it is in receipt of such representation, issue the Termination Notice.

- 21.1.3 After termination of this Agreement for Contractor Default, the Authority may complete the Works and/or procure its completion through any other entity. The Authority and such entity may, for this purpose, use any Materials, Plant and equipment, Contractor's documents and other design documents made by or on behalf of the Contractor.

21.2 Termination for Authority Default

- 21.2.1 In the event that any of the defaults specified below shall have occurred, and the Authority fails to cure such default within a Cure Period of 60 (sixty) days or such longer period as has been expressly provided in this Agreement, the Authority shall be deemed to be in default of this Agreement (the "**Authority Default**") unless the default has occurred as a result of any breach of this Agreement by the Contractor or due to Force Majeure. The defaults referred to herein shall include the following:

- a) The Authority commits a material default in complying with any of the provisions of this Agreement and such default has a Material Adverse Effect on the Contractor;
- b) The Authority has failed to make payment of any amount due and payable to the Contractor within the period specified in this Agreement;
- c) The Authority has failed to provide, within a period of 180 (one hundred and eighty) days from the Appointed Date/ Date of agreement, the environmental clearances and forest clearances required for construction of the Project;
- d) The Authority repudiates this Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by this Agreement; or
- e) The Authority's Engineer fails to issue the relevant Interim Payment Certificate within 60 (sixty) days after receiving a statement and supporting documents.

- 21.2.2 Without prejudice to any other right or remedy which the Contractor may have under this Agreement, upon occurrence of an Authority Default, the Contractor shall be entitled to terminate this Agreement by issuing a Termination Notice to the Authority; provided that before issuing the Termination Notice, the Contractor shall by a notice inform the Authority of its intention to issue the Termination Notice and grant 15 (fifteen) days to the Authority to make a representation, and may after the expiry of such 15(fifteen) days, whether or not it is in receipt of such representation, issue the Termination Notice.

21.3 Termination for Authority's convenience

Notwithstanding anything herein above, the Authority may terminate this Agreement for its own convenience. The termination shall take effect 30 (thirty) days from the date of notice hereunder and shall be deemed to be termination on account of Authority Default.

21.4 Requirements after Termination

Upon Termination of this Agreement in accordance with the provisions of this Article 21, the Contractor shall comply with and conform to the following:

- a) deliver to the Authority all Plant and Materials which shall have become the property of the Authority under this Article 21;
- b) deliver all relevant records, reports, Intellectual Property and other licenses pertaining to the Works, other design documents and in case of Termination occurring after the Provisional Certificate has been issued, the “**as built**” Drawings for the Works;
- c) transfer and/or deliver all Applicable Permits to the Authority to the extent permissible under Applicable Laws; and
- d) Vacate the Site within 15 (fifteen) days.

21.5 Valuation of Unpaid Works

21.5.1 Within a period of 45 (forty-five) days after Termination under Clause 21.1, 21.2 or 21.3, as the case may be, has taken effect, the Authority’s Engineer shall proceed in accordance with Clause 16.5 to determine as follows the valuation of unpaid Works (the “**Valuation of Unpaid Works**”):

- i. value of the completed stage of the Works, less payments already made; and
- ii. Reasonable value of the partially completed stages of works as on the date of Termination, only if such works conform with the Specifications and Standards.

and shall adjust from the sum thereof (i) any other amounts payable or recoverable, as the case may be, in accordance with the provisions of this Agreement; and (ii) all taxes due to be deducted at source.

21.5.2 The Valuation of Unpaid Works shall be communicated to the Authority, with a copy to the Contractor, within a period of 45 (forty five) days from the date of Termination.

21.6 Termination Payment

21.6.1 Upon Termination on account of Contractor Default under Clause 21.1, the Authority shall:

- i. Encash and appropriate the Performance Security or Retention Money, whichever is more, and in the event the Contractor has failed to replenish or extend the Performance Security, claim the amount stipulated in Clause 7.1.1, as agreed pre-determined Damages, if any;
 - ii. encash and appropriate the bank guarantee, if any, to the extent of the outstanding Advance Payment and interest thereon; and
 - iii. pay to the Contractor, by way of Termination Payment, an amount equivalent to the Valuation of Unpaid Works after adjusting any other sums payable or recoverable, as the case may be, in accordance with the provisions of this Agreement, and shall adjust from the sum thereof
- (i) any other amounts payable or recoverable, as the case may be, in accordance with the provisions of this Agreement, and

(ii) All taxes due to be deducted at source.

21.6.2 Upon Termination on account of an Authority Default under Clause 21.2 or for Authority's convenience under Clause 21.3, the Authority shall:

- a) return the Performance Security and Retention Money forthwith;
- b) Encash and appropriate the bank guarantee, if any, to the extent of the outstanding Advance Payment, including interest thereon; and
- c) pay to the Contractor, by way of Termination Payment, an amount equal to:
- d) Valuation of Unpaid Works;
- e) the reasonable cost, as determined by the Authority's Engineer, of the Plant and Materials procured by the Contractor and transferred to the Authority for its use, only if such Plant and Materials are in conformity with the Specifications and Standards;
- f) the reasonable cost of temporary works, as determined by the Authority's Engineer; and
- g) 10% (ten percent) of the cost of the Works that are not commenced or not completed, and shall adjust from the sum thereof (i) any other amounts payable or recoverable, as the case may be, in accordance with the provisions of this Agreement, and (ii) all taxes due to be deducted at source.

21.6.3 Termination Payment shall become due and payable to the Contractor within 30 (thirty) days of a demand being made by the Contractor to the Authority with the necessary particulars, after the Valuation of Unpaid Works has been communicated by the Authority's Engineer. For the avoidance of doubt, it is expressly agreed that Termination Payment shall constitute full discharge by the Authority of its payment obligations in respect thereof hereunder.

21.6.4 The Contractor expressly agrees that Termination Payment under this Article 21 shall constitute a full and final settlement of all claims of the Contractor on account of Termination of this Agreement and that it shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

21.7 Other rights and obligations of the Parties

Upon Termination for any reason whatsoever

- a) the property and ownership in all Materials, Plant and Works and the Project shall, as between the Contractor and the Authority, vest in the Authority in whole, free from any and all Encumbrances; provided that the foregoing shall be without prejudice to Clause 21.6;
- b) the risk of loss or damage to any Materials, Plant or Works and the care and custody thereof shall pass from the Contractor to the Authority; and
- c) the Authority shall be entitled to restrain the Contractor and any person claiming through or under

the Agreement from entering upon the Site or any part of the Project except for taking possession of materials, stores, implements, construction plants and equipment of the Contractor, which have not been vested in the Authority in accordance with the provisions of this Agreement.

21.8 Survival of rights

Notwithstanding anything to the contrary contained in this Agreement any Termination pursuant to the provisions of this Agreement shall be without prejudice to the accrued rights of either Party including its right to claim and recover money damages, insurance proceeds, security deposits, and other rights and remedies, which it may have in law or Agreement. All rights and obligations of either Party under this Agreement, including Termination Payments, shall survive the Termination to the extent such survival is necessary for giving effect to such rights and obligations.

Part VI

Other Provisions

ARTICLE 22

ASSIGNMENT AND CHARGES

22.1 Restrictions on assignment and charges

This Agreement shall not be assigned by the Contractor to any person, save and except with the prior consent in writing of the Authority, which consent the Authority shall be entitled to decline without assigning any reason.

22.2 Hypothecation of Materials or Plant

Notwithstanding the provisions of Clause 22.1, the Contractor may pledge or hypothecate to its lenders, any Materials or Plant prior to their incorporation in the Works. Further, the Contractor may, by written notice to the Authority, assign its right to receive payments under this Agreement either absolutely or by way of charge, to any person providing financing to the Contractor in connection with the performance of the Contractor's obligations under this Agreement. The Contractor acknowledges that any such assignment by the Contractor shall not relieve the Contractor from any obligations, duty or responsibility under this Agreement. For the avoidance of doubt, all Materials and Plants shall, upon their incorporation into Works, be free from any and all Encumbrances without the Authority being required to make any payment to any person on account of any costs, compensation, expenses and charges for such Materials, Plants and Works.

ARTICLE 23

LIABILITY AND INDEMNITY

23.1 General indemnity

The Contractor shall indemnify, defend, save and hold harmless the Authority and its officers, servants, agents, Government Instrumentalities and Government owned and/or controlled entities/enterprises, (the “**Authority Indemnified Persons**”) against any and all suits, proceedings, actions, demands and third party claims for any loss, damage, cost and expense of whatever kind and nature, whether arising out of any breach by the Contractor of any of its obligations under this Agreement or from any negligence under the Agreement, including any errors or deficiencies in the design documents, or tort or on any other ground whatsoever, except to the extent that any such suits, proceedings, actions, demands and claims have arisen due to any negligent act or omission, or breach or default of this Agreement on the part of the Authority Indemnified Persons.

23.2 Indemnity by the Contractor

23.2.1 Without limiting the generality of Clause 23.1, the Contractor shall fully indemnify, hold harmless and defend the Authority and the Authority Indemnified Persons from and against any and all loss and/or damages arising out of or with respect to:

- a) failure of the Contractor to comply with Applicable Laws and Applicable Permits;
- b) payment of taxes required to be made by the Contractor in respect of the income or other taxes of the Sub-contractors, suppliers and representatives; or
- c) non-payment of amounts due as a result of Materials or services furnished to the Contractor or any of its Sub-contractors which are payable by the Contractor or any of its Sub-contractors.

23.2.2 Without limiting the generality of the provisions of this Article 23, the Contractor shall fully indemnify, hold harmless and defend the Authority Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the Authority Indemnified Persons may here after suffer, or pay by reason of any demands, claims, suits or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other Intellectual Property, proprietary or confidentiality rights with respect to any materials, information, design or process used by the Contractor or by the Sub- contractors in performing the Contractor’s obligations or in any way incorporated in or related to the Project. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, the Contractor shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the revocation or suspension of the injunction or restraint order. If, in any such suit, action, claim or proceedings, the Project, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, the Contractor shall promptly make every reasonable effort to secure for the Authority a license, at no cost to the Authority, authorizing continued use of the infringing work. If the Contractor is unable to secure such license within a reasonable time, the Contractor shall, at its own expense, and without impairing the Specifications and Standards, either replace the affected work, or part, or process thereof with non- infringing work or part or process, or modify the same so that it becomes non- infringing.

23.3 Notice and contest of claims

In the event that either Party receives a claim or demand from a third party in respect of which it is entitled to the benefit of an indemnity under this Agreement (the “**Indemnified Party**”) it shall notify the other Party (the “**Indemnifying Party**”) within 15(fifteen) days of receipt of the claim or demand and shall not settle or pay the claim without the prior approval of the Indemnifying Party, which approval shall not be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim or demand, it may conduct the proceedings in the name of the Indemnified Party, subject to the Indemnified Party being secured against any costs involved, to its reasonable satisfaction.

23.4 Defense of claims

- 23.4.1 The Indemnified Party shall have the right, but not the obligation, to contest, defend and litigate any claim, action, suit or proceeding by any third party alleged or asserted against such Party in respect of, resulting from, related to or arising out of any matter for which it is entitled to be indemnified hereunder, and reasonable costs and expenses thereof shall be indemnified by the Indemnifying Party. If the Indemnifying Party acknowledges in writing its obligation to indemnify the Indemnified Party in respect of loss to the full extent provided by this Agreement, the Indemnifying Party shall be entitled, at its option, to assume and control the defense of such claim, action, suit or proceeding, liabilities, payments and obligations at its expense and through the counsel of its choice; provided it gives prompt notice of its intention to do so to the Indemnified Party and reimburses the Indemnified Party for the reasonable cost and expenses incurred by the Indemnified Party prior to the assumption by the Indemnifying Party of such defense. The Indemnifying Party shall not be entitled to settle or compromise any claim, demand, action, suit or proceeding without the prior written consent of the Indemnified Party, unless the Indemnifying Party provides such security to the Indemnified Party as shall be reasonably required by the Indemnified Party to secure the loss to be indemnified hereunder to the extent so compromised or settled.
- 23.4.2 If the Indemnifying Party has exercised its rights under Clause 23.3, the Indemnified Party shall not be entitled to settle or compromise any claim, action, suit or proceeding without the prior written consent of the Indemnifying Party (which consent shall not be unreasonably withheld or delayed).
- 23.4.3 If the Indemnifying Party exercises its rights under Clause 23.3, the Indemnified Party shall nevertheless have the right to employ its own counsel, and such counsel may participate in such action, but the fees and expenses of such counsel shall be the expense of the Indemnified Party, when and as incurred, unless:
- d) the employment of counsel by such party has been authorised in writing by the Indemnifying Party;
 - e) the Indemnified Party shall have reasonably concluded that there may be a conflict of interest between the Indemnifying Party and the Indemnified Party in the conduct of the defense of such action;
 - f) the Indemnifying Party shall not, in fact, have employed independent counsel reasonably satisfactory to the Indemnified Party, to assume the defense of such action and shall have been so

notified by the Indemnified Party; or

- g) the Indemnified Party shall have reasonably concluded and specifically notified the Indemnifying Party either:
 - 1) that there may be specific defenses available to it which are different from or additional to those available to the Indemnifying Party; or
 - 2) that such claim, action, suit or proceeding involves or could have a material adverse effect upon it beyond the scope of this Agreement:

Provided that if Sub-clauses (b), (c) or (d) of this Clause 23.4.3 shall be applicable, the counsel for the Indemnified Party shall have the right to direct the defense of such claim, demand, action, suit or proceeding on behalf of the Indemnified Party and the reasonable fees and disbursements of such counsel shall constitute legal or other expenses hereunder.

23.5 No consequential claims

Notwithstanding anything to the contrary contained in this Article 23, the indemnities herein provided shall not include any claim or recovery in respect of any cost, expense, loss or damage of an indirect, incidental or consequential nature, including loss of profit, except as expressly provided in this Agreement.

23.6 Survival on Termination

The provisions of this Article 23 shall survive Termination.

ARTICLE 24

DISPUTE RESOLUTION

24.1 Dispute resolution

- 24.1.1 Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the “**Dispute**”) shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure set forth in Clause 24.2.
- 24.1.2 The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of this Agreement promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non-privileged records, information and data pertaining to any Dispute.

24.2 Conciliation

In the event of any Dispute between the Parties, either Party may call upon an officer of the Authority, not below the rank of Secretary to the Government or Chief Engineer, as the case may be, or such other person as the Parties may mutually agree upon (the “**Conciliator**”) to conciliate and assist the Parties in arriving at an amicable settlement thereof. Failing conciliation by the Conciliator or without the intervention of the Conciliator, either Party may require such Dispute to be referred to the Secretary or Chief Engineer of the Authority and the Chairman of the Board of Directors of the Contractor for amicable settlement, and upon such reference, the said persons shall meet no later than 7 (seven) business days from the date of reference to discuss and attempt to amicably resolve the Dispute. If such meeting does not take place within the 7 (seven) business day period or the Dispute is not amicably settled within 15 (fifteen) business days of the meeting or the Dispute is not resolved as evidenced by the signing of written terms of settlement within 30 (thirty) business days of the notice in writing referred to in Clause 24.1.1 or such longer period as may be mutually agreed by the Parties, either Party may refer the Dispute to arbitration in accordance with the provisions of Clause 24.3.

24.3 Arbitration

- 24.3.1 Any Dispute which is not resolved amicably by conciliation, as provided in Clause 24.2, shall be finally decided by reference to arbitration by an arbitral tribunal constituted in accordance with Clause 24.3.2. Such arbitration shall be held in accordance with the Rules of Arbitration of the International Centre for Alternative Dispute Resolution, New Delhi or Construction Industry Arbitration Council (CIAC), New Delhi (the “**Rules**”), or such other rules as may be mutually agreed by the Parties, and shall be subject to the provisions of the Arbitration and Conciliation Act, 1996. The place of such arbitration shall be Bhagalpur, and the language of arbitration proceedings shall be English.

The Arbitration shall be in Institutional mode & would not be adhoc, in any case, and the online mode of dispute resolution may also be resorted to as per the latest notification of Ministry of Law & Justice, Government of India.

- 24.3.2 There shall be an arbitral tribunal comprising three arbitrators, of whom each Party shall select one, and the third arbitrator shall be appointed by the two arbitrators so selected and in the event of disagreement between the two arbitrators, the appointment shall be made in accordance with the Rules.
- 24.3.3 Wherever possible or required, On-line dispute resolution mechanism as pre scribed By Ministry of Law vide their notification-
http://doj.gov.in/sites/default/files/List%20of%20firm%20with%20profile-17_1.pdf, with subsequent amendments if any, is to be resorted to, in place of the traditional in-situ arbitration procedures. The decision on which system of procedures is to be followed (viz. traditional or on-line) would rest with the Contracting Parties at the time of signing the contract, who may if they so decide, permit the decision to be made by Third Arbitrator (appointed by the two nominated arbitrators).
- 24.3.4 The arbitral tribunal shall make a reasoned award (the “**Award**”). Any award made in any arbitration held pursuant to this Article 24 shall be final and binding on the Parties as from the date it is made, and the Contractor and the Authority agree and undertake to carry out such Award without delay.
- 24.3.5 The Contractor and the Authority agree that an Award may be enforced against the Contractor and/or the Authority, as the case may be, and their respective assets wherever situated.
- 24.3.6 This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the Award in any arbitration proceedings hereunder.
- 24.3.7 In the event the Party against whom the Award has been granted challenges the Award for any reason in a court of law, its shall make an interim payment to the other Party for an amount equal to 75% (seventy-five per cent) of the Award, pending final settlement of the Dispute. The aforesaid amount shall be paid forthwith upon furnishing an irrevocable Bank Guarantee for a sum equal to the aforesaid amount. Upon final settlement of the dispute, the aforesaid interim payment shall be adjusted and any balance amount due to be paid or returned, as the case may be, shall be paid or returned with interest calculated at the rate of 10% (ten percent)per annum from the date of interim payment to the date of final settlement of such balance.

24.4 Adjudication by a tribunal

In the event of constitution of a statutory tribunal or other forum with powers to adjudicate upon disputes between the Contractor and the Authority, all Disputes arising after such constitution shall, instead of reference to arbitration under Clause 24.3, be adjudicated upon by such tribunal or other forum in accordance with Applicable Laws and all references to Dispute Resolution Procedure shall be construed accordingly.

ARTICLE 25

MISCELLANEOUS

25.1 Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts in the State shall have exclusive jurisdiction over matters arising out of or relating to this Agreement.

25.2 Waiver of immunity

Each Party unconditionally and irrevocably:

1. agrees that the execution, delivery and performance by it of this Agreement constitute commercial acts done and performed for commercial purpose;
2. agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Agreement or any transaction contemplated by this Agreement, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of the Party with respect to its assets;
3. waives any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and
4. consents generally in respect of the enforcement of any judgement or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgement that may be made or given in connection therewith).

25.3 Deleted.

25.4 Waiver

25.4.1 Waiver, including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:

- a) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;
- b) shall not be effective unless it is in writing and executed by a duly authorized representative of the Party; and
- c) Shall not affect the validity or enforceability of this Agreement in any manner.
- d) Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

25.5 Liability for review of Documents

Except to the extent expressly provided in this Agreement:

- a) no review, comment or approval by the Authority or the Authority's

Engineer of any Document submitted by the Contractor nor any observation or inspection of the construction of the Project nor the failure to review, approve, comment, observe or inspect hereunder shall relieve or absolve the Contractor from its obligations, duties and liabilities under this Agreement, Applicable Laws and Applicable Permits; and

- b) The Authority shall not be liable to the Contractor by reason of any review, comment, approval, observation or inspection referred to in Sub-clause (a) above

25.6 Exclusion of implied warranties etc.

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties or any representation by either Party not contained in a binding legal agreement executed by both Parties.

25.7 Survival

25.7.1 Termination shall:

- a) Not relieve the Contractor or the Authority, as the case may be, of any obligations hereunder which expressly or by implication survive Termination hereof; and
- b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of, or caused by, acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.

25.7.2 All obligations surviving Termination shall only survive for a period of 3 (three) years following the date of such Termination.

25.8 Entire Agreement

This Agreement and the Schedules together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn. For the avoidance of doubt, the Parties hereto agree that any obligations of the Contractor arising from the Request for Qualification or Request for Proposals and bid submissions, as the case may be, shall be deemed to form part of this Agreement and treated as such.

25.9 Severability

If for any reason whatsoever, any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to

be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to the Dispute Resolution Procedure set forth under this Agreement or otherwise.

25.10 No partnership

This Agreement shall not be interpreted or construed to create an association, joint venture or partnership between the Parties, or to impose any partnership obligation or liability upon either Party, and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

25.11 Third parties

This Agreement is intended solely for the benefit of the Parties, and their respective successors and permitted assigns, and nothing in this Agreement shall be construed to create any duty to, standard of care with reference to, or any liability to, any person not a Party to this Agreement.

25.12 Successors and assigns

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns.

25.13 Notices

Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated by this Agreement shall be in writing and shall:

- a) in the case of the Contractor, be given by facsimile or e-mail and by letter delivered by hand to the address given and marked for attention of the person set out below or to such other person as the Contractor may from time to time designate by notice to the Authority; provided that notices or other communications to be given to an address outside the city specified in Sub-clause (b) below may, if they are subsequently confirmed by sending a copy thereof by registered acknowledgement due, air mail or by courier, be sent by facsimile or e-mail to the person as the Contractor may from time to time designate by notice to the Authority;

Attention:

{ Designation:

Address:

Fax No:

Email: }

- b) in the case of the Authority, be given by facsimile or e-mail and by letter delivered by hand and be addressed to the person named below with a copy delivered to the Authority Representative or such other person as the Authority may from time to time designate by notice to the Contractor; provided that if the Contractor does not have an office in the same city as the Authority, it may send such notice by facsimile or e-mail and by registered acknowledgement due, air mail or by courier;

{Designation:

Address:

Fax No:

Email: }; and

- c) any notice or communication by a Party to the other Party, given in accordance herewith, shall be deemed to have been delivered when in the normal course of post it ought to have been delivered and in all other cases, it shall be deemed to have been delivered on the actual date and time of delivery; provided that in the case of facsimile or e-mail, it shall be deemed to have been delivered on the working day following the date of its delivery.

25.14 Language

All notices required to be given by one Party to the other Party and all other communications, Documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

25.15 Counterparts

This Agreement may be executed in two counterparts, each of which, when executed and delivered, shall constitute an original of this Agreement.

25.16 Confidentiality

The Parties shall treat the details of this Agreement as private and confidential, except to the extent necessary to carry out obligations under it or to comply with Applicable Laws. The Contractor shall not publish, permit to be published, or disclose any particulars of the Works in any trade or technical paper or elsewhere without the previous consent of the Authority.

25.17 Copyright and Intellectual Property rights

25.17.1 As between the Parties, the Authority shall retain the copyright and other Intellectual Property rights in the Authority's Documents and other design documents made by (or on behalf of) the Authority. The Authority shall be deemed (by signing this Agreement) to give to the Contractor a non-terminable transferable non-exclusive royalty-free license to copy, use and communicate the Authority's Documents, including making and using modifications of them. This license shall:

- (a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works,
- (b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Authority's Documents for the purposes of completing, operating, maintaining,

- altering, adjusting, repairing and demolishing the Works, and
- (c) in the case of Authority's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by this Agreement, including replacements of any computers supplied by the Authority:

25.17.2 The Authority's Documents and other design documents made by (or on behalf of) the Authority's shall not, without the Authority's consent, be used, copied or communicated to a third party by (or on behalf of) for purposes other than those permitted under this Clause 25.17.

25.17.3 As between the Parties, the Authority shall retain the copyright and other Intellectual Property rights in this Agreement and other documents made by (or on behalf of) the Authority. The Contractor may, at its cost, copy, use, and obtain communication of these documents for the purposes of this Agreement. They shall not, without the Authority's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the contract.

25.18 Limitation of Liability

25.18.1 Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or for any indirect or consequential loss or damage which may be suffered by the other Party in connection with this Agreement.

25.18.2 The total liability of one Party to the other Party under and in accordance with the provisions of this Agreement, save and except as provided in Articles 21 and 23, shall not exceed the Contract Price. For the avoidance of doubt, this Clause shall not limit the liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party

25.19 Transportation and Office at Site for the Client:

25.19.1 A well-maintained SUV vehicle with fuel and driver for the day-to-day works/site visit shall be provided by the contractor to the Client.

25.19.2 A well-furnished office including amenities, supporting staffs and office equipment's shall be provided by the contractor to the Client.

25.20 Deleted

ARTICLE 26

DEFINITIONS

26.1 Definitions

In this Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively assigned to them:

“**Accounting Year**” means the financial year commencing from the first day of April of any calendar year and ending on the thirty-first day of March of the next calendar year;

“**Advance Payment**” shall have the meaning as set forth in Clause 17.2.1; “**Affected Party**” shall have the meaning as set forth in Clause 19.1;

“**Affiliate**” means, in relation to either Party {and/or Members}, a person who controls, is controlled by, or is under the common control with such Party {or Member} (as used in this definition, the expression “control” means, with respect to a person which is a company or corporation, the ownership, directly or indirectly, of more than 50% (fifty per cent) of the voting shares of such person, and with respect to a person which is not a company or corporation, the power to direct the management and policies of such person, whether by operation of law or by contract or otherwise);

“**Agreement**” means this Agreement, its Recitals, the Schedules hereto and any amendments thereto made in accordance with the provisions contained in this Agreement;

“**Applicable Laws**” means all laws, brought into force and effect by GOI or the State Government(s) including rules, regulations and notifications made there under, and judgments, decrees, injunctions, writs and orders of any court of record, applicable to this Agreement and the exercise, performance and discharge of the respective rights and obligations of the Parties hereunder, as may be in force and effect during the subsistence of this Agreement;

“**Applicable Permits**” means all clearances, licenses, permits, authorizations, no objection certificates, consents, approvals and exemptions required to be obtained or maintained under Applicable Laws in connection with the construction of the Project during the subsistence of this Agreement;

“**Appointed Date**” means date of this Agreement.

