

REQUEST FOR PROPOSAL

Name of the Work: “Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited”



BAREILLY SMART CITY LIMITED (BSCL)

BAREILLY (UTTAR PRADESH, INDIA)



Employer: - Bareilly Smart City Limited (BSCL)

Nagar Nigam, Bareilly- 243001

Telephone: 0581-25510074

[Email: ceo.bscl01@gmail.com](mailto:ceo.bscl01@gmail.com)



**BAREILLY SMART CITY LIMITED (BSCL)
BAREILLY (UTTAR PRADESH, INDIA)**



Ref No: -BSCL/2020-21/ 739

Date:- 12/02/2021

Bareilly Smart City Limited, Bareilly invites e-tender for the following projects: -

S. No.	Name of the Work	Earnest Money Deposit (Rs.)	Tender fee with GST @ 18% (Rs.)	Work completion Period	Bid Start Date
01	Construction of GIC Incubation and 400-Seater Auditorium Building in Bareilly with 1 year Defect Liability Period Under Bareilly Smart City Limited	68 Lakhs	29,500	12 Months	20/02/2021
02	Selection of Consultant to Manage the Operations of Bareilly Incubation Center under Bareilly Smart City Limited	2 Lakhs	11,800	36 Months	20/02/2021
03	Engineering, Procurement and Construction of 8.10 Kms of Major Road Development in ABD area on EPC mode with 1 Year Defect Liability and 3 years of Operation and Maintenance	1.36 Crore	29,500	12 months	20/02/2021

1.	Detailed NIT and Bid Document shall be available on: - https://etender.up.nic.in and http://www.bareillysmartcity.in
2.	Tender call notice in two Bid systems (Part- I: General & Technical Bid and Part-II: financial Bid/Price Bid/BOQ) from intending bidders fulfilling the eligibility criteria mentioned in this Notice and other qualifying requirements mentioned in this RFP.
3.	Amendment to NIT if any would be published on website only.
4.	In case of any queries on this RFP, intending bidders may contact THE GENERAL MANAGER, BAREILLY SMART CITY LIMITED, Bareilly (Tel. No: - 0581- 25510074, 7055519602) or send an email to: ceo.bscl01@gmail.com

Chief Executive Officer,
Bareilly Smart City Limited, Bareilly.

प्रकाशन हेतु नहीं

- सम्पादक, Hindustan Times (All Edition), Dainik Jagran (Local Edition)
इस अनुरोध के साथ कि अपने राष्ट्रीय संस्करण समाचार पत्र में उपरोक्त निविदा सूचना का प्रकाशन आगामी संस्करण में डी0ए0बी00पी0 दरो पर न्यूनतम स्थान में एक बार प्रकाशित करने का कष्ट करे तथा 04 प्रतियों के साथ बिल भुगतान हेतु प्रेषित करें ।
- आयुक्त महोदय, बरेली मण्डल, बरेली की सूचानार्थ ।
- नोटिस बोर्ड पर चस्पा हेतु ।
- कम्प्यूटर प्रभारी/ आई.टी0 एक्सपर्ट नगर निगम बरेली को इस अनुरोध के साथ प्रेषित कि उक्त निविदा सूचना को नगर निगम, बरेली की वेबसाइट पर प्रदर्शित करने का कष्ट करें ।

Chief Executive Officer,
Bareilly Smart City Limited, Bareilly

BAREILLY SMART CITY LIMITED (BSCL)

BAREILLY

(UTTAR PRADESH, INDIA)

Letter no. BSCL/2020-21/739

Dt.12.02.2021

NATIONAL COMPETITIVE BIDDING THROUGH e-Procurement

Chief Executive Officer (CEO), Bareilly Smart City Ltd., Bareilly invites Item rate for the work mentioned below through e-Procurement in conformity with the terms and conditions of this advertisement and the detailed tender call notice in two Bid systems (Part- I: General& Technical Bid and Part-II: financial Bid/Price Bid/BOQ) from intending bidders fulfilling the eligibility criteria mentioned in this Notice and other qualifying requirements mentioned in this RFP. Bidders can participate in the bidding after registering them on E- tendering portal <http://etender.up.nic.in>. Bidder can download the RFP from <http://etender.up.nic.in> after paying the tender cost through online payment in the name of **Bareilly Smart City Limited, A/C No. : 0294001100000836, Name of Bank: Punjab National Bank, Branch: Pilibhit By-Pass Road, Bareilly, IFSC Code: PUNB0613400**. Bidder will have to upload the scanned copy of transaction slip along with technical bid failing this; the Bid is liable to be rejected. The Bidder should deposit the Earnest Money online in above mentioned account number or through Bank Guarantee of Nationalized Bank, pledged in favour of **Chief Executive Officer, Bareilly Smart City Limited**. The scanned copy of the transaction slip should be uploaded along with technical bid. The bidders should have necessary Portal enrollment (Digital Signature Certificate) under e-procurement process of Govt. of Uttar Pradesh in required class/category. In case of any queries on this RFP, intending bidders may contact CHIEF EXECUTIVE OFFICER, BAREILLY SMART CITY LIMITED, Bareilly (Tel. No :-0581- 25510074)

S.No.	Name of the Work	Earnest Money Deposit (Rs.)	Tender fee with GST @ 18%	Work completion Period
1.	Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited	66 Lakhs	29,500	12 Months

DISCLAIMER

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

This RFP is not an agreement and is not an invitation by the Employer to the prospective Contractor or any other person. The purpose of this RFP is to provide interested bidders with information that may be useful to them in the formulation of their Proposals pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the Employer in relation to the work. Such assumptions, assessments and statements do not purport to contain all the information that each bidder may require. This RFP may not be appropriate for all persons, and it is not possible for the Employer, its employees or advisers to consider the objectives, technical expertise and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in this RFP, may not be complete, accurate, adequate or correct. Each bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this RFP and obtain independent advice from appropriate sources.

Information provided in this RFP to the bidder (consultant/contractor/developer/Manufacturer/Supplier etc.) is on a wide range of matters, some of which depends upon interpretation of law. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Employer accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.

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

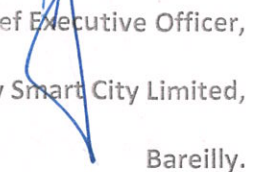
The BSCL also accepts no liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any bidder upon the statements contained in this RFP.

The BSCL may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this RFP.

The issue of this RFP does not imply that the Employer is bound to select a bidder or to appoint the selected bidder, as the case maybe, for the Consultancy and the BSCL reserves the right to reject all or any of the Proposals without assigning any reasons whatsoever.

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

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


Chief Executive Officer,
Bareilly Smart City Limited,
Bareilly.

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Project Profile



Site is located inside the Government Intercollege Campus and can be accessed from two roads . The site marked in red shall be developed into a 400 seater auditorium and an Incubation centre.

Site Facilities

Incubation Center

1. Reception and Lounge
2. Conference Room
3. Meeting Rooms
4. Lecture Hall
5. Mentor's Workstations
6. Incubatee's Workstations
7. Pantry & Washrooms
8. Service Areas

Auditorium

1. Lobby & Reception
2. 400 pax auditorium
3. Projector Room
4. Cafeteria & Kitchen
5. Green Room & Washrooms
6. Scenery Workshop
7. VIP Lounge
8. Artist's Lounge
9. Furniture Storage
10. Dormitories
11. Service Areas

Area Chart

S. No.	Particulars	Total Area (sqm)
A	Total Auditorium Built Up Area	4082
B	Total Incubation Center Built Up Area	1548
1	Total Plot Area	10980
2	Total Ground Floor Area	3490
3	Total First Floor Area	2140
4	Total Basement Area(125 Cars)	4030
5	TOTAL BUILT UP AREA	9660

RFP Format

The intent of this RFP is to invite bids from the Bidders for “Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1-year Defect Liability Period for the Bareilly Smart City Limited” under Implementation of the Smart City Mission in Bareilly”. The Request for Proposal (RFP) consists of three volumes viz.

RFP Volume 1: Instruction to Bidders

Volume 1 details the instructions with respect to the bid process management, technical evaluation framework, and the technical & financial forms.

RFP Volume 2: Scope of work including Functional & Technical Specifications

Volume 2 of the RFP provides information regarding the Project Implementation Plan, business requirements/applications to be covered and corresponding process related documentation, scope of work for the selected bidder and functional requirements along with the Schematic Tender Drawing set.

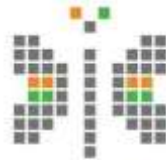
RFP Volume 3: Conditions of Contract and Contract Forms

Volume 3 contains the contractual, legal terms & conditions applicable for the proposed engagement.

REQUEST FOR PROPOSAL

Name of the Work: “Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited”

Volume 1: Instruction to Bidders



Smart City
MISSION TRANSFORMATION

BAREILLY SMART CITY LIMITED (BSCL)

BAREILLY (UTTAR PRADESH, INDIA)



Employer: - Bareilly Smart City Limited (BSCL)

Nagar Nigam, Bareilly- 243001

Telephone: 0581-25510074

[Email: ceo.bscl01@gmail.com](mailto:ceo.bscl01@gmail.com)

Contents

NATIONAL COMPETITIVE BIDDING THROUGH e-Procurement	2
Project Profile	6
RFP Format.....	8
RFP Volume 1: Instruction to Bidders	8
RFP Volume 2: Scope of work including Functional & Technical Specifications.....	8
RFP Volume 3: Conditions of Contract and Contract Forms	8
Volume 1: Instruction to Bidders	9
SECTION 1	14
1.1 Fact Sheet.....	14
1.1. Definitions and Acronyms	16
Section 2- Instruction to Bidders	20
2.1. Preamble:	20
2.2. Background	20
2.3. Brief description of Bidding Process	21
2.4. General.....	22
2.5. Source of Fund:	22
2.6. Eligible Bidders.....	22
2.7. Compliant Bids/ Completeness of Response	22
2.8. Bidder to Inform.....	23
2.9. Bid Preparation and Presentation costs	23
2.10. Pre-bid Clarification	23
2.11. Bid Processing Fee / Bid Document Fee and Transaction Fee	24
2.12. Bid Security/Earnest Money Deposit (EMD)	24
2.13. Bid Validity Period	25
2.14. Bid Formats	25
2.14.1. Pre-Qualification Bid Format	25
2.14.2. Technical Bid Format.....	26
2.14.3. Financial Bid Format.....	26
2.15. Language	26
2.16. Authentication of Bids	27
2.17. Amendment of Request for Proposal	27
2.18. Bid Price and quotation submission.....	27
2.19. Insurance.....	28

2.20.	Deviations and Exclusions	28
2.21.	Total Responsibility.....	28
2.22.	Late Bids	28
2.23.	Right to Terminate the Process	29
2.24.	Non-Conforming bids.....	29
2.25.	Acceptance/Rejection of Bids	29
2.26.	Confidentiality	30
2.27.	Disqualification.....	30
2.28.	Key Personnel.....	31
2.29.	Fraud and Corrupt Practices	33
2.30.	Conflict of Interest	33
2.31.	Right to vary quantity by Authority.....	34
2.32.	Withdrawal, Substitution, and Modification of Bids	34
2.33.	Site Visit.....	35
2.34.	Acknowledgement by Bidder	35
2.35.	Proprietary Data	35
2.36.	Contacts during Bid Evaluation	36
2.37.	Maintenance Tools and Tackles.....	36
2.38.	Drawings, Data and Literature to be furnished	36
2.39.	Governing Law and Jurisdiction	36
	Section 3- Selection Process for Bidder	37
3.1.	Opening of Bids	37
3.2.	Preliminary Examination of Bids	37
3.3.	Evaluation Process	38
3.3.1.	Stage 1 : Pre-Qualification	39
3.3.2.	Stage 2: Technical Evaluation.....	39
3.3.3.	Responsiveness of Technical Proposal.....	39
3.3.4.	Stage 3: Financial Evaluation.....	40
3.3.5.	Correction of Arithmetical Errors.....	40
3.4.	Pre-Qualification Criteria	41
3.5.	Technical Evaluation Framework	45
3.6.	Technical Bid Evaluation Criteria	45
	SECTION 4- Award of Contract.....	51
4.1.	Notification of Award.....	51

4.2. Signing of Contract.....	51
4.3. Performance Bank Guarantee (PBG) / Performance Security:	51
4.4. Warranty & Maintenance	52
4.5. Failure to agree with the Terms & Conditions of the RFP	53
4.6. Miscellaneous.	53
Section 5- Annexure 1 – Template for Pre-Bid Queries.....	55
Section 6- Annexure – 02 - Formats for submission of Pre-Qualification Bid	56
6.1. Pre-Qualification Bid Covering Letter	56
6.2. Company profile.....	58
6.3. Declaration of Non-Blacklisting.....	62
6.4. No Deviation Certificate.....	63
6.5. Total Responsibility Certificate	64
6.6. Self-certificate for Project execution experience and Litigation History (In Bidding Entity's Letter Head)	65
6.7 No Relationship certificate.....	69
6.8 Self-Decalaration certificate.....	70
Section 7- Annexure 3 – Formats for Submission of the Technical Bid	71
7.1. Technical Bid Check-List	71
7.2. Technical Bid Covering Letter.....	69
7.3. Credential Summary	71
7.4. Bidder's Experience - Client Citations	72
7.5. Project Plan	73
7.6 Details of Resources proposed.....	76
7.7 Curriculum Vitae (CV) of Team Members	77
7.6. Conduct and Anti-Collusion Certificate.....	79
Section 8- Annexure 4 – Formats for Submission of the Financial Bid	80
Financial Bid	82
Section 9- Annexure 5 (a) – Performance Bank Guarantee	84
Section 10- Annexure 6 – Non-Disclosure Agreement	86
Section 11- Annexure 7 - Format for Power of Attorney to Authorize Signatory.....	89
Section 12- Annexure 8 – Manufactures / Producers Authorization Form	91
Section 13- Annexure 9 – Detailed BOQ Attached	93

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SECTION 1

1.1 Fact Sheet

This RFP is meant for the exclusive purpose of submitting the e-bid in accordance with the terms and conditions specified herein and this RFP shall not be transferred, reproduced or otherwise used for purposes other than that for which it is specifically issued

Sr. No.	Item	Description
1.	Method of Selection	The method of selection is Item Rate (lowest rate L1 bidder)
2.	Availability of RFP Documents	Download from www.etender.up.nic.in
3.	Date/Time of RFP Issuance	...20/02/2021... 6:00 PM
4.	Bid Processing fee (Non-refundable and Not – exempted)	Indian Rupees 29,500/- (Indian Rupees Twnty-Nine Thousand Five Hundred only) shall be paid via online transfer in favor of the “Chief Executive Officer, Bareilly Smart City Limited”.
5.	Bid Security/Earnest Money Deposit (EMD)	Indian Rupees 66,00,000 (Indian Rupees sixty six Lakhs only) by online / Bank Guarantee from Nationalized Bank in favor of “Chief Executive Officer, Bareilly Smart City Limited, Bareilly”. In case the EMD is submitted in the form of Bank Guarantee then the Bidder will upload the scanned copy of the instrument along with the technical bid and same shall be submitted in original at BSCL office within 3 days of Bid submission due date.
6.	Last date and time for Submission of Pre-Bid Queries	...02/03/2021... 3:00 PM
7.	Date of Pre-Bid Meeting	...02/03/2021... 3:00 PM
8.	Posting of responses to queries (on Email)	Respective bidder's e-mail ID's
9.	Last Date and time for Bid submission (On or before)	...15/03/2021... 3:00 PM
10.	Date, time for opening of Pre-Qualification Bids	...16/03/2021... 3:00 PM
11.	Date, Time for opening of Financial Bids	To Be notified
12.	Bid validity	Bid must remain valid up to 120 (One Hundred & Twenty) days from the actual date of submission of the Bid.
13.	Project Duration	Construction and operation period – 12 Months + 01 (One) year of Defect Liability Period.
14.	Currency	Indian Rupees (INR) only
15.	Bareilly Smart City	Bareilly Smart City Limited,

	Limited Bank Account Details	A/C No. : 0294001100000836, Name of Bank: Punjab National Bank, Branch: Pilibhit By-Pass Road, Bareilly, IFSC Code: PUNB0613400
16.	Name and Address for Correspondence	Attention: Chief Executive Officers Bareilly Smart City Limited (BSCL), Bareilly Municipal Corporation, Nagar Nigam, Bareilly, Electronic mail address: ceo.bscl01@gmail.com

Chief Executive Officer,
Bareilly Smart City Limited,
Bareilly.

1.1. Definitions and Acronyms

Terms	Meaning
ABD	Area Based Development
BIS	Bureau of Indian Standards
BOM	Bill of Material
BOQ	Bill of Quantities
BS	Bid Security
CEO	Chief Executive Officer
CVs /CV	Curriculum Vitae
Online Transfer	RTGS/ NEFT Bank Transfer
EMD	Earnest Money Deposit
GCC	General Conditions of Contract
GoUP	Government of Uttar Pradesh
Gol	Government of India
HOD	Head of Department
INR	Indian Rupee
LoA	Letter of Acceptance
BMC	Bareilly Municipal Corporation
NIT	Notice Inviting Tender
OEM	Original Equipment Manufacture
O&M	Operations & Maintenance
PBG	Performance Bank Guarantee / Performance Security
PCC	Particular Conditions of Contract
PDD	Proposal Due Date
PoC	Proof of Concept
PQ	Pre-Qualification
RFP	Request for Proposal
SCP	Smart City Proposal
SOP	Standard Operating Procedures
SPV	Special Purpose Vehicle
Supplier/ Implementing Agency / Contractor	Successful Bidder
TEC	Technical Evaluation Committee
TOR	Terms of Reference
TQ	Technical Qualification
UAT	User Acceptance Testing

“Appointed Day” means the date of signing of this Agreement by the Parties.

"Authority / Client / Employer/ BSCL" shall mean Bareilly Smart City Limited.

"Bidder" means a single entity submitting the proposals.

"Bid Security" shall mean the Security furnished by the Bidder.

“City” means the city of Bareilly

"Contractor / Implementing Agency / Supplier" shall mean the Selected Bidder which enters into the Contract Agreement with Authority pursuant to issuance the LOA.

"Contract Agreement" shall mean the agreement entered between the Authority and the Contractor pursuant to this RFP.

"Contract Period" is as defined in Fact Sheet of this RFP.

"Damages" shall mean the damages payable by either Party to the other of them, as set forth in the Contract Agreement.

"Document" or "Documentation" means documentation in printed or written form, or in tapes, discs, drawings, computer programmes, writings, reports, photographs, films, cassettes, or expressed in any other written, electronic, audio or visual form in relation to this Project.

"Letter of Acceptance" or "LOA" means the letter issued by the Authority to the Selected Bidder whose Bid has been accepted by Authority pursuant to this RFP for undertaking and executing the Project in conformity with the terms and conditions as set forth in this RFP and the Contract Agreement.

“BMC” mean Bareilly Municipal Corporation.

“BSCL” mean Bareilly Smart City Limited.

"Liquidated Damage" shall mean any loss/losses caused or sustained by BSCL, Authority due to non-performance of any act as per the Scope of Work of this RFP or performance or carrying out of any act expressly or impliedly prohibited by the BSCL / BMC, Authority as per the terms and conditions of Contract Agreement

"Local Authority" shall mean Bareilly Smart City Limited ("BSCL"). "Municipal Authority" shall mean Bareilly Municipal Corporation ("BMC").

" Maintenance" means the maintenance of the Project and includes all matters connected with or incidental to such maintenance, provision of services and facilities in accordance with the provisions of this RFP and Contract Agreement;

" Maintenance Period" means the period commencing from the date of signing of the Contract Agreement and ending on the last day of the Contract Period unless terminated earlier.

"Parties" means the parties to the Contract Agreement collectively and "Party" shall mean any of the parties to the Contract Agreement individually;

"Performance Security" means the guarantee for performance of its obligations to be procured by the Contractor in accordance with the Contract Agreement.

"Project" means all the activities envisaged to be carried out under this RFP;

"Request for Proposal" or "RFP" means invitation of bids setting forth technical and commercial terms and conditions, of the bid and includes this document, the Contract Agreement and all the Annexure and appendices attached to RFP and addendums issued by BSCL

"Service provider" means authorities who provide services like water, sewerage, electricity, telephone, roads, drainage etc.

"Specifications and Standards" means the specifications and standards relating to the quality, quantity, capacity and other requirements for the Project and any modifications thereof, or additions thereto expressly approved by, the Authority;

"Selected Bidder" shall mean the Bidder to whom the LOA has been issued.

"Taxes" means any Indian Taxes including Service Tax, Excise duties, Customs duties, GST, Sales tax, Local taxes, Cess and any impost or Surcharge of like nature (whether Central, State or local) on the goods, materials, equipment and services incorporated in and forming part of the Project charged, levied or imposed by any Government Instrumentality or Municipal Authority or Bareilly Smart City Limited but excluding any interest, penalties and other sums in relation thereto imposed on any account whatsoever

"Termination" means termination of this Contract Agreement pursuant to Termination Notice in accordance with the provisions of the Contract Agreement but shall not, unless the context otherwise requires, include the expiry of the Contract Agreement due to efflux of time in the normal course.

