REQUEST FOR PROPOSAL FOR
IMPLEMENTATION OF “SMART STREET LIGHTING”

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REQUEST FOR PROPOSAL FOR
IMPLEMENTATION OF
“SMART STREET LIGHTING”

For Spine Roads in Guwahati
On
Design, Build & Operate Basis

Guwahati Smart City Limited,
Guwahati, Assam

Tender Notice No. ................. Dated: ....../....../.......
## IMPORTANT KEY DATES

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1.0 Introduction

1.1 The Government of India has announced creation of 100 Smart cities to drive economic growth and improve the quality of life of people by enabling local development and harnessing technology as a means to create smart outcomes for citizens. Guwahati is one of the shortlisted cities for the smart city initiative under Ministry of Urban Development, Government of India. Guwahati Smart City Limited (GSCL) is a Govt. Company for implementing the Smart City mission at the city level. GSCL will plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate the Smart City development projects.

1.2 Presently the coverage of street lights within Guwahati is low. As a Smart city initiative, GSCL is in process to improve the coverage by installing smart street lighting in selected spine roads of Guwahati. GSCL is planning to install smart street lighting with LED Street Lights and Centralized Control & Monitoring System as per national standards. For this purpose GSCL intends to invite Request for Proposal for Design, Supply, Installation and Maintenance of LED Street Lights and Centralized Control & Monitoring System of selected spine roads and Operation & Maintenance for period of 1 (One) year.

2.0 Contents of Request for Proposal

The Request for Proposal (RFP) consists of Volumes viz.

2.1 RFP Volume 1: Instruction to Bidders
Volume 1 details the instructions with respect to the Bid process management, technical evaluation framework, and the technical & financial forms.

2.2 RFP Volume 2: Scope of work including Functional & Technical Specifications & Technical Drawings
Volume 2 of the RFP provides information related to Scope of work for BIDDER, BIDDERs obligations, Employer’s Requirements and Specifications

2.3 RFP Volume 3: General Conditions of Contract
Volume 3 contains the contractual, legal terms & conditions applicable for the proposed engagement.

2.4 RFP Volume 4: Price Bid BOQ
Volume 4 contains Bill of Quantities; BIDDER has to quote his rates in the schedules.
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4.0 Scope of work

4.1 Execution of Design, manufacturing, inspection & testing at manufacturer’s works in accordance with agreed QAP, packaging, delivery to site; handling at site – unloading, storage, shifting from point of unloading to store, storage and from store to the installation site; cleaning, assembly, touch up painting; installation at site; inspection & testing and commissioning; and operation, maintenance and performance demonstration for specified no of years for the equipment and systems of LED Smart Street Lighting system with all accessories, mounting arrangement including Centralized Control and Monitoring System (CCMS) of selected Spine Roads in the city of Guwahati.

4.2 Approximate length of road considered in this project is 137km and approximate nos. of light poles and Luminaires expected is 6400 & 6600 respectively.

4.3 The smart street lighting system shall include minimum components but not limited to the following;

(a) LED Street Luminaire with accessories including Dimmable and non-Dimmable Drivers
(b) Octagonal Lighting pole with inbuilt Junction Box, RCC foundation, Mounting Brackets, hard wares, and other accessories
(c) Connecting power Cabling laid in DWC/ HDPE pipes
(d) Earthing system for pole and feeder pillars with accessories and termination
(e) Smart Outdoor Feeder Pillars (OFP) with Smart Controller for Group Control and Monitoring System
(f) Excavation of trench or Horizontal Drilling for laying DWC pipes
(g) GSM connectivity for communication from Feeder Pillar
(h) Cloud registration; hosting; uploading and managing all data after Mapping of Feeder Pillars and Light poles as applicable installed by BIDDER
(i) All mounting and foundation supports and hardware accessories for equipment/system installations
(j) All civil works associated with installations of the equipment/systems within BIDDER’s scope including excavation, concreting, back filling of soil for preparation of equipment foundation, laying of DWC pipes either by excavating of through HDD; embedment, chipping, punching, making holes, pipe sleeves, fire/ water proof sealing etc
(k) Any other electrical equipment/ component which are not specifically listed above but are necessary to make the system complete and functional in all respect as per specification and statute

4.4 Carrying out detailed survey for identifying the roads; RoW cross sections taking into consideration the carriage way and drains/ foot path on either side at different stretches of a particular road; List out the requirements of particular roads; prospective location for mounting the Feeder pillar as per the offered technology and the locations for mounting the poles keeping in view of availability of supply, access and ease of maintenance; measure exact road lengths; identifying any bottlenecks/ obstacle for execution like laying of
cables etc. along the entire length of the roads; calculating a detailed BOQ; preparation of detail report incorporating all the above and submission to GSCL for review and approval.

4.5 The Battery Limit of BIDDER starts beyond the LT tariff meter provided by APDCL. The Incoming supply at 11kV or 415 V as decided by APDCL shall be provided by APDCL from the nearest source point. Installation of 2 pole structure for HT supply including mounting of swaged poles, cross arms, Stay arrangement, Gang Operated Device (GOD), Drop Out (DO) Fuse, Lightning Arrestors (LA), Insulators & connecting conductors as required, earthing, Transformer on a two pole structures, outgoing cable from transformer LT side, LT Tariff meter panel and all the required civil works shall be provided by APDCL. However, the entire Liaison with APDCL for accomplishing the above work shall be carried out by Contractor.

4.6 Submission of equipment/ system Design Calculation Sheets, Detail Engineering Drawings, Data Sheets, equipment Sizing Calculations etc for review and approval by GSCL before execution/ procurement and manufacturing.

4.7 Carrying out joint Inspection, Testing, Commissioning and Performance demonstration of the entire street Lighting system within the Spine Road and submission of reports for review & acceptance by GSCL.

4.8 Any other equipment which are not specifically listed in this specification but are necessary to make the system complete and functional in all respect as per requirement and statute. All design shall comply with the project requirements as specified.

4.9 All SAFETY considerations in design and manufacturing for safe operation & maintenance and safe practices during installation at site shall be in the scope of the BIDDER. Cost towards accomplishing the same shall be included in the BID price and no extra claim shall be entertained later.

4.10 Submission of all “As Built” drawings, Data sheets, Calculations etc. after execution and commissioning of the equipment and systems as specified above.

4.11 Submission of relevant documents and drawings to the concerned statutory authorities/ agencies and getting clearance and approval for the supplied and installed equipment under this specification is solely the responsibility of the BIDDER.

4.12 All Liaison activities for obtaining required mandatory approvals/ NOCs from Electrical Inspector and any other Statutory Authority as applicable for drawings & documents, initiation of works, Load release, charging and commissioning of equipment and system etc. are within the scope of works.

4.13 Operation and maintenance of LED Smart Street Lighting and Centralized Control and Monitoring System including setting up of call centre; maintaining a service team, spare parts and providing service 365 days as per the Service Level Benchmark specified. The same shall also include the following:

(a) Appropriate up-keeping, maintenance, and operation of all network, hardware, and software components, and ensure smooth functioning of the smart lighting system throughout the entire contract period.
(b) After completing life of equipments, the same equipments shall be replaced with new hardware / software of same or better specifications free of cost throughout the Contract period.

(c) During the guarantee period, if any hardware or software needs to be replaced, the same will be replaced with same or better OEM and with same or higher configuration free of cost.

4.14 Maintaining a status Dashboard on the progress of the project and submission of periodic report on weekly basis to ULB during execution

4.15 Maintaining a status Dashboard regarding the road wise operational status of the Light Poles, No of Complaints, resolution status, Preventive maintenance status and submission of periodic report on weekly basis to ULB during O&M period

4.16 Manning a control room 24X7, 365 days and Monitoring the entire system for all parameters through CCMS and reporting the same appropriately to the concerned Authority

4.17 All Liaison activities with APDCL and other Statutory Authorities for coordinating and seeking required permissions for carrying out scheduled works during O&M tenure.

5.0 **Instruction to BIDDERs**

5.1 The road details such as road width & length and the required Lighting Levels (Lux- Levels) of each road to be illuminated are provided in Technical Specifications. The total quantity of Luminaire envisaged in the project is approx. 6600 nos. Please note that this data is for evaluation purpose only and actual data is to be considered by the successful BIDDER after conducting survey. BIDDER is required to carry out the survey, based on which he needs to work out the lighting design in such a way to provide Illumination Level as mentioned in the Annexure A of tender document.

5.2 The assumptions, assessments, statements and information provided in this RFP document is for the assistance to the Contractors who are expected to carry out their own surveys, investigations and other detailed examination of the Project before submitting their Bids. The Contractor shall visit the site and examine the project in detail for execution of the work and deployment of equipment. Nothing contained in this RFP document shall be binding on the GSCL nor confer any right on the Contractors, and the GSCL shall have no liability whatsoever in relation to or arising out of any or all contents of the RFP document.

5.3 BIDDER may carry out Project Site visits/ inspections/ testing at their own cost.

5.4 The BIDDER has to ensure that the general public/ tourist/ visitors are not hindered in any manner while survey, execution, operations and maintenance of the project.

5.5 BIDDER shall lay cable either manually by excavating open trench or through trenchless method. However, all necessary permission to dig or drill or lay from concerned authority and taking care so as not to damage the existing power/ telecom cables or utility lines underneath through the same corridor shall be ensured by BIDDER. Any damage if done shall be compensated by BIDDER to the concerned owner with no implication to GSCL what so ever.
5.6 All information supplied by BIDDER may be treated as contractually binding on the BIDDER on successful award of the assignment by GSCL on the basis of this RFP document.

5.7 No commitment of any kind, contractual or otherwise shall exist unless and until a formal written Agreement has been executed by or on behalf of GSCL. Any notification of Successful bidder/agency status (including issue of a Letter of Intent) by GSCL shall not give rise to any enforceable rights by the Bidder/agency. GSCL may cancel this public procurement at any time prior to a formal written Agreement being executed by or on behalf of GSCL.

5.8 This RFP document supersedes and replaces any previous public documentation and communications, and Bidder/agencies should place no reliance on such communications.

5.9 If for any reason, any area in whole or part is not available for work, the agreed execution schedule shall be suitably modified. However, under no circumstances the Bidder/agency shall be entitled to any relaxation, whatsoever, on this ground and he shall re-organize his resources to suit the modified schedule.

5.10 It shall be deemed that by submitting a Bid, the Bidder has:

5.10.1 Made a complete and careful examination of this RFP Document and unconditionally and irrevocably accepted the terms thereof;

5.10.1.1 Received all relevant information requested from the GSCL;

5.10.1.2 Made a complete and careful examination of the various aspects of the Project including but not limited to:

(a) Source of power supply and water supply;
(b) Conditions of the access roads, APDCL electric poles & conductors, buildings in the vicinity of the Project Site;
(c) Conditions affecting transportation, access, disposal, handling and storage of materials;
(d) All other matters that might affect the Contractor’s performance under this RFP document;

5.10.1.3 Accepted the risk of inadequacy, error or mistake in the information provided in the RFP document furnished by or on behalf of the GSCL relating to any of the matters referred to in this RFP document;

5.10.1.4 Acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in this RFP Document or ignorance of any of the matters shall not be a basis for any claim for compensation, damages, extension of time for performance of its obligations, loss of profits etc.

5.11 All the assets and Software along with its associated information shall become the property of GSCL after it is commissioned and approved.

5.12 While every effort has been made to provide comprehensive and accurate background information, requirements and envisaged solution(s) specifications, BIDDERs must form their own conclusions about the solution(s) needed to meet the GSCL’s requirements. BIDDERs and recipients of this RFP may wish to consult their own legal advisers in relation to this RFP.
5.13 All information supplied by BIDDERs as part of their Bids in response to this RFP, may be treated as contractually binding on the BIDDERs, on successful award of the assignment by the GSCL on the basis of this RFP.

5.14 No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by or on behalf of GSCL. Any notification of preferred BIDDER status by GSCL shall not give rise to any enforceable rights by the BIDDER. GSCL may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of GSCL.

5.15 Sealed Bids shall be received by the GSCL on the e-Procurement portal https://assamtenders.gov.in before the time and date specified in the schedule of the tender notice. In the event of the specified date for the submission of tender offers being declared a public holiday by the Government of Assam, the offers will be received up to the appointed time on the next working day. The GSCL may, at its discretion, extend this deadline for submission of offers by issuing an addendum and uploading the same on e-procurement portal.

5.16 Facsimile offers and other offline mode offers will be rejected.

5.17 The BIDDERs must be registered with the E-tendering system provider for participating in the bidding process; BIDDERs are required to go through the procedure as specified in https://assamtenders.gov.in portal to upload the Bid document.

5.18 The BIDDERs are required to upload their tenders on https://assamtenders.gov.in portal only. GSCL shall not be held responsible for the delay, if any, in the non-receipt of the same.

5.19 Any revisions, clarifications, corrigenda, addenda, time extensions, etc. to this tender will be posted on https://assamtenders.gov.in website only. BIDDERs should regularly visit the website to keep themselves updated.

5.20 All the qualification information shall be submitted through prescribed forms and statements given in the Annexure of bid document, along with all supporting documents meeting the qualification criteria. BIDDER shall upload scan copies of such prescribed forms and supporting document as a part of submission.

5.21 If the Bid is submitted by a Joint Venture, the Joint Venture entity will be responsible to execute the contract and work order will be issued in name of Joint Venture entity. A certified copy of the Joint Venture Agreement in prescribed form as specified in RFP document shall be submitted along with the bid.

5.22 If the Bid is submitted by a Joint Venture, the bid documents uploaded / submitted to GSCL shall be in the name of Joint venture entity.

5.23 All registered companies under the company act 1956/2013, Limited Liabilities Partnership Firm under the LLP Act 2008, registered firms are allowed to participate in this Bid.

6.0 Eligible BIDDERs

6.1 The BIDDER must be an Original Equipment Manufacturer (OEM) or an experienced Contractor/ESCO fulfilling the following criteria;
6.1.1 The BIDDER can either be a Sole BIDDER or a Joint Venture. The Sole BIDDER / All members of the Joint Venture should be registered entity under Company Act 1956/2013. The Sole BIDDER / Lead member in Joint Venture should have valid registration certificates in Class-I category of CPWD/ APWD/ MES/ State PWD/ PSUs/ Railways/ Municipal Corporations and Development Authorities of Indian State valid in the State of Assam.

6.1.2 If the Bidder is an OEM then it should have Experience in Similar Nature of Works/Project including O&M apart from supplying the Luminaires for the project. It should have its own Lighting Management Software (LMS) which is operative for last five (5) years or it should have tied up with such partners who provide LMS services and are in the field for not less than seven (7) years. The OEM must have must have a sale of minimum 3800 nos. of LED Street light Luminaires in single work order during last 3 years in any city, with any government or semi-government organizations.

6.1.3 The BIDDER should have completed projects related to Urban & Rural Street lighting including erection of poles, luminaries, feeder pillar, cabling & earthing during last five (5) financial years having financial credentials as follows;

One project costing not less than Rs.39.28/-Cr.
Or
(a) Two projects each costing not less than Rs.24.55 Cr.
Or
(b) Three projects each costing not less than Rs.19.64 Cr.

6.2 The BIDDER should have installed and commissioned at least 2800 nos. of LED Street Lighting Luminaries with pole in last five (5) financial years out of which at least 640 nos. of LED Street Lighting Luminaries with poles shall have been installed in one single work order with any Government or Semi-Government organization. Attested copies Letter of Award / Work Order Copy / Supply & Installation Completion Certificate/ Payment receipts/ Proof of release of performance security after completion of the contract/ Proof of settlement/ Release of final payment against the contract/ Certificate for successful completion of work/ Performance report by the client in prescribed form as specified in RFP document shall be submitted along with the bid.

6.3 The BIDDER should have installed a web enabled Centralized Control and Monitoring System (CCMS) for at least 640 nos. of LED light fittings in a single work order or should have installed minimum 20 nos. controllers with a software for a existing system of street lighting in last three 3 (Three) financial years. Attested copies Letter of Award / Work Order Copy / Supply & Installation Completion Certificate/ Payment receipts/ Proof of release of performance security after completion of the contract/ Proof of settlement/ Release of final payment against the contract/ Certificate for successful completion of work/ Performance report by the client in prescribed form as specified in RFP document shall be submitted along with the bid.

6.4 The BIDDER shall have been engaged in Operation & Maintenance Contract of minimum 2800 nos. Conventional and/or LED Street light with conventional feeder pillars or minimum 640 nos. of LED Street Lighting Poles with Centralized Control and Monitoring System for at least three 2 (Two) years.

6.5 BIDDER shall be able to demonstrate the Lighting Management Software with existing data established in other cities which is capable to handle 350 street
light controllers (during technical evaluation). **Confirmation in this regard shall be provided in the Technical Proposal.**

6.6 If the BIDDER is not an Original Equipment Manufacturer (OEM) or an Authorized dealer, then in addition to above mentioned eligibility criteria, BIDDER should also submit an MOU (in prescribed form as specified in RFP document) with Original Equipment Manufacturers (Whose equipment/materials will be installed in the project) confirming backup guarantee for the entire contract period with full replacement and repairing support. Also this Original Equipment Manufacturer (OEM) must have the sale of minimum **3800 nos.** LED Street light Luminaires in single work order during last 3 years in any city, with any government or semi-government organizations.

6.7 The BIDDER should have an Average Annual Turnover of minimum Rs.**14.73/-Cr** in at least last five (5) financial years.

6.8 Turnover of previous year and cost of completed / executed similar nature of work/ O&M shall be given additional weight age of ten percent per year to bring them to current price level to account for price escalation as illustrated below:

**Table 2: Price escalation**

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Turnover/ Cost of Executed work/O&amp;M</th>
<th>Effective cost of executed work at previous completed financial year’s price level</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-2013</td>
<td>E</td>
<td>1.46 x E</td>
</tr>
<tr>
<td>2013-2014</td>
<td>D</td>
<td>1.33 x D</td>
</tr>
<tr>
<td>2014-2015</td>
<td>C</td>
<td>1.21 x C</td>
</tr>
<tr>
<td>2015-2016</td>
<td>B</td>
<td>1.10 x B</td>
</tr>
<tr>
<td>2016-2017</td>
<td>A</td>
<td>1.00 x A</td>
</tr>
</tbody>
</table>

6.9 BIDDER / Lead BIDDER shall demonstrate, **dedicated Line of Credit made available for this project, for the amount equivalent to minimum Rs. 9.82/-Cr** as per the attached format.

6.10 The BIDDER should not have been **Black-Listed** by any State / Central Government Department or Central /State PSUs as on Bid submission date. The BIDDER should provide Legal Attorney certified letter of undertaking to this effect on the letter head, co-signed by BIDDERs’ authorized signatory.

6.11 The BIDDER should provide incorporation certificates to GSCL to authenticate the entity of Firm/Company/ Joint Venture Entity.

7.0 **Joint Venture**
7.1 Joint venture entity of Maximum Two (2) firms/ members/ companies, as partners shall be allowed for the works.

7.2 All the Members of the JV shall be jointly and severally responsible for this Contract. The Member of the JV holding highest stake shall be the Lead Partner. The JV shall comply with the following requirements:

7.3 A Joint Venture Agreement must be submitted along with the documents in which minimum share of lead member shall have to be 60% and share of other members, individually shall not be less than 15%.

7.4 All the members of the Joint Venture firms shall have to collectively satisfy all the criteria mentioned.

7.5 During the bidding stage the BIDDERs intending to form Joint ventures shall submit Joint venture agreement in prescribed form as specified in RFP document. In the event the Joint Venture is declared as the selected BIDDER and awarded the Project, the parties shall form a Company in name of JV and registered itself under Indian Companies Act, 1956. All the terms and conditions related to Joint venture shall be as per Tender document.

7.6 In case, the applicant/JV partner has achieved physical & financial performance for the criteria mentioned above in past, in joint venture with other Contractor (other than present JV partner), the portion of the work (physically and financially) of the contractor included in their Joint Venture Agreement in original contract work shall only be considered for evaluation purpose.

7.6.1 The individual members who join in JV shall have to give an undertaking that they will maintain status-quo till the completion of the work, if the work is awarded to the JV entity, the same JV entity shall be maintained till the satisfactory completion of the work. This undertaking shall be submitted on Stamp paper of Rs. 100 Duly signed by authorized signatory, which shall be notarized.

7.6.2 In case of BIDDER participating as a Joint Venture, on his selection for award of contract, all the partners/members of the Joint Venture will have to sign the Contract with the GSCL and will be jointly and severally liable for performance of the contract. Award of Contract will be in the name of Joint Venture entity which will be considered as "Legal Entity" as far as this Bid/Contract is concerned.

7.6.3 The Bid, and in case of a successful Bid, the Form of Contract Agreement, shall be signed with the name of Joint Venture which will be legally binding on all the partners.

7.6.4 Lead partner shall be declared as Prime BIDDER authorized to be in charge; and this authorization shall be evidenced by submitting a Power of Attorney signed by legally authorized signatories of all the partners.

7.6.5 The member in charge shall be authorized to incur liabilities, receive payments and receive instructions for and on behalf of any or all partners of the Joint Venture and the entire execution of the contract including defect liability period;

7.6.6 All members of the Joint Venture shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms, and a relevant statement to this effect shall be included in the Authorization
mentioned under (b) above as well as in the Bid Form and the Form of Contract Agreement (in case of a successful Bid); and,

7.6.7 A copy of the stamped and notarized agreement entered into by the Joint Venture partners shall be submitted with the Bid. Roles, responsibilities and financial stakes of all members of the Joint Venture entity shall be clearly and unambiguously prescribed in the Joint Venture agreement. In case of non prescription, the JV agreement will be declared as invalid and the Bid will be treated as non responsive.

7.6.8 In case of Joint Venture, financial strengths of each of the JV members individually shall not be less than Minimum Qualifying Criteria worked out in proportionate to their financial stakes in the JV. Further either of the partners of Joint Venture shall fully meet the qualifying criteria mentioned above. Each JV member shall have required registration certificate, existence of company as per tender requirement. Each member shall satisfy these requirements separately.

7.7 The contractors participating in the name and form of a Joint Venture entity shall have to clearly and unambiguously define the role, responsibilities and financial stake of each of the partners, the lead partner shall also have to be defined. On award of contract to such a Joint Venture entity, each of the members of the Joint Venture entity shall have to sign the Contract. Each member of the JV shall be jointly and severally responsible for the performance of the contract.

7.8 An original notarized copy of the agreement as prescribed in Format entered into by the joint venture partners shall be submitted with the Bid. It should also distinctly show the financial participation of each member of the joint venture and the responsibility of each member as regards planning and execution of the work.

7.9 In case of conflict between the terms in contract agreement and the Joint Venture documents, the terms in the contract agreement shall prevail.

7.10 The JV partners shall also need to be registered anywhere in India.

7.11 The tender documents uploaded in the name of an individual applicant shall not be used by a Joint Venture. Joint venture shall have to upload the tender document in the name of JV only, if he wants to apply.

8.0 Compliant Bids/Completeness of Bid

8.1 BIDDERS are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of the Bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.

8.2 Failure to comply with the requirements of the RFP may render the Bid non-compliant and the Bid may be rejected. BIDDERS must:

(a) Include all documentation specified in this RFP, in the Bid

(b) Follow the format of this RFP while developing the Bid and respond to each element in the order as set out in this RFP

(c) Comply with all requirements as set out within this RFP

9.0 BIDDER to Inform
9.1 The BIDDER shall be deemed to have carefully examined the Terms & Conditions, Scope, Specifications, and Schedules of this RFP. If BIDDER has any doubts/clarifications as to the meaning of any portion of the conditions or the specifications he shall, before the last date for Submission of pre-Bid queries, set forth the particulars thereof and submit them to GSCL in writing in order that such doubt may be removed or clarifications are provided.

10.0 **Bid Preparation costs**

The BIDDER shall bear all costs associated with the preparation and submission of its Bid and for their participation in the entire bidding process. The GSCL will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Bidding Process.

11.0 **Pre-Bid Meeting & Clarification**

11.1 **BIDDER’s Queries**

11.1.1 Any clarification regarding the RFP document and any other item related to this project can be submitted to GSCL as per the submission mode and timelines mentioned in the Bid Data sheet. The Pre-Bid queries should be submitted in excel sheet format, along with name and details of the organization submitting the queries.

11.1.2 GSCL shall not be responsible for ensuring that the BIDDER’s queries have been received by them. Any requests for clarifications post the indicated date and time shall not be entertained by GSCL.

11.1.3 BIDDERs must submit their queries as per the format mentioned in – Annexure-1.

11.2 **Responses to Pre-Bid Queries and Issue of Corrigendum/Addendum**

11.2.1 GSCL will organize a Pre-Bid meeting and will respond to any request for clarification or modification of the bidding documents. GSCL shall formally respond to the pre-Bid queries after the Pre-Bid meeting. No further clarifications shall be entertained after the date and time of submission of queries.

11.2.2 GSCL shall endeavor to provide timely response to all queries. However, GSCL makes no representation or warranty as to the completeness or accuracy of any response made in good faith. GSCL does not undertake to answer all the queries that have been posed by the BIDDERs.

11.2.3 Any modifications of the RFP Documents, which may become necessary as a result of the pre-Bid meeting, shall be made by GSCL exclusively through a corrigendum/ addendum. Any such corrigendum/ addendum shall be deemed to be incorporated into this RFP. However, in case of any such amendment, the Bid submission date may be extended at the discretion of GSCL.

11.2.4 Any corrigendum/ addendum issued by GSCL, subsequent to issue of RFP, shall only be available / hosted on the website URL mentioned in the Bid Data sheet. Any such corrigendum/ addendum shall be deemed to be -part of RFP.

12.0 **RFP Document Fee**

12.1 RFP can be downloaded from the website URL mentioned in the Bid Data Sheet.

12.2 Tender Fee as specified in Bid Data sheet shall be paid in form of Demand Draft or Bankers Cheque. The tender fee shall be non-refundable. Without the
payment of tender fee the Bids will be taken as incomplete and non-responsive and shall not be considered.

13.0 **Earnest Money Deposit (EMD)**

13.1 EMD as specified in the Bid data sheet shall be paid in the form of Demand Draft / Bank Guarantee from a Nationalized bank, having branch at Guwahati (as per format mentioned in Annexure 11). No exemption for submitting the EMD will be given to any BIDDER. Bid security in any other form will not be entertained.

13.2 The validity period of the Bank Guarantee shall not be less than 180 (One hundred eighty) days from the Bid Due Date, inclusive of a claim period of 60 (sixty) days, and may be extended as may be mutually agreed between the GSCL and the Contractor. Where a demand draft is provided, its validity shall not be less than 90 (Ninety) days from the Bid Due Date, for the purposes of encashment by the GSCL.

13.3 The Bid shall be summarily rejected if it is not accompanied by the Earnest Money Deposit (EMD).

13.4 The EMD of all unsuccessful BIDDERs would be returned without interest by GSCL no later than 60 (sixty) days from the date of issuance of Letter of Acceptance to the Successful Contractor except in the case of the Successful Contractor whose Bid Security shall be retained till it has provided a Performance Security under the Contract Agreement or within 30 days when the Bidding process is cancelled by GSCL.

13.5 The EMD amount of Successful BIDDER would be returned upon execution of Contract Agreement with GSCL after submission of Performance Bank Guarantee to GSCL as per the provisions there of.

13.6 In case Bid is submitted without the EMD then GSCL reserves the right to reject the Bid without providing opportunity for any further correspondence to the BIDDER concerned.

13.7 The EMD may be forfeited in any of the following circumstances:

(a) If the Bidder submits a non-responsive Bid

(b) If a BIDDER withdraws its Bid during the period of Bid validity or as extended by mutual consent of the respective Bidder and GSCL.

(c) The Bidder engages in any kind of corrupt, fraudulent, coercive, restrictive and undesirable practices as specified.

(d) In case of a successful BIDDER, if the BIDDER fails to sign and return the duplicate copy of the LOI/LOA fails to submit the performance bank guarantee and/or fails to sign the contract in accordance with this RFP within specified time period as mentioned in RFP/Corrigendum/Addendum.

13.8 The decision of GSCL regarding the above forfeiture of the EMD shall be final and binding upon all the Bidders.

13.9 Bidders shall mention the Beneficiary account details for EMD refund as required for refund. Bidder shall submit copy of cancelled cheque of the beneficiary account for EMD Refund.
13.10 In case of forfeiture of the EMD as prescribed above, the particular Bidder shall not be allowed to participate in the rebidding process of the same project.

14.0 Bid Validity Period
14.1 Bid shall remain valid for the time period mentioned in the Bid Data Sheet.
14.2 On completion of the validity period, unless the BIDDER withdraws his Bid in writing, it will be deemed to be valid until such time that the BIDDER formally (in writing) withdraws his/her Bid.

15.0 Contents of Bid
15.1 The two Bids system shall be followed. Technical and Commercial Offers shall be uploaded separately through the e-Procurement portal.

Table 3: List of Bid content

<table>
<thead>
<tr>
<th>Envelop Set</th>
<th>Name of Document</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>RFP Document fee &amp; Bid Security/Earnest Money Deposit (EMD)</td>
<td>RFP Document Fee Bid Security/Earnest Money Deposit (EMD) (To be submitted along with Physical submission and scan copy shall be uploaded during online submission)</td>
</tr>
<tr>
<td>Two</td>
<td>Technical Proposal</td>
<td>With all supporting documents required for meeting the qualification criteria as per formats given in Bid document Technical Proposal</td>
</tr>
<tr>
<td>Three</td>
<td>Technical Bid</td>
<td>Envelop One + Envelop Two</td>
</tr>
<tr>
<td>No Document</td>
<td>Financial/Price Bid</td>
<td>To be submitted online through E-procurement Portal</td>
</tr>
</tbody>
</table>

15.2 Please note that prices should not be indicated in the Technical Bid but should only be indicated in the Financial/Price Bid.

15.3 All the pages of the Bid must be sequentially numbered. The Bid documents must contain in the beginning of the document, a list of contents with page
numbers. Any deficiency in the documentation may result in the rejection of the Bid.

15.4 The original Bid shall be prepared in indelible ink. It shall contain no interlineations or overwriting, except as necessary to correct errors made by the BIDDER itself. Any such corrections must be initialed by the person (or persons) who sign(s) the Bids.

15.5 All pages of the Bid shall be initialed and stamped by the person (or persons) who sign the Bid.

15.6 Power of attorney on signing the document in name of person who signs the documents should be submitted to GSCL

15.7 BIDDER shall submit technical Bid in hard copy which shall be properly bound and all pages shall be sequentially numbered.

15.8 Failure to submit the Bid before the submission deadline specified in the Bid Data Sheet would cause a Bid to be rejected.

16.0 Technical Proposal

16.1 As a part of Technical proposal the BIDDER should submit following for Evaluation of technical proposal:

16.1.1 Basic design solution offered as per the design criteria of the RFP for each type of road including Dialux output sheets and a summary sheet.

16.1.2 An approach & Methodology for carrying out the Project implementation, Project Management & Schedule and Operation & Maintenance of the project during the contract period including survey methodology; deployment of resources, compliance to the Service Benchmarks; maintenance of Service team, spares, call centre set up, its operation, deployment of special tools to expedite implementation and reduce downtime during O&M, Predictive/ preventive maintenance, training and documentation, handing over procedure etc.

16.1.3 Details regarding the similar Projects executed.

16.1.4 Technical write up describing the proposed system including the details of smart control system, its technology, its features, benefits, alarms & Protection, Architecture, method of communications, proposed system for data transfer/ storage/ uploading/ downloading/ access from the local in-house server or cloud based server, its components, its technical configurations, Lighting Management system/ software and its technical details including the real time data, security, programming, administration, user hierarchy, MIS and report generation etc.;

16.1.5 MoU with one or more Luminaire and Lighting Management System OEMs, whose products are being offered by the BIDDER for the project. and technical details regarding the product offered including the following;

(a) Details of the LED chip offered, technical data sheet, Type test report,
(b) Details of LED Luminaire, technical Data sheet, Type test reports
(c) Driver test report for all dimming stages
(d) Guarantee/ warrantee offered

The Type test reports shall include LM-79 & LM-80 test Report, IP 66 test reports from recognized NABL accredited Lab
16.1.6 Technical details regarding other components offered like Pole, cables etc.