“**Arbitration Act**” means the Arbitration and Conciliation Act, 1996 and shall include modifications to or any re-enactment thereof, as in force from time to time;

“**Authority**” shall have the meaning attributed thereto in the array of Parties hereinabove as set forth in the Recitals;

“**Authority Default**” shall have the meaning as set forth in Clause 21.2.1;

“**Authority’s Engineer**” shall have the meaning as set forth in Clause 16.1.1;

“**Authority Representative**” means such person or persons as may be authorised in writing by the Authority to act on its behalf under this Agreement and shall include any person or persons having

authority to exercise any rights or perform and fulfill any obligations of the Authority under this Agreement;

“**Bank**” means a bank in corporate in India and having a minimum net worth of Rs.1,000 crore (Rupees one thousand crore) or any other bank acceptable to the Authority;

“**Bank Rate**” means the rate of interest specified by the Reserve Bank of India from time to time in pursuance of section 49 of the Reserve Bank of India Act, 1934 or any replacement of such Bank Rate for the time being in effect;

“**Base Date**” means the last date of that calendar month, which date precedes the Bid Due Date by at least 28 (twenty-eight) days;

“**Bid**” means the documents in their entirety comprised in the bid submitted by the [selected bidder] in response to the Request for Proposals in accordance with the provisions thereof and “**Bids**” shall mean the bids submitted by any and all pre-qualified bidders;

“**Bid Security**” means the bid security provided by the Contractor to the Authority in accordance with the Request for Proposals, and which is to remain in force until substituted by the Performance Security;

“**CPI (IW)**” means the Consumer Price Index for Industrial Workers as published by the Labour Bureau, Government of India and shall include any index which substitutes the CPI (IW), and any reference to CPI (IW) shall, unless the context otherwise requires, be construed as a reference to the CPI (IW) published for the period ending with the preceding month, save and except that for the purposes of annual revision of the Fixed Charge in accordance with the provisions of Clause 25.3, the revision due on April 1 of any year shall be computed with reference to CPI (IW) as on January 31 of that year;

“**Change in Law**” means the occurrence of any of the following after the Base Date:

- i. the enactment of any new Indian law;
- ii. the repeal, modification or re-enactment of any existing Indian law;
- iii. the commencement of any Indian law which has not entered into effect until the Base Date;
- iv. a change in the interpretation or application of any Indian law by a judgement of a court of record which has become final, conclusive and binding, as compared to such interpretation or application by a court of record prior to the Base Date; or
- v. any change in the rates of any of the Taxes or royalties that have a direct effect on the Project;

“**Change of Scope**” shall have the meaning as set forth in Article 13;

“**Change of Scope Notice**” shall have the meaning as set forth in Clause 13.2.1;

“**Change of Scope Order**” shall have the meaning as set forth in Clause 13.2.4;

“**Completion Certificate**” shall have the meaning as set forth in Clause 12.4.1;

“Joint Venture” means the Joint Venture of entities which have formed a joint venture for implementation of this Project;

“Construction” shall have the meaning as set forth in Clause 1.2.1 (f);

“Construction Period” means the period commencing from the Appointed Date and ending on the date of the Completion Certificate;

“Contract Price” means the amount as specified in Clause 17.1.1;

“Contractor” shall have the meaning attributed thereto in the array of Parties herein above as set forth in the Recitals;

“Contractor Default” shall have the meaning as set forth in Clause 21.1.1;

“Cure Period” means the period specified in this Agreement for curing any breach or default of any provision of this Agreement by the Party responsible for such breach or default and shall:

- ☐ commence from the date on which a notice is delivered by one Party to the other Party asking the latter to cure the breach or default specified in such notice;
- ☐ not relieve any Party from liability to pay Damages or compensation under the provisions of this Agreement; and
- ☐ not in any way be extended by any period of Suspension under this Agreement;

provided that if the cure of any breach by the Contractor requires any reasonable action by the Contractor that must be approved by the Authority or the Authority’s Engineer hereunder, the applicable Cure Period shall be extended by the period taken by the Authority or the Authority’s, Engineer to accord their approval;

“Damages” shall have the meaning as set forth in paragraph of Clause 1.2.1;

“Defect” means any defect or deficiency in Construction of the Works or any part thereof, which does not conform with the Specifications and Standards;

“Defects Liability Period” shall have the meaning as set forth in Clause 15.1.1;

“Dispute” shall have the meaning as set forth in Clause 24.1.1;

“Dispute Resolution Procedure” means the procedure for resolution of Disputes as set forth in Article 24;

“Drawings” means all of the drawings, calculations and documents pertaining to the Project as set forth in Schedule-H, and shall include ‘as built’ drawings of the Project;

“Document” or “Documentation” means documentation in printed or written form, or in tapes, discs, drawings, computer programmes, writings, reports, photographs, films, cassettes, or expressed in any other written, electronic, audio or visual form;

“Emergency” means a condition or situation that is likely to endanger the safety or security of the individuals on or about the Project, including Users thereof, or which poses an immediate threat of material damage to the Works or any of the Project Assets;

“Encumbrances” means, in relation to the Project, any encumbrances such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations, and shall include any designation of loss payees or

beneficiaries or any similar arrangement under any insurance policy pertaining to the Project, where applicable herein but excluding utilities referred to in Clause-9.1;

“Final Payment Certificate” shall have the meaning as set forth in Clause 17.12.1;

“Final Payment Statement” shall have the meaning as set forth in Clause 17.10.1;

Force Majeure” or “Force Majeure Event” shall have the meaning ascribed to it in Clause 19.1;

“GAD” or “General Arrangement Drawings” shall have the meaning as set forth in Clause 4.1.3 (b);

“GOI” or “Government” means the Government of India;

“Good Industry Practice” means the practices, methods, techniques, designs, standards, skills, diligence, efficiency, reliability and prudence which are generally and reasonably expected from a reasonably skilled and experienced contractor engaged in the same type of undertaking as envisaged under this Agreement and which would be expected to result in the performance of its obligations by the Contractor in accordance with this Agreement, Applicable Laws and Applicable Permits in reliable, safe, economical and efficient manner;

“Government Instrumentality” means any department, division or sub-division of the Government or the State Government and includes any commission, board, authority, agency or municipal and other local authority or statutory body, including panchayat, under the control of the Government or the State Government, as the case may be, and having jurisdiction over all or any part of the Project or the performance of all or any of the services or obligations of the Contractor under or pursuant to this Agreement;

“Indemnified Party” means the Party entitled to the benefit of an indemnity pursuant to Article23;

“Indemnifying Party” means the Party obligated to indemnify the other Party pursuant to Article23;

“Indirect Political Event” shall have the meaning as set forth in Clause 19.3;

“Insurance Cover” means the aggregate of the maximum sums insured under the insurances taken out by the Contractor pursuant to Article18, and includes all insurances required to be taken out by the Contractor under Clauses 18.1 and 18.9 but not actually taken, and when used in the context of any act or event, it shall mean the aggregate of the maximum sums insured and payable or deemed to be insured and payable in relation to such act or event;

“Intellectual Property” means all patents, trademarks, service marks, logos, get- up, trade names, internet domain names, rights in designs, blue prints, programmes and manuals, drawings, copyright (including rights in computer software), database rights, semi-conductor, topography rights, utility models, rights in know-how and other intellectual property rights, in each case whether registered or unregistered and including applications for registration, and all rights or forms of protection having equivalent or similar effect anywhere in the world;

“Interim Payment Certificate” or “IPC” means the interim payment certificate issued by the Authority’s Engineer for payment to the Contractor in respect of Contractor’s claims for payment raised in accordance with the provisions of this Agreement;

“LOA” or “Letter of Acceptance” means the letter of acceptance referred to in Recital (D);

“Lead Member” shall, in the case of a Joint Venture, mean the member of such Joint Venture who shall have the authority to bind the Contractor and each member of the Joint Venture; and shall be deemed to be the Contractor for the purposes of this Agreement;

“**Manuals**” shall mean the manuals;

“**Material Adverse Effect**” means a material adverse effect of any act or event on the ability of either Party to perform any of its obligations under and in accordance with the provisions of this Agreement and which act or event causes a material financial burden or loss to either Party;

“**Materials**” are all the supplies used by the Contractor for incorporation in the Works of the Project;

“**Non-Political Event**” shall have the meaning as set forth in Clause 19.2;

“**Parties**” means the parties to this Agreement collectively and “**Party**” shall mean any of the parties to this Agreement individually;

“**Performance Security**” shall have the meaning as set forth in Clause 7.1.1;

“**Plant**” means the apparatus and machinery intended to form or forming part of the Works;

“**Political Event**” shall have the meaning as set forth in Clause 19.4;

“**Programme**” shall have the meaning as set forth in Clause 10.1.3;

“**Project**” means the construction of the Project in accordance with the provisions of this Agreement, and includes all works, services and equipment relating to or in respect of the Scope of the Project;

“**Project Assets**” means all physical and other assets relating to (a) tangible assets such as civil works and equipment including [foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road over-bridges, drainage works, traffic signals, sign boards, kilometre-stones, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices]; and (b) Project Facilities situated on the Site;

“**Project Completion Date**” means the date on which the last Provisional Certificate is issued;

“**Project Completion Schedule**” means the progressive Project Milestones set forth in Schedule-I for completion of the Project on or before the Scheduled Completion Date;

“**Project Facilities**” means all the amenities and facilities to be constructed on the Site,

“**Project Milestone**” means the project milestone as set forth in Schedule-I and includes the Scheduled Completion Date;

“**Proof Consultant**” shall have the meaning as set forth in Clause 10.2.2;

“**Provisional Certificate**” shall have the meaning as set forth in Clause 12.2.1;

“**Punch List**” shall have the meaning as set forth in Clause 12.2.1;

“**Quality Assurance Plan**” or “**QAP**” shall have the meaning as set forth in Clause 11.2.1;

“**Re.**”, “**Rs.**” or “**Rupees**” or “**Indian Rupees**” means the lawful currency of the Republic of India;

“**Request for Proposals**” or “**RFP**” shall have the meaning as set forth in Recital (C);

“**Retention Money**” shall have the meaning as set forth in Clause 7.5.1;

“**Safety Consultant**” shall have the meaning as set forth in Clause 10.1.5;

“**Scheduled Completion Date**” shall be the date as set forth in Clause 10.3.1;

“**Scope of the Project**” shall have the meaning as set forth in Clause 2.1;

“**Section**” means a part of the Project;

“**Site**” shall have the meaning as set forth in Clause 8.1;

“**Specifications and Standards**” means the specifications and standards relating to the quality, quantity, capacity and other requirements for the Project and any modifications thereof, or additions thereto, as included in the design and engineering for the Project submitted by the Contractor to, and expressly approved by, the Authority;

“**Stage Payment Statement**” shall have the meaning as set forth in Clause 17.4;

“**State**” means the State or the Union Territory, as the case may be, in which the headquarters of the Authority are situate and “**State Government**” means the government of that State or Union Territory;

“**Structures**” means an elevated [road or a flyover], as the case may be;

“**Sub-contractor**” means any person or persons to whom a part of the Works has been subcontracted by the Contractor and the permitted legal successors in title to such person, but not an assignee to such person;

“**Suspension**” shall have the meaning as set forth in Clause 20.1;

“**Taxes**” means any Indian taxes including excise duties, customs duties, value added tax, sales tax, local taxes, cess and any impost or surcharge of like nature (whether Central, State or local) on the goods, Materials, equipment and services incorporated in and forming part of the Project charged, levied or imposed by any Government Instrumentality, but excluding any interest, penalties and other sums in relation thereto imposed on any account whatsoever. For the avoidance of doubt, Taxes shall not include taxes on corporate income;

“**Termination**” means the expiry or termination of this Agreement;

“**Termination Notice**” means the communication issued in accordance with this Agreement by one Party to the other Party terminating this Agreement;

“**Termination Payment**” means the amount payable by either Party to the other upon Termination in accordance with Article 21;

“**Terms of Reference**” or “**TOR**” shall have the meaning as set forth in Clause 16.2.1;

“**Tests**” means the tests set forth in Schedule to determine the completion of Works in accordance with the provisions of this Agreement;

“**Time Extension**” shall have the meaning as set forth in Clause 10.4.1;

“**User**” means a person who uses or intends to use the Project or any part thereof in accordance with the provision of this Agreement and Applicable Laws;

“**Valuation of Unpaid works**” shall have the meaning as set forth in Clause 21.5.1;

“**WPI**” means the wholesale price index for various commodities as published by the Ministry of Commerce and Industry, GOI and shall include any index which substitutes the WPI, and any reference to WPI shall, unless the context otherwise requires, be construed as a reference to the WPI published for the period ending with the preceding month; and

“**Works**” means all works including survey and investigation, design, engineering, procurement, construction, Plant, Materials, temporary works and other things necessary to complete the Project in accordance with this Agreement.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DAY, MONTH AND YEAR FIRST ABOVE WRITTEN.

SIGNED, SEALED AND DELIVERED

SIGNED, SEALED AN DELIVERED

For and on behalf of
For and on behalf of

[THE AUTHORITY] by:

THE CONTRACTOR by:

(Signature)

(Signature)

(Name)

(Name)

(Designation)

(Designation)

In the presence of:

1.

2.

{ COUNTERSIGNED and accepted by:

Name and particulars members' contractor }

Schedules

SCHEDULE – A

(See Clauses 2.1 and 8.1)

SITE OF THE PROJECT

1 The Site

- 1.1. The site of the Project (the “**Site**”) shall comprise the site described in respect of which the land shall be provided by the Authority to the Contractor. The Authority shall be responsible for acquiring and providing land on the Site in accordance with the [alignment] finalized by the Authority, free from all encroachments and encumbrances, and free access thereto for the execution of this Agreement.
- 1.2. The dates of providing the land to the Contractor within 15 days of Agreement.
- 1.3. An inventory of the Site including the land, building, trees and any other immovable property on, or attached to, the Site shall be prepared jointly by the Authority Representative and the Contractor, and such inventory shall form part of the memorandum referred to in Clause 8.2.1 of this Agreement.
- 1.4. Carriage of all materials, machineries, site clearing, shifting of dismantling materials are scope of contractor. No extra payment will be given to the contractor by the authority.
- 1.5. The alignment plans of the Project are specified in drawing sheet. In the case of sections where no modification in the existing alignment of the Project is contemplated, the alignment plan has not been provided. Alignment plans have only been given for sections where the existing alignment is proposed to be modified.

SCHEDULE – F

(See Clauses 7.1.1, 7.5.3 and 19.2)

FORM OF BANK GUARANTEE

Annex-I

(See Clause 7.1.1)

Form of Guarantee for Performance Security

.....,

.....,

.....,

WHEREAS:

- a)(insert name and address of the contractor) (hereinafter called the “**Contractor**”) and (insert name and address of the project authority), (hereinafter called the “**Authority**”) have entered into an agreement (hereinafter called the “**Agreement**”) for Construction of ICCB Building in Bhagalpur, Bihar with 2 Years defect liability period under Smart City Mission on Item Rate Contract in Bhagalpur 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..... cr. (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 and undertakes to pay to the Authority upon occurrence of any failure or default in the due and faithful performance of all or any of the Contractor’s obligations, under and in accordance with the provisions of the Agreement during the {Construction Period/ Defects Liability Period} on 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 Authority shall claim, without the Authority 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 Authority, under the hand of an officer not below the rank of a Sr. Manager of the Authority, 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 Authority 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 differences between the Authority 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 Authority 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 Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The Authority 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 Authority 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 Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority 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 Authority 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 Authority in respect of or relating to the Agreement or for the fulfillment, compliance and/or performance of all or any of the obligations of the Contractor under the Agreement.
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 Authority on the Bank under this Guarantee all rights of the Authority 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 on \$. Unless a demand or claim under this Guarantee is made in writing before expiry of the Guarantee, the Bank shall be discharged from its liabilities hereunder.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous

express consent of the Authority 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 Authority that the envelope was so posted shall be conclusive.

This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the date specified in paragraph 8 above or until it is released earlier by the Authority 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:

- & The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- & 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.

Annex – II

(Schedule - F)

(See Clause 7.5.3)

Form of Guarantee for Withdrawal of Retention Money

.....,

.....,

.....,

WHEREAS:

- a)(insert name and address of the contractor) (hereinafter called the “**Contractor**”) has executed an agreement (hereinafter called the “**Agreement**”) with the (insert name and address of the project authority), (hereinafter called the “**Authority**”) for Construction of ICCB Building in Bhagalpur, Bihar with 2 Years defect liability period under Smart City Mission on Item Rate Contract subject to and in accordance with the provisions of the Agreement.
- b) In accordance with Clause 7.5.3 of the Agreement, the Contractor may withdraw the retention money (herein after called the “**Retention Money**”) after furnishing to the Authority a bank guarantee for an amount equal to the proposed withdrawal.
- c) We, through our branch at (the “**Bank**”) have agreed to furnish this bank guarantee (hereinafter called the “**Guarantee**”) for the amount of Rs. cr. (Rs. crore) (the “**Guarantee Amount**”).

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

1. The Bank hereby unconditionally and irrevocably undertakes to pay to the Authority, 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 upto an aggregate sum of the Guarantee Amount as the Authority shall claim, without the Authority 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 Authority, under the hand of an officer not below the rank of a Chief Engineer of the Authority, that the Contractor has committed default in the due and faithful performance of all or any of its obligations for under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority 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 differences between the Authority 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 Authority 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 Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The Authority 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 Retention Money and any of the rights and powers exercisable by the Authority 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 Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority 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 Authority 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 Authority in respect of or relating to the Retention Money.
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 Authority on the Bank under this Guarantee all rights of the Authority 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 date of the Completion Certificate specified in Clause 12.4 of the Agreement.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority 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 authorised 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 Authority 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 up to the date specified in paragraph 8 above or until it is released earlier by the Authority 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.

Annex – III

(Schedule - F) (See Clause 19.2)

Form of Guarantee for Advance Payment

.....,

.....,

.....,

WHEREAS:

- (A)(insert name and address of the contractor) (hereinafter called the “**Contractor**” has executed an agreement (hereinafter called the “**Agreement**”) with the (insert name and address of the project authority), (hereinafter called the “**Authority**”) for Construction of ICCB Building in Bhagalpur, Bihar with 2 Years defect liability period under Smart City Mission on Item Rate Contract (“**Project**”), subject to and in accordance with the provisions of the Agreement
- (B) In accordance with Clause 17.2 of the Agreement, the Authority shall make to the Contractor an advance payment with a simple interest at the rate of 8% (eight per cent) per annum (herein after called “**Advance Payment**”) equal to 10% (ten per cent) of the Contract Price; and that the Advance Payment shall be made in minimum two installments subject to the Contractor furnishing an irrevocable and unconditional guarantee by a scheduled bank for an amount equivalent to 110% (One Hundred and Ten Percent) of such installment to remain effective till the complete and full repayment of the installment of the Advance Payment as security for compliance with its obligations in accordance with the Agreement. The amount of {first/second/third} installment of the Advance Payment is Rs. cr. (Rupeescrore) and the amount of this Guarantee is Rs. cr. (Rupees.....crore) (the “**Guarantee Amount**”)\$.
- (C) We, through our branch at (the “**Bank**”) have agreed to furnish this bank guarantee (*hereinafter called the “**Guarantee**”*) for the Guarantee Amount.

§ The Guarantee Amount should be equivalent to 110% of the value of the applicable installment.

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 installment of the Advance Payment under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, 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 Authority shall claim, without the Authority 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 Authority, under the hand of an officer not below the rank of a Chief Engineer of the Authority, 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 Authority 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 differences between the Authority 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 Authority 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 Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The Authority 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 Authority 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 Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority 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 Authority 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 Authority 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 Authority on the Bank under this Guarantee all rights of the Authority 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 on \$ unless a demand or claim under this Guarantee is made in writing on or before the aforesaid date, the Bank shall be discharged from its liabilities hereunder.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority 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 providing 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 Authority 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 up to the date specified in paragraph 8 above or until it is released earlier by the Authority 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:

f) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

g) 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.

SCHEDULE – H

(See Clause 10.2.4)

DRAWINGS

a) Drawings – All drawings related to civil works shall be provided to the bidder by the Authority. All drawings are also available in Bhagalpur Smart City Limited website (www.smartcitybhagalpur.org).

b) Additional Drawings - All drawings related to civil works shall be provided to the bidder by the Authority

Annex – I

(Schedule – H)

List of Drawings

Note:

1. All drawings related to civil works shall be provided to the bidder by the Authority
2. All drawings are also available in Bhagalpur Smart City Limited website (www.smartcitybhagalpur.org).

SCHEDULE – I

(See Clause 10.3.2)

PROJECT COMPLETION SCHEDULE

1 Project Completion Schedule

During Implementation period, the Contractor shall comply with the requirements set forth in this Schedule-I for each of the Project Milestones and the Scheduled Completion Date. Within 15(fifteen) days of the date of each Project Milestone, the Contractor shall notify the Authority of such compliance along with necessary particulars and the same should be approved in the following format by the Authority.

2.0 Project Milestones:

2.1 As “Time is the essence of the Contract”. The Contractor shall be liable to pay to the Employer, the liquidated damages as per the following milestones:-

Sr. No .	Milestone	Financial Progress	Time Allowed (from date of start)	Compensation For Delay
1	Milestone 1	1/8 th (of whole work)	1/4 th (of whole work)	1.) Slippage up to 25% in financial target during the milestone under consideration – 2.5% of the work remained unexecuted in the related time span. 2.) Slippage exceeding 25% but up to 50% in financial target during the milestone under consideration – 5% of the work remained unexecuted in the related time span.
2	Milestone 2	3/8 th (of whole work)	1/2 th (of whole work)	3.) Slippage exceeding 50% but Up to 75% in financial target during the milestone under consideration – 7.5% of the work remained unexecuted in the related time span.
3	Milestone 3	3/4 th (of whole work)	3/4 th (of whole work)	4.) Slippage exceeding 75% in financial target during the milestone

4	Milestone 4	Full	Full	under consideration-- 10% of the work remained unexecuted in the related time span.
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The above rate of penalty shall be per day till the progress is covered proportionately. However, the Liquidated damages at milestone 1, 2, and 3 above will be returned to the Contractor in the case of the contractor's progress matches his program of works in the following quarter of the contract period. Otherwise, the withheld amount will be forfeited.

In no case the Liquidated damages levied as per milestone 4 will be refunded, irrespective of the fact of having been granted extension of time for such delay, unless such delay is beyond the control of the Contractor at any point of time.

2.2 Payment Certificates

- The Contractor shall submit to the Authority monthly payment invoices of the estimated value of the work completed less the cumulative amount certified previously.
- The Authority's Engineer shall check the Contractor's itemized bills within 10 days and certify the amount to be paid to the Contractor.
- The value of work executed shall be certified by the Engineer and approved by the Authority.

2.3 Scheduled Completion Date

- The Scheduled Completion Date shall be the 15 months from the date of agreement.
- On or before the Scheduled Completion Date, the Contractor shall have completed construction in accordance with this Agreement.

2.4 Extension of time

- Upon extension of any or all of the aforesaid Project Milestones or the Scheduled Completion Date, as the case may be, under and in accordance with the provisions of this Agreement, the Project Completion Schedule shall be deemed to have been amended accordingly.

SCHEDULE – J

(See Clause 12.1.2)

TESTS ON COMPLETION

1 Schedule for Tests

- 1.1 The Contractor shall, no later than 30 (thirty) days prior to the likely completion of construction, notify the Authority's Engineer and the Authority of its intent to subject the Project to Tests, and no later than 10 (ten) days prior to the actual date of Tests, furnish to the Authority's Engineer and the Authority detailed inventory and particulars of all works and equipment forming part of Works.
- 1.2 The Contractor shall notify the Authority's Engineer of its readiness to subject the Tests at any time after 10 (ten) days from the date of such notice, and upon receipt of such notice, the Authority's Engineer shall, in consultation with the Contractor, determine the date and time for each Test and notify the same to the Authority who may designate its representative to witness the Tests. The Authority's Engineer shall thereupon conduct the Tests itself or cause any of the Tests to be conducted in accordance with Article 12 and this Schedule-J.

2 Tests

- 2.1 Visual and physical test: The Authority's Engineer shall conduct a visual and physical check of implementing works to determine that all works and equipment forming part thereof conform to the provisions of this Agreement. The physical tests shall include [***].
- 2.2 Deleted.
- 2.3 Deleted

- 2.4 Other tests: The Authority's Engineer may require the Contractor to carry out or cause to be carried additional tests, in accordance with Good Industry Practice, for determining the compliance of the Project with Specifications and Standards.
- 2.5 Environmental audit: The Authority's Engineer shall carry out a check to determine conformity of the Project with the environmental requirements set forth in Applicable Laws and Applicable Permits.
- 2.6 Safety Audit: The Authority's Engineer shall carry out, or cause to be carried out, a safety audit to determine conformity of the Project with the safety requirements and Good Industry Practice.

i. Agency for conducting Tests

All Tests set forth in this Schedule-J shall be conducted by the Authority's Engineer or such other agency or person as it may specify in consultation with the Authority.

ii. Completion Certificate

Upon successful completion of Tests, the Authority's Engineer shall issue the Completion Certificate in accordance with the provisions of Article 12.

SCHEDULE – K

(See Clause 12.2 and 12.4)

PROVISIONAL CERTIFICATE

- 1) I/We, (Name of the Authority's Engineer), acting as the Authority's Engineer, under and in accordance with the Agreement dated..... (the "**Agreement**"), for Construction of ICCB Building in Bhagalpur, Bihar with 2 Years defect liability period under Smart City Mission on Item Rate Contract (the "**Project**")
(Name of Contractor), hereby certify that the Tests in accordance with Article 12 of the Agreement have been undertaken to determine compliance of the Project with the provisions of the Agreement.
- 2) Works that are incomplete on account of Time Extension have been specified in the Punch List appended hereto, and the Contractor has agreed and accepted that it shall complete all such works in the time and manner set forth in the Agreement. In addition, certain minor works are incomplete and these are not likely to cause material inconvenience to the Users of the Project or affect their safety. The Contractor has agreed and accepted that as a condition of this Provisional Certificate, it shall complete such minor works within 30 (thirty) days hereof. These minor works have also been specified in the aforesaid Punch List.
- 3) In view of the foregoing, I/We am/are satisfied that the Projectcan be safely and reliably placed in service of the Users thereof, and in terms of the Agreement, the Project is hereby provisionally declared fit for entry into operation on this the day of 20.....
- 4)

ACCEPTED, SEALED AND DELIVERED		ACCEPTED, SEALED AND DELIVERED
For and on behalf of		For and on behalf of
Contractor by:		Authority's Engineer by:
Signature		Signature
Name & Designation		Name & Designation
Address		Address

COMPLETION CERTIFICATE

a) I/We, (Name of the Authority's Engineer), acting as the Authority's Engineer, under and in accordance with the Agreement dated (the "**Agreement**"), Construction of ICCC Building in Bhagalpur, Bihar with defect liability period of two years under Smart City Mission on Item Rate Contract (the "**Project**") through.....

(Name of Contractor), hereby certify that the Tests in accordance with Article 12 of the Agreement have been successfully undertaken to determine compliance of the Project with the provisions of the Agreement, and I/We am/are satisfied that the Project can be safely and reliably placed in service of the Users thereof.

b) It is certified that, in terms of the aforesaid Agreement, all works forming part of Project have been completed, and the Project is hereby declared fit for entry into operation on this the day of 20.....

SIGNED, SEALED AND

DELIVERED For and on behalf of the Authority's Engineer by:

(Signature) (Name) (Designation)

(Address)

SCHEDULE – L

(See Clause 18.1.1)

DELETED

SCHEDULE–M

(See Clauses 19.4)

FORMS OF PAYMENT STATEMENTS

1. Project Milestone

Payment Certificates

- The Contractor shall submit to the Authority monthly payment invoices of the estimated value of the work completed less the cumulative amount certified previously.
- The Authority's Engineer shall check the Contractor's itemized bills within 10 days and certify the amount to be paid to the Contractor.
- The value of work executed shall be certified by the Engineer and approved by the Authority.

.Scheduled Completion Date

- The Scheduled Completion Date shall be the 12 months from the notice to start the work.
- On or before the Scheduled Completion Date, the Contractor shall have completed construction in accordance with this Agreement.

Extension of time

- Upon extension of any or all of the aforesaid Project Milestones or the Scheduled Completion Date, as the case may be, under and in accordance with the provisions of this Agreement, the Project Completion Schedule shall be deemed to have been amended accordingly.

SCHEDULE – N

(See Clause 20.1)

INSURANCE

1.0 Insurance during Construction Period

- 1.1** The Contractor shall affect and maintain at its own cost, from the Appointed Date till the date of issue of the Completion Certificate, the following insurances for any loss or damage occurring on account of Non-Political Event of Force Majeure, malicious act, accidental damage, explosion, fire and terrorism:
- a) Insurance of Works, Plant and Materials and an additional sum of [15% (fifteen per cent)] of such replacement cost to cover any additional costs of and incidental to the rectification of loss or damage including professional fees and the cost of demolishing and removing any part of the Works and of removing debris of whatsoever nature; and
 - b) Insurance for the Contractor's equipment and Documents brought onto the Site by the Contractor, for a sum sufficient to provide for their replacement at the Site.
- 1.2** The insurance under paragraph 1.1 (a) and (b) above shall cover the Authority and the Contractor against all loss or damage from any cause arising under paragraph 1.1 other than risks which are not insurable at commercial terms.

2. Insurance for Contractor's Defects Liability/Operation & Maintenance

The Contractor shall effect and maintain insurance cover for the Works from the date of issue of the Completion Certificate until the end of the Defects Liability Period/O&M for any loss or damage for which the Contractor is liable and which arises from a cause occurring prior to the issue of the Completion Certificate. The Contractor shall also maintain other insurances for maximum sums as may be required under Applicable Laws and in accordance with Good Industry Practice.

3. Insurance against injury to persons and damage to property

- 3.1** The Contractor shall insure against its liability for any loss, damage, death or bodily injury, or damage to any property (except things insured under Paragraphs 1 and 2 of this Schedule or to any person (except persons insured under Clause 20.9), which may arise out of the Contractor's performance of this Agreement. This insurance shall be for a limit per occurrence of not less than the amount specified below with no limit on the number of occurrences.

The insurance cover shall be not less than estimated cost.

- 3.2** The insurance shall be extended to cover liability for all loss and damage to the Authority's property arising out of the Contractor's performance of this Agreement excluding:

The Authority's right to have the construction works executed on, over, under, in or through any land, and to occupy this land for the Works; and damage which is an unavoidable result of the Contractor's obligations to execute the Works.

4 Insurance to be in joint names

The insurance under paragraphs 1to3 above shall be in the joint names of the Contractor and the Authority.

SECTION - 5

SPECIAL CONDITIONS OF CONTRACT

- 5.1 **General:** The special conditions are supplementary instructions to the tenders and shall form part of the contract.
- 5.2 **Drawing:** All Drawings/Layout plans provided by the Authority. The Bidder will submit the detailed Contract execution plan within 15 days from date of issuing Work Order or Agreement whichever is earlier. The same shall be reviewed and approved by BSCL or the PDMC. These 15 days period is included in stipulated time of Contract Period. Construction of ICC Building in Bhagalpur, Bihar with 2 Years defect liability period under Smart City Mission on Item Rate Contract shall be carried out as per the drawings provided by BSCL.
- 5.3 **Data to be furnished by the Bidder:** The Bidder shall submit the following information to BSCL.
- 5.4 Proposed constructions Programme and time schedule showing sequence of operations within **15 days** of receipt of notice to proceed with the work in pursuance of the conditions of contract.
- 5.5 **Action when the progress of any item of work is unsatisfactory:**
If the progress of an item of work during construction, which is important for timely completion of work is unsatisfactory, BSCL shall notwithstanding that the general progress of work is satisfactory, after giving the Bidder **15 days'** notice in writing get the said work executed by employing other means including other labour / Bidder etc. and the Bidder will have no claim for compensation for any loss sustained by him owing to such action.
- 5.6 In case if any of the works under this contract are found unsatisfactorily by BSCL, the BSCL shall either request the bidder to rectify the defect immediately or at his discretion may have it done by others (vendor or contractor) and deduct the actual amount incurred as per market rate plus 15 % extra incurred in such works from the bidders.
- 5.7 **Inspection and Tests:** Except as otherwise provided in here of all material and workmanship if not otherwise designated by the specifications shall be subject to inspection, examination and test by BSCL at any and all times during manufacture and/or construction and at any/all places where such manufacture or constructions are carried on. The BSCL shall have the right to reject defective materials and workmanship or require its corrections. Rejected workmanship shall be satisfactorily replaced with the proper material without charge thereof and the Bidder shall properly segregate and remove the rejected material from the premises. If the Bidder fails to proceed at once with the replacement of the rejected material and/or the construction of defective workmanship BSCL may replace such material and/or correct such workmanship and charge the cost thereof to the Bidder.
- 5.8 The Bidder shall be liable for replacement of defective work up to the time of completion of DLP in accordance with the conditions of contract of all work to be done under the contract. The Bidder shall furnish promptly without additional charge all facilities, labour and material necessary for the safe and convenient inspection and tests that may be required by BSCL. All inspections and tests by the departments shall be performed in such a manner as to not unnecessarily delay the work. Special full size and performance test shall be charged with any additional cost of inspection when materials and workmanship are not kept ready by the Bidder at the time of inspection.
- 5.9 **Removal of temporary work, Plant & Surplus materials:** Prior to final acceptance of the completed work, but excepting as otherwise expressly directed or permitted in writing, the Bidder shall, at his own expenses remove from the site and dispose of all the temporary structures including buildings, all plant and surplus materials, and all rubbish and debris for which he is responsible to the satisfaction of BSCL.