"Govt." or Govt. of Uttar Pradesh OR Urban local development bodies or any other Dept." or its subordinate functionaries/ organizations/agencies mentioned in this RFP shall have the same meaning, implication and power to intervene in this work as understood/implied from the corresponding clauses of this RFP where the above terminologies appeared/mentioned.

After the tender contractor, Contractor, Successful bidder mentioned in this RFP shall have the same meaning and shall, ordinarily, mean/be understood as "contractor" is finalized and accepted the words/ expression; selected bidder, selected contractor, selected agency,

The words Contract/Agreement, agreement appearing in this RFP shall mean agreement.

The words, "work", "Work" and "works" shall have the same meaning unless otherwise mentioned in this RFP and it includes the deliverables by the contractor during the defect liability period of 365 days from the date of completion of the original works.

Clarification(s) on other terminologies, if any required, shall be issued as and when necessary.

The "**Estimated cost**" means cost of the entire project inclusive of one year of defect liability period.

"**Last three financial years**" means 2017-18, 2018-19 and 2019-20.

Similar work shall mean "Experience in the following categories:

Similar work shall mean Construction Of RCC Framed Structure Building with HVAC and Accoustic Works.

Section 2- Instruction to Bidders

2.1.Preamble:

This Volume of the Bidding Documents provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the BSCL. It also provides information on bid submission, opening and, on contract award. Further in all matters arising out of the provisions of Volume of I, II and III of the Bidding Documents, the laws of the Union of India shall be the governing laws and courts of Bareilly shall have exclusive jurisdiction.

2.2. Background

- a) The Bareilly Smart City Limited (the “Authority / Client / Employer / BSCL”) is engaged in the implementation of the Smart City Mission projects in Bareilly and as part of this endeavour, the Authority has decided to undertake to procurement and service requirement for **“Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited”** (the “Project”) and has, therefore, decided to carry out the bidding process for selection of an entity as the bidder to whom the Project may be awarded.
- b) The selected Bidder (the “Contractor/ Implementing Agency”) shall be responsible for construction of the Project under and in accordance with the provisions of an i t e m r a t e contract (the “Contract”) to be entered into between the Implementing Agency and the Authority in the form provided by the Authority as part of the Bidding Documents pursuant hereto. The Implementing Agency shall also be responsible for m a i n t e n a n c e of the project during the maintenance period and liable for rectification and change any defect or deficiency in the Project after completion of the Construction Period.
- c) The “Contract” shall mean and include the general conditions, specification, schedules, drawings, form of Bid, covering letter, schedule of prices, or the final general conditions, any special conditions applying to the particular contract specification and drawings and the agreement to be entered into [A formal agreement shall be entered into between the bidder and the Authority for the proper fulfilment of the contract] of these general conditions, all of which must be accepted under the signatures and stamp of the bidder in order to construe the same within the meaning of Contract.
- d) The Agreement sets forth the detailed terms and conditions for award of the project to the Implementing Agency, including the scope of the Implementing Agency’s services and obligations.
- e) The statements and explanations contained in this RFP are intended to provide a better understanding to the Bidders about the subject matter of this RFP and should not be construed or interpreted as limiting in any way or manner the scope of services and obligations of the Implementing Agency set forth in the Agreement or the Authority’s rights to amend, alter, change, supplement or clarify the scope of work, the work to be awarded pursuant to this RFP or the terms thereof or herein contained. Consequently, any omissions, conflicts or contradictions in the Bidding Documents including this RFP are to be noted, interpreted and applied appropriately to give effect to this intent, and no claims on that account shall be entertained by the Authority.
- f) The Authority shall receive BIDs pursuant to this RFP in accordance with the terms set forth in this RFP and other documents to be provided by the Authority pursuant to this RFP (collectively the "Bidding Documents"), and all BIDs shall be prepared and submitted in accordance with such terms on or before the BID due date specified in Important Dates / Fact Sheet for submission of BIDs (the “BID Due Date”).

- g) "Works" shall mean and include project and materials to be provided and work to be done by the bidder under the contract.
- h) Tech "Specification" shall mean the specification annexed to these general conditions and the schedules there to (if any).
- i) "Commercial use" shall mean that use of the work, which the contract contemplates or of which it is to be commercially capable.
- j) "Month" shall mean calendar month.
- k) "Writing" shall include any manuscript, typewritten or printed statement, under or over signature or seal as the case may be.
- l) Words importing persons shall include firms, companies, Department, and other bodies whether incorporated or not.
- m) Words importing the singular only shall also include the plural and vice versa where the context requires.
- n) "Governmental Approval" means any approval, consent franchise, permit certificate, resolution, concession, license or authorization issued by or on behalf of any applicable Governmental Authority for the purpose of setting up of the project and / or for sale and purchase of the project pursuant to the agreement.
- o) "Governmental Authority" means any central, state, regional, district town city, or municipal government, whether domestic or foreign, or any development agency, bureau or other administrative, regulatory or judicial body of any such government.

2.3. Brief description of Bidding Process

The Authority has adopted a single stage two- p a r t system (referred to as the "Bidding Process") for selection of the Bidder for award of the Project. Under this process, the bid shall be invited under two parts. Eligibility and qualification of the Bidder will be first examined based on the details submitted under first part (Technical Bid) with respect to eligibility and qualifications criteria prescribed in this RFP. The Financial Bid under the second part shall be opened of only those Bidders whose Technical Bids are responsive to eligibility and qualifications requirements as per this RFP.

Interested bidders are being called upon to submit their BID in accordance with the terms specified in this Bidding Document. The Bid shall be valid for a period of as mentioned in the FACT Sheet from the date specified in Important Dates / Fact Sheet for submission of BIDs (the "Bid Due Date").

The complete Bidding Documents including the draft Agreement and other annexures / schedules for the Project is enclosed for the Bidders. Subject to the aforesaid documents and any addenda issued subsequent to this RFP Document, will be deemed to form part of the Bidding Documents.

Bidders are advised to examine the Project in greater detail, and to carry out, at their cost, such studies as may be required for submitting their respective BIDs for award of the contract including implementation of the Project.

BIDs will be evaluated for the Project on the basis of the Item Rate based selection required by a Bidder for implementing the Project (the "BID Price"). The total time allowed for completion of construction under the Agreement (the "Construction Period") and the period during which the Implementing Agency shall be liable for maintenance and rectification of any defect or deficiency in the Project after completion of the Construction Period (the "Defect Liability Period") shall be pre-determined, and are specified in the draft Agreement forming part of the Bidding Documents.

Other details of the process to be followed under this bidding process and the terms thereof are spelt out in this RFP.

2.4. General

- i. While every effort has been made to provide comprehensive and accurate background information, requirements and envisaged proposal(s) specifications, Bidders must form their own conclusions about the proposal(s) needed to meet the Authority's requirements. Bidders and recipients of this RFP may wish to consult their own legal advisers in relation to this RFP.
- ii. All information supplied by Bidders as part of their bids in response to this RFP, may be treated as contractually binding on the Bidders, on successful award of the assignment by the Authority on the basis of this RFP.
- iii. No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by or on behalf of Authority. Any notification of preferred bidder status by Authority shall not give rise to any enforceable rights by the Bidder. Authority may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of Authority.
- iv. Bids shall be received by the Authority on the e-Procurement portal <http://etender.up.nic.in> before the time and date specified in the schedule of the RFP notice. In the event of the specified date for the submission of Bid offers being declared a public holiday by the Government of Uttar Pradesh, the offers will be received up to the appointed time on the next working day. The Authority may, at its discretion, extend this deadline for submission of offers by issuing corrigendum and uploading the same on e-Procurement portal.
- v. Telex, cable or facsimile offers will be rejected.

2.5. Source of Fund: The BSCL are empowered with grant of funds from Govt. of India and Government of Uttar Pradesh to be utilized for execution of this Project. All eligible payments under the contract(s) for the package for which this Invitation for Bids is issued shall be made by the BSCL.

2.6. Eligible Bidders

Sole Bidder	Each intending Bidder may be a natural person/ sole proprietorship/ Company/ Partnership firm/ Limited Liability Partnership (LLP) having authority to participate in this RFP.
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Joint venture or consortium of Bidders is NOT permitted.

2.7. Compliant Bids/ Completeness of Response

- a) Bidders are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of the bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.
- b) Failure to comply with the requirements of this paragraph may render the bid non-compliant and the Bid may be rejected. Bidders must:
 - i. Include all documentation specified in this RFP, in the bid.
 - ii. Follow the format of this RFP while developing the bid and respond to each element in the order as set out in this RFP.
 - iii. Comply with all requirements as set out within this RFP.

2.8. Bidder to Inform

The Bidder shall be deemed to have carefully examined the Terms & Conditions, Scope, Specifications, and Schedules of this RFP. If bidder has any doubts/clarifications as to the meaning of any portion of the Conditions or the specifications they shall, before the last date for Submission of Pre-Bid Queries, set forth the particulars thereof and submit them to Authority in writing in order that such doubt may be removed or clarifications are provided.

2.9. Bid Preparation and Presentation costs

The Bidder shall bear all costs associated with the preparation and submission of its bid, including visits for the purpose of clarification of the bid, if so desired / any Presentation as may be required in accordance with the conditions of this RFP and the authority shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

2.10. Pre-bid Clarification

Bidders Queries

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

Authority shall not be responsible for ensuring that the bidders' queries have been received by them. Any requests for clarifications post the indicated date and time shall not be entertained by Authority.

Bidders must submit their queries as per the format mentioned in Section 6 - Annexure I. Queries should be submitted at ceo.bscl01@gmail.com with cc to pmc.bsc@gmail.com within the date and timelines as specified in the Fact Sheet.

Bidders are advised to share the Pre-Bid queries in two formats, one is in excel sheet (in *.xls Format) and as well as another in signed and scanned copy of the file (in *.pdf format) and format as per in Section 6 - Annexure I.

Responses to Pre-Bid Queries

Authority will organize a pre-bid meeting.

Authority will respond to any request for clarification or modification of the bidding documents. Authority shall formally respond to the pre-bid queries. No further clarifications shall be entertained after the pre bid meeting.

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

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

Any corrigendum/notification issued by Authority, subsequent to issue of RFP, shall only be available / hosted on the website URL mentioned in the fact sheet. Any such corrigendum shall be deemed to be incorporated into this RFP.

2.11. Bid Processing Fee / Bid Document Fee and Transaction Fee

RFP can be downloaded from the website URL mentioned in the fact sheet.

Bid Processing Fee / Bid Document Fee as mentioned in the FACT Sheet shall be paid through online transfer in account of the **“Bareilly Smart City Limited, A/C No.: 0294001100000836, Name of Bank: Punjab National Bank, Branch: Pilibhit By-Pass Road, Bareilly, IFSC Code: PUNB0613400”**. The Bid Processing Fee / Bid document fee is mandatory and non-refundable.

Without the payments of Bid document fees the bids will be taken as incomplete and non-responsive and shall not be considered.

2.12. Bid Security/Earnest Money Deposit (EMD)

Earnest Money Deposit: The value of EMD as mentioned (in Tender Document) Earnest Money shall be paid through RTGS / NEFT/Bank Guarantee in favour of Bareilly Smart City Limited, Bareilly. After Tender opening, The EMD of the unsuccessful bidders will be returned to account provided by the bidder during the registration on e-tendering portal under beneficiary Account number. Earnest money in the form of cheques or any other form except above will not be accepted. Scanned Copy of the transaction slip has to be uploaded along with the Technical Bid.

No exemption for submitting the Bid Security/ EMD (amount, as mentioned in Fact sheet) will be given to any agency. Bid security/EMD in any other form will not be entertained.

For Unsuccessful bidders: The bid security of all unsuccessful bidders would be refunded without interest by Authority on finalization of the bid in all respects by the successful bidder.

For Successful bidders: The bid security, for the amount mentioned above, of successful bidder would be returned without interest upon submission by the successful bidder. The successful bidder should however pay the PBG / Performance Security at 10% on Bid Contract Value including EMD at the time of signing the agreement in the shape of Bank Guarantee from a nationalized Bank or unconditional in the form given in the RFP document from any Nationalised Bank.

In case bid is submitted without the EMD/Bid Security then Authority reserves the right to reject the bid without providing opportunity for any further correspondence to the bidder concerned.

The PBG/ Performance Security given in the form of bank guarantee on a nationalized shall be valid for the duration of contract period plus defect liability period and in case any valid extension of contract period is granted, the validity of BG shall also be extended for the corresponding period. The bank guarantee on nationalized bank furnished by the bidder towards additional security amount shall be valid till the work is completed in all respects.

The Bid Security/ EMD shall be forfeited and appropriated by the authority as mutually agreed genuine pre-estimated compensation and damages payable to Authority for the time, cost and efforts of the authority, without prejudice to any other right or remedy that may be available to the authority under the RFP or in law under the following conditions:

- i. If a bidder withdraws or modifies its bid during the period of bid validity or any extension agreed by the bidder thereof;
- ii. If a bidder is disqualified in accordance with clause mentioned in RFP under evaluation of bids
- iii. If the bidder tries to influence the evaluation process or engages in corrupt, fraudulent, coercive or undesirable practice or restrictive practice;
 - If the bidder is declared as the successful bidder and it withdraws its proposal during negotiations. However, failure to arrive at a consensus between authority and the successful bidder shall not be constructed as withdrawal of proposal by successful bidder;
 - Fails to sign and return, as acknowledgement, the duplicate copy of the letter of award;
 - Fails to submit the performance bank guarantee / Performance Security and/or sign the contract in accordance with this RFP;
 - Fails to fulfil any other condition precedent to the execution of the contract, as specified in the letter of award;
 - Fails to execute the contract.

2.13. Bid Validity Period

The EMD submitted along with the bid will remain valid for validity period mentioned in the Fact Sheet.

In exceptional circumstances, prior to expiry of the bid validity period, the authority may request that the bidders to extend the period of validity for a specified additional period at Bidder's cost. The request and the responses to the request shall be made in writing. If validity of their Bids is extended the Earnest Money Deposit (EMD) shall also be extended for a corresponding-period. A bidder may refuse the request without risking forfeiting the EMD, but in this case, the bidder will be out of the competition for the award. Bidder agreeing to the request will not be required or permitted to modify its bid, but will be required to ensure that the bid remains secured for a correspondingly longer period.

On completion of the validity period, unless the Bidder withdraws his/her/their bid in writing, it will be deemed to be valid until such time that the Bidder formally (in writing) withdraws bid.

2.14. Bid Formats

2.14.1. Pre-Qualification Bid Format

S. No.	Section Heading	Details
1	Pre-Qualification Bid Covering Letter	As per format provided in section 6.1
2	About Bidder	As per format provided in section 6.2 of this document.
3	Bidder Registration	Each intending Bidder may be a natural person/ sole proprietorship/ Company/ Partnership firm/ Limited Liability Partnership (LLP) having authority to participate in this RFP.
4	Average Annual Turnover	Certificate from the Statutory auditor / CA clearly specifying the annual turnover for the specified years
5	Net worth	Certificate from the Statutory auditor/ CA clearly specifying the Positive Net worth of the firm
6	Undertaking for non-blacklisting clause	Undertaking by the authorized signatory as per section 6.3

7	Bidder Certifications	Copies of valid certificates in the name of the sole bidder
8	Power of Attorney	Documentary evidence as per format provided in Section 11 (Annexure 7)
9	Project Experience	Citation details of projects as per format in Section 8.4 and 7.6 as applicable.
10	No Deviation Certificate	As per format provided in section 6.4
11	Total responsibility certificate	As per format in section 6.5
12	No relationship certificate	As per format in section 6.7
13	Self-declaration certificate	As per format in section 6.8

2.14.2. Technical Bid Format

S. No.	Heading	Details
1	Technical Bid Checklist	As per format provided in section 7.1
2	Technical Bid Covering Letter	As per format provided in Section 7.2
3	About Bidder	Details about bidder
4	Project/credential summary	As per format provided in Section 7.3
5	Bidder's Experience	Project citation as per format provided in section 7.4 and supporting documentary evidences and Self- certifications as per format in section 6.6 as Applicable
6	Manufacturers'/Producers'	As per format provided in section 12 (Annexure 8)
7	Anti-Collusion Certificate	As per format provided in section 7.8
8	Non-disclosure agreement	As per format provided in section 10 (Annexure 6)

2.14.3. Financial Bid Format

The Bidder must submit the Financial Bid in the formats specified in Section 8. The Financial Proposal shall be submitted only on www.etender.up.nic.in and not by any other means, failing which the Authority shall reject the Bid.

Section	Heading	Details
1.	Bid Price Sheet	As per format provided in Section 8(Annexure – 4) and Section 13 (Annexure 9) for Detailed estimation

2.15. Language

The bid should be prepared and submitted by the bidders in English language only. If any submitted supporting documents (like notices, certificates, correspondences, proceedings, etc.,) are in any language other than English, translation of the same in English language is to be provided (duly attested) by the Bidders. For purposes of interpretation of the documents, the English translation shall govern. Such translated documents shall be notarized and in case of any incorrectness of the translation, the bidder will be penalized. The bidder shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.

2.16. Authentication of Bids

An authorized representative (or representatives - Power of Attorney) of the Bidder shall initial all pages of the Pre-Qualification, Technical and Financial Bids.

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

2.17. Amendment of Request for Proposal

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

It shall be the responsibility of the prospective bidder(s) to check the Authority's website from time to time for any amendment in the RFP document. In case of failure to get the amendments, if any, Authority shall not be responsible.

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

Verbal clarifications and information given by the authority or any other person for or on its behalf shall not in any way or manner be binding on the authority.

2.18. Bid Price and quotation submission

The Bidder has to provide the financial bid in the formats as given in Annexure - 9 Bidders shall give the required details of all applicable taxes, duties, other levies and charges etc. in respect of direct transaction between Authority and the Bidder. The financial bid must be uploaded on e-procurement only and should not be printed or submitted with Prequalification / Technical Bid.

Bidders shall quote for the entire scope of contract on a "overall responsibility" basis such that the total bid price covers Bidder's all obligations mentioned in or to be reasonably inferred from the bidding documents

Prices quoted by the Bidder shall remain firm during the entire contract period and not subject to variation on any account.

The bidders shall quote in their proposals a firm lump sum price as per schedules provided for the entire scope.

The prices quoted shall be lump sum and on for destination basis inclusive of all taxes and duties. For the purpose of clarity, applicable taxes as on the date of submission of bid shall be quoted.

All priced quotations should be in Indian Rupees only. – Bidders are requested to quote the price in figures and as well as in the words in the same box / place.

The bidder should quote his lowest firm prices valid for the duration and completion of the contract. No enhancement of prices for what so ever reason will be allowed once the offer is accepted. Quotation should carry the name of the manufacturers for the building offered.

The prices quoted by the Bidder shall be fixed.

A bid submitted with an adjustable price quotation shall be treated as non-responsive and rejected.

Any conditional bid with any deviations from the terms and conditions of RFP shall be disqualified.

The prices quoted by the Bidder in the Price Proposal Submission Sheet and in the Price Schedules shall valid for the duration and completion of the contract of **Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited.**

No enhancement of prices for what so ever reason will be allowed once the offer is accepted.

2.19. Insurance

Transit cum storage cum erection, testing and commissioning insurance is the responsibility of the bidder. Any loss or damage to the equipment for whatever reasons shall be to the account of the bidder. The bidder shall promptly make good the loss or damage by way of replacement and/or repair of the portion of the equipment damaged or lost, incidental to manufacture or acquisition, transportation, storage and delivery, irrespective of settlement of claims with the insurance underwriters. There shall be no extra cost to the authority on account of such replacement/repair of losses or damages for whatever reasons. All costs on account of insurance liabilities covered under the contract will be to the Bidder's account and principal of the insurance will be to the authority.

2.20. Deviations and Exclusions

Bids shall be submitted strictly in accordance with the requirements and terms & conditions of the RFP. The Bidder shall submit a No Deviation Certificate as per the format mentioned in Section 7.4. The bids with deviation(s) are liable for rejection.

2.21. Total Responsibility

Bidder should issue a statement undertaking total responsibility for the defect free operation of the proposal as per the format mentioned in Section 7.5.

2.22. Late Bids

RFP must be submitted not later than the date and time specified in RFP. In the event of the specified date / time for the submission of bids declared as holiday, the bids will be received on the next working day.

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

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

Authorities shall does not be responsible for delay in submission of any online submission related or website related issues and date of submission cannot be extended for such reasons.

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

2.23. Right to Terminate the Process

Authority may terminate the RFP process at any time and without assigning any reason. Authority makes no commitments, express or implied, that this process will result in a business transaction with anyone. This RFP does not constitute an offer by Authority.

2.24. Non-Conforming bids

A bid may be construed as a non-conforming bid and ineligible for consideration:

- a. If it does not comply with the requirements of this RFP.
- b. If a bid does not follow the format requested in this RFP or does not appear to address the particular requirements of the scope.

2.25. Acceptance/Rejection of Bids

- a. Authority reserves the right to reject in full or part, any or all bids without assigning any reason thereof. Authority reserves the right to assess the Bidder's capabilities and capacity. The decision of Authority shall be final and binding.
- b. Bid should be free of over writing. All erasures, correction or addition must be clearly written both in words and figures and attested.

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

The authority reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to bidders. In case of annulment, all bids submitted and specifically, bid securities shall be promptly returned to the bidders.