16.2 Bids of the BIDDERS, not complying with above mentioned requirement (Technical Proposal) will liable to be rejected

17.0 **Bid Formats**

17.1 Pre-Qualification Bid Format

**Table 3- Bid content check list**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Heading</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pre-qualification checklist</td>
<td>As per format provided in this document</td>
</tr>
<tr>
<td>2.</td>
<td>Pre-qualification Bid Covering letter</td>
<td>As per format provided in this document</td>
</tr>
<tr>
<td>3.</td>
<td>About Bidder</td>
<td>As per format provided in this document</td>
</tr>
<tr>
<td>4.</td>
<td>Legal</td>
<td>1. Copy of Certification of Incorporation/Registration Certificate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. PAN card</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Tax Registration Certificates</td>
</tr>
<tr>
<td>5.</td>
<td>Annual turnover and net worth</td>
<td>Details of annual turnover and net worth with documentary evidence</td>
</tr>
<tr>
<td>6.</td>
<td>Line of Credit</td>
<td>As per format provided in this document</td>
</tr>
<tr>
<td>7.</td>
<td>Self-certificate for non-blacklisting clause</td>
<td>As per format provided in this document</td>
</tr>
<tr>
<td>8.</td>
<td>Power of attorney</td>
<td>As per format provided in this document</td>
</tr>
<tr>
<td>9.</td>
<td>Project experience</td>
<td>As per Qualification criteria prescribed</td>
</tr>
<tr>
<td>10.</td>
<td>No deviation certificate</td>
<td>As per format provided in this document</td>
</tr>
<tr>
<td>11.</td>
<td>Total responsibility certificate</td>
<td>As per format provided in this document</td>
</tr>
<tr>
<td>12.</td>
<td>Anti-collusion certificate</td>
<td>As per format provided in this document</td>
</tr>
<tr>
<td>13.</td>
<td>MoU with OEM</td>
<td>As per format provided in this document</td>
</tr>
</tbody>
</table>
17.2 **Financial/Price Bid Format**

Bidder shall submit the Price Bid online through e-procurement portal website only.

18.0 **Language**

18.1 The Bid should be prepared and submitted by the Bidders in English language only. If any submitted supporting documents are in any language other than English, translation of the same in English language is to be provided (duly attested) by the Bidder. For purposes of interpretation of the documents, the English translation shall govern.

19.0 **Authentication of Bids**

19.1 An authorized representative (or representatives) of the Bidder shall initial all pages of the pre-qualification, technical and Price Bids.

19.2 Bid should be accompanied by an authorization in the name of the signatory (or signatories) of the Bid. The authorization shall be in the form of a written power of attorney accompanying the Bid or in any other form demonstrating that the representative has been duly authorized to sign.

20.0 **Amendment of Request for Proposal**

20.1 At any time prior to the due date for submission of Bid, GSCL may, for any reason, whether at its own initiative or in response to a clarification requested by prospective Bidder(s), modify the RFP document by amendments. Such amendments shall be uploaded on the e-procurement portal website, through corrigendum/ addendum and shall form an integral part of RFP document. The relevant clauses of the RFP document shall be treated as amended accordingly.

20.2 It shall be the responsibility of the prospective Bidder(s) to check the Authority's website [https://assamtenders.gov.in](https://assamtenders.gov.in) from time to time for any amendment in the RFP document. In case of failure to get the amendments, if any, GSCL shall not be responsible.

20.3 In order to allow prospective Bidders a reasonable time to take the amendment into account in preparing their Bids, GSCL, at its discretion, may extend the deadline for submission of Bids. Such extensions shall be uploaded on website of the authority.

21.0 **Bid Price**

21.1 Bidders shall quote for the entire scope of contract on a “overall responsibility” basis such that the total Bid price covers Bidder’s all obligations mentioned in or to be reasonably inferred from the Bidding documents in respect of providing the product/services.

21.2 Prices quoted by the Bidder shall remain firm during the entire contract period and not subject to variation on any account. A Bid submitted with an adjustable price quotation shall be treated as non-responsive and rejected.
21.3 Price quoted by Bidder shall be inclusive of all taxes e.g., **Good Service Tax (GST)** and other taxes, if applicable, under any rule. No claim whatsoever in this context shall be entertained.

22.0 **Deviations and Exclusions**

22.1 Bid shall be submitted strictly in accordance with the requirements and terms & conditions of the RFP. The Bidder shall submit a No Deviation Certificate as per the format mentioned in Bid document. The Bids with deviation(s) are liable for rejection.

23.0 **Tax Liabilities**

23.1 The successful Bidder shall be responsible for all the necessary statutory taxes, statutory dues, local levies etc. to be paid to the Govt./ Statutory Bodies/ Authorities etc., for the services rendered by it. There will be no liability upon GSCL whatsoever on any account.

23.2 The Successful Bidder shall indemnify GSCL from any claims that may arise from the statutory Authorities.

23.3 The successful Bidder shall ensure enforcement of Applicable laws including labor laws, minimum wages laws etc. and at no point should draw GSCL into any kind of litigation on these grounds.

24.0 **Total Responsibility**

24.1 Bidder should issue a statement undertaking total responsibility for the defect free operation of the proposed solution as per the format mentioned in Bid document.

25.0 **Late Bids**

25.1 Late submission will not be entertained and will not be permitted by the e-Procurement Portal.

25.2 The Bids submitted by fax/e-mail etc. shall not be considered. No correspondence will be entertained on this matter.

25.3 GSCL shall not be responsible for any non-receipt/non-delivery of the documents due to technical snag whatsoever at Bidder's end. No further correspondence on the subject will be entertained.

25.4 GSCL reserves the right to modify and amend any of the above-stipulated condition/criterion.

26.0 **Right to Terminate the Process**

26.1 GSCL may terminate the RFP process at any time and without assigning any reason. GSCL makes no commitments, express or implied, that this process will result in a business transaction with anyone.

27.0 **Non-Conforming bids**

27.1 A Bid may be construed as a non-conforming Bid and ineligible for consideration;

27.2 If it does not comply with the requirements of this RFP

27.3 If a Bid does not follow the format requested in this RFP or does not appear to address the particular requirements of the solution.

28.0 **Acceptance/Rejection of Bids**
28.1 GSCL reserves the right to reject in full or part; any or all Bids; without assigning any reason thereof. GSCL reserves the right to assess the Bidder’s capabilities and capacity. The decision of GSCL shall be final and binding.

28.2 Bid should be free of over writing. All erasures, correction or addition must be clearly written both in words and figures and attested.

28.3 In the event of any assumptions, presumptions, key points of discussion, recommendation or any points of similar nature submitted along with the Bid, GSCL reserves the right to reject the Bid and forfeit the EMD.

28.4 If there is any discrepancy in the Price Bid, it will be dealt as per the following:

28.4.1 If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly.

28.4.2 If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.

28.4.3 If there is a discrepancy between words and figures, the amount in words shall prevail.

28.4.4 If there is such discrepancy in an offer, the same shall be conveyed to the Bidder with target date up to which the Bidder has to send his acceptance on the above lines and if the Bidder does not agree to the decision of GSCL, the Bid is liable to be disqualified.

28.5 However, GSCL reserves the right not to proceed with the Bidding Process at any time, without notice or liability, and to reject any Bid without assigning any reasons.

28.6 In the event that the GSCL rejects or annuls all the Bids, it may, in its discretion, invite all eligible Contractors to submit fresh Bids hereunder.

29.0 Confidentiality

29.1 All the material/information shared with the Bidder during the course of this procurement process as well as the subsequent resulting engagement following this process with the successful Bidder, shall be treated as confidential and should not be disclosed in any manner to any unauthorized person under any circumstances. The employees of the successful lead Bidder and Joint Venture entity members who are proposed to be deployed on the project need to furnish a Non-Disclosure Agreement (NDA) as given in Bid document.

29.2 Information relating to the examination, clarification, evaluation and recommendation for the Contractors shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional advisor advising the GSCL in relation to or matters arising out of, or concerning the Bidding Process. The GSCL will treat all information, submitted as part of the Bid, in confidence and will require all those who have access to such material to treat the same in confidence. The GSCL may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or the GSCL or as may be required by law or in connection with any legal process.
29.3 The GSCL or its nominated agencies shall retain all rights to prevent, stop and if required take the necessary punitive action against the Contractor/agency regarding any forbidden disclosure.

30.0 Disqualification

30.1 The Bid is liable to be disqualified in the following cases or in case Bidder fails to meet the Bidding requirements as indicated in this RFP:

(a) During validity of the Bid, or its extended period, if any, the Bidder changes its quoted prices
(b) The Bidder’s Bid is conditional and has deviations from the terms and conditions of RFP
(c) Bid is received in incomplete form
(d) Bid is not accompanied by all the requisite documents
(e) Information submitted in technical Bid is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract (no matter at what stage) or during the tenure of the contract including the extension period if any
(f) Price Bid is enclosed with the same document of technical Bid.
(g) Bidder tries to influence the Bid evaluation process by unlawful/corrupt/fraudulent means at any point of time during the Bid process
(h) In case any one party submits multiple Bids or if common interests are found in two or more Bidders, the Bidders are likely to be disqualified, unless additional Bids/Bidders are withdrawn upon notice immediately.

31.0 Fraud and Corrupt Practices

31.1 The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this RFP, GSCL shall reject a Bid without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the “Prohibited Practices”) in the selection process. In such an event, GSCL shall, without prejudice to its any other rights or remedies, forfeit and appropriate the EMD or PBG, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to GSCL for, inter alia, time, cost and effort of GSCL, in regard to the RFP, including consideration and evaluation of such Bidder’s Bid.

31.2 Without prejudice to the rights of GSCL under clause above and the rights and remedies which GSCL may have under the LOI or the Agreement, if a Bidder is found by GSCL to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the selection process, or after the issue of the LOI or the execution of the agreement, such Bidder shall not be eligible to participate in any tender or RFP issued by GSCL during a period of 3 years from the date such Bidder is found by GSCL to have directly or through an agent, engaged or indulged in any prohibited practices.
31.3 For the purposes of this section, the following terms shall have the meaning hereinafter respectively assigned to them:

31.4 “Corrupt practice” means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the selection process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of GSCL who is or has been associated in any manner, directly or indirectly with the selection process or the LOI or has dealt with matters concerning the agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of GSCL, shall be deemed to constitute influencing the actions of a person connected with the selection process); or (ii) save as provided herein, engaging in any manner whatsoever, whether during the selection process or after the issue of the -LOI or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the project or the award or the agreement, who at any time has been or is a legal, financial or technical consultant/adviser of GSCL in relation to any matter concerning the project;

31.5 “Fraudulent practice” means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the selection process;

31.6 “Coercive practice” means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person’s participation or action in the selection process;

31.7 “Undesirable practice” means (i) establishing contact with any person connected with or employed or engaged by GSCL with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the selection process; or (ii) having a Conflict of Interest; and

31.8 “Restrictive practice” means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the selection process.

32.0 Conflict of Interests

32.1 A Bidder shall not have a conflict of interest that may affect the selection process or the solution delivery (the “Conflict of Interest”). Any Bidder found to have a conflict of Interest shall be disqualified. In the event of disqualification, GSCL shall forfeit and appropriate the EMD, if available, as mutually agreed genuine pre-estimated compensation and damages payable to GSCL for, inter alia, the time, cost and effort of GSCL including consideration of such Bidder’s Bid, without prejudice to any other right or remedy that may be available to GSCL hereunder or otherwise.

32.2 GSCL requires that the Bidder provides solutions which at all times hold GSCL’s interests paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The Bidder shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of GSCL.

33.0 Right to vary quantity and Change of scope of work
33.1 Bidder to note that the GSCL shall have the right to vary the quantity as mentioned in the Price Bid BOQ (Bill of Quantity). Nothing extra shall be paid for increase / decrease in the quantities as mentioned in the Price Bid BOQ (Bill of Quantity). Rate quoted shall be for completing the item in all respect and as per tender requirement. Bidder to note that actual executed quantity shall be paid as per terms and conditions of Bid document.

33.2 If the GSCL procures lesser quantity than the quantity specified in the Bidding documents due to change in circumstances, the Bidder shall not be entitled for any claim or compensation except otherwise provided in the Bid document.

33.3 GSCL reserves the right to decrease or omit any work from the scope of project. It is in Bidder’s obligation to execute the work as instructed by the GSCL and will not be compensated for such decrease or omission in scope of tendered works. The payment for change of scope and extra item shall be made as per the schedule of rates (SOR) as approved by GSCL and for non SOR items the rates will be paid as per approved rates based on rate analysis approved by GSCL. GSCL, may ask the bidder to submit rate analysis with market rates with supporting quotations from suppliers etc. No Change of Scope shall be executed unless the GSCL has issued the Change of Scope Order.

34.0 Withdrawal, Substitution, and Modification of Bids

34.1 A Bidder may withdraw its Bid or re-submit its Bid (technical and/ or Price) as per the instructions/ procedure mentioned at e-Procurement website

34.2 Bids withdrawn shall not be opened and processed further.

35.0 Site Visit

35.1 The Bidder shall visit the site and examine the site or sites for availability of required area, accessibility of the sites, traffic, location surroundings, climate & weather data, availability of power, water and other utilities for construction, handling and storage of materials, Applicable Laws and regulations, and any other information/ matter considered relevant by them at its own responsibility and risk, for preparing the Bid and entering into the contract for design & construction of the works. The costs of visiting the site or sites shall be at the Bidder's own expense.

35.2 GSCL may arrange for the Bidder and any of its personnel or agents to gain access to the relevant site or sites, provided that the Bidder gives the GSCL adequate notice of a proposed visit of at least five (05) working days. Alternatively, GSCL may organize a site visit or visits concurrently with the Pre-Bid meeting, as specified in the RFP. Failure of a Bidder to make a site visit will not be a cause for its disqualification. No site visits shall be arranged or scheduled after the deadline for the submission of the Bids and prior to the award of Contract.

36.0 Selection Process for Bidder

36.1 Opening of Bids

36.1.1 The Bids shall be opened by GSCL in presence of those Bidders or their representatives who may be present at the time of opening.

36.1.2 The representatives of the Bidders should be advised to carry the identity card or a letter of authority from the Bidder firms to identify that they are bona fide representatives of the Bidder firm, for attending the opening of Bid.
36.1.3 There will be three Bid-opening events (1) RFP Document fee & Bid Security/EMD, (2) Technical Bid, (3) Financial/Price Bid.

36.1.4 The date and time for opening of Technical Bid shall be as per Bid Data Sheet & opening of Price Bid would be communicated to the qualified Bidders.

36.2 Preliminary Examination of Bids

36.2.1 GSCL shall examine the Bids to determine whether they are complete, whether the documents have been properly signed and whether the Bids are generally in order. Any Bids found to be nonresponsive for any reason or not meeting any criteria specified in the RFP, shall be rejected by GSCL and shall not be included for further consideration.

36.2.2 Initial Bid scrutiny shall be held and Bids will be treated as non-responsive, if Bids are:

(a) Not submitted in format as specified in the RFP document
(b) Not submitted within Bid due date including any extensions by GSCL
(c) Without bid security/EMD
(d) Received without the letter of authorization (Power of Attorney)
(e) Doesn’t contain all the information as requested in the RFP
(f) Found with suppression of details
(g) The Bid is submitted with subjective conditional offers and partial offers
(h) Non-compliant to any of the clauses mentioned in the RFP
(i) Bids submitted without signature and seal
(j) With lesser validity period

36.3 Clarification on Bids

36.3.1 During the Bid evaluation, GSCL may, at its discretion, ask the Bidder for any clarification(s) of its Bid. The request for clarification and the response shall be in writing, and no change in the price or substance of the Bid shall be sought, offered, or permitted.

36.3.2 The Bidders shall have to give detailed rate analysis in justification of the prices as may be required by the GSCL as a part of the evaluation process, if so desired by the GSCL.

36.4 Evaluation Process

36.4.1 GSCL shall constitute a tender evaluation committee to evaluate the responses of the Bidders. The tender evaluation committee shall evaluate the responses to the RFP and all supporting documents/documentary evidence. Inability to submit requisite supporting documents/documentary evidence by Bidders may lead to rejection of their Bids.

36.4.2 The decision of the tender evaluation committee in the evaluation of Bids shall be final. No correspondence will be entertained outside the process of evaluation with the Committee. The tender evaluation committee may ask for meetings or presentation with the Bidders to seek clarifications or conformations on their Bids.
36.4.3 The Tender Evaluation Committee reserves the right to reject any or all Bids. Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP.

36.5 The steps for evaluation are as follows:

36.5.1 Stage 1: Pre-Qualification

GSCL shall validate the Set 1 “RFP Document fee & Bid Security/Earnest Money Deposit (EMD)”. Technical and Price Bids for those Bidders who don’t pre-qualify will not be opened. Price Bid will not be opened for those Bidders, who don’t qualify the technical evaluation. Bid Security amount shall be returned for those who don’t qualify the financial evaluation stage and after PBG is submitted by successful Bidder.

36.5.2 Stage 2: Technical Evaluation

36.5.2.1 Set 2 “Technical Bid” will be evaluated only for the Bidders who succeed in Stage 1.

36.5.2.2 Criterion of evaluation of technical Bids

(a) GSCL will review the technical Bids of the short-listed Bidders to determine whether the technical Bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at GSCL’s discretion.

(b) The Bidders' technical solutions proposed in the Bid document shall be evaluated as per the requirements specified in the RFP and technical evaluation framework as mentioned

(c) Bidder shall be invited for presentation on overall understanding of proposed project, offered product and solution, Approach & Methodology for execution and O&M during the contract tenure, Project Team Structure, Project Financing including suggested work break down structure on assignment with timeline.

Table 4 – Evaluation Criteria

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Evaluation criteria details</th>
<th>Max marks allotted</th>
<th>Supporting documents required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Experience of Similar Nature of Works/Project:</td>
<td>10</td>
<td>Completion certificate for completed contracts as per attached format duly certified by the competent authority</td>
</tr>
<tr>
<td></td>
<td>The Bidder should have completed projects related to Urban &amp; Rural Street Lighting Poles including erection of poles, luminaries, feeder pillars and cabling &amp; earthing during last five financial years</td>
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<td>S. No.</td>
<td>Evaluation criteria details</td>
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<tr>
<td>1</td>
<td>One project costing not less than <strong>Rs. 39.28/-Cr.</strong>&lt;br&gt;Or&lt;br&gt;Two projects each costing not less than <strong>Rs. 24.55/-Cr.</strong>&lt;br&gt;Or&lt;br&gt;Three projects each costing not less than <strong>Rs. 19.64/-Cr.</strong></td>
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<tr>
<td>2</td>
<td><strong>No. Of LED Smart Street Lighting Luminaries:</strong>&lt;br&gt;The Bidder should have installed and commissioned at least <strong>2800 nos.</strong> of LED Smart Street Lighting Luminaries with pole in last five financial years out of which at least <strong>640 nos.</strong> of LED Street Lighting Luminaries with pole shall be in one single work order with any Government or Semi-Government organization&lt;br&gt;&lt;br&gt;Min <strong>2800 nos.</strong> over all &amp; <strong>640 nos.</strong> in single order of LED Smart Street Lighting Luminaries – 8 marks&lt;br&gt;&lt;br&gt;Above <strong>2800 up to 4400 nos.</strong> over all &amp; <strong>1600 nos. in single order</strong> of LED Smart Street Lighting Luminaries – 9 marks&lt;br&gt;&lt;br&gt;Above <strong>4400 nos.</strong> over all &amp; <strong>2200 nos.</strong> in single order of LED Smart Street Lighting Luminaries – 10 marks</td>
<td><strong>10</strong></td>
<td>Completion certificate for completed contracts as per attached format duly certified by the competent authority</td>
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<tr>
<td>3</td>
<td><strong>Centralized Control Monitoring System - Street Light controllers:</strong>&lt;br&gt;The Bidder should have installed and commissioned a web enabled Centralized Control and Monitoring System (CCMS) for at least <strong>640 nos.</strong> of LED street light fittings or should have installed minimum 20 nos. controllers with a software for a existing system of street lighting in last five financial years</td>
<td><strong>10</strong></td>
<td>Completion certificate for completed contracts as per attached format duly certified by the competent authority</td>
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<tr>
<td>S. No.</td>
<td>Evaluation criteria details</td>
<td>Max marks allotted</td>
<td>Supporting documents required</td>
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<td>Min 640 nos. of LED street Light Fittings for CCMS or 20 nos. of controllers with a software for existing system – 8 marks</td>
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<td></td>
<td><strong>Above 640 nos. up to 1600 nos.</strong> of LED street Light Fittings for CCMS or 20 nos. to 50 nos. of controllers with a software for existing system – 9 marks</td>
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<tr>
<td></td>
<td>Above 1600 nos. of LED street Light Fittings for CCMS or 50 nos. of controllers with a software for existing system – 10 marks.</td>
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<td>4</td>
<td><strong>Operation &amp; Maintenance:</strong></td>
<td>10</td>
<td>Completion certificate, work order for ongoing contracts as per attached format duly certified by the competent authority</td>
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<td></td>
<td>The Bidder shall have been engaged in Operation &amp; Maintenance Contract of minimum 2800 nos. of LED street lights with conventional Feeder Pillar &amp; 640 nos. of LED Street Lighting Poles with Centralized Control and Monitoring System In 2 (Two) years out of last 5 (Five) years</td>
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<td></td>
<td>Min 2800 nos. of LED street lights with Conventional FP &amp; 640 nos. of LED Street Lighting Poles with CCMS - 8 marks</td>
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<tr>
<td></td>
<td><strong>Above 2800 nos. up to 4400 nos.</strong> LED street lights with Conventional FP &amp; above 640 up to 1280 nos. of LED Street Lighting Poles with CCMS – 9 marks</td>
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<td></td>
<td>Above 4400 nos. LED street lights with Conventional FP &amp; <strong>more than 1280 nos.</strong> of LED Street Lighting Poles with CCMS – 10 marks</td>
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<tr>
<td>S. No.</td>
<td>Evaluation criteria details</td>
<td>Max marks allotted</td>
<td>Supporting documents required</td>
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<td>5</td>
<td><strong>Financial strength:</strong>&lt;br&gt;The Bidder should have average annual turnover of minimum 50% of tender amount over the three financial years out of last five financial years&lt;br&gt;Up to average annual turnover of Rs.24.55/-Cr. – 8 marks&lt;br&gt;Between average annual turnover of Rs.24.55/-Cr – Rs.49.10/-Cr – 9 marks&lt;br&gt;Above average annual turnover of Rs.49.10/-Cr. of tender amount – 10 marks</td>
<td>10</td>
<td>Audited financial statements for the last five financial years&lt;br&gt;Certificate from the statutory auditor on turnover details shall be provided for last five (5) financial years.&lt;br&gt;Additional weightage shall be given for previous years executed works as per formula mentioned in RFP</td>
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<td>6</td>
<td><strong>Project team Structure:</strong>&lt;br&gt;Project Manager – (No. - 1)&lt;br&gt;Qualification – B.E / M.E (Electrical)/ MBA&lt;br&gt;Experience – experience in management of electrical project/other similar kind of project in public sector at least 15 years&lt;br&gt;Project Manager shall be available during construction period as well as operation and maintenance period.&lt;br&gt;Marks allotted – 4 marks&lt;br&gt;Site Engineer – 2 Nos.&lt;br&gt;Qualification – D.E/ B.E (Electrical)&lt;br&gt;Experience – experience in management of electrical project/other similar kind of project in public sector at least 8 years&lt;br&gt;Marks allotted – 2 marks&lt;br&gt;Site Supervisor – 4 Nos.&lt;br&gt;Qualification – D.E / B.E (Electrical)&lt;br&gt;Experience – experience in management of electrical project/other similar kind of project in public sector at least 05 years&lt;br&gt;Site supervisors to be available during construction period as well as operation and maintenance period&lt;br&gt;Marks allotted – 4 marks</td>
<td>10</td>
<td>Documentary evidence of qualification and experience records shall be provided.&lt;br&gt;Individual undertaking from each person shall be submitted.</td>
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<tr>
<td>S. No.</td>
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| 7     | **Submission of Technical Proposal:**  
Technical proposal shall include as mentioned above and not limited to;  
- Actual design with design report with Dialux calculations the LED Smart Street Lighting and Centralized Control and Monitoring System with all accessories  
- Submission of LM-79 & LM-80 test report from recognized NABL accredited lab for LED as well as luminaire  
- Submission of IP-66 report from recognized NABL accredited lab  
- Data sheets of luminaire and the LED as specified in the requirement of technical specification  
- Brief note on maintenance procedure during O&M period with respect to the service level benchmark  
- Other documents as specified in the Vol II. | 20 | |
| 8     | **Presentation on project:**  
Bidder will be asked to give presentation on the following;  
- The Bidder shall brief about his organizational structure; past experiences in the field related to the project and its financial strength.  
- The Bidder shall demonstrate the design and offered product and its relevance to the project.  
- The Bidder shall demonstrate capacity & capability; approach and methodology for execution of the project from planning to commissioning and O&M thereafter, for the required number of LED Smart Street Lighting and CCMS and other features offered in the technical proposal as per the RFP.  
- Bidder shall demonstrate Smart street | 20 | |
<table>
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<tr>
<th>S. No.</th>
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<th>Supporting documents required</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>lighting system from existing project which is capable to handle 350 Switching points</td>
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Note: It is mandatory for the Bidder to comply with all the criteria for Technical Evaluation. Bidders not complying with this requirement shall be liable for rejection.

36.5.3 **Bidders with an Overall Technical score of 70 marks** or more in the Technical Evaluation Framework as mentioned above will qualify for commercial evaluation stage. Failing to secure minimum marks shall lead to technical rejection of the Bid.

36.5.4 The proposal review committee may undertake oral clarifications with the Bidders followed by written confirmation of the same.

36.5.5 **Stage 3: Price Bid Evaluation**

(a) All the technically qualified Bidders will be notified to participate in Price Bid opening process.

(b) The Price Bids for the technically qualified Bidders shall then be opened on notified date and time and reviewed to determine whether the Price Bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at GSCL’s discretion.

(c) Price Bids that are not as per the format shall be liable for rejection.

(d) The Bid price shall include all taxes & duties and shall be in Indian Rupees.

(e) After evaluation of the price analyses, GSCL may require that the amount of the performance security be increased at the expense of the successful Bidder to a level sufficient to protect the GSCL against financial loss in the event of default of the successful Bidder under the contract. The amount of the increased performance security shall be decided at the sole discretion of the GSCL, which shall be final, binding and conclusive on the Bidder.

36.6 **Total Bid Evaluation**

36.6.1 The selection criteria shall be based on Technically Qualified Lowest Evaluated (L1) Bidder.

37.0 **Award of Contract**

37.1 GSCL will notify the successful Bidder in writing by e-mail followed by courier to be confirmed by the Bidder in writing by email followed by courier.

38.0 **Signing Of Contract**

38.1 After the notification of award, GSCL will issue Letter of Intent (LOI)/Letter of Acceptance (LOA). Accordingly, a contract shall be signed between Successful
Bidder and GSCL or the agency designated by GSCL. As an acceptance of the LOI/LOA, the Bidder shall sign and return back a duplicate copy of the LOI/LOA to GSCL or the agency designated by the GSCL. The bidder shall return the duplicate copy along with a Performance Bank Guarantee within next fifteen (15) days from the date of issuance of LOI/LOA.

38.2 Issue of LOA shall not be construed as any right given in favor of the Successful Bidder, and GSCL reserves the right to annul the process of award, including signing of contract, of this project without any liability or obligation for such annulment, and without assigning any reason there to.

38.3 On receipt of the Performance Bank Guarantee, within five working days, GSCL or the agency designated by GSCL shall execute a Contract Agreement with the Successful Bidder within next fifteen (15) days. Date of signing the Contract Agreement shall be deemed as the date of Commencement of work.

38.4 Failure of Successful Bidder to sign the Contract Agreement will be cause of forfeiture of performance security by GSCL and GSCL reserves the right to Award the work to next best value Bidder or call for new bids.

38.5 Notwithstanding to the contrary mentioned above, GSCL at its sole discretion shall have the right to extend the timelines for execution of Agreement on the request of the Successful Bidder, provided the same in bona-fide.

38.6 The Successful Bidder should intimate the list of team member to GSCL to handle the work order. The successful Bidder should ensure that he fully familiarizes with the terms and conditions of the tender, scope of work and the guidelines.

39.0 Mobilization Advance

5 (%) percent of the Awarded Contract Value. A bank Guarantee of 110 (%) percent against the mobilization advance is to be submitted. The mobilization advance will be adjusted in the Interim Payment Certificates raised by the Contractor for the work completed. The bank Guarantee submitted against mobilization advance has to be valid till completion of the work. In case, the Contractor/Bidder fails to mobilize necessary manpower, machinery, materials and any necessary procurement or purchase to start the preliminary work, the bank guarantee against mobilization advance may be forfeited and will lead to the termination of contract.

40.0 Performance Bank Guarantee (PBG)

40.1 Within fifteen (15) working days from the date of issuance of LOI, the successful Bidder shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) to the GSCL. The PBG shall be from a nationalized bank having branch at Guwahati in the format prescribed in tender document payable on demand at Guwahati, for the due performance and fulfillment of the contract by the Bidder.

40.2 This Performance Bank Guarantee shall be for an amount equivalent to 10% of total contract value valid up to the end of operation and maintenance period.

40.3 If the qualified Bidder fails to furnish the performance bank guarantee (PBG) within the above said period, GSCL may at its own discretion cancel the Letter of Intent issued to the successful contractor without giving any notice and the EMD remitted by him will be forfeited to GSCL. His tender will be held void.

40.4 PBG shall be invoked by GSCL under following conditions;
(a) In the event the Successful Bidder fails to perform the contractual responsibilities and obligations as set out in the RFP to the complete satisfaction of GSCL

(b) If GSCL incurs any loss due to the negligence of the Contractor in carrying out the project implementation as per the agreed terms and conditions

(c) If information of documents furnished by Successful Bidder turns out to be misleading or untrue in any material respect

40.5 The PBG furnished by the Successful Bidder in respect of his contract will be returned to Bidder at the end of the contract period subject to satisfaction to the GSCL regarding performance and meeting all the following conditions;

(a) After successful completion of the project including implementation and O&M of all the services for the duration of the contract period

(b) Payment of all the penalties throughout the implementation, operation and maintenance period

(c) Payment of all fees as per agreement along with penalties, if any

(d) Successful handing over of all the assets and services including all hardware & software in working conditions at the end of service or contract period

(e) On production of clearance certificate on all the above

40.6 In case the project is delayed /extended beyond the period of completion as mentioned in tender document, the performance bank guarantee shall be accordingly extended by the Bidder till completion of scope of work at his own cost.

40.7 In case the scope of work as specified in the contract is extended by GSCL, the BIDDER shall submit additional Performance Bank Guarantee as required within 10 days of such extension.

40.8 In case of bank guarantee of any nationalized bank is furnished by the Successful Bidder to GSCL, as part of the performance security and the bank goes into liquidation or, for any reason is unable to make payment against the said performance bank guarantee, the loss caused thereby shall fall on the Successful Bidder and the Successful Bidder shall forthwith, on demand, furnish additional security to GSCL to make good the deficit.

40.9 The liability or obligation of the bank under the bank guarantee shall not be affected or suspended by any dispute between the GSCL and the Successful Bidder, and the payment, under the bank guarantee by the bank to GSCL shall not wait till disputes are decided. The bank shall pay the amount under the guarantee, without any demur, merely on a demand from GSCL stating that the amount claimed is required to meet the recoveries due or likely to be due from the Successful Bidder. The demand, so made, shall be conclusive as regards to amount due and payable by the bank, under the guarantee limited to the amount specified in the bank guarantee.

40.10 The guarantee will not be discharged due to the change in the constitution of the bank or the Successful Bidder. Bank’s liability shall stand automatically discharged unless a claim in writing is lodged with the bank within the period stated in the performance bank guarantee including the extended period.
40.11 In case the date of expiry of the Bank Guarantee is a holiday, it will be deemed to expire on the close of the next working day.

41.0 Retention money

40.12 5 (%) percent of each Interim Payment certificate will be deducted as retention money. The retention money will be returned in equal installments. 30 (%) percent of the amount will be paid after successful completion of work. Rest 70 (%) percent of the amount will be paid in equal installments for 1 (One) year till completion of Defect Liability Period.

42.0 Delivery Schedule
The milestones and deliverables for the implementation of the project would be as follows:

Table 5 – Delivery Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time of Completion (days )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signing of Agreement</td>
<td>T0</td>
</tr>
<tr>
<td>Manpower deployment</td>
<td>T0+15 days</td>
</tr>
<tr>
<td>Office Set up</td>
<td>T0+30 days</td>
</tr>
<tr>
<td>Survey, Report submission and Approval</td>
<td>T0+45 days</td>
</tr>
<tr>
<td>Design &amp; Drawing approval</td>
<td>T0+50 days</td>
</tr>
<tr>
<td>Commencement of execution</td>
<td>T0+55 Day</td>
</tr>
<tr>
<td>End of Commissioning</td>
<td>T0+210 days</td>
</tr>
<tr>
<td>Operation and Maintenance</td>
<td>T0+210 days + 365 days (1 Year)</td>
</tr>
</tbody>
</table>

43.0 Failure to Agree with the Terms and Conditions of the RFP document

43.1 The performance of Contractor will be continuously reviewed by GSCL to maintain the terms & conditions as specified in this RFP document. Based on the review, if the Contractor fails to satisfy / maintain their commitment with respect to SLAs, Performance, Timely Implementation of the Project etc. the termination of the Contract Agreement may be initiated by giving 30 days notice as cure period and if it is not cured within 30 days then GSCL will terminate the Contract Agreement by giving further notice of 30 days. GSCL’s decision in this regard will be final.