- 5.10 **Possession prior to completion:** BSCL shall have the right to take possession of or use any completed part of the work. Such possession or use shall not be deemed as an acceptance of any work not completed in accordance with the contract.
- 5.11 **Damage to works:** The works whether fully completed or incomplete, all the materials, machinery, plants, tools, temporary building and other things connected therewith shall remain at the risk and in the sole charge of the Bidder until the completed work has been delivered to BSCL and till completion certificate has been obtained from BSCL. Until such delivery of the completed work, the Bidder shall at his own cost take all precautions reasonably to keep all the aforesaid works, materials, machinery, plants, temporary buildings and other things connected there with free from any loss, damages and in the event of the same or any part thereof being lost or damaged, he shall forthwith reinstate and make good such loss or damages at his own cost.
- 5.12 **Examination and tests on completions:** On the completion of the work and not later than three months thereafter, BSCL shall make such examination and tests of the work as may then seem to him to be possible, necessary or desirable, and the Bidder shall furnish free of cost any materials and labour which may be necessary thereof and shall facilitate in every way all operations required by BSCL, in making examination and tests.
- 5.13 **Climatic Conditions:** BSCL may order the Bidder to suspend any work that may be subject to damage by climatic conditions and no claims of the Bidder will be entertained by the department on this account.
- 5.14 As per the Ministry of Environment and Forest Guidelines 2010 and Ministry of Urban Development notifications, the Site area shall be protected from dust by fixing Green Fencing around the Construction site area.

The Contractor is instructed to strictly adhere to the following at his own cost.

- a) Supply and Fixing Green barriers and wind breaking walls around their sites.
 - b) Cover tarpaulin on scaffolding around area of construction,
 - c) Do not store construction material, particularly sand, on any part of the street, roads in any colony,
 - d) Cordon the work area with proper fencing by other means with due consideration of safety of workers, public, etc.
 - e) Dust emissions from construction site are controlled.
 - f) Sprinklers should be compulsorily used at the site and Wet jets in grinding and stone cutting must be used.
 - g) The work area shall be well illuminated during nights.
- 5.15 **Safety regulations:** During the entire contract period, while carrying out this works indicated in this tender, the Bidder will ensure compliance of all safety regulations as provided in the Safety Code (**Annexure - D**). The bidder will be responsible for safety of the works.
- 5.16 **The Bidder will make his own arrangement:** for supply of water, light & power for his works and labour camps etc.: The Bidder will make his own arrangement for supply of water, light and power for his works and labour camps etc. BSCL will not entertain any claim what so ever for any failure or break down etc. in supply of to the Bidder. The Bidder will supply and fix his own tested meter of the approved make but the meter will be kept in the custody of the department.

- 5.17 **Interference with other Bidders:** The Bidder must not interfere with other Bidders who may be employed simultaneously or otherwise by the department at the Site. He will at no time engage departmental labour or that of other Bidders without the written permission of BSCL. **Bidder is fully responsible for cause of damages of the adjoining works of different works at site and the same cost of rectification of damages shall be recovered from the Bidder as per BSCL's instructions.**
- 5.18 **Regulations and bye laws:** The Bidder shall conform to the regulations, bye-laws any other statutory rules made by any local authorities or by the Government and shall protect and indemnify BSCL, against any claim or liability arising from or based on the violation of any such laws, safety, theft, ordinance, regulation, orders, decrees etc.
- 5.19 **Site Order Book:** A site order book shall be kept in the site of the work. As far as possible all orders regarding the works are to be entered in this book. All entries therein shall be signed by the BSCL or PDMC in direct charge of the work and the Bidder or his representatives. In the important cases the Senior Manager of BSCL will countersign the entries which the Bidders or his representative shall be bound to take note of all instructions meant for the Bidder as entered in the site order book without having to be called for separately to note them. BSCL shall submit periodically copies of the remarks of the site order book to the Senior Manager, BSCL for record and to the Bidder for compliance and report.
- 5.20 **Conversion of units:** Whenever in the contract agreement dimensions and units have been expressed in F.P.S. system, the same will be converted in to metric system units by applying the standard conversion table of Indian Standard Institution so as to derive the corresponding figure arithmetically and the Bidder will have to accept the figures so derived without any claim or compensation whatsoever.
- 5.21 **Rights of other Bidders and persons:** If, during the progress of the work covered by this contract, it is necessary for other Bidders or persons to do work in or about the site of work, the Bidder shall afford such facilities, as BSCL may require.
- 5.22 **Employment of technical persons:** The Bidder shall employ or produce evidence of having in his employment of the qualified technical person as indicated in the RFP from the Institution recognized by the Government of Bihar / Govt. of Other State / Govt. of India
- 5.23 The above is the minimum requirement of Manpower. However, contractor shall access the actual requirement and deploy the necessary manpower. No extra cost will be paid for deployment of extra manpower if required.
- 5.24 The technical staff shall be got approved in writing from BSCL (whose approval may be withdrawn any time) for supervision of works and to receive direction from the Engineer of the work on behalf of the contractor. The supervisory staff of the contractor will not be changed without the approval of BSCL.
- 5.1 **Bonus for early completion**
In the event that the Project Completion Date occurs prior to the Scheduled Completion Date, the Contractor shall be entitled to receive a payment of bonus equivalent to 1% (one percent) of the Contract Price per month computed on per day basis, shall be payable to the contractor subject to a

maximum of 5% (five per cent) of the Contract Price. Provided, however, that the payment of bonus, if any, shall be made only after the issue of the Completion Certificate.

Additional Special Conditions

1. Contractor is advised to read carefully all chapters and give complete information regarding his proposals, substantiating the same with calculations, drawings literature, with clear reference to any standards adopted (which are not mentioned in the tender), in such manner that there is no ambiguity or nothing is left to chance. All relevant information, so as to make the proposal understandable shall be given. Vague remarks and remarks like “will be given later” are not acceptable. If in the opinion of BSCL, the proposal is grossly incomplete, this will form sufficient reason for complete rejection of the tender on technical grounds.
2. Contractor shall note that this is an Item rate tender. The bidder shall give rate for complete work. However, his proposals are subject to scrutiny and approval for unit wise/sub-unit wise progressive payments by the competent authority. He shall therefore take utmost precaution to offer very standard equipment manufactured by only reputed manufacturers (wherever the makes are specified, the same shall be offered). However, the bidder should note that after the tenders are opened, all modifications, corrections, changes should be carried out entirely to the satisfaction of BSCL at no extra cost to BSCL. The contractor shall not be allowed to change the price quoted.
3. All the equipment installed shall be thoroughly tested at the time of commissioning of the plant and all initial defects shall be rectified to the entire satisfaction of the engineer. Damaged or non-working parts shall be replaced at no extra cost to BSCL.
4. **Training of the BSCL, staff before Handling over the Equipment/Instruments.** As there is fair amount of automation specified, there will be very large number of small components, which form units of equipment. In order that the BSCL staff engaged on operations and maintenance/Defect liability period becomes proficient in understanding and handling the equipment correctly, the contractor will have to organize training programme in the manufacturers’ shops as well as on site during actual operation of the plant. For this purpose, he will have to employ suitably qualified, trained personnel to carry out this training. The training period is for 7 days after commissioning of the plant or for such extra period before commissioning in the workshops. A mutually agreed programme shall be formulated during the execution, which will be binding on the contractor.
5. **Third Party Inspection:** BSCL reserves the right to appoint any organization/ institution for checking of design, & quality & quantity checks of works at least 5% of total frequency during the contract & no additional cost shall be payable by BSCL on this account.
6. The overall development of site at which processing sheds shall be constructed inclusive of roads, horticulture, lights and other utilities services such as water supply, sewerage, drainage etc. shall be provided by contractor agency as per drawings approved by BSCL if required.
7. The Bidder shall liable for all statutory clearances inclusive from Bihar Pollution Control Board for execution and till operation period.
8. Bidder shall liable to all consequences arising there upon.
9. During the Construction Period, the Contractor shall maintain, at its cost, the Project Site and the assets thereon so that the traffic and commercial worthiness and safety thereof are at no time materially inferior as compared to their condition 7 (seven) days prior to the date of this Agreement,

and shall undertake the necessary repair and maintenance works for this purpose.

10. The Construction work shall be executed by the bidder strictly as per technical specification of Bihar Construction Department/CPWD. In case of ambiguity or dispute arises, Bihar Construction Department (BCD) specification will prevail over.
11. The bidder shall strictly abide the General Conditions of contract and Special Conditions of Contract of the RFP document. In no case, the bidder may violate the above conditions and no amendments should be made in the GCC or SCC.
12. In case of arbitration or dispute of the Contract, the Hon'ble High court of Patna, Bihar is the Jurisdiction.
13. The RFP document shall form part of Contract Agreement. The bidder should download all pages of the RFP document and must sign all pages (authorized signatory of the Contract agency) before uploading the RFP document in the www.eproc2.bihar.gov.in portal

SECTION 6

CONTRACT DATA

CONTRACT DATA

Clause Reference With respect to section 4.

Items marked “N/A” do not apply in this contract.

	Name: BSCL. Address: Municipal Corporation, Court Compound, Bhagalpur Name of Employer's Representative: - Chief Executive Officer, Bhagalpur Smart City Limited, Bhagalpur	[Cl.1.1 of ITB of Section - 1]
	The Engineer is: - To be Informed Later.	GCC Cl. 16 of Article -16
	The Dispute Review Expert will be Expert Mediator of the Govt. of India rules.	[GCC Cl. 24 of Article-24]
	The Defects Liability Period is 2 years.	[GCC Cl. 15 of Article-15]
	The commencement date shall from the date of agreement	[GCC Cl. 10 of Article -10]
	The Intended Completion Date for the whole of the Works is 15 months after agreement. For detail, refer Important Milestones	[GCC Cl. 12 of Article -12]
	Mile Stone for physical works to be completed	15 Month Period from the start date
	Milestone 1 i.e. 25 % of work	4 months
	Milestone 2 i.e. 50 % of work	8 months
	Milestone 3 i.e. 75 % of work	12 months
	Milestone 4 i.e. 100 % of work	15 months
	The Site is located at Bhagalpur	(Cl.7 of ITB)
	The name and identification number of the Contract is	[ITB CL 1.1]
	The work consists of Construction of remaining work of ICC Building in Bhagalpur, Bihar with 2 Years defect liability period.	[Cl. 1.1 of ITB)
	The following documents also form part of the Contract	[GCC Cl. 1.0 of Article -1]
	The law which applies to the Contract is the law of Union of India	[GCC Cl.25.1 of Article -25]
	The language of the Contract documents is English	[GCC Cl.25.14 of Article -25]

	The limit of sub-contracting	N/A
	The Schedule of Key Personnel	[Annexure – II of ITB of section 2)
	The minimum insurance cover for physical property, injury and death is Rs.5 lakhs per occurrence with the number of occurrences limited to four. After each occurrence, contractor will pay additional premium necessary to make insurance valid for four occurrences always till Defect Liability Period of the Project.	[GCC. 18.0 of Article 17.0)
	The Site Possession Dates shall be 15 days after the issue of LoA.	[GCC Cl.8.2 of Article 8]
	The period for submission of the programme for approval of Engineer shall be 30 days from the appointed date	[GCC Cl.10.1.3 of Article 10] 10.1.3
	The currency of the Contract is Indian Rupees	[GCC Cl.17.2 of Article 17)
	The security deposit (retention money) will be collected by deductions from the running bills of the contractor at the rate of 8%	[GCC Cl. 7.5.1 of Article 7]
	<p>Amount of liquidated damages for delay in Completion of works:</p> <p>1.) Slippage up to 25% in financial target during the milestone under consideration – 2.5% of the work remained unexecuted in the related time span.</p> <p>2.) Slippage exceeding 25% but up to 50% in financial target during the milestone under consideration – 5% of the work remained unexecuted in the related time span.</p> <p>3.) Slippage exceeding 50% but Up to 75% in financial target during the milestone under consideration –7.5% of the work remained unexecuted in the related time span.</p> <p>4.) Slippage exceeding 75% in financial target during the milestone under consideration--10% of the work remained unexecuted in the related time span.</p>	[GCC CL 10.3.2]
	Maximum limit of liquidated damages for delay in completion of work is 10 per cent of the Initial Contract Price rounded off to the nearest thousand.	[GCC Cl. 10.3.2 & 10.3.3 of Article 10)
	Amount of Bonus for early completion of whole of the works As per GCC	[GCC Cl. 17.16 of Article 17]
	The amounts of the advance payment are:	[GCC Cl 17.2 of Article 17]

	<p>Mobilization (Interest bearing) – 10% of the Contract price. On submission of unconditional Bank Guarantee (to be drawn before the end of 20% of the Contract period). The contractor shall furnish part 'Bank Guarantee' of 110% of amount of advance taken as Mobilization. The second and subsequent installment shall be released by the Engineer-in-Charge only after the contractor furnishes a proof of the satisfactory utilization of the earlier installment to the entire satisfaction of the Engineer-In-Charge.</p>	<p>The mobilization advance shall be released in two equal installments of 5% each.</p>
	<p>Repayment of advance payment for mobilization and equipment: The advance loan shall be repaid with percentage deductions from the interim payments certified by the Engineer under the Contract. Deductions shall commence in the next Interim Payment Certificate following that in which the total of all such payments to the Contractor has reached not less than 20 percent of the Contract Price or 6 (six) months from the date of payment of first installment of advance whichever period concludes earlier, and shall be made at the rate of 20 per cent of the amounts of all Interim Payment Certificates until such time as the loan has been repaid, always provided that the loan shall be completely repaid prior to the expiry of the original time for completion pursuant to Clauses 8.2 and 8.4 (Condition of Contract). In case non-achievement of milestone and accordingly non-production of running bills and consequently non-recovery of mobilization advance, the part Bank Guarantee (BG) against the Mobilization advance to that extent shall be forfeited.</p>	<p>[GCC Cl. 17.2.5 of Article 17]</p>
	<p>The Securities shall be for the following minimum amounts equivalent as a percentage of the Contract Price: Performance Security for 2 percent of contract price (to be decided after evaluation of the bid) as additional security in terms of ITB Clause 29.5.</p>	<p>[Cl. 7.1 of Article 7)</p>
	<p>The date by which "as-built" drawings (in scale as directed and in color print) in 5 sets of Hard copy (coloured) and 1 set of soft copy are required within 28 days of issue of certificate of completion of whole or section of the work, as the case may be.</p>	<p>GCC CL 10.2.7 of Article 10)(Deleted)</p>
	<p>The amount to be withheld for failing to supply "as built" drawings in color print by the date required is Rs 10.00 lakhs for projects up to Rs 50 crores, and additional Rs 0.15 lakhs for every Rs. 1.00 crore increment in project cost thereafter, with upper limit of Rs 50 lakhs.</p>	<p>GCC CL 10.2.7 of Article 10(Deleted)</p>
	<p>The percentage to apply to the value of the work not completed representing the Employer's additional cost for completing the Works.</p>	<p>GCC Cl 10.5 of Article 10)</p>

VOLUME-II

SECTION 7

TECHNICAL SPECIFICATION

Disclaimer: The technical specifications provided herein for Bhagalpur Smart City Limited) are as per NBC, IS 456, IS 800 and other relevant IS codes. In the absence of any definite provisions on any particular issue in the aforesaid specifications, reference may be made to the specifications of Smart City Mission policy of Government of Bihar/India which provides the specifications of various items of works which may be taken as minimum and any item of lower specifications shall not be allowed. The Government of Bihar is committed to provide specification in line with the aforementioned policy, if not better, as indicated in the technical specifications given herein. All the material utilized in this building are to be complied with specification of Indian Green Building Council (IGBC) Green Data Center.

The successful bidder shall carry out work as per approved GFC Drawing by the Authority Engineer/ Client. The building will be B+G+5 as specified by the employer. The contractor is supposed to get prepared HVAC, Electrical & PHE design and drawings from competent agency at their own cost. The design must conform to the relevant building codes & specifications related to earth quake resistant design of buildings for respective seismic zones. The designs and drawings so prepared have to be got approved from Authority Engineer's/Client.

1. Foundation & Plinth

Foundation: The foundations for building shall be either pile foundation or Isolated Column footing or Raft footing or Combined Column cum Raft footing, as per approved GFC drawings. The RCC work in foundation, unless otherwise stated, shall be of M25 or higher grade.

Plinth: The Plinth beam in foundation shall be in RCC work with M25 Grade concrete and high corrosion resistance Fe 500/550 TMT bars conforming to IS 1786:2008.

Plinth filling: The plinth shall be filled with excavated soil (excluding clayey/black cotton soil) or new soil in layers not exceeding 15 cm or river/ local sand used for plinth filling eg. Ganga sand, etc (including watering/ ramming for proper compaction).

2. Super Structure

Superstructure: The superstructure for the building under Smart City Mission shall be either RCC Framed structure or any structure conforming to New and Emerging Technology approved by Building Material and Technology Promotion Council (BMTPC), Ministry of Housing and Urban Poverty Alleviation, Government of India. The RCC work in superstructure, unless otherwise stated shall be in M25 or higher grade for G+5 building, G+6 and G+8 building.

Lintel: As the building is to be earthquake proof, R.C.C band at lintel level shall be provided. The thickness of the band will be 120mm except for the openings where it will be 150mm extending suitably on the both sides of the opening to a thickness of not less than 200mm wherever necessary (i.e. where anchoring in column is not there).

Chajja: The Chajja will be in R.C.C of M-25 grade in B+G+5 Building and M-25 grade in G+6 and G+8 building. The chajja will be projected 45cm (cantilever projection) and the average thickness measured at middle will be 63mm.

3. Water proofing (APP) on roof slab and chajjas

Atactic Poly-propylene Polymer (APP) modified prefabricated five layer 3mm thick water proofing membrane, black finished, reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 liter/ sqm shall be provided on roof slab and chajjas for water proofing.

4. Brick work in foundation and superstructure

4.1 In Foundation/Plinth

Red brick masonry/Fly Ash Brick work (brick conforming to 100 A) of required thickness as per design shall be used in foundation in 1:6 cement mortar (with PSC/PPC cement). The brick work in external walls shall be laid over sand filling followed by PCC in 1:4:8 of 100 mm thick. The depth of this wall in plinth (upto plinth band level) shall be got approved by Engineer-in-charge; however, this depth shall be 450 mm unless until stated otherwise. Alternately, R.C.C band at ground level in M-20 concrete can be provided over which the red brick masonry work can be done upto plinth level.

4.2 In superstructure (including parapet wall)

Fly Ash brick masonry work (Bricks conforming to IS 12894 of 2004) shall be used in outer walls of superstructure in 1:6 cement mortar (with PSC/PPC cement). The outer wall shall be of full brick size (230 mm).

The inner wall shall be in pre-cast concrete hollow blocks (150/100 mm), conforming to IS 2185 Part-I: 2005. 6 mm dia. Mild steel Reinforcement shall be provided at every 4th course (embedded in cement mortar or otherwise) in the precast concrete hollow block masonry work.

The parapet wall over roof slab on the periphery will be in full brick size (230 mm) laid in 1:4 cement mortar (with with PSC/PPC cement).

5. Plastering work (Internal and external)

5.1 Internal wall plaster:

12mm thick cement plaster in 1:6 cement mortar (with PSC/PPC cement) with clean coarse sand of FM 1.5, in single layer.

13.External wall plaster:

20 mm thick cement plaster in 1:4 cement mortar (with PSC/PPC cement) with clean coarse sand of FM 1.5, in single layer.

Cement punning shall be provided of 1.5mm thick upto plinth band level in all building immediately after external plaster.

14.Ceiling plaster:

6 mm thick cement plaster in 1:3 cement mortar (with PSC/PPC cement) with clean coarse sand of FM 1.5, in single layer.

15.Plaster in Chajjas:

6 mm thick cement plaster in 1:3 cement mortar (with PSC/PPC cement) with clean coarse sand of FM 1.5, in single layer with suitable rain cuts along three edges of the chajja. The raincuts should be prepared with proper plastering (beat work) instead of simply pointing work.

16.Cement punning:

Cement punning shall be done over slab (wardrobe shelf of rooms and slabs below kitchen deck slab) which will be 1.5 mm thick with PSC/PPC cement.

7. Plain Cement Concrete:

Plain cement concrete or mud mat of 1:4:8 (one PSC/PPC cement, four sand of FM 2.5-3.0, eight aggregates of metal grade III: 50-25 mm) shall be used below footing, wherever required.

Plain cement concrete of 1:3:6 (one PSC/PPC cement, three sand of FM 2.5-3.0, six aggregates of metal grade III: 50-25 mm) shall be used below flooring, below bottom reinforced concrete slab of septic tank etc, wherever required as directed by EIC.

8. Reinforcement

Fe500/550 conforming to IS 1786:2008 High corrosion resistant -TMT Bars of TISCON (TATA), SAIL, JINDAL, VIZAG (RINL) or Electro-steel or equivalent.

9. Flooring, Skirting and Dado Sub-Base for Flooring in Ground floor

In ground floor before flooring 75 mm local sand shall be filled and properly rammed after providing adequate water OMC for proper compaction. Over this sand layer, one flat brick soling with 75A bricks shall be provided and the joints filled with local sand. Over the flat brick soling 100 mm thick PCC 1:3:6 of M10 Grade shall be provided which will form the sub-base for flooring in the ground floor.

9.1 Floor Tiles of bedroom, hall, living room, balcony and passage/ lobby

Vitrified floor tiles 600mm X 600mm X 8mm thick conforming to IS: 15622/ISO 13006, of approved make, colour and shades, laid on 20mm thick 1:4 cement mortar (1 cement : 4 coarse sand) including pointing the joints with white cement mixed with matching pigment etc., shall be provided in floor of bedroom, hall, living room, balcony and passage/ lobby. Skirting of similar material of 150 mm height shall be provided.

10.0 APP over sunken slab in Bath/ Toilet

Atactic Poly-propylene Polymer (APP) modified prefabricated five layer 3mm thick water proofing membrane, black finished, reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/ sqm needs to be provided in Sunk slab of Bath/ Toilet for water proofing.

Fill Material- Before laying Floor tiles in bath/toilet the space between sunken slab and floor need to be filled by lightweight materials with negligible pores such as fly ash etc.

11.0 Floor of Kitchen and Bath/ Toilet

Ceramic antiskid tiles in floor of size 300mm X 300mm X 6mm thick conforming to IS : 15622, in approved make, colour, shade laid on 20 mm thick Cement Mortar 1:4 (1 cement : 4 coarse sand) including pointing the joints with white cement mixed with matching pigment etc., shall be provided in floor of Kitchen and Bath/ Toilet.

12.0 Dado/ Wall Tile Work in Kitchen and Bath/ Toilet

In Kitchen- The skirting will be 150mm high and will be of the same material of which the floor has been provided in the kitchen. In dado, ceramic glazed tiles of size 300mmX300mm X 6mm thick conforming to IS: 15622, in approved make, colour, shade laid on 12 mm thick Cement Mortar 1:3 (1 cement : /3 coarse sand) including pointing the joints with white cement mixed with matching pigment etc., complete shall be provided upto a height of 600mm above kitchen counter top all along the adjacent wall of the kitchen counter top including window sill and window side wherever applicable.

In Bath/ Toilet- In dado of Bath/ Toilet, ceramic glazed tiles of size 300mmX300mm X 6mm thick conforming to IS : 15622, in approved make, colour, shade laid on 12 mm thick Cement Mortar 1:3 (1 cement : /3 coarse sand) including pointing the joints with white cement mixed with matching pigment etc., complete shall be provided upto a height of 2 m from floor level in all walls of bath/toilet.

13.0 Floor of Staircase

Kota stone of minimum thickness 25mm shall be used for flooring in risers and treads of steps, skirting and/ or pillar laid in minimum 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the kota stone including rubbing and polishing complete. Single stone is to be used for riser and treads of steps and the size of kota stone should be chosen such there should be no horizontal joints in the skirting of the stairs. The height of the skirting should be such that from the outer edge of the tread the skirting should be atleast 150mm in height. The upper edge of the skirting should be in straight line.

14.0 Doors and Door Frames

14.1 Pressed steel door frames conforming to IS: 4351, manufactured from commercial mild steel sheet of 1.60 mm thickness, including hinges, jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.60 mm, pressed mild steel welded or rigidly fixed together by mechanical means, including M.S. pressed butt hinges 2.5 mm thick with mortar guards, lock strike plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface all complete. Two coats of synthetic enamel paint of approved shade and make over steel door frame surface after cleaning the surface thoroughly shall be provided. The frame shall be fixed with adjustable lugs with split end tail to each jamb.

14.2 External Doors: Minimum 30mm thick solid core type non-decorative single leaf flush shutter conforming to IS 2202-1 (1999) with black board core blended with high quality phenol formaldehyde synthetic resin both side commercial veneeres of standard make for external doors.

14.3 Internal Doors: Minimum 25mm thick flush door shutters non decorative type, conforming to IS : 2202 (Part 1), interior grade, commercial type, core of block board construction with frame of first class hard wood and well matched commercial ply veneering with vertical grains, cross bands and face veneers on both faces of shutters. The doors in the bath/ toilet will be provided with aluminum metal sheet all over its face in inner side. There will be no painting on the inner side of the bath/ toilet door however, two coats of primer with antitermite solution mixed suitable shall be provided.

14.4 Both external and internal doors will include hinges, should be all complete with ISI Mark Powder coated (minimum thickness of powder coating 50 micron). Aluminum Door fittings namely Tower Bolt: 150 x 10 mm, Sliding Pad Bolt: 250 x 16mm, Handle: 125 mm and Floor Door Stopper: Single Rubber Stopper.

15.0 Painting: Two coats of synthetic enamel paint over one coat of wood pink primer of approved shade and make over new wooden surface after cleaning and smoothening of wooden surface with sand papers of appropriate numbers all complete.

16.0 Fire Door and Door Frame in Fire Staircase: Fire resistant door frame shall be provided in fire staircase of section 50 x 60 mm on horizontal side 35 x 60 mm on vertical sides having built in rebate made out of 1.6 mm thick GI sheet (Zinc coating not less than 120gm/m²) suitable for mounting 120 min Fire Rated Glazed Door Shutters. The frame shall be filled with Mineral wool Insulation having density min 96Kg/m³. The frame will have a provision of G.I. Anchor fasteners 14 nos. (5 each on vertical style & 4 on horizontal style of size M10 x 80) suitable for fixing in the opening along with Factory made Template for SS Ball Bearing Hinges of Size 100x89x3mm for fixing of fire rated glazed shutter. The frame shall be finished with a approved fire resistant primer or Powder coating of not less than 30 micron in desired shade.

16.1 : 60 mm thick glazed fire resistant door shutters in fire staircase of 120 min fire rating confirming to IS:3614 (Part II) or EN1634-1:1999, tested and certified as per laboratory approved by Engineer-in-charge, with suitable mounting on door frame, consisting of vertical styles, top rail & side rail 60 mm x 60 mm wide and bottom rail of 110 mm x 60 mm made out of 1.6mm thick G.I. sheet (zinc coating not less than 120gm/m²) duly filled mineral wool insulation having density min 96 kg/m³ and fixing with necessary stainless steel ball bearing hinges of size 100x89x3mm of approved make, including applying a coat of approved fire resistant primer or powder coating not less than 30 micron.

17.0 Windows, Ventilator and Associated Grill

Aluminum work for windows and ventilators with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of approved dia and size; including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminum sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminum snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. Including Glazing, paneling and dash fasteners. Powder coated Aluminum sections shall be used (minimum thickness of powder coating 50 micron) with float glass panes of minimum 4.0 mm thickness. The aluminum plate wherever used of 1.5mm thickness.

M.S. grill made of 20mm x 6mm M.S. flat or 10mm square bar with minimum 18 Kg per sqm as per approved drawing, properly fabricated with joints continuous fillet welded and finished smooth or as approved by Engineer In charge for windows & ventilator. Two coats of synthetic enamel paint of approved shade and make over a coat of red oxide zinc chromate primer after cleaning the surface thoroughly all complete.

18.0 Railing in Balcony and Staircase

Railing in Balcony and Staircase will comprise of Steel work welded in built up sections of height not less than 1.2m with minimum 18 Kg per sqm 16 guage properly fixed and applying two coats of synthetic enamel paint over a priming coat of red oxide zinc chromate primer. Over the steel work circular pipe will be welded which will be also painted as the steel work are painted. Railing work shall conform to IS 1239-1 (2004)

19.0 Kitchen Countertop and Shelf

Countertop- The kitchen countertop base slab shall be constructed with RCC 1:1.5:3 M-20 concrete with 6mm and down stone chips and 6mm dia MS Bars. The Thickness of the slab will be 50 mm. Over this slab, 600mm x 25mm thick Kota stone shall be provided. The stainless steel sink will be adjusted suitably and shall be in level flushed with the kitchen finished countertop so that the water on the kitchen countertop finds way smoothly to the sink. Kota Stone shall also be provided in the core of the kitchen slab, flushed with the outer edge of the horizontal slab. The Kota stone should be fixed with cement mortar 1:3.

Shelf Below Kitchen Platform - The space below the kitchen platform shall be constructed with RCC 1:1.5:3 M-20 concrete with 6mm and down stone chips and 6mm dia MS Bars suitably divided in two parts in order to accommodate gas cylinder in one part. In the remaining part between the kitchen platform and the floor one horizontal RCC slab of 50mm thickness shall be provided for accommodating kitchen utensils and other kitchenware. This slab needs to be finished with 1:3 cement mortar and 1.5 mm thick cement punning. The lowest enclosure of the shelf shall be 75mm above floor level.

Shelf Above Lintel in kitchen- The Shelf above lintel level of 63mm thickness which shall be 60cm projection along three sides of wall shall be constructed with RCC 1:1.5:3 M-20 concrete with 6mm and down stone chips and 6mm dia MS Bars. The slabs need to be finished with 1:3 cement

plaster and 1.5mm thick punning over it. The color wash of the room shall be applied on this slab also after finishing with plaster etc

20.0 Shelf in Bedroom and Drawing Hall

The Shelf in bedroom and drawing hall shall be of 63mm thickness shall be RCC 1:1.5:3 M-20 concrete with 6mm and down stone chips and 6mm dia MS Bars suitably partitioned so as to hang coats, sarees, etc in one upper part and the remaining portion can be sub divided to keep folded clothes, books, etc. A hanging rod shall be provided for hanging coat, sarees etc. All the slabs needs to be finished with 1:3 cement plaster with 1.5mm thick punning on its top and front face. The lowest enclosure of the shelf shall be 75mm above floor level.