The Authority reserves the right to verify all statements, information and documents submitted by the bidder in response to the RFP. Any such verification or lack of such verification by the authority shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the authority thereunder.

If there is any discrepancy in the financial bid, it will be dealt as per the following:

- a. Activities and items described in the Technical Proposal but not priced in the Financial proposal shall be assumed to be included in the prices of other activities or items and no corrections will be made to the Financial Proposal / Bid.
- b. If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly.

- c. If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.
- d. If there is a discrepancy between words and figures, the amount in words shall prevail.
- e. If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of Authority, the bid is liable to be disqualified.

2.26. Confidentiality

From the time the bids are opened to the time of the contract is awarded, the bidder should not contact the client on any matter related to its qualification documents, Technical Bid and/or Financial Bid. Information relating to the evaluation of proposals and award recommendations shall not be disclosed to the bidders who submitted the bids or to any other party not officially involved with the bid process, until the publication of the contract award.

Any attempt by a bidder or anyone on behalf of the bidder to influence improperly the client in the evaluation of the bids or award of the contract may result in the disqualification of its bid.

All the material/information shared with the Bidder during the course of this procurement process as well as the subsequent resulting engagement following this process with the successful bidder, shall be treated as confidential and should not be disclosed in any manner to any unauthorized person under any circumstances. The employees of the successful Lead bidder who are proposed to be deployed on the project need to furnish a Non-Disclosure Agreement (NDA) as per Annexure 6 in section 12.

2.27. Disqualification

The bid is liable to be disqualified in the following cases or in case bidder fails to meet the bidding requirements as indicated in this RFP:

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

bidders are likely to be disqualified, unless additional bids/bidders are withdrawn upon notice immediately

i. Bids without EMD / Bid Security and as well as Bid Documentation / Bid Processing Fee will be disqualified.

2.28. Key Personnel

Authority has identified certain key positions and minimum qualifications for each of the positions that should be part of project team of the bidder (hereby referred to as “key personnel”). Details of these key positions are provided.

The personnel proposed should possess good working knowledge of English language. No key personnel involved should have attained the age of 58 years at the time of submitting the proposal. The client reserves the right to ask for proof of age, qualification and experience at any stage of the project.

I. Initial Composition; Full Time Obligation; Continuity of Personnel

Bidder shall ensure that each member of the Key Personnel devotes substantial working time as per the staffing schedule/ manpower plan to perform the services to which that person has been assigned as per the bid.

The bidder shall assess support personnel; both technical and administrative to undertake the project. If required, additional support and administrative staff shall be provided as needed for the timely completion of the project without any additional cost to the client. It is stressed that the time period of the assignment indicated in the Technical Requirements should be strictly adhered to.

Bidder shall not make any changes to the composition of the Key Personnel and not require or request any member of the Key Personnel to cease or reduce his or her involvement in the provision of the Services during the defined term of the engagement unless that person resigns, is terminated for cause, is long-term disabled, is on permitted mandatory leave under Applicable Law or retires. In any such case, the Authority's prior written consent would be mandatory.

II. Evaluations

Bidder shall carry out an evaluation of the performance of each member of the Key Personnel in connection with the Services at least once in each Contract Year. Bidder shall provide reasonable written notice to Authority of the date of each evaluation of each member of the Key Personnel. Authority shall be entitled to provide inputs to the bidder for each such evaluation. Bidder shall promptly provide the results of each evaluation to Authority, subject to Applicable Law.

III. Replacement

In case any proposed resource resigns, then the Bidder has to inform Authority within one week of such resignation.

Bidder shall promptly initiate a search for a replacement to ensure that the role of any member of the Key Personnel is not vacant at any point in time during the contract period, subject to reasonable extensions requested by Bidder to Authority.

Before assigning any replacement member of the Key Personnel to the provision of the Services, Bidder shall provide Authority with:

- a. A Resume / Curriculum vitae and any other information about the candidate That is reasonably requested by Authority; and
- b. An opportunity to interview the candidate.

The bidder has to provide replacement resource of equal or better qualification and experience as per the requirements of this RFP.

If Authority objects to the appointment, Bidder shall not assign the individual to that position and shall seek an alternative candidate in accordance with the resource requirements of this RFP.

The bidder needs to ensure at least 4 weeks of overlap period in such replacements. Authority will not be responsible for any knowledge transition to the replacement resource and any impact /escalation of cost incurred by the bidder due to resource replacement.

IV. High Attrition

If in the first 6-month period from the Contract Effective Date and in any rolling 12 months period during the Term of contract, 15 percent or more of the members of the Key Personnel cease or reduce their involvement in the Services for any reason other than with Authority's prior written consent, Bidder shall:

- a. provide Authority with a reasonably detailed explanation as to the reasons for such change, including, where applicable and permitted, notes from any exit interviews conducted by Bidder with any departing member of the Key Personnel; and
- b. if such change to Key Personnel has or is likely to have any material adverse impact on the provision of the Services or any substantial part thereof, undertake, at its own costs, such remediation acts as are reasonably necessary in order to improve the retention of the Key Personnel including making reasonable changes to the human resources policies and procedures applicable to the Key Personnel (including those related to compensation, benefits and other conditions so that they are competitive with the market) as may be necessary to ensure that such policies and procedures comply with Good Industry Practice.

2.29. Fraud and Corrupt Practices

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

Without prejudice to the rights of Authority under Clause above and the rights and remedies which Authority may have under the LOA or the Agreement, if a Bidder is found by Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the issue of the LOA or the execution of the Agreement, such Bidder shall not be eligible to participate in any tender or RFP issued by Authority during a period of 3 years from the date such Bidder is found by Authority to have directly or through an agent, engaged or indulged in any Prohibited Practices.

Will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract;

Will sanction a party or its successor, including declaring ineligible, either indefinitely or for stated period of time to participate in BSCL Bidding / Tender activities if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, an BSCL contract.

2.30. Conflict of Interest

- a. A bidder shall not have a conflict of interest that may affect the Selection Process or the proposal delivery (the “Conflict of Interest”). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, Authority shall forfeit and appropriate the EMD, if available, as mutually agreed genuine pre-estimated compensation and damages payable to Authority for, inter alia, the time, cost and effort of Authority including consideration of such Bidder’s Bid, without prejudice to any other right or remedy that may be available to Authority hereunder or otherwise.
- b. Authority requires that the bidder provides proposals which at all times hold Authority’s interest’s paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The bidder shall not accept or engage in any assignment that would be in conflict with its

prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of Authority.

- c. **Conflicting Activities:** Conflict between consulting activities and procurement of goods, works or non-consulting services: A bidder that has been engaged by the client to provide goods, works, or non-consulting services resulting from or directly related to those goods, works, or non-consulting services. Conversely, a Bidder hired to provide consulting services for the preparation or implementation of a project, or any of its Affiliates, shall be disqualified from subsequently providing goods or works or non-consulting services resulting from or directly related to the consulting services for preparation or implementation.
- d. **Conflicting Relationships:** Relationship with the client's staff: A bidder (including its Directors, stakeholders or Management) that has a close business or family relationship with a professional staff of the client who are directly or indirectly involved in any part of
 - The preparation of the RFP for the assignment
 - The Technical Specifications of the goods, works or services may not be awarded a contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the client throughout the selection process and the execution of the contract.

2.31. Right to vary quantity by Authority.

- a. At the time of contract, the quantity of goods, works or services originally specified in the bidding documents may be increased or decreased. It shall be without any change in the unit prices or other terms and conditions of the Bid and the bidding documents.
- b. If the authority does not procure any subject matter of procurement or procures less than the quantity specified in the bidding documents due to change in circumstances, the bidder shall not be entitled for any claim or compensation except otherwise provided in the bidding document.
- c. Repeat orders for extra items or additional quantities may be placed, if it is provided in the bidding document, on the rates and conditions given in the contract if the original order was given after inviting open competitive bids. Delivery or completion period may also be proportionally increased.

2.32. Withdrawal, Substitution, and Modification of Bids

- a. No bid may be withdrawn, substituted or modified in the interval between the bid submission deadline and the expiration of the bid validity period specified by the bidder in the bid submission form, or any extension thereof agreed to by the bidder. Withdrawal of the bid during this interval may result in the forfeiture of the EMD / Bid Security.
- b. Any alteration / modification in the application or additional information supplied subsequent to the bid submission date, unless the same has been expressly sought for by the client, shall be disregarded.
- c. Bids withdrawn shall not be opened and processed further.

- d. Alternative bid shall not be permitted.

2.33. Site Visit

- a) The Bidder may wish to visit and examine the site or sites and obtain for itself, at its own responsibility and risk, all information that may be necessary for preparing the bid and entering into the Contract. The costs of visiting the site or sites shall be at the Bidder's own expense.
- b) Bidders are encouraged to submit their respective bids after visiting the project site and ascertaining for themselves the site conditions, traffic, location, surroundings, climate, availability of power, water and other utilities for construction, access to site, handling and storage of materials, weather data, applicable laws and regulations and any other matter considered relevant by them.
- c) A site visit conducted by the authority **shall be organized** on the written request of the bidder. The bidder shall intimate the Employer for site visit through Electronic mail ceo.bscl01@gmail.com at least three (03) days in advance.
- d) Failure of a Bidder to make a site visit will not be a cause for its disqualification.
- e) No site visits shall be arranged or scheduled after the deadline for the submission of the Bids and prior to the award of Contract.

2.34. Acknowledgement by Bidder

- a. It shall be deemed that by submitting the bid, the bidder has:
 - i. Made a complete and careful examination of the RFP.
 - i. Received all relevant information requested from the authority.
 - ii. Accepted the risk of inadequacy, error or mistake in the information provided in the RFP or furnished by or on behalf of the authority relating to any of the matters ; and
 - iii. Agreed to be bound by the undertakings provided by it under and in terms hereof.
 - iv. The Authority shall not be liable for any omission, mistake or error in respect of any of the above or on account of any matter or thing arising out of concerning or relating to the bidding process, including any error or mistake therein or in any information or data given by the authority.

2.35. Proprietary Data

All documents and other information supplied by the authority or submitted by bidder to the authority shall remain or become the property of the authority. Bidders are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their bid. The authority will not return any bid or any information provided along therewith.

2.36. Contacts during Bid Evaluation

Bids shall be deemed to be under consideration immediately after they are opened and until such time the authority makes official intimation of award / rejection to the bidders. While the bids are under consideration, bidders and / or their representatives or other interested parties are advised to refrain, save and except as required under the bidding documents, from contacting by any means, the authority and / or their employees / representatives on matters related to the bids under consideration.

2.37. Maintenance Tools and Tackles

The proposal shall include all special tools and tackles required for the maintenance of the equipment in each equipment package.

The Bidder shall indicate all the above items in the proposal sheets in the form of a schedule giving therein the description and the quantity of each item. The item wise Price to be quoted by the Bidder shall be furnished in the format, which will be delivered with the first shipment of the main equipment.

2.38. Drawings, Data and Literature to be furnished

The Bidder shall include in his offer the following:

Undertaking to furnish details of special precautions and instructions to be followed and check list for erection, testing and commissioning of the building.

Undertaking to furnish all required shop drawings, documentations for assembly, erection, testing and commissioning of the building. Instructions regarding storage, handling, precautions etc., and checklists at various stages.

2.39. Governing Law and Jurisdiction

The contract and the transaction contemplated therein shall be governed by and construed in accordance with the laws of India.

The contract and the transactions contemplated therein shall be subject to the exclusive jurisdiction of the competent courts in Bareilly, Uttar Pradesh, India.

If any disputes arises between the parties hereto during the subsistence or thereafter, in connection with the validity, interpretation, implementation or alleged material breach of any provision of the agreement or regarding a question, including the questions as to whether the termination of contract Agreement by one party hereto has been legitimate, both parties hereto shall endeavour to settle such dispute amicably. The attempt to bring about an amicable settlement is considered to have failed as soon as one of the parties hereto, after reasonable attempts gives 15 days' notice thereof to the other party in writing.

The place of arbitration shall be Bareilly, Uttar Pradesh, India.

The arbitration proceeding shall be governed by the Arbitration and Conciliation Act of 1996 as amended from time to time.

Section 3- Selection Process for Bidder

3.1. Opening of Bids

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

The representatives of the bidders should be advised to carry the identity card or a letter of authority from the bidder firms to identify that they are bonafide representatives of the bidder firm, for attending the opening of bid.

There will be bid-opening as follows,

1. Set 1 – RFP Processing Fee & Bid Security / EMD(Pre-qualification)
2. Set 2 – Technical Bid

The date and time for opening of Technical & Financial bid would be as mentioned in the Fact Sheet.

The Technical Bids of only those bidders who clears the Pre-qualification stage shall be opened.

The Financial Bids of only those bidders will be opened who are qualified in Technical qualification.

3.2.Preliminary Examination of Bids

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

Authority shall examine the Technical Proposal to confirm that all documents and technical documentation requested have been uploaded on online portal, and to determine the completeness of each document submitted.

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

- a. Not submitted in format as specified in the RFP document
- b. Received without the Letter of Authorization (Power of Attorney)
- c. Transaction Fee
- d. Bid documentation / Bid Processing Fee.
- e. Earnest Money Deposit (EMD) / Bid Security.
- f. Technical Proposal Submission Sheet.
- g. Found with suppression of details
With incomplete information, subjective, conditional offers and partial offers submitted
- h. Submitted without the documents requested

- i. Non-compliant to any of the clauses mentioned in the RFP
- j. Manufacturer's Authorization, if applicable.
- k. With lesser validity period

Examination of Terms and Conditions; Technical Evaluation of Bids

Authority shall examine the Bids to confirm that all terms and conditions specified in Bid Document have been accepted by the Bidder without any material deviation or reservation.

Authority shall evaluate the technical aspects of the Bid submitted in accordance to confirm that all requirements specified in Schedule of Supply of the Bidding Document have been met without any material deviation or reservation.

If, after the examination of the terms and conditions and the technical evaluation, authority determines that the Technical Proposal is not substantially responsive it shall reject the Bid.

3.3.Evaluation Process

Authority shall constitute a Bid Evaluation Committee to evaluate the responses of the bidders. The Bid Evaluation Committee shall evaluate the responses to the RFP and all supporting documents/documentary evidence. Inability to submit requisite supporting documents/documentary evidence by bidders may lead to rejection of their bids.

The decision of the Bid Evaluation Committee in the evaluation of bids shall be final. No correspondence will be entertained outside the process of evaluation with the Committee. The Bid Evaluation Committee may ask for meetings or presentation with the Bidders to seek clarifications or conformations on their bids.

Only those Bidders who meet the eligibility criteria specified shall qualify for evaluation under this Section 3. Bids of firms who do not meet these criteria shall be rejected.

The Bidder's competence and capability is proposed to be established by the following parameters

- i. After the bidder qualifies in the Pre-Qualification, will be considered for Technical Evaluation and only those bidders will be qualified for financial bid.
- ii. The RFP Evaluation Committee reserves the right to reject any or all bids without assigning any reason. Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP. The steps for evaluation are as follows:

3.3.1. Stage 1 : Pre-Qualification

- a. Authority shall validate “RFP Document fee & Bid Security/Earnest Money Deposit (EMD)”.

If the contents are as per requirements, Authority shall open the “Pre- Qualification Bid”. **Each of the Pre-Qualification condition mentioned in Section 3.4 is MANDATORY.** In case, the Bidder does not meet any one of the conditions, the bidder shall be disqualified.

- b. Technical and Financial bids for those bidders who don't pre-qualify will not be opened.

3.3.2. Stage 2: Technical Evaluation

- a. “Technical bid” will be evaluated only for the bidders who succeed in Stage 1.

- b. Authority will review the technical bids of the short-listed bidders for responsiveness. If the technical proposal is found

- Not to be complete in all respects; or
- Not duly signed by the authorized signatory of the bidder on all pages; or
- Not to be in prescribed format and interlineations in between the formats / lines in the prescribed formats; or
- To contain alternation, conditions, deviations or omissions.

then such technical bids shall be deemed to be substantially non-responsive. and liable to be disqualified at Authority's discretion.

- c. The bidders' technical proposal in the bid document shall be evaluated as per the requirements specified in the RFP and technical evaluation as mentioned in Section 3.3.1

3.3.3.Responsiveness of Technical Proposal

1. Authority's determination of the responsiveness of a Technical Proposal is to be based on the contents of the Technical Proposal itself.

2. A substantially responsive Technical Proposal is one that conforms to all the terms, conditions, and specifications of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:

- a) Affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or
- b) Limits in any substantial way, inconsistent with the Bidding Document, Authority's rights or the Bidder's obligations under the Contract; or
- c) If rectified would unfairly affect the competitive position of other Bidders presenting substantially responsive Technical Proposals.
- d) If a Technical Proposal is not substantially responsive to the Bidding Document, it shall be rejected by authority and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.

3.3.4. Stage 3: Financial Evaluation

The financial bids for the technically qualified bidders shall then be opened on the notified date and time and reviewed to determine whether the financial bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at Authority's discretion.

- a. **Financial bids shall be uploaded on e-procurement portal only.**
- b. Financial bids that are not as per the format provided in Section 9 (Annexure 4) shall be liable for rejection.
- c. The bid price shall include all taxes and levies and shall be in Indian Rupees.
- d. The bidder achieving the lowest cost shall be invited for negotiations for awarding the contract.
 - a. In case of a tie where two or more bidders achieve the same lowest cost, selection will be made in this order :
 1. The bidder with the higher Technical Score will be invited first for negotiations for awarding the contract.
 2. The bidder whose annual turnover is more will be preferred.
 3. Even if the criteria incidentally become the same, the turnover on similar works and thereafter machinery available for the work and then the clean track record will be considered for selection.

3.3.5. Correction of Arithmetical Errors

Provided that the bid is substantially responsive, the authority shall correct arithmetical errors on the following basis:

- a. Only for admeasurement contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected.
- b. If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- c. If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to this clause as stated above.
- d. Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with RFP shall result in the rejection of the Bid.

3.4. Pre-Qualification Criteria

The Technical Evaluation Committee will review the PQ to determine whether the bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at Authority's discretion. The tender Fee and Earnest Money Deposit shall be checked in this stage. Failure to fulfil this criteria shall lead to cancellation of tender and the technical evaluation of those bidders shall not be carried out.

Sl. No.	Eligibility and Qualification Criteria	Compliance Requirements	Documentation
1	The Sole Bidder	<ul style="list-style-type: none">Each intending Bidder may be a natural person/ sole proprietorship/ Company/ Partnership firm/ Limited Liability Partnership (LLP) having authority to participate in this RFP.	PQ_1

- a. The Bidder has to be a single entity (the **"Sole Bidder"**), coming to implement the Project. Joint Venture or Consortium is not allowed in this tender.
- b. Bidder may be a natural person private entity shall be eligible for consideration subject to the conditions set out in the below clause 3.4 Pre-Qualification Criteria.
 - i. The Bidder including individual should, in the last 3 (three) years, have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial BSCL / BMC or a judicial pronouncement or arbitration award against the Bidder including individual, as the case may be, nor has been expelled from any project or contract by any public entity nor have had any contract terminated by any public entity for breach by such Bidder including individual.
- c. A Bidder shall not have a conflict of interest (the **"Conflict of Interest"**) that affects the Bidding Process. Any Bidder found to have a Conflict of Interest shall be disqualified and liable for forfeiture of the BID Security or Performance Security as the case may be. A Bidder shall be deemed to have a Conflict of Interest affecting the Bidding Process, if:
- d. A Bidder shall be liable for disqualification and forfeiture of BID Security, if any legal, financial or technical adviser of the BSCL in relation to the Project is engaged by the Bidder, its Member or any Associate thereof, as the case may be, in any manner for matters related to or incidental to such Project during the Bidding Process or subsequent to the (i) issue of the LOA or (ii) execution of the Agreement. In the

event any such adviser is engaged by the selected Bidder or Contractor, as the case may be, after issue of the LOA or execution of the Agreement for matters related or incidental to the project, then notwithstanding anything to the contrary contained herein or in the LOA or the Agreement and without Prejudice to any other right or remedy or the BSCL, including the forfeiture and appropriation of the BID Security or Performance Security, as the case may be, which the BSCL may have there under or otherwise, the LOA or the Agreement, as the case may be, shall be liable to be terminated without the BSCL being liable in any manner whatsoever to the Selected Bidder or Contractor for the same. For the avoidance or doubt, this disqualification shall not apply where such adviser was engaged by the Bidder, its Member or Associate in the past but its assignment expired or was terminated 6 (six) months prior to the date of issue of this RFP. Nor will this disqualification apply where such adviser is engaged after a period of 3 (three) years from the date of commercial operation of the Project.