43.2 In case of termination of this Contract Agreement, GSCL shall have the right to avail services of any other Contractor to continue the project without any hindrance from Contractor and the Contractor has to provide all necessary
assistance for smooth switch over. GSCL will not pay any charges to the Contractor.

43.3 In addition, GSCL reserves the right to appropriate the EMD / Performance Bank Guarantee given by the Contractor and black-list the Contractor.

43.4 Failure of the Successful Contractor to agree with the RFP document shall constitute sufficient grounds for the annulment of the award, in which event GSCL may take a decision to re-issue the RFP document. In such a case, GSCL shall invoke the PBG of the Successful Contractor.

44.0 Terms of Payment

44.1 CONTRACTOR shall procure material only after the procurement clearance is received from Employer or it’s representative. CONTRACTOR shall not dump the entire quantity as estimated after the design and detail engineering of the Job but shall procure for the current phase of work after due approval. In the event the Contract is terminated for reasons as appropriated by Employer, The CONTRACTOR shall be liable for payment for only those quantities which have been cleared for procurement.

44.2 Interim and Final Payment Certificate

44.3 Interim Payment: - CONTRACTOR shall submit monthly payment certificate for the work executed. Payment shall be made not later than 30 (Thirty) working days from the date of submission of such Interim Payment Statement by the CONTRACTOR to the Authority for certification subject to the submission being not required to be revert back for corrections.

44.4 Payment breakup of approved rate per unit no. of LED Smart Street Lighting pole:

(a) On satisfactory completion of Supply, installation, testing, commissioning & smooth functioning of LED Smart Street Lighting Poles with all accessories as mentioned in BOQ for quantity installed- 60%

(b) On satisfactory completion of Supply, installation, testing, commissioning & smooth functioning of CCMS boxes through web enabled software, generation of relevant reports, proper setup for monitoring of CCMS on daily basis, generation of necessary alerts at the time of faults/abnormal conditions for quantity installed- 30%

(c) On satisfactory testing, commissioning and handing over all components of projects - 10%

(d) Operation and Maintenance- Every Quarter in equal installments based on quoted prices of O & M will be paid for One Year.

Payment shall be done only after certification from Engineer.

44.5 Final Payment

After completion of all works and on issuance of completion certificate, the CONTRACTOR shall submit Final Payment certificate to the Employer. Payment shall be made not later than 60 (Sixty) days from the date of submission of Final Payment Certificate.
45.0  **Loss and Theft of Property**

45.1  The CONTRACTOR shall be responsible for the up keeping of all the assets created and any loss and damage thereof shall be made good by him immediately at his own cost to continue the services under the scope of RFP document available for use. If CONTRACTOR fails to create new assets which are damaged by theft or any other reason and Services are affected then the penalties will be levied as per Penalty Clause for not meeting the desired level of Service Level. If the level of services goes below the minimum level as prescribed in the Service Level Benchmark then GSCL will get it done at risk and cost of the CONTRACTOR or take any suitable action including termination of Contract Agreement.

46.0  **Miscellaneous**

46.1  GSCL, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to;

(a)  Suspend and/ or cancel the Bidding Process and/ or amend and/ or supplement the Bidding Process or modify the dates or other terms and conditions relating thereto;

(b)  Consult with any BIDDER in order to receive clarification or further information;

(c)  Retain any information and/ or evidence submitted to the GSCL by, on behalf of, and/ or in relation to any BIDDER; and/ or

(d)  Independently verify, disqualify, reject and/ or accept any and all submissions or other information and/ or evidence submitted by or on behalf of any BIDDER.

46.2  It shall be deemed that by submitting the Bid, the BIDDER agrees and releases the GSCL, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/ or performance of any obligations hereunder, pursuant hereto and/ or in connection with the Bidding Process and waives, to the fullest extent permitted by applicable laws, any and all rights and/ or claims it may have in this respect, whether actual or contingent, whether present or in future.

46.3  The CONTRACTOR shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupiers of adjacent properties during execution of work.

46.4  In the event of any restrictions being imposed by the GSCL, security agencies, traffic agencies, or any other authority in the working area, CONTRACTOR shall strictly follow such restrictions and nothing shall be excused from doing the stipulated work on this account. The loss of time on this account, if any, shall have to be made by deploying additional resources to complete the work in time. Other restrictions are given as under

(a)  The movement of trucks and vehicles shall be regulated in accordance with rules and regulations as approved by competent authority;

(b)  The CONTRACTOR/agency shall inform in advance, the truck registration numbers, ownerships of the trucks, names and address of the drivers;
(c) Labour huts/ stay of workmen will not be allowed at project area and in GSCL area;
(d) The CONTRACTOR shall be responsible for behaviour and conduct of its staff. The Contractor shall engage no staff with doubtful integrity or having a bad record;
(e) The workers of the CONTRACTOR should strictly observe code of conduct and manner befitting security. If any employee of the Contractor fails to absolve proper conduct, the Contractor shall be liable to remove him from deployment, immediately in receipt of the instructions of the GSCL;
(f) The CONTRACTOR shall be responsible for the conduct and behaviour of its staff employed for the work;
(g) The GSCL shall have the right to have any person removed who is considered unacceptable due to the reasons of security, efficiency, etc. Similarly, CONTRACTOR reserves the right to change the staff as per its requirement;
(h) The GSCL shall not be responsible for any compensation, which may be required to be paid to the worker(s) of the CONTRACTOR consequent upon any injury/mishap.

47.0 **Annexure 1 – Template for Pre-Bid Queries**

Bidder shall submit all Pre-Bid queries in excel in the following format

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>RFP Volume &amp; Section</th>
<th>RFP Page No.</th>
<th>Contents in RFP</th>
<th>Clarification Sought</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
# Annexure 2 – Formats for Submission of the Technical Bid

## 48.1 Technical Bid checklist

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Checklist Items</th>
<th>Compliance (Yes or No)</th>
<th>Page No. And Section No. in Bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>RFP Document fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Earnest Money Deposit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Bid Covering letter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Incorporation/ Registration Certificate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>PAN card</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>GST Registration Certificate (Central and State)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Audited financial statements for the last five (5) financial years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Line of Credit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>JV Agreement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Power of Attorney</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Declaration of non-blacklisting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Experience Certificate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>No Deviation Certificate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Total Responsibility Certificate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Anti Collusion Certificate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>MoU with OEM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
49.0 **Bid Covering Letter**

Date: dd / mm / yyy

To,

[                ]

Sub: Request for Proposal Design, Supply, Installation and Maintenance of LED Street Lights and Centralised control and monitoring system of selected spine roads in the city of Guwahati and operation and maintenance for period of 1 (One) year.

Ref: RFP No. <<......>> dated << ......>>

Dear Sir,

With reference to your request for proposal for Design, Supply, Installation and Maintenance of LED Street Lights and Centralised control and monitoring system of selected spine roads in the city of Guwahati and operation and maintenance for period of 1 (One) year on Design, Build, Operate Basis”, we hereby submit our qualification Bid, Technical Bid and Price Bid for the same.

We hereby declare that:

We hereby acknowledge and unconditionally accept that the Authority can at its absolute discretion apply whatever additional criteria it deems appropriate, not just limiting to those criteria set out in the RFP and related documents, in short listing of agency/Bidder for providing services.

We have submitted EMD of INR [   ] in form of Bank Guarantee and Tender fee of INR [   ] in form of DD / Banker Cheque No __________ Dt ________

We hereby declare that all information and details furnished by us in the Bid are true and correct, and all documents accompanying tender are true copies of their respective originals.

We agree to abide by our offer for a period of 180 days from the date of opening of pre-qualification Bid prescribed by authority and that we shall remain bound by a communication of acceptance within that time.

We have carefully read and understood the terms and conditions of the RFP and the conditions of the contract applicable to the RFP. We do hereby undertake to provision as per these terms and conditions.

In the event of acceptance of our Bid, we do hereby undertake to complete the work in accordance with tender requirement and as per scope of work mentioned in Tender document. We also confirm inclusion of the following:

All other works and services ancillary or related to the full completion of the Works in accordance with the Authority/Employer’s requirements as stipulated in the RFP document

To undertake the Construction works for entire contract period from the date of signing of the contract as mentioned in the RFP document.
We affirm that the prices quoted are inclusive of design, build, operate basis and inclusive of all out of pocket expenses, taxes, levies discounts etc.
We do hereby undertake, that,

until a formal contract is prepared and executed, this Bid, together with your written acceptance thereof and notification of award of contract, shall constitute a binding contract between us.

We understand that the Authority may cancel the bidding process at any time and that Authority is not bound to accept any Bid that it may receive without incurring any liability towards the Bidder.

We fully understand and agree to comply that on verification, if any of the information provided in our Bid is found to be misleading the selection process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so.

In case of any clarifications please contact __________________________ email at __________________________

Thanking you,
Yours sincerely,
(Signature of the Lead Bidder)
Printed Name
Designation:
Seal
Date:
Place:
Business Address:

49.1 Company profile

Brief company profile (required for both Bidder / Lead member)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Particulars</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Name of Bidder</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Legal status of Bidder (Company, Pvt. Ltd., LLP, firm etc.)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Main business of the Bidder</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Registered office address</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Incorporation date and number</td>
<td></td>
</tr>
</tbody>
</table>
49.2 Financial Turnover
The financial turnover of the company is provided as follows:
(To be Submitted by Sole Bidder as well as all members of Joint venture)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Turnover</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Copy of audited financial statements or declaration from the appointed statutory auditor to be provided as proof of the financial turnover.
Annexure 3: Declaration of Non-Blacklisting

(To be provided on the Company letter head)

(To be submitted by Sole Bidder as well as all members of Joint venture)

Declaration for Lead Bidder:

Place
Date
To,
[ ]

Subject: Self Declaration of not been blacklisted in response to the Request for Proposal Design, Supply, Installation and Maintenance of LED Street Lights and Centralized control and monitoring system of selected spine roads in the city of Guwahati and operation and maintenance for period of 1 (One) year. Ref: RFP No. <<.....>> dated << .....>>

Ref: RFP No. <<.....>> dated << .....>>

Dear Sir,
We confirm that our company or firm / entity, ____________,is currently not blacklisted in any manner whatsoever by any of the State or Union Territory and or Central Government in India on any ground including but not limited to indulgence in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

(Signature of the Lead Bidder)

Printed Name
Designation
Seal
Date:
Place:
Business Address:
52.0 **Annexure 4: No Deviation Certificate**

(To be submitted by Sole Bidder as well as Lead Bidder of Joint Venture)

This is to certify that our offer is exactly in line with your tender enquiry/RFP (including amendments) no. _________ dated __________. This is to expressly certify that our offer contains no deviation either technical including but not limited to scope of work, business requirements specification, functional requirements specification and technical requirements specification) or financial in either direct or indirect form.

(Authorized Signatory)
Signature:
Name:
Designation:
Address:

Seal:

Date:
53.0 Appendix 5: Total Responsibility Certificate

(To be Submitted by Sole Bidder as well as all members of Joint Venture)

This is to certify that we undertake the total responsibility for the defect free operation of the proposed construction works as per the requirement of the RFP for the duration mentioned in all the volumes of the RFP.

(Authorized Signatory)

Signature:

Name:
Designation:
Address:

Seal:

Date:
Business
Address:
**Annexure 6: – Formats for Experience Certificate** *(To be submitted by Sole Bidder as well as all members of Joint venture)*

**Statement – A** - Statement showing the similar works completed in the last Five years.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Department / Client with Address</th>
<th>Name of work</th>
<th>Estimated cost of work put to tender</th>
<th>Contract Amount</th>
<th>Date of award of contract</th>
<th>Target date of completion of work as per contract and date of completion of work if completed</th>
<th>Actual Amount of work completed/ Number of Poles/Luminaries/Light Fittings with CCMS/Controllers installed/commissioned/work in progress</th>
<th>Time limit in year and months</th>
<th>Percent age rate and amount of Penalty</th>
<th>Reasons for delay in completion of work</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7a 7b 8</td>
<td>9a 9b 10 11 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Attested Copies of Work Order and Completion Certificates from Competent Authority (Engineer In charge, not below the rank of Executive Engineer) should be attached in respect of each work.

It is mandatory to furnish details in this format only.

Sole Bidder/member of JV also shall submit annual maintenance certificate duly signed by competent authority in support of his Maintenance experience meeting the eligibility criteria. In support of O & M experience Bidders should submit copies of work order/AMC contract/proof of bills/running bills etc.

Signature:

Name:

Designation:

Office Address with contact details:

Seal:

Date:
53.1 **Statement – B**
(To be Submitted by Sole Bidder as well as all members of Joint venture)

Statement showing the similar works in hand / work in progress

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Department / Client with Address</th>
<th>Name of work</th>
<th>Estimated cost of work put to tender</th>
<th>Contract Amount</th>
<th>Date of award of contract</th>
<th>Target date of completion of work as per contract and date of completion of work if completed</th>
<th>Actual Amount of work done</th>
<th>Time limit in year and months</th>
<th>Reasons for delay in completion of work</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
</tbody>
</table>

Note:-
Attested copies of work order from issuing authority have to be attached.
It is mandatory to furnish details in this format only.
In case of Joint venture the above form shall be filled by The JV members separately

Signature:
Name:
Designation:
Address:
Seal:
Date:
53.2 **Statement – C**

Team Member employed by the firm on date......

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name</th>
<th>Photo</th>
<th>Designation</th>
<th>Educational Qualification</th>
<th>Experience in the field</th>
<th>Duration of Service in the firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>Project Manager</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
<td></td>
<td>Senior Site Engineer</td>
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<tr>
<td>3</td>
<td></td>
<td></td>
<td>Electrical Engineer</td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td></td>
<td>O&amp;M Supervisor</td>
<td></td>
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<tr>
<td>5</td>
<td></td>
<td></td>
<td>Service Technicians</td>
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</tr>
</tbody>
</table>

Signature:  
Name:  
Designation:  
Office Address with contact details:  
Seal:  
Date:  
Note:  

Attested Copies of Educational & experienced Certificates attached. It is mandatory to furnish details in this format only. Enclosure: (a) Photograph, (b) Educational Certificates, (c) Experience Certificates
53.3 **Statement – D**

Details of other team member (technical and non technical) to be employed for the project

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Designation</th>
<th>Total number</th>
<th>Number available for this work</th>
<th>Name</th>
<th>Qualification</th>
<th>Professional experience of details of work carried out</th>
<th>How these would be involved in this work</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

Signature:
Name:
Designation:
Office Address with contact details:
Seal:
Date:
Annexure 7: Anti-Collusion Certificate

(To be submitted by Sole Bidder as well as all members of Joint venture)

We hereby certify and confirm that in the preparation and submission of our Bid for Design, Supply, Installation and Maintenance of LED Street Lights and Centralized control and monitoring system of selected spine roads in the city of Guwahati and operation and maintenance for period of 1 (One) years on design, build and operate mode in ..........Assam against the RFP issued by authority, we have not acted in concert or in collusion with any other Bidder or other person(s) and also not done any act, deed or thing, which is or could be regarded as anti-competitive. We further confirm that we have not offered nor will offer any illegal gratification in cash or kind to any person or organization in connection with this Bid.

(Signature of the Bidder)

Printed Name
Designation
Seal:
Date:
Place:
Office Address with contact details:
Annexure 8: Performance Bank Guarantee

Ref: ___________________________ Date ___________________________

Bank Guarantee No. ___________________________

{Name}

{Designation}

{Address}
{Phone Nos}
{Fax Nos.}
{Email id}

Whereas, <<name of the Bidder and address>> (hereinafter called “the Bidder”) has undertaken, in pursuance of contract no. <Insert Contract No.> dated. <Date> to provide construction works for <<name of the assignment>> to <<name of the authority>> (hereinafter called “the Authority”)

And whereas it has been stipulated by in the said contract that the Bidder shall furnish you with a bank guarantee by a recognized bank for the sum specified therein as security for compliance with its obligations in accordance with the contract.

And whereas we, <Name of Bank> a banking company incorporated and having its head/registered office at <Address of Registered Office> and having one of its office at <Address of Local Office> have agreed to give the Bidder such a bank guarantee.

Now, therefore, we hereby affirm that we are guarantors and responsible to you, on behalf of the Bidder, up to a total of Rs.<Insert Value> (Rupees <Insert Value in Words> only) and we undertake to pay you, upon your first written demand declaring the Bidder to be in default under the contract and without cavil or argument, any sum or sums within the limits of Rs. <Insert Value> (Rupees <Insert Value in Words> only) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Bidder before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the Bidder 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 be valid until <<Insert Date>>

Notwithstanding anything contained herein:
Our liability under this bank guarantee shall not exceed Rs. <Insert Value> (Rupees <Insert Value in Words> only).

This bank guarantee shall be valid up to <Insert Expiry Date>.

It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this bank guarantee that we receive a valid written claim or demand for payment under this bank guarantee on or before <Insert Expiry Date>) failing which our liability under the guarantee will automatically cease.

Date ______________________

Place ______________________                     Signature ______________________

Witness ______________________                     Printed Name ______________________

(Bank's common seal)
Annexure 9: Format for Power of Attorney to Authorize Signatory

POWER OF ATTORNEY

[To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney.]

We, M/s.______ (name of the firm or company with address of the registered office) hereby constitute, appoint and authorize Mr. or Ms.______ (Name and residential address) who is presently employed with us and holding the position of ______, as our Attorney to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to our RFP for the Project ______ (name of the Project), including signing and submission of the RFP response, participating in the meetings, responding to queries, submission of information or documents and generally to represent us in all the dealings with Client or any other Government Agency or any person, in connection with the works until culmination of the process of Bidding till the Project Agreement is entered into with ____________ (Client) and thereafter till the expiry of the Project Agreement.

We hereby agree to ratify all acts, deeds and things lawfully done by our said Attorney pursuant to this power of attorney and that all acts, deeds and things done by our aforesaid Attorney shall and shall always be deemed to have been done by us.

(Add in the case of a Joint Venture Entity)
Our firm is a Member or Lead Bidder of the Joint Venture of ___________, ___________, and___________. Dated this the _____ day of ______ 2017

(Signature and Name of authorized signatory)

___________

(Signature and Name in block letters of all the remaining partners of the firm Signatory for the Company)

Seal of firm Company

Witness 1:    Witness 2:

Notes: (To be executed by all the members individually)

The Mode of execution of the power of attorney should be in accordance with the procedure, if any laid down by the applicable law and the charter documents of the executants(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
Annexure 11 – Bank guarantee for Earnest Money Deposit

To,
<Name>
<Designation>
<Address>
<Phone Nos.>
<Fax Nos.>
>Email id

Whereas <<Name of the Bidder>> (hereinafter called 'the Bidder) has submitted the Bid for Submission of RFP <<RFP Number>> dated <<Date>> for <<Name of the assignment>> (hereinafter called "the Bid") to <<Authority>>.

Know by all means these presents that we <<... >> having our office at <<Address>> (hereinafter called "the Bank") are bound unto the << Authority >> (hereinafter called "the Authority") in the sum of Rs. <<Amount in figures>> (Rupees <<Amount in words>> only) for which payment well and truly to be made to the said Authority, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this <<Date>>.

The conditions of this obligation are:
If the Bidder withdraws or amends, impairs or derogates its Bid during the period of Bid validity specified in the RFP
If the Bidder withdraws or amends, impairs or derogates its Bid during the period of notification on acceptance of Bid by authority to Bidder.
Withdraws his participation from the Bid during the period of validity of Bid/quote.
If Bidder fails to submit performance bank guarantee to authority
We undertake to pay to the Authority up to the above amount upon receipt of its first written demand, without the Authority having to substantiate its demand, provided that in its demand to the Bank, Authority will note that the amount claimed by it is due to it owing to the occurrence of one or all of the conditions, specifying the occurred condition or conditions.
This guarantee will remain in force up to <<insert date>> and including <<extra time over and above mandated in the RFP>> from the last date of submission and any demand in respect thereof should reach the Bank not later than the above date.
Notwithstanding anything contained herein:
Our liability under this Bank Guarantee shall not exceed Rs. <<Amount in figures>> (Rupees <<Amount in words>> only)
This Bank Guarantee shall be valid up to <<insert date>>.)
It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this bank guarantee that we receive a valid written claim or demand for payment under this bank guarantee on or before <<insert date>> failing which our liability under the guarantee will automatically cease.

(Authorized Signatory of the Bank)

Seal:

Date:
Annexure 12 - Format for Line of Credit

(Sample format for evidence of access to or availability of credit facilities)

BANK CERTIFICATE

This is to certify that M/S ------------------------------------------ is a reputed company with a good financial standing. If the contract for the work, namely, ______________ is awarded to the above firm, we shall be able to provide overdraft / credit facilities to the extent of Rs.______________ to meet their working capital requirements for executing the above Contract.

Signature of Senior Bank Manager __________

Name of the senior Bank Manager __________

Address of the Bank -----------------------

Stamp of the Bank Note: Certificate should be on the letter head of the bank.
Annexure 13 - Format for Joint Venture Agreement

JOINT VENTURE AGREEMENT

(To be notarized on stamp paper of appropriate value)

The Joint Venture agreement made and entered into at _____________________________ (place) on ________________day of __________ (YEAR) by and between.

Firm A (Name with address of the registered office)
Firm B (Name with address of the registered office)
Firm C (Name with address of the registered office)

(2) Definitions: In this deed the following words and expressions shall have the meaning set out below.

"The Employer" shall mean MD, Guwahati Smart City Limited (GSCL)

"The Works" shall mean ______________________________________________________

____________________________________________________________(Name of work) which is more particularly described in the pre-qualification and tender documents issued thereof by the Employer.

"The Tender" shall mean the Tender to be submitted by Joint Venture to the Employer for the work /works.

"The Contract" shall mean the contract entered /to be entered into between the Joint Venture and the Employer for the works.

Joint Venture (J.V):

The Parties hereto declare that they have agreed to form a Joint Venture for the purpose of submitting the pre-qualification Application/ tender document initially and then tender and if successful for the execution of the works as an integrated Joint Venture. The parties are not under this agreement entering into any permanent partnership of Joint Venture to tender or undertake any contract other than the subject works. Nothing herein contained shall be considered to constitute the parties of partners to constitute either Party the agent of the other.

Witnesses: Where as Employer has invited tenders from intending bidders and has permitted a group of firms (not exceeding two) forming a Joint Venture to eligible to be a bidder. And whereas_ MD, Guwahati Smart City Limited (MD, GSCL)_____________________________party of the first part and ______________party of the first and Second part/third part(if applicable) are desirous to enter into a Joint Venture in the nature of partnership engaged in the joint undertaking for the specific purpose of execution of the work of constructing ___________________________and whereas Parties of the first and Second part /third part(if applicable) reached understanding to submit pre-qualified/ tender, if pre-qualification, and to execute the contract if awarded;

This agreement witness as follows.

The parties do not enter into an agreement of any permanent partnership of Joint Venture to tender or undertake any Contract other than the specified above;
That the operation of this Joint Venture firm concerns and is confined to the work of ___________of Guwahati Smart City Limited (GSCL)

The name of the Joint Venture firm for convenience and continuity shall be: __________________________________________________________________________

The Address of Joint Venture for communication shall be as under: _________________________________

The Joint Venture shall jointly submit pre-qualification application on the above name according to all terms and conditions stated in the relevant instructions contained in the bid documents.

That this Joint Venture shall regulate the relations between the parties thereto and shall include without being limited to them the following conditions.

______________________________ firm shall be the lead company in charge of the Joint Venture for all intents and purpose.

In case the said work is awarded to the Joint Venture, the partners of the Joint Venture will nominate a person with duly notarized power of Attorney on stamp paper, who will represent the Joint Venture with the authority to incur liabilities, receive instructions and payments, sign and execute the contract for an on behalf of the Joint Venture,

All the (Maximum Two) parties agree to make financial participation and to place at disposal of Joint Venture the benefits of its individual experience, technical knowledge, skill and shall in all respect bear its share as regards planning and execution of the work and responsibilities including the provision of information, advice and other assistance required in the Joint Venture and participation shall be in proportion of, Firm –A...................% Firm - B...............% Firm – C..............%

All rights, interests, liabilities, obligations work experience and risks (and all net profits or net losses) arising out of the contract shall be borne by the parties in proportion to their shares. Each of the parties shall furnish its proportionate share in any bonds, guarantees, sureties required for the works as well as its proportionate share in connection with the works. The share and participation of the two/three partners in working capital and other financial requirements shall be in ratio as mentioned above.

Internal responsibilities and liabilities:

The division of individual scope of work may be worked out mutually by the parties but the party shall be jointly and severally liable to the employer for the whole work.

The parties specifically undertake to carry out their separate works in full compliance with the contract with the employer. Each party shall be responsible jointly and severally for consequences if any arising out of defective or delayed execution of works which falls within the individual’s party’s area of responsibility and/or it has been caused due to acts and/or omission of the concerned party.

The parties jointly and severally agree to replace modify or repair any defect in their respective portions of works in accordance with the terms and condition of the contract with the employer.
The parties jointly and severally shall indemnify and hold harmless to each other against any claim made by the employer or any other third party for injury, damage, loss or expenses is attributed to the breach /non-performance of his responsibilities by the indemnifying party in accordance with the agreements and/or contract with the employer.

None of parties have joined in any other Joint Venture for the said works.

Responsibilities and liabilities of Joint Venture towards the employer:

Parties hereto shall be jointly and severally liable and responsible for the acts, deeds and things done or omitted to be done in respect of the execution of the contract and for any financial liability arising there from.

Parties hereto shall be jointly and severally responsible to the Employer for the execution of the works in accordance with the contract conditions;

Parties hereto shall be jointly and severally indemnify to the Employer against any claim made against the employer or any other third party for any injury, damage or loss which may be attributed to the breach of the obligations under the contract pursuant to the contract.

Site management:

The execution of the work on the site will be managed by a Project Manager appointed by the Joint Venture and who will report to the ____________(J.V.) the project manager shall be authorized to represent the Joint Venture on site in respect of matters arising under the contract.

The ________________(Name of the J.V.) shall be jointly and severally liable to the employer for the execution of the contract commitment in respect of the works in accordance with contract conditions.

Termination of the Agreement:

This agreement shall be terminated in the following circumstances.

The employer awards the contract for the work to the other Bidder.

The employer cancels the contract to award the contract.

On completion of the defect liability period as stipulated in the contract agreement of the works and all the liabilities thereof are liquidated.

No partner has right to assign any benefits, obligation of liability under the agreement to any third party without prior written consent of the other partner as well as MD, Guwahati Smart City Limited (GSCL).

Financial matter:

Bank Account in the name of the Joint Venture will be opened with nationalized Bank having branch at Guwahati to be operated by an individual signatory as decided mutually by the Joint Venture partners.

(b) All the partners shall be responsible to maintain or cause to maintain proper Books of accounts balance sheet and profit and loss account as to the state of affairs of the firm as at the end of the financial year and as to the profit and loss made or incurred by the firm for the year ended on that date, respectively shall be prepared and the same shall subject to audit by a Chartered Accountant.
None of the party shall be entitled to make any borrowing on behalf of the Joint Venture without express prior written consent of the other party.

Bank guarantee for the application /execution of the work shall be provided jointly from a bank acceptable to the employer.

Negotiation: Any negotiation of agreement between the parties hereto and the employer subsequent to the submission of the tender and prior to award, shall take place only with consent of each of the parties who shall be represented at the such negotiation by one or more representative(s) duly empowered to make such negotiation or agreement.

Legal jurisdiction: All questions relating to validity interpretation of this agreement shall be governed by the law of India and shall be subject to jurisdiction of High court at Guwahati.

Insurance:
The Joint Venture through the parties individually shall take such insurance in connection with the work in accordance with the tender condition as acceptable to the employer.

The cost of the insurance premium paid by the Joint Venture shall be borne and paid by the parties in proportion to the respective shares of work. Other insurance taken individually by the parties shall be fully borne by the respective parties.

No change shall be made in this agreement without prior written consent of the employer and other party. However if the employer directs the parties to make changes in the agreement so as to fulfill tender conditions the parties discuss with employer and mutually agreed such changes required to be made in the agreement.

Default and withdrawals from the Joint Venture: In case that either party fails to observe the provision stipulated in this agreement withdrawal from the Joint Venture, Loss and/or expenses incurred by other party due to such default and/or withdrawals shall be fully compensated by the party who has defaulted.

All matter relating to or arising due to this agreement shall be treated as confidential and shall not be disclosed to any other party. In witness whereof the parties have caused their duly authorized representatives to sign below.

Witness:
Signed for and on behalf of firm-A
Date Seal

Witness:
Signed for and on behalf of firm-B
Witness:
Signed for and on behalf of firm-C

Date Seal
Witness:
Annexure 14 - Format for MEMORANDUM OF UNDERSTANDING (MOU) with OEM (LED Smart Street Lighting Luminaries & Centralized Control Monitoring System - Street Light controllers)

This MEMORANDUM OF UNDERSTANDING hereinafter referred to as MoU made on__ Day _____________ (month and year) at __________ by and between.

(Name of Original Equipment Manufacturer (OEM) with address) ________, represented by ________________ Authorized Signatory, which expression shall unless repugnant to the subject or context include its administrators, Successors and assigns.

(Name of Bidder with Address)_______________, represented by____________________ Authorized Signatory, which expression shall unless repugnant to the subject or context includes its administrator, successor and assigns

Hereinafter referred to as “Parties” in the collective sense and each of which is referred to as “______ (Name of Original Equipment Manufacturer (OEM))” & " ____ (Name of Bidder)” in the individual sense.

WHEREAS Guwahati Smart City Limited (hereinafter referred to as Employer) has invited tender (hereinafter referred to as the (“project”) for the following work:

Name of Project: __________________________________________________

WHEREAS if the said project is awarded to “__________________ ”(Name of Bidder) to execute the said project and it would also need Electrical materials such as LED Smart Street Lighting Luminaries & Centralized Control Monitoring System- Street Light controllers and we the “_________”(Name of Bidder) hereby enter into this MoU with "__________( Name of Original Equipment Manufacturer (OEM))____" for timely execution of ________ (Name of Project) and as per the tender conditions and further we mutually agree to execute the said project jointly and both the parties would be jointly and severally responsible for execution of the said projects as per the Bidding Documents.

IN WITNESS WHEREOF all the parties mentioned herein above have signed this MOU on the day, month and year first above mentioned.

No change shall be made in this agreement without prior consent of Employer and other party. However, If the Employer direct the parties to make changes in MOU agreement so as to fulfill the tender condition / requirement, the parties shall discuss with the employer and shall mutually agree for such changes as may be required to be made in the agreement.

In the interest of timely completion of the project, after discussion and getting assurance from manufacture of Electrical materials such as LED Smart Street Lighting Luminaries & Centralized Control Monitoring System- Street Light controllers, the following schedule for ________Supply of Electrical materials is proposed in order to meet the milestones and desired target of the projects.

Total number of days for supply of Electrical materials shall be _______ days from the date of work order. We hereby declare that the supply of Electrical materials for the Project will be ensured by us (within ______ days) as per the above mentioned schedule. We are aware that, in case the above schedule is not met with by us, we shall be liable for paying the Liquidated damages as
prescribed in the tender documents for non fulfillment of assured supply of Electrical materials.

All support including up-gradation and updation of the software shall be carried out, if the system is implemented, all through the contract period without any additional cost implication and also extended period if agreed upon.

For, (Name of Bidder)  

For, (Name of Original Equipment Manufacturer (OEM))

Authorised Signatory  

Authorised Signatory
REQUEST FOR PROPOSAL FOR

IMPLEMENTATION OF
“SMART STREET LIGHTING”

For Spine Roads in Guwahati
On
Design, Build & Operate Basis

Guwahati Smart City Limited,
Guwahati, Assam

Tender Notice No. ............... Dated: ...../....../......

Volume II: Technical Specifications & Drawings
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4. Design criteria
5. Detail Field Survey
6. Technical Specification of octagonal Pole
7. Technical Specifications of LED Luminaire
8. Technical Specification of Streetlight Feeder Pillar/ Switching point
9. Technical Specifications of Centralized Control and Monitoring System (CCMS)
10. Cable and Cable Termination
11. Operation & Maintenance
12. Quality Control Plans
13. Inspection
14. Capacity Building
15. Hand-Over of the System at the end of Contractual Period
16. Documents required to be submitted by CONTRACTOR during Technical Bid
17. Documents required to be submitted by Successful CONTRACTOR
18. Approved Makes
19. Annexure 1- Luminaire Data Sheet
20. Annexure 2- Minimum Requirements Of The GI Poles
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22. Annexure 4- List Of Identified Roads
23. Annexure 5- Road Boq
24. Annexure 6- Luminaries Datasheet Filled By CONTRACTOR

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1.0 SCOPE OF WORKS

1.1 The scope of works is as defined in the Vol I of the RFP Instruction to the BIDDERS.

1.2 Refer Drawing no. TCE.10477A-EL-4027-GA-40020 for the road route considered for this project.

2.0 GENERAL INSTRUCTION TO CONTRACTORS

2.1 This specification is the minimum requirement and should be read in conjunction with relevant latest specifications, requirements, rules and regulations of the Local Authority. Any additional requirements as per Local Authority or latest Standards shall be offered by CONTRACTOR. The same shall be indicated in the Technical Proposal and a separate Bill of Quantities (BOQ) for additional or modified items shall be submitted along with the BID write up.