The Shelf above lintel level shall be constructed of 75mm thickness and 750mm projected in all sides of wall in bedroom which shall be constructed in RCC 1:1.5:3 M-20 concrete with 6mm and down stone chips and 6mm dia MS Bars. All the slab needs to be finished with 1:3 cement plaster with 1.5mm thick punning and 1.5mm thick punning over it. The color wash of the room shall be applied on this slab also after finishing with plaster etc.

21.0 Terrace and Parapet Wall

Staircase tower shall vertically extend as per the typical drawing to have sufficient head room which will be covered with RCC slab of thickness as per design with minimum M-20 concrete. APP water proofing will be applied over the staircase roof also. The staircase tower roof slab will necessarily have to be projected so that the water cut can be provided in the projected portion which will avoid rain water flowing from the roof top finding way directly through walls. The vertical walls of the staircase tower will be 230mm thick constructed by Fly ash brick.

Wall all around the roof in parapet will be 1m high 230 mm thick full brick/ concrete wall. The parapet wall will be plaster from inside 1:4 cm and 1:3 cm plaster on top. 1.5mm cement punning will be done on the flat top portion of the parapet wall.

All terrace and parapet walls shall be finished with Premium exterior acrylic smooth paint silicone additives. (Two or more coats applied @ 1.43 ltr/ 10 sqm over priming coat of cement primer applied @ 2.20 kg/ 10 sqm).

22.0 Painting

Internal walls and ceiling- Painting with two coats of interior acrylic emulsion paint of approved shade (however, for ceiling only white color paint shall be used) and make over surface smoothened after applying Birla putty or equivalent of any other make of 2mm thickness and providing over it a primer coat of cement primer. Exterior walls with Premium exterior acrylic smooth paint silicone additives. (Two or more coats applied @ 1.43 ltr/ 10 sqm over priming coat of cement primer applied @ 2.20 kg/ 10 sqm)

23.0 Wooden Work- Two coats of synthetic enamel paint over one coat of wood pink primer of approved shade and make over new wooden surface after cleaning and smoothening of wooden surface with sand papers of appropriate numbers all complete.

24. Steel Surface - two coats of synthetic enamel paint of approved shade and make over steel surface after cleaning the surface thoroughly all complete.

24.0 Internal Sanitary and Collecting Chamber India Water Closet (I.W.C)

Viterous white glazed earthen ware I.W.C. conforming to IS 2556 Part-III of approved make with attached footrest (Preferably Orrisa Squatting Pan in white color of size 580x440x300 mm) with 100mm H.C.I. 'P' or 'S' trap and not less than 5 Litre low level plastic cistern of approved make in white color with brass stop cock (weight 50gm or more), PVC connection pipe etc all associated fittings to complete the job which can be utilized by the residents thereafter.

25.0 Wash Basin

Vitrified white glazed earthen ware wash hand basin of minimum size 450mm x 300mm of approved make conforming to IS 2556 Part IV of flat back of one piece construction including combined overflow basin single tap hole of size 28 sqmm or 30mm rounded. The basin shall have circular waste hole or 5sqcm slot type overflow supported on painted C.I. or R.S. cantilever brackets conforming to IS 775 (use of MS angle or Tee section as bracket not permitted) with 32mm C.I. brass waste, 15mm dia C.I. body brass spindle stop cock of approved quality and weight not less than 330 grams, 32mm P.V.C. waste pipe 750mm long with brass coupling at one end all to be put to use for residents. A suitable brass bib cock with chromium coated not less than 400gms should be mounted on the wash basin.

26.0 Drainage of Domestic Water

Sewage disposal from WC & waste water from kitchen & Bathroom has to be taken out with suitable dia PVC pipe, "S/P" trap & fittings including steel/ strainers as required. It shall be responsibility of contractor to make essential arrangements for disposal of rain water from terrace (roof slab) by providing proper gentle slope in the roof/ terrace slab and by providing appropriate PVC/uPVC pipes of size between 75 to 100mm dia conforming to IS 13592 and fittings conforming to IS 13591, free from cracks, flaws and defects and shall be able to withstand the water pressure all complete. The connection between two pipes shall be made with approved sealant and the joint should be leak proof. The PVC pipe should be fastened to the wall with suitable fasteners at desired location as per IS code in this regard. All the roof top water should be taken to the nearby rain water harvesting collection pit so that the water so collected can be gainfully utilized in recharging the water table.

27.0 Miscellaneous Items to be put in the Dwelling Units

Following items shall be provided by the contractor in each Dwelling Unit:-

- a) C.P. brass towel rail 600mm long and 20mm dia with two C.P brass bracket coated. The rail shall be coated with chromium plated of thickness not less than grade no. II of IS 4827.
- b) C.P. brass soap dish container medium quality with screw and hinges etc.
- c) C.P Brass towel ring of dia 175mm and thickness not less than 8mm.
- d) Stainless Steel A ISI 304 (18/8) Kitchen Sink (Inner dimension 550 x 400mm, depth 200mm) shall be provided in Kitchen with compatible Stainless steel drain board (min. thickness 1 mm) as per IS : 13983 with C.I. brackets and stainless steel plug 40 mm to be placed flushed with kitchen slab. The gap between board and platform/wall shall be finished with white/matching cement.

28.0 Other Attachments related to PHE works

Male ended 15mm dia brass bib cock shall be provided of approved quality (Wt. not less than 400 gms.) with extra socket all complete; One for Bathing purposes in the bathroom and one near I.W.C and one for Kitchen sink (This does not include the tower bib cock which will be put on the wash basin).

Duct portion up to plinth level shall be constructed as collecting chamber and covered with flag stone.

The above list may not be complete and suitable additions may be suggested with contractor has to comply with.

29.0 Internal Water Supply

The internal water supply will be through PVC pipes (except for toilet where uPVC shall be used with fittings of specified dia including laying, fixing, cutting, jointing, painting etc for vent overflow, waste water pipeline etc. The pipe and fitting shall conform to series IV of IS 4985-1978

PVC pipes and fittings (Bend, Tees, Unions, reducers, etc) shall be free from cracks, flaws, defects and shall be able to withstand requisite pressure. 15mm CP brass bib cock not less than 400 gm with 15mm dia UPVC pipe. The water supply pipe connecting various floors should be 25 mm UPVC pipe. The distribution pipelines in various floors should be done with 20mm dia pipes unless until directed otherwise. The spacing between clamps for internal pipes shall be around 700mm for horizontal runs and 1000mm for vertical runs.

Construction/ Installation of RCC water tank/ polyethylene water storage tank(s), ISI: 12701 marked as approved by Engineer in charge on roof of every building. The capacity of the tank should be computed as per latest CPHEEO Manual for each Dwelling Unit. RCC water tank should have proper manhole (with CI cover) and flushing hole to dispose off water at the time of cleaning. Proper arrangement for a person to enter the water tank (for Cleaning shall be made). The RCC tank, if constructed, should be properly plastered from within by 20mm 1:3 cement mortar plaster with suitable waterproofing agent with 2mm thick cement punning on all the walls and bottom slab.

All other fitting and installations required for healthy living the residents in line with the Affordable Housing Policy need to be provided by the contractor at their cost if directed.

All other fitting and installations required for healthy living the residents in line with the Affordable Housing Policy need to be provided by the contractor at their cost if directed.

Gun metal full way valve with each Overhead tank shall be provided.

Unions, non- return valves and other fittings are to be provided as per requirement for ease of operation and maintenance.

The contractor will be wholly and solely responsible for providing house service connection joining the external pipeline with individual dwelling units of each block.

30. Internal Electrification and Panel Room

30.1 : 5 nos. light points, 1 no tube light point, 2 nos. fan points and 4 nos. Plug socket points, all of 5 Amp in each dwelling unit all complete with Piano Type switch and socket.

30.2 15 Amp Plug Socket Point with fittings 2 Nos (1 for Kitchen and 1 for Hall), Telephone socket and T.V antenna socket in each dwelling unit.

30.3 pin ceiling rose on the junction box at suitable location needs to be in all building blocks.

31. Ceiling Fan and Fan Regulator- 1200mm Sweep, double ball bearing, 2 canopy ceiling fan shall be provided along with electronic step mini fan regulator in each dwelling unit.

32. Bulb and Batten/ Angle holder- LED Bulbs of minimum 9/12W shall be provided at suitable locations along with batten/ angle holder all the building blocks.

33. Electronic Call bell shall be provided for each dwelling unit.

34. In addition, one light point shall be provided outside the main door of each DU.

35. 1.5 sq mm. stranded copper wiring with concealed PVC conduit pipe.

36. 16 Amp. M.C.B. including required size of Switch Board.

37. 2+4 way MCB 240 Volts SPN MCB-1 no for each DU **38.** 6- 32 A SP MCB 240 volts, 'C' curve- 2 nos for each DU **39.** 40 A SP MCB 240 volts, 'D' curve-1 no for each DU

The internal as well as external wiring in the houses constructed under Smart City Mission will be fully concealed.

All material should be conforming to I.S.I. standard and relevant IS Codes and before using the same it shall be approved by Employers Representative.

4 nos. plate earthing with necessary fittings/ wiring all complete for every building shall be provided in each building.

Lightening conductor with all accessories shall also be provided as per relevant norms. Meter room should be constructed separately.

Contractor shall also provide all electrical works upto meter board panel.

Suitable Illumination at the following places in the building also will be the responsibility of the contractor:

iv. Staircase at Suitable landings

v. Roof at suitable place

vi. Near Common Meter Panel

vii. Back of the building

All other fitting, installations and wiring required for healthy living the residents in line with the Affordable Housing Policy need to be provided by the contractor at their cost if directed.

40.0 Fan Hook

Fan hooks of 16mm dia M.S. bar & suitable length, bent to required size and shape, placed in position and fixed in the R.C.C.slab/beam at the time of casting.

41.0 Roof Top Rain Water Harvesting arrangement (including recharging pit)

Rain water harvesting system associated with 80-100m deep, 100-150 mm dia tube well (extending upto fracture zone/ GW aquifer), recharge pit of length and width varying between 5-7 mt and depth about 6 metres with five layers of coarse sand & gravels upto natural ground level with stainless steel wire mesh suitably tied on the top of 10-15 cm and Rain Water Harvesting recharge Pit (As per Typical Drawing) for each block. Before the recharge pit, an inspection chamber (Pre-chamber) shall be constructed, where the water will be retained for some time before letting into the recharge pit. Water will be brought from the roof top catchment, first to the pre-chamber and then to the recharge pit through 75mm PVC pipe. For designing the rainwater harvesting pit, the manual of CPWD on Rain water harvesting has to be referred to/ followed. The Ground Water Directorate of Water Resources Department, Government. of Jharkhand has also brought out a booklet on Rain Water Harvesting which can be obtained from them. Their email id is- dirgwdran-wrd-jhr@nic.in).

42.0 Building Elevation

Building elevation shall be strictly in accordance with the elevation details shown in approved execution drawing.

43.0 Expansion Joint

To be constructed as per relevant I.S. code in this regard.

44.0 Internal Road Work

The Cement Concrete road will be 200mm thick M-25 Concrete with proper camber laid over lean concrete of 100mm thick M-15 with extra 300 mm on each side of the road. Lean concrete shall be laid on 150 mm sand filling. The width of the road ideally should be 4.5m but may increase as per the site condition. For details of footpath, drains along the road, etc,

45.0 Sewer Drain

Manhole- Brick masonry manhole chamber 800x900mm, R.C.C. Slab top in 1:1.5:3 concrete mix P.C.C- 150 mm thick (P.C.C. 1:3:6).

Pipe- 150mm Dia, 225mm Dia & 300mm Dia RCC Hume Pipe including fitting accessories.

The house service connection between individual dwelling units and the sewer drain as well as the sewer drain and main truck drain will be the responsibility of the contractor.

46.0 Landscapping/ Green Space/ Park (Must be 10% of the total project area at each site)

i) Soil filling -Good Earth + cow dung / dump manure.

46.1 Plantation -Doob grass, Hedges &Furns, Adansonia digitata (Kalp vricksh), Bauhinia Acuminata shrub in earthen Pot, etc all complete on fine dressed ground.

46.2 Making Brick Side Edging, Lawn Turf etc all complete.

47.0 Under Ground Water Tank/Sump Well Including Pumping Arrangement

47.1 R.C.C. M-25 or more as per approved design with special water proofing.

47.2 150 mm thick (P.C.C. 1:4:8).

47.3 Crushed Stone Dust of Sand/Moorum filling around the water tank in case of clayey soils to avoid pressure on the tank due to expansion of soils. **47.4**The capacity of Sump should be computed as per latest revision of CPHEEO Manual each Dwelling Unit.

48.0 Compound Fencing and Gate

Barbed Wire Fencing- Fencing with R.C.C. post of mix 1:1.5:3 and 2m height placed at required distance, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be struted on both sides and end post one side only, provided with horizontal lines and two diagonals of barbed wire weighing 9.38 kg per 100 metres (minimum), between the two posts fitted and fixed with G.I. staples on wooden plugs or G.I. binding wire tied to 6 mm bar nibs fixed while casting the post. With G.I. barbed wire.

GATE- Supplying, fitting & fixing 20 gauge G.C.I sheet gate of suitable width fitted on M.S Angle frame of size 60x60x6 mm including cost of fabrication, providing necessary locking arrangement with haskal and domny duly fixed in R.C.C. M-200 with normal mix of (1:1.5:3) in column of required size with approved quality of stone chips 20mm to 6mm size graded and clean coarse sand of F.M. 2.5 to 3, applying two coats of synthetic enamel paint over a priming red lead paint over steel work and two coats of exterior quality acrylic paint of approved shade over a coat of cement primer including 19mm thick water proof plaster over R.C.C column.

49.0 Septic Tank

R.C.C septic tank to cater to the needs of all residents shall be designed by the contractor as per CPHEEO Manual/ IS 2470 and got approved along with the building designs. The number of septic tanks and the locations will be site specific has to be got approved along with the building designs for which the computation needs to be provided by the contractor.

A suitable covered soak pit attached with every septic tank shall also be constructed by the contractor.

50.0 Tube Well and Pump House

Attention of Contractor: It is brought to the knowledge of the contractor that the tube well and pump house is to be constructed in such a way if piped water supply is not available the tube well is

capable of meeting the domestic water needs however related details but not limited to is provided below. Successful drilling of perfectly vertical bore hole of a diameter suitable to receive 150mm nominal diameter casing pipe upto desired depth to achieve required yield below ground level for transporting, lowering and fixing of 150mm nominal diameter G.I. casing pipe inside the bore hole including all works pertaining to drilling such as transportation, installation and removal of drilling machine, etc. all complete.

I.S.I. Marked G.I. Casing pipe (plain) medium class in 4 to 7 meters or required length one end fitted with socket as per I.S. 1239 (Part-2) 1992 with IVth revision (Up-to date amendments)

Conducting yield test or development of tube-well by operating the pumping set continuously for a desired time interval as per the direction of Engineer in charge including all complete.

Making hydrant pillar work with bricks of required crushing strength not less than 25kg/sq.cm in cement mortar 1:4 including 10cm thick coping 1:2:4 (stone aggregate, 12.5mm nominal size) rendered smooth with neat cement and plastered with 12mm cement mortar 1:4 including finishing with floating coat of neat cement over 15cm thick foundation concrete 1:5:10 (stone aggregate 40mm nominal size) including earth work and disposal of surplus earth complete as per standard design.

Submersible pump of suitable HP 12 stages having discharge 300 ltr. / min. as per I.S.I. Specification with 4 Sq mm Cable wire and panel board with starter suitable for above 5 HP pumps shall be provided.

Mono block pump upto 5 HP as per I.S.I. Specification with 4 Sqmm Cable wire and panel board with starter suitable for above 5 HP pumps. as per site requirement shall be provided.

51.0 External Electrification

External electrification work shall be suitably designed and provided to cater the requirements of all the dwelling units. The contractor has to co-ordinate and follow-up with concerned BBVNL/Applicable local authority for obtaining necessary sanction towards the scheme. The scheme so sanctioned should be inclusive of required specification layer and other drawings etc. complete as per requirement.

All the respective charges to be paid to BSEB/BBVNL like strengthening, supervision charges etc. outside the transformer to be installed by contractor shall be borne by implementing agency however, the contractor shall facilitate and carry out the liaising work for getting demand notice and supporting documents along with approvals from BSEB/BBVNL. The contractor take note of this and they should not load the same unnecessarily in the price quoted for the work under consideration.

The details scope of work related to aforementioned external electrification may include (but not limited to) the following:-

51.1 Preparing & submission of 3 set of drawings after carrying as of survey & getting approval from Supervisor.

51.2 Obtaining necessary permission in respect of road/soil/footpath cutting from the external agencies namely PWD, RCD etc. as the case may be.

51.3 Preparation & submission of good for construction drawings.

51.4 The agency shall be responsible for submission of all documents to electrical inspection authority and other local body towards the completion of entire work at their own cost, failing which the work may not be treated complete.

51.5 Charging permission of the installation.

51.6 Inspection report of the various equipment and material required for external electrification.

51.7 The approval of Chief Electrical Inspector shall be taken by the contractor for installation of transformer and other equipment.

51.8 Arranging pre & post state wise & final testing and commissioning of the Installation from BBVNL/Applicable local authority and electrical inspector etc as required including any shutdowns if required.

51.9 All papers/required documents/drawings to be submitted by the bidder to BBVNL/Applicable Local Authority is to be submitted first to implementing agency and after taking their approval only, the same can be submitted BBVNL/Applicable Local authority.

52.0 Parking

Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete.

The paver block mentioned above shall be laid above random rubble masonry base properly compacted.

Please note that as per Bihar Building Bye- Laws for affordable housing, 20% of the total Dwelling unit shall be provided with car parking and remaining 80% shall be two wheeler parking.

53.0 Street Lighting

Solar 30 W LED Street Light System including 30 W with inbuilt charge controller and dusk to dawn controller LED OSRAM or equivalent. Pole of M.S Material with powder coating and 6m height. Battery 12 V/ 75 A-h, suitable for 2 days autonomy/ service. Solar Panel 75 WP (MNRE approved with IDO 9001:2008 Certified). Battery with automatic Dusk-down on-off system.

54.0 Lifts

Bihar Building Bye-laws makes provision of Lifts mandatorily in G+4 buildings or in buildings of height 12 m and above. The number, type and capacity of lift shall be in accordance with Part VIII, Building services, Section-5, Lift, elevators and escalators in National Building Code (NBC) of India, 2016.

Out of the total number of lifts provided in accordance with NBC, one stretcher lift shall be mandatory for building more than 6 stories high.

The provision and make of lift has to be also got approved by the IIT/NIT / Govt. Engineering College as mentioned in the Bid documents while getting other designs approved.

55.0 Fire Fighting System

All high rise buildings (15m or above height, irrespective of its occupancy) should be equipped with Fire Fighting System as per provisions indicated by NBC and that will be applicable in affordable housing buildings also. The building design shall comply to the applicable provisions (including Fire Exit Staircase) of Fire and Life safety as mentioned in National Building Code of India 2016, Volume I, Part-IV –Fire and Life Safety and bidder shall submit compliance report of these provisions in their proposal.

Adequate nos. of detectors (smoke/optical), Sprinkler, Fire Extinguisher, Hose Reel, Wet/ Dry Riser, Down comer, Yard Hydrant and others shall be provided in every high rise building and shall be connected with Fire water tank of required capacity at the top of the roof.

The High Rise building can't be handed over by the contractor if the fire fighting system is not constructed and put to place as per National Building code/State Fire safety regulation/ norms.

NOTE:

1.The above specifications to the extent practicable are in line with the Govt. of Bihar SOR. Some up gradations have been made on the basis of feedback received from various stakeholders by the decision makers. Any deviation from the policy/Bye- Laws must be got approved from the implementing agency before execution. The decision of the implementing agency will be final and binding to the constructing agency.

2. if any ambiguity arises in the above technical specifications, BCD/CPWD technical specifications to be followed for the Construction work. Nonetheless, CPWD Specifications will prevail over the above in case of any obligation on either side.

List of Approved Makes

CIVIL ITEMS:

Sr. No.	Description of Approved Material	Approved Make
1 (a)	Cement (PPC/PSC)	Ultratech (L&T)/ Ambuja/ACC /Konark/ Birla Gold/ Emami Double Bull/JK/Coramandel /Lafarge etc.,
1 (b)	White Cement	JK White/ Birla White
2	Reinforcement Steel	SAIL/ TISCON(TATA)/ VIZAG (RINL) /JINDAL, ELECTROSTEEL or equivalent
3	Structural Steel	SAIL/ TISCON(TATA)/ VIZAG (RINL) /JINDAL, ELECTROSTEEL
4.	Glazed Ceramic Tile	KAJARIA / JOHNSON/ SOMANI/ CERA/Orient Bell/RAK
5.	Ceramic Floor Tile	KAJARIA / JOHNSON/ SOMANI/ CERA/ Orient Bell/RAK
6.	Vitrified Tile	KAJARIA / JOHNSON/ SOMANI/ CERA/ Orient Bell/RAK
8.	Ply Wood, Shuttering Ply Conforming to IS 303-1989 / IS 4990-1993	M/s. Century Plyboards (I) Ltd. / M/s. Green Ply Industries Ltd.
9.	-	-
10.	Fire Door	Shakti Met-Door, Metaflex
11	Rolling Shutter	Bengal Rolling Shutter, 'Standard', 'Swastik', 'Diana', 'Hercules',
12.	Stainless Steel Section	SAIL/ TATA
13.	Stainless steel hardware for doors	Dorma /Haffelle/Dorset kaba
14	Glazing	Saint Gobain / Asahi Float Glass Ltd / Hindustan Safety Glass Works Ltd. / Modi.
15.	Injection water proofing, waterproofing repellents coating,water Conc. Admixtures. Plasticized membrane PVC of waterproofing	Sika Qualcrete Ltd./ Structural Waterproofing Co. / Pidilite Industries Ltd. / Fosroc / BASF. (The applicator has to be certified by the water proof vendor)
16.	Synthetic Enamel Paints, Distemper, Acrylic Emulsion Paints, Melamine	I.C.I (I) Ltd. / Berger Paints (I) Ltd. / Jenson & Nicholson (I) Ltd. / Asian Paints (I) Ltd. /

Sr. No.	Description of Approved Material	Approved Make
	Coating, Aliphatic Acrylate	FOSROC Chemicals(I) Pvt Ltd.
17.	Flush door (Factory made)	M/s. Century Plyboards (I) Ltd. / Green ply / Merino Industries
18.	Aluminium Sections and Extrusion shall conform IS:733-1983 and IS:1285-1975	HINDALCO / JINDAL
19.	General Hardware	
	a) Latches, hinges etc.	GODREJ / DORMA / HAFELLE
	b) Locks, Flush bolt	GODREJ / DORMA / HAFELLE
	c) Handles	GODREJ / DORMA/ HAFELLE
	d) Screw	Nettlefold / GKW / ND
	e) Door Closure	GODREJ / DORMA/HAFELLE
	f) Floor Spring	GODREJ / M/s. EVERITE Agencies Pvt. Ltd. / M/s. Garnish
	g) Aldrop	ISI Marked
	h) Tower bolt	ISI Marked
	I) PVC Buffer block	ISI Marked
	J) Door Stopper	ISI Marked
	k) Patch fittings for toughened glass	Dorma Systems
20.	Laminates	—DECOLAM (Bakelite Hylam Ltd.) / —MERINO (Century Laminating Co. Ltd.)/ GREENLAM (GREEN PLY)
21	Kota stone (Bluish grey/ Green)	Premium
22	Waterproof Adhesive for Tile / Slab fixing to wall or floor	Terraco India (P) Ltd. / M/s. Pidilite Industries Ltd. / M/s. Roffe Construction Chemicals Pvt. Ltd.
23	Sealant	Rhodorsil-33, Pidi seal A-11 & B-11: M/s. Pidilite Industries Ltd., Techseal RDL-600, Techseal RDL-940, Techseal RDL-1000: M/s. Choksey Chemical (P) Ltd. Roffseal: M/s. Roffe Construction

Sr. No.	Description of Approved Material	Approved Make
		Chemicals Pvt. Ltd. or Fosroc ., Sikk Polysulphide/ Dr. Fixit Pidiseal PS (42 P) MYK.
24	Tile Jointing Materials	—Rainbow Tile Mate – HDI(M/s. Roffe construction Chemicals Pvt. Ltd.).
		—Terragroutl (M/s. Terraco India (P) Ltd.). or
		Fosroc
25	Decorative Ply (Teak / Cedar / Mahegony /Walnut Veneer)	M/s. Century Plyboards (I)Ltd./ GREEN PLY
26	Cement Based Exterior Textured Paint	ICI (I) Ltd / Asian Paints / Berger Paint (I) Ltd./Jenson & Nicholson
27	Glass Mosaic tiles	Shon, Kent, Bisazza
28	Glass for structural glazing & canopy (Coloured Reflective toughened glass)	Saint Gobain / Hindustan Pilkington/ Ashai float glass.
29	Silicone Sealant	GE/Dow Corning
30.	Aluminium composite panel	Aluco bond, Aludecor, Alstrong
31.	MS Conduit pipe	BEC /SUPREME/ AKG
32.	PVC Conduit pipe	PLAZA/PRECISION/POLYCAB/AKG/ Arkaylite/ Havells,JUVAS
33.	Pre-constructional Anti-termite (Chloropyriphos)	Pest Control India or approved by Engineer-in- charge
34.	Cement Primer	ICI / BERGER / ASIAN PAINTS/ JENSON & NICHOLSON
35.	Textured Paint	ICI / BERGER / ASIAN PAINTS/ JENSON & NICHOLSON
36.	Waterproofing acrylic emulsion Exterior grade paint	ICI/ BERGER / ASIAN PAINTS/ JENSON & NICHOLSON
37.	Acrylic Polymer waterproofing coat	SIKA / FOSROC / PIDILITE / ROFFE/ BASF

Sr. No.	Description of Approved Material	Approved Make
38.	Expanding grout admixture	SIKA / FOSROC / PIDILITE / ROFFE/ BASF
39.	Integral waterproofing compound	SIKA / FOSROC / PIDILITE / ROFFE
40.	Waterproofing admixture	SIKA / FOSROC / PIDILITE / ROFFE
41.	Plasticizer	SIKA / FOSROC / PIDILITE / ROFFE
42.	APP Modified Bituminous membrane	SIKA / FOSROC / PIDILITE / ROFFE
43.	Aluminium anodized louver	HUNTER DOUGLAS
44.	Structural glazing	JINDAL/HINDALCO .
45.	Stainless steel handrail with balluster	GODREJ / DLINE
46.	Floor hardener	Ironite/ Feronite

WATER SUPPLY, SEWERAGE & DRAINAGE

Sr. No.	Description of Approved Material	Approved Brand / Manufacturer
1.	G.I. Pipes - medium class (As per IS-1239, P - I)	TATA/JINDAL
2.	G.I. Pipe fittings (as per IS-1239, P - I)	HB/ "NB" /"ZOLOTO"/Leader / -"JSI"
	II) ; of material with Galvanised Cast Iron Fillings, with material code conforming to IS- 1879	approved Heavy

Sr. No.	Description of Approved Material	Approved Brand / Manufacturer
3.	C.P. on brass fittings	
	CP Bib cock	JAQUAR-Continental /CERA /ESSCO - Delux' or
		sumthing special'/ —Marcl/—Hindwarel or as
		approved by ENGINEER-IN-CHARGE
	CP 'Long Nose' /or' Long Body' Bib cock	- Do -
	CP Angle valve	- Do -
	CP 'Concealed' Stop cock 'Heavy' type with adjustable CP wall Flange	- Do -
	CP Shower Rose	- Do -
4.	Bronze /Gun metal-body—Pressure-	—Zolotol- 1040A / Leaderl/ —Santl / —Neta
	Release valve with threaded screwed ends, class (PN-1.0) / or (PN-1.6) class	
5.	Gun metal body Ball Float valve with PVC	Zolotol / Leaderl/ —Santl / —Neta

Sr. No.	Description of Approved Material	Approved Brand / Manufacturer
	(High pressure) Ball Float	
6.	15 mm dia. PVC Connector pipe with Symet nuts at both ends. - (for Wash Basin Pillar tap & W.C. & Urinal - Cistern connections)	PRAYAG or as approved by ENGINEER-IN-CHARGE
7.	Wall Outlet Connection Flexible Pipe - 15mm dia	"Jaquar" / —Esscol/ —Hindware
8.	Bronze /Gun metal-body Gate valve with threaded screwed ends, "Non-rising Spindle" type (PN-1.0) / or (PN- 1.6) class	—Leader/ —Zoloto/-for Bronze Sant / body / —Neta/ SBM – —Peglar/ type
9.	Bronze -body Globe valve with 'BSPT(F), threaded screwed ends, "Non-rising Spindle" type (PN-1.0) (PN- 1.6) class	Valves of 'Zoloto', or 'Sant' or as approved by ENGINEER-IN-CHARGE.
10.	CI body Gate /Sluice valve with flanged	—Sant' / —Zoloto'/Leader / —Hawa'

Sr. No.	Description of Approved Material	Approved Brand / Manufacturer
	ends rising Spindle" type (PN- 1.0) / or (PN-1.6) class	
11.	Pump for water supply .	'Willo' / 'KSB' / —CRI / —Grundfos//DP.pump
12.	CP Spreader- Urinal 15mm (for Urinals only)	for all Toilets :- Hindware / "Parryware" or as approved by ENGINEER-IN-CHARGE.
13.	Soil, waste & vent pipes / and Pipe Fittings & Specials :- C.I. Centri cast (as per 15- 3989)	NECO' / 'HEPCO' / 'KAPILANSH DHATU UDYOG (P) L TD.'
14.	C.P. on brass fittings	JAQUAR/ESSCO _-Delux'/Marc /Hindware /CERA/
15.	C.P. on brass fittings C.P. Waste Coupling, ii) C.P. Bottle Trap, iii) C.P Robe Hook, iv) C.P. Towel Rail. v) CP Two way Bib Tap	JAQUAR/ESSCO _-Delux'/Marc/ Hindware /CERA
16.	CP Toil. Paper Holder	- Do -

Sr. No.	Description of Approved Material	Approved Brand / Manufacturer
17.	CP Towel Ring	- Do -
18	CP Soap Dish Holder	- Do -
19.	CP Bottle CP Trap with wall connection Pipe	- Do -
20.	Sanitary Fixtures & Fittings	
	CP Robe Hooks	- Do -
	CP "Two-way" Bib cock	- Do -
	CP Shower Rose	- Do -
21.	Rigid PVC (Concealed) Waste pipe, [Schdl.-40], (as per ASTM D 1785)- (concealed or exposed)	Supreme / Oriplast / Finolex/ Utkarsh
22.	Rain Water Pipe Fittings :- 'Sand cast Iron' - "SWR" class, as per (IS: 1792)	DO
23.	'Salem' Stainless Steel Sink as per AISI	"Hindware" "Hafele" "Nirali", 'Parryware'

Sr. No.	Description of Approved Material	Approved Brand / Manufacturer
	304 (18/8) conforming to I.S.- 13983	
24.	Stone- Ware Pipes, and S.W. Pipe Fittings	Sonali / GINNI / NIRALI / Hind
25.	C. I. Manhole Cover (I.S. - 1726) - "Medium" or "Heavy" Grade (Light duty only on Oil/Grease Trap Chamber)	NECO' / 'HEPCO' / Swastika / _BPL' / _BICL.
26.	NP-2 class R.C.C. Pipes and Pipe Fittings (i.e., RCC Collars etc.)	/ _West Bengal Eastern Spuncrete Concrete /_HINDUSTAN' / Industries(P) Ltd. _SUR'./or equivalent ISI approved Make.
27.	Stone- Ware Gully Trap	Sonali / GINNI / NIRALI / Hind / or equivalent ISI approved make.
28.	C. I. Grating- (Over Catch Pit I Yard Gully Chamber), (I.S. - 1726) - "Medium" or "Heavy" Grade	NECO' / 'HEPCO' / _BPL' / Kapilansh Dhatu Udyog
29.	Rain Harvesting Agriculture Pump/	'Willo' / KSB / _CRI / _Grundfos / DP pumps/

Sr. No.	Description of Approved Material	Approved Brand / Manufacturer
	Pump of required capacity -.	
30.	"Enclosed" Analogue type Water Meter ("Bulk" Type), conforming to IS-2373 with Calibration Certificate, including all necessary accessories.	"Dashmesh" / 'Kaycee" / "Capstan"/ —Kentl.
31.	Bronzebody "Parallel Slide" 'Blow-off valve ("Spring loaded, blow-off pressure sellable" type), with flanged ends, also with matching Flanges (PN-1.0) / or (PN-1.6) class	Zoloto' / Sant –make / Leader.
32.	Air-Release Valve Bronzebody "Parallel Slide" 'Blow-off valve ("Spring loaded, blow-off pressure sellable" type), with flanged ends, also with matching Flanges (PN-1.0) / or (PN-1.6) class	Zoloto' / Sant –make / Leader.

