

INDIAN INSTITUTE OF TECHNOLOGY PATNA

Name of Work:-'Illumination of Football Ground at Sports complex in IIT Patna'

NIT No. IITP/IWD/ELECT/RS/NIT-01/2020-21

June- 2020

TENDER DOCUMENT

INDIAN INSTITUTE OF TECHNOLOGY, PATNA Bihta, Patna-801106 (Bihar)

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Name of Work

Illumination of Football Ground at Sports complex in IIT Patna.

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INDIAN INSTITUTE OF TECHNOLOGY, PATNA Bihta, Patna-801106 (Bihar)

1. NOTICE INVITING e-TENDER (NIT)

The Registrar, Indian Institute of Technology Patna, invites E- tenders item rate on prescribed tender documents under two bid system (Technical Bid and Price Bid) for the work of 'Illumination of Football Ground at Sports complex in IIT Patna' from the Original Equipment Manufacturers or their Authorized Distributors/Dealers/Channel Partners or Experienced Contractor/Firms who have executed similar nature works in any Central / State Government /PSU and who fulfill other eligibility criteria of Tender Document.Tender notice available on www.eprocure.gov.in/eprocure/app, www.eprocure.gov.in/eprocure/app, www.iitp.ac.in.

a)	Bidding Document No.	IITP/IWD/Elect./RS/NIT-01/2020-21dated 15.06.2020
b)		Illumination of Football Ground at Sports complex in IIT Patna.
c)	Estimated cost put to the Tender	Rs. 62,89,824/- (Rupees Sixty Two Lakh Eighty Nine Thousand Eight Hundred Twenty Four only).
d)	Period for completion	5 Months
e)	Cost of Tender document.	NIL
f)	Earnest Money Deposit (EMD)	Earnest money Deposit (EMD) of Rs1,25,796/- (Rupees One Lakh Twenty Five Thousand Seven Hundred Ninety Six only) to be deposited in the institute's account through SBI i-collect and the receipt of submission is to be uploaded along other technical bid documents. For details regarding submission of EMD, the webpage with following link may be visited: https://www.iitp.ac.in/images/pdf/snp/SBI%20I-Collect.pdf Alternatively, the bidders may provide an unconditional bank guarantee of Rs.1,25,796/-valid for 6 months from the last date of bid submission in the format provided in Annexure-II or Fixed Deposit Receipt endorsed in favour of IIT Patna.
g)	Bid Document Sale/Download Start Date and Time	14.00 hrs. on 16.06.2020
h)	Bid Submission Start Date	12.00hrs on 25.06.2020

i)	Pre-bid meeting	11.30 hrs. on 25.06.2020 in the HOD Office, Third floor, Directorate side in Admin block of IITP.
j)	Bid Submission End Date and Time	15.00 hrs. on 07.07.2020
k)	Date and Time for Opening of Bio (Technical Bid)	15.30 hrs. on 08.07.2020
l)	Financial bid Opening	To be intimated later on.
m)	Security Deposit	5% of the tendered amount, to be refunded after completion of Defect liability period.
n)	Performance Guarantee	5% of the tendered amount, in prescribed proforma from any scheduled bank.
0)	Defect Liability period	3 Years from the date of completion.
p)	Validity of Offer	120 Days from the date of opening of price bid
q)	Engineer-in-charge Address	Executive Engineer, Electrical
		(Institute Works Department)
		Indian Institute of Technology Patna,
		Kanpa Road, Bihta, Patna-801106
		Ph:- 0612-3028718, 3028710
		E-mail:- ee_electrical@iitp.ac.in

The tender document can be downloaded from website. Corrigendum, if any would appear on the www.eprocure.gov.in/eprocure/app and IIT Patna website. IIT Patna reserves the right to reject any or all the tenders in part or full without assigning any reasons thereof.

2. INSTRUCTIONS FOR ONLINE BID SUBMISSION

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: https://eprocure.gov.in/eprocure/app

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: https://eprocure.gov.in/eprocure/app) by clicking on the link "Online bidderEnrollment" on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

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

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 5) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 6) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained

using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

- 7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 9) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

3. <u>INFORMATION AND INSTRUCTIONS FOR BIDDERS</u>

NIT NO. IITP/IWD/Elect/RS/NIT-01/2020-21

NAME OF WORK:-Illumination of Football Ground at Sports complex in IIT Patna.

INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR e- TENDERINGFORMING PART OF NIT AND TO BE POSTED ON WEBSITE

- a. Information and instructions for Contractors will form part of NIT and to be uploaded on http://www.eprocure.gov.in/eprocure/appwebsite.
- b. The bid document consisting of scope of works and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website http://www.eprocure.gov.in/eprocure/app. But the bid can only be submitted after uploading the documents such as EMD and other documents as per tender document.
- c. The Draft information and instructions to Contractors may be modified suitably by NIT approving authority as per requirement.
- d. The bidder must ensure to quote rate for each items separately in the specified column. If any column of rate against any item remains left blank by the bidder, it shall be treated that the bidder has quoted nil rate for that and the item will be executed by the bidder free of cost.
- e. IIT Patna shall not be responsible for non-receipt bid due to internet issues or any other reasons.
- f. The work is estimated to cost Rs.62,89,824/-. This estimate however, is given merely as a rough guide.
- g. Tender documents consisting of specifications, schedule of quantities of the various classes of work to be done and the set of terms & conditions of contract to be complied with by the contractor whose tender may be accepted and other necessary documents can be seen on website http://www.eprocure.gov.in/eprocure/app.
- h. The information and instructions for tenderers / bidders posted on the web-site shall form part of bid/tender documents.
- i. The bid can only be submitted after scanning and uploading the mandatory details within the period of tender submission as per critical data sheet.
- j. Envelope containing Cost of EMD(in case of bank guarantee or FDR)(with due mention ofName of work, NIT No, Date & time of opening of bids) to be submitted in HOD(IWD) Office orinIWD Tender Box placed at Ground floor, Admin Block(Left Wing). The documents submitted shall be opened as per scheduled time mentioned.

- k. Online bid documents submitted by intending bidders shall be opened only of those bidders, whose Earnest Money Deposit (EMD) placed in the envelope are found in order.
- I. The Contractor, whose tender is accepted, will be required to furnish performance guarantee of 5 % (Five Percent) of the tendered amount within the specified period. This guarantee shall be in the form Banker's cheque of any scheduled bank / Demand draft of any scheduled bank / Pay order of any scheduled bank/ Bank Guarantee of any scheduled bank. In case the contractor fails to deposit the said performance guarantee within the period, including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 90 days beyond that.
- m. IITP will deduct security deposit from each bill till the sum will amount to 5% of the total bid value of the work. Security deposit will be refunded to bidder after successful completion of Defect liability tenure of 3 years.
- n. This Notice Inviting Tender shall form a part of the contract document. The successful tenderer/ contractor on acceptance of his tender by the Accepting Authority, shall sign the contract Agreement consisting of the notice inviting tender and all the documents within seven (7) days from the stipulated date of start of the work.
- o. There shall be defect liability period of 3 Years from date of successful completion/handover. During defect liability period, contractor has to rectify/replace defected items.
- p. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.
- q. The competent authority does not bind itself to accept the lowest or any other tender and reserves the right to reject any or all the tenders received without the assigning any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.
- r. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.