2.2 All SAFETY considerations in design and manufacturing for safe operation & maintenance and safe practices during installation at site shall be in the scope of the CONTRACTOR. Cost towards accomplishing the same shall be included in the BID price and no extra claim shall be entertained later.

2.3 Equipments furnished/ supplied under this scope of works shall be complete in every respect with all mountings, fittings, fixtures, and standard accessories normally provided with such equipment and / or needed for erection, completion and safe operation of the equipment as required by applicable codes though they may not have been specifically detailed in the Technical Specification unless included in the list of exclusions. Materials and component not specifically stated in the specification but which are necessary for commissioning and satisfactory operation unless specifically excluded shall be deemed to be included in the scope of specification and shall be supplied without any extra cost. All similar standard components/ parts of similar standard equipment provided shall be inter-changeable with one another.

2.4 The CONTRACTOR shall be responsible for the selection and design of appropriate equipment to provide the best co-ordinated performance of the entire system. The design of various components, sub-assemblies and assemblies shall be so done that it facilitates easy field assembly and maintenance.

2.5 CONTRACTOR shall plan and carry out all supply, installation, testing and commissioning of the lighting system conforming to the approved drawing, technical specification and good engineering practices.

2.6 The material supplied by the CONTRACTOR shall be subject to approval of the designated Authorities of GSCL. Samples of the Supply material under the scope of works shall be inspected by GSCL or their representatives either at site or at Manufacturer’s works and approve them for supply and execution. Notwithstanding any approval/ instruction given otherwise, if the GSCL, during random check up, finds any non conformance with the quality of material supplied by the CONTRACTOR with
respect to the technical specifications, GSCL shall have the Authority to reject the entire lot/ batch of that particular material and ask to replace without any cost impact to GSCL.

2.7 For all excavation works the CONTRACTOR shall restore the area/ road, as the case may be, after completing the installation work.

2.8 During the construction at site, it shall be the CONTRACTOR’s responsibility to take care of the safety and security of its person and material at site. The CONTRACTOR shall be self reliant with all the requirements including tools and tackles for digging, filling, erecting, lifting, etc. and consumables required for construction like electricity and water at his own cost.

2.9 The CONTRACTOR shall make provision for adequate no of Ladder mounted vehicles self sufficient with all the required tools and instruments, duly calibrated, for installation and maintenance to meet the deadlines and benchmarks specified.

2.10 The CONTRACTOR shall carry out the installations in a safe and responsible manner without any inconvenience or danger to public. The CONTRACTOR shall take care not to damage any public/ private property by mistake or by intention during the course of work with its actions and shall be well insured to compensate the owner in case any such incidence happens.

2.11 The CONTRACTOR shall also liaison with DISCOM and other Govt. Bodies like PWD, CEIG, water board etc. for obtaining valid permission to work.

2.12 All the cost towards liaison with statutory Bodies for seeking all necessary statutory approvals and other activities involving Govt. Agencies viz., drawing approval, testing and commissioning etc, shall be borne by the CONTRACTOR.

2.13 All the statutory fees for the above approvals shall be borne by GSCL. Such payments shall be reimbursed to the CONTRACTOR upon submission of stamped receipts to the GSCL.

2.14 All the responsibilities related to installation of smart street lighting system in the identified Spine roads shall be borne by CONTRACTOR in respect of cost, managing the technical barrier and other related aspect.

2.15 The GSCL shall not be responsible for untoward incidence, if occurred due to faulty design and poor installations. The CONTRACTOR would be responsible for any civil/criminal proceedings arising out of such incidence and for damage caused to life and property thereof.

2.16 Upon completion of street lighting work on the Spine Roads, fifteen (15)-days testing period will start to check the adequacy of the installed LED street lighting system. The issue of completion certificate to the CONTRACTOR is subject to successful testing and approval of GSCL.

2.17 GSCL is free to draw samples (not more than 0.5% per lot) after the start of supplies from the supplied quantity and subject the same to test in a NABL Accredited Lab. CONTRACTOR shall bear the cost of testing of such samples. The decision of GSCL on the same shall be binding on the CONTRACTOR. Failure of the sample will invite
strict penalty and disqualification of the CONTRACTOR from future tenders also.

2.18 The quantities mentioned in the BOQ may vary @ 10% based on the outcome of the Road survey. There shall be no cost implication for the same. However, efforts shall be made to optimize the system.

3.0 APPLICABLE CODES AND STANDARDS

3.1 All the equipment and systems shall conform to the latest applicable National and International standards; and latest Rules and Regulation of the Local Authorities.

3.2 The design, manufacture, installation, testing, commissioning and performance of all the equipment and system shall comply with all currently applicable statutes, regulations and safety codes in the locality where the equipment will be installed. Nothing in this specification shall be construed to relieve the CONTRACTOR of his responsibility.

4.0 DESIGN CRITERIA

4.1 Street Lighting System

4.1.1 The list of identified roads is provided in the Annexure 4. There are no definite RoW sections for any of the road in Guwahati. The roads vary in width along its entire length. Maximum RoW width is being provided in the Annexure. The width of RoW to be considered for the design shall be inclusive of the shoulder width on either side and Carriage way. The pole shall be mounted on the outer edge of the shoulder towards the drain to avoid any obstruction of traffic/ expansion in near future.

4.1.2 The roads can be summarized into different ROWs. The minimum Lux level and Uniformity requirements of each ROW is indicated in the table below;

<table>
<thead>
<tr>
<th>ROW No.</th>
<th>Road Width* (m)</th>
<th>Road Length (km)</th>
<th>Lux Level</th>
<th>Uniformity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5-6</td>
<td>19.86</td>
<td>15</td>
<td>0.4</td>
</tr>
<tr>
<td>2</td>
<td>7.22</td>
<td>117.7</td>
<td>20</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>137.56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Road widths are including Carriage way and Shoulders.

4.1.3 The CONTRACTOR shall design the system for each road keeping the following in view;
(a) The level and type of lighting adopted for a street shall be based on its traffic importance, both vehicular and pedestrian. However, the system of lighting to be provided should take into account all the relevant factors, such as the presence of factories, market, or places of public resort, the character of the street like trees, landscape etc.

(b) Public lighting should permit users of the road at night to move about with the greatest possible safety and comfort so that the traffic capacity of the road at night is as much equal to that planned for the daytime as possible.

(c) The driver should be able to see distinctly without the use of dipped or driving headlights and locate with certainty and in time all significant details notably the alignment of the road (its direction and its surrounds)

(d) The glare due to luminaries should be controlled at a value which keeps the visual discomfort to which the driver is subjected below an acceptable level as per the latest standard.

(e) The pedestrian should be able to see distinctly the edges of the footways, vehicles and obstacles; dark patches should not occur.

(f) The above aim shall be achieved with due respect to the aesthetic appearance of the lighted road within acceptable limits of cost of installation and maintenance.

4.1.4 All the required Design Factors shall be considered as per the latest version of IS 1944 and National Lighting Code 2010

4.1.5 Maintenance factor of shall not be considered not less than 0.8 for the lighting calculation.

4.1.6 Lighting design shall be performed using latest version of DiaLux Software (Version 4.12 or higher)/ Original Equipment Manufacturer (OEM) validated software. The Validation Report validated from Accredited Authority shall be submitted along with the BID.

4.1.7 Maximum power output of each Feeder Pillar for calculating the incoming cable size shall be considered not less than 10 kVA. The voltage drop at the terminals of the farthest pole shall not exceed more than 3% from the Feeder Pillar. Cumulative voltage drop from HT to the farthest Point for one Feeder Pillar group shall not exceed 5%.

4.1.8 The following criteria shall be followed for designing the CCMS system for the Identified roads;

(a) Only Group ON-OFF shall be provided for the roads having lights below 90W.

(b) Group ON-OFF Plus Dimming shall be provided for the roads having Lights equal to or above 90W.

(c) Dimming shall be possible up to 100% of the rated output.
(d) Dimmable driver shall be considered for only for Luminaires which are rated equal to or above 90W.

(e) Only Step-less Dimming shall be provided for the Luminaires where applicable.

4.2 CABLE SIZING:

4.2.1 The CONTRACTOR shall ensure that cable associated with the power distribution systems in all the installations throughout the Works are adequately rated for their use.

4.2.2 The following main aspects shall also be considered while deciding the final size of the cables-

(a) Supply voltage and frequency

(b) All cables shall be selected to carry the corresponding full load current under site conditions.

(c) Route length and disposition of cables

(d) Maximum allowable temperature rise under normal full load condition based on the material of cable insulation (XLPE/ PVC).

(e) Maximum short circuit current duration (fault clearing time) and final temperature of cable during short circuit current flowing through the cable.

4.2.3 For Cables emerging from MCB outgoing of the feeder pillar, fault clearing time shall be considered as 0.01 second

4.2.4 Appropriate de-rating factors as per cable manufacturer’s catalogue as enlisted below shall be considered for sizing the cable:

(a) Ambient Air Temperature (minimum 45 degree C).

(b) Ambient ground temperature (minimum 35 degree C to be considered)

(c) Laid in Air/ ducts/ directly in ground etc.

(d) Depth of cable burial (minimum 750 mm for LT and 900 mm/ 1200mm for 11kV/ 33KV HT)

(e) Thermal Resistivity of Soil (minimum 150 degree C Cm/ W to be considered)

(f) No. of cables in a group-touching each other or separated by a distance

(g) No. of cable trays in tier

(h) Any other de-ration factors as applicable & as per Manufacturer’s catalog.
4.2.5 The number of light fixture controlled by a single feeder pillar outgoing circuit shall be limited based on the voltage drop at the farthest pole. The cumulative voltage drop at that point shall not exceed by 5%.

4.2.6 The LV power cables shall be 1.1 kV grade, multi-stranded Copper/Al conductor, XLPE insulated, colour coded, inner and outer extruded PVC sheathed, galvanized steel round wire/flat strip armoured cables.

4.2.7 Cables up to & including 4.0 sq.mm shall be Cu multi-stranded conductor with galvanized steel round wire armoured & balance cables shall be Al multi-stranded conductor with galvanized steel round wire/flat strip armoured.

4.2.8 Control cables shall be Cu multi-stranded conductor with galvanized steel round wire/flat strip armoured. For multi core cables above 7 cores, minimum two spare cores shall be considered.

4.3 EARTHING SYSTEM

4.3.1 The safety earthing and lightning protection system shall be based on the latest version of the following codes and standard.

**TABLE 2: STANDARD AND GUIDELINES FOR EARTHING PROTECTION**

<p>| | |</p>
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<tbody>
<tr>
<td>c)</td>
<td>CEA guidelines 2010</td>
</tr>
<tr>
<td>e)</td>
<td>CPWD Specifications - 2013</td>
</tr>
</tbody>
</table>

4.3.2 Size of Earthing Conductors

The earthing conductor sizes shall be calculated as per IS: 3043. Following factors will be considered for sizing the earthing conductor

**TABLE 3: PARAMETERS FOR SIZING OF EARTH CONDUCTOR**

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>a)</td>
<td>Design Ambient Temperature</td>
</tr>
<tr>
<td>b)</td>
<td>Allowable temperature rise</td>
</tr>
<tr>
<td>c)</td>
<td>For steel welded joints</td>
</tr>
<tr>
<td></td>
<td>Fault clearing time</td>
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</tbody>
</table>
d) Overall earthing resistance | Less than 1 Ohms

4.3.3 GI Pipe electrodes shall be provided for Feeder Pillars (2 Nos. each), each light pole (1 No) and other systems as per the provisions of latest version of IS 3043 or better. Electrode shall be connected to the equipments by two runs of GI strip of min size 25X6 mm laid in HDPE/ DWC pipes.

4.4 CIVIL DESIGN

4.4.1 All the civil foundation design shall be suitable for the Seismic requirement of Guwahati as per latest IS as the city of Guwahati falls in the Seismic Zone-V.

4.4.2 The design shall also consider the maximum wind speed of min 180 kmph as per IS 875.

4.4.3 Grade of concrete to be used shall be M20 (1:1.5:3) and grade of reinforcement steel shall be Fe 500 or Fe415.

4.4.4 40NB Flexible HDPE/ DWC Pipe of 1m length shall be embedded to draw the cable from the power cable.

4.4.5 Minimum requirement for Civil Foundations for Lighting poles upto a height of 6m are as follows;

(a) Depth of the foundation should be 1100 mm minimum.
(b) Plan dimensions of footing should be 900mm x 900mm having depth D=200 mm Minimum.
(c) Reinforcement in foundation in both directions -
(d) Bottom reinforcement -T 10 @ 150 mm c/c.
(e) Top Reinforcement to be as per IS456
(f) Four anchor bolts of 16mm Dia and 500 mm total length are required.
(g) Grade of concrete to be used shall be M20 (1:1.5:3) and grade of reinforcement steel shall be Fe 500 or Fe415.
(h) Concrete pedestal -
(i) Size -300 mm x 300 mm
(j) Main vertical reinforcement in shall be 4 nos. bars of 12mm dia bars
(k) Shear reinforcement (stirrups) shall be 8 mm dia bars at 200 mm c/c.
(l) This foundation design of pole will be applicable for all types of soils i.e. soft soil, medium soil and hard soil.
4.4.6 Minimum requirement for Civil Foundations for Lighting poles up to a height of 10m are as follows;

(a) Depth of the foundation should be 1600 mm minimum.
(b) Plan dimensions of footing should be 1200mm x 1200mm having depth D=300 mm Minimum.
(c) Reinforcement in foundation in both directions -
(d) Bottom reinforcement - T 10 @ 150 mm c/c.
(e) Top Reinforcement to be as per IS456
(f) Four anchor bolts of 16mm Dia and 500 mm total length are required.
(g) Grade of concrete to be used shall be M20 (1:1.5:3) and grade of reinforcement steel shall be Fe 500 or Fe415.
(h) Concrete pedestal -
(i) Size -350 mm x 350 mm
(j) Main vertical reinforcement in shall be 8 nos. bars of 12mm dia bars
(k) Shear reinforcement (stirrups) shall be 8 mm dia bars at 200 mm c/c.
(l) This foundation design of pole will be applicable for all types of soils i.e. soft soil, medium soil and hard soil.

5.0 DETAIL FIELD SURVEY

5.1 CONTRACTOR shall carry out a Detailed Survey of the identified Spine Roads to gather following information to design the proposed system;

(a) Road width at different stretches of a particular road;
(b) Road Length of particular roads;
(c) List out the requirements of particular roads for satisfactory illumination and control;
(d) Prospective location for mounting the Switching Point Feeder pillars as per the offered technology; its access to the power from nearest APDCL source.
(e) Identify the location for mounting the lighting poles,
(f) Bottlenecks and hindrances and offered solution for the same
(g) Nearest supply point for the feeder pillar
(h) Location for mounting the two pole structures and transmission line poles

(i) Cable corridor and under laying other utilities

5.1.2 Design the new lighting system based on the above inputs in Dialux.

5.1.3 A Detailed Project Report (DPR) shall be submitted by CONTRACTOR incorporating the survey findings and Offered Solutions including design calculations and BOQ for the Luminaires and infrastructural components.

5.1.4 The DPR shall indicate the total energy consumption by the system proposed for each road per month.

5.1.5 Road wise drawings for GA layout with Sections for various stretches of the road shall be enclosed showing the location of poles and feeder pillar with HT supply arrangement and any other accessories required. All the space allocations shall be clearly identified after due verification with the authorities.

5.1.6 The DPR shall also include the following;

(a) Situation analysis for the surveyed roads and findings

(b) Proposed solution

(c) Design Report for each road

(d) Summary of all the roads including road width with carriage way/ footpath/ drains; proposed wattage; height of poles; distance between the poles; calculated lux level, uniformity etc.

(e) Detail description of CCMS system with proposed technology, data sheets, architecture, server details, software applications, features offered, list of alerts and alarms, list of parameters offered for monitoring and control, system efficiency, bandwidth requirement

(f) Data sheets of proposed Luminaire, Poles, Feeder Pillar, controller, battery, communication module, server etc.

(g) Details of Helpdesk set up and Complain Management System

(h) O&M SOP

(i) Resource deployment

(j) Micro Project schedule on weekly basis

(k) Milestones for completion of illumination in terms of road length (km)

6.0 TECHNICAL SPECIFICATIONS OF OCTAGONAL POLE
6.1 The Product should be designed for the specific climatic and environmental conditions of the region to ensure full durability and safety throughout its designed life.

6.2 All the Octagonal Poles shall be designed to withstand the maximum wind speed of 180 kmph as per IS 875. The top loading i.e. area and the weight of fixtures are to be considered to calculate maximum deflection of the pole and the same shall meet the requirement of BS EN 40-3-3:2013.

6.3 The pole shall also be designed to withstand the Earthquake as per the provisions of the relevant BIS/other standards related to the urban location in the State of Assam.

6.4 The pole shaft shall have octagonal cross section and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding of the pole shaft. The welding of the pole shaft shall be done by Submerged Welding process.

6.5 All octagonal pole shafts shall be provided with the rigid flange plate of suitable thickness with provision for fixing minimum 4 foundation bolts. The base plate shall be fillet welded to the pole shaft at two locations i.e. from inside and outside. The welding shall be done as per process approved by Third Party Inspection agency.

6.6 The materials of the pole as follows:

(a) Pole - Conforming to grade S355J0,
(b) Base Plate: - Fe 410 Conforming to IS 226/ IS 2062,
(c) Foundation Bolts: - 6.8 Gr. as per IS 1367,
(d) Pole Sections: - The Octagonal Poles shall be in single piece with single longitudinal welding joint,
(e) Galvanization: - The poles shall be hot dip galvanized as per IS 2629 / IS 2633 / IS 4759 standards with average coating thickness of 65 micron. The galvanizing shall be done in single dipping. The zinc Ingot raw material shall be 99.99% pure and procured from reliable sources with Quality Test Certificates.

6.6.2 The pole manufacturing & galvanizing unit shall be ISO 9001: 2000 & ISO 14001 certified to ensure consistent quality & environmental protection.

6.6.3 The poles shall have integrated Junction box with openable door of adequate size (approximate 600mm length) at the elevation of 750 mm from the base plate. The door shall be hinged type with mechanical interlock, dust proof, weather proof and vandal resistance and shall ensure safety of inside connections and components. The door shall be flush with the exterior surface and shall have suitable locking arrangement. The pole shall be adequately strengthened at the location of the door to compensate for the loss in section.

6.6.4 The door of the Junction Box shall permit clear access to the components inside viz., termination strips, connectors, MCBs, cables etc. There shall also be suitable arrangement for the purpose of earthing.
6.7 Electrical connections - Four way connectors shall be provided along with Slide lock suitable for connecting 1.1 kV grade, 4 core X16 sqmm Al cable. It shall also inhouse no. 6 amps DP MCB, 2.5 sqmm connectors for looping with 2.5 Sqmm Copper wires for connecting to the luminaries through 0.6 kV grade, 3 core X 2.5 mm² PVC insulated copper conductor flexible un-armoured Cable from the terminal block to the fixture within the pole. All the cables laid through the pipe shall be without any joint.

6.8 Two nos. Earth Boss shall be provided at the bottom of the pole (diagonally opposite) suitable for connecting 25X6 mm GI/ CU earth strip or SWG wire for earthing of the poles. Similar Earth Boss suitable for connecting 4 sqmm copper wire shall be provided on the control plate inside the Junction Box for earthing of the electrical components.

6.9 Two nos. 50 mm NB HDPE sleeves of suitable length shall be provided through the foundation upto the Junction Box for entry of power cable.

6.10 Earthing of each pole shall be carried out with one dedicated earth electrode. The earth electrode shall be GI pipe electrode as recommended in the latest version of IS 3043. The earth electrode shall be connected with two 25X6 sqmm GI strips to the two distinct earth boss on the pole.

6.11 Aesthetic appearance - All the grooves and carvings of the pole unit shall be free from any kind of distortion for a pleasing aesthetic appearance.

6.12 Top Mountings - The galvanized decorative mounting bracket as selected by the GSCL shall be supplied along with the Poles for Installation of the luminaries.

6.13 The Poles shall be bolted on a pre-cast foundation with a set of foundation bolts for greater rigidity.

6.14 The CONTRACTOR shall carry out all the relevant tests and inspection in the presence of the GSCL or Third Party Agency, as may be selected by the GSCL, before the dispatch of the poles at no extra cost to the GSCL.

6.15 The CONTRACTOR shall inform the GSCL at least FIFTEEN (15) days in advance, about the manufacturing programmed so that arrangement can be made for inspection. GSCL reserves the right to waive the inspection at any stage.

6.16 All the material/equipment/accessories shall be supplied with manufacturer’s test certificates.

6.17 CONTRACTOR shall submit the Proposed Product Catalogue, Detail Data sheet, spare parts list and drawing of Pole & Bracket along with the BID for each product quoted.

6.18 CONTRACTOR shall arrange for all the tools and equipment’s including

6.19 M20 concrete foundations shall be provided for all the poles. Approx. dimension of the foundation for evaluation purpose is 600X600X1700 mm. However, CONTRACTORs shall design as per the stability requirement and Soil bearing Capacity of each location. The Poles shall be bolted on a pre-cast foundation with minimum four foundation bolts for greater rigidity.
6.20 Galvanized Poles Dimensions – These are the minimum dimensions. CONTRACTOR may offer as per their design for a particular Height.

7.0 TECHNICAL SPECIFICATIONS OF LED LUMINAIRE

7.1 Applicable Standards

All applicable standards shall be as per Annexure 4.

7.2 Environmental Conditions

The average atmospheric condition during the year is mentioned below. The equipment shall be designed to work in such environmental conditions:

(a) Maximum ambient air temperature: 45° C
(b) Minimum ambient air temperature: 5° C
(c) Max. Relative humidity: 90%
(d) Atmosphere: Dusty and Humid
(e) Rainfall data: 1600 mm
(f) The equipment shall be suitable to sustain and work in the humid and dusty atmosphere of Guwahati.

7.3 Luminaire Description

7.3.1 The Luminaires shall work on single phase three wire system (phase, neutral & earth).

7.3.2 The luminaire light output (lumen) shall be constant and shall be able to withstand allowable supply source voltage variations/ fluctuations, spikes and harmonics.

7.3.3 The Luminaries shall have a sturdy and corrosion resistant high pressure Die cast Aluminium alloy housing with weatherproof gasket for lamp and control gear accessories. The housing shall be Epoxy coated, without any cracks or thorough holes, made in a single piece of die-cast LM6 Aluminium alloy. The luminaries shall be totally enclosed, dust tight and water proof.

7.3.4 Heat sink used should be aluminium extrusion having high conductivity. The dimensions of luminaries shall be optimum and adequate to permit sufficient heat dissipation, through the body itself, so as to prevent abnormal temperature rise inside the lantern and consequential damage to the cover and gasket materials, LEDs, lenses and electronic drivers. Heat sink must be thermally connected to MCPCB/ LED light source.
7.3.5 The Luminaries Housing shall be suitable for termination of 3C X 2.5 sqmm copper conductor PVC insulated flexible Cable with Double Compression Cable Glands

7.3.6 The optical system shall consists of individual Poly Carbonate lenses on high power LEDs designed & tested to achieve typical street lighting distribution from the LED Luminaire. These lenses provided for individual LEDs are to be fixed on lens plate in order to have consistent light distribution from luminaries. Luminaries should conform to the Photometric Distribution / requirements of Cut-Off / Semi Cut – off light distribution and optics as classified in IS 1944 and NLC 2010.

7.3.7 Suitable number of LED lamps shall be used in the luminaries. The manufacturer shall submit the proof of procurement of LEDs from OEMs at the time of testing along with the test reports.

7.3.8 The Luminaries shall be provided with distortion free, clear, high tensile, heat resistant, toughened glass of minimum 0.8mm thickness or UV resistant polycarbonate cover fixed with corrosion free/ stainless Steel screws.

7.3.9 An extruded silicon loop gasket shall be provided in the lantern body to ensure a weather proof seal between the cover and the metal housing to exclude the entry of dust, water, insects, etc. Luminaries should conform to degree of protection of IP 66 or above. Felt gasket will not be accepted. The test report from NABL accredited laboratory shall be submitted along with the technical proposal/ Bid.

7.3.10 Luminaire shall be enclosed in an aesthetically designed housing with corrosion resistant polyester powder Coating after phosphor-chromate treatment.

7.3.11 All Luminaires shall conform to RoHS/CE/ERTL/ERDI requirements.

7.3.12 Name of the GSCL, Year of Manufacture, Batch No., Serial Number or Identification No. Luminaries Manufacturer's Name / Logo, Wattage and Frequency should be embossed on the housing.

7.3.13 LED luminaries, should conform to the various National / International standards for safety & performance. Manufacturer should provide test reports as per LM 79 & LM80. The test report from NABL accredited laboratory shall be submitted along with the technical proposal/ Bid for LED as well as Luminaires.

7.3.14 Luminaries shall conform to the National / International standards for Safety & Performance and test certificates as per IS 16103/ IS 16107 should be provided by the manufacturer. In case of luminaries are imported, the CONTRACTOR shall conform to test parameters as per UL or equivalent standards.

7.3.15 The electrical component of the LED and LED driver must be suitably enclosed in separate sealed unit to function in environment conditions mentioned above.

7.3.16 All the connecting wires inside the Luminaries shall be Low Smoke Halogen Free, fire retardant cable.
7.3.17 Adequate protection against Overloading, Short Circuit, Over Voltage, Over temperature, Under Voltage, String Open, Surge Protection shall be provided within the Luminaries.

7.3.18 Design of the thermal management shall be done in such a way that it shall not affect the properties of the diffuser.

7.3.19 All the material used in the luminaries shall not contain any toxic material/ metal like mercury; shall be halogen free and fire retardant confirming to relevant standards.

7.3.20 The Manufacturer shall have all the relevant testing facilities certified by an accredited laboratory and shall be offered for inspection to the GSCL for verification of the required parameters and tests. CONTRACTOR shall confirm the same in the BID.

7.3.21 The control gear shall comply with the provisions of IEC 61347-2-13, IEC 62031 and IEC 62384 as appropriate.

7.3.22 In Guwahati the switching surges are expected in the power supply system. Appropriate surge protection shall be provided by the CONTRACTOR for all the Luminaires offered by it as well as external arrangements shall be provided for the existing fittings if they donot have such protections inbuilt. Such protections can either be provided centrally at the Feeder Pillar or at each individual luminaire level or a combination of both, as may be decided by the CONTRACTOR. No claim for failure of Luminaires, on account of voltage surges other than Lightning surges, will be considered.

7.3.23 Additionally, as per ANSI C 136.2-2014/ UL-1449, External Surge protection device (SPD) with Thermal Protection (TMOV) of minimum 20 kV/ 10 kA to be separately installed with each fixture. The same shall be certified from independent lab and follow IEC 62305 & IEC 61643-11-2011

7.3.24 In case of voltage surges due to lightning, it is expected that lights, in the affected circuit, will fail in a group and not in an isolated manner. Hence, any such failure of lights in a group on account of Lightning surges, may be reported to the GSCL, along with circumstantial evidence preferably within 48 hours of such occurrence. The responsibility for submission of supporting documentation rests with the successful CONTRACTOR.

7.3.25 The Luminaires shall be suitable for operation within the input supply voltage range specified. The driver of the light should be able to sense and cut-off power to the light in case of phase-to-phase/ 440 V fault. No claim in this regard shall be considered.

7.3.26 The lighting fixtures offered shall comply with the data sheet attached in Annexure 1.

7.3.27 The complete luminaire assembly shall have a warranty period of 5 years as decided.

7.3.28 Protection against any type of mischief should be made.

7.4 Testing Of Luminaire
7.4.1 The Routine test on each of the offered Luminaries shall be carried out by the CONTRACTOR before dispatch. Following tests shall be carried out as Routine tests by the CONTRACTOR for the offered Luminaries;

(a) Visual and Dimensional check
(b) Checking of documents of purchase of LED
(c) Insulation resistance test
(d) HV test
(e) Reverse polarity

7.4.2 The Acceptance test shall be carried out by GSCL or GSCL’s Representative on a sample of the lot offered for Acceptance. The Lot shall be different from the lot from which the Type test samples have been drawn. The cost of the testing shall be borne by the CONTRACTOR. Following tests shall be carried out as Acceptance tests by the CONTRACTOR for the offered Luminaries;

(a) Visual and Dimensional check
(b) Checking of documents of purchase of LED
(c) Insulation resistance test
(d) HV test
(e) Over voltage protection
(f) Surge protection
(g) Reverse polarity
(h) Lux measurement
(i) Test for IP 66 protection

7.4.3 Following Type tests reports shall be provided by the CONTRACTOR for the offered Luminaries along with the BID;

(a) Resistance to humidity
(b) Insulation resistance test
(c) HV test
(d) Over voltage protection
(e) Surge protection
(f) Reverse polarity
(g) Temperature rise Test
(h) Ra (Colour Rendering Index) measurement test
(i) Lux measurement
(j) Fire retardant Test
(k) Test for IP 66 protection
(l) Endurance Test,
(m) Life Test
(n) Photometric Measurements Test Report (IES LM 79)
(o) LED Lumen Maintenance Test Report (IES LM 80)
(p) Vibration test as per ANSI
(q) Drop Test

8.0 TECHNICAL SPECIFICATION OF STREETLIGHT FEEDER PILLAR/ SWITCHING POINT

8.1 All Feeder Pillars (FP) shall be Outdoor type, Wall/ Column/ Steel Support mounting, Weatherproof, double door, single front, non-compartmentalized enclosure with locking facilities.

8.2 The OFP (Outdoor Feeder Pillar) shall be made of Galvanised sheet steel enclosure. All the feeder pillars shall be Outdoor type with permanent rain canopy and shall be dust, damp and vermin proof. All feeder pillars shall conform impact resistance of IK10 and shall be minimum IP54 certified.

8.3 The GI feeder Pillar shall be fabricated from 3 mm CRCA sheet and shall be Hot Dipped Galvanized as per relevant latest standards after entire fabrication. The enclosure shall be powder coated with Epoxy paint as per desired colour of GSCL. The gland plate shall be 3mm thick.

8.4 The fabricated enclosure shall not have any welds or bolt heads apparent from outside. All fabrication work like cutting, drilling, punching, shearing & welding etc. related to the enclosure shall be complete before proceeding to 7 tank process. The fabricated body shall be thoroughly cleaned and treated by chemical agents as required to produce a smooth surface free of scales, grease and rust.

8.5 Sheet metal components shall be pre-treated using the seven tank phosphating process consisting of de-greasing, acid pickling, de-rusting, phosphating and passivation including repeated rinsing in between each process. On completion of passivation of the components they shall be preheated and then epoxy powder coated
with selected shade for exterior as well as interior and Glossy White shade for the gland plates (Inside the panel) and component mounting plate.

8.6 All interiors and exteriors of the enclosure shall be finished and painted to prevent rusting and corrosion. The paint should be carefully selected to withstand tropical heat, rain and environmental effects. The paint shall not scale off or crinkle or be removed by abrasion due to normal handling. Thickness of all painting shall be minimum 80 - 100 microns DFT. The final colour of Feeder pillar shall be as per GSCL requirements.

8.7 The gasket shall be of neoprene rubber suitable to withstand all weathers for long tenure of service. All hardware shall be made of non corrosive material either HD Galvanized or stainless steel. Door shall be with concealed type hinges & captive screws.

8.8 Both the doors shall have an Inspection/ View Window for monitoring the energy meter reading without opening the door. The window on the external door shall be provided with a metal flip cover with small canopy which can be moved up and down for viewing the meter.

8.9 Both the doors shall have panel type lock with keys in duplicate as per the requirements of the GSCL.

8.10 All the feeder pillars shall be of uniform height and shall be mounted with the bottom of the panel at minimum 500mm above the Finished Ground or Floor level as the case may be.

8.11 A danger notice board written in English, Hindi and Assamese shall be made of 2mm thick GI plate and shall be provided on the front door of the feeder pillar.

8.12 The details of max load in KW, Rating of Incomer, no of phase, voltage, frequency, controller no., Meter No., road name, Pillar no. name of the agency and year of erection shall be labelled using radium sticker/radium paint.

8.13 The feeder pillar shall consist of Incoming Four Pole (FP) RCBO or MCB with ELCB, 3 Phase smart Energy Digital Meter, FP Contactor for each outgoing circuit, Astronomical Timer, Outgoing FP MCB apart from all the smart control components like Gateway controller, Power Supply Unit for the Gateway unit, Battery for Back up etc. It shall also consist of FP Isolator for isolating the smart lighting control equipment without discontinuing supply to the light pole during the outage of the smart control system.

8.14 The feeder pillar shall have cable entry at the bottom suitable for terminating double compression glands for 2 Runs of 3.5 C 50sqmmAluminiumconductor, XLPE insulated armoured cable at the incoming terminal and minimum 4 Runs of 4 core 16 sqmm Aluminium conductor, XLPE insulated armoured cable at the outgoing terminal.