Sr. No.	Description of Approved Material	Approved Brand / Manufacturer
33.	<p>Bronze / Gun metal -body Ball valve with</p> <p>'BSPT(F), threaded screwed ends, "quarter turn Lever operated" type (PN-1) / or (pN-1.6) class</p> <p>Gaskets-CAF 'Full face' conforming to IS-2712, Gr.- C; (3mm thick)</p>	<p>Valves of Bronze body :-'Leader', 'Zoloto' – Metal</p> <p>only:- Sant make / Leader.</p> <p>"Klinger" / "Permanite" / "Champion".</p>
34.	<p>CPVC and uPVC and HDPE pipe including fittings</p>	Ori-Plast /Suprim/Alom
35.	<p>Pressure Reducing Valve Blow-off</p> <p>VALVE : Bronze / Gun metal Body,:</p> <p>Bronze/Gun metal Body, Non-Return</p> <p>Valve (N.R.V) : C.I. Body</p>	<p>Zoloto, / "Sant" / —Leader / —Amcol/ —Hawal)</p>
36.	<p>(Vitreous Sanitarywares chinaware):-</p> <p>i) W.C. - (Indian type/ European Type)</p> <p>- with'S' / 'P' - Trap - Floor mounted type, without PVC Flushing Cistern</p> <p>ii) Wash Basins - "Flat-back" type</p>	<p>Hindware,/ —Parryware/ —CERA / KOHLER</p>

Sr. No.	Description of Approved Material	Approved Brand / Manufacturer
	rectangular pattern with —Esscoll CP Pillar Tap / or —Swan neckl type Mixer iii) Urinal - Flat back "Small" with CP Spreader, CP Waste coupling, CP Bottle Traps with waste pipes.	
37.	Wall Mirror	6mm thick 'Modiguard' / 'Ashai' / or equivalent as approved by ENGINEER-IN-CHARGE, with 12mm thick hard-board backing
38.	W.C.:- Floor mounted "Pedestal" type- W.C. -	'Hindware- /'Parryware'/'Cera' :-
39.	Wash Basin	'Hindware- /'Parryware' / 'Cera'
40.	For WC flushing :- PVC 'Low-level' "Dual- Flush" Cistern	Hindware' "SLEEK" or equivalent Parryware or 'Cera' Model.

ELECTRICAL ITEMS:

Sr. No.	ITEM	APPROVED MAKES
1	Diesel engine	CUMMINS / CATERPILLAR / KIRLOSKAR
2	Alternator	KIRLOSKAR / STAMFORD / AREVA
3	LT Cable termination materials	DOWELLS / COMET / LOTUS

Sr. No.	ITEM	APPROVED MAKES
4	Air Circuit Breaker	SCHNEIDER / ABB / L&T
5	MCCB / Contactor	SCHNEIDER / ABB / L&T
6	MCB Distribution Board	SCHNEIDER / ABB / L&T
7	MCB / RCCB / RCCBO	SCHNEIDER / ABB / L&T
8	Power Factor Correction Relay	SCHNEIDER // L&T/EPCOS
9	Power Factor Correction Capacitors	SCHNEIDER / EPCOS / L&T
10	Relays	SCHNEIDER / SIEMENS / L&T
11	Meters	SCHNEIDER / ENERCON/ AEI
12	Ammeter/Voltmeter selector switch	L&T/ KAYCEE / SALZER
13	Indicating Lamp	SCHNEIDER /SIEMENS/VAISHNO/ L&T
14	Push Buttons / Indicating Lamps	SCHNEIDER /L & T (RISHAB) / SIEMENS
15	CT	KAPPA / AUTOMATIC ELECTRIC / BCH
16	L. T. Power, control and signal cable	HAVELLS / POLYCAB / CRYSTAL
17	Cu. Wires	MESCAB / FINOLEX /HAVELLS
18	M.S.Conduit	JINDAL / TATA / GST
19	PVC conduit & Accessories	ISI Marked
20	Industrial Power Socket Outlets	SCHNEIDER / ABB / L&T
21	Switches and Sockets modular type	LEGRAND / CRABTREE / L&T
22	Lighting Fixture	WIPRO / CG / PHILIPS/ JAQUAR
23	Wall/ Ceiling / Exhaust Fans	USHA / CROMPTON / HAVELLS
24	Ductable Split Units	LG / PANASONIC / CARRIER
25	Wall Mounted Split Unit	LG / PANASONIC / CARRIER
26	Cable Tray	FABRICATED / LEGRAND
27	EPABX	UNIFY / CISCO / AVAYA
28	RJ 11 SOCKET	LEGRAND/L&T/SCHNEIDER
29	RJ 45 SOCKET	LEGRAND/L&T/SCHNEIDER
30	LAN Cable & Accessories	HAVELLS / POLYCAB / CRYSTAL
31	UPS	ETON/EMERSON
32	CCTV CAMERAS	L&T/SCHNEIDER/ABB
33	PA SYSTEM along with all accessories	BOSCH / HONEYWELL
34	TRANSFORMER	VOLTAMP / SCHNEIDER /
35	HT BREAKER	SCHNEIDER/ABB/L&T
36	HT XLPE CABLE	HAVELLS / POLYCAB / CRYSTAL
37	11 KV RUBBER MAT	ISI MARKED
38	11 KV HAND GLOVES	ISI MARKED
39	ELECTRONIC LIGHTING ARRESTER	PROLITE/
40	Fan	Havells, Crompton, Bajaj
41	LED Lights	Havells, Crompton, Bajaj,Surya,Jaquar,Syska

FIREFIGHTING MAKES

Sr. No.	Description of Material/Item	Approved Make
1	Relays	Siemens / Schneider / L & T
2	Meters	IMP / Neptune
3	Ammeter/Voltmeter selector switch	Kaycee / Salzer / AE
4	Indicating Lamp	Siemens/ Schneider
5	Wires (copper conductor)	Mescab / Polycab/ Havells/ Nicco / Gloster
6	MCCB	Siemens/ Schneider / L & T
7	CT	Kappa
8	MS-Black Main Pipes-Hydrant ERW (IS-1239) Butt weldable /threaded IS:1239 Part-I (Heavy)	JINDAL / TATA/ Nezone/ _Skipper‘
9	Gate valve(IS:210,GR-210) ,	Crawlie & Ray
10	Butter fly valve in C.S. lever / Wheel	/Leader /Intervalve/Sant/ Zoloto/L&T
	operated to be fitted between flanges, PN- 1.0 BS-5155	Kirloskar/
11	Foot Valve with Strainer as per IS- 4038	
12	Sluice / Gate Valve.	
13	N.R.V.	
		Eastern Spuncrete / W.B. Concrete Industries Pvt.

Sr. No.	Description of Material/Item	Approved Make
14	R.C.C. pipes (NP-3	Ltd. / Hindustan
15	Hydrant Valve IS-5290	Shield Fire/Minimax, Surex –all ISI marked
16	CP fire Hose with G.M. Nozzle.	FireShield /Minimax, Surex – all ISI marked
17	Pressure Gauge	FireShield /Minimax, Surex – all ISI marked
18	Hose Box	FireShield /Minimax, Surex – all ISI marked
19	Fire Extinguishers	FireShield /Protector/ /Surex /Minimax-all ISI approved
	D.C.P.- 5 Kg.- including MS fastening Clamps for mounting on walls/columns CO ₂ 4.5 Kg.- including MS fastening Clamps for mounting on walls/columns Water CO ₂ including MS fastening Clamps for mounting on alls/columns A B C – Powder type	
	(Mono Ammonium Phosphate base) - including MS fastening Clamps for mounting on walls/columns	
20	Pump	Pumps/Kirloskar/KSB/ SAM TURBO BE /WPIL /Grundfos or Equivalent
21	Y'-strainer	Kirloskar/Lead er/ Sant /Zoloto
	Pressure Release Valve	Kirloskar/Lead er/ Sant /Zoloto
	Fire Sprinklers (both pendent & Up-	TYCO / VIKING / Omex / =Centrall-ELÖ

Sr. No.	Description of Approved Material/Item	Approved Make
23	Right type)	16/ Crawlle & Ray
24	FIRE ALARM PANEL DETECTORS 3	HONEYWELL-ESSER, Notifire, Simplex, _Morley-Edward
	MODULES/ MCP (system sensor)	
25	RESPONSE INDICATOR	Approved matching Brand.
26	CABLE	Finolex or equivalent
27	PVC CONDUIT	Ori-Plast or other equivalent
28	FIRE ALARM PANEL	HONEYWELL-ESSER,
29	Smoke Detector	Siemens/Esser/Tyco
30	Heat Detector	Siemens/Esser/Tyco
31	Manual Call Box	ISI Approved Make
32	PC	HP/Dell
33	Pressure Switch	Indfoss ,/ Switzer
34	Lift	OTIS/KONE/JOHNSON

All material must conform to relevant BIS specifications.

Furniture:

Sr. No.	Description of Approved Material/Item	Approved Make
1.	Modular Workstation Office	HNI (BP Ergo) / Featherlight, Godrej
2.	Unwind Chair With Arms	HNI (BP Ergo) / Featherlight, Godrej
3.	Sofa Set d-lion fabric sofa 3 1 1 sets	Featherlight, Godrej
4	Glaze coffee Table	Featherlight, Godrej, Amardeep
5	Relax chair for coffee table	Featherlight, Godrej, Amardeep
6	Glass top centre table with bottom storage	Woodcraft / Godrej interio or approved make

Sr. No.	Description of Approved Material/Item	Approved Make
7	Meeting Table/Conference table	Kirti Industries/ approved make
8	High Back Chair	approved make /Kartik Furniture
9	Mid Back Chair/Executive/Conference/Workstation/Mesh Back/Revolving/Office	approved make /Godrej
10	Glass Partition	Modi Guard, Saint Gobain, AIS/ approved make

Note:

Bidders to consider any of the approved makes indicated above. If any equivalents are suggested by the bidder, they shall be specifically highlighted in the bid submissions, along with technical documentation supporting compliance / equivalency.

The choice of Final makes shall be made by the client/ consultant. The sample or Cat.no. of all types of fixing should be approved before execution.

CODES & STANDARDS.

All the systems and equipment's within the scope of this tender shall be of reputed proven makes, designed and manufactured in accordance with the stipulations of latest versions of Indian Codes.

When an equipment is offered conforming to standards other than those listed below, it shall be clearly brought in notice of engineer in charge.

Sr. No	IS Code	Description
1	IS:1646	Code of practice for fire safety of building (general), Electrical Installations.
2	IS:1648	Code of Practice for fire safety of buildings (general), Fire Fighting Equipment and its Maintenance.

Sr. No	IS Code	Description
3	IS:3034	Code of Practice for Fire of Industrial Buildings, Electrical Generating and Distributing Stations.
4	IS:884	First Aid Hose Reel for Fire Fighting (For Fixed Installations).
5	IS:2171	Portable Fire Extinguisher, Dry Powder Type
6	IS:2878	Portable Fire Extinguishers, CO2 type.
7	IS:1239	Part - I : Mild Steel Tubes (upto 150mm). Part - II : Mild Steel tubulars and other wrought steel pipe fittings.
8	IS:778	Gunmetal gate, globe and check valves for general purposes.
9	IS:13095	Butter Fly Valve
10	IS:14846	Sluice Valve for water works purposes (50 to 1200mm size) – Specification.
11	IS:5312	Swing Check type Reflux (Non-Return) Valves.
12	IS:940	Portable Fire Extinguisher ,Water CO2 Type.
13	IS:10204	Portable Fire Extinguisher, Foam Type.
14	IS:2190	Code of practice for selection, installation and maintenance of portable First - Aid Fire Appliances.
15	IS:1520	Horizontal Centrifugal Pumps for clear, cold and fresh water.
16	IS:5290	Landing / Hydrant Valve
17	IS:8423	Controlled Percolation Hose for fire fighting.
18	IS:903	Fire Hose Delivery Couplings, Branch Pipe, Nozzles & Nozzle spanner.
19	IS:2062	Structural Steel (Fusion / Welding Quality).
20	IS:325	Three Phase Induction Motor.

Sr. No	IS Code	Description
21	NBC	National Building Code, Chapter – IV (Amendment No.3, January 1997).
22	IS:2189	Code of practice for selection, installation and maintenance of Automatic Fire
		Detection and Alarm System.
23	IS:732	Code of practice for electrical wiring installations
24	IS:2217	Recommendations for providing first aid fire fighting arrangements in public
		buildings.
25	IS:3844	Code of practice for installation of internal fire hydrant in multistoried
		buildings.
26	IS:3589	Mild Steel Tubes (200mm and above).

VOLUME-III

SECTION 8 FORM OF BID

FORM OF BID

Description of the Works:

BID

To :

Address :

- 1.0 We offer to execute the Construction of ICCC Building in Bhagalpur, Bihar with 2 Years defect liability period under Smart City Mission on Item Rate Contract for remaining work described above and remedy any defects therein in conformity with the Conditions of Contract, specification, drawings (Concept layout), Price Bid (Item rate format) and Addenda along with reply to the pre-bid queries.
- 2.0 We undertake, if our Bid is accepted, to commence the Works as soon as is reason-ably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the document.
- 3.0 We agree to abide by this Bid for the period of _____ days from the date fixed for receiving the same, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- 4.0 Unless and until a formal Agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
- 5.0 We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this _____ day of _____

Signature _____ in the capacity of _____ duly authorized

to sign bids for and on behalf of (In block capitals or typed)

Address

Witness

Address

Occupation

SECTION 9

PRICE BID

PRICE BID

Preamble

- 1.0 The Price Bid shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Technical Specifications and Contract Drawings, Bill of Quantities, Reply to Pre-Bid Queries and Addendum.
- 2.0 The payment will be based upon the actual quantities executed and completed for different items of work as stated in the Bill of Quantities, as measured by the Contractor and checked and verified by the Authority's Engineer and valued at the rates and prices tendered in the Price Bid, within the terms of the Contract.
- 3.0 The Rates of Different Items of Work contained in the Bill of Quantities shall be tendered in the Price Bid shall include supply, construction and operation & maintenance, labour, supervision, materials, erection, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
- 4.0 The rates or prices shall be quoted entirely in Indian Currency.
- 5.0 The rates of various items of work contained in the Bill of Quantities shall be entered in the price bid which will be taken to have included in the cost of water supply electricity etc.
- 6.0 The rates of different items of work related to the construction of ICC Building as mentioned in above para shall be deemed to be inclusive of costs associated with the related Items of Work.
- 7.0 General directions and descriptions of work and materials are not necessarily repeated or summarized in the Price Bid. References to the relevant sections of the contract documentation shall be made before entering rates or price in the Price Bid.
- 8.0 The method of measurement of completed work shall be on the item rate basis for which payment shall be made as indicated in the bid documents.
- 9.0 Errors will be corrected by the Employer for any arithmetic errors pursuant to Clause 29 of the Instructions to Bidders.
- 10.0 Rock is defined as all materials which, in the opinion of the Engineer, require blasting, or the use of metal wedges and sledgehammers, or the use of compressed air drilling for its removal, and which cannot be extracted by ripping with a tractor of at least 150 kW with a single rear mounted heavy duty ripper.

PRICE BID

I/we hereby tender to execute the whole of the work described in the:

Name of the Work: - Construction of ICCC Building in Bhagalpur, Bihar with 2 Years defect liability period under Smart City Mission on Item Rate Contract of remaining work.

PRICE BID FORMAT

The price bid format is as per eproc2 website.

SECTION 10

SECURITIES AND OTHER FORMS

BID SECURITY (BANK GUARANTEE)

WHEREAS, [name of Bidder] (hereinafter called "the Bidder") has submitted his Bid dated [date] for the construction of [name of Contract hereinafter called "the Bid"].

KNOW ALL PEOPLE by these presents that we _____ [name of Bank] of _____

[Name of country] having our registered office at (hereinafter called "the Bank") are bound unto _____

[Name of Employer's Representative] (Hereinafter called "the Employer's Representative") in the sum of * for which payment well and truly to be made to the said Employer's Representative the Bank itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of 2021

THE CONDITIONS of this obligation are:

1.0 If after Bid opening the Bidder withdraws his bid during the period of Bid validity Specified in the Form of Bid;

OR

2.0 If the Bidder having been notified to the acceptance of his bid by the Employer during the period of Bid Validity:

3.0 fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or

4.0 fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders; or

5.0 does not accept the correction of the Bid Price pursuant to Clause 27.

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or any of the three conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date** days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE
SIGNATURE

WITNESS
SEAL

[Signature, name and address]

- 6.0 The Bidder should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 16.1 of the Instructions to Bidders.
- 7.0 45 days after the end of the validity period of the Bid. Date should be inserted by the Employer before the Bidding documents are issued.

PERFORMANCE BANK GUARANTEE

To

_[Name of Employer's Representative]

_[Address of Employer's Representative]

WHEREAS, _____ [name and address of Contractor] (hereafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [name of Contract and brief description of Works] (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligation in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOWHEREFORE we here by affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of _____

[amount of guarantee]*(in words), such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contractor of the Works to be performed there under or of any of the Contract documents which may be made between your and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

BANK GUARANTEE FOR ADVANCE PAYMENT

PERFORMANCE BANK GUARANTEE

To

[Name of Employer's Representative]

[Address of Employer's Representative]

[Name of Contractor]

Gentlemen:

In accordance with the provisions of the Conditions of Contract, sub-clause 14.2 ("Advance Payment") of the above-mentioned Contract, [name and address of Contractor] (herein after called "the Contractor") shall deposit with [name of Employer's Representative] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [amount of Guarantee]* [in words].

We the _____ [bank of financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to [name of Employer's Representative] on his first demand without whatsoever right of obligation on our part and without his first claim to the Contractor, in the amount not exceeding _____ [amount of guarantee]* _____ [in words]

We further agree that no change or addition to or other modification of the terms of the Contractor or Works to be performed there under or of any of the Contract documents which may be made between

_____ [name of Employer's Representative] and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such

change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until [name of Employer's Representative] receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and Seal: _____

Name of Bank / Financial Institution: _____

Address: _____

*An amount shall be inserted by the Bank or Financial Institution representing the amount of the Advance Payment, and denominated in Indian Rupees.

LETTER OF ACCEPTANCE

(Letter head paper of the Employer's Representative)

Letter No.

Dated

From,

To,

Subject: Construction of ICCB Building in Bhagalpur, Bihar Under Smart City Mission (SCM) on Item Rate Contract for remaining work – Letter of Acceptance (“LOA”) – Reg.

Reference: 1.NIT No.-;

2. -----

3. -----

4.-----

Sir,

This is to notify that your Bid (Bid or tender Reference -) submitted on -----(Date) through e-procurement (<https://www.eproc2.bihar.gov.in>) against NIT No.-for construction of ICCB Building at Bhagalpur Under Smart City Mission, at your quoted bid price amounting to Rs./- (Rs.) only has been determined to be lowest evaluated bid and has been accepted by Authority. The conditions of this “LOA” are mentioned below:

1. You are requested to return a duplicate copy of this “LOA” with seal and signature of authorised signatory as an acknowledgement within 7 (seven) days.
2. You are also requested to furnish Performance Security including an additional security for unbalanced bid of Rs./- (Rs.) only within 15 (fifteen) days of receipt of this “LOA”.
3. In case of failure of submission of Performance Security within time as mentioned above, the award shall be deemed to be cancelled and Bid Security shall be encashed by the Authority.

Thanking you.

Your's Sincerely,

Authorized Signature

Name and title of Signatory

(Employer's Representative)

ISSUE OF NOTICE TO PROCEED WITH THE WORK

(Letter head of the Employer's Representative)

(Date)_____

To

(Name and address of the Contractor)

Dear Sirs,

Pursuant to your furnishing the requisite security as stipulated in ITB Clause 32.1 and signing of the Contract for the construction of

_at Bid Price of Rs. _

You are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of Employer's Representative)

AGREEMENT FORM

(On Stamp Paper)

AGREEMENT NUMBER: (To be filled by Authority)

Name of Work: Construction of ICCC Building in Bhagalpur, Bihar Under Smart City Mission (SCM) on Item Rate Contract for remaining work.

This agreement entered into on this the day of

BETWEEN

Bhagalpur Smart City Limited, CIN- U93090BR2016SGC033046, having its registered office at Municipal Corporation, Court Compound, Bhagalpur, Bihar-812001 through Authorised Signatory ----- (hereinafter referred to as the “**Authority**” which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of **One Part;**

AND

M/s ----- having its registered office at ----- through its authorized signatory ----- (hereinafter referred to as the “**Contractor**” which expression shall, unless repugnant to the context or meaning thereof) of the **Other Part,.**

Each of “Authority” and “Contractor” may be referred to individually as a “Party”, and together they may be referred to as the “Parties”.

Whereas the “Authority” entrusted construction of ICCC Building in Bhagalpur, Bihar Under Smart City Mission (SCM) on Item Rate Contract (“**Project**”) to “Contractor” in accordance with the terms and conditions set forth in this agreement.

The “Authority” accordingly invited Request for Proposals (“RFP”) vide E-Tender NIT No. dated from the eligible bidders as per terms and conditions prescribed in the “RFP” for undertaking the “Project”.

The “Authority” issued Letter of Acceptance vide Letter No. dated and to M/s for the “Project” at the Contract Price of Rs./- (Rs.) only inclusive of all taxes and GST.

NOW, THEREFORE, in consideration of the foregoing and the respective covenants set forth in this Agreement, the sufficiency and adequacy of which is hereby acknowledged, the “Authority” hereby covenants to pay the “Contractor” in consideration of the obligations specified herein, the Contract Price or such other sum as may become payable under the provisions of the Agreement at the times and in the manner specified in the Agreement and intending to be legally bound hereby, the Parties agree and accept that the following documents are part of this agreement:

- a) Performance Security in terms of
- b) Letter of Acceptance (LOA) with letter No.dated
- c) Bid document of M/s submitted on website <http://www.eproc2.bihar.gov.in>
- d) NIT No:dated;
- e) RFP and Drawings and Bill of Quantities

f) Any other reference documents mentioned in the RFP.

In the witness whereof the parties there to have caused this Agreement to be executed on the day and year written before.

For and on behalf of
M/s

For and on behalf of
Bhagalpur Smart City Limited

[Authorized Signatory]

[Authorized Signatory]

Seal of M/s
Witness:

Seal of Bhagalpur Smart City Limited.
Witness:

1.

1.

2.

2.

UNDERTAKING

I, The undersigned do hereby undertake that our firm M/s _____ agree to abide by this bid for a period _____ days for the date fixed for receiving the same and it shall be binding on us and may be accepted at any time before the expiration of that period.

(Signed by an Authorized Officer of the Firm)

Title of Officer

Name of Firm

DATE

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SECTION 11 DRAWINGS

The detail drawings are available on

<https://www.smartcitybhagalpur.org/tenders>

VOLUME-V

SECTION12

DOCUMENTS TO BE
FURNISHED BY BIDDER

All required documents as mentioned in RFP.