- s. Tender for the works shall remain open for acceptance for a period of One Hundred Twenty days (120) from the date of opening of tenders(Price bid). If any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the Institute, then the Institute shall, without prejudice to any other right or remedy, be at liberty to forfeit 100% of the said earnest money as aforesaid. Further the tender shall not be allowed to participate in the re-tendering process of work.
- t. In case the contractor fails to commence the work specified in the tender documents on 7th day or such time as may be mentioned in the letter of award or from the date of handing over the site wherever is later, the Institute shall, without prejudice to any other right or remedy, be at liberty to forfeit whole of the earnest money absolutely.
- u. The time allowed for carrying out thework is 5 months from the day of acceptance of work order placed by IITP.
- v. Rates quoted by the bidders shall be inclusive of GST(Goods and service tax- Central, State and interstate) and all other taxes applicable.
- w. Bidder's quoted Rates/Prices for executing the activities under the Contract shall remain firm till completion of entire work and shall not attract any escalation under any circumstances whatsoever.
- x. If any information furnished by the bidder is found as false / fabricated, then his bid will be rejected and treated as cancelled. Even if it is detected at any stage after signing of contract, it would lead to termination of contract besides forfeiture of EMD. In such cases the bidder may be debarred from participation in future tendering process in IITP as decided by Competent Authority.
- y. The Earnest Money received shall be refunded to the unsuccessful bidders without any interest upon executing the Contract Agreement by successful bidder.
- z. The bidders may contact to AE(Electrical), IWD, IIT Patna (Ph:- 0612-3028710) for any clarification during the office hrs.
- aa. The Bidder(s) may note that ONLINE BIDS will ONLY be accepted. All the requisite supporting documents mentioned in the bid document should and must be uploaded. The Bids sent through FAX, E-mail, by hand and/or by post shall not be accepted/ processed in any case.
- bb. In case, holiday is declared by the Government on the day of opening the bids, the bids will be opened on the next working day at the same time. The IITP reserves the right to accept or reject any or all the tenders.
- cc. There shall be pre-bid meeting on 25.06.2020 at 11.30 am In the office of IWD/ Meeting room, 3rd floor, Admin block at IIT Patna, Bihta campus & bidders or their authorized representatives can attend the pre bid meeting. The bidders may seek any clarification on or before the pre-bid meeting. Intending bidder(s) may be send their queries, if any through e-mail to the engineer-in charge on and before the pre id meeting. No queries shall be entertained after the pre bid meeting.
- dd. Conditional tenders will be summarily rejected.

4. Eligibility Criteria:

Contractors/ vendors who fulfill the following requirements shall be eligible to apply.

Eligibility criteria:-. Applications from consortium/ joint ventures shall not be accepted. Experience of only the bidding entity shall be considered.

The applicant has successfully completed following works during last seven years with Central/State Government Organization/ Central Autonomous Body/ Public Sector Undertaking.

(i) One *similar completed work costing not less than the amount equal to 80% of the estimated cost.

OR

(ii) Two *similar completed works costing not less than the amount equal to 60% of the estimated cost.

OR

- (iii) Three *similar completed works costing not less than the amount equal to 40% of the estimated cost.
 - "Similar work" shall mean 'Outdoor Sports ground lighting work with High mast' during last seven years ending on last date of the month previous to the one in which applications are invited. Sports ground like Football, Cricket, Hockey etc.
 - A Completion certificate from Client along with copy of Award letter/ Work Orders/BOQ must be submitted by the bidder. Certificates from private organizations for whom such work have been executed shall not be accepted.
 - The bidder should have achieved an average annual financial turnover (gross) of 100% of the estimated cost during the last three financial years ending 31st March 2019. This should be duly audited by Chartered Accountant. The multiplication factor of 7% per annum simple interest is not applicable on the Annual Financial Turnover figures.
 - The bidder should not have incurred loss (profit after tax should be positive) in more than two years during last five financial years ending31st March 2019, duly audited and certified by the Chartered Accountant.
 - Bidder must hold solvency certificate from any scheduled bank for a minimum value of 40% of the estimated cost, issued not earlier than 6(six) months from the last date of submission.
 - The validity of the registrations and licenses should be valid as on the date of tender submission.
 - Technical Bid documents must be uploaded as per clause-5.
 - Conditional tenders will not be accepted.

5. <u>List of Technical bid Documents to be uploaded:</u>

- a) Scanned copy of Earnest Money Deposit (EMD) submission or its exemption, if any.
- b) Scanned copy of Experience certificates as defined in Para1.
- c) Scanned copy of GST No and Scanned copy of Pan Card.
- d) Scanned copy of CA Audited Annual Accounts for Financial Years 2016-17, 2017-18, 2018-19 with ITR Form. Average Annual Turnover for last three financial years i.e.2016-17, 2017-18, 2018-19 should not be less than Rs 62.89 Lakh.
- e) Scanned copy of EPF & ESI Registration Certificate.
- f) Solvency certificate from any scheduled banks for a minimum value of 40% of the estimated cost.
- g) Valid Electrical Licence (Not applicable for OEM, if OEM directly participated).
- h) Authorization certificate from OEM for Authorized Distributors/Dealers/Channel Partners/Contractors/Firms (Self declaration, in case OEM directly participated).
- i) Scanned copy of Annexure- IV, V, VI, VII.

Note: - Technical Bid will be evaluated along with above mentioned documents/credential (i.e.from a to i)

6. General terms and Conditions

Measurement of Work Done

- 1.1 Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement, the value in accordance with the contract of work done. All measurement of all items having financial value shall be entered in Measurement Book so that a complete record is obtained of all works performed under the contract. All measurements and levels shall be taken jointly by the Engineer-in Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties. If for any reason the contractor or his authorized representative is not available and the work of recording measurements is suspended by the Engineer-in-Charge or his representative, the Engineer-in-Charge and the Department shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer in Charge or his representative shall be deemed to be accepted by the Contractor.
- 1.2 The contractor shall, without extra charge, provide all assistance with every appliance, labor and other things necessary for measurements and recording levels. Except where any general or detailed description of the work expressly shows to the contrary, measurements shall he taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available, then a mutually agreed method shall be followed.
- 1.3 The contractor shall give, not less than 7 days notice to the Engineer-in-Charge or his authorized representative in-charge of the work, before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-Charge or his authorized representative in-charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer-In-Charge's consent being obtained in writing, the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

1.4 Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels. It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

2. PAYMENT OF FINAL BILL

2.1 The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-Charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-Charge, will, as far as possible be made within 3 (three) months from the date of receipt of the bill by the Engineer-in-Charge or his authorized representative, complete with account of materials issued by the Department and dismantled materials.

3. MATERIALS TO BE PROVIDED BY THE CONTRACTOR

- 3.1 The contractor shall, at his own expense, provide all materials, required for the works other than those specified otherwise. The contractor shall, at his own expense and without delay, supply to the Engineer-in-Charge samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the Contractor shall be in conformity with the specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer-in-Charge furnish proof, to the satisfaction of the Engineer-in-Charge that the materials so comply. The Engineer-in-Charge shall within thirty days of supply of samples or within such further period as he may require intimate to the Contractor in writing whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the Engineer-in-Charge for his approval, fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with specifications, approval of the Engineer-in-Charge shall be issued after the test results are received.
- 3.2 The Engineer-in-Charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer-in-Charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-Charge shall also have full powers to require other proper materials to be

substituted thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the Contractor.

4. DEVIATIONS/ VARIATIONS

4.1 The Engineer-in-Charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

5. Extra Items and Pricing

a)In the case of Extra Item(s) being the schedule items {Delhi Schedule of Rates items), these shall be paid as per the schedule rate.

- b) In the case of substituted items (items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following para:
 - i) If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).
 - j) If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).
- c) In the case of extra item(s) (items that are completely new, not found in either Delhi Schedule of Rates of CPWD or in tender's schedule of quantities, and are in addition to the items contained in the contract), the contractor may within fifteen days of receipt of order or occurrence of the item{s}, claim rates, supported by proper analysis, for the work and the engineer-in-charge shall within one month of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the

contractor" determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

6. CARRYING OUT PART WORK AT RISK & COST OF CONTRACTOR

6.1 If contractor:

- (i) At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Engineer-in-Charge; or
- (ii) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after a notice in writing is given in that behalf by the Engineer-in-Charge; or Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing In that behalf by the Engineer-in-Charge.
- 6.2 The Engineer- in-Charge without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to:
- (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or
- (b) Carry out the part work/ part incomplete work of any item(s) by any means at the risk and cost of the contractor.
- 6.3 The Engineer-In-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work/ part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor.

7. LABOUR LAWS TO BE COMPLIED BY THE CONTRACTOR

- 7.1 The contractor shall comply Contract Labour (R &A) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971. The contractor shall also abide by the provision of the Child Labour Prohibition & Regulation) Act-1998. The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment &Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996. Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non execution of the work.
- 7.2 Nolabour below the age of fourteen years shall be employed on the work.