8.15 All MCBs/ RCBOs/RCCBs shall be comply with the relevant IS and IEC standards. It shall be current limiting type and shall provide a cut off in, < 10 ms for prospective currents during faults. It shall be provided with fixed thermal overload, short circuit and earth fault release as appropriate. The breaking capacity of the MCB shall be 16A for 1 sec.
8.16 The Outgoing and Incoming breakers shall be discriminated based on Current.

8.17 The other power and control components are as listed below;

(a) The minimum rating of the incomer shall be 32A, 100mA sensitivity, Current limiting type, Characteristic Curve C, Breaking capacity 10 kA for 1 sec.

(b) All the contactors shall have high rupturing capacity rated for 3 phase 440 V, 50 Hz, Four Pole, AC 3 duty.

(c) Astronomical timer having Single channel and capable of Auto resetting when power resumes, provision of manual over ride, switching ON / OFF the circuit as per the Sun set and Sun rise timings along the year.

(d) Min 25X3 mm tinned Copper bus bar with SMC support insulators shall be provided for power distribution within the feeder pillar. The size of phase and neutral shall be equal.

(e) Outgoing FP RCBOs – 30mA sensitivity, Current limiting type, Characteristic Curve C, Breaking capacity 10 kA for 1 sec.

(f) Terminal connectors suitable for terminating the above mentioned cables. Min 12 nos. 25 sqmm terminals for incoming cable and Separate 5 nos. terminals shall be provided for tapping power for the luminaire with 2.5 sqmm Copper conductor PVC insulated Un-armoured cable. Twenty percent spare terminals shall be provided.

(g) Under voltage and Over voltage Monitoring Relay for connection and disconnection of the power during off band abnormal voltage within a time band.

(h) All connecting power & control wiring shall be carried out with stranded copper conductor PVC insulted LSHF wires. Minimum size of control wiring shall be 1.5 sqmm and power wiring shall be 4 sqmm.

(i) Space Heater with MCB and Thermostat and 7W LED Luminaries with lamp shall be provided inside with a door limit switch. The lamp and the heater shall be tapped from the outgoing of the meter with separate DP MCB circuits.

(j) An Aluminium / GI Earth bus shall be run at the bottom of the Feeder Pillar which shall be connected to the earth leads at the two extreme ends for connecting the GI earthing strip from the electrode.

(k) Cast Resin CT of appropriate rating (---/5A) shall be provided at the incomer of each phase for measurement of the current.

(l) Multifunction meter with RS 485 and RJ 45 connectivity for measuring, Line and Phase Voltage/ Current; kW, KVAR, KVA; kWh kVAh, kVARh (L & C); Frequency, Phase wise Voltage and Current Harmonics upto min 7th order; Maximum demand.
(m) CONTRACTOR shall provide provision for connection through SIM, Ethernet, RS 485 and OFC to connect with server through whatever mode is available at site. Presently the communication of the Feeder pillar shall be carried out through GSM network however after the city OFC network is laid the communication shall be carried out through the OFC network.

8.18 Two nos. Pipe Earthing electrode shall be provided for each Feeder pillar and connected with 25X6 mm GI earth strip. The pipe electrode shall be as per the latest version of IS 3043.

8.19 HDPE/ DWC pipe of suitable size (minimum 40 mm ID) for conveniently accommodating the above incoming and outgoing cables shall be laid upto the feeder pillar for carrying the buried cables upto the feeder pillar for termination. The GI strip for earthing shall be laid with proper dressing.

8.20 The feeder pillar shall be mounted on prefabricated Galvanised Steel Support structure duly fastened with a concrete foundation with M20 concrete suitable to sustain the local geological conditions, seismic conditions and max wind speed requirements.

8.21 All the material/equipment/accessories must confirm to the relevant IS with its latest amendments. All the material/equipment/accessories shall be supplied with manufacturer’s test certificates.

8.22 Insulation resistance between live parts and earth terminal shall be 5 MΩ minimum. All power equipment shall be able to withstand high voltage (HV) test at 1.5 kV for 1 minute between live parts (current carrying parts) and earth terminal without breakdown of insulation.

8.23 Following documents needs to be submit for approval

(a) General Arrangements drawing.
(b) Support and foundation drawings
(c) Wiring diagram.
(d) QAP (Quality assurance Plan).
(e) Datasheet for each component.

8.24 Routine test shall be conducted as per relevant IS/IEC and shall be carried out at manufacturer place and same shall be witnessed by GSCL/GSCL’s representative. Following shall be minimum check

(a) Visual inspection Check
(b) Bill of material.
(c) Electrical Continuity check.
(d) Functional Check.
8.24.2 Type Test certificate shall be submitted for review.

9.0 **TECHNICAL SPECIFICATIONS OF CENTRALISED CONTROL AND MONITORING SYSTEM (CCMS)**

9.1 Scope of Works for Smart Street Lighting shall include design, supply, installation, testing at site, commissioning, Operation and maintenance of lighting controls through Centralized Control & Monitoring System – (CCMS) for LED streetlights installed under the scope of this RFP. Operation and Maintenance of CCMS shall be as per the terms and conditions of the RFP.

9.2 The CCMS system shall be provided for the total no. of lights that is offered based on the design by the CONTRACTOR and shall be Scalable upto two times as many numbers of lamp within short period.

9.3 The CCMS System shall consist of the following components;

9.3.1 In the Field enclosed within the Feeder Pillar (FP)

(a) Controller

(b) Communication Module/ Gateway

(c) Antenna

(d) Battery Bank for 12 Hrs Back up

9.3.2 Server for storage of data - preferably dedicated server set-up or cloud based arrangement to ensure 100% guarantee of the data transmission, and real time data storage and archived data for the contract period.

9.3.3 Web Based Application Software

9.4 Concept of Smart Street Lighting to be implemented at Guwahati

9.4.1 CCMS shall consist of Street Light Controllers and its accessories installed within each Feeder Pillar with a gateway to communicate with Server.

9.4.2 The Maximum quantity of luminaries controlled by each Controller shall be decided by CONTRACTOR however, it shall not be less than 50 lamps per Controller.

9.4.3 All the LED Luminaires shall be Remotely/ Automatically/ Manually Switched ON-OFF in GROUP through Web Based Applications based on

(a) Sunrise/ sunset timing depending on geographical locations of the Switching Point / Feeder Pillar

(b) Based on preprogrammed/ Scheduled timings
9.4.4 All the LED Luminaires which are rated equal to and above 90W shall be Dimmable whereas the rest of the lights shall be non Dimmable.

9.4.5 Dimming should be possible from 10 to 100% however, dimming shall be carried out in steps as follows:

(a) From 10 PM to 1AM – 25%
(b) From 1 AM till 3 AM – 50%
(c) From 3 AM till Dawn – 75%

The setting shall be adjustable / programmable at site as per the Sun rise time.

Moreover, the dimmable Luminaires shall be switched ON and switched Off in steps and in synch with the natural light during Sun rise and Sun Set time.

9.4.6 The CCMS shall provide the following features:

(a) Offer Web-based solution for Remote management on Real Time basis of the Outdoor Lighting System through wired or wireless GPRS/ 3G/ 4G/ Fibre/ LAN/ Wifi communication networks securely.

(b) Capturing and monitoring the all the data from the Smart Energy meter to check the status of all the electrical parameters available at the FP

(c) Monitoring of ON and OFF period; Provide On/Off control based on Sunrise and Sunset timings for burn hour optimization, Energy optimization and simplify maintenance.

(d) Shall facilitate easy and remote configuration/ programming of the system from a web based interface that can be changed as per requirement.

(e) Shall facilitate Fault Monitoring and Automatic Fault detection; Event Logging and Report generation.

(f) Alarm Generation and Alert Notifications through emails & SMSs to desired number of users.

(g) The system shall be modular and easily scalable. Presently the system shall be designed for 15000 luminaires or 350 Switching Points and should be expandable upto 2500 switching points as and when required in steps.

(h) Battery Backup for Minimum 6 Hrs shall be provided for the controller to store the data in case of power failure

(i) Emergency Override - Locally & Remotely.

(j) Facilitate Asset mapping through GPS coordinates of each FP on existing maps
(k) The controller shall have inbuilt memory storage in each controller to store data in case of Communication network failure and transfer it as soon as the link is resumed

(l) Shall have protection logic to operate the hardware to automatically isolate the system during abnormal conditions and restart the system as soon as the system normalizes

(m) Server uptime should be minimum 99.99% with disaster backup and sufficient storage capacity and processing power to ensure stable operation of CCMS throughout the contract period

(n) Minimum 60 Days data shall be stored in the CLOUD. Data Older than 60 days shall be backed up on Editable tapes/Discs

(o) Should be easy to integrate with City Operation Centre (COC).

(p) CCMS shall ensure Data authenticity, Cyber security, safe database management, data retrieval and trouble free operation of software and allied systems. It shall have a self diagnostic and self healing feature to identify fault and resume the system by isolating it within shortest possible time.

9.5 Features of Controller

9.5.1 The Controller shall consist of CPU with minimum 32 bit processor, shall have inbuilt three phase power inputs, interface ports – USB, GPRS & Ethernet; internal health monitoring and logging facility; inbuilt flash memory for data storage; and shall support minimum 2 Analogue and 2 Digital inputs.

9.5.2 Controller shall have the provision to store last 30 days data at one hour interval. All these data is accessible for reading, recording by downloading through HHT (Hand Held Unit) through optical port or USB/Bluetooth given on controller front. For HHT, a smart phone-based solution for collecting/accessing data is also acceptable

9.5.3 The controller shall have a built-in calendar and a local Real Time Clock (RTC) having an accuracy of +/- 1 minute per year or better, synchronized with remote time server, to enable functionality even in case of communication network failure. A separate internal Lithium battery back-up shall be provided for continuous operation of controller RTC for at least two years under controller un-powered conditions.

9.5.4 Controller shall be able to carry out switching operations based on Astronomical calendar of the location.

9.5.5 Controller shall facilitate local operation in case of emergency or during maintenance with proper security verification.

9.5.6 Controller shall be able to detect switch weld condition and generate alarm.

9.5.7 Controller shall be able to log minimum last 25 scheduled and unscheduled events including scheduled switching events, faults, abnormal power conditions and maintenance.
9.5.8 Controller shall additionally be able to log minimum last 25 the power availability events.

9.5.9 The controller shall have protection logic to monitor the abnormal conditions like overload & over voltage conditions, against the benchmark/ threshold limits configured in it and carry out auto switching to disconnect the system if the abnormal condition prevails over predefined period. The controller shall reconnect after the normal system conditions are resumed. All such unscheduled switching activities shall be logged in the system.

9.5.10 Controller shall be provided with a 6 digit LCD to display the controller parameters/ data. Proper universal interface port (USB, Optical etc.) or device shall be provided to access all the stored data within the controller as well as to configure the controller locally either by a Hand Held Unit or by connecting to a laptop in a secured manner. Configuration allows user to set operating modes, ON/OFF timings, RTC configuration, Updating GPS locations, Astronomical Clock etc.

9.5.11 The CPU of the controller shall be well protected against overvoltage and surges upto 10 kV as per EN 61000-4-5; Burst pulses up to 4 kV as per EN 61000-4-4.

9.5.12 All the controllers shall be traceable when mapped through GPS coordinate.

9.5.13 The controller shall support digital and analogue measurements.

9.5.14 Controller shall have following constructional specifications

(a) Controller case and terminal blocks shall be made of fire resistant material
(b) Sealing arrangement - As per IS 13779 and CEA Metering regulations 2006
(c) Insulation shall withstand an insulation test of 4 KV and impulse test at 6 KV
(d) Latching Relay/Bi-Stable Switch/Isolation device should conform to IEC - 61036/ 61037

9.6 Communication Module of the Controller in the FP

(i) The module shall operate on 240 V AC single phase power supply
(ii) Ability to communicate with remote central server/ CLOUD securely via cellular networks (GSM / GPRS) and/ or RF networks. All data shall be secured by encrypting them by 128 bit encryption.
(iii) Communication network between CCMS unit and central server should be GSM/GPRS: Quad band 850/900/1800/1900 MHz2G4, and communication method shall be TCP – IP via GPRS / 3G and/ or RF SMS
(iv) The module shall be a Two-way communicator
(v) The Module shall be able to send data regarding energy usage, ON/OFF status etc. from controller as well as give commands from a central server/ CLOUD for switching ON/OFF scheduling etc.
(vi) Ability to remotely upgrade the CCMS device firmware from central server

9.7 Battery Module

9.7.1 The Controller (CPU), Communication module etc. shall be provided with battery backup for 12 Hrs to function during failure of grid power.

9.7.2 The battery shall help CPU to store all the data and send a main power failure alarm to the remote server/ Cloud before it shuts down safely.

9.8 Software Application Features

9.8.1 The web application shall be offered through the GSCL web site or as may be decided by the GSCL at the time of execution.

9.8.2 The application shall enable receipt & storage of all the field data with a time stamp in Cloud or in-house local server.

9.8.3 The application shall facilitate to communicate, control and configure the each Switching point FP controllers remotely. The application shall be suitable to manage the data traffic from the field to the Cloud or Server.

9.8.4 Operation Time - It should be able to record LED luminaires glowing and non-glowing hours of a particular FP (Group).

9.8.5 The System should be suitable for third party integration if required.

9.8.6 Report Generation – shall enable Users to generate various reports related to the system performance parameters such as energy consumed report, lamp and system failure report, actual hours of operation, uptime (%), etc. as well as based on historical data on daily, monthly, quarterly or annually basis as the case may be from the data/readings received from the units. The reports shall be generated in Xcel as well as Graphical format.

9.8.7 The application should facilitate Roles and Permissions requirements at different level of user hierarchy. It should manage system access for different levels with multiple privileges for different purpose, including Administrator access to configure, work flow access for operations, and public access for viewing and uploading status.

9.8.8 Web application shall ensure system security and safety for users at different levels with security password for various users.

9.8.9 It should be possible to configure Switching point remotely through web application. Remote configuration includes setting new ON/OFF timings, setting RTC time, viewing the Real time data of each switching point, Energy meter parameters, Resetting of the any unit, time synchronization of controller with that of Server and GPS clock etc.

9.8.10 The minimum interval for the update of data should be 15 minute but programmable up to 1 minute.

9.8.11 Asset Management –
(a) Application shall provide a map application that gives an overview of all Feeder Pillars on a street map or GIS map or a satellite image.

(b) Web application software shall offer asset management feature and allow user to locate SPC through GPS coordinates. It also enables user to identify each SPC with unique/Asset ID with additional information like Wattage, Make, Installation date, replacement date, Replacement defect tracking. It is also possible to link details of every street light with reference to particular switching point.

9.8.12 Dashboard – Web application shall provide a comprehensive dashboard with real time status of switching point, real time faults of various switching points, system uptime %, power consumption, power consumption, graphical representation of cumulative data etc.

9.8.13 The application software should be flexible to cater to customized requirement which are not foreseen at this point of time but are deemed necessary during the execution and O&M. Separate tabs shall lead to details regarding monitoring & control parameters like, Alerts, Maps, Configuration, Reports, uptime, fault penalty, history, energy savings, power failure, operational hour, lamp failure etc.

9.8.14 Each Switching Point FP shall be represented by a separate Tab on the dashboard to show the switch point summary indicating the FP details, rating, location, meter parameters, history of alerts, active alerts, link to the map page, etc.

9.8.15 The application shall generate alarm and alerts through SMSs for any type of abnormal system conditions and faults as listed below to designated users which should not be less than six in numbers.

9.8.16 It should describe the abnormality or fault in short as well as highlight the same with different colours to indicate the status with respect to time – within 12 hrs, in next 12 hrs, beyond a day etc. It shall provide monthly reports on the faults through email. Penalty as indicated in the Service Benchmark for the CONTRACTOR shall be calculated based on these reports.

9.8.17 Application should be able to track the failure of lamps in a particular switching point by triggering alarm due to significant drop in power consumption. The application should display the no. of faulty lights for each phase separately instead of giving a total figure of faulty lights for all the 3 phases together.

9.8.18 Application shall protect and report Jamming/ hacking attempts and maintain status-quo in cases of such attempts i.e. if lights are ON, they should remain ON till the default OFF time recorded in the system. In case lights are OFF at the time of Jamming / hacking attempt, lights should remain OFF till default ON time recorded in the system.

9.8.19 Software to have complaint handling system for light failures, with citizen interface and means of communicating repair update to complaining citizen through SMS.

9.8.20 Ability to remotely upgrade the CCMS device firmware from central server.

9.8.21 The system shall display the following minimum faults in alarms

(a) Phase-wise currents on crossing threshold values
(b) Phase-wise voltages on crossing threshold values - Under/over voltage detection
(c) Main breaker error
(d) Contactor fault
(e) Circuit breaker off
(f) Circuit phase errors (fuse, breaker, etc.)
(g) Main power failure
(h) Leakage to ground
(i) Manual switch activated
(j) Control cabinet door open
(k) Low Power Factor
(l) Communication failure with server
(m) Theft Alert
(n) Group failure of Lights

9.8.22 The software shall enable to divide the city lights in certain zones as per GSCL requirement and assign access to the concern authorities for control and monitoring from their mobile or laptop.

9.8.23 All alarms shall be notified in near real-time via SMS and email to responsible maintenance team.

9.8.24 The system shall support auto switching of street light according to light sensor input.

9.8.25 The system shall support auto switching of street light according to input. Graphical view of the electrical consumption readings shall be available online for monitoring of the hourly, daily and monthly electricity consumption.

9.8.26 All Software’s License shall be in the name of GSCL. All costs shall be perpetual cost or onetime cost. CONTRACTOR shall provide all the upgrades to the system software and system security during the contract period without any additional cost.

9.8.27 The Software Application shall be supported by the CONTRACTOR even after the contract period.

9.8.28 In case of CLOUD server, the CLOUD registration shall be done in the name of Client/Owner. Only Administrative rights shall be provided to the CONTRACTOR during the contract period. The CLOUD services shall be intact upon renewal every year after the contract period. The CLOUD shall not be OEM specific and shall be
independent of OEM so that after the completion of contract period there should be no dependence on OEM for cloud services.

**10.0 CABLE AND CABLE TERMINATION**

10.1 All the LV Power cables shall be 1100V grade, multi-stranded, Al / Copper conductor, XLPE insulated, extruded inner & outer PVC sheath compound type ST2 and galvanised steel strip armoured cables.

10.2 All cables shall conform to IS 7098 – Part I and all armouring shall confirm to latest version of IS: 3975.

10.3 For all LT power and control cables, double compression glands with aluminium lugs for Aluminium cables and tinned Copper lugs for Copper cables shall be used in indoor and outdoor application.

10.4 The termination shall be inclusive of miscellaneous items such as clamps, cleats, cable tags, cable markers etc.

10.5 In general cable installation works shall be carried out in accordance with IS 1255 – 1983, latest version. At road crossings, the depth of the Pipe shall be minimum 1m else proper concrete encasing shall be provided.

10.6 For Underground cables, all cables shall be laid in minimum 63mm ID HDPE/ DWC pipes either laid by excavation or through horizontal directional drilling (HDD) or Micro-tunneling. The top of the pipe shall be atleast 750mm below the finished ground level. There should not be any joints between two pole distance. The roads shall be made good as before by following standard procedure for preparation of roads and with standard quality material.

10.7 All Railway crossings shall be carried out as per the prevailing standards of railway or as specified by the concerned Authority in writing.

10.8 Cable markers shall be provided in the vicinity or on the top of the corridor such that it should not obstruct the pedestrian/ parked or traffic vehicles. Cable markers shall project 150mm above ground and shall be spaced at an interval of 30 metres, and at every change in direction. Top of cable marker/joint marker shall be sloped, to avoid accumulation of water/dust on marker. On finished surface like foot path etc. The marking shall be accomplished with a separate colour tiles/ paver block for highlighting the route of the cable.

10.9 Cable tags shall be provided on all cables both at feeder pillar end as well as on each pole JB (just before entering the equipment enclosure).

10.10 Cable Glands

(a) Double compression type cable glands with rubber hoods shall be used for the termination of all the power and control cables. Cable glands shall be brass casting, machine finished and Nickel-plated to avoid corrosion and oxidation. Rubber components used in cable gland shall be of neoprene.

(b) For single core cables, gland shall be with brass ring.
(c) Cable glands shall be with metric threads.
(d) Cable glands shall be conical (& not flange type).

10.11 Cable Lugs

(a) Cable lugs shall be of tinned Copper, solder less crimping type for Cu cables & Al lugs for the Al cables.
(b) The current rating of the lugs shall be same as that of the respective cable conductors.
(c) Ring type cable terminations shall be used.
(d) Insulated lugs are not acceptable for any cable terminations.
(e) Bi-metal strip/ Bi-metallic lug shall be used whenever two different metals are to be connected together.
(f) Double hole extended neck (long barrel neck) type lugs shall be used in case of cables above 185 sq. mm.
(g) Fork terminals shall be used for luminaries& decorative switch/ socket. Pin terminals may be acceptable during execution only in case other terminals/ lugs cannot be accommodated.
(h) Reducer / wire pin terminals shall be avoided for MCB terminations. MCB terminations shall be with ‘long palm terminals.
(i) All terminations in Feeder Pillars / enclosure for earthing& neutral busbars / terminals shall be with ring type terminals.
(j) All earthing terminations shall be with ring type lugs only.
(k) All control & interlock cable terminations shall be with ring type lugs.
(l) Anticorrosion/ anti-oxidation compounds shall be used for crimping lugs [This shall especially be ensured for Al cable terminations & any bimetallic terminations (Cu cable termination using tinned Copper lugs)].
(m) If termination is done with crimping tool employing crimping die then forming dies shall be used to make the sector shaped conductor into a round conductor before crimping the lugs on the conductor. The lug must not be crimped directly on the sector conductor. Before crimping the lug, the conductor shall be thoroughly cleaned and special jelly applied over it to prevent further oxidation.

10.11.2 Cable Joints shall be either heat shrinkable type of Pre-mould push on type of reputed makes. Test certificates of the Joints shall be submitted at the time of inspection.

11.0 OPERATION & MAINTENANCE
11.1 O&M shall be initiated after completion of installation and commissioning of street lighting system on all the specified roads and issue of completion certificate by GSCL after due inspection and testing.

11.2 CONTRACTOR shall install a Help Desk minimum 30 days in advance before the initiation of the O&M period.

11.3 The CONTRACTOR shall be responsible for maintaining/ repair/ replacement, comprehensively, of all the Luminaires, Switching point controller panels, cable and earthing systems along with the Cloud or In-house Server installed by it in the allocated area during the tenure of the contract.

11.4 CONTRACTOR may maintain a service team/s with vehicle/ s to address the complaints/ accidents on SOS basis and take action immediately.

11.5 The payment for the O&M shall be per agreed in the Contract for the entire tenure.

11.6 The Manpower and accessories required for O&M shall be provided by CONTRACTOR during relevant contract period. Minimum One 8 years experienced electrical technician and one assistant shall be provided for every 1500 luminaires right at the beginning of the contract and shall be augmented if found insufficient during the course of the contract. Replacement for the teams shall be well planned during the scheduled offs and leaves.

11.7 **GSCL shall ensure availability of power. Electricity charges and Connectivity charges shall be paid by GSCL to the APDCL.**

11.8 **Availability of communication network through the selected mode shall be ensured by the CONTRACTOR for data and SMSs. The CONTRACTOR shall bear the cost of connectivity of all such network charges and pay monthly/ annually as the case may to the telecom service provider.**

11.9 The Non-availability of incoming power supply from APDCL shall be intimated by CONTRACTOR within 24 hours. CONTRACTOR shall coordinate with APDCL on behalf of GSCL and GSCL shall facilitate as and when required to expedite the response.

11.10 Any complaint for failure of luminaire due to lack of earthing, SPD, connector and loose connections shall be to CONTRACTOR's Account.

11.11 The CONTRACTOR shall upgrade the software application from time to time during the contract period in terms of features, performance & security of the system.

11.12 The CONTRACTOR shall take adequate insurance to cover themselves for the cost of O&M during the tenure of the contract including the ones due to theft.

11.13 The CONTRACTOR shall make provision for adequate number of Ladder mounted vehicles self-sufficient with all the required tools and instruments, duly calibrated, to meet the maintenance requirements as per service benchmark.

11.14 All the electrical parameters and illuminance level of all the roads shall be monitored with calibrated Power Analyzer and Lux meter and documented for records and analysis at regular interval as specified.
11.15 All the necessary modifications that are required to be carried out for the efficient working of the system including network and Luminaires and minimise the breakdowns and issues shall be carried out by CONTRACTOR from time to time at its own cost.

11.16 CONTRACTOR shall develop training material for the GSCL technicians, impart them training from time to time as may be decided by the GSCL.

11.17 All the responsibilities related to replacement of LED lamps / cables / other accessories shall be borne by CONTRACTOR in respect of cost, managing the technical barrier and other related aspect during the tenure of the project.

11.18 The maintenance work will be carried out without disturbing the street traffic and with proper work permit.

11.19 **Helpdesk Setup**

11.19.1 The CONTRACTOR shall set up a centralized helpdesk to address the O&M for the project for entire Contract period with the following;

(a) A web based **Complaint Management System** shall be installed which should enable users to log complains and monitor its status & closure. The CMS shall be updated regularly with new updates/patches to improve the performance during the contract period.

(b) A **Toll Free Number** exclusively for the Street lighting for Spine Roads shall be finalized in consultation with the GSCL. Language Capabilities: Assamese, Hindi and English;

(c) The help desk shall operate **24X7** to assist and guide the users.

(d) The help desk will handle user queries and issues relating to implemented solution.

(e) The helpdesk shall ensure that users can log calls and complaints for any technical issues they face while accessing the system.

(f) The helpdesk shall have Interactive Voice Response (IVR) system for first level of call segregation;

(g) A Standard Operating Procedures (SOP) for O&M process shall be created by the CONTRACTOR from logging of request to closure of the request. The SOP shall address call prioritization guidelines, problem security codes and escalation procedures etc. in consultation with GSCL;

(h) It shall be also possible to log requests by user through other channels like email and web interface;

(i) All the complaints and work carried out by the CONTRACTOR shall be logged in the system with a unique service request.
(j) The application shall be accessible to all users including general public through the GSCL portal for logging issues;

(k) CONTRACTOR shall allocate Serial No to the Pole- Lamp combination and maintain records of each one of them during the Contract period.

(l) A Report containing the operational Status of each light pole, complaints received and resolved; Preventive maintenance schedule and status, Stock of spares, man power update, etc shall be submitted to the GSCL on a weekly basis.

(m) The call statistics will be analyzed every quarter after Go-Live and the number of Customer Care Executives may be ramped up or down accordingly on a week’s notice;

11.20  Service Level Benchmark

11.20.1 A service Level Benchmark for evaluating the performance of the CONTRACTOR shall consist of the following;

(a) **Resources** - CONTRACTOR shall maintain O&M team, tools and calibrated measuring and verification instruments as specified above from the day one of the contract. In case the required resources are not deployed on time, a penalty of Rs.5000 per day shall be imposed for the first week and the same shall be doubled in the subsequent weeks till adequate resources are deployed.

(b) **System Uptime** - CONTRACTOR shall maintain sufficient resources and achieve minimum uptime of 95% on yearly basis (year period to be decided by GSCL) for the entire system, excluding the period of non-availability of power supply.

(c) **Energy Consumption** – The energy consumed by the lamp shall not exceed more than as committed in the design report. CONTRACTOR shall guarantee the total energy consumption of the system for each road with respect to its design offered in the DPR. The same shall be monitored on daily basis and reported to the GSCL. Any excess energy more than the guaranteed consumption shall be recovered from the CONTRACTOR. Any action required for mitigating the excess energy consumption may be immediately taken up by the CONTRACTOR with the information to the GSCL.

(d) **Lux Level** – CONTRACTOR shall guarantee the Lux level based on Design output and offered Luminaire for each road. There shall not be any reduction of the Lux level during the entire tenure of the contract period. Illuminance of each road shall be checked every fortnightly and reported to GSCL. Any reduction in the lux level shall be immediately investigated and corrective action shall be taken with information to GSCL.

(e) In case a reduction in the lux levels are found due to reduction in the output/ performance of the Luminaires, all the Luminaires of the same wattage and same batch offered in the project shall be investigated and rectified/ replaced if
found faulty by the CONTRACTOR at its own cost within a period of time as may be agreed by GSCL.

(f) **Complain Resolution** - All the complaints shall be redressed within 24 working hrs. In case the service provider fails to comply with the same a penalty of Rs. 100/- per day per complaint shall be imposed for a period of 7 days after which the amount will be doubled for the next subsequent weeks till the complaint is resolve to the satisfaction of the owner.

(g) At any given time the CONTRACTOR shall maintain spares equivalent to minimum 1% of the total number of lights installed. Failing to maintain spares and causing delay in resolution of the complaint shall be penalized as indicated above.

(h) Cleaning of the luminiare cover shall be taken up once in half year and record shall be maintained and reported to GSCL.

12.0 **QUALITY CONTROL PLANS**

12.1 The Quality Control Plan shall list and define in sequential order all process control activities, inspection and tests proposed to be performed on the equipment/ material starting from component procurement and from testing stages to product dispatch. The Quality Control Plan shall indicate and identify the applicable standards, detailed description with diagram the procedure, acceptance criteria, extent of check and record to be generated.

12.2 The CONTRACTOR shall within Fifteen (15) days of placement of order submit the following information to the GSCL.

(a) Descriptive list of the raw material as well as bought out accessories and the names of sub suppliers selected from those furnished along with the Specification.

(b) Type test certificates of the raw material and bought out accessories.

(c) Quality Assurance Plan (QAP) with holds points for GSCL'S inspection. The QAP and hold points shall be discussed between the GSCL and the CONTRACTOR before the QAP is finalized.

13.0 **INSPECTION**

13.1 The inspection may be carried out by the GSCL or his representative at any stage of manufacturing. The successful CONTRACTOR shall grant free access to the GSCL/ its representative/s at a reasonable notice when the work is in progress. Inspection and acceptance of any equipment under this specification by the GSCL shall not relieve the CONTRACTOR of his obligation of furnishing equipment in accordance with the specification and shall not prevent subsequent rejection if the equipment is found to be defective.
13.2 The CONTRACTOR shall keep the GSCL informed in advance regarding the time of starting and progress of manufacture of all the equipment in its various stages so that arrangements could be made for stage inspection, if desired by GSCL.

13.3 No material shall be dispatched from its point of manufacture unless the material has been satisfactorily inspected and tested and approved by GSCL.

13.4 CONTRACTOR shall, during inspection/ at any stage as sought by GSCL, will furnish test certificates for all equipment including bought out items as included in this BID. However, the GSCL reserves the right to insist for witnessing the acceptance/routine testing of bought out items.

13.5 The CONTRACTOR shall communicate to the GSCL the details of all testing programme at least Three (3) weeks in advance. GSCL reserves the right to waive the inspection at any stage.

13.6 CONTRACTOR shall keep all his testing instruments duly calibrated against Standard Meters at designated Accredited Laboratory not earlier than 6 months from the date of test of the equipment, covered under this specification. Calibration certificates shall be made available during inspection. The calibrating instruments used as standard shall be traceable to National/ International standards.

13.7 A joint inspection of GSCL Authority; Technical Officer, Project Manager and team of CONTRACTOR shall be carried out before commencing for operation.

13.8 Following Field Test shall be carried out on the system

(a) Visual Inspection of quality of work,
(b) Insulation resistance of the system including cable
(c) Power consumption of individual Luminaire, each feeder pillar System for a particular road.
(d) Lux level available with and without the other façade and vehicular lights. The lux level shall be tested in accordance with NLC.
(e) Operational demonstration with CCMS
(f) Earth resistance of each pole and feeder pillar

14.0 CAPACITY BUILDING

14.1 The CONTRACTOR needs to provide training to GSCL employees and other stakeholders as directed by GSCL for capacity building;

14.2 The CONTRACTOR shall prepare all the requisite audio/visual training aids that are required for successful completion of the training for all stakeholders. These include the following for all the stakeholders:

(a) Training manuals for GSCL employees / stakeholder departments;
(b) Computer based training modules;
(c) Presentations;
(d) User manuals;
(e) Operational and maintenance manuals for Smart Components implemented;
(f) And Regular updates to the training aids prepared under this project.

14.3 The CONTRACTOR shall maintain a copy of all the training material on the portal and the access will be provided to relevant stakeholders depending on their need and role. The access to training on the portal would be finalized with GSCL. CONTRACTOR has to ensure the following points:

14.3.1 For each training session, the CONTRACTOR has to provide the relevant training material copies to all the attendees.

14.3.2 The contents developed shall be the property of GSCL with all rights.

14.4 The CONTRACTOR has to ensure that the training sessions held are effective and that the attendees would be able to carry on with their work efficiently. For this purpose, it is necessary that the effectiveness of training sessions is measured. The CONTRACTOR will prepare a comprehensive feedback form that will capture necessary parameters on measuring effectiveness of the training sessions. This form will be discussed and finalized with GSCL.