Bill of Quantity

Note:

1. Rate quoted by the bidders is inclusive of carriage, GST, All Taxes, and 2 (Two) years defect liability period.

Bill of Quantity

Name of Work: -CONSTRUCTION REMAINING WORK OF ICCC BUILDING (B+G+5 FLOOR)
INCLUDING UTILITY SERVICES IN BHAGALPUR, BIHAR

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
1	Earth work in excavation over areas (exceeding 30 cm in depth. 1.5 m in width as well es 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m; disposed earth to be levelled and neatly dressed. All kinds of soil.	cum	3200.00
2	Supplying and Filling in plinth with local sand and under floors including, watering, ramming consolidating and dressing complete.	cum	500.00
3	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m All kinds of soil	100 sqm	2700.00
4	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared	100 sqm	2500.00
5	Providing designation 100 A one brick flat soling joints filled with local sqm 285.20 sand including cost of watering, taxes, royalty all complete as per building specification and direction of E/I, but excluding carriage cost of bricks & sand.	sqm	246.40
6	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering-all work upto plinth level. 1:4:8 (1 Cement: 4 coarse sand: 8 graded stone aggregate 40 mm nominal size)	cum	150.00
7	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement :3 coarse sand: 6 graded stone aggregate 20 mm nominal size) over 75 mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth.	sqm	100.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
8	Providing and laying factory made chamfered edge Cement Concrete paver blocks of required strength, thickness & size/shape, made by table vibratory method , to attain superior smooth finish using PU or equivalent moulds, laid in required Grey colour & pattern over 50mm thick compacted bed of coarse sand, compacting and proper embedding / laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with jamuna sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand in footpath, parks, lawns, drive ways or light traffic parking etc. all complete as per manufacturer's specifications & direction of Engineer -in-Charge. (a) 80 mm thick c.c. paver block of M-35 grade with approved colour design and pattern.	sqm	510.00
9	Providing and laying damp-proof Course 50 mm thick with cement concrete 1:2:4(1cement: 2:2 coarse sand :4 graded stone aggregate 20mm nominal size)	sqm	100.00
10	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement-All work up to plinth level 1:1:2 (1 cement:1 coarse sand:2 graded stone aggregate 20mm nominal size. M-25 grade of concrete	cum	922.00
11	Reinforced cement concrete work in wall (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. up to floor five level excluding cost of centring, shuttering, finishing and reinforcement. M30 Grade of Concrete-Column and retaining wall	cum	340.00
12	Reinforced cement concrete work in wall (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. up to floor five level excluding cost of centring, shuttering, finishing and reinforcement. 1:1:2 (1 cement: 1 coarse sand: 2 graded stone aggregate 20 mm nominal size)-Beam-M25 Grade of Concrete for raft foundation	cum	700.00
13	Reinforced cement concrete work in wall (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. up to floor five level excluding cost of centring, shuttering, finishing and reinforcement. 1:1:2 (1 cement: 1 coarse sand: 2 graded stone aggregate 20 mm nominal size)- Roof -M25 Grade of Concrete	cum	720.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
14	Reinforced cement concrete work in wall (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. up to floor five level excluding cost of centring, shuttering, finishing and reinforcement. 1:1:2 (1 cement: 1 coarse sand: 2 graded stone aggregate 20 mm nominal size)-Chhajja-M25 Grade of Concrete	cum	75.00
15	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15, landings, balconies, shelves, chajjas, lintels, bands, Precast R.C.C slab plain window sills, staircases and spiral staircases up to floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) Providing M-25 grade R.C.C	cum	15.00
16	Centring and shuttering including strutting, propping etc. and removal of form for Foundations, footings, Pile Cap, bases of columns etc. for mass concrete.	sqm	850.00
17	Centring and shuttering including strutting, propping etc. and removal of form for Lintels, beams, plinth beams, girders, base Slab and cantilevers	sqm	6500.00
18	Centring and shuttering including strutting, propping etc. and removal of form for Columns, Pillars, Piers, Abutments, Posts and Struts	sqm	2200.00
19	Centring and shuttering including strutting, propping etc. and removal of form for Stairs, (excluding landings) except spiral-staircases	sqm	125.00
20	Centring and shuttering including strutting, propping etc. and removal of form for Suspended floors, roots, landings, balconies and access platform	sqm	6000.00
21	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete up to plinth level and above plinth level. Thermo-Mechanically Treated bars TMT (Fe 500) 8 mm dia	kg	65714.29
22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete up to plinth level and above plinth level. Thermo-Mechanically Treated bars TMT (Fe 500) 10 mm dia	kg	65714.29
23	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete up to plinth level and above plinth level. Thermo-Mechanically Treated bars TMT (Fe 500) 12 mm dia	kg	65714.29

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
24	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete up to plinth level and above plinth level. Thermo-Mechanically Treated bars TMT (Fe 500) 16 mm dia	kg	65714.29
25	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete up to plinth level and above plinth level. Thermo-Mechanically Treated bars TMT (Fe 500) 20 mm dia	kg	65714.29
26	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete up to plinth level and above plinth level. Thermo-Mechanically Treated bars TMT (Fe 500) 25 mm dia	kg	95714.29
27	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete up to plinth level and above plinth level. Thermo-Mechanically Treated bars TMT (Fe 500) 32 mm dia	kg	35714.29
28	Brick work with fly ash bricks as per IS 12894(2002) & IS 3495 in foundations and plinth in: Cement mortar 1.:4 (1 cement: 4 coarse sand)	cum	270.00
29	Brick work with fly ash bricks as per IS 12894(2002) & IS 3495 in foundations and plinth in: Extra for Brick work in superstructure above plinth level up to floor V cum	cum	950.00
30	Providing and fixing Fiber Glass Reinforced plastic (FRP) Door Frames of cross-section 90 mm x 45 mm having single rebate of 32 mm x 15 mm to receive shutter of 30 mm thickness. The laminate shall be moulded with fire resistant grade unsaturated polyester resin and chopped mat. Door frame laminate shall be 2 mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fibre glass from all sides. M.S. stay shall be provided at the bottom to steady the frame.	m	240.00
31	Providing and fixing to existing door 30 mm thick Glass Fibre Reinforced Plastic (FRP) panelled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3 mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5 mm thick FRP laminate for panels conforming to IS: 14856, including fixing to frames.	sqm	188.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
32	Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ± 1 mm), with wall thickness 2.0 mm (± 0.2 mm), corners of the door frame to be Jointed with galvanized brackets and stainless steel screws, joints mitred and plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19 mm and 1 mm (± 0.1 mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineer-in-charge 42x50 mm	m	970.00
33	30 mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a uPVC hollow section of size 60x30 mm and wall thickness 2 mm (± 0.2 mm), with inbuilt decorative moulding edging on one side. The styles and rails mitred and joint at the corners by means of M.S. galvanised/plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 25x20 mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x30 mm and 2 mm (± 0.2 mm) wall thickness fixed to the shutter styles by means of plastic/ galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (± 0.1 mm) wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction.	sqm	525.00
34	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters. Description 35 mm thick including stainless steel butt hinges with necessary screws-	sqm	65.00
35	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (Thickness to be specified by the manufacture) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3(1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	sqm	1120.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
36	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone finished smooth. Aggregate 6 mm nominal size) as per direction of Engineer-in-Charge. Granite Stone of approved shade	sqm	1370.00
37	Providing and laying vitrified floor tiles in different sizes {thickness to be specified by the manufacturer) with water absorption's less than 0.08 % and conforming to IS : 15622 of approved make in all colours and shades, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) including grouting the joint with white cement and matching pigments etc., complete Size of Tile 60x60 cm	sqm	3000.00
38	Kota stone slabs 20 mm thick in risers of steps skirting. Dado & pillars laid on 12 mm (average (thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete. Details of cost for 10 sqm	sqm	875.00
39	Providing and laying in sssitu five course water proofing treatment with glass fibre tissue reinforced bitumen over roof consisting of first coat of bitumen primer @ 0.40 kg. per sqm, 2nd & 4th courses of bonding material@ 1.60 kg. per sqm which shall consist of blown type bitumen of grade 85/25 conforming to IS: 702, third layer of glass fibre tissue course as specified, fifth, the top most layer of stone grit 6 mm and down size or pea-sized gravel sprad @ 6 dmJ per sqm including preparation of surface excluding grading for slope etc. complete	sqm	1030.00
40	12 mm thick cement plaster of mix Internal and outer 1:4 (1 cement :4 coarse sand)	sqm	16000.00
41	6 mm cement plaster to ceiling of mix 1:4 (1 cement: 4 coarse sand)	sqm	5500.00
42	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	sqm	21500.00
43	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade. New work (two or more coats) over and including water tinnable priming coat with cement primer.	sqm	16500.00
44	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade Two or more coats on new work	sqm	120.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
45	<p>Providing and fixing tiled false ceiling of specified materials of size 595x595 mm in true horizontal level, suspended on interlocking metal grid of hot dipped galvanized steel sections (galvanized @ 120 grams/ sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25 mm made of 0.30 mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanized butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge</p> <p>8 mm thick fully perforated calcium silicate board made with Calcareous & Siliceous materials reinforced with cellulose fiber manufactured through autoclaving process to give stable crystalline structure with minimum compressive strength 225 kg/ sq. cm, bending strength 100 kg/sq. cm , of size 595x595 mm, having perforation of dia. 10 mm with minimum perforated area 18 % with non woven tissue on the back side, having an NRC (Noise Reduction Coefficient) of 0.85, with 50 mm thick rockwool of 48 kg /cum backing</p>	sqm	8500.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
46	<p>Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including: Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminium sections for fixing glazing panels of various thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)-cumsmoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation & drainage and protection against fire hazard including: Fabricating and supplying serrated M.S. hot dip galvanised / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimensional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/ masonry/structural steel framework of building structure using stainless steel anchor fasteners/ bolts, nylon separator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers. Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory / work shop environment, including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeter for holding glass.</p>	sqm	2500.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
47	Providing, assembling and supplying vision glass panels (IGUs) comprising of hermetically-sealed 6-12- 6 mm insulated glass (double glazed) vision panel units of size and shape as required and specified, comprising of an outer heat strengthened float glass 6mm thick, of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade, an inner Heat strengthened clear float glass 6mm thick, spacer tube 12mm wide, dessicants, including primary seal and secondary seal (structural silicone sealant) etc. all complete for the required performances, as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer-in-Charge. The IGUs shall be assembled in the factory/ workshop of the glass processor. (Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.26.2) For payment, only the actual area of glass on face # 1 of the glass panels (excluding the areas of the grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm. Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, + 12mm Airgap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25-0.28) and U value of 3.0 to 3.3 W/m2 degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.	sqm	2750.00
48	Providing 150mm wide brick drain in cement mortar (1:6) with av. 150mm clear depth and 125mm apron concrete (1: 4:8), over one brick designation 100-A flat soling in proper grade and slope at the base, the drain duly plastered in CM. (1:3) with punning over exposed surface all complete as per building specification and direction of E/I	m	450.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
49	Providing and fixing machine moulded aluminium covering on external wall of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving dash fastener, over expansion joint on vertical surfaces / ceiling floors, the fixing on plate in one row on one side of joint only shall be done with stainless steel dash fasteners of 8 MM Dia and 75MM long bolt including providing aluminium washers 2 MM Dia and 75 MM long bolt including providing aluminium washers 2 MM thick & 15 MM Dia , at a staggered pitch of 20 MM centre to centre including drilling holes in the receiving surface and providing expandable plastic sleeves in holes etc. complete as per manufacturer's specification and direction complete as per direction of Engineer-in-charge. Note: The contractor shall design, transport on site, supply and do necessary rests for this material and get it approved from competent authority before execution Anodised aluminium sheet 2.5MM thick (anodised transparent or dyed to required shade according to IS 1868 Minimum anodic coating of grade AC 15) is to be used.	Kg	9500.00
50	Supplying Installation testing and commissioning of following capacity Passenger lifts having contract speed of 1 MPS/serving different floors in the lift shaft as per detailed specification enclosed as under:-a) 10 Persons Detail of lifts i) Speed - 1 MPS ii) Floor - 5(G+4 iii) Travel 23.5 Mtrs. (approx)) iv) Stops & openings - Ground and all floors v) Controller : A.C. Microprocessor based variable voltage & variable frequency (VVVF)vi) Automatic rescue device complete with dry maintenance free batteries as reqd.vii) Operation : Microprocessor based single automatic push button/duplex collective selective with without attendant. viii) Power - 400/440V, 3phase, 50 Hz, 4 wire systemix) Type of doors.a) Car Power operated, Centre opening horizontal sliding stainless steel scratch proof door (moon rock/ Hairline finish)b) Landing door : SS door with scratch proof (moon rock / Hairline finish).c) A hand rail of standard size at 900mm above floor level to be fixed adjacent to control panel in the lift car.d) Voice announcement system in the car to announce the position of the elevator in the hoistway as the car passes or stops at a floor served by the elevator.	Each	2.00
51	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m. Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	RM	240.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
52	Pumping out waste water including hire charge for pumps to be provided by the contractors including delivery and suction pipes, specials valves, etc. supplying fuel and lubricants, necessary operator and helper and removing the same on completion as per direction of flows from Nikashis, drains underground conduits etc. pump log book to be maintained.)	Hp. hr	1500.00
53	Earth work in back filling the trench after laying different types and sizes of pipes with carth removed during excavation within initial lead and lift as per specification and direction of E/I.	cum	457.00
54	Providing designation 75 A one brick flat soling joints filled with local sand including cost of watering taxes royalty all complete as per specification and direction of E/I	sqm	189
55	Providing PCC M-7.5 with nominal mix of (1:4:8) in foundation with approved quality of stone metal grade-Ill (50mm lo 25 mm) size clean coarse sand of F.M 2.5 to 3 including screenings shuttering mixing cement concrete in mixer and place in position, vibrating Striking, curing taxes. and royalty all complete for Concrete cradle for dia from 150 mm to 200mm NP2 pipe laying	cum	40
56	Supplying & laying Double Wall Corrugated (with external annular corrugation and smooth internal walls) high Density Polyethylene Pipes conforming to IS 16098 (Part-II):2013 having stiffness Class of SN 8 with Ring stiffness not less than 8.00 KN/Sqm. and Impact Resistance TIR value not more than 10% including necessary jointing materials for non- pressure underground Drainage, Sewerage & Cross drainage application. 150 mm internal dia	Metre	59.00
57	Supplying & laying Double Wall Corrugated (with external annular corrugation and smooth internal walls) high Density Polyethylene Pipes conforming to IS 16098 (Part-II):2013 having stiffness Class of SN 8 with Ring stiffness not less than 8.00 KN/Sqm. and Impact Resistance TIR value not more than 10% including necessary jointing materials for non- pressure underground Drainage, Sewerage & Cross drainage application. 250 mm internal dia	Metre	86.00
58	Supplying & laying Double Wall Corrugated (with external annular corrugation and smooth internal walls) high Density Polyethylene Pipes conforming to IS 16098 (Part-II):2013 having stiffness Class of SN 8 with Ring stiffness not less than 8.00 KN/Sqm. and Impact Resistance TIR value not more than 10% including necessary jointing materials for non- pressure underground Draainage, Sewerage & Cross drainage application. 300 mm internal dia	Metre	95.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
59	Supplying & laying Double Wall Corrugated (with external annular corrugation and smooth internal walls) high Density Polyethylene Pipes conforming to IS 16098 (Part-II):2013 having stiffness Class of SN 8 with Ring stiffness not less than 8.00 KN/Sqm. and Impact Resistance TIR value not more than 10% including necessary jointing materials for non- pressure underground Drainage, Sewerage & Cross drainage application. 400 internal dia	Metre	5.00
60	Constructing Brick masonry manhole in cement mortar 1:4 (1 cement: 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement - 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design. Inside size 90 cm×80cm and 45 cm deep including C.I cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (wt of cover 108 kg and wt of frame 100kg) with common burnt clay F.P.S (non-modular) bricks of class designation 7.5	Each	5.00
61	Constructing Brick masonry manhole in cement mortar 1:4 (1 cement: 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement - 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design. a) Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg)with common burnt clay F.P.S (non-modular) bricks of class designation 7.5	Each	4.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
62	Constructing Brick masonry manhole in cement mortar 1:4 (1 cement: 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement - 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design. b) Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg) With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	3.00
63	Constructing Brick masonry manhole in cement mortar 1:4 (1 cement: 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement - 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design. a) Extra depth for 90 cm x 80 cm manhole beyond 0.45 m depth. With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	5.00
64	Constructing Brick masonry manhole in cement mortar 1:4 (1 cement: 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement - 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design. b) Extra depth for 120 cm x 90 cm manhole beyond 0.50 m depth.	Metre	1.00
65	Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) as per standard design. a) With 20x20 mm square bar	Each	112.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
66	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement: 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame completes as per standard design: With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	18.00
67	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4 (1 cement: 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design: With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	2.00
68	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level. All types of soil 300 mm dia depth	RM	40.00
69	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.150 mm nominal size dia	RM	30.00
70	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:150 mm dia	Each	2.00
71	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tube well as per IS:2800 (part I).150 mm dia	Each	2.00
72	Supplying, filling, spreading & levelling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	3.00
73	Supplying, filling, spreading & levelling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -in charge.	cum	5.00
74	Supplying, filling, spreading & levelling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	5.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
75	Earthwork in excavation in foundation trenches in ordinary soil (vide classification of soil item - A) and disposal of excavated earth as obtained to a distance upto 50 M including all lifts, levelling, ramming the foundation trenches, removing roots of trees, shrubs all complete as per approved design, building specification and direction of E/I	cum	130.00
76	Filling in foundation trenches and plinth in layers not exceeding 150mm thick well-watered, rammed, fully compacted and fine dressed with earth obtained from excavation of foundation trenches within a lead of 50 M and lift of 1.5 M all complete as per building specification and direction of E/I (Mode of measurement compacted volume.	cum	52.00
77	Providing P.C.C M-100 with nominal mix of (1:3:6) in foundation with approved quality of stone metal grade-1 (50 mm to 25 mm size) clean coarse sand of FM 2.5 to 3 including screening shuttering mixing cement concrete in mixer and placing in position Vibrating striking, curing taxes and royalty all complete as per building specification and direction of Engineer-In-Charge.	cum	8.00
78	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level. 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone, aggregate 20 mm nominal size	cum	3.00
79	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. above plinth level up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement. 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size	cum	1.00
80	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars	Kg	600.00
81	Centering and shuttering including strutting, propping etc. and removal of form for: Foundations, footings, bases of columns, etc. for mass concrete.	sqm	10.00
82	Centering and shuttering including strutting, propping etc. and removal of form for: Walls (any thickness) including attached pilasters, buttresses, plinth and string courses	sqm	25.00
83	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform	sqm	15.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
84	Providing designation 75A brick work in C.M (1:4) in foundation and plinth with approved quality of clean coarse sand of F.M 2 to 2.5 including providing 10 mm thick mortar joints, cost of screening materials, racking out joints to 15mm clepth, curing. taxes and royalty all complete as per building specification and direction of E/I	cum	21.00
85	Providing 12mm thick cement plaster (1:4) with clean coarse sand of F.M 1.5 including screening, curing with all leads and lifts of water, scaffolding taxes and royalty all complete as per building specification and direction of E/I.	sqm	75.00
86	Providing 19mm thick cement plaster (1:3) with clean coarse sand of F.M 1.5 including screening, curing with all leads and lifts of water, scaffolding taxes and royalty all complete as per building specification and direction of E/I	sqm	62.00
87	Providing 1.5 mm cement punning including curing carriage of water with all leads and lifts as per building specification and direction of E/I	sqm	75.00
88	Supply and fixing C.I cover with frame for manhole 560mm diameter C.I cover (heavy duty) the weight of the cover to be not less than 108 kg.	Each	5.00
89	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (cement 4 coarse sand) for sluice valve, with C.I surface bux 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and R.C.C top slab 1:2:4 mix (1cement 2 coarse sand: 4 graded stone aggregate 20 mm nominal size). i/c necessary excavation, foundation concrete 1:5:10 (1 cement: 5 fine sand: 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement: 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design: 18.34.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	1.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
90	<p>Supply, installation, testing and commissioning of Diesel engine driven pump set for fire Hydrant & Sprinkler system consisting of the following:</p> <p>a) Horizontal split case, Diesel engine driven pump with all accessories capacity 137 cum/h at 70 m head with CI casing, standard fitting, CS diffusers, bronze impeller (dynamically balanced) and SS (304) Shaft with mechanical seal. The installation shall be complete with flexible coupling and coupling guard, 150 mm dial pressure gauge 0-16 kg/cm² range with gun metal shut off cock on delivery side'as required. (The pump should be tested for bench mark at factory and test certificate shall be submitted). Pump shall be capable of furnishing not less than 150% of rated capacity at a head of not less than 65% of the rated head. The shut off head shall not exceed 120% of rated head.</p> <p>b) Radiator cooled diesel engine of speed 1500 pm suitable for the above pump with automatic starting mechanism and other accessories including fuel tank (fabricated from 3mm MS sheet painted with two coats of synthetic enamel paint over a coat of primer) of capacity adequate to sustain pump operation for 8 hours continuous working. The tank shall be fitted with Magnetic oil level indicator, openable cover, drain valve, air vent including structural supports (painted with approved shade) with necessary starting batteries etc. necessary GI piping (Class-C), fuel pipe from fuel tank to engine, connections & fittings, flexible coupling, coupling guard complete in all respect as required (exhaust piping will be paid separately under relevent item SL 1.2 in the plumbing item .</p> <p>e) The rate includes interconnecting power cables and control wiring from engine control panel to diesel engine, earthing, concrete foundation and foundation bolts etc. complete operational.</p> <p>f) Cost of all the items accessories tools and tackles packing etc. required to put pumping system into service and obtaining the Final NOC from Local Fire Brigade Authorities & approval from any others statutory body shall also be included in rates quoted by the bidder-g) Supply of the required first charge of consumables such as lubricants, fuel, distilled water for battery and other consumables related to diesel engine and accessories shall also be included in rates quoted by the bidder.</p>	Set	1.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
91	<p>Supply, Installation, testing and commissioning of Jockey pump of capacity 10.8 cum/hr at 70 m head for fire fighting system comprising of the following:</p> <p>a) Horizontal centrifugal pump, suitable for operation on 415 volts +10%, 3 phase, 50 HZ + 3% A.C supply. The installation shall be complete with Flexible coupling and coupling guard, complete as required. The pump casing shall be CI, shaft shall be SS & impeller/ shaft sleeve/casing wearing ring shall be bronze. The pump shall be provided with mechanical seal. The system shall be complete with 150 mm dial pressure gauge of 0-16 Kg/m2 range with gun metal shut off cock on delivery side, as required. (The pump should be tested for bench mark at factory and test certificate shall be submitted).</p> <p>b) Squirrel cage induction motory TEFC type suitable for operation on 415 volts, + 10%, 3 phase 50 HZ + 3%. AC supply, for the above pump with speed of 2900 rpm (synchronous speed 3000 rpm), conforming to IP 55 protection & class-F insulation, The motor shall conform to IS 325-1978 with flexible coupling and coupling guard, complete as required</p> <p>c) Common base plate for (a) and (b) from M.S channel of required size.</p> <p>d) Suitable cement concrete (Grade M25) foundation with cement plaster (1:4) and neat cement finish (detailed design and shop drawing to be provided by the Contractor complete with anti-vibration arrangement of cushy foot mountings.</p> <p>e) Cost of all the items accessories tools and tackles packing etc. required to put pumping system into service and obtaining the Final NOC from Local fire Brigade Authorities and approval from</p>	Set	1.00
92	<p>Supply, installation, testing and commissioning of Main Sprinkler/Hydrant Pump set for common Sprinkler / Hydrant system consisting of the following:</p> <p>Sprinkler/common Pump with all accessories capacity 137 Cum/Hr at 70 m head (IS + IS) with CI casing, standard fitting, CS diffusers, bronze impeller (dynamically balanced) and SS (304) Shaft with mechanical seal. The installation shall be complete with flexible coupling and coupling guard, 150mm dial pressure gauge, 0-16 kg/cm2 range with gun metal shut off cock on delivery side as required. (The pump should be tested for benchmark at factory and test certificate shall be submitted) Pump shall be capable of furnishing not less than 150% of rated capacity at a head of not less than 65% of the rated head. The shut off head shall not exceed 120% of rated head</p> <p>b) Radiator cooled diesel engine of speed 1500 rpm suitable for the above pump with automatic starting mechanism and other accessories including fuel tank (fabricated from 3mm MS sheet, painted with two coats of synthetic enamel paint over a coat of primer) of capacity adequate to sustain pump operation for 8 hours continue working. The tank shall be fitted with Magnatic oil.</p>	Set	1.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
93	Supply, installation, testing and commissioning of Control Panel in common cubical with suitable compartmentation for all Fire Pumps mentioned above (Motor driven and Engine driven, with provision of supplying power to driven hydrant pump of 171 cum/hr. at 88 mtr head in future) as per requirement of the drives and with logic of operational sequence as per specifications with all material, accessories, instrumentation etc. complete. (General arrangement & circuit diagram to be furnished by contractor for vetting & approval by consultant/owner). Note : Cost shall be inclusive for approval of fire hydrant & sprinkler system from local fire authority and Fire Emergency services and any other relevant statutory authority at initial & various other stages of works, including preparation of report/drawings as per fire authority. Contractor shall include cost of all liaison works which are not explicitly mentioned above but are mandatory to have fire authority approval (any statutory charges will be reimbursed as per actual upon production of the invoice / challan informer of the owner.	Set	1.00
94	Providing and fixing Water Level Monitor (Water Gauge) for installing on the side wall of Water Reservoir consisting of calibrated bore transparent tube with back ground board, floating indicator, drain out valve etc. Complete operational. (Water level difference upto 4 m.) -For all Water Reservoir chamber in water works.	Each	2.00
95	Providing and fixing water level control switch assembly consisting of adjustable low level and high level actuation for auto on/off the respective motor for installing from top / side of the reservoir through sleeve of 150 mm dia on top side of underground reservoir including flange, PVC guide tube, two numbers floats with SS wire and electric contactor including cost of control wiring from the respective motor panel to the controlling switch etc. complete operational	Each	2.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
96	<p>Providing & fixing Pressure Switch the most commonly used fluid control components of Aluminum encloser with storage temprature 40 to 180°F (-40 to 82°C) along with ambient temprature 0 to 160°F (-18 to 71°C),set point shifts less than 1% of range for a 50°F (28°C) ambient temperature change. Unit will operate down to -40°F (-40°C) but with reduced repeatability. Maximum media temperature 200°F (93°C), Shock Set point repeats after 50 G, 10 millisecond duration. Switch output One SPDT including seven electrical terminations; Refer to 'How to Order' and vibration set point repeats after 10 G, 5-500 CPS.</p> <p>Note: Pressure Switch the most commonly used fluid control components of Aluminum encloser with storage temprature etc, all complete work should be executed by specialized agency. The agency/contractor shall submit of shop drawings for Pressure Switch details of construction etc. for approval and according to the approved shop drawing a sample of each of system submitted for preliminary inspection for sample approval. After that the sample should be fixed at site to ascertain its performance. Large scale manufacturing should be taken up only after rectification of defects in sample as directed to the full satisfaction of the department / PMC and after obtaining formal approval of the same.</p>	Each	12.00
97	Supply, Installation, Fixing of CARBON DIOXIDE Fire Extinguisher confirming to IS: 2878 with ISI Mark.(4.5 LITERS) BRAND: FIRESTOP/FIREND / FIRESHIELD	Each	40.00
98	<p>Supply, installation, testing and commissioning of following types of Extinguishers with provision of wall bracket (fixed with anchor fastner).</p> <p>(a) 4.5 kg CO2 High Pressure Portable Fire Extinguisher, filled with Co2 Gas as per IS 15222, Gross Weight 16.4, empty weight 11.9 Kg, Control discharge mechanism fitted with 1 Meter Wire Braided Hose & Flat Hom with Diffuser Nozzle for dispersed discharge of CO2, Discharge Time 12 Sec, Average Discharge is 95%, Applicable on Class B, C and electrically started Fire, Fire Rating 21B, Internal coating is not applicable & External coating is of enamel spray painting, Powder Coated Handle, Valve Confirm to IS 3224 ISI Marked, CO2 Cylinder construction: hot spinning by seamless pipes & bearing ISI mark, Body confirms to IS 7285 and PESO APPROVED. Extinguishers confirmed to ISI 15683:2006 and ISI marked.</p>	Each	40.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
99	Supply, installation, testing and commissioning of following types of Extinguishers with provision of wall bracket (fixed with anchor fastner). (b) ABC Type Fire Extinguisher Cap. 9 kg Filled with Mono Ammonium Phosphate Powder 90% confirms to IS 14609, Stored Pressure Type, UGTS Pressure Gauge, Gross Weight 13.3 Kg. Empty Weight 4.3 Kg, Can Height 575 mm, Diameter 180 +/- 10mm, Discharge Time 31 Sec, Controllable discharge mechanism, Jet Range 6 Meters, Average Discharge is 90%, applicable on Class A,B & C and electrically started Fire, A Rating 4A, B Rating 89B, Can Construction : Deep drawn & CO2 Mig welded, EPDM Rubber Hose with both end Aluminum clamped, Internal Coating - Epoxy Powder coating, External Coating - Pure Polyester Powder coating (UV Resistant), Brass forged valves with safety Pin is of SS material, Sheet metal thickness : 2.0 mm, ISI Approved IS 15683:2006	Each	15.00
100	Supply, Installation, Fixing of DRY CHEMICAL POWDER Fire Extinguisher confirming to IS: 2171 with ISI mark and CO2 cartridge will be confirming to IS: 4947 with ISI mark, Powder will be confirming to IS: 4308 with ISI Mark (5 KG) BRAND : FIRESTOP I FIREND / FIRE SHIELD	Each	1.00
101	Supply. Installation, Fixing of DRY CHEMICAL POWDER Fire Extinguisher confirming to IS: 2171 with ISI mark and CO2 cartridge will be confirming to IS: 4947 with ISI mark, Powder will be confirming to IS 4308 with ISI Mark (10 kg) BRAND : FIRESTOP - FREN) - FIRE SHIELD	Each	1.00
102	Excavating trenches of required width for pipes, cables, etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	Metre	900.00
103	Excavating trenches of required width for pipes, cables, etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5 m	Cum	1800.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
104	<p>Providing, laying, jointing, testing (duly tested to 1.5 times of working pressure) and commissioning of following sizes (N.B) of overground pipes conforming to IS-1239 upto 150 mm dia pipes and IS-3589 for pipes above 150 mm dia with all accessories like all fittings (standard MS fitting with threaded joints for pipes upto 50mm and welded joint for others pipe shall be used on the pipes in general, and flanged joints shall be used at connections with fire fighting appurtenances, valves etc. and, at junctions for maintenance purpose) including tees, elbows, headers, reducers, union, flanges, rubber gaskets, GI nuts bolts, washer including supporting/fixing the pipe on floor / wall ceiling with galvanised clamps, hangers (using anchor fastners) as per specification, GI pipe sleeve of suitable higher size shall be provided wherever the pipes are crossing the walls/floors and sealing the sleeves with glass wool in between & fire sealant compound at either end all as per Employer's / Consultants requirements including cutting holes and chases in brick, RCC work and making good the same to original conditions complete in all respects. All hangers, clamps, brackets etc, shall be of galvanized iron unless specified otherwise and supply of the same shall also be included for rates under this head. (Welding of any kind on the galvanized support banger shall not be permitted) completed as per the approval of the Engineer in charge.</p> <p>(a) 80 mm dia = MS C Heavy class pipe. (welded flanged joints)</p>	Metre	270.00
105	<p>Providing, laying, jointing, testing (duly tested to 1.5 times of working pressure) and commissioning of following sizes (N.B) of overground pipes conforming to IS-1239 upto 150 mm dia pipes and IS-3589 for pipes above 150 mm dia with all accessories like all fittings (standard MS fitting with threaded joints for pipes upto 50mm and welded joint for others pipe shall be used on the pipes in general, and flanged joints shall be used at connections with fire fighting appurtenances, valves etc. and, at junctions for maintenance purpose) including tees, elbows, headers, reducers, union, flanges, rubber gaskets, GI nuts bolts, washer including supporting/fixing the pipe on floor / wall ceiling with galvanised clamps, hangers (using anchor fastners) as per specification, GI pipe sleeve of suitable higher size shall be provided wherever the pipes are crossing the walls/floors and sealing the sleeves with glass wool in between & fire sealant compound at either end all as per Employer's / Consultants requirements including cutting holes and chases in brick, RCC work and making good the same to original conditions complete in all respects. All hangers, clamps, brackets etc, shall be of galvanized iron unless specified otherwise and supply of the same shall also be included for rates under this head. (Welding of any kind on the galvanized support banger shall not be permitted) completed as per the approval of the Engineer in charge.</p> <p>(a) 100 mm dia - MS C Heavy class pipe. (Welded/Flanged Joints)</p>	Metre	95.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
106	<p>Providing, laying, jointing, testing (duly tested to 1.5 times of working pressure) and commissioning of following sizes (N.B) of overground pipes conforming to IS-1239 upto 150 mm dia pipes and IS-3589 for pipes above 150 mm dia with all accessories like all fittings (standard MS fitting with threaded joints for pipes upto 50mm and welded joint for others pipe shall be used on the pipes in general, and flanged joints shall be used at connections with fire fighting appurtenances, valves etc. and, at junctions for maintenance purpose) including tees, elbows, headers, reducers, union, flanges, rubber gaskets, GI nuts bolts, washer including supporting/fixing the pipe on floor / wall ceiling with galvanised clamps, hangers (using anchor fastners) as per specification, GI pipe sleeve of suitable higher size shall be provided wherever the pipes are crossing the walls/floors and sealing the sleeves with glass wool in between & fire sealant compound at either end all as per Employer's / Consultants requirements including cutting holes and chases in brick, RCC work and making good the same to original conditions complete in all respects. All hangers, clamps, brackets etc, shall be of galvanized iron unless specified otherwise and supply of the same shall also be included for rates under this head. (Welding of any kind on the galvanized support banger shall not be permitted) completed as per the approval of the Engineer in charge.</p> <p>(b) 150 mm dia - MS "C Heavy class pipe. (Welded/Flanged Joints)</p>	Metre	50.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
107	<p>Providing, laying, jointing, testing (duly tested to 1.5 times of working pressure) and commissioning of following sizes (N.B) of overground pipes conforming to IS-1239 upto 150 mm dia pipes and IS-3589 for pipes above 150 mm dia with all accessories like all fittings (standard MS fitting with threaded joints for pipes upto 50mm and welded joint for others pipe shall be used on the pipes in general, and flanged joints shall be used at connections with fire fighting appurtenances, valves etc. and, at junctions for maintenance purpose) including tees, elbows, headers, reducers, union, flanges, rubber gaskets, GI nuts bolts, washer including supporting/fixing the pipe on floor / wall ceiling with galvanised clamps, hangers (using anchor fasteners) as per specification, GI pipe sleeve of suitable higher size shall be provided wherever the pipes are crossing the walls/floors and sealing the sleeves with glass wool in between & fire sealant compound at either end all as per Employer's / Consultants requirements including cutting holes and chases in brick, RCC work and making good the same to original conditions complete in all respects. All hangers, clamps, brackets etc, shall be of galvanized iron unless specified otherwise and supply of the same shall also be included for rates under this head. (Welding of any kind on the galvanized support banger shall not be permitted) completed as per the approval of the Engineer in charge. (c) 200 mm dia - MS 10 mm thick pipe. (Welded Flanged Joints)</p>	Metre	30.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
108	<p>Providing, laying, jointing, testing (duly tested to 1.5 times of working pressure) and commissioning of following sizes (N.B) of overground pipes conforming to IS-1239 upto 150 mm dia pipes and IS-3589 for pipes above 150 mm dia with all accessories like all fittings (standard MS fitting with threaded joints for pipes upto 50mm and welded joint for others pipe shall be used on the pipes in general, and flanged joints shall be used at connections with fire fighting appurtenances, valves etc. and, at junctions for maintenance purpose) including tees, elbows, headers, reducers, union, flanges, rubber gaskets, GI nuts bolts, washer including supporting/fixing the pipe on floor / wall ceiling with galvanised clamps, hangers (using anchor fastners) as per specification, GI pipe sleeve of suitable higher size shall be provided wherever the pipes are crossing the walls/floors and sealing the sleeves with glass wool in between & fire sealant compound at either end all as per Employer's / Consultants requirements including cutting holes and chases in brick, RCC work and making good the same to original conditions complete in all respects. All hangers, clamps, brackets etc, shall be of galvanized iron unless specified otherwise and supply of the same shall also be included for rates under this head. (Welding of any kind on the galvanized support banger shall not be permitted) completed as per the approval of the Engineer in charge.</p> <p>(d) 250 mm dia - MS 10 mm thick pipe. (Welded/Flanged Joints)</p>	Metre	500.00
109	<p>Providing, laying, jointing, testing (duly tested to 1.5 times of working pressure) and commissioning of following sizes (N.B) of overground pipes conforming to IS-1239 upto 150 mm dia pipes and IS-3589 for pipes above 150 mm dia with all accessories like all fittings (standard MS fitting with threaded joints for pipes upto 50mm and welded joint for others pipe shall be used on the pipes in general, and flanged joints shall be used at connections with fire fighting appurtenances, valves etc. and, at junctions for maintenance purpose) including tees, elbows, headers, reducers, union, flanges, rubber gaskets, GI nuts bolts, washer including supporting/fixing the pipe on floor / wall ceiling with galvanised clamps, hangers (using anchor fastners) as per specification, GI pipe sleeve of suitable higher size shall be provided wherever the pipes are crossing the walls/floors and sealing the sleeves with glass wool in between & fire sealant compound at either end all as per Employer's / Consultants requirements including cutting holes and chases in brick, RCC work and making good the same to original conditions complete in all respects. All hangers, clamps, brackets etc, shall be of galvanized iron unless specified otherwise and supply of the same shall also be included for rates under this head. (Welding of any kind on the galvanized support banger shall not be permitted) completed as per the approval of the Engineer in charge.</p> <p>(e) 300 mm dia - MS 10 mm thick pipe. (Welded/Flanged Joints)</p>	Metre	50.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
110	Providing and fixing G.I. pipes (C- Heavy) complete with G.I. fittings including trenching and refilling etc. conforming to IS : 1239. Jindal/Tata make (a) 25 mm dia nominal bore	Metre	150.00
111	Providing and fixing G.I. pipes (C- Heavy) complete with G.I. fittings including trenching and refilling etc. conforming to IS : 1239. Jindal/Tata make (b) 32 mm dia nominal bore.	Metre	150.00
112	Providing and fixing G.I. pipes (C- Heavy) complete with G.I. fittings including trenching and refilling etc. conforming to IS : 1239. Jindal/Tata make (c) 40 mm dia nominal bore	Metre	140.00
113	Providing and fixing G.I. pipes (C- Heavy) complete with G.I. fittings including trenching and refilling etc. conforming to IS : 1239. Jindal/Tata make (d) 50 mm dia nominal bore	Metre	60.00
114	Providing and fixing G.I. pipes (C- Heavy) complete with G.I. fittings including trenching and refilling etc. conforming to IS : 1239. Jindal/Tata make (e) 65 mm dia nominal bore	Metre	195.00
115	Painting with two coats of Synthetic enamel paint of approved shade and brand over a coat of Red oxide zink chromate primer. For the following sizes (NB) pipes prior to application of primer the surface should be cleaned for any dirt, rusts, rough substance etc. Including painting of legends and direction completed as per the approval of the Engineer- in-charge.Outer surface for any dia pipe	sqm	480.00
116	Providing & fixing gun-metal fire brigade inlet connection collecting head) consisting of 3 Nos. 63 mm dia instantaneous type male couplings with built-in check valves, 1 No. 150 mm dia sluice valve, 1 No. 150 mm dia non-return valve and 150 mm dia flanged outlet complete with bolts, nuts and rubber insertions as required and as per IS:904-1963. For UGR - 1 no	Each	2.00
117	Providing & fixing MS cabinet (to enclose above FB connection) fabricated from 16 gauge MS sheet with full front glass door and locking arrangement duly painted with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade and suitably mounted on a raised masonry platform as required (Approx 0.6m x 0.6m x 0.45m).	Each	4.00
118	Providing & Hiking gunmetal fire brigade suction coupling (draw-out connection inter female coupling as per IS: 902- 1974 complete with 150 mm dia GI suction header.	Each	1.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
119	Providing & Fixing MS cabinet to enclose draw out connection as per Item above) fabricated from to MS Sheet with full front glass door and locking arrangement duly painted with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade and suitably mounted on a raised masonry platform as required. (Approx 0.6m x 0.6m x 0.45m)	Each	3.00
120	Providing & fixing 150 mm dial type Pressure gauge of (0-16kg/cm ²) range with gun metal shut off cock etc. duly calibrated before installation in MKS and FPS units and fixing the same where required as directed including all fittings, short piece, nipples, elbows testing the joints etc.all complete. (Quantity of this item will be payable only where it has not been included in the relevant composite items).	Each	3.00
121	G.I Pipe sleeve of suitable higher size shall be provide of wherever in the pipe are crossing the walls/ floors and sealing the sleeves with glass wool in between and sealant compound at either end as per project manager's requirement.	Meter	50.00
122	Gun metal double headed hydrant valves with 100 mm dia flanged inlet brass spindle control & 63 mm dia female instantaneous outlet type gun metal coupling complete with rubber blank cap and chain as per IS : 5290 (ISI Marked should be embossed).	Each	4.00
123	Providing, Fixing, testing & Commissioning of Single Headed Gun Metal ISI Marked oblique pattern Hydrant Landing Valve with 80 mm dia, flanged inlet & 63 mm dia instantaneous type female outlet complete with cap and chain, twist release lug and all accessories as per IS:5290-19833 (Type-'A') and specifications complete as reequired . (MAKE:ESSEL/WINCO/NEWAGE) [For Internal & Terrace Hydrant].	Each	1
124	Providing RRL Hose with ISI Marked (IS:636)63 mm dia X15 M long complete with instantaneous type Gun Metal 3 mm dia ISI Marked male & female couplings (IS:903) bound & riveted to hose pipes with copper rivets and copper wire complete as reqd. (MAKE: NIRMAL RUBBER/NEWAGE)	Each	6.00
125	Providing & Fixing of Gun Metal 63 mm dia Short Branch Pipe with 20 mm dia nozzle, ISI marked (IS:903) complete as required. (Make: ESSEL/WINCO/NEWAGE).	Each	10.00
126	Providing & Fixing Standard Fireman's Axe with heavy insulated handle	Each	10.00
127	Supplying, Installation, Testing & Commissioning of First Aid Hose reel drawn with 30 mtrs. Long rubber hose and G.M shut off nozzle, 25mm dia Gate valve, Union pipe complete set confirming to IS: 884. [For internal hydrant)	Set	10.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
128	supplying & Fixing, cast iron body Butterfly valves with matching flanges, rubber Insertion, nuts, bolts and washer etc (IS:13095) of following size complete as required. (MAKE : KOLEY/KALPANA/AUDCO) 250 mm dia	Each	10
129	supplying & Fixing, cast iron body Butterfly valves with matching flanges, rubber Insertion, nuts, bolts and washer etc (IS:13095) of following size complete as required. (MAKE : KOLEY/KALPANA/AUDCO) 150 mm dia	Each	2.00
130	supplying & Fixing, cast iron body Butterfly valves with matching flanges, rubber Insertion, nuts, bolts and washer etc (IS:13095) of following size complete as required. (MAKE : KOLEY/KALPANA/AUDCO) 100 mm dia	Each	2.00
131	Providing ,Fixing ,Testing & Commissioning of air Release Valve	Each	2.00
132	Providing and making drainage provision for the wet riser with 50 mm dia MS (heavy duty) pipe, ball valve, fittings etc. as required maximum length of pipe 6 mtr.	Set	5.00
133	Supply, installation, testing & commissioning of 150 mm dia installation control valve assembly comprising of vertical wet alarm valve, hydraulic alarm motor & gong, 15 mm dia Test Valve, 50 mm dia, Drain Valve and all necessary trimming connections including 02 nos, pressure gauge as per manufacturers catalogue complete as reqd. (Make: HD FIRE)	Set	5.00
134	Supplying, Installation Testing & Commissioning of 15 mm dia quartzoid Bulb Type G.M. Sprinkler Head suitable to operate at 68* C complete as reqd. (Make: HD Fire / TYCO)	Set	270.00
135	Providing, fixing, testing & commissioning screwed type Cast Steel compact Pressure reducing valve of approved quality with pipes and specials including making necessary screwed/ flanged joints by providing all jointing materials including painting and testing the joints to hydraulic pressures specified for pipes all complete as per drawings and as directed by the Engineer-in- Charge to manage pressure of water, to restrict hydraulic forces by spring forces and maintains the desired pressure level in various parts of circuit. b) 300mm diameter	Each	1
136	Providing & Fixing of Installation Control Valve with turbine type automatic Alarm Gong to be connected with control valve, drain & test valve and all other necessary components per manufacturer's specifications complete as required and shall be suitable for test pressure 21 Kg/cm2. c) 250 mm diameter	Each	1