- 7.3 The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, Contract Labour (Regulation and Abolition) Act, 1970 and rules framed thereunder and other labour laws affecting contract labour that may be brought into force from time to time.
 - 8. No interest will be payable by the IITP on the Earnest Money Deposit(EMD) / SD. The earnest money of all the unsuccessful tenderers will be returned to them at the earliest.
- 9. Engaged manpower should not be paid less than minimum wages and allowances notified by Govt. time to time. Wage payment details of engaged manpower should be furnished to IITP when asked. Agency must follow the all labourrelevant act and regulation.
- 10. At any stage, if it is opined by IIT Authority that the agency is not performing satisfactorily as per system requirement, IIT reverses right to terminate the contract as deemed fit after giving 7 days notice. In such a situation, IIT may engage another agency on contractor's Risk and Cost. The security deposit of the agency will be forfeited by the Institute, if agency leaves the contract before contract ending period or non-completion of the full contract.
- 11. All safety measures will be the responsibility of agency at their own cost. The agency will be solely held responsible for any accident occurring due to non-compliances of safety measures.
- 12. Copies of drawings and SLD pertaining to the work can be seen by the bidders at office of the HOD (IWD), IIT Patna if available.
- 13. IITP reserves the right to reject any tender/bid wholly or partly without assigning any reason.
- 14. IITP shall have the right to verify the particulars furnished by the bidder independently.
- 15. Additional conditions specifications, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
- 16. The bid submitted shall become invalid and cost of bid shall not be refunded if:
- (i) The bidder is found ineligible.
- (ii) The bidder have not submitted taxation authorities registration certificate and labour law registration certificate such as service tax/ GST/CST /ESIC/EPF etc. as stipulated in the bid Document. (If applicable)
- 17. The acceptance of a tender will rest with the Competent Authority IIT Patna who does not bind him to accept the lowest tender and reserves to himself the, authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed conditions are not fulfilled or are incomplete in all respects are liable to be rejected.
- 18. The rates quoted against work should be for the complete finished item of Work and include all labour, material, taxes, overhead, duties, cess, insurance etc. Sales tax or any other tax in respect of this Contract shall be payable by the contractor and IITP will not entertain any claim whatsoever in this respect. So the rates are to be quoted are inclusive of all taxes.



7. TECHNICAL SPECIFICATIONS

1. **GENERAL**

The work shall be carried out as per national code or C. P. W. D specifications for works with correction slips issued up-to date unless otherwise specified in the schedule of quantities for the works.

The following Indian Standard Specifications and Codes of Practice will apply to the equipment and the work covered by the scope of this contract. In addition the relevant clauses of the Indian Electricity Act 1910 and Indian Electricity Rules 1956 as amended upto date shall also apply. Wherever appropriate Indian Standards are not available, relevant British and/or IEC Standards shall be applicable.

Necessary test certificates in support of the certification shall be submitted prior to supply of the equipment.

All equipments, switchgear, cables and other items of work shall conform to Indian/ IEC Standard specifications.

The installation shall conform in all respects to Indian Standards Code of Practice for Electrical wiring installation IS:732- 1989. It shall also be in conformity with the current Indian Electricity Rules and the Regulations and requirements of the Local Electric Supply Authority, Local laws/by laws in so far as these become applicable to the installation. Wherever these specifications call for a higher standard of materials and /or workmanship than those required by any of the above regulations, these specifications shall take precedence over the said regulations and standard. In general, the materials, equipment and workmanship shall conform to the following Indian Standards, unless otherwise called for.

It is to be noted that updated and current Standards shall be applicable irrespective of those listed below.

Low voltage Switchgear and Control gear specifications IS 13947: 1993

Part I – General

Part 2 - Circuit Breakers

Part 3 - Switch Fuse Units

Part 4 – Contactors and Motor Starters

Part 5 - Control Circuit Devices

XLPE insulated PVC sheathed armoured

Cables of 1.1kv grade as per IS 7098 Part-I &II 1988/1985

Low voltage Switchgear and Control gear assemblies IS 8623: 1993

Marking of Switchgear bus bars IS 11353: 1985

Degree of Protection of Enclosures for low IS 2147: 1962

Voltage switchgear

Code of Practice for selection, installation and

Maintenance of Switchgear IS 10118: 1982

Code of practice for earthing IS 3043 -1987

Specification for low voltage switchgear and

control gear assemblies IS 8623 -1993 (Part-I to III)

General Specifications for Electrical Works:

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(Part I - Internal) - 2013.

(Part II - External) - 2007.

(Part IV - Substation) - 2007.