14.5 After each training session, feedback will be sought from each of the attendees on either printed feedback forms or through a link available on the web portal. One member of the stakeholder group would be involved in the feedback process and he/she has to vet the feedback process. The feedback received would be reported to GSCL for each training session.

15.0 HAND-OVER OF THE SYSTEM DURING EXIT PERIOD

15.1 The CONTRACTOR shall hand over to the GSCL the following before the expiry of the contract or in the case of termination of Contract by GSCL with Justifiable reason as specified elsewhere in the RFP:

(a) A complete list of Hard and Soft Assets with its records over the past period.
(b) All the assets in good working condition as per tech specification or its upgraded version. Incase any asset is not in working condition, CONTRACTOR shall ensure that the same is made good as per required standard and performance and handed over within the Exit period.
(c) All software along with the confidential information related to it like user name and passwords and hardware keys if any. It shall also hand over all the rate contract if any signed with the software company for continuity of services.
(d) Information relating to the current services rendered and technology and technical data relating to the performance of the services; Entire documentation relating to various components of the Project, any other data and confidential information related to the Project;

(e) All other information (including but not limited to documents, records and agreements) relating to the products & services related to the project to enable GSCL and its nominated agencies, or its replacing CONTRACTOR to carry out due diligence in order to transition the provision of the Project Services to GSCL or its nominated agencies, or its replacing CONTRACTOR (as the case may be).

15.1.2 The duration of 60 working days after completion of the contract period shall be considered as Handover/ Exit period during which CONTRACTOR shall give full access to its premises, records, data base and assets related to this project.

15.1.3 All the information as indicated above which is handed over to GSCL should not be copied, sold or reused by CONTRACTOR under any circumstances without any written approval from GSCL.

15.1.4 In case this handover happens within DL period, the CONTRACTOR shall ensure that the technology provider shall continue to support the assets and systems till the end of the DL Period.

15.1.5 The CONTRACTOR shall not retain any data, security codes, and other confidential documents including any type of customer survey data with them.

15.1.6 During the Exit period CONTRACTOR shall not reduce any manpower or replace any Manpower wilfully as available on the day of issue of Notice. In case the CONTRACTOR reduce the manpower then **GSCL shall charge Rs. 1000/- Per person per day as penalty** for the remaining duration of the Exit period.

16.0 DOCUMENTS REQUIRED TO SUBMIT BY CONTRACTOR DURING TECHNICAL BID

(a) Offered Solution for Smart Lighting with details of the technology

(b) Typical Design report highlighting the solution & calculations for the each category of road as specified in the RFP above

(c) Summary statement of Road, Road width, Height of pole, Mounting arrangement, Wattage of LED Luminaire offered, Calculated Lux level

(d) LED Data sheet and Type test reports as specified above

(e) Guaranteed Energy consumption for each Luminaire and its system including the losses.

(f) Luminaire Data sheet mentioned in the BOQ and their respective type test reports as specified above
(g) Detail Write up on the CCMS including proposed system, features offered, technology and components offered, System Architecture, data sheets of the components.

(h) Approach methodology for carrying out the scope of work for Project implementation and Operation and Maintenance phases

(i) Earthing and Surge suppression solutions offered

(j) Sustainability of the System offered

(k) Makes of component and systems offered

(l) Exit management plan

17.0 DOCUMENTS REQUIRED TO SUBMIT BY SUCCESSFUL CONTRACTOR

17.1.1 Detailed Field Survey Report along with findings with maps

17.1.2 Detailed Project report with proposed solution as found in the Site Survey report including the following:

(a) Road details – Total RoW width, Width of carriage way/ foot path/ drains, road length etc.

(b) Design calculations for each road

(c) Summary of Road, road width as above, Design lux, Pole height, calculated lux level, no. of FP, Luminaire wattage

(d) Guaranteed Energy consumption for each FP including the losses.

(e) Identified source of power, single line diagram and space provisions for Switching points for each road

(f) Location drawings for poles, Switching points and cable laying corridor

(g) Offered systems, components, their technical data sheets and type test reports;

(h) System Architecture drawing

(i) Details regarding Cloud Server and Lighting management Software

(j) Communication Protocol

(k) O&M SOP – Procedure, description of works to be carried out, Regular Inspection Plan, regular Quality Control Plan, regular maintenance plan for Predictive & Preventive maintenance.

(l) Office / Storage space General arrangement layout
(m) Resource Deployment plan for manpower and tools
(n) Details of Call centre & Complain management system – system and component technical details
(o) Organisation structure and team CVs
(p) Detailed execution micro schedule to meet the target dates with milestones & deadlines – Order of roads for installation
(q) BOQ
(r) Make offered

17.1.3 Execution drawing with coordinates of each pole and Switching point for each road
17.1.4 Civil foundation drawings with Calculations for each height of pole
17.1.5 Equipment Manuals: Original Manuals from OEMs
17.1.6 Installation Manual: For all the application systems
17.1.7 User Manuals: For all the application software modules, required for operationalization of the system.
17.1.8 System Manual: For all the application software modules, covering detail information required for its administration.
17.1.9 Control schematic diagram and interconnection diagrams for switching points
17.1.10 Test reports of bought out components
17.1.11 Inspection reports of the components, luminaires and system
17.1.12 All drawings shall carry GSCL’s name, purchase order no. with date, project title, consulting engineer’s name and adequate space for drawing approval.
17.1.13 Training Material: Training Material will include the presentations used for trainings and also the required relevant documents for the topics being covered. Training registers should be submitted for same.
17.1.14 Standard Operational Procedure (SOP) Manuals: The draft process (SOP) document for O&M and all other services shall be formally signed off by GSCL before completion of Final Acceptance Test. This SOP manual will be finalized by the CONTRACTOR within 2 months of operationalization, in consultation with the GSCL and formally signed off by the GSCL.
17.1.15 The CONTRACTOR shall ensure upkeep & update all documentation and manuals during the Contract period. The ownership of all documents, supplied by the CONTRACTOR, will be with GSCL. Documents shall be submitted in two copies each in printed (duly hard bound) & in softcopy formats
17.1.16 Data sheet to be filled by CONTRACTORS as per Annexure 3

18.0 APPROVED MAKES

**TABLE NO: 4 – Approved Make**

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Description</th>
<th>Approved Make</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>GI Octagonal Lighting Pole</td>
<td>Bajaj/ Philips/ Valmont/ Jindal Power/ Aster/ Transrail Ltd/ utkarsh/ nezone</td>
</tr>
<tr>
<td>2.</td>
<td>LED Chip</td>
<td>Cree, Osram, Nichia, Philips Lumileds</td>
</tr>
<tr>
<td>3.</td>
<td>Lighting Fixtures</td>
<td>Philips/ Wipro/ Bajaj/ Havells/Lighting Technology</td>
</tr>
<tr>
<td>4.</td>
<td>Cable</td>
<td>UNIVERSAL/RPG/CCI/KEI/FINOLEX/ POLYcab</td>
</tr>
<tr>
<td>5.</td>
<td>Cable Termination Kit/ Cable Joining Kit</td>
<td>Raychem / 3M</td>
</tr>
<tr>
<td>6.</td>
<td>Gland/Lugs</td>
<td>As per APWD Approved list or Dowells, Commet, Connectwell</td>
</tr>
<tr>
<td>7.</td>
<td>Earthing Material</td>
<td>As per APWD Approved list</td>
</tr>
</tbody>
</table>
8. MCCB, MCB, RCCB, RCBO and other Switchgears | Schneider, Siemens, ABB, L&T, MDS, Hager, Havells
9. Time Switch | L&T GIC, Siemens, Schneider, Legrand, Hager, ABB, Havells
10. Energy meter, MFM | Schneider, Siemens, ABB, L&T
11. Contactor and other switchgears | L&T, Siemens, Schneider, ABB,
12. HDPE/ DWC Pipe | Rex, Gemini, Duraline, Alcorr
13. GI Pipe | Tata, Asian, CTC, Jindal, Zenith, Apollo, GST

19.0 ANNEXURE 1

TABLE NO. 5 - LUMINAIRE DATA SHEET

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameters</th>
<th>Requirements / Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Type</td>
<td>LED Luminaries complete with all accessories including driver, internal wiring with flameproof wires, etc., for Street Lighting</td>
</tr>
<tr>
<td>2.</td>
<td>LED chip make</td>
<td>Nichia, Philip Lumiled, Osram, CREE</td>
</tr>
<tr>
<td>3.</td>
<td>Rated Voltage</td>
<td>230V</td>
</tr>
<tr>
<td>4.</td>
<td>Operating Voltage Range</td>
<td>Single phase 140-280 volt AC. But luminaries shall be tested for 100V to 300 V AC</td>
</tr>
<tr>
<td>5.</td>
<td>Frequency</td>
<td>50 Hz +/- 3%</td>
</tr>
<tr>
<td>6.</td>
<td>Power Factor</td>
<td>&gt; 0.95</td>
</tr>
<tr>
<td></td>
<td>Requirement</td>
<td>Specification</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>LED wattage</td>
<td>1-3 Watt</td>
</tr>
<tr>
<td>8</td>
<td>LED chip Efficacy</td>
<td>&gt;135 Lm/Watt system lumen output at 25 degree C, supported by LM80 report, to be submitted.</td>
</tr>
<tr>
<td>9</td>
<td>LED Drive current</td>
<td>&gt;=350 mA&lt;750 mA</td>
</tr>
<tr>
<td>10</td>
<td>LED Beam Angle</td>
<td>CONTRACTOR to decide</td>
</tr>
<tr>
<td>11</td>
<td>Colour Temperature</td>
<td>≥5500K</td>
</tr>
<tr>
<td>12</td>
<td>Rated Minimum LED Life (L70)</td>
<td>50000 Burning Hours <em>(With only 30% Lumen Degradation or 70% Lumen maintenance)</em></td>
</tr>
<tr>
<td>13</td>
<td>System efficacy</td>
<td>≥ 100 Lm/Watt</td>
</tr>
<tr>
<td>14</td>
<td>Total Lumen Output</td>
<td>CONTRACTOR to offer</td>
</tr>
<tr>
<td>15</td>
<td>Colour Rendering Index of Luminaires</td>
<td>&gt;70</td>
</tr>
<tr>
<td>16</td>
<td>System Power Efficiency</td>
<td>≥ 90%</td>
</tr>
<tr>
<td>17</td>
<td>Driver Type</td>
<td>Constant Current based Electronic Driver</td>
</tr>
<tr>
<td>18</td>
<td>Driver Efficiency</td>
<td>&gt; 90%</td>
</tr>
<tr>
<td>19</td>
<td>Driver Life</td>
<td>&gt;20000 hrs.</td>
</tr>
<tr>
<td>20</td>
<td>Maximum temperature rise for Driver</td>
<td>&lt;30 Deg C at 45 Deg C ambient</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Specification</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>21.</td>
<td>Operating Temperature Range</td>
<td>-20 Deg C to + 50 Deg C</td>
</tr>
<tr>
<td>22.</td>
<td>Luminaries body temperature after 12 hours of continuous operation</td>
<td>≤ 30 Deg C from ambient</td>
</tr>
<tr>
<td>23.</td>
<td>Junction temperature</td>
<td>&lt; 85 Deg C - self certified by Manufacturer</td>
</tr>
<tr>
<td>24.</td>
<td>Heat Sink Temperature</td>
<td>≤ 15 C from ambient</td>
</tr>
<tr>
<td>25.</td>
<td>Solder point temperature</td>
<td>&lt; 70 Deg C</td>
</tr>
<tr>
<td>26.</td>
<td>Operating Humidity</td>
<td>10% to 95% RH</td>
</tr>
<tr>
<td>27.</td>
<td>Control Gear</td>
<td>Prewired with low smoke halogen free, fire retardant e beam cable up to terminal block. Fuse protection shall be provided inside.</td>
</tr>
<tr>
<td>28.</td>
<td>Operating Hours</td>
<td>Dusk to Dawn (max 12 Hrs.)</td>
</tr>
<tr>
<td>29.</td>
<td>Total Harmonics Distortion (THD)</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>30.</td>
<td>Construction</td>
<td>High power SMD and LED must be mounted on Copper MCPCB for high thermal conductivity and fastest heat transfer from the LED junction</td>
</tr>
<tr>
<td>31.</td>
<td>IP Protection</td>
<td>IP66 or more; no water stagnation anywhere</td>
</tr>
<tr>
<td>32.</td>
<td>Luminary Housing</td>
<td>Pressure Die Cast Aluminum (grade 5000 or similar) housing with corrosion resistant polyester powder coating &amp; safety as per IEC 60598 / IS 10322. Mounting bracket with aiming &amp; locking facilities. Large surface area with fins to dissipate the heat to</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>33.</td>
<td>Heat Sink</td>
<td>Well-designed thermal management system with defined heat sink - Aluminium extrusion</td>
</tr>
<tr>
<td>34.</td>
<td>Clip / Fastners</td>
<td>Corrosion free/ Stainless steel.</td>
</tr>
<tr>
<td>35.</td>
<td>Wire</td>
<td>The connecting wires used inside the luminaries, shall be Low Smoke Halogen Free, fire retardant e-beam cable and fuse protection shall be provided in input side.</td>
</tr>
<tr>
<td>36.</td>
<td>Materials</td>
<td>Halogen free and fire retardant confirming to UL94.</td>
</tr>
<tr>
<td>37.</td>
<td>Optics</td>
<td>Secondary lens array should be provided for optimized roadway photometric distribution. Lens material should be optical high grade PMMA with more than 90% light transmittance.</td>
</tr>
<tr>
<td>38.</td>
<td>IK protection for Optic Cover</td>
<td>&gt;IK07</td>
</tr>
<tr>
<td>40.</td>
<td>Minimum Surge Protection</td>
<td>&gt;10 kV</td>
</tr>
<tr>
<td>41.</td>
<td>Protection Required in Driver Module</td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Short Circuit</td>
<td>Yes; Constant current limit mode.</td>
</tr>
<tr>
<td>b.</td>
<td>Open Circuit</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### ANNEXURE 2

#### TABLE NO. 6- MINIMUM REQUIREMENTS OF THE GI POLES

<table>
<thead>
<tr>
<th>HEIGHT (mtr)</th>
<th>TOP DIA (A/F) (mm)</th>
<th>BOTTOM DIA (A/F) (mm)</th>
<th>SHEET THICKNESS (mm)</th>
<th>BASE PLATE DIMENSIONS (LxBxT)</th>
<th>FOUNDATION BOLT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BOLT SIZE (NO. x DIA) (mm)</td>
</tr>
<tr>
<td>5</td>
<td>70</td>
<td>130</td>
<td>3</td>
<td>200 x 200 x 12</td>
<td>4 x 16 Dia</td>
</tr>
<tr>
<td>S. No.</td>
<td>Brief Title</td>
<td>IS/IEC Code</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Testing procedure of photometric testing for LED Luminaires</td>
<td>LM 79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Testing procedure on the lifespan of LED Luminaires</td>
<td>LM 80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>National Lighting Code</td>
<td>SP72</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21.0 ANNEXURE 3

**TABLE 7: LIST OF STANDARDS FOR LED LUMINAires**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Brief Title</th>
<th>IS/IEC Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>70 130 3 220 x 220 x 12 4 x 20 Dia 205 600 100</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>70 130 3 220 x 220 x 12 4 x 20 Dia 205 750 100</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>70 135 3 225 x 225 x 16 4 x 20 Dia 210 750 100</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>70 155 3 260 x 260 x 16 4 x 24 Dia 250 750 125</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>70 175 4 275 x 275 x 16 4 x 24 Dia 270 750 125</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>90 210 4 300 x 300 x 20 4 x 24 Dia 300 750 125</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>90 240 4 320 x 320 x 20 4 x 24 Dia 325 850 125</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>90 240 4 As per manufacturer Recommendations</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td></td>
<td>6. Limits of Harmonic Current Emissions</td>
<td>IS 14700-3-2</td>
</tr>
<tr>
<td></td>
<td>7. DC or AC supplied electronic control gear for LED modules - Performance requirements</td>
<td>IEC 62384</td>
</tr>
<tr>
<td></td>
<td>8. Lamp control gear: Particular requirements for DC or AC supplied electronic control gear for LED modules</td>
<td>IEC 61347-2-13</td>
</tr>
<tr>
<td></td>
<td>10. Electro Magnetic compatibility (EMC)- Limits for Harmonic current emission— (equipment input current ≤ 16 A per phase)</td>
<td>IEC 61000-3-2</td>
</tr>
<tr>
<td></td>
<td>11. Equipment for general lighting purposes - EMC Immunity requirements</td>
<td>IEC 61547</td>
</tr>
<tr>
<td></td>
<td>12. LED Modules for General Lighting-Safety Specifications</td>
<td>IEC 62031</td>
</tr>
<tr>
<td></td>
<td>13. Degrees of Protection provided by enclosures (IP Code)</td>
<td>IEC 60529</td>
</tr>
<tr>
<td></td>
<td>15. General Lighting - LEDs and LED modules – Terms and Definitions/ General lighting – Light emitting diode (LED) products and related equipment –Terms and definitions</td>
<td>IS:16101 / IEC TS 62504</td>
</tr>
<tr>
<td></td>
<td>16. LED Modules for General Lighting - Safety Requirements</td>
<td>IS:16103(Part1)</td>
</tr>
<tr>
<td></td>
<td>17. LED Modules for General Lighting - Performance Requirements</td>
<td>IS:16103(Part2)</td>
</tr>
<tr>
<td></td>
<td>18. Safety of Lamp Control Gear - Particular Requirements of D.C. or A.C. Supplied Electronic Control gear for Led</td>
<td>IS:15885(Part2)</td>
</tr>
<tr>
<td>Modules</td>
<td>Sec13)</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td>19. Luminaire Performance – Particular Requirements – LED Luminaire</td>
<td>IS 16107-2-1</td>
<td></td>
</tr>
<tr>
<td>Sr. No</td>
<td>Rd. No.</td>
<td>Name of The Road</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>114</td>
<td>Assam Engineering College Road</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>Pandu Port Road(Hanuman Mandir to Rly colony Post Off)</td>
</tr>
<tr>
<td>3</td>
<td>7A</td>
<td>Pandu Port Road(Rly Colony Post Office to AdabariTiniali Shiv Mandir)</td>
</tr>
<tr>
<td>4</td>
<td>7AA</td>
<td>Pondu Bara bazar Road <strong>TWIN MEDIAN 5m+1m+5m</strong></td>
</tr>
<tr>
<td>5</td>
<td>2A</td>
<td>Lokhra Road</td>
</tr>
<tr>
<td>6</td>
<td>2D</td>
<td>LalGanesh Road</td>
</tr>
<tr>
<td>7</td>
<td>41</td>
<td>Boragaon Road(NH27-Krishna Mandir- Shiv Mandir-Jai Mata Vaishnav Devi temple-Gosala Nepali Mandir- Gol Park Goshala)</td>
</tr>
<tr>
<td>8</td>
<td>71</td>
<td>Kula Basumatary Path</td>
</tr>
<tr>
<td>9</td>
<td>33</td>
<td>PNGB Road(NH 27 to Don Bosco School)</td>
</tr>
<tr>
<td>10</td>
<td>108</td>
<td>Boragaon Industrial Road</td>
</tr>
<tr>
<td>11</td>
<td>111</td>
<td>GarchukPamohiRaod</td>
</tr>
<tr>
<td>12</td>
<td>111A</td>
<td>DPS Road</td>
</tr>
<tr>
<td>13</td>
<td>3</td>
<td>A K Dev Road/Dhirenpara main road/Katabari main road</td>
</tr>
<tr>
<td>Sr. No</td>
<td>Rd. No.</td>
<td>Name of The Road</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td>117</td>
<td>Shantipur Main Road</td>
</tr>
<tr>
<td>15</td>
<td>36</td>
<td>NS Road (From Borosola to Kumharpara at the bend to PH)</td>
</tr>
<tr>
<td>16</td>
<td>48</td>
<td>Faiyaz Ahmad Road</td>
</tr>
<tr>
<td>17</td>
<td>48A</td>
<td>Faiyaz Ahmad Road</td>
</tr>
<tr>
<td>18</td>
<td>49</td>
<td>KRC Road</td>
</tr>
<tr>
<td>19</td>
<td>50</td>
<td>BR Phukan Road</td>
</tr>
<tr>
<td>20</td>
<td>115</td>
<td>S Chowdhury Road</td>
</tr>
<tr>
<td>21</td>
<td>117D</td>
<td>KRB Road</td>
</tr>
<tr>
<td>22</td>
<td>117H</td>
<td>AT Road (From Athgaon Bridge end to KRB Road)</td>
</tr>
<tr>
<td>23</td>
<td>36A</td>
<td>NS Road - from Kumharpara to AT Road</td>
</tr>
<tr>
<td>24</td>
<td>51</td>
<td>Chatribari Road/KC Road</td>
</tr>
<tr>
<td>25</td>
<td>51A</td>
<td>Chatribari Road/KC Road</td>
</tr>
<tr>
<td>26</td>
<td>117E</td>
<td>MS Road</td>
</tr>
<tr>
<td>27</td>
<td>117F</td>
<td>SRCB Road</td>
</tr>
<tr>
<td>28</td>
<td>117G</td>
<td>KEDAR Road</td>
</tr>
<tr>
<td>29</td>
<td>118B</td>
<td>Jail Road</td>
</tr>
<tr>
<td>30</td>
<td>93</td>
<td>Motilal Nehru Road</td>
</tr>
<tr>
<td>31</td>
<td>96</td>
<td>Lamb Road</td>
</tr>
<tr>
<td>32</td>
<td>109</td>
<td>MahapurushSrimantaSankardeva Path (from AT Road Bridge to Paltan bazar Police Stn)</td>
</tr>
<tr>
<td>33</td>
<td>109A</td>
<td>Thane Road- Paltan bazar Police Stn to B Baruah Road</td>
</tr>
<tr>
<td>Sr. No</td>
<td>Rd. No.</td>
<td>Name of The Road</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
<td>------------------</td>
</tr>
<tr>
<td>34</td>
<td>110</td>
<td>Paltan Bazar Road from GS road to AT Road</td>
</tr>
<tr>
<td>35</td>
<td>118A</td>
<td>Kamarpatty Road</td>
</tr>
<tr>
<td>36</td>
<td>118C</td>
<td>Col J Ali Road</td>
</tr>
<tr>
<td>37</td>
<td>118D</td>
<td>HC Road</td>
</tr>
<tr>
<td>38</td>
<td>76</td>
<td>Dr Bhupen Hazarika Path/Guwahati Refinery Road</td>
</tr>
<tr>
<td>39</td>
<td>94</td>
<td>FC Road</td>
</tr>
<tr>
<td>40</td>
<td>95</td>
<td>MC Road</td>
</tr>
<tr>
<td>41</td>
<td>118E</td>
<td>Jorpukuri Uzan Bazar Road</td>
</tr>
<tr>
<td>42</td>
<td>76A</td>
<td>Dr Bhupen Hazarika Path/Guwahati Refinery Road</td>
</tr>
<tr>
<td>43</td>
<td>44</td>
<td>Pub Sarania Path/S Sarania Road/Ashram Road</td>
</tr>
<tr>
<td>44</td>
<td>79</td>
<td>Gandhimandav Road</td>
</tr>
<tr>
<td>45</td>
<td>64</td>
<td>Lachit Nagar Main Road</td>
</tr>
<tr>
<td>46</td>
<td>4</td>
<td>B.K.Kakati Road</td>
</tr>
<tr>
<td>47</td>
<td>4A</td>
<td>B.K.Kakati Road</td>
</tr>
<tr>
<td>48</td>
<td>4AA</td>
<td>B.K.Kakati Road</td>
</tr>
<tr>
<td>49</td>
<td>4B</td>
<td>Sati Joymati Road</td>
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<td>50</td>
<td>86</td>
<td>Bishnupur Main Road</td>
</tr>
<tr>
<td>51</td>
<td>113</td>
<td>Fayal Ahmad Road/Ambari Road</td>
</tr>
<tr>
<td>52</td>
<td>2B</td>
<td>AK Azad Road</td>
</tr>
<tr>
<td>53</td>
<td>71A</td>
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</tr>
<tr>
<td>54</td>
<td>2AA</td>
<td>Lokhra Road</td>
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<td>Sr. No</td>
<td>Rd. No.</td>
<td>Name of The Road</td>
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<tr>
<td>55</td>
<td>2C</td>
<td>Netaji Subashchandra Bose Road</td>
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<tr>
<td>56</td>
<td>1</td>
<td>Ganeshguri-Kahilipara OdalBakra Road</td>
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<tr>
<td>57</td>
<td>15</td>
<td>Rajib Nagar Path</td>
</tr>
<tr>
<td>58</td>
<td>5</td>
<td>Freedom Fighter Road/ASEB Road</td>
</tr>
<tr>
<td>59</td>
<td>12</td>
<td>GMC Hospital Road from GMCH Circle to AK Azad Road</td>
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<tr>
<td>60</td>
<td>24A</td>
<td>Rajgarh Road</td>
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<td>61</td>
<td>116</td>
<td>Ram Krishna Mission Road</td>
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<tr>
<td>62</td>
<td>116A</td>
<td>Ram Krishna Mission Road</td>
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<td>63</td>
<td>117A</td>
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<td>66</td>
<td>117C</td>
<td>Harbala Rd to Bhangagarh road</td>
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<td>Ganeshguri-Kahilipara OdalBakra Road</td>
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<td>13A</td>
<td>GMCH Hostel Road/Dispur College Road/KachariBasti Road</td>
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<td>69</td>
<td>13B</td>
<td>GMCH Hostel Road/Dispur College Road/KachariBasti Road</td>
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<td>Japorigog Road/Dr. Nirmal Prabha</td>
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<td>73</td>
<td>6</td>
<td>Zoo-Narengi Road(Geeta Nagar Road)upto BG Chowk <strong>TWIN MEDIAN 5m+1m+5m</strong></td>
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<tr>
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<td>Rajgarh Road</td>
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<td>Rajgarh Road to RG Baruha Link Road</td>
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<td>Ambikagiri Nagar Path</td>
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<td>43</td>
<td>Rajgarh Link Road</td>
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<td>65</td>
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<td>79</td>
<td>38</td>
<td>Maniram Dewan Road</td>
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<tr>
<td>80</td>
<td>76AA</td>
<td>Dr Bhupen Hazarika Path/Guwahati Refinery Road</td>
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<td>81</td>
<td>22</td>
<td>Salbari Main Road</td>
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<tr>
<td>82</td>
<td>6A</td>
<td>Zoo-Narengi Road(Geeta Nagar Road)upto BG Chowk <strong>TWIN MEDIAN 5m+1m+5m</strong></td>
</tr>
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<td>83</td>
<td>19</td>
<td>Satgaon Main Road</td>
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<td>84</td>
<td>27A</td>
<td>Dr Zakir Hussain Road</td>
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<tr>
<td>85</td>
<td>27B</td>
<td>Hari Mandir Path (Sarumotoria)</td>
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<td>86</td>
<td>54</td>
<td>From Japorigog Road to Japorigog Jama Masjid</td>
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<td>87</td>
<td>40A</td>
<td>Dakhingaon Road</td>
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<tr>
<td>88</td>
<td>40B</td>
<td>Dakhingaon Road</td>
</tr>
<tr>
<td>89</td>
<td>45</td>
<td>Lakshmi Mandir Path(Beltola Road to GS Road)</td>
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<td>Sr. No</td>
<td>Rd. No.</td>
<td>Name of The Road</td>
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<tr>
<td>--------</td>
<td>---------</td>
<td>----------------------------------------------------------------------------------</td>
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<tr>
<td>90</td>
<td>14A</td>
<td>Hockey Stadium Road/BishnuRava Path(From Hatigaon to Saukuchi)</td>
</tr>
<tr>
<td>91</td>
<td>40D</td>
<td>Dakbingaon Road</td>
</tr>
<tr>
<td>92</td>
<td>77</td>
<td>Central Jail Road,Sarusajai(Lokhra Road from NH 37+ NalaparaRoad+And road joining above mention two road)</td>
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<tr>
<td>93</td>
<td>14AA</td>
<td>Hockey Stadium Road/BishnuRava Path(From Hatigaon to Saukuchi)</td>
</tr>
<tr>
<td>94</td>
<td>14B</td>
<td>AG Colony Road</td>
</tr>
<tr>
<td>95</td>
<td>14D</td>
<td>Nizara Path</td>
</tr>
<tr>
<td>96</td>
<td>57</td>
<td>Dargah Road/ChaolungSukaphaa Path</td>
</tr>
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<td>97</td>
<td>30</td>
<td>Latakata Road &amp; Pillingkata Road, Bakrapara</td>
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<td>98</td>
<td>30A</td>
<td>Latakata Road &amp; Pillingkata Road, Bakrapara</td>
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<tr>
<td>99</td>
<td>101</td>
<td>From Panjabari Road to Shilpgram</td>
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<td>100</td>
<td>102</td>
<td>Bhagabari Rd upto Shiv mandir Diversion</td>
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<td>103</td>
<td>Radha Nagar Road</td>
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<tr>
<td>102</td>
<td>104</td>
<td>Arunodoy Path</td>
</tr>
<tr>
<td>103</td>
<td>105</td>
<td>From Pankhabari Path-Hari Mandir –Shilpgram</td>
</tr>
<tr>
<td>Sr. No</td>
<td>Rd. No.</td>
<td>Name of The Road</td>
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<tr>
<td>--------</td>
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</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
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## ANNEXURE 5

### TABLE NO: 9 – BOQ OF ROADS

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Carriage way + Shoulder Width (m)</th>
<th>Length (m)</th>
<th>Lux Level</th>
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<tbody>
<tr>
<td>1</td>
<td>5-6 m</td>
<td>19862 m</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>7-9 m</td>
<td>64611 m</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>10-11 m</td>
<td>24529 m</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>12-13 m</td>
<td>12784 m</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>14-15 m</td>
<td>3500 m</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>16-18 m</td>
<td>6259 m</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>19-20 m</td>
<td>288 m</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>22 m</td>
<td>1293 m</td>
<td>20</td>
</tr>
<tr>
<td>9</td>
<td>22m with median</td>
<td>3226 m</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>11-13m with median</td>
<td>1210 m</td>
<td>20</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>137562 m</strong></td>
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## ANNEXURE 6

### TABLE NO: 10 – LUMINARIES DATASHEET FILLED BY CONTRACTOR

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameters</th>
<th>Requirements / Value</th>
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<tr>
<td>1.</td>
<td>Type</td>
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</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>LED chip make</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Rated Voltage</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Operating Voltage Range</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Frequency</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Power Factor</td>
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</tr>
<tr>
<td>7.</td>
<td>LED wattage</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>LED chip Efficacy</td>
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</tr>
<tr>
<td>9.</td>
<td>LED Drive current</td>
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</tr>
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<td>10.</td>
<td>LED Beam Angle</td>
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<td>11.</td>
<td>Colour Temperature</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Rated Minimum LED Life (L70)</td>
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</tr>
<tr>
<td>13.</td>
<td>System efficacy</td>
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</tr>
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<td>14.</td>
<td>Total Lumen Output</td>
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</tr>
<tr>
<td>15.</td>
<td>Colour Rendering Index of Luminaires</td>
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</tr>
<tr>
<td>16.</td>
<td>System Power Efficiency</td>
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</tr>
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<td>17.</td>
<td>Driver Type</td>
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</tr>
<tr>
<td></td>
<td>Description</td>
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</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Driver Efficiency</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Driver Life</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Maximum temperature rise for Driver</td>
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<tr>
<td>21.</td>
<td>Operating Temperature Range</td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>Luminaries body temperature after 12 hours of continuous operation</td>
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<td>23.</td>
<td>Junction temperature</td>
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</tr>
<tr>
<td>24.</td>
<td>Heat Sink Temperature</td>
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</tr>
<tr>
<td>25.</td>
<td>Solder point temperature</td>
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</tr>
<tr>
<td>26.</td>
<td>Operating Humidity</td>
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</tr>
<tr>
<td>27.</td>
<td>Control Gear</td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>Operating Hours</td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>Total Harmonics Distortion (THD)</td>
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<td>30.</td>
<td>Construction</td>
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<td>31.</td>
<td>IP Protection</td>
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<td>32.</td>
<td>Luminary Housing</td>
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<td>33.</td>
<td>Heat Sink</td>
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<td>34.</td>
<td>Clip / Fastners</td>
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<td>Optics</td>
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<td>38.</td>
<td>IK protection for Optic Cover</td>
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<td>39.</td>
<td>Photometric measurements</td>
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<td>40.</td>
<td>Minimum Surge Protection</td>
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<tr>
<td>41.</td>
<td>Protection Required in Driver Module - Short Circuit; OV; UV; Over Temperature; String Open Protection</td>
<td></td>
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</table>
REQUEST FOR PROPOSAL FOR
IMPLEMENTATION OF
“SMART STREET LIGHTING”

For Spine Roads in Guwahati
On
Design, Build & Operate Basis

Guwahati Smart City Limited,
Guwahati, Assam

Tender Notice No. ................. Dated: ...../....../......