Technical Eligibility

Sl. No.	Eligibility and Qualification Criteria	Compliance Requirements	Documentation
2	The Bidder [Single Entity as a whole] should be having an average annual Turnover (TO) is equal to 20.4 Cr. in Indian Rupees during last 3 audited financial years (2017-18, 2018-19, 2019-20).	Certificate from the Statutory auditor / CA clearly specifying the annual turnover for the specified years	PQ_2
3	The Bidder [Single Entity as a whole] should have positive net worth	Certificate from the Statutory auditor / CA clearly specifying the net worth alongwith the audited Balance sheet	PQ_3
4	<p>The bidder must have satisfactorily completed similar nature of works during last 7 years ending last day of month previous to the one in which application are invited should be either of the following:</p> <p>Three similar works, each were costing not less than the amount equal to Rs. 13.6 Cr. of the estimated project cost.</p> <p>or</p> <p>Two similar works, each were costing not less than the amount equal to Rs. 17 Cr. of the estimated project cost.</p> <p>or</p> <p>One similar work costing not less than the amount equal to Rs. 27.2 Cr. of the estimated project cost.</p>	<p>For each eligible work, bidder(s) should provide copy of work order and any one of the following documents(s):</p> <ul style="list-style-type: none"> i. completion certificate issued by the appropriate authority; or ii. any other document which shows the evidence of submission of final report or final deliverable to the appropriate authority; or iii. no-dues certificate issued by the appropriate authority; or iv. For Private Projects being shown as "Similar Work", the completion certificate should be accompanied by relevant TDS detail and certified final bill of the project. 	PQ_4

5	The sole bidder should not be blacklisted by any Central / State Government Department or Central/State Public Sector Units (PSUs) in India as on the bid submission	<ul style="list-style-type: none"> Undertaking by the authorized signatory of bidder as per format given in Annexure 2, section 7 	PQ_5
6	GST Registration, PF Registration, Pan Card	<ul style="list-style-type: none"> Provision of These Documents is mandatory 	PQ6
7	Self Declaration Certificate	<ul style="list-style-type: none"> Undertaking by the authorized signatory of bidder as per format given in Section 6.8 	PQ7
8	No relationship Certificate	<ul style="list-style-type: none"> Undertaking by the authorized signatory of bidder as per format given in Section 6.7 	PQ8
Similar work shall mean Construction Of RCC Framed Structure Building with HVAC and Accoustic Works.			
<p>The Bidder is to submit audited statements of accounts for the last three (3) years, along with its bid. The Bidder has to submit accounts and certified balance sheet certified by a registered chartered accountant supported by copies of tax returns or the last three (3) years, along with its bid. In the event that the Authority in the Bidder's audited statement notes consistent losses or the risk of insolvency, the Bidder may be disqualified. Where necessary Authority will make enquiries with the Bidder's Bankers.</p>			
<p>Technical bids along with the compliance sheet of technical specifications and with necessary documents should be filled in all respects and each paper should be signed by the authorized representative, scanned and uploaded in e-procurement portal.</p>			
<p><u>Note:</u></p> <p><u>On Failure of submission of these above-mentioned documents the bidder will be disqualified</u></p>			

Notes:

- Any bid failing to meet all of the above eligibility criteria shall be disqualified and will not be considered for technical evaluation.
- No relaxation will be given to any of the qualification criteria.
- Financial year means period beginning from the 1st April to 31st March of the next year.
- The details pertaining to Turnover for the year 2016-17 to 2018-2019 shall be certified by Chartered Accountant on his own letter head and duly attested. Turnover of last 3 financial year from 2016-17 to 2018-2019 shall be considered subject to submission of provisional / audited certificate from Chartered Accountant by the bidder.

The details pertaining to Net worth shall be certified by Chartered Accountant on his own letter head and duly attested alongwith the audited balance sheet certified by Chartered Accountant.

- The statements showing the value of completed works should be countersigned by the Engineer-In-Charge / Executive Engineer / Employer.
- Even though the bidders meet the above qualifying criteria, they are subject to be disqualified / debarred / suspended / blacklisted if they have:
 - Furnished false / fabricated particulars in the forms, statements and / annexures submitted in proof of the qualification requirements and/or
 - Not turned up for entering into agreement, when called upon.
 - Made misleading or false representations in the forms, statements and attachments in proof of the qualification requirements; and/or
 - Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, or financial failures etc., and/or
 - Participated in the previous bidding for the same work and had quoted unreasonable bid prices (Too high or too low) and could not furnish rational justification to the Employer.
 - Even while execution of the work, if found that the work as awarded to the contractor based on false / fake certificate of experience, the contractor will be blacklisted and work will be taken over invoking clause.

3.5. Technical Evaluation Framework

The Bidder's technical proposal in the Technical Evaluation bid shall be evaluated as per the evaluation criteria.

Notes:

- Bidder to submit work order and completion certificate as a supporting document for each Project.
- Authority (or a nominated party) reserves the right to check/validate the authenticity of the information provided in the Pre-qualification and Technical Evaluation criteria and the requisite support must be provided by the Bidder.

The following sections explain how the Bidders shall be evaluated on each of the evaluation criteria.

3.6. Technical Bid Evaluation Criteria

To demonstrate its technical capacity and experience (Technical Capacity), the Bidder must have the following experience:

Project experience

Construction of Similar Works:

Similar work shall mean Construction Of RCC Framed Structure Building with HVAC and Accoustic Works.

(a) Key Personnel

Bidder shall provide adequate number of personnel, each responsible for a specific role within the project. Bidder shall provide clear definition of the role and responsibility of each individual personnel.

Bidder shall have a defined hierarchy and reporting structure for various teams that shall be part of the project. Bidder has to provide the list of proposed Resources for the Project. Any changes in Resource deployment will have to be approved by the Authority.

Following table indicates the minimum qualification required for Key Positions identified for this project. However, Bidder shall independently estimate the teams size required to meet the requirements as per scope of this RFP.

All proposed positions shall be Onsite throughout the entire project implementation phase.

Sr. No.	Position	Qualification	Experience of execution of similar works
1	Project Manager (1 Nos)	B.E/B.Tech. Civil + MBA/ Construction Management	7 Years
2	Site Engineer (1 Nos)	B.E./B.tech. Civil	5 Years
3	Site Engineer (1 Nos)	B.E./B.tech. Electrical	5 Years
4	Junior site Engineer	Diploma Civil	5 Years
5	Junior site Engineer	Diploma Electrical/ Mechanical	5 Years
6	Site Supervisor (2 Nos)	ITI or Diploma Civil	3 years
7	Safety Engineer (1 Nos)	Diploma in Safety/B.E/ B.tech. Civil	3 Years
8	Quality Control engineer	B.E/ B.Tech. Civil/QC Engineer	3 years
9	Planning Engineer	B.E/ B.Tech.	3 years

During Maintenance of the project (DLP Period) after construction, this minimum staff shall be kept at site:

1. Maintenance Manager – civil engineer with min. 5-year experience in building construction projects
2. Junior Site Engineer (Electrical) – B.E / diploma electrical with min. 5-year experience in building construction projects
3. 1 Gardener and 2 helpers for maintaining landscaping.

4. Helper & labour as required for the works.

Manpower plan for Implementation Phase to be provided as per format provided in Section 8.

Apart from the above –mentioned resources, the Bidder shall also propose manpower to be deployed during the Construction and maintenance phase of the Project as provided in the format Section 8.

Any additional or support manpower shall be estimated and should be accounted for in the financial proposal by the selected bidder, so that, the project as per the scope defined and agreement are fulfilled and the project objectives are met.

SECTION 4- Award of Contract

4.1.Notification of Award

Authority will notify the successful Bidder in writing by e-mail followed by courier. To be confirmed by the Bidder in writing by email followed by courier.

4.2.Signing of Contract

After the notification of award, Authority will issue Letter of Acceptance (LOA). Accordingly, a contract shall be signed between successful bidder and Authority or the agency designated by Authority. As an acceptance of the LOA, the Bidder shall sign and return back a duplicate copy of the LOA to Authority or the agency designated by the Authority. The bidder shall return the duplicate copy along with a Performance Bank Guarantee / Performance Security within 10 working days from the date of issuance of LOA.

On receipt of the Performance Bank Guarantee / Performance Security, Authority or the agency designated by Authority shall enter into a contract with the successful bidder.

4.3.Performance Bank Guarantee (PBG) / Performance Security:

Within ten (10) working days from the date of issuance of LOA, the successful Bidder shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) / Performance Security to the Authority. The PBG shall be from a Nationalized Bank or a Scheduled Commercial Bank in the format prescribed in Section 10 - Annexure 5 (a), payable on demand, for the due performance and fulfilment of the contract by the bidder.

This Performance Bank Guarantee / Performance Security shall be for an amount equivalent to 10% of total contract value including EMD. PBG shall be invoked by Authority, in the event the Bidder:

- a. fails to meet the overall penalty condition as mentioned in RFP Volume II or any changes agreed between the parties,
- b. fails to perform the responsibilities and obligations as set out in the RFP to the complete satisfaction of Authority,
- c. Misrepresents facts / information submitted to Authority.

The performance bank guarantee / Performance Security shall be valid till satisfactory completion of Post Implementation Support including the Defect Liability period. The performance bank guarantee / Performance Security may be discharged / returned by Authority upon being satisfied that there has been due performance of the obligations of the bidder under the contract. However, no interest shall be payable on the performance bank guarantee / Performance Security.

In the event of the Bidder being unable to perform the contract for whatever

Reason, Authority shall have the right to invoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of Authority under the contract in the matter, the proceeds of the PBG shall be payable to Authority as compensation for any loss resulting from the bidder's failure to perform/comply its obligations under the contract.

Authority shall notify the bidder in writing of the exercise of its right to receive such compensation within 40 days, indicating the contractual obligation(s) for which the bidder is in default. Authority shall also be entitled to make recoveries from the bidder's bills, performance bank guarantee / Performance Security, or from any other amount due to him, an equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.

In case the project is delayed beyond the project schedule as mentioned in RFP Vol 2, the performance bank guarantee / Performance Security shall be accordingly extended by the Bidder till completion of scope of work as mentioned in RFP Volume II.

This Performance Bank Guarantee / Performance Security shall be valid till (60) days beyond the validity period of the contract, or beyond any period of extension under the contract, if agreed.

On satisfactory performance and completion of the order in all respects and duly certified to this effect by the Project Coordinator, Contract Completion Certificate shall be issued and the PBG would be returned to the Bidder.

4.4. Warranty & Maintenance

- a. Bidder shall also provide complete maintenance support for all the proposed works as outlined in this RFP for a period of project duration [as stated in the Fact Sheet], as per the requirements provided in this RFP and all the acceptance tests are successfully concluded to the satisfaction of the client.
- b. During the warranty period, the bidder shall warrant that the goods supplied under the contract are new, unused of the most recent version/ models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The bidder further warrants that the goods supplied under this contract shall have no defects arising from design, materials or workmanship.
- c. Client or designated representatives of the bidder shall promptly notify successful bidder in writing of any claims arising under this warranty. Upon receipt of such notice, the bidder shall within the warranty period and with all reasonable speed, repair or replace the defective systems, without costs to client and within time specified and acceptable to client.
- d. If the successful bidder, having been notified, fails to remedy the defect(s) within the period specified in the contract, client may proceed to take such reasonable remedial action as may be necessary, at the successful bidder's risk and expense and without prejudice to any other rights, which client may have against the bidder under the contract.
- e. During the comprehensive warranty period, the successful bidder shall provide all product(s) and documentation updates, patches/ fixes, and version upgrades within 15 days of their availability and should carryout installation and make operational the same at no additional cost to client.
- f. The successful bidder hereby warrants that;

- The Project works represents a complete Project meeting all the requirements as outlined in the RFP and further amendments if any and provides the functionality and performance, as per the terms and conditions specified in the contract.
- The proposed works shall achieve parameters delineated in the technical specification / requirement.
- The successful bidder shall be responsible for warranty services from licensors of products included in the project works.
- The successful bidder undertakes to ensure the maintenance of the acceptance criterion / standards in respect of the systems / project during the warranty period.

4.5.Failure to agree with the Terms & Conditions of the RFP

Failure of the successful bidder to agree with the Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the award, in which event Authority may award the contract to the next best value bidder or call for new bids. In such a case, Authority shall invoke the PBG and / or forfeit the EMD.

4.6.Miscellaneous.

1. The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts in Bareilly shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or in connection with the Bidding Process.
2. The Authority, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to;
 - i. suspend and/ or cancel the Bidding Process and/ or amend and/ or supplement the Bidding Process or modify the dates or other terms and conditions relating thereto;
 - ii. consult with any Bidder in order to receive clarification or further information;
 - iii. qualify or not to qualify any Bidder and/ or to consult with any Bidder in order to receive clarification or further information;
 - iv. retain any information and/ or evidence submitted to the Authority by, on behalf of, and/ or in relation to any Bidder; and/ or
 - v. Independently verify, disqualify, reject and/ or accept any and all submissions or other information and/ or evidence submitted by or on behalf of any Bidder.
3. It shall be deemed that by submitting the Bid, the Bidder agrees and releases the Authority, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/ or performance of any obligations hereunder, pursuant hereto and/ or in connection with the Bidding Process and waives, to the fullest extent permitted by applicable laws, any and all rights and/ or claims it may have in this respect, whether actual or contingent, whether present or in future.

4. Obtaining the required statutory licenses like Consent to Establish /Consent to operate / building plan approval / completion certificate alongwith any other approvals from the statutory authorities (if required / directed by Client).
5. Authority may, at its discretion reserves the right to extend the RFP submission date and amending for which the RFP is invited.
6. Authority reserves the right to accept / reject any or all RFP(s)/Proposals and to annul the process without assigning any reason thereto.
7. Authority reserves the right to define the requirements and issue another RFP/s / Tender as may be deemed necessary.
8. The Authority reserves the right to verify the particulars furnished by the bidders independently and also reserves the right to reject any proposal without assigning any reason thereof in the interests of effective implementation of the project.
9. After uploading the technical/financial bid, the original BG are to be submitted by the bidder to the concerned CEO, BSCL so as to reach before opening of the pre-qualification bid. Failure to furnish BG, entail rejection of the bid and forfeiture of the EMD. Similarly, if any of the certificates, documents etc. furnished by the bidder are found to be false/fabricated/bogus, the bidder will be black listed and the EMD forfeited.
10. The Authority may extend the dates for issue and receipt of RFP by issuing an amendment in which case all rights and obligations of the Chief Executive Officer, Bareilly Smart City Limited.
11. Authority reserves the right to define the requirements and issue another RFP/s / Tender as may be deemed necessary.
12. The Authority reserves the right to verify the particulars furnished by the bidders independently and also reserves the right to reject any proposal without assigning any reason thereof in the interests of effective implementation of the project.
13. The Authority may extend the dates for issue and receipt of RFP by issuing an amendment in which case all rights and obligations of the Chief Executive Officer, Bareilly Smart City Limited.

Section 5- Annexure 1 – Template for Pre-Bid Queries

Bidder shall submit all pre-bid queries in excel in the following format along with the name and details of the origination submitting the queries.

SL #	RFP Volume, Section	RFP page no	Content in the RFP	Clarification sought

Note:

- In case of queries with regard to RFP document, please mention the section/clause as may be applicable.
- In case of queries with regard to functional or technical requirements, please give reference of the corresponding FR/TR
- Bidders are advised to share the Pre- Bid queries in two formats, one is in excel sheet (in *.xls Format) and as well as another in signed and scanned copy of the file (in *.pdf format).**

Section 6- Annexure – 02 - Formats for submission of Pre-Qualification Bid

6.1. Pre-Qualification Bid Covering Letter

Dated: DD/MM/YYYY

To

Chief Executive Officer,

Bareilly Smart City Limited,

C/o Bareilly Municipal Corporation,

Nagar Nigam, Bareilly

Sub: **REQUEST FOR PROPOSAL FOR “Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited”**

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

Dear Sir,

With reference to your **“Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited”**, we hereby submit our Pre-qualification bid, Technical Bid and Financial Bid for the same.

We hereby declare that:

- a. We have examined and have no reservations to the Bidding Document, including Addenda No.: (Insert the number and issuing date of each addenda);
- b. We hereby acknowledge and unconditionally accept that the Authority can at its absolute discretion apply whatever criteria it deems appropriate, not just limiting to those criteria set out in the RFP and related documents, in short listing of Agency for providing services.
- c. We offer to supply in conformity with the Bidding Document and in accordance with the delivery schedule specified in Schedule of Supply, the following Goods and Related Services:

S. No.	Description of works
1	“Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited” under Implementation of the Smart City Mission in Bareilly.

- d. We have submitted EMD of Indian Rupees [.....] and Bid Processing fee of Indian Rupees[.....]in the form of online Transfer/ Bank Guarantee in favour of Chief Executive Officer, Bareilly Smart City Limited.
- e. We hereby declare that all information and details furnished by us in the Bid are true and

correct, and all documents accompanying such application are true copies of their respective originals.

- f. We agree to abide by our offer for a period of 120 days from the date of opening of pre-qualification bid prescribed by **Authority** and that we shall remain bound by a communication of acceptance within that time.
- g. We have carefully read and understood the terms and conditions of the RFP and the conditions of the contract applicable to the RFP. We do hereby undertake to provision as per these terms and conditions.
- h. In the event of acceptance of our bid, we do hereby undertake:
 - i. To supply the products and commence services as stipulated in the RFP document.
 - ii. To undertake the project services for entire contract period from the date of signing of the contract as mentioned in the RFP document.
 - iii. We affirm that the prices quoted are inclusive of, development, delivery, installation, commissioning, , and inclusive of all out of pocket expenses, taxes, levies discounts etc.
- i. We do hereby undertake, that, until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and notification of award of contract, shall constitute a binding contract between us.
- j. If our Bid is accepted, we commit to obtain a Performance Security in the amount of 10 percent of the Contract Price for the due performance of the Contract.
- k. We are not participating, as Bidders, in more than one Bid in this bidding process.
- l. We understand that the **Authority** may cancel the bidding process at any time and that **Authority** is not bound to accept any bid that it may receive without incurring any liability towards the bidder.
- m. We fully understand and agree to comply that on verification, if any of the information provided in our bid is found to be misleading the selection process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so.
- n. We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

In case of any clarifications please contact on email at ceo.bscl01@gmail.com.

Thanking you,

Yours sincerely,

(Signature of the Lead bidder) Printed Name

Designation

Seal

Date: Place:

Business Address:

6.2. Company profile

A. Brief company profile

Sl. No.	Particulars	Description or details
1.	Name of Bidder	
2.	Legal status of Bidder (Registered Contractor, company, Pvt. Ltd., LLP etc.)	
3.	Bidder's actual or intended country of registration (Indicate Country of Constitution)	
4.	Bidder's actual or intended year of incorporation (Incorporation / Registration date and number)	
5.	GST number	
6.	PAN details	
7.	Bidder's legal address (In country of Registration)	
8	Main business of the Bidder	
9	Registered office address	
10.	Primary Contact Person (Name, Designation, address, mobile number, fax, email)	
11.	Secondary Contact Person (Name, Designation, address, mobile number, fax, email)	
12	EMD details	

Note:

Attached are copies of original documents of article of incorporation (or equivalent documents of constitution or association), and / or registration documents of the legal entity named above.

Include are the organizational chart, a list of Board of Directors and the beneficial ownership

B. Certificate of Incorporation / Registration (required for bidder members)

C. Financial Turnover

The financial turnover of the company is provided as follows:

	2016-17	2017-18	2018-19
Annual Turnover			

Copy of audited financial statements or declaration from the appointed statutory auditor/ CA to be provided as proof of the financial turnover.

Positive net worth, as on the last date of latest audited financial year. Copy of self-certified statutory auditor certificate by CA and audited Balance sheet to be submitted along with the bid

Fiscal Criteria of the Bidder

Bidder Type	Net Worth	Financial Year
Single Entity Bidder		

Fiscal Data

Amount / Value (INR, Crore)			
Description of Fiscal Information	2016-2017	2017-18	2018-19
Statement of Fiscal Position information from Balance Sheet			
Total Assets			
Total Liabilities			
Total Equity / Net Worth (NW)			
Securities (Stocks, Bonds, Mutual Funds, etc.,)			
Insurance Policies (Cash surrender value)			
Current Assets			
Current Liabilities			
Working Capital			
Information from Income Statement			
Total Revenue			
Profits Before Taxes			
Cash Flow Information			
Cash Flow from Operating Activities			

Source of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments

Serial Number	Source of Finance	In ₹ , - Crore
1		
2		
3		

Instructions:

- The Bidder/Member shall attach copies of the balance sheets, financial statements and Annual Reports for the last financial year preceding the Bid Due Date. The financial statements shall:
 - reflect the financial situation of the Bidder;
 - be audited by a statutory auditor;
 - be complete, including all notes to the financial statements; and
 - Correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).
- Net Worth shall mean (Subscribed and Paid-up Equity + Reserves) less (Revaluation reserves + miscellaneous expenditure not written off + reserves not available for distribution to equity shareholders).
- Financial Year will be the latest completed financial year, preceding the bidding. In case the Bid Due Date falls within 3 (three) months of the close of the latest financial year.
- The Bidder shall provide an Auditor's Certificate specifying the Net Worth of the Bidder and also specifying the methodology adopted for calculating such Net Worth.

Turnover* of the bidder's company in last three financial years

Description	2016-17	2017-18	2018-19	Remarks
Turnover (₹ in Cr.)				
Amount Equivalent to Current Year				
Profit after Tax (₹ in Cr.)				

* Certified copies from a registered chartered accountant shall be enclosed.