(Part VII – DG Set) - 2006
```

2. SCOPE OF WORK

The scope of works will include supply, installation, testing, commissioning and performance testing of LED sports lighting system of Football Ground at Sport Complex, IIT Patna in accordance with requirements documented in BOQ and technical specifications attached herewith in the corresponding section of tender documents.

The scope basically covers the following activities, though not limited to and all associated works, services as may be required to complete the installation in all respects within the battery limited defined in the specifications and necessary for the installation to achieve constant illumination levels for 10 years.

- Lighting design computer models guaranteeing constant illumination field for 10 years and system engineering, including structural design for the Stadium mast and its foundation for 25 Years.
- 2. The contractor/OEM shall have to offer a direct 3 year FREE replacement on-site warranty towards the installed sports lighting system.
- 3. System should comply the minimum design parameter as defined in clause-4.
- 4. The Stadium mast shall have provisions to increase the light levels to Class-Il (>500 Lux) at a later period by increasing only the number of LED Lights.
- 5. The final achieved light levels and readings etc. shall be carried-out by the OEM engineer and certificate to that effect shall be issued.
- 6. Hot dipped galvanized polygonal Stadium type high mast with associated special cross arms, service platform, fix type ladder, etc.& all related parts after commissioning shall be under contractor scope.
- 7. LED Sports Floodlight luminaries outdoor remote driver type complete with accessories.
- 8. Outdoor aluminum enclosure boxes housing remote drivers and supporting electrical equipments comprising; drivers, surge protection, fuses etc. for each luminaries and safety disconnect switch for each circuit.
- 9. Wire harness complete with plug in connectors provided inside the pole for electrical connections from driver unit Up to each floodlight.
- 10. Electrical earth system for the high mast and electrical equipments as per applicable standards.

- 11. All civil works related to the lighting system including civil and structural designs, construction of RCC Shallow foundation M25 Grade for Stadium mast according to safe soil bearing capacity applicable to the project site.
- 12. Performance testing of the installation to establish lighting levels guaranteed by the bidder during commissioning.
- 13. The area to be lit is the Football Ground located at sport complex IIT- Patna campus.
- 14. Preparation and Submission of GFC drawings for approval. Five sets of approved GFC drawings to be submitted.
- 15. Preparation and Submission of As-built drawings after completion of works at site. Three sets of As-built drawings after verification.
- 16. Tenderer are advised to inspect the site of work and they will be deemed to have familiarizes themselves with the scope of work, local condition, drawings, specifications, condition of contract, etc. before submitting their tender.
- 17. The bidder shall arrange technical Engineer (for complete work supervision) so as to guarantee the system quality is maintained at the time of installation, testing and commissioning.

3. **DESIGN PARAMETERS:**

The illumination levels and associated parameters shall meet the following requirements of Class-I (>200 Lux). The system shall have provisions to increase the light levels to Class-II (>500 Lux) at a later date by increasing only the number of LED Lights.

Design Criteria:-

Horizontal Av. Lux = >200
Min/Av. U2 = > 0.6
Min/Max U1 = > 0.4
Glare Rating GR = <50
Maintenance Factor = 0.85
Colour Rendering = > Ra70
Colour Temperature = >5000K
Ht. of the Stadium High mast = 25Meter
Type of floodlight = 350W-450W LED Sports Floodlight Fixtures

All illumination values shown above are constant light levels to be maintained over a period of 10 years. A maintenance factor of 0.85 should be used to guarantee the maintained illumination levels.

DETAILED TECHNICAL SPECIFICATIONS OF LED LIGHTING SYSTEM

This section provides technical specifications of various constituents of the LED lighting system. The products and equipments offered by the bidder must conform to these specific requirements in addition to the stipulations of applicable standards / norms.

1.0 Stadium high Mast

- 1.1 The masts & foundation shall be designed to cater light levels to Class-II (>500 Lux) at a later date by increasing only the number of LED Lights.
- 1.2 The mean probable design life of structure should be 25 years.
- 1.2 The high mast shall be made of continuously tapered polygonal sections of lengths to arrive at the specified height.
- 1.3There shall be specified number of masts located as per approved layout drawing.
- 1.4 The high mast shall be structurally designed in accordance with technical report no. 7, published by institution of lighting engineer U.K. and to withstand the wind speed of 180 km/hrs. as per IS 875 Part-Ill with latest amendment.
- 1.5 The mast section should be manufactured with best steel grade with BSEN 10025, J355 or equivalent.
- 1.6 Each section of the mast shall be hot-dip galvanized through single dip process. Average thickness of the galvanizing shall not be less than 85 microns.
- 1.7 All welding shall be undertaken and performed as per BS 529.
- 1.8 The cross arms shall be made of suitable steel grade, duly galvanized and equipped with suitable provision for mounting of floodlights.
- 1.9 The mast should include proper stepped ladder including safety cage and working plateform to access the light fixtures
- 1.10 All MS parts including hardware shall be hot dip galvanized as per BS 729 / BSEN ISO 1461 or equivalent standard.
- 1.11 Stadium mast shall be conformed relevant standards such as ASTM A572 or equivalent for pole shaft and base plate .
- 1.12 The tenderer shall design and provide suitable shallow RCC foundation for the Stadium high mast with 'M-25' (minimum) grade concrete considering the safe soil bearing capacity at site as 10 T/sqmtr at 2 metre depth grade cement concrete. Detailed design calculation with drawing for foundation including soil testing report shall be submitted for approval.
- 1.13 Base section of the high mast shall be provided with weatherproof servicedoor having vandal resistance lock.
- 1.14 Stadium mast shall be installed outside the Athletic track for illumination of Football ground as per drawing.

2.0 Floodlight LED Luminaire

- 2.1 The Single LED floodlight luminaire shall be of special design for sports lighting application . The floodlights must have IES TM-21-11 testing for projected lumen maintenance or NABL certified LED fixturés along with LM 79 & LM 80 certification. The floodlight shall be of heavy and robust construction considering the required heat sinks etc. |
- 2.2 The floodlight shall consist of die-cast aluminium housing providing a rugged base and facilitating sophisticated photometric unit to prevent direct glare from the LED light source.
- 2.3 The floodlight shall be a state-of-the-art design allowing easy mounting.
- 2.4 The unit shall have a degree of protection of IP-66 allowing protection against ingress of dust, solid objects and water/moisture.
- 2.5 The photometric pattern shall provide optimal energy efficiency and minimal spill light and its visor should allow energy efficient light on the field preventing glare.

- 2.6 The front glass shall be made of 3mm thick safety tempered glass lens for resistance to thermal and mechanical shock.
- 2.7 To prevent the mounting cross-arms from sagging resulting in potential floodlight misalignment and to allow easy maintenance the driver and other electrical accessories shall be mounted in a remote outdoor type electrical enclosure box at the base of the mast.
- 2.8 Each floodlight luminiare shall be attached to the cross arm by a minimum of two (2) bolts, which shall be of stainless steel and there shail not be any penetration of the top or sides of the cross arms for mounting the floodlights.
- 2.9 To assure quality of lighting on the field is maintained, light fixtures shall have a positive repositioning device for each luminaire on the assembly. The device shall provide for automatic repositioning of the aiming after relamping. In addition, there shall be a stainless steel bolts and nuts to secure the alignment.
- 2.10 The floodlight shall have Class-H electrical insulation for complete safety.
- 2.11 The floodlight should have improved material and gasket system to virtually eliminate outgasing and contamination of the reflector and lens.
- 2.12 Type Test Report from a NABL accredited LAB should be submitted.

3.0 Light Source

- 3.1. The light source for floodlight luminaries shall be LED arranged in a suitable array.
- 3.2. The LED shall be of minimum 5000Kcolor temperature and minimum 70Ra CRI
- 3.3. The LED shall have instant ON-OFF capabilities.
- 3.4 The LED which fails during the warranty period should be replaced and installed at site within 7 days at no extra cost.

4.0 LED Driver and Electrical Enclosure

- 4.1 The driver shall functionally match with the LED floodlight by the bidder and must have been successfully been used for similar sports lighting projects. The driver should conform to UL testing for 50 deg. C ambient temperature operations.
- 4.2 The driver, surge suppresser, fuse and circuit disconnectors shall be mounted in an outdoor type enclosure made of aluminum sheet, duly power coated with high performance polyester, having a degree of protection minimum IP- 66,
- 4.3 For easy in identification and reduce maintenance time each driver, wire, cable, fuse, etc. shall be labeled to identify the floodlight luminaries it controls.
- 4.4 The driver gear electrical enclosure shall be mounted on each pole with suitable mounting arrangement to prevent ingress of water.

5.0 Internal Wiring

- 5.1 To protect from deterioration resulting from exposure to the harsh atmospheric conditions, all wiring for LED floodlights shall be contained inside the cross arms or poles and no external wiring even if provided with flexible conduits is acceptable.