Volume III: General Conditions of Contract (GCC)
<table>
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<tr>
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<td>1.0 Definitions</td>
<td>4</td>
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<td>2.0 Contract Documents</td>
<td>6</td>
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<td>9.0 CONTRACTOR'S Responsibilities</td>
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<td>10.0 GSCL's Responsibilities</td>
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<td>22.0 Site Regulations and Safety</td>
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<td>24.0 Defect Liability</td>
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<td>25.0 Environmental Safeguards</td>
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<td>26.0 Liquidated damage</td>
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<td>27.0 Closure of the contract</td>
<td>22</td>
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<td>28.0 Un-foreseeable Difficulties</td>
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<td>29.0 Change in Constitution of Firm</td>
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<td>30.0 Indemnifications</td>
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<td>31.0 Insurance of Work</td>
<td>23</td>
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<td>Salient features of Some Major Labour Laws Applicable to Establishments Engaged in building and other Construction work</td>
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<td>36.0</td>
<td>Safety and Welfare Provisions for labour to be employed by the Contractor</td>
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<tr>
<td>37.0</td>
<td>Labour Welfare Provisions</td>
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1.0 Definitions

The following words and expressions shall have the meanings hereby assigned to them:

1.1 “Contract” means the Contract Agreement entered into between the Guwahati Smart City Limited (GSCL) and the CONTRACTOR, together with the Contract Documents referred to therein, they shall constitute the Contract, and the term “the Contract” shall in all such documents be construed accordingly.

1.2 "Bill of Quantities" means the priced and completed Bill of Quantities forming part of the Bid.

1.3 “GCC” means the General Conditions of Contract hereof.

1.4 “SCC” means the Special Conditions of Contract.

1.5 “Day” means calendar day.

1.6 “Month” means calendar month.

1.7 “Employer” means, Guwahati Smart city Limited (GSCL), Staffed Building, Bhangagarh, Guwahati- 05 and includes the legal successors or permitted assigns of the GSCL.

1.8 “Engineer-in-Charge” means the person appointed by the Employer to act as Engineer-in-Charge for the purpose of the Contract, or any other competent person appointed by the Employer and notified to the CONTRACTOR to act in replacement to such person and shall include his authorized representative.

1.9 “Engineer” means the person appointed by the Employer to act as Engineer for the purposes of the Contract, or any other competent person appointed by the Employer and notified to the CONTRACTOR to act in replacement to such person and shall include his authorised representative.

1.10 “CONTRACTOR” means the person(s) whose bid to perform the Contract has been accepted by the Employer and is named as such in the Contract agreement, and includes the legal successors or permitted assigns of the CONTRACTOR.

1.11 “CONTRACTOR’s Representative” means any person nominated by the CONTRACTOR and approved by the Employer in the manner provided in GCC Sub- Clause 17.2 (CONTRACTOR’s Representative and Construction Manager) hereof to perform the duties delegated by the CONTRACTOR.

1.12 “Sub CONTRACTOR” including vendors, means any person to whom execution of any part of the Facilities, including preparation of any design or supply of any Plant and Equipment, is sub-contracted directly or indirectly by the CONTRACTOR and includes its legal successors or permitted assigns.

1.13 “Adjudicator” means the person or persons appointed by the Employer to make a decision on or to settle any dispute or difference between the Employer and the CONTRACTOR referred to him or her by the parties pursuant to GCC Sub-Clause 6.1 (Adjudicator) hereof.
1.14 “Contract Price” means the sum specified in Clause 11 (Contract Price) of the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.

1.15 “Facilities” means the Plant and Equipment to be supplied and installed, as well as all the Installation Services to be carried out by the CONTRACTOR under the Contract.

1.16 "Specification" means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer.

1.17 "Temporary Works" are works designed, constructed, installed, and removed by the CONTRACTOR which are needed for construction or installation of the Works.

1.18 “Plant and Equipment” means permanent plant, equipment, machinery, apparatus, articles and things of all kinds to be provided and incorporated in the Facilities by the CONTRACTOR under the Contract (including the spare parts to be supplied by the CONTRACTOR under the contract), but does not include CONTRACTOR’s Equipment.

1.19 “Installation Services” means all those services ancillary to the supply of the Plant and Equipment for the Facilities, to be provided by the CONTRACTOR under the Contract e.g. transportation and provision of marine or other similar insurance, inspection, expediting, Site preparation works (including the provision and use of CONTRACTOR’s Equipment and the supply of all construction materials required), installation, testing, pre-commissioning, commissioning, operations, maintenance, the provision of operations and maintenance manuals, training of GSCL’s Personnel etc.

1.20 “CONTRACTOR’s Equipment” means all plant, facilities, equipment, machinery, tools, apparatus, appliances or things of every kind required in or for installation, completion and maintenance of Facilities that are to be provided by the CONTRACTOR, but does not include Plant and Equipment, or other things intended to form or forming part of the Facilities.

1.21 “Site” means the land and other places upon which the Facilities are to be installed, and such other land or places as may be specified in the Contract as forming part of the Site.

1.22 “Time for Completion” means the time within which Completion of the Facilities as a whole (or of a part of the Facilities where a separate Time for Completion of such part has been prescribed) is to be attained in accordance with the relevant provisions of the Contract.

1.23 "Liquidated Damage"

If the CONTRACTOR fails to deliver any or all of the Goods or perform the Related Services within the period specified in the Contract, the Employer may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the appendix “A” of Contract condition for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage as specified in Appendix “A” of Contract condition for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage as specified in Appendix “A” of Contract condition t

1.24 “Completion” means that the Facilities have been completed operationally and structurally, and that all work in respect of Pre-commissioning of the Facilities or such specific part thereof has been completed, and Commissioning has been attained as per Technical Specifications.
1.25 "Commencement Date" means the date specified in the notice to commence issued by the Employer to the CONTRACTOR.

1.26 "Pre-commissioning" means the testing, checking and other requirement specified in the Technical Specifications that are to be carried out by the CONTRACTOR in preparation for commissioning.

1.27 "Commissioning" means trial/initial operation of the Facilities or any part thereof by the CONTRACTOR, which operation is to be carried out by the CONTRACTOR (Commissioning) hereof, for the purpose of carrying out Guarantee Test(s).

1.28 "Guarantee Test(s)" means the test(s) specified in the Technical Specifications to be carried out to ascertain whether the Facilities or a specified part thereof is able to attain the Functional guarantees specified in the Technical specifications.

1.29 "Operational Acceptance" means the acceptance by the Employer of the Facilities (or any part of the Facilities where the Contract provides for acceptance of the Facilities in parts), which certifies the CONTRACTOR’s fulfillment of the Contract in respect of Functional Guarantees of the Facilities.

1.30 "Defect Liability Period" means and includes the period of validity of the warranties given by the CONTRACTOR which includes manufacturers guarantees commencing at successful completion of Commissioning (Trial Operation) of the Facilities or a part thereof, during which the CONTRACTOR is responsible for defects with respect to the Facilities (or the relevant part thereof) as provided in GCC clause 23 (Defect Liability) hereof.

2.0 Contract Documents

2.1 Subject to the Contract Agreement, all documents forming part of the Contract (and all parts thereof) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.

2.2 The documents forming the Contract shall be interpreted in the following order of priority

(a) The Contract Agreement (including addenda, clarification, when signed by all parties concerned)
(b) The Letter of Acceptance
(c) Volume III: General Conditions of Contract
(d) Volume II: Works Requirement / Technical Specification & Drawings
(e) Volume I: Information to Bidder
(f) The Bid (accepted Price Proposal) of the Successful Bidder, Letters and documents including the covering letter of the Successful Bidder, minutes of meeting, clarification letters, if any, and the letter of acceptance and nomination instruction by the Employer
(g) Volume IV: Price Bid BOQ
(h) Completed Technical Schedules
(i) Bidder’s Technical Proposal other than Completed Technical Schedules
(j) Any other documents issued by the GSCL before signing the Contract Agreement and forming the part of the Contract

2.3 All documents forming part of the Contract (and all parts thereof) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.
2.4 Two original Contract Documents shall be made, one for the Employer and the other for the CONTRACTOR. The CONTRACTOR shall make two (2) copies of Contract Document and supply without any charge, to Employer.

3.0 Interpretation

3.1 In interpreting these Conditions of Contract, singular also means plural, word including one gender includes all genders. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about the Conditions of Contract.

3.2 If partial completion is specified in the Contract Data, references in the Conditions of contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion date for the whole of the Works).

3.3 The documents forming the Contract shall be interpreted in the following order of priority

(a) The Contract Agreement (including addenda, clarification, when signed by all parties concerned)
(b) The Letter of Acceptance
(c) Volume III Special Conditions of Contract
(d) Volume III: General Conditions of Contract
(e) Volume II: Works Requirement / Technical Specification
(f) Volume I: Information to Bidder
(g) The Bid (accepted Price Proposal)
(h) Volume IV: Price Bid BOQ
(i) Completed Technical Schedules
(j) Bidder’s Technical Proposal other than Completed Technical Schedules
(k) Any other documents issued by the GSCL before signing the Contract Agreement and forming the part of the Contract

3.4 Language

3.4.1 The official language shall be English only.

3.4.2 If any of the Contract Documents, correspondence or communications are prepared in any language other than the governing language under GCC Clause 3.4 above, the English translation of such documents, correspondence or communications shall prevail in matters of interpretation.

3.5 Headings

3.5.1 The headings and marginal notes in the General Conditions of Contract are included for ease of reference, and shall neither constitute a part of the Contract nor affect its interpretation.

3.6 Entire Agreement

3.6.1 The Contract constitutes the entire agreement between the Employer and the CONTRACTOR with respect to the subject matter of Contract and supersedes all
communications, negotiations and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract.

3.7 **Amendment**

3.7.1 No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party here to.

3.8 **CONTRACTOR**

3.8.1 Subject to the provisions of the Contract, the CONTRACTOR shall be solely responsible for the manner in which the Contract is performed. All employees, representatives or Sub CONTRACTOR engaged by the CONTRACTOR in connection with the performance of the Contract shall be under the complete control of the CONTRACTOR and shall not be deemed to be employees of the GSCL, and nothing contained in the Contract or in any subcontract awarded by the CONTRACTOR shall be construed to create any contractual relationship between any such employees, representatives or Sub CONTRACTORs and the GSCL.

3.9 **Joint Venture or Consortium**

Refer Vol I.

3.10 **Non-Waiver**

3.10.1 No relaxation, forbearance, delay or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect or restrict the rights of that party under the contract, nor shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

3.10.2 Any waiver of a party’s rights, powers or remedies under the Contract must be in writing, must be dated and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

3.11 **Severability**

3.11.1 If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

3.12 **Country of Origin**

3.13 “Origin” means the place where the materials, equipment and other supplies for the Facilities are mined, grown, produced or manufactured, and from which the services are provided.

4.0 **Notices**

4.1.1 Unless otherwise stated in the Contract, all notices to be given under the Contract shall be in writing, and shall be sent by personal delivery, airmail post, special courier, cable, facsimile or Electronic Data Interchange (EDI) to the address of the relevant party set out in the Contract Coordination Procedure to be finalized.

4.1.2 Any notice sent by cable, and facsimile or shall be confirmed within 2 (two) days after dispatch by notice sent by airmail/post or special courier, except as otherwise specified in the contract.
4.1.3 Any notice sent by airmail post or special courier shall be deemed (in the absence of evidence of earlier receipt) to have been delivered ten (10) days after dispatch. In proving the fact of dispatch, it shall be sufficient to show that the envelope containing such notice was properly addressed, stamped and conveyed to the postal authorities or courier service for transmission by airmail or special courier.

4.1.4 Any notice delivered personally or sent by telegraph, facsimile shall be deemed to have been delivered on date of its dispatch.

4.1.5 Either party may change its postal, cable, facsimile or EDI address or addressee for receipt of such notices by ten (10) days’ notice to the other party in writing.

4.1.6 Notices shall be deemed to include any approvals, consents, instruction orders and certificates to be given under the Contract.

5.0 Governing Law

5.1.1 The Contract shall be governed by and interpreted in accordance with laws in force in India. The High Court of Guwahati shall have exclusive jurisdiction in all matters arising under the Contract.

6.0 Settlement of Disputes

6.1.1 Adjudicator

(a) If any dispute of any kind whatsoever shall arise between the Employer and the CONTRACTOR in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the Facilities whether during the progress of the Facilities or after their completion and whether before or after the termination, abandon or breach of the Contract—the parties shall seek to resolve any such dispute or difference by mutual consultation. If the parties fail to resolve such a dispute or difference by mutual consultation, then the dispute shall be referred in writing by either party to the Adjudicator, with a copy to the other party.

(b) The Adjudicator shall give its decision in writing to both parties within twenty-eight (28) Working days of a dispute being referred to it. If the Adjudicator has done so, and no notice of intention to commence Arbitration has been given by the Employer or the CONTRACTOR within fifty-six (56) days of such reference, the decision shall become final and binding upon the Employer and the CONTRACTOR. Any decision that has become final and binding shall be implemented by the parties forthwith.

6.1.2 Arbitration

(a) If either the Employer or the CONTRACTOR is dissatisfied with the Adjudicator’s decision, or if the Adjudicator fails to give a decision within twenty-eight (28) working days of a dispute being referred to it, then either the Employer or the CONTRACTOR may, within fifty-six (56) days of such reference, give notice to the other party, with a copy for information to the Adjudicator, of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

(b) Any dispute, in respect of which a notice of intention to commence arbitration has been given, in accordance with GCC Sub-Clause 6.1.2(a), shall be finally settled by Arbitration. Arbitration may be commenced prior to or after completion of the Facilities.
(c) In case the CONTRACTOR is a Public Sector Enterprise or a Government Department

In case the CONTRACTOR is a Public Sector Enterprise or a Government Department, the dispute shall be referred for resolution in Permanent Machinery for Arbitration (PMA) of the Department of Public Enterprise, Government of India. Such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary/Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the Parties finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

(d) In case the CONTRACTOR is not a Public Sector Enterprise or a Government Department

In all other cases, any dispute submitted by a party to Arbitration shall be heard by an Arbitration panel composed of three arbitrators, in accordance with the provisions set forth below.

(e) The Employer and the CONTRACTOR shall each appoint one Arbitrator, and these two Arbitrators shall jointly appoint a third Arbitrator, who shall chair the Arbitration panel. If the two arbitrators do not succeed in appointing a third Arbitrator within twenty eight (28) days after the letter of the two Arbitrators has been appointed, the third Arbitrator shall, at the request of either party, be appointed by the Employer.

(f) If one party fails to appoint its Arbitrator within forty-two (42) days after the other party has named its Arbitrator, the party which has named an Arbitrator may request the Employer to appoint the second Arbitrator.

(g) If for any reason an Arbitrator is unable to perform its function, the mandate of the Arbitrator shall terminate in accordance with the provisions of applicable laws as mentioned in GCC Clause 5.0 (Governing Law) and a substitute shall be appointed in the same manner as the original arbitrator.

(h) Arbitration proceedings shall be conducted in accordance with The Arbitration and Conciliation Act, 1996 or its subsequent thereof. The place of Arbitration shall be Guwahati.

(i) The decision of a majority of the arbitrators (or of the third Arbitrator chairing the arbitration panel, if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction as decree of the court. The parties thereby waive any objections to or claims of immunity from such enforcement.

(j) The Arbitrator(s) shall give reasoned award.

(k) Notwithstanding any reference to the Adjudicator or arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless otherwise they agree the Employer shall pay the CONTRACTOR any monies due to the CONTRACTOR.

7.0 Scope of Services
Scope of Services under this contract shall be in accordance with that mentioned in Vol I and II of the RFP.

8.0 Time for Commencement and Completion

8.1 The CONTRACTOR shall commence work from the date of Signing of the Agreement and the CONTRACTOR shall thereafter proceed in accordance with the Time Schedule as agreed in the Contract Agreement.

8.2 The CONTRACTOR shall attain Completion of the work (or of a part where a separate time for Completion of such part is specified in the Contract) within the time stated in the Contract or within such extended time to which the CONTRACTOR shall be entitled under GCC Clause 8.3-Extension of Time for Completion hereof.

8.3 Extension of time

8.3.1 If the CONTRACTOR shall desire an extension of the time for completion of the work on the ground of his having been unavoidably hindered in its execution or on any other grounds, he shall apply, in writing, to the Engineer within 5 working days for each location with the type and details regarding the hindrance, on account of which he desires such extension as aforesaid.

8.3.2 The Authority Competent to grant extension under the rules / delegations of power or other duly authorized Engineer shall, if in his opinion (which shall be final), reasonable grounds be shown therefore, authorize such extension of time, if any, as may, in his opinion, be necessary or proper.

8.3.3 If the period of completion of contract expires before the expiry of the period of 5 days provided in this clause, the application for extension shall be made before expiry of the period stipulated for completion of the contract.

9.0 CONTRACTOR’s Responsibilities

9.1 The CONTRACTOR shall design, manufacture (including associated purchases and/or subcontracting), install and complete the Facilities with due care and diligence in accordance with the Contract.

9.2 The CONTRACTOR confirms that it has entered into this Contract on the basis of a proper examination of the data relating to the tendered work including any data as provided by the Employer, and on the basis of information that the CONTRACTOR could have obtained from a visual inspection of the Site and of other data readily available to it relating to the Facilities as at the date of bid submission. The CONTRACTOR acknowledges that any failure to acquaint itself with all such data and information shall not relieve its responsibility for properly estimating the difficulty or cost of successfully performing the Facilities.

9.3 The CONTRACTOR shall acquire in its name all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country where the Site is located that are necessary for the performance of the Contract, including, without limitation, visas for the CONTRACTOR and Sub CONTRACTOR’s personnel and entry permits for all imported CONTRACTOR’s Equipment. The CONTRACTOR shall acquire all other permits, approvals and/or licenses that are not the responsibility of the Employer hereof and that are necessary for the performance of the Contract.

9.4 The CONTRACTOR shall comply with all laws in force in the country where the Facilities are installed and where the Installation Services are carried out. The laws will include all national, provincial, municipal or other laws that affect the performance of the Contract and bind upon the CONTRACTOR. The CONTRACTOR shall indemnify and hold harmless
the Employer from and against any and all liabilities, damages, claims, fines, penalties and expenses of whatever nature arising or resulting from the violation of such laws by the CONTRACTOR or its personnel, including the Sub CONTRACTOR and their personnel hereof.

9.5 Work to be open to inspection: CONTRACTOR to be present

All work, under or in course of execution or executed in pursuance of the contract shall, at all times, be opened to inspection and supervision of the Employer/Engineer, and his subordinates and any other authorized agency of Employer and the CONTRACTOR shall, at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer or his subordinate and any other authorized agency of the Employer to visit the works shall have been given to the CONTRACTOR, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for the purpose. Orders given to the CONTRACTOR's agent shall be considered to have the same force as if they had been given to the CONTRACTOR himself.

9.6 The Safety Procedures

9.6.1 The CONTRACTOR Shall:

(a) Comply with all applicable safety regulations,
(b) Take care for the safety of all persons entitled to be on the site,
(c) Provide any temporary works (including roadways, footways, guards and fences) which may be necessary because of the execution of works, for the use and protection of the public and of owners.

9.7 Site office

9.7.1 CONTRACTOR shall have to establish well furnished site office at Guwahati for his supervisory staff and for project meetings with Employer/Engineer. Site office shall be approved by the Employer.

9.8 Planning, Designing and Execution of the Works

9.8.1 The CONTRACTOR shall carry out and be responsible for the design of works, including any site surveys, subsoil investigations, material testing and all other things necessary for proper planning and design.

9.8.2 Within 10 days from award of the contract, the CONTRACTOR shall start submitting drawings, construction documents etc., for review and approval by the Engineer. The CONTRACTOR will be fully responsible for ensuring that its drawings, designs and construction documents satisfy all requirements for constructing works that are complete and fully functional in all respects.

9.8.3 The CONTRACTOR shall prepare and keep up to date, a complete set of "as built" records of the execution of the works, showing the exact as built locations, sizes and details of the work as executed. These records shall be kept on the site and two sets of such records shall be submitted to the Employer.

9.8.4 In addition the CONTRACTOR shall supply to the Engineer's representative as built drawings of the works, showing all works executed.

9.8.5 CONTRACTOR shall be responsible for preparing baseline Programme, upon acceptance of the Baseline Programme by the Employer, the CONTRACTOR shall adhere to it strictly.
The CONTRACTOR shall ensure that preparation, updating and revision of programme of works are carried out by experienced and qualified personnel.

9.9 Monthly Reports and Meetings

9.9.1 Monthly Reports
(a) Monthly Progress Reports shall be prepared by the CONTRACTOR and submitted to the Employer. The first report shall cover the period up to the end of the first calendar month following the commencement date. Reports shall be submitted monthly thereafter, each within two working days after the last day of the month to which it related.
(b) Reporting shall continue during both construction and operation and Maintenance period.
(c) The reporting format shall be developed by the CONTRACTOR with the approval from Employer within Ten days of commencement of work.

9.9.2 Meetings
(a) Meetings shall be held in the office of Employer / Engineer or at any other places as mutually fixed in advance. The proposed agenda for meetings shall be exchanged at least Two days in advance. It is required that a decision maker of the CONTRACTOR is present at the meetings so that binding decisions can be taken about outstanding issues.

9.10 Quality Control
9.10.1 Employer shall have the right to exercise proper Quality Control measures. The CONTRACTOR shall provide all assistance to conduct such tests.

9.11 Operation and Maintenance Manuals
9.11.1 Prior to the commencement of the tests on completion, the CONTRACTOR shall supply to the Employer provisional Operation and Maintenance manuals in sufficient details. The work shall not be considered to be completed for the purposes of completion of works until the Employer has received final Operation and Maintenance manuals in such details.

9.12 Land for Temporary use
9.12.1 Land for labor camps, storage yards, temporary site sheds, casting yard shall be arranged by the CONTRACTOR at the site or nearby plot with the consent of Employer at his own cost.

9.13 CONTRACTOR’s Materials, Labors, etc.
9.13.1 The CONTRACTOR shall provide everything necessary for the proper execution of the works according to the intent and meaning of the drawings, and specifications taken together, whether the same is or is not particularly shown or described therein. If the CONTRACTOR finds any discrepancy therein he shall immediately and in writing refer the same to the Engineer representative. The decision of the Engineer shall be final and binding on the CONTRACTOR.

9.14 Power and Water
9.14.1 CONTRACTOR shall at its own responsibility and cost arrange for the power supply and water supply required for the construction works at all the sites.

9.15 Materials
9.15.1 All construction materials like Steel, Cement and other materials necessary for execution of this work shall not be supplied by the Employer and same shall be procured by the CONTRACTOR at his own cost. Procurement and testing certificates for cement and reinforcement steel round bars or high yield strength steel deformed bars as required shall be arranged by the CONTRACTOR at his own cost from standard, reputed manufacturer as approved by the Employer. The CONTRACTOR shall submit statement of sources for procurement of materials.

9.15.2 Procurement of all materials shall be arranged by the CONTRACTOR at his own cost from standard, reputed manufacturer as approved by the Employer. The royalty receipts, challans, etc shall have to be submitted by the CONTRACTOR from time to time to the Employer.

9.15.3 The CONTRACTOR will have to make his own arrangement for plants, equipments, machineries to be used in the execution of this work well in time after award of the Contract.

9.16 Labor Employment

9.16.1 The CONTRACTOR shall furnish to the Engineer every week during the progress of the works classified weekly returns of the number of the people employed on the work during the week. The report of skilled and unskilled labors shall be given in the prescribed form. The CONTRACTOR shall have to obtain labor license from concerned Government Department and shall have to submit to the Employer.

9.16.2 During continuance of the contract, the CONTRACTOR and his sub CONTRACTORs shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority

9.17 Treasure Trove

9.17.1 In the event of the Discovery by the CONTRACTOR or his employees during the progress of the work of any treasure, coins, antiquities, fossils, minerals or other articles or things of value or interest, whether geological, archeological or any other such treasure or other things shall deemed to be the absolute property of the client.

9.17.2 The CONTRACTOR shall take all reasonable precautions to prevent his workmen or any other persons from removing such things as above and shall immediately upon discovery thereof acquaint the Employer of such discovery.

9.18 CONTRACTOR's General Obligations

9.18.1 The CONTRACTOR shall be responsible for Design, Supply, Installation and Maintenance of Street poles and Luminaries with all fittings and Operation and Maintenance as per Employers requirement and specification given in Bid Document. After the satisfactory completion and commissioning of all Tendered works, the CONTRACTOR is required to take up the Maintenance of the same as approved by the Employer.

10.0 Employer's Responsibilities

10.1.1 The Employer shall give the CONTRACTOR right of access to, and possession of all parts of the Site for commencement of work. The Employer shall provide, at the request of the CONTRACTOR, such reasonable assistance as to allow the CONTRACTOR to obtain properly any permits, licences or approvals required by the Laws of the Country

B. Payment
11.0 Contract Price

The Contract Price shall be as specified in clause 11.0 (Contract Price and Terms of Payment) of the Form of Contract Agreement.

The Contract Price shall be adjusted in accordance with provisions of (Price Adjustment) to the Contract Agreement, if applicable. It will be mentioned in Appendix A General Conditions of Contract.

11.1 The Implementing Partner shall be deemed to have satisfied itself as to the hereof, correctness and sufficiency of the Contract Price, which shall, except as otherwise provided for in the Contract, cover all its obligations under the Contract.

12.0 Mobilization Advance

Refer Vol-I

13.0 Performance Security

Refer Vol-I

14.0 Retention Money

Refer Vol-I

15.0 Taxes and Duties

15.1 Except as otherwise specifically provided in the Contract, the CONTRACTOR shall bear and pay all taxes, duties, levies and charges applicable to the CONTRACTOR, its Sub CONTRACTOR or their employees by all municipal, state or national government authorities.

15.2 All taxes, duties and levies on works contract, if any, shall be to the CONTRACTOR’s account and no separate claim in this regard will be entertained by the GSCL.

15.3 For the purpose of the Contract, it is agreed that the Contract Price is based on the taxes, duties, levies and charges prevailing at the date seven (7) days prior to the last date of bid submission in the country where the Site is located. If any rates of Tax are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the performance of Contract, which was or will be assessed on the CONTRACTOR in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction there-from, as the case may be, in accordance with GCC Clause 22 (Change in Laws and Regulations) hereof.

C. Intellectual Property

16.0 Copyright

16.1 The copyright in all drawings, documents and other materials containing data and information furnished to the Employer by the CONTRACTOR herein shall remain vested in the CONTRACTOR or, if they are furnished to the Employer directly or through the CONTRACTOR by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party. The Employer shall however be free to reproduce all drawings, documents and other material furnished to Employer for the purpose of the contract including, if required, for operation and maintenance of the facilities.

17.0 Confidential Information
17.1 The Employer and the CONTRACTOR shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following termination of the Contract. Notwithstanding the above, the CONTRACTOR may furnish to its Sub CONTRACTOR such documents, data and other information it receives from the Employer to the extent required for the Sub CONTRACTOR to perform its work under the Contract, in which case even the CONTRACTOR shall obtain from such Sub CONTRACTOR undertaking of confidentiality similar to that imposed on the CONTRACTOR under this GCC clause 16.

17.2 The Employer shall not use such documents, data and other information received from the CONTRACTOR for any purpose other than the operation and maintenance of the Facilities. Similarly, the CONTRACTOR shall not use such documents, data and other information received from the GSCL for any purpose other than the design, procurement of Plant and Equipment, construction or such other work and services as are required for the performance of the Contract.

18.0 Representatives

18.1 CONTRACTOR’s representative

18.1.1 The CONTRACTOR shall appoint the CONTRACTOR’s representative and shall give him all authority necessary to act on CONTRACTORs behalf under the contract. Unless the CONTRACTORs representative is named in the Contract, the CONTRACTOR shall prior to the commencement date, submit to the Employer for consent the name and particulars of the person the CONTRACTOR proposes to appoint as CONTRACTORs representative. If the consent is withheld or subsequently revoked, or if the appointed person fails to act as CONTRACTOR’s representative, the CONTRACTOR shall similarly submit the name and particulars of another suitable person for such appointment. The CONTRACTOR shall not, without prior consent of Employers representative revoke the appointment of CONTRACTORs representative or appoint a replacement.

18.1.2 The CONTRACTOR’s Representative shall represent and act for the CONTRACTOR at all times during the currency of the Contract and shall give to the Engineer all the CONTRACTOR’s notices, instructions, information and all other communications under the contract.

18.1.3 All notices, instructions, information and all other communications given by the Employer to the CONTRACTOR under the Contract shall be given to the CONTRACTOR's Representative or, in its absence, its deputy, except as herein otherwise provided.

18.1.4 The CONTRACTOR shall not revoke the appointment of the CONTRACTOR’s Representative without the Employers prior written consent, which shall not be unreasonably withheld. If the Employer consents thereto, the CONTRACTOR shall appoint some other person as the CONTRACTOR’s Representative, pursuant to the procedure set out in GCC Sub- Clause 18.1.1

18.1.5 The CONTRACTOR’s Representative may, subject to the approval of the Employer (which shall not be unreasonably withheld), at any time delegate to any person any of the powers, functions and authorities vested in him or her. Any such delegation may be revoked at any time. Any such delegation or revocation shall be subject to a prior notice signed by the CONTRACTOR’s Representative and delivered to the Employer, and shall specify the powers, functions and authorities thereby delegated or revoked.
18.1.6 Any act or exercise by any person of powers, functions and authorities so delegated to him or her in accordance with this GCC Sub-Clause 18.1.5 shall be deemed to be an act or exercise by the CONTRACTOR’s Representative.

18.1.7 Notwithstanding anything stated in GCC Sub-clause 18.1.1 above, for the purpose of execution of contract, the Employer and the CONTRACTOR shall finalize and agree to a Contract Co-ordination Procedure and all the communication under the Contract shall be in accordance with such Contract Co-ordination Procedure.

18.1.8 The Employer may by notice to the CONTRACTOR object to any representative or person employed by the CONTRACTOR in the execution of the Contract who, in the reasonable opinion of the Employer, may behave inappropriately, may be incompetent or negligent, or may commit a serious breach of the Site regulations provided under GCC 21.0. The Employer shall provide evidence of the same, whereupon the CONTRACTOR shall remove such person from the Facilities.

18.1.9 If any representative or person employed by the CONTRACTOR is removed in accordance with GCC Sub-Clause 18.1.5, the CONTRACTOR shall, where required, promptly appoint a replacement.

19.0 Fraud and Corrupt Practices
Refer Vol I

20.0 Force Majeure

20.1 “Force Majeure” shall mean any event beyond the reasonable control of the Employer or of the CONTRACTOR, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected, and shall include, without limitation, the following:

(a) War, hostilities (whether war be declared or not), invasion, act of foreign enemies,

(b) Rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion and terrorist acts;

(c) Munitions of war, explosive materials, ionising radiation or contamination by radioactivity, except as may be attributable to the CONTRACTOR’s use of such munitions, explosives, radiation or radio-activity, and

(d) Natural catastrophes such as earthquake, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster

20.2 If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within Fifteen (15) days after the occurrence of such event.

20.3 The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party’s performance is prevented, hindered or delayed. The Time for Completion shall be extended in accordance with GCC Clause.

20.4 If the performance of the Contract is substantially prevented, hindered or delayed for a single period of more than thirty (30) days or an aggregate period of more than seventy five (75) days on account of one or more events of Force Majeure during the currency of the Contract, the parties will attempt to develop a mutually satisfactory solution, failing which
either party may terminate the Contract by giving a notice to the other, but without prejudice to either party’s right to terminate the Contract.

20.5 The CONTRACTOR shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that it’s delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

21.0 Termination

21.1 Termination for Default

21.1.1 The Employer, without prejudice to any other remedy for breach of Contract, by fifteen (15) days Notice of default sent to the CONTRACTOR, may terminate the Contract in whole or in part:

(a) If the CONTRACTOR fails to deliver any or all of the Works/Goods within the period specified in the Contract, or within any extension thereof granted by the Employer or if the CONTRACTOR fails to perform any other obligation under the contract.

(b) If the CONTRACTOR, in the judgment of the Employer has engaged in fraud and corruption, as defined in GCC Clause 19.0, in competing for or in executing the Contract.

21.1.2 In the event the Employer terminates the Contract in part, pursuant to GCC Clause 21.1, the Employer may procure, upon such terms and in such manner as it deems appropriate, Work/Goods or Related Services similar to those undelivered or not performed, and the CONTRACTOR shall be liable to the Employer for any additional costs for such similar Goods or Related Services. However, the CONTRACTOR shall continue performance of the Contract to the extent not terminated.

21.1.3 In the event of termination of the Order, Employer shall make payment of the price payable for the items delivered and services completed by the CONTRACTOR and accepted by Employer. The CONTRACTOR shall not be entitled to any further compensation for any termination of the Order.