Names of three Clients from different departments to whom similar works are done in the last three financial years and to whom reference may be made by the Authority regarding the bidder's performance for timely completion of delivery, installation and after sales service support:

Description	Client1	Client 2	Client 3	Remarks
Name and Designation of Contact person				
Complete Address of the Buyer				
Telephone Number / Mobile Number				
E-mail Address				

Special Accreditations or Awards:

Other details – (If bidder wants to furnish relate to their capabilities) Declaration:

(Signature, name and designation of the authorised signatory with seal and Date)

6.3. Declaration of Non-Blacklisting

(To be notarized on Non-Judicial Stamp Paper of Rs.100)

To,

()

Subject: Self Declaration of not been blacklisted in response to the **REQUEST FOR PROPOSAL FOR “Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited”**

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

Dear Sir,

I M/s. (Sole Applicant) (the names and addresses of the registered office) hereby certify and confirm that we or any of our promoter/s / director/s are not barred or blacklisted by any state government or central government / department / agency /PSU in India or abroad from participating in Project/s, by the bidder.

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

We further confirm that we are aware our Application for the captioned Project would be liable for rejection in case any material misrepresentation is made or discovered with regard to the requirements of this RFP at any stage of selection and / or thereafter during the Contract Period. Dated this.....Day of, 201....

Name of the Applicant

.....

Signature of the Authorised Person

.....

Name of the Authorised Person

Printed Name Designation

Seal

Date:

Place:

Business Address:

6.4.No Deviation Certificate

To

The Chief Executive Officer,
Bareilly Smart City Limited,
C/o Bareilly Municipal Corporation,
Nagar Nigam, Bareilly

This is to certify that our offer is exactly in line with your RFP enquiry (including amendments) no. _____dated_____. This is to expressly certify that our offer contains no deviation either Technical (including but not limited to Scope of Work, Business Requirements Specification, Functional Requirements Specification, Hardware Specification and Technical Requirements Specification) or Financial in either direct or indirect form.

(Authorized Signatory)

Signature: Name: Designation:

Address:

Seal

Date:

6.5.Total Responsibility Certificate

Dated: DD/MM/YYYY

To

The Chief Executive Officer,
Bareilly Smart City Limited,
C/o Bareilly Municipal Corporation,
Nagar Nigam, Bareilly

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

(Authorized Signatory)

Signature: Name: Designation:

Address:

Seal: Date:

6.6.Self-certificate for Project execution experience and Litigation History (In Bidding Entity's Letter Head)

This is to certify that <Name of the Bidding entity> has been awarded with < Name of the Project > as detailed under:

Name of the Project	
Client's Name, Contact no. and Complete Address	
Contract Value for the bidder (in Indian Rupees)	
Current status of the project (Completed/Ongoing)	
Activities completed by bidding entity as on bid submission date <i>(Only relevant activities as sought in the Criteria to be included)</i>	
Value of Work completed for which payment has been received from the client.	
Date of Start	
Date of Completion	
References (Name and contact details of the authorized client officials issued the project executed certifications are to be referred)	

We further confirm that we are aware our proposal for the <<Name of the RFP>> for implementation of Smart Solutions in Bareilly would be liable for rejection in case any material misrepresentation is made or discovered with regard to the requirements of this RFP at any stage of selection and/or thereafter during the term of the contract.

Dated this.....Day of, 202..... . (Authorized Signatory)

Signature:

Name: Designation:

Bidding entity's name Address:

Seal: Date:

All above statements should be backed by corresponding experience certificate from respective Employers.

Date: DD/MM/YYYY

Experience will be counted for the completed works and duly enclosing completion certificates from the clients.

Specific Experience of Similar Projects

Bidder's Name :
 Date :
 No. and Title :
 Page _____ of _____ pages

SN	Contract Details	Elements Executed	Unit	Quantity executed	Value in Rs.
1	Contract name: Year of completion: Amount of contract: Name of Employer: Address: _				
2	Contract name: Year of completion: Amount of contract: Name of Employer: Address: _				

All quantities mentioned and the values indicated should be backed by respective certificates from the Employer.

A) Litigation History

Date: DD/MM/YYYY

Bidder's Name: _____

RFP No. and Title: _____

Page _____ of _____ pages

Non-Performed Contracts			
<input type="checkbox"/> Contract non-performance did not occur since 1 st January [insert year]			
<input type="checkbox"/> Contract(s) not performed since 1 st January [insert year]			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and INR equivalent)
		Contract Identification: Name of Employer: Address of Employer: Reason(s) for non-performance: [indicate main reason]	
Pending Litigation			
<input type="checkbox"/> No pending litigation			
<input type="checkbox"/> Pending litigation			

Pending Litigation, in accordance with section III, Evaluation and Qualification Criteria

Year of dispute	Amount in dispute (IN Rs.)	Contract Identification	Total Contract Amount (In Rs.)
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute: Party who initiated the dispute: Status of dispute:	
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute: Party who initiated the dispute: Status of dispute:	

Information on litigation history in which Bidder is the Petitioner.

S. No	Case No. / Year	Court where filed.	Subject Matter / Prayer in the case.	Respondents i.e., SE / CE	Present Stage.
1	2	3	4	5	6

(To be provided by the Bidder/each Member/Associate for any material non-performance or contractual non-compliance in past projects, contractual disputes and litigation/ arbitration in the last 5 years preceding the Bid Due Date)

Sl. No	Name	Forum and Counterparty With Contract Identification	Brief Description of the matter	Estimated financial liability	Current Status of Litigation	Orders passed against the Bidder/Member

Bidder must not hide any information regarding litigation or blacklisting otherwise legal action may be initiated in case of wrong information submitted by the bidder.

Signature of the Bidder

6.7 No Relationship certificate

I/We hereby certify that I/We* am/are* **related /not related** (*) to any officer of Bareilly Smart City Limited, Bareilly of the rank of Assistant Engineer & above. I/We* am/are* aware that, if the facts subsequently proved to be false, my/our* contract will be rescinded with forfeiture of E.M.D and security deposit and I/We* shall be liable to make good the loss or damage resulting from such cancellation.

I/We also note that, non-submission of this certificate will render my/our tender liable for rejections.

(*) – Strike out which is not applicable

SIGNATURE OF THE BIDDER

6.8 Self-Decalaration certificate

1. I/We have visited the site and have fully acquainted with the local situation regarding the materials, labour and factors pertaining to the work for completion in all respect before submitting the tender.
2. I/We have carefully studied the conditions of the construction, specifications, contract condition and all other document relating to this work and agree to execute the same accordingly.
3. I/We solemnly pledge that I/We shall be sincere in discharging my/our duties as responsible contractor and complete the work within the prescribed time limit. In case there are deviation from the construction program, I/We shall abide by the decision of Engineer-in-charge for revision of the program and arrange for the labor, materials, equipment etc. accordingly.
4. In the event of award of the work to me/us, I/We under the entire responsibility for the structural stability to reconstruct / replace the whole or part of the component of the structure in the event of failure or improper functioning/improper constructions within a period of one year from the date of completion without asking for extra payment from any account to the department.
5. I/We undertake that I/We shall not claim any escalation of cost on account of materials, laborers, taxes, natural calamities, public nuisance, miscreants or any account in connections with work within execution of the work till the project completion period and shall not be entertained by the department (BSCL, Bareilly).
6. In case of violation of contents of department's tender documents in conditions or in any form, my /our offer / tender shall be rejected by the department without any intimation to me/us.

(*) – Strike out which is not applicable

SIGNATURE OF THE BIDDER

Section 7- Annexure 3 – Formats for Submission of the Technical Bid

7.1. Technical Bid Check-List

Sl. No	Checklist I t e m	Compliance (Yes/No)	Page No. and Section No. in the Bid
1	Technical Bid Letter		
2	Credential summary		
3	Project Citations and Self-certifications, as applicable		
4	Project plan		
5	Compliance to Requirement (Technical / Functional Specifications)		
6	Manufacturers'/Producers' Authorization Form		
7	Anti-Collusion certificate		
8	Non-disclosure agreement		

Signature of the Bidder

7.2. Technical Bid Covering Letter

Dated: DD/MM/YYYY

To

The Chief Executive Officer,
Bareilly Smart City Limited,
C/o Bareilly Municipal Corporation,
Nagar Nigam, Bareilly

Subject: **Request for Proposal [RFP] for ““<<Name of the RFP>>””**

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

Dear Sir,

I (in case of single bidder) or We, <<name of the undersigned Bidder >>, having read and examined in detail all the bidding documents in respect of **Request for Proposal [RFP] for selection of “<<Name of the RFP>>”** do hereby propose to provide our services as specified in the bid submitted by us.

It is hereby confirmed that I / We are entitled to act on behalf of our company / corporation / firm / organization and empowered to sign this document as well as such other documents, which may be required in this connection.

We declare that all the services shall be performed strictly in accordance with the RFP documents.

We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to Authority, is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the department in its evaluation process. We also confirm that we shall not attract conflict of interest in principle.

We hereby declare that in case the contract is awarded to us, we shall submit the contract Performance bank guarantee / Performance Security in the form prescribed at Annexure 5 (a) of Section 10 of the RFP Volume I.

We hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.

We understand that our bid is binding on us and that you are not bound to accept a Bid you receive. This bid is valid for 120 (One Hundred and Twenty) days after opening of technical bid. We shall extend the validity of the bid if required by Authority.

Thanking you,

Yours sincerely,

(Signature of the Lead Bidder) Printed

Name Designation

Seal

Date:

Place:

Business Address:

7.3.Credential Summary

Sl. No.	Project Name	Client Name	Client Type	Project Value (in Indian Rupees)	Project Components	Documentary evidence provided (Yes or No)	Project Status (Completed or Ongoing or Withheld)
1							
2							
3							
4							
5							
6							
7							

- Client type – Indicate whether the client is Government or PSU or Private
- Documentary evidence provided – Indicate the documentary evidence provided with the detailed project credential like work order or purchase order or completion certificate or letter of appointment
- Project Status – Completed (date of project completion) or Ongoing (project start date)

Signature of the Bidder

7.4.Bidder's Experience - Client Citations

Bidder is requested to furnish the credentials in the following format for both Pre-qualification and Technical criterion. All credentials should be followed by relevant documentary proof.

Name of the Project & Location	
Client's Name and Complete Address	
Narrative description of project Contract Value for the bidder (in Indian Rupees)	
Date of Start	
Date of Completion	
Activities undertaken by prime bidder or consortium member	

Note: If the project is ongoing, bidder must clearly specify which of the stages/phases/milestones are completed and which are ongoing and at what stage of completion and produce a self- certificate as per the format provided.

Signature of the Bidder

7.5. Project Plan

A Detailed Project Plan covering break-up of each phase into the key activities, along with the start and end dates must be provided as per format given below.

Activity-wise Timelines							
Sl. No.	Detailed Work Breakdown structure	Month Wise Program					
		1	2	3	4	5	...
	Project Plan						
1	Activity 1						
1.1	Sub-Activity 1						
1.2	Sub-Activity 2						
2							
2.1							
2.2							
3							
3.1							
4							

Activity-wise Timelines

Sl. No.	Item of Activity	Month wise Program
----------------	-------------------------	---------------------------

Note: The above activity chart is just for the purpose of illustration. Bidders are requested to provide detailed activity & phase wise timelines for executing the project with details of deliverables & milestones as per their bid.

7.6 Details of Resources proposed

Sl. No.	Designation	Name	Highest Degree	Basic Qualification	Certifications	Total Experience (In Years)
1. During Construction						
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
2. During Defect Liability Period						
1.						
2.						
3.						
4.						
5.						

7.7 Curriculum Vitae (CV) of Team Members

1	Name:			
1.	Proposed position or role	<i>(only one candidate shall be nominated for each position)</i>		
2.	Date of Birth		Nationality	
3.	Education			
		Qualification	Name of School or College or University	Degree Obtained
				Year of Passing
4.	Years of experience			
5.	Areas of Expertise and no. of years of experience in this area	<i>(as required for the Profile)</i>		
6.	Certifications and Trainings attended			
7.	Employment Record			
		Employer	Position	From
				To
		<i>[Starting with recent position and last 2 firms, list in reverse order, giving for each employment: dates of employment, name of employing organization, positions held.]</i>		

8.	Detailed Tasks Assigned	(List all tasks to be performed under this project)																													
9.	Relevant Work Undertaken that Best Illustrates the experience as required for the Role	<table border="1"> <tr> <td colspan="2"></td> </tr> <tr> <td>Name of assignment Year</td> <td></td> </tr> <tr> <td>Location</td> <td></td> </tr> <tr> <td>Employer</td> <td></td> </tr> <tr> <td>Main project features</td> <td></td> </tr> <tr> <td>Position held</td> <td></td> </tr> <tr> <td>Activities performed</td> <td></td> </tr> <tr> <td colspan="2"></td> </tr> <tr> <td>Name of assignment Year</td> <td></td> </tr> <tr> <td>Location</td> <td></td> </tr> <tr> <td>Employer</td> <td></td> </tr> <tr> <td>Main project features</td> <td></td> </tr> <tr> <td>Position held</td> <td></td> </tr> <tr> <td>Activities</td> <td></td> </tr> </table>				Name of assignment Year		Location		Employer		Main project features		Position held		Activities performed				Name of assignment Year		Location		Employer		Main project features		Position held		Activities	
Name of assignment Year																															
Location																															
Employer																															
Main project features																															
Position held																															
Activities performed																															
Name of assignment Year																															
Location																															
Employer																															
Main project features																															
Position held																															
Activities																															

Compliance to Requirement (Technical / Functional Specifications)

The bidder should provide compliance to the requirement specifications (both technical and functional) specified in the RFP. The same should be produced here, and compliance against each requirement line item should be marked.

7.6. Conduct and Anti-Collusion Certificate

(To be notarized on Non-Judicial Stamp Paper of Rs.100)

I / We hereby certify and confirm that in the preparation and submission of our Bid for **Request for Proposal [RFP] for “<<Name of the RFP>>”** against the RFP issued by Authority, that

I / We undertake that, in competing for the contract, I / we will strictly observe the laws against fraud and corruption in force in India namely Prevention of Corruption Act 1988.

I / We declare that our organization have never been blacklisted by any department / units of Government of India or State Governments or Union Territories in India for any of the reasons of committing serious misconducts or have been charged with committing criminal action(s), or dissatisfaction with the performance of our services, or violation of any terms and conditions of the Agreement. In case if such misconducts are found to have been committed by us with documentary evidences, our contract can be summarily cancelled with the forfeiture of the security and performance guarantees we have executed with the Authority.

I / We hereby certify and confirm that in the preparation and submission of our Bid, I / we have not acted in concert or in collusion with any other Bidder or other person(s) and also not done any act, deed or thing which is or could be regarded as anti- competitive.

I / We further confirm that I / We have not offered nor will offer any illegal gratification in cash or kind to any person or agency in connection with the Bid.

I / We further acknowledge that on any later date, if it was found that I / We indulged in any of the corrupt activities mentioned in Prevention of Corruption Act 1988, the Authority has the right to take necessary legal action.

Dated thisDay of, 201...

Place:

.....

(Name of the Bidder)

.....

(Signature of the Bidder / Authorised Person)

.....

(Name of the Authorised Person)

Seal

Business Address:

Section 8- Annexure 4 – Formats for Submission of the Financial Bid

A. Preamble

1. The Price Schedule shall be prepared in compliance with the Instructions to Bidders, General and Particular Conditions of Contract.
2. A rate or price shall be entered against each item in the Priced schedule. The cost of Items against which the Bidder/ Service Provider has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Price Schedule and that component work shall be executed free of cost.
3. The whole cost, complying with the provisions of the Contract, shall be included in the Items provided in the Priced Schedule, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.

Financial Bid

- i. The Bidder has to provide the financial bid in the formats as given here. Bidders shall give the required details of all applicable taxes, duties, other levies and charges etc. in respect of direct transaction between Authority and the Bidder. **The financial bid must be uploaded on e-procurement only and should not** be printed or submitted with Prequalification / Technical Bid.
- ii. Bidders shall quote for the entire scope of contract on a “overall responsibility” basis such that the total bid price covers Bidder’s all obligations mentioned in or to be reasonably inferred from the bidding documents
- iii. Prices quoted by the Bidder shall remain firm during the entire contract period and not subject to variation on any account.
- iv. The bidders shall quote in their proposals all items based on item rate price as per schedules provided for the entire scope.
- v. The prices quoted shall be inclusive of all taxes and duties. For the purpose of clarity, applicable taxes as on the date of submission of bid shall be considered.
- vi. **All priced quotations should be in Indian Rupees only.** – Bidders are requested to quote the price in figures and as well as in the words in the same box / place.
- vii. The bidder should quote his lowest firm prices valid for the duration and completion of the contract. No enhancement of prices for what so ever reason will be allowed once the offer is accepted.
- viii. The prices quoted by the Bidder shall be fixed.
- ix. A bid submitted with an adjustable price quotation shall be treated as non-responsive and rejected.
- x. Any conditional bid with any deviations from the terms and conditions of RFP shall be disqualified.

General

1. The Schedules do not generally give a full description of the equipment to be supplied and the services

to be performed under each item. Bidders shall be deemed to have read the Technical Specifications and other sections of the bidding documents and reviewed the Drawings to ascertain the full scope of the requirements included in each item prior to filling in the rates and prices. The entered rates and prices shall be deemed to include for the full scope as aforesaid, including overheads and profit.

2. If bidders are unclear or uncertain as to the scope of any item, they shall seek clarification in accordance with the Instructions to Bidders in the bidding documents prior to submitting their bid.

Pricing

3. Prices shall be filled in indelible ink, and any alterations necessary due to errors, etc., shall be initialled by the Bidder.

As specified in the Conditions of Contract, prices shall be fixed and firm for the duration of the Contract.

4. Bid prices shall be quoted in the manner indicated and, in the currencies, specified in the Instructions to Bidders in the bidding documents.

For each item, bidders shall complete each appropriate column in the respective Schedules, giving the price breakdown as indicated in the Schedules.

Prices given in the Schedules against each item shall be for the scope covered by that item as detailed in the Technical Specifications, Drawings or elsewhere in the bidding documents.

5. Where there are errors between the total of the amounts given under the column for the price breakdown and the amount given under the Total Price, the former shall prevail and the latter will be corrected accordingly.

Where there are discrepancies between amounts stated in figures and amounts stated in words, the amounts stated in words shall prevail.

6. Payments will be made to the Contractor in the currency or currencies indicated under each respective item.
7. Items left blank will be deemed to have been included in other items. The TOTAL for each Schedule and the TOTAL of the Grand Summary shall be deemed to be the total price for executing the Facilities and sections thereof in complete accordance with the Contract, whether or not each individual item has been priced.
8. When requested by the Employer for the purposes of making payments or part payments, valuing variations or evaluating claims, or for such other purposes as the Employer may reasonably require, the Contractor shall provide the Employer with a breakdown of any composite or lump sum items included in the Schedules.

Financial Bid

To,
Chief Executive Officer
Bareilly Smart City Limited,
C/o Bareilly Municipal Corporation,
Nagar Nigam, Bareilly

Sub: Financial Bid for **“Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited”**,

Ref: Your RFP Notification No. _____ dated _____

Dear Sir,

Having gone through this RFP document and having fully understood the Scope of the Project and the Scope of Work for the Project as set out by AUTHORITY in the RFP. I / we are pleased to inform that I / we would deploy the following resources for undertaking the entire activities involved in this RFP No. We also quote the amount that we would be charging from the Authority. The quote is inclusive of all applicable taxes and charges.

A. Estimate Summary

GIC Auditorium- Bareilly smart city		
Summary of Estimated Cost		
Sr. No.	Description	Amount (Rs.)
1	Civil works	
2	External development (incl. drain, boundary wall, internal road, guard room, RWH pit & UG tank)	
3	Furniture	
4	Auditorium	
5	HVAC	
6	Plumbing work	
7	Fire fighting	
8	Electrical works	
	Total	

- The price bid shall necessarily include the assumptions made by the Bidder while arriving at the quoted financial offer.
- The Bidder has to provide detailed item rate quotation as per Annexure 9.
- The evaluation committee may further ask for detailed rate analysis and calculations made in

arriving at this financial offer, if required.

I / we have reviewed all the terms and conditions of the RFP and would undertake to abide by all the terms and conditions contained therein. I / we hereby declare that there are and shall be no deviations from the stated terms in the RFP Document.

We the undersigned, examined the conditions of contract, specification, special conditions of contract, basic parameters of the proposed scheme and subsequent Addendums for the above-mentioned works. We have examined understood and checked these documents and have ascertained that there is no ambiguity in the employer's requirement. We accordingly offer to complete the work in conformity with such documents for the lumpsum price as given here under.

We agree to take up the work of as per the Employers requirements at an Item Rate Contract basis. The estimated price of the project is

..... (in figures)

..... (in words).

If this offer is accepted we will provide the specified performance security, commence the work within 15 days from the date of issue of letter of acceptance and complete the work within accordance with the above named documents within the period stipulated for completion. We guarantee that the works will then confirm with the performance security included in the RFP.