- 5.2 To ensure quality and consistency of the equipment, the internal pole wire harness shall he assembled in the factory as part of the lighting equipment and will be covered under the manufacturer's equipment warranty.

- 5.3 To protect wire harness from expensive and time-consuming repairs caused by strain on the connection, the wire harness shall be supported at the top of the pole and in the middle by a stainless steel wire mesh grip matched to the size of the harness.;
- 5.4 To eliminate the wire harness from being accidentally removed, the wire mesh grip shall be mechanically attached to the pole to an enclosed snap hook.
- 5.5 The internal wiring shall be of copper having minimum cross section of 2.5 sqmm, colour coded for easy identification and shall include abrasion protection sleeve, strain relief and plug in connections.

6.0 Working Platform & Ladder

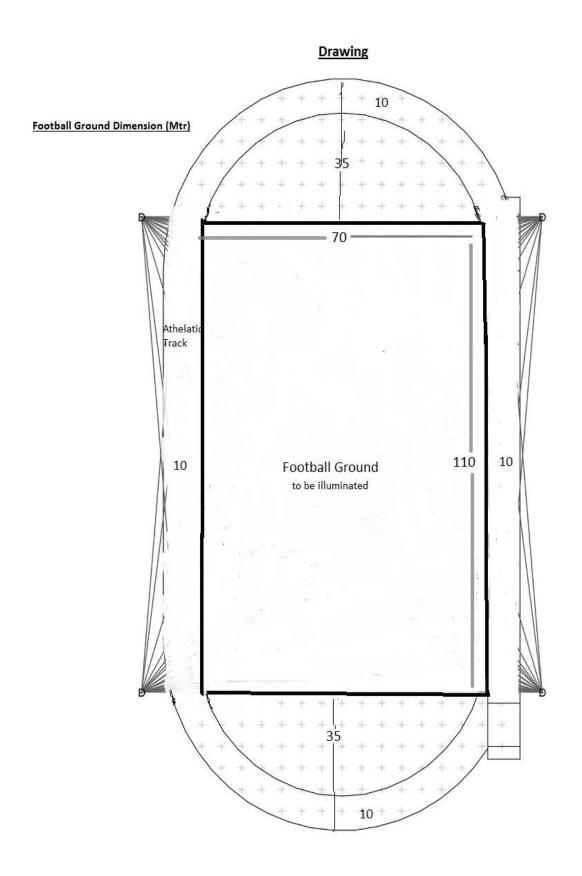
- 6.1 For access to the floodlight luminaire a fixed platform and ladder provided on each high mast.
- 6.2 The platform & ladder shall also be hot dip galvanised.

General Requirements

- 7.1 All components shall be designed and manufactured as a system. All luminaries, wire harnesses, drivers and other enclosures shall be factory assembled, aimed, wired and tested.
- 7.2 All exposed components shall be constructed of corrosion resistant material and/or coated to help prevent corrosion. All exposed steel shall be hot dip galvanized. All exposed hardware and fasteners shall be stainless steel of at- least 18-8 grade, passivity and polymer coated to prevent possible galvanic corrosion to adjoining metals. All exterior reflective inserts shall be anodized, coated with a clear, high gloss, durable fluorocarbon, and protected from direct environmental exposure to prevent reflective degradation or corrosion. All wiring shall be enclosed within the cross arms, pole, or electrical components enclosure.
- 7.3 During material handling, transportation, erection, etc. the atmost care shall be taken so that no damage or scratch or mark occurson any parts. If occurred, necessary action shall be taken by contractor.
- 7.4 Cable and wire selection should be done so that maximum 60% of loading is achieved. Calculation sheet showing the same shall be provided to institute authorities for approval during design stage. Necessary cable for providing the supply to DBs shall be in scope of Contractor. Selection of power cables shall be sized to restrict the voltage drop to 3%. The supply and installation of Gland and Lugs needed for termination will be in scope of Contractor. Cable size shall be decided by keeping maximum 60% load. All the cables shall have gland and lugs.
- 7.5 The system of wiring shall consist of PVC insulated copper stranded conductor flexible FRLS wires in metallic conduits in exposed and FRLS PVC conduit shall be used in concealed. Wires originating from two different phases shall not run in the same conduit. All wires shall have ferrules 'for identification. Minimum wiring size of FRLS copper conductor shall be 1.5 sq mm for light and 4 sq mm for power.
- 7.7 Electricity and water required for work will be provided by institute at one point on chargeable basis (as per institute norms) or contractor can arrange the same on his own risk and cost.
- 7.8 Lightining arrestor & Aviation lighting needed for the system shall be contractor scope.

- 8. **Defect Liability Period:** The equipment should be covered comprehensive on-site warranty against any manufacturing defect for a period of 3Years from the date of successful installation and acceptance. In case any part or whole of the equipment is found to be defective during the dlp period, then the same will have to be replaced/repaired free of cost at our premises. Warranty certificate should be submitted with the bill(s).
- 9. Insurance: Necessary insurance cover will be in the scope of Contractor. The date of delivery should be strictly adhered to failing which the work order is liable to be cancelled. Penalty may be imposed as per terms & conditions. Goods should be securely, safely and adequately packed & dispatched and delivered at the risk of supplier. In case of damage consignment the same should be replaced without any cost to the Buyer and the supplier can collect the damaged consignment after satisfactory replacement.
- 10. Inspection:- Before dispatch the materials, the Vendor will give sufficient advance notice of the date in writing on which the goods will be ready for inspection. If due to any reasons, it is not possible on the part of the purchaser to visit the plant/ site of the Vendor for inspection of the items, the Vendor shall share the detailed schematic diagram, pictures of item and the details as required by the IITP.
- 11. **Test Certificates:** Manufacturing test certificates & Type test certificates should be submitted with material. OEM Should have the corresponding product for at least 1 years in their product list.

8 DRAWING:-



9 LIST OF APPROVED MAKES.

1.	Rigid PVC Conduit & Accessories for conduit	 Precision, Polycab, AKG Or equivalent as approved by Engineer-in-Charge
2.	Flexible Wires - Cu - FRLS	 Finolex, RR kable, Polycab KEI Havells Or equivalent as approved by Engineer-in-Charge
3.	LED Luminaries	 Philips Bajaj Wipro Or equivalent as approved by Engineer-in-Charge
4.	MCB / Contactor/Astronomical Timer	 Legrand, Siemens, Schinider, L&T Or equivalent as approved by Engineer-in-Charge
5.	Power Cable	 Finolex Havells Polycab KEI Or equivalent as approved by Engineer-in-Charge
6.	Polygonal Stadium HighMast	 Bajaj Philips Transrail Valmont Or Equivalent as approved by Engineer-in-Charge
7.	Feeder Pillar	CPRI approved Panel Builder
8.	All other materials	Make and sample to be approved by Engineer-in-charge before use of work.

10-SCHEDULES

SCHEDULE `A '

Schedule of quantities enclosed.

SCHEDULE 'B'

Schedule of materials to be issued to the contractor.

- Nil -

SCHEDULE `C'

Tools and plants shall be hired to the contractor by the Institute.

- Nil -

SCHEDULE 'D'

Extra schedule for specific requirements/ document for the work, if any.

- Nil -

SCHEDULE 'E'

Schedule of components of cement, steel & other materials Labour etc. for price escalation.

- Nil -

SCHEDULE 'F'

Refer to Conditions and Clauses of document.

Definitions :		
i)	HOD IWD	Head In charge.
ii)	Department	Institute Works Dept
iii)	Engineer-in-Charge	EE(Electrical)
iv)	Tender Accepting Authority	Director, Indian Institute of Technology Patna

v)	СОРН	15 %
vi)	Standard Schedule of Rates	(i). C.P.W.D. Delhi Schedule of Rates 2016 with up to date correction slips issued up to the date of receipt of tenders.
(vii)	(i) Time allowed for submission of performance guarantee from the date of issue of letter of acceptance.	14 days
(viii)	Authority to give fair & reasonable extension of time for completion of work.	Director, IIT Patna

11-SPECIAL TERMS & CONDITIONS

- 1. Rates quoted in the financial bid must be inclusive of all central, state, local taxes, insurances, levy, cess, transportation & accommodation charge etc. including trade tax on works contract and GST applicable. There should be no increase or variation in the tendered price even in case of changes in GST/service tax, etc. Rate are also inclusive of payment to the Labour Department in accordance with the prevailing Labour law, including all statutory liability fixed by the Labour commissioner or any other law enforcement agency.
- 2. Agency shall be solely responsible for payment of wages/salaries and allowances to their personnel as per the rules or act applicable under government order. All central, state, local laws & bye laws applicable will be obeyed by the agency.
- 3. Without taking prior approval from the IITP Engineer-in -charge, no fittings/materials will be removed for the purpose of repairs/replacement.
- 4. The agency shall further keep the IITP Engineer-in-charge indemnified against any loss to the IITP property and assets. The IITP shall have further right to adjust and/or deduct any of the amounts as aforesaid from the payments due to the agency under this contract.
- 5. The agency shall ensure that the persons so deployed do not allow any property of the IITP related to Equipment's to be taken out of the premises without a Gate Pass signed by the designated officials of the IITP.
- 6. The agency shall at his own cost, if required, take necessary insurance cover in respect of the aforesaid services rendered to IIT Patna and The agency shall comply with the statutory provisions of Contract Labor (Regulation & Abolition) Act, 1970; Employees State Insurance Act; Workman's Compensation Act, 1923; Payment of Wages Act, 1936; The Provident Fund (and Miscellaneous Provisions) Act, 1952; Payment of Bonus Act, **Employees** Minimum Wages Act, 1948; Employer's Liability Act, 1938; and/or any other 1965; The rules/regulations and/or statues that may be applicable to them. The agency shall indemnify the Institute against all claims which may be made upon the Institute whether under the aforesaid statutes or any other statute in force during the currency of this contract.
- 7. Agency shall deploy his persons in such a way that they get weekly rest. The working hours / leave, for which the work is taken from them, do not violate relevant provisions of Shops and Establishment Act. The agency shall arrange to provide reliever equally qualified in case of absence/leave/off etc. The agency shall in all dealings with the persons in his employment have due regards to all recognized festivals, days of rest and religious or other customs. In the event of the agency committing a default or breach of any of the provisions of the Labour Laws including the provisions of Contract Labour (Regulation and Abolition) Act, 1970 as amended from time to time or in furnishing any information, or submitting or filling any statement under the provisions of the said regulations and rules which is materially incorrect, he shall without prejudice to any other liability pay to the IIT Patna, a sum as may be claimed by IIT Patna.