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
137	Supplying, fitting and fixing Puddle collar in RCC walls cover slabs or floors etc. assembly/sleeves consisting of MS pipes(Heavy type) conforming to IS: 1239 upto 150mm and IS 3589 having required shell thickness,not less than 8mm pipes of 200mm & above both ends flanged drilled to IS specification and one end matching blank flange(welded to pipe) with nuts, bolts, washers etc.and MS collar of minimum 6 mm thickness of specified size welded all round the pipe complete including three coats of bituminous paint on concealed portion and a coat of zinc oxide primer and two coats of synthetic enamel paint of approved shade on the exposed portion of the puddle collars as per direction of Engineer-in-charge. Upto 250 mm dia (both end flanged or threaded	kg	1310
138	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement All work un to plinth level. Thrust /AnchorBlocks 1:3:6 (1 Cement:3 Coarse Sand (zone-III) : 6 Graded stone aggregate 20 mm nominal size).	Cum	0.50
139	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement All work un to plinth level. Thrust /AnchorBlocks 1:2:4 (1 Cement:2 Coarse Sand : 4 Graded stone aggregate 20 mm nominal size).	Cum	2.00
140	Centering and Shuttering including struting, propping etc, and removal of form for walls (any thickness) including attached plaster, butteresses, plinth and string course etc.	Sqm	20.00
141	Steel reinforcement for RCC work including straightening, cutting bending, placing position and binding all complete upto plinth level. Thermo-Mechanical Treated bars of Grade Fe-500D or more	kg	100

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
142	<p>Supply, installation, testing and commissioning XYLEM/KIRLOSKAR / BE / GRUNDFOSS I WILO / DP make Pump motor set (located in Pump house for lifting / forcing water from a chamber of U.G. Reservoir to end use point network as stated below & of required drive (Motor HP), having discharge capacity and pumping head with squat or common base frame all electrical accessories (recommended by manufacturer) etc., such as 100 mm dia. pressure gauge (range 0-15 kg Sq.cm) with control cock fitted on delivery line, coupling of required size on suction end flexible removable type [Flanged) coupling on delivery end of pump, required M.S. galvanized supporting frame complete operational.</p> <p>(a) Vertical inline Booster Pumps set Consisting of: 2 non-self-priming, vertical stainless steel high-pressure centrifugal pumps of the MVI series, impellers and diffusers as well as all parts in contact with the fluid made of stainless steel or of corrosion-resistant materials, bidirectional mechanical seal and 3-phase motor. For every pump with gear-operated ball cocks on the suction/pressure side and a non-return valve on the pressure side, 8 ltrs diaphragm pressure vessel including flow setting in accordance with DIN 4807, 2 pressure gauges and pressure sensor (4 -20 mA), ready for connection with 1.4571 stainless steel pipework mounted to electrolytic galvanized base frame with height-adjustable vibration absorbers including solenoid valves level switches etc, at roof tanks. Note that required control panels will be paid under sl no. 1 1.2 below)</p> <p>Domestic pumps (I W + I S) for filter water volume flow : 5.00 cum/hr : 40.00 m</p>	Set	2.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
143	<p>Composite Electrical Control Panel : Supply, Installation, testing and commissioning of Compartmentalized Wall Mounted cubicle Type Electrical Control Panel (for all the pumps described in Sl. No. 1.1.1 above,the panel to be fabricated and shall consist of CPU,analogue/digital modules, COM interface, graphics-capable monochromatic touch display with 3-colour backlight for signaling the operating states operation fault/acknowledged fault and for symbol and plain text-supported menu guidance in 3 languages (selectable from 15).3 user levels. Display or adjustability of menu language, passwords, operating parameters, hours of operation, pump status, actual pressure display, frequency converter status, actual frequency display, history memory for run and fault signals with time stamp via real time clock, status and actual pressure display, built-in frequency converter with PWM technology for controlling the speed of the base-load pump, main switch, Manual- Q-Automatic switch for internal power supply, potential-free contacts for collective run and fault signals (SBM/SSM) as well as ON/OFF connection for fire alarm systems, motor protection switch/protection combination, TWC connection possible,automatically pump iteration. With provision for modules for connection 16 BMS and bus systems External remote set point adjustment or manual control mode - Evaluation relay for PIC Single run and fault signal, low water. Overload protection via Two Motor protection via motor protection switch starting train SESI Weintal overload relay - Battery-backed JWET Supply Jumb Trussutelevat can be adjusted externally, connection to BMS Strum id with VOISINNI Analoudler SM made. ISBN Teine web superDUS system: Prothue LON-BAS, CAN-Bus, (l) For Domestic Filtered Water Pumps {ref. SI. No. 1.1.1 (l)</p>	Each	2.00
144	<p>Supply, installation, testing and commissioning XYLEM/KIRLOSKAR / BE / GRUNDFOSS I WILO / DP make Pump mate Submersible type non-clogging Pump motor set (2 nos of Pumps located in each sump in semi-underground pump house is UG connecting corridor) of required drive (Motor HP), having discharge capacity and pumping head as described below with all electrical accessories viz main switch and starter auto on/off system with float alarm (with fixed or flexible alarm), over load protection relay, power cable and control cable from main switch and starter with auto on-off with dry running protection for protective motors, earthing having required MS. galvanized supporting stay/clamp etc. complete operational.</p> <p>A set of Sump pumps (Non-clogging type) having discharge capacity of each pump approx. 1 cum/hr at 10 m. pumping head working standby) Suction and delivery to surface drain at ground level. Including MCC and allied works.</p>	Each	2.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
145	Supply, installation, testing and commissioning XYLEM KIRLOSKAR / BE / GRUNDFOSS / WILO / DP make Pump motor set (located at roof top forcing water from a chamber of OH.Reservoir to downward pressure boosting and relevent pressure tank of requiral drivc (Motor HP), having discharge capacity and pumping head as described below with separate a common base frame all electrical accessories, with over load protection relay power cable and control cable from MCC to respective molars,earthing including other successors (recommended by manufacturer) ate., sien as BG mm dia. pressure gauge (range 0 15 Kb./S.Cm.) with control cochtiled on delivery line, coupling of required size on section and flexible removable type (Hanged) coupling on delivery end et pump. required MS galvanised supporting frame complete operational. Downward Pressure Boosting Pump (fixed speed) and Including Control Panel & relevant Pressure tank on the roof top for distribution of domestic & Flushing water 1) Pressure Boosting Pumps (IW+HIS) for filter water volume flow : 2 m3/h, Fixed with 18m head.	Each	2.00
146	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m Pipes, cables etc, not exceeding 80 mm dia.	RM	147.00
147	Earth work in backfilling the trench after laying different types and sizes of pipes with earth removed during excavation within initial lead and lift as per specification and direction of E/I.	CUM	108.00
148	Close timbering in trenches including strutting shoring and packing cavities (whenever required for each additional depth 1.5m complete as per specification and direction of E/I (Measurement ta be taken of the face area timbered).	SQM	10.00
149	Providing and fixing G.I: pipes (C- Heavy) complete with G.I. fittings including trenching and refilling etc conforming to IS:1239. 50 mm dia nominal bore	RM	129.00
150	Providing and fixing G.I: pipes (C- Heavy) complete with G.I. fittings including trenching and refilling etc conforming to IS:1239. 65 mm dia nominal bore	RM	18.00
151	Providing and fixing G.I: pipes (C- Heavy) complete with G.I. fittings including trenching and refilling etc conforming to IS:1239. 80 mm dia nominal bore	RM	15.00
152	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :50 mm diameter pipe	RM	129.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
153	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality : 65 mm diameter pipe	RM	18.00
154	Providing and filling sand of grading zone V or coarser grade, allround the G.I. pipes in external work :50 mm diameter pipe	RM	129.00
155	Providing and filling sand of grading zone V or coarser grade, allround the G.I. pipes in external work :65 mm diameter pipe	RM	18.00
156	Providing and filling sand of grading zone V or coarser grade, allround the G.I. pipes in external work :80 mm diameter pipe	RM	15.00
157	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :100 mm dia Ductile Iron Class K-7 pipes	RM	8.40
158	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :150 mm dia Ductile Iron Class K-7 pipes	RM	6.00
159	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :250 mm dia Ductile Iron Class K-7 pipes	RM	25.00
160	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :300 mm dia Ductile Iron Class K-7 pipes	RM	5.00
161	Providing wrapping and coating to outer surface of underground G.I. / M.S.: D.1. pipelinc as par LS: 10221 with a layer of 4 mm thick wrapping and required coatings. (alternatively iwo layers of 2 mm thick wrappings with required coatings may be provided but without any extra cost). a) 50 mm nominal bore	RM	129.00
162	Providing wrapping and coating to outer surface of underground G.I. / M.S.: D.1. pipelinc as par LS: 10221 with a layer of 4 mm thick wrapping and required coatings. (alternatively iwo layers of 2 mm thick wrappings with required coatings may be provided but without any extra cost). b) 65 mm nominal bore	RM	18.00
163	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 15 mm nominal outer dia Pipes	RM	73.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
164	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 20 mm nominal outer dia Pipes	RM	5.00
165	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 25 mm nominal outer dia Pipes	RM	41.00
166	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 32 mm nominal outer dia Pipes	RM	84.00
167	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 40 mm nominal outer dia Pipes	RM	28.00
168	Providing fixing, testing & commissioning screwed type Cast Steel compact Pressure reducing valve of approved quality with pipes and specials including making necessary screwed/ flanged Joints by providing all jointing materials including painting and testing the joints to hydraulic pressures specified for pipes all complete as per drawings and as directed by the Engineer-in- Charge to manage pressure of water, to restrict hydraulic forces by spring forces and maintains the desired pressure level in various ways. For 50 mm dia pipe	Each	1.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
169	Providing fixing, testing & commissioning screwed type Cast Steel compact Pressure reducing valve of approved quality with pipes and specials including making necessary screwed/ flanged Joints by providing all jointing materials including painting and testing the joints to hydraulic pressures specified for pipes all complete as per drawings and as directed by the Engineer-in- Charge to manage pressure of water, to restrict hydraulic forces by spring forces and maintains the desired pressure level in various ways. For 65 mm dia pipe	Each	1.00
170	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :100 mm diameter (Class-ii)	Each	1.00
171	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) : 125 mm diameter ((Class-ii)	Each	1.00
172	Providing and fixing gun metal non-return valve Horizontal Vertical type of approved quality as per specification and direction of Engineer-In-Charge(a) 15 mm nominal bore	Each	1.00
173	Providing and fixing gun metal non-return valve Horizontal Vertical type of approved quality as per specification and direction of Engineer-In-Charge(b) 20 mm nominal bore	Each	1.00
174	Providing and fixing gun metal non-return valve Horizontal Vertical type of approved quality as per specification and direction of Engineer-In-Charge(c) 25 mm nominal bore	Each	1.00
175	Providing and fixing gun metal non-return valve Horizontal Vertical type of approved quality as per specification and direction of Engineer-In-Charge (d) 32 mm nominal bore.	Each	2.00
176	Providing and fixing gun metal non-return valve Horizontal Vertical type of approved quality as per specification and direction of Engineer-In-Charge (e)40 mm nominal bore	Each	2.00
177	Providing and fixing Cast Carbone steel double flange swing type Non Return Valve class 300 as per BS 1868 inter working parts of S.S 304 Hydraulic test pressure of body 30 kg/cm2 seat 21kg/cm2 approved quality. (f) 50 mm nominal bore.	Each	2.00
178	Providing and fixing Cast Carbone steel double flange swing type Non Return Valve class 300 as per BS 1868 inter working parts of S.S 304 Hydraulic test pressure of body 30 kg/cm2 seat 21kg/cm2 approved quality. (g) 65 mm nominal bore.	Each	2.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
179	Providing and fixing gun metal full way valve with. CI wheel of approved quality (screwed end) a complete as per specification and direction of Engineer-In-Charge a) 15 mm nominal bore	Each	1.00
180	Providing and fixing gun metal full way valve with. CI wheel of approved quality (screwed end) a complete as per specification and direction of Engineer-In-Charge b) 20 mm nominal bore	Each	1.00
181	Providing and fixing gun metal full way valve with. CI wheel of approved quality (screwed end) a complete as per specification and direction of Engineer-In-Charge C) 25 mm nominal bore	Each	1.00
182	Providing and fixing gun metal full way valve with. CI wheel of approved quality (screwed end) a complete as per specification and direction of Engineer-In-Charge d) 32 mm nominal bore	Each	2.00
183	Providing and fixing gun metal full way valve with. CI wheel of approved quality (screwed end) a complete as per specification and direction of Engineer-In-Charge e) 40 mm nominal bore	Each	2.00
184	Providing and fixing C.S body gate valve as B.S 1414 class 300 rising spindle of 8.5 410 and internal working parts S.S 304 raised face with hand wheel operated Hydraulic test pressure of body 30 kg/cm ² seat 21 kg/cm ² approved quality (f)50 mm nominal bore.	Each	2.00
185	Providing and fixing C.S body gate valve as B.S 1414 class 300 rising spindle of 8.5 410 and internal working parts S.S 304 raised face with hand wheel operated Hydraulic test pressure of body 30 kg/cm ² seat 21 kg/cm ² approved quality (g)65 mm nominal bore.	Each	1.00
186	Supplying, fitting and fixing Wrought iron flange of approved quality, with washers and bolts as per standard joints complete in all respects. (a) 40 mm nominal bore	Each	2.00
187	Supplying, fitting and fixing Wrought iron flange of approved quality, with washers and bolts as per standard joints complete in all respects. (b) 50 mm nominal bore.	Each	12.00
188	Supplying, fitting and fixing Wrought iron flange of approved quality, with washers and bolts as per standard joints complete in all respects. (c) 65 mm nominal bore	Each	8.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
189	Supplying, fitting and fixing Wrought iron flange of approved quality, with washers and bolts as per standard joints complete in all respects. (d) 80 mm nominal bore	Each	4.00
190	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts,nuts, rubber insertions etc. (The tail pieces if required will be paid separately) : 80 mm dia nominal bore	Each	1.00
191	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts,nuts, rubber insertions etc. (The tail pieces if required will be paid separately) : 100 mm dia nominal bore	Each	1.00
192	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts,nuts, rubber insertions etc. (The tail pieces if required will be paid separately) : 150 mm dia nominal bore	Each	1.00
193	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 : 80 mm dia nominal bore	Each	1.00
194	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 : 100 mm dia nominal bore	Each	1.00
195	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 : 150 mm dia nominal bore	Each	1.00
196	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	8.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
197	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	4.00
198	Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory. 80 mm diameter C.I. pipe	100 RM	0.73
199	Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory. 100 mm diameter C.I. pipe	100 RM	0.41
200	Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory. 125 mm diameter C.I. pipe	100 RM	0.84
201	Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory. 150 mm diameter C.I. pipe	100 RM	0.28
202	Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory. 200 mm diameter C.I. pipe	100 RM	1.29
203	Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory. 250 mm diameter C.I. pipe	100 RM	0.18

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
204	Supplying, fitting and fixing Paddle collar in RCC walls of floors etc: assembly/sleeves consisting of MS pipes(Heavy type) conforming to IS 1239 und IS 3589 having required shell Thickness, both ends fanged drilled to IS specification and one end matching blank flange(welded to pipe) with nuts, bolts, washers etc and MS collar of minimum 6 mm thickness of specified size welded all round the pipe complete including three coats of bituminous paint on concealed portion and coat of zinc oxide primer and two cons of synlactic enamel paint of approved shade on th Upto 250 mm dia (both end flanged or threaded) e exposed portion of the paddle collars as per direction of Engineer-in-charge.	KG	700.00
205	Providing and fixing Water level Monitor (Water Gauge). for installing on the side wall of Water Reservoir consisting of calibrated background board, copper float, stand red wire required number of pulleys, puddle collar/ sleeves as required adjustable pointer etc. Complete operational (Water level difference upto 4m) - For Uuder ground reservoir.	Each	5.00
206	Providing and fixing Water level Monitor (Water Gauge). for installing on the side wall of Water Reservoir consisting of calibrated background board, copper float, stand red wire required number of pulleys, puddle collar/ sleeves as required adjustable pointer etc. Complete operational (Water level difference upto 4m) - For over head reservoir.	Each	5.00
207	Providing and fixing water level control switch assembly uunsis of just below level and high levei actuation for auto on/off the respective motor of the reservoir sleeve of 150 mm dia on top / side of the reservoir including flange and etc. with respective motor pannel switch etc. in complete operational	Each	10.00
208	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:3:6 (1 Cement : 3 coarse sand (zone-III) : 6 graded stone aggregate 20 mm nominal size)	CUM	3.00
209	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)	CUM	15.00
210	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars of grade Fe-500D or more.	KG	1.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
211	Supplying and fixing C.I. cover without frame for manholes : 560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg	Each	15.00
212	Providing and fixing Copper wire Netting fixed with threaded clamped connection to vent / overflow pipes upto the following dia (Pipes to be paid separately). Upto 100m m dia	Each	12.00
213	<p>Water Treatment Plan S/cum/hr Capacity Water Treatment Plant Note for WTP :The following description of Items shall be read in conjunction with the technical tender specifications and schematic drawings. Work will be executed as per the shop drawing to be prepared by the contractor and to be approved by the owner/consultant. The Water Treatment Plant shall be placed within pump house of water works)</p> <p>Filter Feed pumps - 2 nos (1W+18) Capacity 5 cum/hr at 25m WC • Flow Meter - 2 Nos Capacity 0-10 Cum/hr • Pressure Gauge. 4nos or as per approved drawing</p> <p>Range 0-15 kg/sq cm OXIDATION CHAMBER(OC) Average Flow : 5 Cu.m/Hr Type of vessel : Vertical, Cylindrical. Dimension of vessel : 400 mm dia x 800 m ht M.O.C : FRP Media : Mno2</p> <p>IRON REMOVAL FILTER (IRF) Average Flow : 5 Cu.m/Hr Type of vessel : Vertical, Cylindrical. Dimension of vessel : 900 mm dia x 1500 m ht M.O.C : FRP Minimum Working Pressure : 3.0 kg/cm2 Test pressure : 7.0 kg/cm2 Back wash interval : 24 Hr Types of media : gravel & treated salt Size of frontal pipeline : 40 NB Construction of pipeline : UPVC. Type of valves : Multiport Pressure Gauge : Provided at inlet & outlet of filter, Sampling Cock : Provided at the outlet. Backwash Duration : 25 minutes.</p> <p>MULTI GRADE FILTER (MGFYDUAL MEDIA FILTER (DMF) Average Flow 5 Cum/Hr Type of vessel : Vertical, Cylindrical. Dimension of venue : 800 mm dia x 1500 m he MOC : FRPhos Minimum Working Pressure : 3.0 kg/cm2 Test pressure</p>	JOB	1