We understand that you are bound to accept the lowest or any RFP you may receive. Yours faithfully,

For and on behalf of (*Name of Bidder*)

..... *Duly*

*signed by the Authorised Signatory of the Bidder (Name,
Designation, Address and official stamp)*

Date: DD/MM/YYYY

Section 9- Annexure 5 (a) – Performance Bank Guarantee

Ref: _____

Date _____

Bank Guarantee No. _____

<Name>

<Designation>

<Address><Phone Nos.><Fax Nos.><Email id>

Whereas, <<name of the firm and address>> (hereinafter called “Implementing Agency”) has undertaken, in pursuance of contract no. <Insert Contract No.> dated. <Date> to provide Implementation services for <<name of the assignment>> to Bareilly Smart City Limited (hereinafter called “the Authority”)

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

And whereas we, <Name of Bank> a banking company incorporated and having its head/registered office at <Address of Registered Office> and having one of its office at

<Address of Local Office> have agreed to give the supplier such a bank guarantee.

Now, therefore, we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of Indian Rupees<Insert Value> (Rupees <Insert Value in Words> only) and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of Indian Rupees<Insert Value> (Rupees

<Insert Value in Words> only) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

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

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the Implementing Agency shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This Guarantee shall be valid until <<Insert Date>>) Not withstanding anything contained herein:

I. Our liability under this bank guarantee shall not exceed Indian Rupees<Insert Value> (Rupees <Insert Value in Words> only).

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

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

Date _____

Place _____

Signature _____

Witness_ _____

Printed name _____

(Bank's common seal)

Section 10- Annexure 6 – Non-Disclosure Agreement

WHEREAS, we the undersigned Bidder, _____, having our principal place of business or registered office at, are desirous of bidding for RFP No. <<>> dated <<DD-MM-2018>> **Request for Proposal [RFP] for selection of “<<Name of the RFP>>”** (hereinafter called the said 'RFP') to the “Bareilly Smart City Limited”, hereinafter referred to as 'Authority'

And,

WHEREAS, the Bidder is aware and confirms that the Authority's business or operations, information, application or software, hardware, business data, architecture schematics, designs, storage media and other information or documents made available by the Authority in the RFP documents during the bidding process and thereafter, or otherwise (confidential information for short) is privileged and strictly confidential and or proprietary to the Authority,

NOW THEREFORE, in consideration of disclosure of confidential information, and in order to ensure the Authority's grant to the Bidder of specific access to Authority's confidential information, property, information systems, network, databases and other data, the Bidder agrees to all of the following conditions.

It is hereby agreed as under:

1. The confidential information to be disclosed by the Authority under this Agreement (“Confidential Information”) shall include without limitation, any and all information in written, representational, electronic, verbal or other form relating directly or indirectly to processes, methodologies, algorithms, risk matrices, thresholds, parameters, reports, deliverables, work products, specifications, architecture, project information, security or zoning strategies & policies, related computer programs, systems, trend analysis, risk plans, strategies and information communicated or obtained through meetings, documents, correspondence or inspection of tangible items, facilities or inspection at any site to which access is permitted by the Authority.
2. Confidential Information does not include information which:
 - a. the Bidder knew or had in its possession, prior to disclosure, without limitation on its confidentiality;
 - b. information in the public domain as a matter of law;
 - c. is obtained by the Bidder from a third party without any obligation of confidentiality;
 - d. the Bidder is required to disclose by order of a competent court or regulatory authority;
 - e. Is released from confidentiality with the written consent of the Authority.The Bidder shall have the burden of proving hereinabove are applicable to the information in the possession of the Bidder.
3. The Bidder agrees to hold in trust any Confidential Information received by the Bidder, as part of the Bid process or otherwise, and the Bidder shall maintain strict confidentiality in respect of such Confidential

Information, and in no event a degree of confidentiality less than the Bidder uses to protect its own confidential and proprietary information. The Bidder also agrees:

- a. to maintain and use the Confidential Information only for the purposes of bidding for this RFP and thereafter only as expressly permitted herein;
 - b. to only make copies as specifically authorized by the prior written consent of the Authority and with the same confidential or proprietary notices as may be printed or displayed on the original;
 - c. to restrict access and disclosure of Confidential Information to their employees, agents and representatives strictly on a "need to know" basis, to maintain confidentiality of the Confidential Information disclosed to them in accordance with this clause; and
 - d. To treat Confidential Information as confidential unless and until Authority expressly notifies the Bidder of release of its obligations in relation to the said Confidential Information.
4. Notwithstanding the foregoing, the Bidder acknowledges that the nature of activities to be performed as part of the Bid process or thereafter may require the Bidder's personnel to be present on premises of the Authority or may require the Bidder's personnel to have access to software, hardware, computer networks, databases, documents and storage media of the Authority while on or off premises of the Authority. It is understood that it would be impractical for the Authority to monitor all information made available to the Bidder's personnel under such circumstances and to provide notice to the Bidder of the confidentiality of all such information.

Therefore, the Bidder shall disclose or allow access to the Confidential Information only to those personnel of the Bidder who need to know it for the proper performance of their duties in relation to this project, and then only to the extent reasonably necessary. The Bidder will take appropriate steps to ensure that all personnel to whom access to the Confidential Information is given are aware of the Bidder's confidentiality obligation. Further, the Bidder shall procure that all personnel of the Bidder are bound by confidentiality obligation in relation to all proprietary and Confidential Information received by them which is no less onerous than the confidentiality obligation under this agreement.

5. The Bidder shall establish and maintain appropriate security measures to provide for the safe custody of the Confidential Information and to prevent unauthorized access to it.
6. The Bidder agrees that upon termination or expiry of this Agreement or at any time during its currency, at the request of the Authority, the Bidder shall promptly deliver to the Authority the Confidential Information and copies thereof in its possession or under its direct or indirect control, and shall destroy all memoranda, notes and other writings prepared by the Bidder or its Affiliates or directors, officers, employees or advisors based on the Confidential Information and promptly certify such destruction.
7. Confidential Information shall at all times remain the sole and exclusive property of the Authority. Upon completion of the Bid process and or termination of the contract or at any time during its currency, at the request of the Authority, the Bidder shall promptly deliver to the Authority the Confidential Information and copies thereof in its possession or under its direct or indirect control, and shall destroy all memoranda, notes and other writings prepared by the

Bidder or its Affiliates or directors, officers, employees or advisors based on the Confidential Information within a period of sixty days from the date of receipt of notice, or destroyed, if incapable of return. The destruction shall be witnessed and so recorded, in writing, by an authorized representative of the Authority. Without prejudice to the above the Bidder shall promptly certify to the Authority, due and complete destruction and return. Nothing contained herein shall in any manner impair rights of the Authority in respect of the Confidential Information.

8. In the event that the Bidder hereto becomes legally compelled to disclose any Confidential Information, the Bidder shall give sufficient notice and render best effort assistance to the Authority to enable the Authority to prevent or minimize to the extent possible, such disclosure. Bidder shall not disclose to a third party any Confidential Information or the contents of this RFP without the prior written consent of the Authority. The obligations of this Clause shall be satisfied by handling Confidential Information with the same degree of care, which the Bidder applies to its own similar Confidential Information but in no event less than reasonable care.

For and on behalf of:

(BIDDER)

Authorized Signatory

Office Seal:

Name:

Place:

Designation:

Date :

Section 11- Annexure 7 - Format for Power of Attorney to Authorize Signatory

POWER OF ATTORNEY

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

We, M/s. (name of the firm or company with address of the registered office) hereby constitute, appoint and authorize Mr. or Ms. (Name and residential address) who is presently employed with us and holding the position of , as our Attorney to do in our name and our behalf all such acts, deeds or things necessary in incidental to submission of our Bid of the Project (name of the Project), including signing and submission of the Bid and all other documents related to the bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other documents, participating in the meetings, responding to queries, submission of information / responses which the Bareilly Smart City Limited may require us to submit and the aforesaid Attorney is further authorized for making representations to the Bareilly Smart City Limited, Bareilly or any other Government Agency or any person, in connection with the works until culmination of the process of bidding till the Project Agreement is entered into with Bareilly Smart City Limited and thereafter till the expiry of the Project Agreement.

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

All the terms used herein but not defined shall have the meaning ascribed to such terms under this RFP.

Signed by the within named..... (Insert the name of the executant company) through the hand of Mr. duly authorized by the Board to issue such Power of Attorney

Dated this day of Accepted

.....

Signature of Attorney

(Name, designation and address of the Attorney) Attested

.....

Signature of Executant

(Name in Block Letters, designation and address of the Executant)

.....
Signature and Stamp of Notary of the place of execution

Common Seal of has been affixed in my / our presence pursuant to Board of Director's Resolution dated.....

WITNESS

Witness 1: Witness 2: Name

..... Name Designation

..... Designation

Notes:

- a. *To be executed by all the members individually.*
- b. *The Mode of execution of the power of attorney should be in accordance with the procedure, if any laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal of the executant affixed in accordance with the required procedure Further, the person whose signatures are to be prescribed on the Power of Attorney shall be duly authorized by the executant(s) in the regard.*
- c. *The person authorized under this Power of Attorney, in the case of the bidding Company / Lead Member being a public company or a private company which is a subsidiary of a public company, in terms of the Companies Act 1956, with a paid up share capital of more than Rupees of Five Crores, should be the Managing Director / whole time director / manager appointed under section 269 of the Companies Act, 1956. In all cases the person authorized should be a director duly authorized by a board of resolution duly passed by the company.*
- d. *Also, wherever required, the executant(s) should submit for verification the extract of the chartered documents and documents such as a Board Resolution / Power of Attorney, in favour of the person executing the power of Attorney for delegation of power hereunder on behalf of the executant(s).*
- e. *For a Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued.*

Section 12- Annexure 8 – Manufactures / Producers Authorization Form

Dated: DD/MM/YYYY

To

Chief Executive Officer,

Bareilly Smart City Limited,

C/o Bareilly Municipal Corporation,

Nagar Nigam, Bareilly

Subject: Manufacturer's Authorization Form

Ref.: RFP No.<<----->>, Dated: <<--/--/-->>

Dear Sir,

We (Insert complete name of manufacturer) who are established and reputable manufacturers of ____ [List of Goods] having factories or product development centres at the locations _____ or as per list attached, do hereby authorize. _____ [Name and Address of the Bidder] to submit a bid in relation to the Invitation for Bids indicated above, the purpose of which is to provide the following Goods, manufactured by us (insert name of goods) and to negotiate and conclude the contract with you against RFP No. _____, dated: _____ for the above goods manufactured or developed by us.

We hereby extend our full guarantee and warranty for the goods supplied by the bidder and or maintenance or support services for the products against this invitation for bid by

_____ [Name of the Bidder] as per requirements and for the duration of contract as specified in this RFP.

We have repair and service facilities in India and we shall either develop our own facility or authorize a service center at Bareilly for day to day maintenance of equipment.

Products or technology quoted are neither end-of-sale nor end-of-life as on the date of installation and commissioning and are not end-of-support till the successful completion of O&M period of the project.

We have not have been blacklisted by any state / Central Government Department or Central/State PSU's.

We have not filed for bankruptcy and should be profitable for at least last 2 consecutive financial years.

Thanking you, Yours faithfully,

..... Name (complete
name of person signing the security)

In the capacity of (legal capacity of the person signing the security) Signed (signature)

.....
Duly authorized to sign the Authorization for and on behalf of (complete name of
manufacturer)

Date (Insert date of signing)

For and on behalf of: _____[Name of the OEM]

..... Authorised Signatory

Name: Designation:

Place: Date:

Note:

- (a) This letter of authorization should be on the letterhead of the manufacturer and should be signed by a person with the proper authority to sign the document that is binding on the manufacturer.
- (b) Please attach resolution of Board of Directors/Power of Attorney for the authorized signatory

Section 13- Annexure 9 – Detailed BOQ Attached

Validate

Print

Help

Item Rate BoQ

Name of the Bidder/
Bidding Firm /
Company :

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER #
Sl. No.	Item Description	Quantity	Units	BASIC RATE +GST as per govt norms In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT With Taxes in Rs. P
1	2	4	5	13	53
2	Civil works				
3	EARTH WORK				
4	Excavation in foundation in ordinary soil, loame, clay or sand including lift upto 1.5 m and lead upto 30 m including filling watering and rammimg of excavated earth in to the trenches or in to the space between the building & the side of foundation trenches or in to the plinth , removal & disposal of surplus earth as directed by the engineer in charge upto a distance of 30 m from the foundation trenches . (Excluding royalty)	20863.00	per cum		0.00

5	Add to above items for every additional 30m. Lead or part of 30m. Or for every additional 1.5m. Lift or part of 1.5m.	20863.00	per cum		0.00
6	CONCRETE WORK				
7	Providing and laying in Cement concrete 1:4:8 (1 Cement: 4 approved Coarse sand: 8 Coarse aggregate) size of aggregate shall be 4cm gauge or as approved including supply of all material labor, T&P etc. required for proper completion of the work.	1378.00	per cum		0.00
8	Design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately).				
9	All works upto plinth level	3552.00	cum		0.00
10	All works above plinth level upto floor level	3170.00	cum		0.00
11	Centering and shuttering including strutting, propping etc. and removal of form for :				
12	Foundations, footings, bases of columns, etc. for mass concrete	1616.00	Sqm		0.00
13	Lintels, beams, plinth beams, girders, bressumers and cantilevers	4433.00	sqm		0.00
14	Columns, Pillars, Piers, Abutments, Posts and Struts sqm	4223.00	sqm		0.00
15	Suspended floors, roofs, landings, balconies and access platform	12811.00	sqm		0.00
16	STEEL				

17	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level/ above Thermo-Mechanically Treated bars of grade Fe-500D or more (Approved makes: Jindal, TATA steel, JSW, vizag).	8066.40	per qtl		0.00
18	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	6000.00	kg		0.00
19	Mild steel or iron work in heavy sizes such as trusses: built up gates, door,frames, record racks roof work, gates etc. wrought to required from including drilling holes, rivetting or welding where necessary, and also including supply of steel, bolts, nuts etc. & their fixing required for proper completion of the work.	660.00	qtl		0.00
20	Providing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.0.63 mm thick with zinc coating not less than 275 gm/ m ²	1032.00	sqm		0.00
21	Masonry work				
22	First class brickwork in 1:5 cement and coarse sand mortar in foundation and plinth including supply of all materials, labour and T&P etc. required for proper completion of the work .	1099.00	per cum		0.00

23	As above ,but in superstructure, including necessary cutting and moulding of bricks as required and including honey comb brick work, thickness of wall not to be less 1 brick thick. Add extra labour to above items	942.00	per cum		0.00
24	As above ,but for wall of half brick (4½") thick.	157.00	per cum		0.00
25	Painting and Distempering				
26	12 mm Thick plaster with kankar lime over brick minimum thickness not to be less than 3/8" (10mm) thick including supply of all materials, labour and T&P etc. required for proper completion of the work				
27	above but with cement and coarse sand mortar(1:6)	12073.00	per sqm		0.00
28	Add for extra labour and material for plaster over rough face of brick walls	4467.00	per sqm		0.00
29	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
30	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm (Approved makes: Berger,Asian paints, Nerolac)	12073.00	Sqm		0.00
31	Neat cement Punning	12073.00	sqm		0.00
32	6 mm cement plaster of mix :				
33	1:3 (1 cement : 3 fine sand)	5540.00	sqm		0.00
34	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :Two or more coats on new work	2000.00	sqm		0.00
35	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	12073.00	sqm		0.00
36	Flooring				

37	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete.				
38	Size of Tile 600x600 mm (Approved makes: Kajaria, Nitco, Somany)	5472.00	per sqm		0.00
39	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	924.00	per sqm		0.00
40	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including pointing the joints with white cement and matching pigment etc., complete.	540.00	sqm		0.00
41	Granite of any colour and shade				
42	Area of slab up to 0.50 sqm	25.00	sqm		0.00
43	Area of slab over 0.50 sqm	1731.00	sqm		0.00
44	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, leveling & dressing & finishing the top smooth.	204.00	sqm		0.00
45	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :				
46	25 mm thick	500.00	sqm		0.00

47	FALSE CEILING				
48	<p>Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering up to 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with :</p>				
49	12.5 mm thick tapered edge gypsum moisture resistant board	2882.00	sqm		0.00

50	Providing and fixing mineral fibre false ceiling tiles at all heights of size 595X595mm of approved texture, design and pattern. The tiles should have Humidity Resistance (RH) of 99%, Light Reflectance > 85%, Thermal Conductivity k = 0.052 - 0.057 w/m K, Fire Performance as per (BS 476 pt - 6 & 7) in true horizontal level suspended on interlocking T-Grid of hot dipped all round galvanized iron section of 0.33 mm thick (galvanized @120 gsm) comprising of main T runners of 15x32 mm of length 3000 mm, cross T of size 15x32mm of length 1200 mm and secondary intermediate cross T of size 15x32 mm of length 600 mm to form grid module of size 600x600 mm suspended from ceiling using galvanized mild steel item (galvanized @80gsm) 50 mm long 8mm outer diameter M-6 dash fasteners, 6 mm diameter fully threaded hanger rod up to 1000 mm length and L-shape level adjuster of size 85x25x2 mm, spaced at 1200 mm centre to centre along main 'T'. The system should rest on periphery walls /partitions with the help of GI perimeter wall angle of size 24x24X3000 mm made of 0.40 mm thick sheet, to be fixed to the wall with help of plastic rawl plug at 450 mm centre to centre & 40 mm long dry wall S.S. screws. The exposed bottom portion of all T-sections used in false ceiling support system shall be pre-painted with polyester baked paint, for all heights. The work shall be carried out as per specifications, drawings and as per directions of the engineer-in-charge				
51	With 16 mm thick beveled tegular mineral fiber false ceiling tile (NRC 0.55 to 0.6)	484.00	sqm		0.00
52	DOOR WINDOW				
53	Supply and fixing of flush doors commercial quality conforming to I.S. 2202 Part-1 (1983) including fixing of wooden cleats and stoppers and including fixing and adjustment of hinges bolt locks handles springs fitting with necessary screws to be supplied departmently.				
54	35mm thick	163.20	Sq.m.		0.00
55	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position:				
56	Sal Wood	7.34	cum		0.00
57	Providing and fixing 25mm thick shutters for cup board etc:				
58	Panelled or panelled & glazed shutters:				
59	Secnd class teak wood including ISI marked anodised aluminium butt hinges with necessary screws.	10.00	Sqm		0.00

60	Glazed Shutters:				
61	Second class teak wood including ISI marked anodised aluminium butt hinge with necessary screws.	10.00	sqm		0.00
62	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete:				
63	2nd class teak wood				
64	50x20mm	408.00	RM		0.00
65	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
66	Powder coated aluminium (minimum thickness of powder coating 50 micron)	95.77	KG		0.00
67	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item)				
68	With float glass panes of 5mm thickness	14.40	sqm		0.00
69	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				
70	Powder coated aluminium (minimum thickness of powder coating 50 micron)	95.77	kg		0.00
71	Providing and fixing IS : 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :				

72	125x64x2.50 mm	360.00	each		0.00
73	100x60x2.50 mm	10.00	each		0.00
74	providing and fixing ISI marked aluminium butt hinges anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:				
75	75x45x3.2mm	96.00	each		0.00
76	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured):				
77	Rectangular or square	5.00	sqm		0.00
78	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :				
79	250x10 mm	5.00	each		0.00
80	150x10 mm	60.00	each		0.00
81	providing and fixing bright finished brass handles with screws etc complete				
82	125 mm	60.00	each		0.00
83	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.	60.00	each		0.00
84	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight up to 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.				
85	With stainless steel cover plate minimum 1.25 mm thickness	4.00	each		0.00
86	stainless steel tube handle H type 450mm long	8.00	each		0.00
87	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	16.00	sqm		0.00

88	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	25.00	each		0.00
89	Filling the gap in between aluminum frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over bracker rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.				
90	up to 5mm depth and 5mm width	76.80	meter		0.00
91	P/f frameless glass door using 12 mm th toughened glass incl stainless steel pivot with clamps at top, patch fittings, floor springs, stainless steel handles and locking mechanism (as per approved) , necessary floor / glass cutting, making hole.				
92	1000 mm wide & 2400 mm ht. (single / double leaf)	23.04	nos		0.00
93	FIRE EXIT DOORS				
94	Providing and fixing fire resistant door frame of section 50 x 60 mm on Nhorizontal side & 35 x 60 mm on vertical sides having built in rebate made out of 1.6 mm thick GI sheet (Zinc coating not less than 120gm/ m ²) suitable for mounting 120 min Fire Rated Glazed Door Shutters. The frame shall be filled with Mineral wool Insulation having density min 96Kg/m ³ . The frame will have a provision of G.I. Anchor fastners 14 nos (5 each on vertical style & 4 on horizontal style of size M10 x 80) suitable for fixing in the opening along with Factory made Template for SS Ball Bearing Hinges of Size 100x89x3mm for fixing of fire rated glazed shutter . The frame shall be finished with a approved fire resistant primer or Powder coating of not less than 30 micron in desired shade as per the directions of Engineer - in- charge . (Cost of SS ball bearing hinges is excluded).	50.00	metre		0.00

95	Providing and fixing 60 mm thick glazed fire resistant door shutters of 120 min Fire Rating confirming to IS:3614 (Part II) or EN1634-1:1999, tested and certified as per laboratory approved by Engineer-in-charge, with suitable mounting on door frame, consisting of vertical styles, top rail & side rail 60 mm x 60 mm wide and bottom rail of 110 mm x 60mm made out of 1.6mm thick G.I. sheet (zinc coating not less than 120gm/m ²) duly filled mineral wool insulation having density min 96 kg/ m ³ and fixing with necessary stainless steel ball bearing hinges of size 100x89x3mm of approved make, including applying a coat of approved fire resistant primer or powder coating not less than 30 micron etc all complete as per direction of Engineer-in-charge (panelling to be paid forseparately).	30.00	sqm		0.00
96	Providing and fixing glazing in fire resistant door shutters, fixed panels & partitions etc., with G.I. beading made out of 1.6 mm thick G.I. sheet (zinc coating not less than 120 gm/m ²) of size 20 x 33 mm screwed with M4 x 38 mm SS screws at distance 75 mm from the edges and 150 mm c/c , including applying a coat of approved fire resistant primer/ powder coating of not less than 30 micron on G.I. beading, & special ceramic tape of 5 x 20 mm size etc complete in all respect as per NBC 2016, IS 16231 (Part 3):2016 and as per direction of Engineer-incharge with glass of required thickness having 120 minutes of fire resistance both integrity & radiation control (EW120) and minimum 20 minutes of insulation (EI20). The manufacturer have to give test report/certification of fire glass and the glass should have the stamp showing the value of E, EW & EI. The glass shall be tested in approved NABL accredited lab or by any other accreditation body which operates in accordance with ISO/IEC 17011 and accredits labs as per ISO/IEC 17025 for testing and calibration scopes shall be eligible. The maximum glazing size shall not be more than 1100x2200 mm (w x h) or 2.42 sqm.	5.00	sqm		0.00
97	Structural Glazing				
98	Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including:				

99	Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various				
100	thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)- cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation & drainage and protection against fire hazard including:				
101	Fabricating and supplying serrated M.S. hot dip galvanised / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimentional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/ masonry/structural steel framework				
102	of building structure using stainless steel anchor fasteners/ bolts, nylon seperator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.				
103	Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean				
104	and controlled factory / work shop environment , including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeter for holding glass.				
105	Providing and fixing in position flashings of solid aluminium sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.				