- 8. Agency shall keep the IIT Patna indemnified against all claims whatsoever in respect of the employees deployed by the agency, in case any employee of the agency so deployed enters in dispute of any nature whatsoever, it will be the primary responsibility of the agency to contest the same. In case IIT Patna is made party and is supposed to contest the case, the IIT Patna will be reimbursed for the actual expenses incurred towards Counsel fee and other expenses, which shall be paid in advance by the agency to IIT Patna on demand. Further, the agency shall ensure that no financial or any other liability comes on IIT Patna in this respect of any nature whatsoever and shall keep IIT Patna indemnified in this respect.
- 9. No accommodation facility will be provided by the IIT Patna.

- 10. Income tax/ other applicable taxes if any will be deducted at source as per the rules in force from the bill and the amount so deducted will be credited to the Income tax/concerned authority and a certificate of the amount credit will be issued by the Account Section of Institute.
- 11. Institute reserve the right to curtail or enhance the scope of work either by deletion of certain items entirely or by reducing/increasing the quantities of certain items as required and reviewed by the Institute from time to time and therefore, the final value of the work shall be worked out and paid to the extent of work actually carried out.
- 12. In the event of any question, dispute/difference arising under the agreement or in connection herewith (except as to matters the decision of which is specially provided under the agreement) the same shall be referred to the sole arbitration by the Director, IIT Patna& his decision will be final and binding.
- 13. IIT Patna shall not be responsible for any expense incurred by bidders in connection with the preparation & submission of their bids, site visit and other expenses incurred during bidding process.
- 14. The Arbitrator may give interim awards and/or directions, as may be required, Subject to the aforesaid provisions the Arbitrator & Conciliation Act, 1996 and the rules made hereunder and any modification thereof from time to time being in force shall be deemed to apply to the arbitration proceedings under this clause.
- 15. Bidder should not be under liquidation, court receivership or similar proceeding and shall submit certificate for the same.

16. Force Majeure:-

- a) Notwithstanding the provisions stated above, failure to provide the services by agency shall not be liable for forfeiture of its performance security or penalty & not be constructed as breach of contract at an event of force majeure.
- b) For purposes of this clause, "Force Majeure" means an event beyond the control of the agency and not involving the agency/service provider's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the service provider either in its sovereign or contractual capacity, wars or revolutions fires, floods.
- c) If a Force Majeure situation arises, the agency/ service provider shall promptly notify the Engineer In-Charge in writing of such conditions and the cause thereof. Unless otherwise directed by the employer in writing, the service provider shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.
- 17. **Theft of Parts:** Agency shall be fully responsible for theft, burglary, fire or any mischievous deeds by his workers/staff and shall replace the items under such category. Any loss occurred due to negligence will be recovered from the agency.
- 18. **JURISDICTION:** Disputes of any nature that may be arise in connection with the execution of this order shall be governed by the laws of India and subject to the jurisdiction of courts situated in Patna, Bihar India only.

12- PAYMENT TERMS

1.	Supply of material	50% of Item rate
2.	Installation	25% of Item rate
3.	Testing and Commissioning	20% of Item rate
4.	Security Deposit After Successful completion of Defect liability period of 3 Years	Balance 5%

ANNEXURE - I

IDMENNITY BOND

(On Non- Judicial Stamp Paper of Rs. 100/-)

Know all men by these presents that I/We do heday of2018. WHEREAS,IIT Patna, Registrar has appointed as	ereby execute Indemnity Bond in favor of the IITP on this the contractors for proposed work at IIT Patna.	
criminal complaints/liabilities, site mishaps and carising out of any mishaps at the site due to fault	T Patna, Registrar against any third party claims, civil or other accidents or disputes and/or damages occurring or ty work, negligence, faulty construction and/or for violating be being while executing /executed works by me/us.	
Any damages and loss or expense due to or resulting from any negligence or breach of duty on the part of me/us or my sub contractors if any, servants or agents. Any claim by an employee of mine/ours or of sub contractors if any, under the workmen's Compensation Act and Owners liability Act 1939 or any other law, rules and regulations in force for the time being and any acts replacing and/or amending the same or any of the same as may be in force at the time and under any law in respect of injuries to persons or property arising out of land and in the course of execution of the contract work and/or arising out of and in the course of employment of any workman/employee. Any act or omission of mine/ours of sub-contractors if any, our/their servants or agents which may involve any loss, damage, liability, civil or criminal action.		
IN WITNESS WHEREOF THEhas set his/their ha		
SIGNED AND DELIVERED BY THE	NAME AND ADDRESS	
AFORESAID	Contractor	
IN THE PRESENCE OF WITNESSES:		
1.	2.	

ANNEXURE - II

PROFORMAFORPERFORMANCEBAN KGUARNATEE

(TOBESTAMPEDINACCORDANCEWITH STAMPACT, IF ANY,)

Ref.				Bank G	Guarantee No,
				Date	
Indian Institute of Technology	Patna				
Amhara, Bihta- 801103					
Dear Sirs,					
We refer to the contract No			signed	on	
		ed] ("the Contract") ("			
			_ concei	rning	
(Brief description of the scope					
By this	Bank	Guarantee,	we,	the	undersigned,
		a Bank (or compg its Branch office at		ed under t	the law of
		ar	nd registered /		
principal office at		do hereby irrev	ocably guaran	tee	
payment to you up to ten (5%)	of the Cont	ract price until Ninet	y (90) days bey	yond the	Completion Period.

We undertake to make payment under this .Bank Guarantee upon receipt by us of your first written demand signed by your duly authorized officer declaring the Contractor to be in default under the Contact and without cavil or argument any sum or sums within the above named limits, without your need to prove or show grounds or reasons for your demand and without the right of the Contractor to dispute or question such demand. our

liability under this Bank Guarantee shall be to pay you the sum so requested or the amount then guaranteed hereunder whichever is less in respect of any demand duly made hereunder prior to expiry of the Bank Guarantee, without being entitled to inquire whether or not this payment is lawfully demanded.

This Bank Guarantee shall be valid from the date of issue until Ninety (90) days beyond the Completion Period of the Facilities i.e. upto an inclusive of

(vear,	month	and	date)	١.

Except for the documents herein specified, no other documents or other action shall be required, notwithstanding any applicable law or regulation.

If the Defect Liability Period is extended with respect to the Facilities in accordance with the Contract, the validity of this Bank Guarantee shall be extended with respect to ten percent (5%) of the Contract Price of that part until expiry of 90 days beyond such extended Completion period.

Our liability under this Bank Guarantee shall become null and void immediately upon its expiry, whether it is returned or not, and no claim may be made hereunder within one month from the date of such expiry or after the aggregate of the sums paid by us to you shall equal the sums guaranteed hereunder, whichever is the earlier.

All notices to be given under shall be given by registered (airmail) posts to the addressee at the address herein set out or as otherwise advised by and between the parties hereto.

We hereby agree that any part of the Contract may be amended, renewed, extended, modified, compromised, released or discharged by mutual agreement between you and the Contractor, and this security may be exchanged or surrendered without in any way impairing or affecting our liabilities hereunder without notices to us and without the necessity for any additional endorsement, consent or guarantee by us, provided, however, that the sum guaranteed shall not be increased or decreased. No action, event or condition which by any applicable law should operate to discharge us from liability hereunder shall have any effect and we hereby waive any right we may have to apply such law so that in all respects our liability hereunder shall be irrevocable.and, except as stated herein, unconditional in all respects.

Yours truly,
Name of the Bank
Authorized Signature
Signature of
Witness.Name :
.Address .

Note:

- 1. The non-judicial stamp papers of appropriate value shall be purchased in the name of the Bank who issues the 'Bank Guarantee'.
- 2. Performance Security is to be provided by the successful bidder in the form of a Bank Guarantee which should be issued either:
 - (a) by a reputed bank located in the country of Employer and acceptable to the Employer, or
 - (b) by a foreign bank confirmed by either its correspondent bank located in the country of Employer which should be reputed and acceptable to the Employer, or
 - (c) by a Public Sector Bank in the country of Employer.

All banks except Public Sector Banks of the Employer's country shall have with overall international corporate rating or rating of long term debt not less than A- (A minus) or equivalent by a reputed rating agency.

ANNEXURE - III

INTEGRITY PACT

Between

Indian Institute of Technology, Patn	a (IITP) hereinafter referred to as "The Principal"
	and
	. hereinafter referred to as "The Bidder"

Preamble