21.2 Termination for Insolvency

21.2.1 The Employer may at any time terminate the Contract by giving Notice to the CONTRACTOR if the CONTRACTOR becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the CONTRACTOR, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Employer.

21.3 Failure or Breach of Contract

21.3.1 In case of the breach of the Contract full/part of the performance Guarantee can be forfeited and action against CONTRACTOR may be taken like Blacklisting, Suspension of Business, Banning of Business etc. along with the termination of contract by Employer without any compensation to the CONTRACTOR.

21.4 Consequences of Termination by Employer

21.4.1 If the Employer with reasonable grounds, terminates the Contract the Performance guarantee and any other sums of the CONTRACTOR with the Employer shall be forfeited and action shall be taken against him as per GCC, if deemed appropriate.

22.0 Jurisdiction of Court
22.1 The Bidding Process shall be governed by, and construed in accordance with, the laws of India. The courts at Guwahati shall have the exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the Bidding Process and implementation of RFP.

23.0 Indemnity Clause

23.1 The CONTRACTOR/agency shall defend, indemnify, release and hold harmless the GSCL from and against any and all loss, damage, injury, liability, demands and claims for injury to or death of any person (including an employee of the CONTRACTOR/agency or GSCL) or for loss of or damage to property (including CONTRACTOR/agency or GSCL property), in each case whether directly or indirectly resulting from or arising out of CONTRACTOR/agency performance under this RFP document / Contract agreement. This indemnity shall apply whether or not GSCL was or is claimed to be passively, concurrently, or actively negligent, and regardless of whether liability without fault is imposed or sought to be imposed on one or more of the GSCL. Such indemnity shall not apply to the extent that it is void or otherwise unenforceable under applicable law in effect on or validly retroactive to the date of this RFP document / Contract agreement and, shall not apply where such loss, damage, injury, liability, death or claim is the result of the sole negligence or willful misconduct of the GSCL.

24.0 Site Regulations and Safety

24.1 The Employer and the CONTRACTOR shall establish Site regulations setting out the rules to be observed in the execution of the Contract at the Site and shall comply therewith. The CONTRACTOR shall prepare and submit to the Employer, proposed Site regulations for approval, which approval shall not be unreasonably withheld.

24.2 Such Site regulations shall include, but shall not be limited to, rules in respect of security, safety of the Facilities, gate control, sanitation, medical care, and fire prevention.

25.0 Change in Laws and Regulations

25.1 If, after the date seven (7) days prior to the date of Bid submission, in the country where the Site is located, any law, regulation, ordinance, order or by-law having the force of law is enacted, promulgated, abrogated or changed (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the costs and expenses of the CONTRACTOR and/or the Time for Completion, the Contract Price shall be correspondingly increased or decreased, and/or the Time for Completion shall be reasonably adjusted to the extent that the CONTRACTOR has thereby been affected in the performance of any of its obligations under the Contract.

25.2 Bidder to note that any subsequent changes in Tax structure by government will be compensated (Plus or Minus) on availability or submission of actual documentation. CONTRACTOR has to intimate Employer regarding changes occurred in Tax structure after bid submission. If the CONTRACTOR fails to provide such information and if any financial obligation may arise due to change in Tax structure, same will be recovered from CONTRACTOR. The CONTRACTOR shall apply fair means of Stock maintenance and shall adopt accounting standards as may be prescribed under Goods and Service Tax- GST. For arriving at the difference in procurement prices, due to change in GST it will be open for Employer to ask for original invoices, LR, weigh bridge slips, payment details and such other documents as may be required for the purpose. If there is reduction in overall tax burden then proportional benefit of that shall be passed on to the Employer.
26.0 Defect Liability

26.1 The CONTRACTOR warrants that the Facilities or any part thereof shall be free from defects in the design, engineering, materials and workmanship of the Plant and Equipment supplied and of the work executed.

26.2 The Defect Liability Period shall be from the date of Completion of the Facilities (or any part thereof) from the date of Operational Acceptance of the Facilities (or any part thereof), whichever first occurs, unless specified otherwise. During defect liability period any faulty or non-working/non-functioning goods/materials or work shall be rectified as well as all defective components shall be replaced. Non-response to any such defect occurs within 48 hours, GSCL may deduct an amount of 0.005 (%) percent on the O&M cost.

26.3 If during the Defect Liability Period any defect should be found in the design, engineering, materials and workmanship of the Plant and Equipment supplied or of the work executed by the CONTRACTOR, the CONTRACTOR shall promptly, in consultation and agreement with the Employer regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good such defect as well as any damage to the Facilities caused by such defect.

26.4 The Employer shall give the CONTRACTOR a notice stating the nature of any such defect together with all available evidence thereof, The Employer shall give all reasonable opportunity for the CONTRACTOR to inspect any such defect.

26.5 The Employer shall give the CONTRACTOR all necessary access to the Facilities and the Site to enable the CONTRACTOR to perform its obligations under this GCC Clause 23. The CONTRACTOR may, with the consent of the Employer, remove from the Site any Plant and Equipment or any part of the Facilities that are defective if the nature of the defect, and/or any damage to the Facilities caused by the defect, is such that repairs cannot be expeditiously carried out at the Site.

26.6 If the repair, replacement or making good is of such a character that it may affect the efficiency of the Facilities or any part thereof, the Employer may give to the CONTRACTOR a notice requiring that tests of the defective part of the Facilities shall be made by the CONTRACTOR immediately upon completion of such remedial work, whereupon the CONTRACTOR shall carry out such tests. If such part fails the tests, the CONTRACTOR shall carry out further repair, replacement or making good (as the case may be) until that part of the Facilities passes such tests. The tests in character shall in any case be not less than what has already been agreed by the Employer and the CONTRACTOR for the original equipment/part of the Facilities.

26.7 If the CONTRACTOR fails to commence the work necessary to remedy such defect or any damage to the Facilities caused by such defect within a reasonable time (which shall in no event be considered to be less than fifteen (15) days), the Employer may, following notice to the CONTRACTOR, proceed to do such work, and the reasonable costs incurred by the Employer in connection therewith shall be paid to the Employer by the CONTRACTOR or may be deducted by the Employer from any monies due to the CONTRACTOR or claimed under the Performance Security.

27.0 Environmental Safeguards

27.1 The CONTRACTOR shall take action of following points and note the stipulations as under, in regards to Environmental Safeguards as stipulated by the Ministry of Environment and Forests.
27.2 Appropriate measures shall be undertaken while undertaking digging activities to avoid degradation of water quality.

27.3 Borrow pits and other scars created during the road construction shall be properly leveled and treated.

27.4 Adequate provision for Infrastructure facilities, i.e., water supply, fuel, sanitation etc, shall be ensured for laborers during construction period in order to avoid damage to the environment.

27.5 No excavation from or dumping of waste materials into any water body/wetlands shall be done.

27.6 Borrow sites for earth, quarry sites for road construction and dump site shall be identified keeping in view:

27.7 No excavation or dumping on private property is carried out without written consent to the owner.

27.8 No excavation or dumping shall be allowed on wetlands, forest areas or other ecologically valuable or sensitive locations.

27.9 Any approvals required for the same shall be arranged by the CONTRACTOR.
27.10 The time allowed for carrying out the work as mentioned above, shall be strictly obeyed by the CONTRACTOR.

27.11 If the CONTRACTOR does not commence the work within the period specified above, the CONTRACTOR shall stand liable for the forfeiture of the performance Security.

27.12 If the CONTRACTOR shall desire an extension of the time for completion of the work on the ground of unavoidably hindered in its execution or on any other grounds, the CONTRACTOR shall apply, in writing, to the authority within 5 working days for each location of the date of the hindrance, on account of which the CONTRACTOR desires such extension as aforesaid.

27.13 Employer grants extension of the time of completion after examine the reason of extension, if the period of completion of contract expires before the expiry of the period of 5 working days, the application for extension shall be made before the expiry of contract period.

28.0 Liquidated Damage

28.1 If the CONTRACTOR fails to deliver any or all of the product or does not perform the services within the time period(s) specified in the Contract, authority shall without prejudice to its other remedies under the contract, deduct from the contract price, as liquidated damages, a sum equivalent to 0.5% of the price of the undelivered product at the stipulated rate for each week or part thereof during which the delivery of such product may be delayed subject to a maximum limit of 10% of the Contract amount. Such penalty is to be deducted always by the authority from the bill of the firm. Once the maximum of the damages above is reached, authority may consider termination of contract.

28.2 Employer may debar the Bidder from taking part in future proposals for a specified period or black list him. The work shall, throughout the stipulated period of completion of the contract, be proceeded with all due diligence, time being essence of the contract, on the part of the Bidder.

29.0 Closure of the Contract

29.1 Employer will issue the satisfactory completion certificate on execution of the project with compliance of all terms and condition mentioned in this RFP to close the contract.

30.0 Unforeseeable Difficulties

30.1 The Bidder shall be deemed to have obtained all necessary information as to risk, contingencies and other circumstances that may influence or affect the works;

30.2 By signing the contract, the Bidder accepts the total responsibility for having sustained all difficulties and costs of successfully completing the work.

30.3 The contract rates shall not be adjusted to take account of any unforeseen difficulties or costs.

31.0 Change in Constitution of Firm

31.1 Any change in the constitution of the firm/company etc. shall be notified forthwith by the firm in writing to the authority within a period of 30 days from the date of its occurrence & such changes shall not relieve any new member or the member of the firm at the time of proposal from any liability under the contract.

31.2 No new partner/partners shall be accepted in the firm/company by the Bidder in respect of the contract unless he/they agree(s) to abide by all its terms and conditions and deposit with the authority on a written agreement to this effect. The firm’s receipt of
acknowledgement or that of any partner(s) subsequently accepted as above shall bind all of them and will be sufficient to discharge any liability under this contract.

32.0 Indemnifications

32.1 The CONTRACTOR to indemnify the authority against the following:

32.2 The CONTRACTOR shall at its own expense make good any physical loss or damage occasioned by it in the course of the performance of its obligations under this Contract if and to the extent such loss or damage is caused by the willful misconduct or failure to follow good engineering practices of the Bidder,

32.3 The CONTRACTOR shall indemnify, defend and hold harmless the authority and its officers, employees, agents and affiliates against any and all claims of loss, damage and expense of whatever kind and nature, including all related costs and expenses incurred in connection therewith, in respect of personal injury to or death of third parties and in respect of loss of or damage to any third party to the extent that the same arises out of:

32.4 Any breach by the CONTRACTOR of its obligations hereunder,

32.5 Any negligent act or omission on the part of the CONTRACTOR, its Sub-Contractors or their respective agents or employees, and

32.6 Any willful misconduct or breach of statutory duty on the part of the Contractor, its Sub-CONTRACTORS or their respective agents and employees.

33.0 Insurance for work

33.1 The CONTRACTOR shall effect and maintain during the Contract execution all insurance against accident to worker as may be required to insure the CONTRACTOR’s personnel and any other persons employed by it on the work from and against any liability incurred.

33.2 The CONTRACTOR’s personnel/any person employed by the CONTRACTOR shall include the Sub-CONTRACTOR and its personnel.

33.3 The CONTRACTOR may also insure itself from any Third Party claims which may have been affected by the action of the CONTRACTOR either directly or indirectly.

33.4 The material supplied under this Contract shall be fully insured by the CONTRACTOR against loss or damage during transportation, storage, and delivery to site.

34.0 Transportation:

34.1 The bidder is required under the contract to transport required material from place of manufacturing to the site. Transport of material to the site, including all required permits, permissions, other incidental costs shall be in the scope of the CONTRACTOR. The CONTRACTOR shall consider same in his quoted price.

35.0 Additional Conditions

35.1 Any damage caused to either private or public property services, structures, etc shall be made good by CONTRACTOR without any extra cost to the Employer.

35.2 CONTRACTOR need to ensure proper and adequate traffic safety signboards, barricades, lighting at night shall be displayed during day and night to ensure that no accidents take place.

35.3 No excavated materials shall allowed to be stacked on roadside/footpaths/public premises without written permission from Competent Authority.
35.4 The CONTRACTOR shall arrange Security & Storage of their materials to avoid any theft or losses until installation at site. GSCL shall, in no case, shall be responsible for providing any security/storage for the materials & equipments lying at site during or before execution of work. CONTRACTOR shall be responsible for any loss or damage until the completion of the Installation of the street lights.

35.5 That the work to be carried out with diligence and all work is to be done in workmen like manner. The material used by the CONTRACTOR is subject to approval from Engineer, whose decision with rate of progress and to the quality of work and material shall be final.

35.6 That no claim or application for revision in the contract rate will be considered due to sudden rate fluctuation of labor and materials or carriage in market at any stage of work under progress and during the tenure of the Contract.

35.7 That the CONTRACTOR will be responsible for delay in supplying or unavailability of any materials. No claim or damage from the CONTRACTOR shall be entertained by GSCL.

35.8 The CONTRACTOR shall execute extra item of works only after receiving instructions from Engineer and after getting approval for same.

35.9 That after completion of the work the CONTRACTOR will remove and cart away all unwanted material, debris etc, at designated location as approved by the Employer at his own cost and leave the site clean and tidy.

35.10 That the CONTRACTOR will have to make his own arrangement to carry water at site at his own cost.

35.11 The CONTRACTOR shall make good all the bituminous / concrete roads if excavated for laying the DWC pipes and cables. The finish shall be made same as before excavation. In case the road made good by CONTRACTOR caves in or settles down than the rest of the road level or breaks down with seasonal changes then the CONTRACTOR shall make it good again right from ground preparation at no extra cost.

35.12 That all facilities for inspecting the works will be provided by the CONTRACTOR and damage in process of inspection will be made good by the CONTRACTOR.

35.13 That if any vehicle is engaged in the work, all rules and regulations issued in connection with Motor Vehicle Act will have to be followed.

35.14 That the work to be completed in all respect within stipulated time and no extension of time shall be recommended in normal condition. In special condition, time extension may be granted for valid reason as mentioned elsewhere in the Contract.

35.15 That the CONTRACTOR will have to arrange all necessary tool & plants required as per nature of work.

35.16 That the quarries for the stone materials of all types and size will be arranged by the CONTRACTOR and the Quality of the materials will be approved by GSCL.

35.17 If any defect is detected in defect liability period the CONTRACTOR have to rectify the same of his own cost failing which the repair work will be done by the Employer and cost involved will be deducted from performance security or the amount payable to the CONTRACTOR and necessary action will be taken against the CONTRACTOR.

35.18 That the CONTRACTOR will arrange for photography at site after completion of job at his/her/their own cost and the same will be submitted to the Employer along with the bill.

36.0 Compliance With Labour Regulations:
36.1 During continuance of the contract, the CONTRACTOR and his sub CONTRACTORs shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The CONTRACTOR shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-

36.2 Observance of the provisions stipulated in the notifications / bye laws/Acts/Rules/regulations including amendments, if any, on the part of the CONTRACTOR, the Engineer/Employer shall have the right to deduct any money due to the CONTRACTOR including his amount of performance security. The Employer/Engineer shall also have right to recover from the CONTRACTOR any sum required or estimated to be required for making good the loss or damage suffered by the Employer. The employees of the CONTRACTOR and the Sub-CONTRACTOR in no case shall be treated as the employees of the Employer at any point of time.

37.0 Salient Features Of Some Major Labour Laws Applicable To Establishments Engaged In Building And Other Construction Work

(The law as current on the date of bid opening will apply)

37.1 Workmen Compensation Act 1923: The Act provides for compensation in case of injury by accident arising out of and during the course of employment.

37.2 Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.

37.3 Employees P.F. and Miscellaneous Provision Act 1952 (since amended): The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are :

(i) Pension or family pension on retirement or death, as the case may be.
(ii) Deposit linked insurance on the death in harness of the worker.
(iii) Payment of P.F. accumulation on retirement/death etc.

37.4 Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

37.5 Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the CONTRACTOR to contract labour and in case the CONTRACTOR fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the CONTRACTOR is required to take license from the designated Officer. The Act is applicable to the establishments or CONTRACTOR of Principal Employer if they employ 20 or more contract labour.

37.6 Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a
scheduled employment. Construction of Buildings, Roads, and Runways are scheduled employments.

37.7 Payment of Wages Act 1936: It lies down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

37.8 Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.

37.9 Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/- per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above up to Rs.3500/- per month shall be worked out by taking wages as Rs.2500/- per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.

37.10 Industrial Disputes Act 1947: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

37.11 Industrial Employment (Standing Orders) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and gets the same certified by the designated Authority.

37.12 Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.


37.14 Inter-State Migrant workers’ (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home up to the establishment and back, etc.

37.15 The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act
applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

37.16 Factories Act 1948: The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

38.0 Safety & Welfare Provisions for labour to be employed by the CONTRACTOR

All necessary personal safety equipment as considered adequate by the Engineer shall be available for use of persons employed on the Site and maintained in a condition suitable for immediate use; and the CONTRACTOR shall take adequate steps to ensure proper use of such equipment by those concerned.

Safety Provisions:

38.1 The CONTRACTOR shall comply with all the precautions as required for the safety of the workmen.

38.2 All workmen at site shall be provided with safety helmets and yellow/orange jackets.

38.3 Workmen required on site during night hours shall be provided with fluorescent yellow jackets with reflective lopes.

38.4 Workers employed on mixing asphaltic materials, cement, lime mortars, concrete etc. shall be provided with protective footwear, protective goggles.

38.5 Those engaged in handling any material, which is injurious to the eyes, shall be provided with protective goggles protective goggles.

38.6 Those engaged in welding works shall be provided with welder’s protective eye shield.

38.7 Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

38.8 Suitable scaffolds shall be provided for workmen for all work that cannot safely be done from the ground, or from solid construction except for such short period work as can be done safely from ladders. When a ladder is used, an extra labourer shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable foot-holds and hand-holds shall be provided on the ladder, which shall be given an inclination not steeper than 1/4 to 1.

38.9 Scaffolding or staging more than 3.25 metres above the ground or floor, swung or suspended from an overhead support or erected with stationary support, shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 metre high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the support or structure.

38.10 Working platforms, gangways, and stairways shall be so constructed that they do not sag unduly or unequally, and if the height of any platform or gangway or stairway is more than 3.25 metres above ground level or floor level, it shall have closely spaced boards, have adequate width and be suitably provided with guard rails as described in above.
38.11 Every opening in the floor of a structure or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of one metre.

38.12 Safe means of access and egress shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 metres in length. The width between side rails in a rung ladder shall in no case be less than 30 cm for ladders up to and including 3 metres in length. For longer ladders the width shall be increased at least 6 mm for each additional 30 cm of length. Spacing of steps shall be uniform and shall not exceed 30 cm.

38.13 Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The CONTRACTOR shall provide all necessary fencing and lights to protect the public from accidents and shall be bound to bear the expenses of defending every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person or which may with the consent of the CONTRACTOR be paid to compromise any claim by any such person.

38.14 Excavation and Trenching: All trenches, 1.5 metres or more in depth shall at all times be supplied with at least one ladder for each 20 metres in length or fraction thereof. Ladders shall be extended from the bottom of the trench to at least 1 metre above the surface of the ground. The sides of a trench, which is 1.5 metres or more in depth shall be stepped back to provide a suitable slope, or be securely held by timber bracing so as to avoid the danger of side collapse. Excavated material shall not be placed within 1.5 metres of the edge of any trench or half the depth of the trench, whichever is more. Excavation shall be made from the top to the bottom. Under no circumstances shall undermining or undercutting be done.

38.15 When workers are employed in sewers and manholes, which are in use, the CONTRACTOR shall ensure that manhole covers are open and manholes are ventilated at least for an hour before workers are allowed to go into them. Manholes so open shall be cordoned off with suitable railing and provide warning signals or boards to prevent accidents to the public.

38.16 Demolition: Before any demolition work is commenced and also during the process of the work:

38.17 All roads and open areas adjacent to the work site shall either be closed or suitably protected.

38.18 No electric cable or apparatus, which is liable to be a source of danger other than a cable or apparatus used by operators, shall remain electrically charged:

38.19 All practical steps shall be taken to prevent danger to persons employed by the Employer, from risk of fire or explosion, or flooding. No floor, roof or other part of a building shall be so overloaded with debris or materials as to render it unsafe.

38.20 When work is performed near any place where there is risk of drowning all necessary equipment shall be provided and kept ready for use and all necessary steps taken for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

38.21 Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following:
(a) These shall be of good mechanical construction, sound material and adequate strength and free from patent defects and shall be kept in good working order be regularly inspected and properly maintained.

(b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from defects.

(c) For every hoisting machine and every chain hook, shackle, swivel and pulley block used in hoisting, lowering or as means of suspension, safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with safe working load. In case of a hoisting machine or a variable safe working load, each safe working load and conditions under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to in the paragraph above shall be loaded beyond safe working load except for the purpose of testing.

(d) Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards; hoisting appliances shall be provided with such means as will reduce the risk of accident during descent of load to the minimum. Adequate precautions shall be taken to reduce to the minimum risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energised, insulating mats, working apparel such as gloves, sleeves and boots, as may be necessary, shall be provided. Workers shall not wear any rings, watches and carry keys or other material which are good conductors of electricity.

(e) All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in a safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.

(f) These safety provisions shall be brought to the notice of all concerned by displaying on a notice board at a prominent place at the work location. Persons responsible for ensuring compliance with the Safety Code shall be named therein by the CONTRACTOR.

(g) To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the CONTRACTOR shall be open to inspection by the Engineer or his Representative.

(h) Notwithstanding anything contained in condition above, the CONTRACTOR shall remain liable to comply with the provisions of all acts, rules, regulations and bylaws for the time being in force in India and applicable in this matter. The CONTRACTOR shall be responsible for observance, by his sub-CONTRACTORS, of the foregoing provisions.

(i) The following road safety materials must be used during the time of execution/diversion of traffic.

   (i) Traffic cone (385mm x 385mm base) x 722mm
   (ii) Safety jackets for labours/officers
   (iii) Safety helmets for labours/officers
   (iv) Safety reflective gloves
   (v) Pollution masks for labours & engineers
39.0 Labour Welfare Provisions:

39.1 First Aid:

At every workplace, there shall be maintained in readily accessible place first aid appliances including an adequate supply of sterilised dressings and sterilised cotton wool as prescribed in the Factory Rules of the State in which the work is carried on. The appliances shall be kept in good order and, in large work places; they shall be placed under the charge of a responsible person who shall be readily available during working hours.

39.2 Accommodation for Labour:

The CONTRACTOR shall during the progress of the work provide, erect and maintain necessary temporary living accommodation and ancillary facilities for labour at his own expense to standards and scales approved by the Engineer.

39.3 Drinking Water:

(a) In every workplace, there shall be provided and maintained at suitable places easily accessible to labour, a sufficient supply of cold water fit for drinking. Where drinking water is obtained from an intermittent public water supply each workplace shall be provided with storage tanks where drinking water shall be stored. Every water supply storage shall be at a distance of not less than 15 metres from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well, which is within such proximity of any latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door, which shall be dust proof and waterproof.

(b) A reliable pump shall be fitted to each covered well. The trap door shall be kept locked and opened only for cleaning or inspection, which shall be done at least once a month.

39.4 Washing and Bathing Places:

Adequate washing and bathing places shall be provided separately for men and women. Such places shall be kept in clean and drained condition.

39.5 Scale of Accommodation in Latrines and Urinals:

(a) There shall be provided within the precincts of every workplace, latrines and urinals in an accessible place, and the accommodation, separately for each for these, shall not be less than at the following scale:

(b) No. of Seats

(i) Where number of persons does not exceed 50 2
(ii) Where number of persons exceed 50 but does not exceed 100 3
(iii) For additional persons per 100 or part thereof 3

In particular cases, the Engineer shall have the power to increase the requirement, wherever necessary.
39.6  Latrines and Urinals:

39.6.1  Except in workplaces provided with water-flushed latrines connected with a water borne sewage system, all latrines shall be provided with dry-earth system (receptacles) which shall be cleaned at least four times daily and at least twice during working hours and kept in a strictly sanitary condition. Receptacles shall be tarred inside and outside at least once a year.

39.6.2  If women are employed, separate latrines and urinals, screened from those for men and marked in the vernacular in conspicuous letters "For women only", shall be provided. Those for men shall be similarly marked "For men only". A poster showing the figure of a man and a woman shall also be exhibited at the entrance to latrines for each sex. There shall be adequate supply of water, close to latrines and urinals.

39.7  Construction of Latrines:

39.7.1  Inside walls shall be constructed of masonry or other non-absorbent material and shall be cement washed inside and outside at least once a year. The dates of cement washing shall be noted in a register maintained for the purpose and kept available for inspection. Latrines shall have at least a thatched roof.

39.8  Disposal of Excreta:

39.8.1  Unless otherwise arranged for by the local sanitary authority, arrangement for proper disposal of excreta by incineration at the workplace shall be made by means of a suitable incinerator approved by the local medical health and municipal or cantonment authorities. Alternatively, excreta may be disposed of by putting a layer of night soils at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm layer of waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn into manure).

39.8.2  The CONTRACTOR shall, at his own expense, carry out all instructions issued to him by the Engineer to effect proper disposal of soil and other conservancy work in respect of CONTRACTOR's work-purpose or employees on the site. The CONTRACTOR shall be responsible for payment of any charges, which may be levied by municipal or cantonment authority for execution of such work on his behalf.

39.9  Provisions of shelters during rest:

39.9.1  At every workplace, there shall be provided, free of cost, four suitable sheds, two for meals and two others for rest, separately for use of men and women labour. The height of each shelter shall not be less than 3 metres from floor level to lowest part of roof. Sheds shall be kept clean and the space provided shall be on the basis of at least 0.5 sq.m. per head.

39.10  Crèches:

39.10.1  At a place where women are ordinarily employed, there shall be provided at least one hut for use of children under the age of 6 years belonging to such women. Huts shall not be constructed to a standard lower than that of thatched roof, mud floor and wall with wooden planks spread over mud floor and covered with matting. Huts shall be provided with suitable and sufficient openings, for light and ventilation. There shall be adequate provision of sweepers to keep the places clean. There shall be a maidservant in attendance.

39.10.2  Sanitary utensils shall be provided to the satisfaction of local medical, health a municipal or cantonment authorities. Use of huts shall be restricted to children, their attendants and mothers of children.

39.11  Canteen:
39.11.1 A cooked food canteen on a moderate scale shall be provided for the benefit of workers wherever it is considered necessary.

39.12 Anti-malarial precautions:

39.12.1 The CONTRACTOR shall, at his own expense, conform to all anti malarial instructions given to him by the Engineer, including filling up any borrow pits which may have been dug by him.

39.13 Awareness and Education of HIV/AIDS

39.13.1 The CONTRACTOR shall provide/carryout HIV/AIDS awareness and training programme to its labour and management, at least twice per year during the construction period.

39.14 Child Labour Prohibition

39.14.1 The CONTRACTOR shall not employ Child Labour for any works or in any manner under the Contract at any time. In the event that the CONTRACTOR uses child labour, the Employer shall terminate the Contract.

39.15 Amendments:

39.15.1 The Employer may, from time to time, add to, or amend these Rules and issue such directions as it may be considered necessary for the proper implementation of these Rules or for the purpose of removing any difficulty, which may arise in the administration thereof.
REQUEST FOR PROPOSAL FOR IMPLEMENTATION OF “SMART STREET LIGHTING”

For Spine Roads in Guwahati On Design, Build & Operate Basis

Guwahati Smart City Limited,
Guwahati, Assam

Tender Notice No. .................. Dated: ...../....../........

Volume IV: Price Schedule
Guwahati Smart City Limited

e-Tender Notice
International competitive bidding

3rd Floor, STATFED Building
G.M.C.H. Road, Bhangagarh
Guwahati-781005

No.: SPV/GSCL/DEV/45/2017/4

Date: 30/01/2018

MD, GSCL invites Request for Proposal for Implementation of "Smart Street Lighting" on Design, Build and Operate basis with Operation and Maintenance period of 1 (One) Year in Guwahati.

The detail tender documents will be available in the e-tendering portal: www.assamtenders.gov.in & www.gscl.in from date: 30-01-2018. Tenders are to be submitted online through the e-procurement portal www.assamtenders.gov.in only. Duration of online submission is 28-02-2018 upto 15:00 (3:00 p.m). Hardcopy of tenders shall be submitted at last by 01-03-2018 11:00 a.m. The Technical Tender opening shall be done on 01.03.2018 at 15:00 (3:00 p.m). Those tenders will be rejected which have not been submitted online.

Dr. M. Angamuthu, IAS
Managing Director
Guwahati Smart City Limited
**NOTICE INVITING TENDER (This supersedes all earlier notices)**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Method of Selection</td>
<td><strong>Technically Qualified Lowest Evaluated (L1) BIDDER</strong></td>
</tr>
</tbody>
</table>
| 3.      | Availability of RFP Documents       | Download from (www.gscdal.in) & https://assamtenders.gov.in  
Online Tender Submission On https://assamtenders.gov.in                                                                                   |
| 4.      | Employer/Authority                  | Guwahati Smart City Limited (GSCL)  
Staffed Building, Bhangagarh, Guwahati-781005                                                                                                                                                        |
| 5.      | Officer inviting Bids / Bid Opening Authority | Managing Director, Guwahati Smart City Limited                                                                                                           |
| 6.      | Estimated Tender Amount             | **Rs. 49.10/- Cr.**  
(Rupees Forty Nine Crores Ten Lakhs only)  
Construction Cost plus Operation and Maintenance cost for 1 (One) year.                                                                              |
| 7.      | Period of Completion                | 30 weeks or 210 days from the date of Award of Contract                                                                                              |
| 8.      | Defect liability period             | 1 (One) year from issue of Completion Certificate                                                                                                  |
| 9.      | Operation and Maintenance Period    | Period of 1 (One) year from the date of successful Commissioning of LED Street Lights and Centralized Control & Monitoring System and issuing completion certification on installation from authority. |
| 10.     | Date of Issuance of RFP            | 30-01-2018 1500 hr onwards                                                                                                                         |
## NOTICE INVITING TENDER (This supersedes all earlier notices)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>Bid Document Fee (Non-refundable)</td>
<td><strong>Rs. 20000/-</strong> (Rupees Twenty thousand only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In the form of Demand Draft / Bankers Cheque in favor of MD, GSCL payable at Guwahati</td>
</tr>
<tr>
<td>12.</td>
<td>Bid Security/Earnest Money Deposit (EMD)</td>
<td><strong>Rs. 98.00/-</strong> Lakhs (Rupees Ninety Eight Lakhs only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In form of Demand Draft in favor of MD, GSCL payable at Guwahati or by Bank Guarantee of Nationalized bank, having branch at Guwahati (as per format attached in Bid Document)</td>
</tr>
<tr>
<td>13.</td>
<td>Last date and time for Submission of Pre-Bid Queries</td>
<td>07-02-2018, 1600 hrs</td>
</tr>
<tr>
<td>14.</td>
<td>Pre-Bid Meeting Date, Time &amp; Venue</td>
<td>08-02-2018 from 1100 hrs at the Office of Guwahati Smart City Limited (GSCL)- Statfed Building, Bhangagarh, Guwahati-781005</td>
</tr>
<tr>
<td>16.</td>
<td>Last Date and time for on line bid submission</td>
<td>28-02-2018 Up to 1500 hrs</td>
</tr>
<tr>
<td>17.</td>
<td>Last Date of Physical submission of Bid (Tender Fee, EMD, Technical Bid) in Hard Copy</td>
<td>01-03-2018 Up to 1100 hrs</td>
</tr>
<tr>
<td>18.</td>
<td>Date of opening of Technical Bids</td>
<td>01-03-2018 after 1500 hrs</td>
</tr>
<tr>
<td>19.</td>
<td>Bid validity</td>
<td>Bid must remain valid up to 180 (One Hundred &amp; Eighty) days from the actual date of submission of the Bid.</td>
</tr>
<tr>
<td>Sr. No.</td>
<td>Item</td>
<td>Description</td>
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<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>20.</td>
<td>Retention Money</td>
<td>5 (%) percent of each Interim payment certificate will be deducted as retention amount and will be returned after successful completion of Defect Liability Period of 1 (One) year.</td>
</tr>
<tr>
<td>21.</td>
<td>Mobilization Advance</td>
<td>5% of the Awarded Contract Value</td>
</tr>
<tr>
<td>22.</td>
<td>Performance Security</td>
<td>10 (%) percent of Awarded Contract Amount in form of Bank guarantee valid up to completion of operation &amp; maintenance</td>
</tr>
<tr>
<td>23.</td>
<td>Currency</td>
<td>Currency in which the Bidders may quote the price and will receive payment is Indian Rupees (INR) only.</td>
</tr>
</tbody>
</table>
| 24.    | Name and Address for Correspondence | Office of Guwahati Smart City Limited (GSCL)-Statfed Building, Bhangagarh, Guwahati-781005  
|        |                          | mdsmartguwahati@gmail.com  
|        |                          | www.gscdal.in                                                             |
| 25.    | Joint Venture            | Maximum Two (2) Members in Joint Venture are allowed                       |
| 26.    | Place of Arbitration     | Guwahati, Assam                                                           |