106	Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if required), making necessary holes of required sizes and of required numbers etc. complete.				
107	This item includes cost of all inputs of designing, labour for fabricating and installation of aluminium grid, installation of glazed units, T&P, scaffolding and other incidental charges including wastages etc., enabling temporary structures and services, cranes or cradles etc. as described above and as specified. The item includes the cost of getting all the structural and functional design including shop drawings checked by a				
108	structural designer, dully approved by Engineer-in-charge. The item also includes the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working structural glazing as specified, cleaning and protection till the handing over of the building for occupation. In the end, the Contractor				
109	shall provide a water tight structural glazing having all the performance characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer- in-Charge.				
110	Note:- 1. The cost of providing extruded aluminium frames, shadow boxes, extruded aluminium section capping for fixing in the grooves of the curtain glazing and vermin proof stainless steel wire mesh shall be paid for separately under relevant items under this sub- head.				
111	However, for the purpose of payment, only the actual area of structural glazing (including width of grooves) on the external face shall be measured in sqm. up to two decimal places.				

112	Note:- 2. The following performance test are to be conducted on structural glazing system if area of structural glazing exceeds 2500 Sqm from the certified laboratories accredited by NABL(National Accreditation Board for Testing and Calibration Laboratories), Department of Science & Technologies, India. Cost of testing is payable separately				
113	The NIT approving authority will decide the necessity of testing on the basis of cost of the work, cost of the test and importance of the work. Performance Testing of Structural glazing system Tests to be conducted in the NBL Certified laboratories				
114	Performance Laboratory Test for Air Leakage Test (-50pa to - 300pa) & (+50pa to +300pa) as per ASTM E-283-04 testing method for a range of testing limit 1 to 200 mVhr				
115	Static Water Penetration Test. (50pa to 1500pa) as per ASTM E- 331-09 testing method for a range up to 2000 ml.				
116	Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01- 05 testing method for a range upto 2000 ml				
117	Structural Performance Deflection and deformation by static air pressure test (1.5 times design wind pressure without any failure) as per ASTM E-330-10 testing method for a range upto 50 mm				
118	Seismic Movement Test (upto 30 mm) as per AAMA 501.4-09 testing method for Qualitative test. Tests to be conducted on site.				
119	Onsite Test for Water Leakage for a pressure range 50 kpa to 240 kpa (35psi) upto 2000 ml	1364.00	sqm		0.00
120	Water proofing & ATT				

121	Providing and injecting chemical emulsion for preconstructional antitermite treatment and creating and chemical barrier under and around the column pits, wall and floor along the external per meter of binding expansion joints surrounding of pipes and conduits etc. complete (plinth area of the building at ground floor only shall be measured as per I.S.6313 (part ii 1981) . Aldrine emulsifiable concentrate of any other approved materials such as heptachlor or chlordane will be used. the rates of application of chemical emulsion shall be as follows				
122	Treatment for masonry and foundation 5 litres per sqm				
123	Back fill in immediate contact with foundation 7.5 liters/sqm.				
124	Treatment of top surface of plinth filling 5 liters per sqm				
125	Treatment junction of soil along external per meter building 7.50 liter per sqm				
126	Treatment of soil under apron along external perimeter 5 liter/sqm	756.00	sqm		0.00
127	Providing and laying in situ seven course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40 Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).	3050.00	sqm		0.00

128	<p>Providing and mixing integral crystalline admixture for waterproofing treatment to RCC structures like basement raft, retaining walls, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc. at the time of transporting of concrete into the drum of the ready-mix truck, using integral crystalline admixture @0.80% (minimum) to the weight of cement content per cubic meter of concrete) or higher as recommended by the manufacturer's specification in reinforced cement concrete at site of work. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e. by reducing permeability of concrete by more than 90%, compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure. The crystalline admixture shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the Engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.</p>	8066.40	kg		0.00
129	<p>Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :</p> <p>(a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours.</p> <p>(b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.</p>	250.00	sqm		0.00

130	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI- 212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.				
131	For vertical surface two coats @ 0.70 kg per sqm	3350.00	sqm		0.00
132	For horizontal surface one coat @ 1.10 kg per sqm.	1683.00	sqm		0.00
133	External Development				
134	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.	3950.00	Sqm		0.00
135	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.				

136	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	781.00	cum		0.00
137	Extra for providing and mixing hardening compound of approved quality as per manufacturer's specification in cement concrete.	25.00	litre		0.00
138	Providing and fixing in position pre-moulded joint filler in expansion per cm depthjoints. Size is 5cm x 10cm	1000.00	per cm depth joints. per cm width per m length		0.00
139	Providing and laying in position bitumen hot sealing compound for expansion joints etc. 16.46.1 Using grade 'A' sealing compound.: Size is 5cm x 10cm	1000.00	per cm depth joints. per cm width per m length		0.00
140	MISCELLANEOUS				

141

LIFT
CAPACITY (kgs) : 544 Kg, 8 persons.
SPEED (mps) : 1 mps
RISE (m) : 11.7 m
STOPS : 4 Stops With (all opening on the same side)
CONTROLLER TYPE : ACD3-MRL
DRIVE : VF Regenerative (Closed Loop)
POWER SUPPLY : 400/415 Volts (3 Phase AC)
OPERATION : Full collective operation
CAR GROUP : One car (simplex)
MACHINE : PM Gearless (Located in shaft on top of guide rails)
TRACTION MEDIA : Flat Coated Steel Belt
CAR FINISH : • Rear Mid Panel = Powder Coated Paint
• Rear Corner Panels = Powder Coated Paint
• Side Mid Panels = Powder Coated Paint
• Side Corner Panels = Powder Coated Paint
• Front Panels = Powder Coated Paint
FALSE CEILING TYPE : CD-41
FLASE CEILING FINISH : Cream
VENTILLATION : Cross flow fan
HAND RAILS : STEEL POWDER PAINTED BLACK Handrails on rear car panels
FLOORING : Vinyl Tiles
CAR DOOR FINISH : Powder Coated Paint
LANDING DOORS FINISH : Stainless Steel #4(Hairline)
CAR & HOISTWAY DOOR TYPE : Central opening (CO) doors
DOOR OPERATOR : DC Door Operator

142

COP : COP for stops <= 12 (950mm) in Stainless Steel #4(Hairline)
CAR POSITION INDICATOR : Monochrome LCD-Blue Background & White font
Dot matrix (LED) Scrolling Display
HALL FIXTURES : O2000
Pan Type Fixture ,
HALL FIXTURE FACE PLATE : Stainless Steel #4(Hairline)
HALL BUTTON ARRANGEMENT : LCD Monochrome type
STANDARD FEATURES : Anti-nuisance Car Call Protection
Independent Service (for Duplex only)
Overload Device
Nudging
Emergency Firemen's Service
Emergency Car Light Unit
Infrared Curtain Door Protection
Door Time Protection
Emergency Alarm Button
Extra Door Time of Lobby & Parking
Door Open/Close Button
Manual Rescue Operation
Belt Inspection Drive
Auto Fan Cut Off
OPTIONS INCLUDED : Automatic Rescue operation,

143	<p> HALL FIXTURES : O2000 Pan Type Fixture , HALL FIXTURE FACE PLATE : Stainless Steel #4(Hairline) HALL BUTTON ARRANGEMENT : LCD Monochrome type STANDARD FEATURES : Anti-nuisance Car Call Protection Independent Service (for Duplex only) Overload Device Nudging Emergency Firemen's Service Emergency Car Light Unit Infrared Curtain Door Protection Door Time Protection Emergency Alarm Button Extra Door Time of Lobby & Parking Door Open/Close Button Manual Rescue Operation Belt Inspection Drive Auto Fan Cut Off OPTIONS INCLUDED : Automatic Rescue operation, PIT DEPTH : 1350 OVERHEAD 4500 HOISTWAY DIMENSIONS (W x D – mm) : 1800 mm W x 1700 mm D CAR DIMENSIONS (W x D x H - mm) : 1100 mm W x 1300 mm D x 2200 mm D CAR & HOISTWAY DOOR TYPE : Central opening (CO) doors DOOR OPENING (W x H - mm) : 800 mm W x 2000 mm H </p>	3.00	nos		0.00
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144	Brick tiling in elevation complete Brick tile for elevation Providing and fixing 9"x2",9"x3",21/4"x15",41/2"x15",or 9"x15" 'CERA, BRICK', 7mm thick Exterior matt glazed cermic body wall cladding tiles in approved shade with specially designed deep grooves o back side of the tile for superior adhesion. The tiles should have excellent water absorption i.e between 10-15% from back surface to assist superior adhesive bonding with substrate. the tiles weight shall be 1KG/ Sq. ft. and have zero water absorption from top surface and should be efflorescence proof .The tiles should be fixed on surface having rough plaster of cement mortar in 1:3 ratio(1 Cemnet:3 coarse sand) and the tiles should be fixed with 1:1 ratio by volume (1cement :1 fine sand)and mixed with polymix liquid cement admixture ,which should be applied by notch trowel. the tiles can also br applied with one component tile adhesive Ultimate or equivalent with notch trowl application . The 'Ultimate or equivalent with notch trowl application . The 'Ultimate' Tile adhesive to be mixed with clean water in 1:3 ratio by weight (1 water :3 the tile adhesive powder) .Make:- unistone, odyssey stone etc	1620.00	sqm		0.00
145	PLUMBING WORKS (INTERNAL & EXTERNAL)				
146	STORM WATER (SCHEDULED ITEMS)				
147	Excavating trenches of required width for pipes, cables, etc, including excavation for sockets, depth upto 1.5 m, including getting out the excavated materials, returning the soil as required in layers not exceeding 20 cm in depth, including consolidating each deposited layers by ramming, watering etc., stacking serviceable material for measurements and disposal of unserviceable material as directed, within a lead of 50 m : All kinds of soil				
148	Pipes, cables etc, not exceeding 80 mm dia.	400.00	Metre		0.00
149	Providing and laying non-pressure SN8 class p.vc . pipes with collers jointed with soln including testing of joints etc. complete : ASTRAL (PVC pipe foamcore NP8)OR EQUIVALENT				
150	150 mm dia.pvc pipe	100.00	Metre		0.00
151	250 mm dia. PVCpipe	100.00	Metre		0.00
152	300 mm dia. PVC . pipe	100.00	Metre		0.00
153	300 mm dia. PVC . pipe (SEWAGE)	800.00	Metre		0.00

154	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collers jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement :2 fine sand) including testing of joints etc. complete :				
155	150 mm dia. R.C.C. pipe	40.00	Metre		0.00
156	250 mm dia. R.C.C. pipe	100.00	Metre		0.00
157	300 mm dia. R.C.C. pipe	100.00	Metre		0.00
158	SANITARY WORK (SCHEDULE ITEM)				
159	Providing, fixing, jointing, testing and commissioning of UPVC pipe with fittings (for waste pipe from individual fixtures to floor trap / floor drain & vent pipe& rain water) IS : 4985 (Pipe Class III - 6 kg / sq.cm) cut to required lengths including all necessary fittings and specials such as bends, junctions offsets, access pieces . Fixing at wall / ceiling level supported by G.I. clamps, hangers etc. duly epoxy coated. Cost shall be inclusive of providing and laying 1:2:4 cement concrete all around the pipe including pillers, supports, shuttering & centering.				
160	110 mm dia	600.00	Metre		0.00
161	90 mm dia	400.00	Metre		0.00
162	Providing and fixing MS holder-batclamps of approved design to Upvc pipe embedded in and including cement concrete blocks 10 x 10 x 10cm of 1:2:4 (1 cement:2 coarse sand: 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the wads etc.				
163	110 mm dia	100.00	Each		0.00
164	90 mm dia	50.00	Each		0.00
165	Providing and fixing uPVC bend of required degree with access door, insertion rubber wasrier 3mm thick, bolts and nuts complete.				
166	110 mm dia	40.00	Each		0.00
167	90 mm dia	20.00	Each		0.00
168	Providing and fixing uPVC plain bend of required degree				
169	100 mm dia	20.00	Each		0.00
170	75 mm dia	20.00	Each		0.00
171	Providing and fixing uPVC double equal junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete.				
172	100 x 100x100x100 mm	20.00	Each		0.00

173	75 x 75 x 75 x 75mm	10.00	Each		0.00
174	Providing and fixing uPVC double equal plain junction of required degree				
175	100 x 100x100x100 mm	20.00	Each		0.00
176	75 x 75 x 75 x 75mm	10.00	Each		0.00
177	Providing and fixing uPVC single equal plain junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete				
178	100 x 100x100x100 mm	10.00	Each		0.00
179	75 x 75 x 75 X 75mm	10.00	Each		0.00
180	Providing and fixing uPVC single equal plain junction of required degree				
181	100x100x100 mm	20.00	Each		0.00
182	75x75x 75mm	20.00	Each		0.00
183	Providing and fixing uPVC door piece, insertion rubber washer 3mm thick, bolts and nuts complete - 100mm				
184	110 mm dia	20.00	Each		0.00
185	90 mm dia	20.00	Each		0.00
186	Providing and fixing uPVC trap of self cleansing design with screwed down or hinged grating with or without vent ami complete, including cost of cutting and making good the walls and floors				
187	100mm inlet and 100mm outlet	20.00	Each		0.00
188	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps, i/c making good the walls etc. concealed pipe, including painting with anti corrosive bitumastic paint, cutting chases and making good the wall :				
189	15 mm dia nominal bore	350.00	metre		0.00
190	20 mm dia nominal bore	600.00	metre		0.00
191	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. External work				
192	15 mm dia nominal bore	10.00	metre		0.00
193	20 mm dia nominal bore	10.00	metre		0.00
194	25 mm dia nominal bore	200.00	metre		0.00

195	Providing and fixing chlorinated Polyvinyl chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.0m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.				
196	Internal work- Exposed on wall				
197	25mm nominal bore	50.00	Metre		0.00
198	32mm nominal bore	200.00	Metre		0.00
199	40mm nominal bore	200.00	Metre		0.00
200	Providing and fixing chlorinated Polyvinyl chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.0m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.				
201	Concealed work including cutting chases and making good the walls etc.				
202	15mm nominal bore	150.00	Metre		0.00
203	20mm nominal bore	200.00	Metre		0.00
204	25mm nominal bore	100.00	Metre		0.00
205	32mm nominal bore	200.00	Metre		0.00
206	Providing and fixing brass stop cock of approved quality				
207	15mm nominal bore	40.00	Each		0.00
208	20mm nominal bore	35.00	Each		0.00
209	Providing and fixing gun metal gate valve with CI wheel of approved quality (screwed end).				
210	25 mm nominal bore	20.00	Each		0.00
211	50mm nominal bore	20.00	Each		0.00
212	Providing and fixing unplasticised PVC connection pipe with brass unions:				
213	30 cm length (15mm nominal bore)	40.00	Each		0.00
214	Providing and fixing C.P . brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.				

215	15mm nominal bore	20.00	Each		0.00
216	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately)				
217	50mm dia	8.00	Each		0.00
218	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :				
219	100x100 mm size P type				
220	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	15.00	Each		0.00
221	Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement :3 coarse sand sand :6 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design:				
222	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately):				
223	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	6.00	each		0.00

224	Constructing brick masonry chamber for underground C.I. Inspection chamber and bends with common burnt clay F.P.S (non modular) bricks of class designation 7.5 in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design:				
225	Inside dimensions 455 x 610 mm and 45 cm deep for single pipe line				
226	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	35.00	Each		0.00
227	Extra for depth beyond 45 cm of brick masonry chamber with common burnt clay F.P.S (non modular) bricks of class designation 7.5.				
228	For 455 x 610 mm size-				
229	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	40.00	metre		0.00
230	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :				
231	For pipes 100 to 250 mm diameter	4.00	Each		0.00
232	For pipes 250 to 300 mm diameter	4.00	Each		0.00
233	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :				
234	With common burnt clay F .P .S. (non modular) bricks of class designation 7.5	10.00	Each		0.00

235	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion. (i) Single socketed pipes.				
236	110mm diameter single socketed pipes	200.00	metre		0.00
237	Providing and fixing on wall face unplasticised-PVC moulded fittings/accessories for unplasticised-Rigid PVC rain water pipes conforming to IS:13592 Type A including jointing with seal ring conforming IS: 5382 leaving 10mm gap for thermal expansion.				
238	Single pushfit Coupler :				
239	110mm Single Pushfit Coupler	40.00	each		0.00
240	Bend 87.5°				
241	110mm bend Bend 87.5 degree	40.00	each		0.00
242	Shoe (Plain)				
243	110mm Shoe (Plain)	20.00	each		0.00
244	Providing and fixing unplasticised-PVC pipe clips of approved design to unplasticised-PVC rain water pipes by means of 50x50x50mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.				
245	110mm	30.00	each		0.00
246	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 25cm diameter and weighing not less than 440 grams.	20.00	each		0.00
247	SANITARY WORK (NON SCHEDULE ITEM)				
248	Providing and fixing uPVC floor drain of following size inlet and outlet including cutting and making good the walls and floors wherever required complete in all respects.	100.00	Each		0.00
249	Providing and fixing uPVC cleanout plug with openable cap for uPVC pipes				
250	For 110 mm OD pipes	30.00	Each		0.00

251	Making khurras 600x600mm with average minimum thickness of 5 cms cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 graded stone aggregate 20mm nominal size) over PVC sheet 1m x 1m x 400 micron, finished with 12mm plaster in cement mortar 1:3(1 cement :3 coarse sand) finished with floating coat of neat cement including rounding of edges and finishing of outlet, complete in all respects.	24.00	Nos		0.00
252	Providing and fixing in position uPVC PIPE and fittings of heavy class (c) conforming to IS:1239 (for waste pipe from individual fixtures to floor trap / floor drain & vent pipe) Including fixing at wall / ceiling level supported by galvanized clamps and hangers etc.				
253	For waste pipes				
254	40mm OD	250.00	Metre		0.00
255	50mm OD	200.00	Metre		0.00
256	Providing & fixing wall hung EWC (Jaguar with concealed flush jaguar 1093) with SS plate & buttons, connection pipe etc. complete with all accessories like angle valves etc (Jaguar 5001).				
257	EWC (Jaguar Florentine with concealed flush jaguar 1093)	32.00	nos		0.00
258	EWC (Jaguar Fonte with concealed flush jaguar 1093)	32.00	nos		0.00
259	Providing & fixing INDIAN STYLE WC with flush valve, connection pipe etc. complete with all accessories like angle valves etC	4.00	nos		0.00
260	Providing & fixing wash basin and tap (Jaguar wall mounted) complete with all accessories like angle valves, waste coupling, bottle trap etc complete.				
261	Jaguar continental under counter 705 with Jaguar Pressmatic tap PRS 031 Tap	48.00	nos		0.00
262	Jaguar cAria 39901 vanity wash basin with Jaguar Pressmatic tap PRS 061 wall mounted Tap	16.00	nos		0.00
263	Providing & fixing Urinal (Jaguar 132530) complete with all accessories like angle valves, waste coupling, trap, and Jaguar pressmatic 073 auto close conceal urinal flush valve with all systems	30.00	nos		0.00
264	Providing & fixing Pantry Sink Mixture with extended spout (Jaguar 5319NB) complete with all accessories like angle valves, waste coupling,Bottle trap etc with single bowl with drainboard sink of Nirali / Jayna anti scratch.	4.00	nos		0.00

265	Health Faucet : P/f CP Health Faucet (jet spray) for WC including all accessories, cutting and making good the walls wherever required complete in all respects of following make and type: Make: JAQUAR- Model No- ALD-CHR-585 including angle valve etc. complete.	64.00	nos		0.00
266	Providing & fixing electric operated hand dryer with photovoltaic control of reputed manufacturer complete as per specification & instructions of engineer.	20.00	Each		0.00
267	Providing and fixing towel ring trapezoidal shape 215 mm long, 200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms.(Make:Jaquar/Varmora/Essex)	16.00	Each		0.00
268	Liquid Soap Dispenser : P/f SS Desktop Liquid Soap Dispenser fixed with PVC rawlplugs and CP brass screws incl cutting and making good the walls wherever required complete in all respects (Euronics - Model No - ES05).	20.00	nos		0.00
269	Air Purifier : P/f CP brass Air Purifier holder fixed with PVC rawlplugs & CP brass screws incl cutting and making good the walls wherever required complete in all respects of UTEC / Kimberley clark make	20.00	nos		0.00
270	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C waste fitting complete				
271	40mm dia (flexible pipe)	64.00	each		0.00
272	Providing and fixing 600 X 450mm bevelled edge mirror of superior glass (of approved quality) complete with 6mm thick hard board ground fixed to wooden cleats wiyh C.P. brass screws and washers complete.	30.00	each		0.00
273	Providing and fixing toilet paper holder :				
274	C.P. brass	20.00	each		0.00
275	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipe but without fittings and base support for tank.	60000.00	per ltr.		0.00
276	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810gms.				
277	20mm dia, nominal bore	20.00	each		0.00
278	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standard and weighing not less than 690gms.				