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
	: 7.0 kg/cm ² Back wash interval : 24 Hr Types of media • Gravel, Coarse Sand Size of frontal pipeline : 50 NB Construction of pipeline : UPVC/GI Type of valves : Butterfly Pressure Gauge : Provided at inlet & outlet of filter. Sampling Cock : Provided at the outlet. Backwash Duration 30 minutes. ACTIVATED CARBON FILTER Capacity 5 cum/hr Diameter 800mm Height 1800 mm MOC FRP/MS Media Gradel gravels & activated Carbon - Inter Connecting Pipes, Pipe fittings and valve etc - 1 lot - Civil work like foundation of pumps, motors, vessels and ancillary works like drains etc within battery limit - 1 Job Starter Panel with Cableing work with 5 Nos of feeder - 1 lot		
214	Electrical Power Cable a obtrol when I lot Earthing with a pipe ma per 18:3043, tlat Potable water quality teat lat -1 Set Electrical Control Panels - 1 Set • Ultra Violet Disinfection Unit - 1 no, Flow - 5 cumhr, Life 9000 hrs. Operating and maintaining the plant round the clock for two years from the date of virtual completion of 1 year free O & M after successful completion & handing over the plant as detailed in the condition of Contract and Technical Specification, i.e. after successful testing and commissioning and furnishing test reports on treated water from Water Treatment Plant from approved agency, imparting training to the owner's staff to run the plant and including cost of all spares, consumables including common salt, all chemicals, top-up of resin etc and required man-power deployed round the clock during O&M period (Cost of Power & Water will be borne by the Owner)- 1 job	MONTH	24

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
215	<p>Reverse Osmosis Unit of Capacity 250 LPH, Placed in the Building roof.</p> <p>Note: Raw water Feed Pump 500 LPH head 25.0m sand filter 500 LPH size 13" x 54" FRP MOC & media, Graded Gravels & Sand ACF 500 LPH, size 13" x 54" MOC FRP with Graded Gravel & Activated Carbon.</p> <p>Cartridge Filter I No 500 LPH</p> <p>Micron cartridge Filter I No MOC PP, size 20" x 4" Rating 5 Micron Capacity 500 LPH</p> <p>High pressure pump vertical in line I no Capacity 500 LPH Pressure 10-12 Kg/sqcm</p> <p>RO membrane 2 nos Type TFC Polymide, size 40 x 40</p> <p>RO Pressure Tube, PVC I no 40 x 40</p> <p>On line TDS & Digital Conductivity meter (Digital)</p> <p>Pressure Meter (SS316/MASS) 3 nos</p> <p>Rotameter 2 nos</p> <p>Low Pressure, High Pressure Switch & Level Sensor-2 nos</p> <p>• Electrical Control Panels with indicator Lamp AMP meter, Volt meter, on off switch</p> <p> Pipe line Upvc upto H.P Pump I no & HP pumps to end final waterskid MS box SS 304 & analog</p> <p>UV System one set for 250KLH(Life 9000 HRS)</p>	1 SET	1
216	<p>Excavating trenches of required width for pipes, cables, etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:</p> <p>Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia</p>	RM	47
217	<p>Pumping out waste water including hire charge for pumps to be provided by the contractors including delivery and suction pipes, specials valves, etc. supplying fuel and lubricants, necessary operator and helper and removing the same on completion as per direction of flows from Nikashis, drains underground conduits etc. pump log book to be maintained.)</p>	Hp.hr.	1000
218	<p>Earth work in back filling the trench after laying different types and sizes of pipes with earth removed during excavation within initial lead and lift as per specification and direction of E/I</p>	Cum	55

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
219	Close timbering in trenches including strutting shoring and packing cavities (whenever required) for each additional depth 1.5m complete as per specification and direction of El (Measurement to be taken of the face area timbered)	Sqm	50
220	Providing designation 75A one brick flat soling joints filled with local sand including cost of watering taxes royalty all complete as per specification and direction of E/I	Sqm	25
221	Providing PCC M-75 with nominal mix of (1:4:8) in foundation with approved quality of stone metal grade-III (50mm to 25 mm) size clean coarse sand of F.M 2.5 to 3 including screenings shuttering mixing cement concrete in mixer and place in position, vibrating, striking, curing taxes and royalty all complete for concrete cradle for dia from 150mm NP2 pipe laying	Cum	46
222	Supply of UPVC pipes (B Type) & fittings conforming to IS-13592-1992 single socketed 3 meter length 110 mm dia	meter	15
223	Supply of UPVC pipes (B Type) & fittings conforming to IS-13592-1992 single socketed 3 meter length 160 mm dia	meter	7
224	Supplying & laying Double Wall Corrugated (with external annular corrugation and smooth internal walls) high Density Polyethylene Pipes conforming to IS 16098 (Part-II):2013 having stiffness Class of SN 8 with Ring stiffness not less than 8.00 KN/Sqm. and Impact Resistance TIR value not more than 10% including necessary jointing materials for pressure underground Drainage, Sewerage & Cross drainage application. 150 mm internal dia	meter	41.00
225	Supplying & laying Double Wall Corrugated (with external annular corrugation and smooth internal walls) high Density Polyethylene Pipes conforming to IS 16098 (Part-II):2013 having stiffness Class of SN 8 with Ring stiffness not less than 8.00 KN/Sqm. and Impact Resistance TIR value not more than 10% including necessary jointing materials for pressure underground Drainage, Sewerage & Cross drainage application. 250 mm internal dia	meter	6.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
226	Construction brick masonry chamber for underground cl Inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1-2:4 mix (1 cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement : 5 coarse sand (Zone III): 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick (yyith cement mortar 1:3 (1 cement 3 coarse sand), finished smooth etc. complete as per standard design. Inside dimension 500 x 700 mm and 45 cm deep for pipe line with one or two inlets; Extra for depth beyond 45 cm of brick masonry chamber. For 500 x 700 mm size with common burnt clay F.P.S (non modular) bricks of cladd designation 7.5	meter	2
227	Constructing Brick masonry manhole in cement mortar 1:4 (1 cement: 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design (a) Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg):with common burnt clay F.P.S (non modular) bricks of class designation 7.5	Each	3
228	Constructing Brick masonry manhole in cement mortar 1:4 (1 cement: 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design (a) Inside size 120 cm x 90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal dimensions, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg):with common burnt clay F.P.S (non modular) bricks of class designation 7.5	each	2

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
229	Constructing Brick masonry manhole in cement mortar 1:4 (1 cement: 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design with common burnt clay F.P.S (non modular) bricks of class designation 7.5(a) extra depth for 90 cm x 80 cm manhole beyond 0.45 m depth with common burnt clay F.P.S (non modular) bricks of class designation 7.5	meter	3.00
230	Constructing Brick masonry manhole in cement mortar 1:4 (1 cement: 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design with common burnt clay F.P.S (non modular) bricks of class designation 7.5 (b) Extra depth for 120 cm x 90 cm manhole beyond 0.90 m depth.	meter	1.00
231	Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design (a) with 20x20 mm square bar.	Each	40
232	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:100x100 mm size P type with common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	5

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
233	Constructing brick masonry grease trap 1250 x 2500 x 1000 and manhole cover 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design.	Each	1.00
234	providing and fixing soil, waste and vent pipes:100 mm dia sand cast iron S&S Pipe as per IS: 1729	meter	25.00
235	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for ew work: 100 mm diameter pipe	meter	10.00
236	supply and fixing C. I cover with frame for manhole 560mm diameter C.I cover (heavy duty) the weight of the cover to be not less than 108 kg (for septic tanks, chlorination Chambers & Soakwell	Each	8.00
237	Preamble to BOQ for Bore Well and allied works: (0) Number of bore wells considered are 1 nos at locations to be finalized to suit site conditions. The number of bore wells may vary depending upon the actual yield available after boring and also depending upon the quantum of water available, if any, from the local authority. Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part 1), including collecting samples from different strata, preparing and submitting strata chart bore log, including hire & running charges of all equipment's, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, upto 90 meter depth below ground level.a) For depth upto 250 meters for 150 mm dia tube well with top enlargement of 200 mm dia (upto 50 meter) All types of soil 150 mm dia	meter	200
238	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part 1), including collecting samples from different strata, preparing and submitting strata chart bore log, including hire & running charges of all equipment's, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, upto 90 meter depth below ground level.a) For depth upto 250 meters for 150 mm dia tube well with top enlargement of 200 mm dia (upto 50 meter) All types of soil 200 mm dia	meter	50.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
239	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended casing pipes of required dia, conforming to 18:4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge. i) 150 mm nominal size dia having minimum wall thickness 5.00mm	meter	250
240	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended casing pipes of required dia, conforming to 18:4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge. ii) 200 mm nominal size dia having minimum wall thickness 5.40 mm	meter	50
241	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed / plain bevel ended pipe (type A) of required dia, conforming to 18: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumastic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge. i) 150 mm nominal size dia having minimum wall thickness 5.00mm	Meter	6
242	Gravel packing in tube well construction in accordance with IS: 4097 including providing gravel finel medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineering-in charge	Cum	2.00
243	Packing annular space between the outside of the housing pipes and the bore with cement concrete (1:2:4) as direction of the engineer- in - charge with cost of all materials and labour complete. (Intial 10.00m)	Cum	13.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
244	Development of tube well in accordance with IS: 2800 (part 1) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory. Vc disinfection of tube well, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	hr.	24
245	Collecting sample of water for bacteriological and chemical test from any depth at any time during execution of work including hire and labour charges for tools and plants and sterilizing the equipment's, paying all changes and fees, testing etc. and submission of test reports for parameters as per IS:10500, complete in all respect as per direction. (a) Final test after completion of development of yield	Nos.	1
246	Providing and fixing Bell Plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (PART I) a) 150 mm dia	Each	1
247	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing / casing pipe removable as per requirement, all complete for boor well of:a) 150 mm dia	Each	1
248	Providing and fixing 200 mm center Guide with clamp	Set	12
249	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.200 mm clamp	meter	2
250	Supplying, fitting, fixing and lowering Inside the tube well Submersible pump set having spring loaded non return valve having discharge capacity & pumping head as stated below, directly coupled with submersible motor of suitable HP capable to give required discharge suitable for operation within 340 - 400 volts (plus minus 8%). 3 phase, 50 cycles, AC supply, including cost of G.I stranded wire suspension from clamps at top of well to safety support below Submersible pump. The materials of pump - C.I. Casing . Chromium Steel Pump Shaft. Bronze Impeller, KSB/DP/Kiloskar or other approved make Pump and Motor set of same duty conditions. (Note: the specialist bore well vendor has to quote for both alternatives given below. Any one or both of the alternatives will be operated as per site conditions) Discharge capacity 15 cum per hour at a pumping head of approx. 75 meters head.	Set	1

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
251	Supplying, fitting and fixing Electrical Control Panel Board suitable for outdoor installation of adequate size made out of 2mm thick CRCA M.S. sheet and M.S. flat painted with suitable enamel paint fitted with required electrical accessories of L&T / SIEMENS / CROMPTON or equivalent approved make suitable for submersible pump - motor set, described above, including Automatic Star Delta Starter, Main Switch, Single Phase Preventer, Overload Protection Device, Water Level Controller with two probes, one for low level audible warning and one for very low level for tripping of the motor with all required electrical works, Amp. Meter, Volt Meter with Selector Switch, Indicator Lamp, on & off push button, Danger Board etc. as required.	Set	1.00
252	Supplying and laying of Water Proof PVC insulated Copper Cable of 3C x 2.5 Sq.mm. size suitable for the Submersible Motor.	Meter	250
253	Making end termination of Water Proof PVC insulated Copper Cable of 3C x 2.5 Sq.mm. size suitable for the Submersible Motor	Set	1
254	Pumping for work from discharge of submersible pump onwards: This work is generally to be done by plumbing contractor, however this work to be done by Tube well contractor on specific instruction of site-in-charge as per site requirement. (a) Supplying, fitting and fixing 100 mm dia G.I. pipe line (Tata Medium quality) with all fittings from discharge end of Submersible Pump to nearby Water Tank for over ground or underground installation including necessary earthwork, clamps including two coats painting.	Meter	25.00
255	Pumping for work from discharge of submersible pump onwards: This work is generally to be done by plumbing contractor, however this work to be done by Tube well contractor on specific instruction of site-in-charge as per site requirement. (b) Providing and fixing 80mm G.I. pipes complete with G.I. fittings including trenching and refilling etc. with all fittings from pump delivery to drain out point.	Meter	3.00
256	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :a) 100 mm dia	Set	1
257	Supplying, fitting and fhung GI Column Pipe (heavy quality) Including Manges with Nuts, Bolts and Washers at both ends, threading where required, coupling, painting etc. all complete (Length of the pipe coupled with pump motor set to be approx. 600 mm, topmost pipe to be approx.1500 mm long and rest of the pipes to be approx. 3 meters long each). a) 50 mm dia	Meter	40

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
258	Providing and fixing Cast Carbene steel double flange swing type Non Retur Valve class 300 as per B.S 1868 inter working parts of S.S 304 Hydraulic test pressure of body 30 kg/cm ² seat 21 kg/cm ² approved a) 100 mm nominal bore	Each	1.00
259	Providing and fixing Cast Carbene steel double flange swing type Non Retur Valve class 300 as per B.S 1868 inter working parts of S.S 304 Hydraulic test pressure of body 30 kg/cm ² seat 21 kg/cm ² approved a) 80mm nominal bore	Each	1.00
260	Providing and fixing Cl. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) a) 100 mm nominal bore	Each	1
261	Providing and fixing Cl. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) a) 80mm nominal bore	Each	1.00
262	Supplying , fitting and fixing M.S. Housing Clamp of approved quality to suit size of Housing pipe upto 300 mm dia Including necessary Nuts, Bolts and Washers	Set	2.00
263	Supplying , fitting and fixing M.S. Housing Clamp of approved quality to suit size of Housing pipe upto 300 mm dia Including necessary Nuts, Bolts and Washers a) 100 mm dia MS 90 degree bend with arrangement for fixing Pressure gauge	Each	1
264	Supplying , fitting and fixing M.S. Housing Clamp of approved quality to suit size of Housing pipe upto 300 mm dia Including necessary Nuts, Bolts and Washers b) 100 mm dia MS 90 degree plain bend	Each	3
265	Supplying , fitting and fixing M.S. Housing Clamp of approved quality to suit size of Housing pipe upto 300 mm dia Including necessary Nuts, Bolts and Washers c) 200 mm x 100 mm dia MS reducing tee	Each	1
266	Geophysical investigation of the aquifer by electro logging system with all tools and plants as necessary including supply of necessary report. Supplying P.V.C. water storage tank of approved quality with closed top with lid (Black) - Multilayer a) 10 KL	Each	1.00
267	Supplying P.V.C. water storage tank of approved quality with closed top with lid (Black) - Multilayer b) 15 KL	Each	1.00
268	Supplying P.V.C. water storage tank of approved quality with closed top with lid (Black) - Multilayer FFR 1 & 2	Liter	109880.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
269	Supplying P.V.C. water storage tank of approved quality with closed top with lid (Black) - Multilayer RWR	Liter	24660.00
270	Supplying P.V.C. water storage tank of approved quality with closed top with lid (Black) - Multilayer FILTER WATER RESERVOIR	Liter	25420.00
271	<p>(Note For STP : The following description of items shall be read in conjunction with the technical tender specifications and schematic drawings Work will be executed as per the shop drawing to be prepared by the contractor and approved by the owner/consultant. The Sewage Treatment Plant shall be located as per site plan of the plot on graded ground (levelled of) to be arranged by the owner through other agency. Site may vary as per design & site condition.</p> <p>Sewage Treatment Plant Construction in RCC, including all earth work, de-watering if required of the following Chambers/tanks as per specifications, Drawings and accepted Design as per CPHEEO Manual for the process of treatment, including cost of all building materials, puddle collars, sleeves . Inserts, manholes, water proofing, surface finishing & painting etc., cost of labour, tools and plants and accessories all complete operational: The size of the units shall be guided as per site conditions • Bar Screen Chamber 01 No. 0.75 x 2.4 x 2.0 RCC underground Collection Sump 01 No.3.36 Cum 1.0 * 2.4 x 1.4 RCC underground Anacrobic Tank 01 No. 37.8 Cum 5.25 x 2.4 x 3.0 RCC underground Filter Feed Tank 01 No. 7.2 Cum 2.4x 1.0 x 3.0 RCC underground Mechanical & Electrical Transfer Pump 02 Nos. (1w+1s) Dry Motor Submersible 2 cum/hr 10 MWC 1 HP (each) CNP/ Kirloskar / DP/Equv. Filter Feed Pump 02 Nos. (1w+1s) Open well Submersible 4 cum/hr 30 MWC 1 HP (each) Kirloskar/ wilo/ Equv. Pressure Sand Filter with sand media 01 No. 4 Cum/Hr (max) 600 mm x1800 mm PVC/ FRP TMAWIADS/ Equy. Activated Carbon Filter 01 No. 4 Cum/Hr (max) 600 mm x 1800 mm PVC / FRP TMAW/ADS/Equv. Piping & Valves Of Lot PVC & PP Electrical Cabling 01 Lot.</p>	1 JOB	1.00

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
272	Starter Panel 01 No. Microorganism for commissioning & stabilization.As Required UV Disinfection 01 No. Flow - 5 cum/hr Make - Alfa/Equivalent Operating and maintaining the plant round the clock for two years from the date of virtual completion of one year free O & M after successful commissioning & handing over the plant as detailed in the condition of Contract and Technical Specification, i.e. furnishing test reports on treated effluent from approved agency, imparting training to the owner's staff to run the plant and including cost of all spares, consumables and required man- power deployed round the clock during O&M period (Cost of Power & Water will be borne by the Owner) - 1 job	Month	24.00
273	Modular Workstation Office - Product Id: 5116877 58643680340	NOS	40
274	Godrej Unwind Chair With Arms (GODREJ INTERIO) - Product id: 5116877-86884426353	NOS	120
275	Godrej sofa set d-lion fabric sofa 3 1 1 sets nos. (GODREJ INTERIO) - Product id: 5116877- 22498304575	NOS	8
276	GLAZE COFFEE TABLE - Product id: 5116877- nos. 11634231569	NOS	24
277	Relax Chair for Coffee Table Product id: 5116877- nos. 73416536958	NOS	48
278	GLASS TOP CENTRE TABLE WITH BOTTOM STORAGE - Product id: 5116877-96887584754	NOS	8
279	MEETING TABLE / CONFERENCE TABLE (KIRTI IND) (KE -MT 1) - Product id: 5116877- 57522067552	NOS	2
280	High Back Chair (KARTIK FURNITURE) (CHR- 126) - Product id: 5716877-80828922980	NOS	16
281	GODREJ AVEO MID BACK CHAIR/EXECUTIVE /CONFERENCE/WORKSTATION/ MESH BACK /REVOLVING: OFFICE (GODREJ INTERIO Product id: 5116877-57873985692	NOS	50
282	Glass Partition (NV)(NV-AP-03)	SQM	1160
283	Wiring for light point / fan point / exhaust fan point / call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable size G.I. box etc as required. Group C	Nos.	200

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
284	Wiring for twin control light point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable size G.I. box etc as required.	Point	15
285	Wiring for light / power plug with 2x4 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit alongwith 1 No 4 sq.mm FR PVC insulated commper conductor single core cable for loop earthing as required.	Meter	1200
286	Wiring of circuit / submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required, 2 x 2.5 sq.mm + 1 x 2.5 sq.mm earth wire	Meter	600
287	Wiring of circuit / submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required, 2 x 4 sq.mm + 1 x 4 sq.mm earth wire	Meter	700
288	Wiring of circuit / submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required, 2 x 6 sq.mm + 1 x 6 sq.mm earth wire	Meter	750
289	Supply and drawing following sizes of FR PVC insulated copper conductor single core cable in the existing surface / recessed PVC conduit as required, 3 x 1.5 sq.mm	Meter	1500
290	Supply and drawing following pair 0.5 sq.mm FR PVC insulated annealed copper conductor unarmoured telephone cable in the existing surface / recessed PVC conduit as required, 2 Pair	Meter	750
291	Supply and drawing co-axial TV cable RG-6 grade 0.7 sq.mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface / recessed PVC conduit as required.	Meter	300
292	Supply and fixing of following sizes of medium class PVC conduit along with accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required. 20 mm	Meter	200
293	Supply and fixing of following sizes of medium class PVC conduit along with accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required. 25 mm	Meter	750
294	Supplyingand fixing of following sizes of medium class PVC conduit along with accessories in surface/ recess includingcuttingthewallandmaking goodthesamein case of recessed conduit as required. 32 mm	Meter	1500

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
295	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/ recess including cutting the wall and making good the same in case of recessed conduit as required. 40 mm	Meter	500
296	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/ recess including cutting the wall and making good the same in case of recessed conduit as required. 50 mm	Meter	500
297	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. 5/6 amps switch	Each	500
298	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. 2 way, 5/6 amps switch	Each	15
299	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. 15/16 amps switch	Each	200
300	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. 3 pin, 5/6 amps socket outlet	Each	500
301	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. 6 pin, 15/16 amps socket outlet	Each	300
302	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. Telephone socket outlet	Each	100
303	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. TV antenna socket outlet	Each	30
304	Supplying and fixing stepped type electronic fan regulator on the existing modular plate/ switch box including connections but excluding modular plate etc. as required.	Each	15
305	Supplying and fixing modular blanking plate on the existing modular plate & switch box but excluding modular plate as required.	Each	75
306	Supplying and fixing following size/ modules, GI box along with modular base and cover plate for modular switches in recess etc as required. 1 or 2 Module (75 mm x 75 mm)	Each	30

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
307	Supplying and fixing following size/ modules, GI box along with modular base and cover plate for modular switches in recess etc as required. 4 Module (125 mm x 75 mm)	Each	450
308	Supplying and fixing following size/ modules, GI box along with modular base and cover plate for modular switches in recess etc as required. 8 Module (125 mm x 125 mm)	Each	250
309	Supplying and fixing following Modular base and cover plate on existing modular metal boxes etc. as required. 1 Module	Each	5
310	Supplying and fixing following Modular base and cover plate on existing modular metal boxes etc. as required. 2 Module	Each	30
311	Supplying and fixing following Modular base and cover plate on existing modular metal boxes etc. as required. 4 Module	Each	450
312	Supplying and fixing following Modular base and cover plate on existing modular metal boxes etc. as required. 8 Module	Each	250
313	Supplying and fixing 2 pin, 6 amp ceiling rose on the existing junction box/ wooden block including connection etc as required.	Each	60
314	Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required. Upto 450 mm sweep	Each	7
315	Providing and fixing following capacity busbar chamber with 4 strips of suitable size made of copper, heavy duty, complete with all accessories including connections, earthing the body etc. as required. 400 Amps	Each	7
316	Providing and fixing following capacity four pole ONload/ panel mounted changeover switches inside the existing cubical panel board including drilling holes in cubicle panel, making connections etc. as required.	Each	7
317	Supplying and fixing following way, horizontal type three pole & neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus - bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator). 4 way (4 + 12), double door, horizontal type	Each	50
318	Supplying and fixing following ways, surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amp tinned copper bus bar, common neutral link, earth bar, din bar, for mounting MCB's (but without MCB's and incomer) as required. (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.) 4 way (8 + 12), double door, vertical type	Each	7

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
319	Supplying and fixing following rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive loads of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. 6/32 amps, single pole	Each	300
320	Supplying and fixing following rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive loads of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. 40 amps, Tripole and neutral	Each	45
321	Supplying and fixing following rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive loads of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. 50/63 amps, Tripole and neutral	Each	25
322	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required. 63 Amp	Each	25
323	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, SP MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.	Each	7
324	Supplying and fixing 20 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 amps "C" curve, TP MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required. (Used for AC box)	Each	45
325	Supplying and fixing 30 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 amps "C" curve, TP MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.	Each	20
326	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	Set	7
327	Providing and fixing 25mm X 5mm G.I. strip on surface or in recess for connections etc. as required.	Meter	750

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
328	Providing chemical/mineral maintenance free earthing system comprising of copper coated earth electrode 3 metre length and 17.2 mm outer dia along with 25 kg earth conductivity enhancing back fill mineral compound for earth electrode to fill up the excavated earth and earth inspection pit etc. as required.	Set	15
329	Supplying and fixing single wall mounted 18/22 watt LED typebattenfitting complete with electronic driver and LED tube etc directly on wall/ ceiling including connections with 1.5 sq.mm FR PVC insulated copper conductor and earthing the body etc. as required.	Each	200
330	Supplying and fixing recess mounted 18 watt LED vertical downlighter complete with all accessories and replaceable electronic driver, directly on false ceiling includingconnection with 1.5 sq.mm FR PVC insulated copper conductor cable and earthing the body etc. as required.	Each	60
331	Supplying and fixing indoor recess mounting 36 watt LED flat panel luminaire suitable for armstrong / grid ceilingand complete with electronic driveretc.directly onfalseceilingincludingconnectionwith1.5sq.mmFR PVC insulated copper conductor cable and earthing the body etc. as required.	Each	400
332	Fixing for laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required. (Clamped with 25 x 3 mm NS flat clamp)	Meter	400
333	Supply and installation of regular/standard model A.C. ceiling fan of 1200 mm sweep including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FR PVC insulated copper conductor etc. as required.	Nos.	15
334	3.5 core, 35 sq.mm, XLPE/PVC insulated PVC, sheathed (Heavy duty) Armoured electric cable with aluminium conductor.	Meter	300
335	3.5 core, 50 sq.mm, XLPE/PVC insulated PVC, sheathed (Heavy duty) Armoured electric cable with aluminium conductor.	Meter	300
336	Providing and fixing circular / hexagonal cast iron or M.S. sheet box for ceiling fan clamp 140 mm internal dia, 73 mm height, 5 mm thick rim bottom and top lids, 1.5 mm thick M.S. sheet with its top surface hacked for proper bonding top lid shall be screwed into the cast iron box by means of 3.3 mm dia round headed screws, one lock at the corners. Clamps shall be made of 12 mm dia M.S. bar bent to shape as per standard drawing.	Each	15

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
337	Supply, installing on wall, testing and commissioning of following capacity Air Insulated Compact Type Rising Mains for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply with enclosure having IP-54 rating after fixing the tap off boxes and all accessories, made of 1.6mm thick steel sheet duly powder coated in convenient sections complete with 4 Nos. aluminium bus bars having current density of 130 A/sq cm at nominal current rating, necessary joints & expansion joints, fire barrier at each floor, provision of tapping at every metre, continuous earthing with 2 nos aluminium strip of suitable size (one on each side) including, G.I. clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. as required. 800 A Isc = 500kA for 1 second: Make - C&S/ABB/Schneider	Meter	80
338	Supply, installing on wall, testing and commissioning of following capacity Air Insulated Compact Type Rising Mains for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply with enclosure having IP-54 rating after fixing the tap off boxes and all accessories, made of 1.6mm thick steel sheet duly powder coated in convenient sections complete with 4 Nos. aluminium bus bars having current density of 130 A/sq cm at nominal current rating, necessary joints & expansion joints, fire barrier at each floor, provision of tapping at every metre, continuous earthing with 2 nos aluminium strip of suitable size (one on each side) including, G.I. clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. as required. 1250 A Isc = 500kA for 1 second: Make - C&S/ABB/Schneider	Meter	80
339	Supply, installing by suspension on ceiling, testing and commissioning of following capacity Sandwich Type Rising Mains for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply with enclosure having IP-54 rating after fixing the tap off boxes and all accessories, made of 1.6mm thick steel sheet duly powder coated in convenient sections complete with 4 Nos. aluminium bus bars having current density of 130 A/sq cm at nominal current rating, necessary joints & expansion joints, fire barrier at each floor, provision of tapping at every metre, continuous earthing with 2 nos aluminium strip of suitable size (one on each side) including, G.I. clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. as required. 400 A 25kA SC for 1 second: Make - C&S/ABB/Schneider	Meter	100
340	Supply and erection of 6 meter height Hot-dip galvanized octagonal street light pole with following arm with top dia 70 mm and bottom dia A/F 130 mm, made of 3 mm thick sheet alongwith base plate of size 220 X 220 X 12 mm , small door opening for junction box mounting with MCB & connector, cement concrete of 1:3:6 including excavation, refilling and suitable size.	Nos.	20

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
341	Supply and erection of 4 metre height Hot-dip galvanized octagonal street light pole with following arm with top dia 70 mm and bottom dia A/F 130 mm, made of 3 mm thick sheet alongwith base plate of size 220 X 220 X 12 mm , small door opening for junction box mounting with MCB & connector, cement concrete of 1:3:6 including excavation, refilling and suitable size.	Nos.	100
342	1.5 sq. mm ISI marked, PVC insulated single core copper conductor cable.	Meter	800
343	4 core, 16 sq mm XLPE / PVC sheathed (heavy duty) armoured electric cable with aluminium conductor.	Meter	800
344	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation and refilling the trench etc as required.	Meter	800
345	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	Set	2
346	Providing and fixing 25mm X 5mm G.I. strip on surface or in recess for connections etc. as required.	Meter	20
347	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade	Each	4
348	Supplying and fixing following Retrofit CFL type street light fitting with sheet aluminium housing, clear acrylic cover and all accessories including Retrofit CFL lamp etc. on pole/building including connection with FR PVC insulated copper conductor cable and earthing the	Nos.	100
349	Supplying and fixing following Retrofit CFL type street light fitting with sheet aluminium housing, clear acrylic cover and all accessories including Retrofit CFL lamp etc. on pole / building including connection with FR PVC insulated copper conductor cable and earthing the	Nos.	30
350	Supplying and fixing 90 watt LED type FLOOD light with die cast aluminium housing for ingress protection of IP65 and complete with all accessories etc and connection with FR PVC insulated copper conductor cable and earthing the body etc. as required.	Nos.	8
351	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in the existing masonry open duct as required. Above 120 sq. mm and upto 400 sq. mm	Nos.	150
352	Supplying and making outdoor cable and termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required : 300 sq. mm	Nos.	6

Sr. No.	DESCRIPTION OF ITEMS	UNIT	QTY
353	3.5 core, 185 sq. mm XLPE / PVC insulated sheathed (Heavy duty) armoured electric cable with aluminium conductor	Nos.	150
354	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required. Above 95 sq. mm and upto 185 sq. mm	Nos.	150
355	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	Nos.	6
356	Providing and fixing 25mm X 5mm G.I. strips on surface or in recess for connections etc. as required.	Nos.	60
357	DG Set 1000 kVA	Nos.	2

Sd/
Chief Executive Officer (CEO),
Bhagalpur Smart City Limited