In order to achieve these goals, the Principal will appoint an independent external Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the Integrity pact by all parties concerned, for all works covered in the project.

Section 1 - Commitments of the Principal

- (1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - No employee of the Principal, personally or through family members or through any channel, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - The principal will, during the tender process treat all contractor(s)/ Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Contractor(s)/Bidders the same information and will not provide to any Contractor(s)/Bidder(s), confidential / additional information through which the Contractor(s)/Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - The principal will exclude from the process all known prejudiced persons. The principal shall obtain bids from only those parties who have been shortlisted or pre-qualified or through a process of open advertisement/ web publishing or any combination thereof.
- (2) If the Principal obtains information on the conduct of any of its employees, contractor(s) and/or Bidder(s)which is criminal offence under the IPC/PC Act, or there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and subject to its discretion, can additionally initiate disciplinary actions.
- (3) The Principle will enter into agreement with identical condition with all contractor(s)/Bidder(s) for the different Work Packages in the aforesaid Project.

Section 2 – Commitments of the Bidder(s)/Contractor(s)

- (1) The Bidder(s)/Contractor(s) commit(s) itself/themselves to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - (a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract any material or immaterial benefit which he/she is not legally

- entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- (b) The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- (c) The Bidder(s)/Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- (d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agent/representatives in India, if any. Similarly the Bidder(s)/Contractor(s) of Indian nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guideline on Indian Agent of foreign supply" shall be disclosed by the Bidder(s)/Contractor(s). Further as mentioned in guideline all the payment made to the Indian agent /representative have to be in Indian Rupees Only. Copy of the "Guidelines on Indian Agents of foreign Suppliers" is annexed and marked as Annex-"A"
- (e) The Bidder(s)/Contractor(s) will, when submitting his bid, disclosed any end all payments he has made, is committed to or intends to make agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder(s)/Contractor(s) will not instigate third persons to commit offenses outlined above or be an accessory to such offenses.

Section 3-Disqualification from tender process and exclusion from future contracts

- (1) If the Bidder(s)/Contractor(s), before contract awarding the project or during execution has committed a transgression through a violation of Section 2 above or in any other form such as to put his reliability or credibility in question, the Principal, at it sole discretion, is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or to terminate the contract, if already awarded, for that reason, without prejudice to any other legal rights or Remedies available to the Principal under the relevant clause of GCC/SCC of the Tender/contract.
- (2) If the Bidder(s)/Contractor(s) has committed a transgression through a violation of any other form so as to put his reliability or credibility into question the Principal will also be entitled to exclude such Bidder(s)/Contractor(s) from future tenders/contract award processes. The imposition and duration of exclusion will be determined by the Principal, Keeping in view the severity of the transgressions. The severity will be determined by the circumstances of the case, in particular, the number of transgression and/or the amount of damage.
- (3) If it is observed after payment of final bill but before expiry of validity of integrity pact that the contractor has committed a transgression, through a violation of any of the term under section 2 above or any other term(s) of this pact, during the execution of contract, the principal will be entitled to exclude the contractor from the further tender/contract award processes.
- (4) The exclusion will be imposed for a minimum period of six (6) months and a maximum period of three (3 years).
- (5) If the Bidder(s)/Contractor(s) can prove that he has restored / recouped the damage to the principal caused by him and has installed a suitable corruption prevention system, the Principal may, at its sole discretion, revoke or reduce the exclusion period before the expiry of the period of such exclusion.

Section 4 - Compensation for Damages

- (1) If the Principal has disqualified the Bidder(s)/Contractor(s) from the tender process prior to the award according to Section 3, the Earnest Money Deposit (EMD)/Bid security furnished, if any along with the offer as per term of the invitation of the tender, shall also forfeited. The Bidder(s)/Contractor(s) understand and agree that this will be imposed by the principal, in term of Section 3 above.
- (2) If at any time after the awarding of the project, the principal has terminated the contract according to section 3, or if the Principal is entitled to terminate the contract according to Section 3, the security Deposit/Performance Bank Guarantee furnished by the contractor, if any as per term of the NIT/Contract shall be forfeited without prejudice to any other legal rights and remedies available to the principal under the relevant clause of General/Special Condition of contract. The Contractor(s)/Bidder(s) understand and agrees that this will be in Additional to the disqualification

and exclusion of the Bidder(s)/Contractor(s), As may be imposed by the Principal in term of Section 3 above.

Section 5 – Previous Transgression

- (1) The Bidder(s)/Contractor(s) herein declares that it is has committed no transgression in the last 3 years with any other Company in any country conforming to the anti corruption approached as detailed herein or with Government/any other Public Sector Enterprise in India that could justify its exclusion from the tender process.
- (2) If at any point of time during the tender process or after the awarding of the contract, it is found that the Bidder(s)/Contractor(s) has made an incorrect statement on this subject, he can be disqualified from the tender process or if, as the case be, terminated for such reason and the Bidder(s)/Contractor(s) can be black listed in terms of Section 3 above.

<u>Section 6 – Independent External Monitor / Monitors</u>

- ((1) The Principal shall, in case where the project value is in excess of Rs. 50 crores and above, appoint competent and credible Independent Monitor(s) with clearance of Central Vigilance Commission. The monitor shall review independently, the case referred to it to access whether and to what extent the parties concerned comply with the obligations under this Integrity Pact.
- (2) The case of non-compliance of the provision of the Integrity Pact, the complaint/ non-compliance is to be lodged by the aggrieved party with the nodal officer only as shall be appointed by the HOD IWD. The nodal Officer shall refer the complaint/ non-compliance so received by him to the aforesaid monitor.
- (3) The Monitor will not be subject to instructions by the representatives of the parties and will perform its functions neutrally and independently. The monitor shall reports to the HOD IWD, IITP.
- (4) The Bidder(s)/Contractor(s) accepts that the Monitor shall have the right to access, without restriction, all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to this project documentation. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s) with confidentiality.
- (5) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor.
- (6) As soon as the Monitor notices, or believes to notice, a violation of this Pact, he will so inform the Principal and request the Principal to discontinue and/or take corrective action or to take other relevant action. The Monitor can in this regard submit non-binding recommendation. However, beyond this the Monitor has no right to demand from the parties that they act in a specific manner and/or refrain from action or tolerate action.
- (7) The Monitor will submit a written report to the Director, IITP within 4 to 6 weeks from the date of reference or intimation to it and should the occasion arise, submit proposals for corrective action for the violation or the breaches of the provision of the agreement noticed by the monitor.
- (8) If the Monitor has reported to the Director, IITP of a substantiated suspicion of an offense under relevant IPC/PC Act and the Director, IITP has not, within reasonable time, taken visible action to proceed against such offense or reported it to the Chief Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, IITP.
- (9) The word 'Monitor' means Independent External Monitor and includes both singular and plural forms.

Section 7 - Criminal charges against violating Bidders/Contractors/Subcontractors

If the Principal obtains knowledge of conduct of a Bidder/Contractor or an employee or a representative or an associate of a Bidder/Contractor, which constitutes a criminal offence under the IPC/PC Act, or if the Principal has substantive suspicion in this regard, the Principal will forthwith inform the same to the Chief Vigilance Office, IITP.

Section 8 - Duration of Integrity Pact

This Pact shall come into force when both parties have legally singed it. The Pact shall expire, in case of the contractor(s), 3 (three) month after the last payment under the contract is made and in case of the unsuccessful bidder(s), 2 (two) month after the contract for the project has been awarded. If any claim is

made/loaded during this time, the same shall be binding and continue to the valid despite the laps of the pact as specified above, unless it is discharged/determined by HOD IWD of ITTP.

The Bidder(s)/Contractor(s), however, understand and agrees that even upon the completion of the Project and/or the last payment under the Contract having been made, if any transgression / violation of the terms of this pact comes/is brought to the notice of the principal, it may, subject to its discretion, blacklist and/or exclude such Bidder(s)/Contractor(s) as provided for in section 3, without prejudice to any other legal right or remedy so available to the Principal.

Section 10 - Other provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, Patna.
- (2) Changes and supplements as well as termination notices need to be made in writing.
- (3) If the Bidder/Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement shall remain valid and binding. In such a case, the parties will strive to come to an agreement to their original intentions.
- (5) Wherever he of his as indicated in the above sections, the same may be read As he/she, as the case may be.

(For & behalf of the Principal)	(For the Bidder/Contractor)
(Office Seal)	(Office Seal)
1 Id00	
Date	
Witness 1: (Name & Address)	
Witness 2: (Name & Address)	

ANNEXURE - IV

TENDER ACCEPTANCE LETTER

(On Company / firm's Letterhead)

To, Date:
The Registrar
I.I.T. Patna,
Bihta, Patna – 801106.

Sir.

Ref: Tender No. IITP/IWD/ELECT/RS/NIT-01/2020-21 for "Illumination of Football Ground at sports complex in IIT Patna."

I/we have carefully gone through the Terms & Conditions as mentioned in the above referred Tender document as per your advertisement, given in the abovementioned website(s).

- 1. I/we declare that all the provisions of this Tender are unconditionally acceptable to my company. I /we further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.
- 2. I/we hereby certify that I/we have read the entire terms and conditions of the tender documents from Page No. _____ to ____ (including all documents like annexure(s), schedules(s), etc.,) which form part of the contract agreement and I/we shall abide hereby by the terms / conditions /clauses contained therein.
- 3. The corrigendum(s) issued from time to time by your department /organizations too have also been taken into consideration, while submitting this acceptance letter.
- 4. I/we certify that all information furnished by the our Firm is true and correct and if at any stage, it has been found that the agency has furnished any wrong declaration / forged documents, the Competent Authority of IIT Patna may terminate contract with immediate effect without assigning any reason there of and suitable legal action should be taken against the agency which may include blacklisting / debarment from participating in any tender of IIT Patna for the period, approved by the competent authority.

Yours faithfully,

(Signature of the Bidder, with Official Seal)

ANNEXURE - V

DECLARATION OF ANNUAL TURNOVER (Balance Sheet)

(On Company / firm's Letterhead)		
Date:		
To,		
The Registrar		
I.I.T. Patna,		
Bihta, Patna – 801106.		
g.		
Sir,	NIT 01/201 21 for filly-minetian of	
Ref: Tender No. IITP/IWD/ELECT/RS/		
Football Ground at sports complex in	III Fama.	
1) I/we hereby declare that, our firm's Ann	ual Turnover as follows, and I/we have	
also supported an Audited Accounts for yo		
also supported all radiced recounts for yo	ar references.	
F. Y. 2016 – 17		
F. Y. 2017–18		
F. Y. 2018 – 19		
Yours faithfully,		
(Cianatura of the Didder with Official Carl		
(Signature of the Bidder, with Official Sea	l)	

ANNEXURE - VI

DETAILS OF THE FIRM

Ref: Tender No. IITP/IWD/ELECT/RS/NIT- 01/20-21

1.	Name of Firm	
1.	INAMIC OF THIM	
2.	Registered/Postal Address	
3.	Working Email id	
4.	Telephone no/Fax no/Mobile	
5.	Particulars of Registration with various government bodies/organization.	
6.	Details of Similar nature projects completed during past seven years.(Attach separate sheet if needed)	
7.	Were you ever debarred/ blacklisted by any department during the past seven years?	
8.	Name of Directors /Partners with Address	
9.	Permanent Account Number (PAN) No	
10.	GST Registration No. if applicable	
11.	BANK DETAILS:	
a.	Bank Name	
b.	Branch Address	
c.	Account No	
d.	Type of Account (Current/Savings)	
e.	MICR No.	
f.	IFSC Code	

Date: Name of the Authorized Signatory Place: Stamp & Signature

ANNEXURE - VII

COMPLIANCE SHEET

Ref: Tender No. IITP/IWD/ELECT/RS/NIT-01/20-21

	ITEMS	(YES
		/NO)
2.	25 Mtr high Hot Deep Galvanized Fix Type Polygonal Stadium High Mast with fixed type head frame structure, in two sections suitable for 180 Km/hrs wind speed as per IS 875 Part-III with latest amendment., Mast shall be suitable to carry 25 Nos. of 300-450W LED Flood light luminaries fittings to illuminate Football Ground as per the light levels- FIFA Class-II (Leagues and clubs). The mast should include proper stepped ladder including safety cage and working plateform to access the light fixtures, junction box, lightening finial & foundation bolts manufactured from special steel along with nuts, washers, anchor plate and common template & LED type twin dome aviation obstruction Light. Stadium mast shall be conformed relevant standards such as ASTM A572 or equivalent for pole shaft and base plate & BSEN ISO 1461 or equivalent for Galvanizing. The mean probable design life of structure should be 25 years. Stadium mast should comply specification & scope of work in Tender Document.	
3.	Flood light 350 to 450 Watt with a minimum system lumen output 47000 lumen and a system efficacy of 120 lumen/watt. The Luminaire shall have a rated system mean lifetime of 50000 burning hour @ L70. Correlated Colour Temperature (CCT) of Luminaire should not be less than 5000K and Colour Rendering Index (CRI) should not be less than 70 .The luminaire shall have a IP66 rating and IK08 along with the surge protection having a provision of protection upto 10kV/KA. SPD should be able to sustain a minimum 15 hits of 10KA rating. The power factor should be greater than or equal to 0.95 and THD < 20%. Light distribution of luminaire should be of symmetric wide beam and optics should be anti-dust exposed lenses . The luminaires housing shall be made of non-corrosive high pressure die-cast aluminium to withstand extreme environments with corrosion resistant powder coating. The driver should be fully integrated with efficiency of more than 85%. The luminaire sould be able to operate at an ambient of (-) 10 deg C to (+) 45deg C ambient. The luminaire should be completely integrated and modular part should not be their to avoid gathering of dust. The maintenance factor consider during lux level calculation should be 0.85 . Product should be suitable for continuous operation (10-12 Hrs per day). The wattage of each LED should be greater than 1watt and less than 3watt. Only high power single white LED chip with ceramic based suitable for outdoor use is allowed. The LED used in the luminaire shall be SMD type of reputed manufacturer. The luminaire should be capable of withstanding voltage stress of 440V for 8hrs, should have an auto shutdown @325V and have an auto recovery feature. The Driver should be a potted driver not a printed circuit board without casing, mounted inside the luminaire. Luminaire fitting should designed for application in outdoor sports field. The luminaire should comply design criteria and specification in tender. Makes- As per approved make list in Tender documents. Light fitting should comply FIFA Stan	

Date: Name of the Authorized Signatory

Place: Stamp & Signature

Special condition for Safety at the Work Site

The contractor will identify one of the supervisors for taking care of implementation of Safety systems.

The Contractor should follow the following General Guidelines governing the safety rules as laid down under:

- 1. Nobody is allowed to work without wearing safety helmet. Chinstrap of safety helmet shall be always on. Drivers, helpers and operators are no exception.
- 2. No one is allowed to work at or more than three meters height without wearing safety belt and anchoring the lanyard of safety belt to firm support preferably at shoulder level.
- 3. No one is allowed to work without adequate foot protection.
- 4. Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas-cutting. For other jobs as and when site safety cocoordinator insists eye protection has to be provided.
- 5. All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job.
- 6. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.
- 7. Adequate illumination at workplace shall be ensured before starting the job at night.
- 8. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.
- 9. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.
- 10. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the tre-passers from entering the area.
- 11. Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
- 12. All electrical connections shall be made using 3 or 5 core cables, having a earth wire.
- 13. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.
- 14. A tools and tackles inspection register must be maintained and updated regularly.
- 15. Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.
- 16. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and / or safety personnel to be corrected on priority basis.
- 17. No children shall be allowed to enter the workplace.

- 18. All the lifting tools and tackles shall be stored properly when not in use.
- 19. Clamps shall be used on Return cables to ensure proper earthling for welding works.
- 20. Return cables shall be used for earthing.
- 21. All the pressure gauges used in gas cutting apparatus shall be in good working condition.
- 22. Proper eye washing facilities shall be made in areas where chemicals are handled.
- 23. Connectors and hose clamps are used for making welding hose connections.
- 24. All underground cables for supplying construction power shall be routed using conduit pipes.
- 25. Spill trays shall be used to contain the oil spills while transferring / storing them.
- 26. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.

Registrar IIT Patna