279	15mm dia, nominal bore	64.00	each		0.00
280	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS : 8931.				
281	15mm dia, nominal bore	40.00	each		0.00
282	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931				
283	15mm dia, nominal bore	50.00	each		0.00
284	Providing laying and jointing glazed stoneware pipes grade 'A' with stif mixture of cement mortar in the of 1:1 (1 cement : 1 fine sand) including testing of joints etc complete.				
285	100mm diameter	500.00	RM		0.00
286	150mm diameter	300.00	RM		0.00
287	PLUMBING ESTIMATE FOR UNDERGROUND PARKING				
288	C O N C R E T E W O R K				
289	Providing and laying in Cement concrete 1:4:8 (1 Cement: 4 approved Coarse sand: 8 Coarse aggregate) size of aggregate shall be 4cm gauge or as approved including supply of all material labor, T&P etc. required for proper completion of the work.	30.94	com		0.00
290	R.C.C Work with cement approved coarse sand and 2 cm (3/4") gauge approved stone ballast in the proportion of 1 :2:4 in lintels of doors and windows excludiing supply of reinforcement and its binding but including its fixing and binding the same with with 24 B.W.G.G.I binding wire and including supply of all materials, albour and T&P etc. required for proper completion of the work. Binding wire cost being included in the item.	95.57	cum		0.00
291	S T E E L W O R K				
292	Mild steel or iron in plain work such as reinforced concrete or reinforced brick work (when not included in an over all rates) wrought to required shape as necessary including bending for proper completion of the work and inluding supply of all steel and wastage and lapping & hooks. (Approved makes: Jindal, TATA steel, JSW, vizag).	76.46	per qtl		0.00

293	Mild steel or iron work of small size and sections such as holding down bolts, hold fast , tie rods , gratings etc (when not invluded in an over all rates) wrought to required form , including bof supply of steel , lots nuts and wastage etc. and there fixing required for proper completion of work	82.28	per qtl		0.00
294	DRAIN				
295	EARTH WORK				
296	Excavation in foundation in ordinary soil, loame, clay or sand including lift upto 1.5 m and lead upto 30 m including filling watering and rammimg of excavated earth in to the trenches or in to the space between the building & the side of foundation trenches or in to the plinth , removal & disposal of surplus earth as directed by the engineer in charge upto a distance of 30 m from the foundation trenches . (Excluding royalty)	524.00	per cum		0.00
297	CONCRETE WORK				
298	Providing and laying in Cement concrete 1:4:8 (1 Cement: 4 approved Coarse sand: 8 Coarse aggregate) size of aggregate shall be 4cm gauge or as approved including supply of all material labor, T&P etc. required for proper completion of the work.	39.00	per cum		0.00
299	Design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately).				
300	All works upto plinth level	70.00	cum		0.00
301	Centering and shuttering including strutting, propping etc. and removal of form for :				
302	Foundations, footings, bases of columns, etc. for mass concrete	1345.00	Sqm		0.00
303	STEEL				

304	Mild steel or iron in plain work such as reinforced concrete or reinforced brick work (when not included in an over all rates) wrought to required shape as necessary including bending for proper completion of the work and including supply of all steel and wastage and lapping & hooks. (Approved makes: Jindal, TATA steel, JSW, vizag).	56.00	per qtl		0.00
305	Mild steel or iron work of small size and sections such as holding down bolts, hold fast , tie rods , gratings etc (when not included in an over all rates) wrought to required form , including supply of steel , lots nuts and wastage etc. and there fixing required for proper completion of work	15.00	per qtl		0.00
306	Painting and Distempering				
307	12 mm Thick plaster with kankar lime over brick minimum thickness not to be less than 3/8" (10mm) thick including supply of all materials, labour and T&P etc. required for proper completion of the work				
308	but with cement and coarse sand mortar(1:6)	4757.00	per sqm		0.00
309	Add for extra labour and material for plaster over rough face of brick walls	4757.00	per sqm		0.00
310	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone- III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
311	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions,total weight of cover and frame to be not less than 38 kg(weight of cover 23 kg and weight of frame 15 kg) :				
312	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	6.00	each		0.00
313	Extra for depth for manholes :				
314	Size 90x80 cm				

315	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2.00	metre		0.00
316	Acoustic work, Stage furnishing & Stage lighting and A V system in Auditorium				
317	ACOUSTICAL TREATMENT CEILING:				
318	<p>Ceiling With Micro-perforated 3x3mm Square Gyp Acoustic Board in Hall, Back Stage & Green Room:-</p> <p>Providing & fixing Micro perforated Gyp acoustical ceiling , as marked in the drawings, consisting of GI perimeter channels of size 0.55mm thick (having one flange of 20mm and another flange of 30mm and a web of 27mm) along with perimeter of ceiling, screw fixed to brick wall/ partition with the help of nylon sleeves and screws, at 610mm c/c. Then suspending GI intermediate channels of size 45mm (0.9mm thick with 2 flanges of 15mm each) from the soffit at 1220mm c/c with ceiling angles of width 25mm x 10mm x 0.55mm thick fixed to soffit with GI cleats and steel expansion fasteners. Ceiling section of 0.55mm thickness having knurled web of 51.5mm and two flanges of 26mm each with lips of 10.5mm are then fixed to the intermediate channel with the help of connecting clips and in a direction perpendicular to the intermediate channel at 300mm c/c. The polyester fibre of 1000 gsm density and 50mm thick layed over the made framework and Finished in 12.5mm thick micro-perforated gypsum board, 1200mm x 2400mm, with 3x3mm square perforations in combination with 12.5mm thick gypsum board where ever required. The ceiling to be finished with 2 or more coats of mat type plastic emulsion paint after proper jointing & making surface smooth. All complete as per drawing & design.</p> <p>Approved make : Absound Overseas/Danoline/Acoustic India.</p>	752.00	sqm		0.00
319	<p>Stage suspension Grid: Providing & fixing MS suspension grid system over stage for hanging stage services made of 2 nos 40x40x5mm MS angles welded back to back with 50x12x12mm thk studs as MS spacers sandwiched between the MS angles so as to maintain 12mm gap between MS angles, the welded angles to be placed @ 1200mm c/c in one direction and 40x5mm thick MS Tee @ 600mm c/c in other direction. The MS grid to be suspended from the roof structure by means of MS flat suspender of 50x6mm thick MS flats @ 1200mm c/c in both directions. All MS members to be painted with a coat of red oxide primer & 2 or more coats of black enamel paint.</p>	125.00	sqm		0.00

320	Woodwool fibril acoustical panel in stage ceiling: Providing and fixing Fibril wood-wool black acoustical panel of size 1200x600x20 mm, to be installed on existing MS suspension grid. Approved make: Absound Overseas/Herra Design/Acoustic India.	125.00	sqm		0.00
321	ACOUSTICAL TREATMENT WALL PANELING:				
322	Slated Wooden Acoustic paneling for rear wall, side walls lower Level: Providing and fixing Slated Wooden Acoustic panel with lineal perforations to be fixed on walls. The panels shall be with melamine laminate finish of size 2440mm x 128mm x 16mm with 4mm grooves at 28 mm pitch tongue and groove edges for seamless mounting high density fiberboard having density of 800 kg/m ³ and system NRC of 0.83 as per IS 8225 / ISO 354 / ASTM 423C . The back of the panels are perforated with 10mm diameter circular holes with a nonwoven fabric covering of 0.2mm for providing Sound absorption via the acoustic impedance method. Panel is to be fixed on 50mm GI framework consisting of 48x36x34x0.5mm thick GI Studs wall channels & 50x35x35x0.5mm floor channels @ 600mm c/c back support with 75x12mm MR grade ply strip as recommended by the manufacturer with screw fixed horizontal / vertical to wall in tongue & groove system. The cavity of GI framework should be inserted with 50mm thick 1000GSM, thermally bonded polyester fibre for better insulation. The shade of the panel will be approved by architect or engineer in charge. Approved make: Topacoustics/Absound Overseas/Acoustic India	405.00	sqm		0.00

323	<p>Fabric wrapped Compressed glass substrate panels paneling on rear & side walls upper level :</p> <p>Providing and Fixing Fibril Glass Stoff acoustical wall paneling square edges made of fibre glass substrate of 120kg/m3 density and 25mm thick. Panel will be wrapped on the front side with fire retardent fabric as per BS EN1021:1&2 with an option of colors as per the choice of the architect or engineer in charge of size 1200X600 mm providing the sound absorption level of NRC 1.0 as per IS 8225 / ISO 354 / ASTM 423C with the system. Panel will be affixed on wall using construction adhesives backing with 8mm MR grade ply on 50mm GI framework consisting of 48x36x34x0.5mm thick GI Studs wall channels & 50x35x35x0.5mm floor channels @ 600mm c/c with the help of steel screw as per the instructions laid down by the manufacturer. All complete as per drawing & design. Approved Make : Acoustic India/ Absound Overseas/AMF.</p>	405.00	sqm		0.00
324	<p>Stage Walls treatment : Providing and fixing 20mm thick black fibril wood wool panels having density of 400kg/cum, fixed over a framework of GI channels consisting of 48x36x34mm GI Stud wall channels & floor channels @ 600mm c/c, filled with 50 mm thick 500GSM thermally bonded polyester wadding to be held in position with 19mm GI wire netting.</p> <p>Approved Make : Herra Design/ Acoustic India/ Absound Overseas.</p>	270.00	sqm		0.00
325	<p>Providing & fixing 150x15mm thick Polished teak wood skirting at the bottom of wall paneling. The skirting shall be fixed over 12mm thick commercial ply to match the level of paneling.</p>	800.00	Rmtr		0.00
326	STAGE FURNISHING				

327	SUPPLY INSTALLATION TESTING AND COMMISSIONING of FRONT CURTAIN made out of FR Treated approved colour velvet cloth with horizontal sliding arrangement complete with fixing rails, brackets, sliding arrangements & motorised operation complete with runners, master runners, pullies, 3mm steel wire rope, 1HP motor (Crompton) 2nos. air breaker contactors (L&T/SIEMENS), 2 nos. micro switches for auto stop, 3nos. push buttons for forward, reverse and stop positions. The curtain should be draped to half area when in closed position. Minimum overlap at centre should be 900mm and should be stitched in double gathering. App size 21000x9000. Make of fabric: Banswara, Reliance, Raymonds, Comrade. Make of Track sytem: Canara / New Age / Leksa	1.00	each		0.00
328	SUPPLY INSTALLATION TESTING AND COMMISSIONING of REAR CURTAIN made out of FR Treated approved colour crepe cloth with horizontal sliding arrangement complete with fixing rails, brackets, sliding arrangements & motorised operation complete with runners, master runners, pullies, 3mm steel wire rope, 1HP motor (Crompton) 2nos. air breaker contactors (L&T/SIEMENS), 2 nos. micro switches for auto stop, 3nos. push buttons for forward, reverse and stop positions. The curtain should be draped to half area when in closed position. Minimum overlap at centre should be 900mm and should be stitched in double gathering. size 21000x9000. Make of fabric: Banswara, Reliance, Raymonds, Comrade. Make of Track sytem: Canara / New Age / Leksa	1.00	each		0.00
329	Providing and fixing WINGS at Stage with fire retardant crape black fabric (weight not less than 320gms/sqm of Make: Comrade/ RSWM/Banswar Syntax) fixed complete on 25mm dia MS pipe for 180 degree rotational movement . The work shall be executed as per drawings ,specifications & instructions of engineer in charge.	6.00	each		0.00
330	Providing & fixing of the Border frills out of Fire retardant Crape black colour (weight not less than 290 gms/sqm Make: Comrade/RSWM/Banswara Syntax)) fabric in 1:2 gathers & acessories like cotton dori eyelets of brass complete with 25mm dia medium grade GI pipe painted black suitably hung from the ceiling . The work shall be executed as per drawings ,specifications & instructions of engineer in charge.	4.00	each		0.00

331	P/f of the cyclorama for the stage by fixing 35x35x5mm MS angle on the wall with MS angle hold fasts secured to the walls & 40mm dia 16G MS pipe welded to it as per the drgs. Further 40mm dia pipe welded to it at 600 centres vertically at an angle of 45 deg. & finally welding 40 mm dia pipe horizontally to it. The pipe to be supported away at 200mm centers by MS pipe. The cyclorama frame to be supported by MS angle hold fasts of 35x35x5mm on the wall at 1200mm centers. Finally fixing PVC perforated screen, cyclorama cloth as per approved sample & fixing by cotton dori 10mm thick complete.	1.00	each		0.00
332	Providing and fixing 90x20mm thick, in random length, Maple wood planks flooring with tongue & groove joints ,fixed to pine wood joist at 600 mm c/c in one direction , pine wood joists to be resiliently supported on 50x50 mm rubber pads . Polishing of flooring on exposed surface: In horizontal/vertical plane (Rate for flooring shall include providing additional framework required for housing microphone and power outlet junction boxes.	125.00	sqm		0.00
333	SOUND REDUCING DOORS				
334	Entry/exit doors for the auditorium 77mm thick, acoustic doors consisting of fire resistant materials & peripheral seals all around . The door to be laminated with 1mm thick laminate. The Door shutter frames to be of klin dried chemically treated teak wood. The door shutter frame to be lapped with 12mm commercial ply duly treated for fire retardance. Make : Global Fire/ Navair/ Absound Overseas.	36.00	sqm		0.00
335	Chowkhats for the doors in second class teak wood of size 110x 90mm duly fire treated.	60.00	Rmt.		0.00
336	Providing and fixing SS handles 450mm long. Make: Doors/Doorvin/Ozone	12.00	Each		0.00
337	Providing and fixing Hinges (Steel with bal bearings) of size 125 X 32mm fixed with steel drive all screws of 35mm. Make: Doors/Doorvin/Ozone	48.00	Each		0.00
338	Providing and fixing heavy duty door closer. Make: Doors/Doorvin/Ozone	6.00	Each		0.00
339	Providing and fixing locking arrangement for doors. Make: Doors/Doorvin/Ozone	6.00	Each		0.00
340	AUDITORIUM CHAIRS & CARPET FLOORING				

341	<p>Supplying & installation of Fabric upholstered chair with C-Frame mechanism for Auto-tip seat movement without spring or gravity. The chair to be mounted on central foot for easy housekeeping and aesthetics. The chair shall have powder coating not below 40 microns on all MS framework. The seat shall have Polyurethane moulded foam of Density 45+-5 KG /cum & back to have density of 40+-5Kg /cum. The height of the back to be 950-1050mm from the ground to top of the Back & for the seat to be 400-450mm from the ground. The rear of the back to be covered with Polypropylene Plastic shell in black color. The chair to be upholstered in fire retardant fabric (optional) with optional 5 mm foam lamination for durability. The box type armrest to be fabric cladded for extra comfort (provision for conferencing system can be provided on top of armrest). The armrest between two chairs in a row to be shared, including fixing of the chair with expansion fasteners of M8X100 length on hard RCC/PCC floor.</p> <p>Make: Krishna Quenette / Featherlite / Absound Seating</p>	500.00	each		0.00
342	<p>Providing and fixing machine tufted loop pile high low scroll polypropylene carpet effective pile height 6mm, total pile weight not less than 22oz. secondary backing action back 55 gms/sqm. In rolls of 3.66 mtr. width as per size, shade, design and direction of Engineer-in-charge and as per manufacturer's specifications. The sample may be approved by the Engineer-in-charge before start of the work. The surface area will be measured for payment. The carpet to be bakced with 6mm thick PU underlay. Approved</p> <p>Make: Capital Carpet, Heritage, CCIL.</p>	755.00	sqm		0.00
343	STAGE LIGHTING SYSTEM				
344	<p>SUPPLY INSTALLATION TESTING AND COMMISSIONING of 1000W Halogen Planoconvex spot light complete with 1000 W Halogen Bipin T-11 lamp, spherical anodised reflector, imported socket, 150mm dia planoconvex lens, bottom sliding knob, yoke, colour frame & suitable clamp, safety chain complete as required.</p> <p>Make : Canara / Effectron / NAAPL</p>	8.00	each		0.00

345	SUPPLY INSTALLATION TESTING AND COMMISSIONING of 1000W Halogen Fresnel light consisting of 1000W Halogen Bipin T-11 lamp, 150mm dia imported fresnel lens, Imported socket, bottom sliding knob, yoke, colour frame & suitable clamp safety chain complete as required. Make : Canara /Effectron / NAAPL	8.00	each		0.00
346	"SUPPLY INSTALLATION TESTING AND COMMISSIONING of 1000 W Halogen profile light consisting of 2 nos. 150mm dia PC lenses, imported socket, ellipsoidal anodised aluminium reflector, 1000W halogen BipinT-11 lamp, yoke colour frame & suitable clamp safety chain complete as required. Make : Canara /Effectron / NAAPL	4.00	each		0.00
347	SUPPLY INSTALLATION TESTING AND COMMISSIONING of 1000W, 240 Volt, PAR Sealed Beam Light 16 SWG aluminium duly painted powder quoted paint , lamp 1000watt 240V OSRAM/Philips lamp CP-61/62,Ceremic type base GX 16 D mat black color, yoke & clamp safety chain complete as required Make : Canara /Effectron / NAAPL	24.00	each		0.00
348	SUPPLY INSTALLATION TESTING AND COMMISSIONING OF 1000 W Halogen light with mash & barndoor consisting of 2nos. single contact compressible holders, yoke, 1000W halogen tube & suitable clamp safety chain complete as required Make : Canara / Effectron / DLMC / MSS	5.00	each		0.00
349	SUPPLY INSTALLATION TESTING AND COMMISSIONING of M.S. Pipe Ladders to be provided on sides of the Stage to be fixed on the existing GI pipe or top grid. Made of 50mm x 25mm MS pipe complete as required size 1800x600. CUSTOM BUILT	4.00	each		0.00
350	SUPPLY INSTALLATION TESTING AND COMMISSIONING of 50mm dia MS pipe lighting bars complete with suspenders etc. complete.	40.00	mtr		0.00
351	SUPPLY INSTALLATION TESTING AND COMMISSIONING of DMX controled Lighting desk for control of lights both halogen and LED: 12/24 Channels Make:New Age / MA lighting / Zero88 UK	1.00	each		0.00

352	SUPPLY INSTALLATION TESTING AND COMMISSIONING of Light Point Wiring from Patch Panel to be provided near stage to various stage light fixtures with FRLS 2.5 Sq.mm 3 Core PVC Insulated and PVC Sheathed Cable including Cable Tray of suitable size for laying these wires on the tray including 16AMP MULTISOCKET AND PvC cable tray mountable box complete with accessories as required.FRLS 3 core 2.5 sqmm wires. Make of wires : Polycab / Finolex / Skytone / Havells. Make of Switch Sockets & box : Nothwest / Anchor / Schneider / MK	50.00	each		0.00
353	SUPPLY INSTALLATION TESTING AND COMMISSIONING of 18x4KW stage lighting digital, wall mounted dimmer rack with patch panel. Make : Make : Canara /Effectron / NAAPL	1.00	each		0.00
354	LED Grazer BCG 432 x LED - LXN/GN PSU - 100- 240 Volts	6.00	each		0.00
355	LED strip light with aluminium strip Extrusion (Length 1 mtr. Width 75 mm No. of LED per mtr. = 60 LED Wattage of each LED = 40mw Wattage per mtr. = 2.5 W.	35.80	mtr		0.00
356	LED brick light (108YL) Length = 115 mm Width = 155 mm No. Of LED 18 (Single)	19.00	Nos		0.00
357	Wiring for step and exit light with PVC insulated copper conductor 1100V multistrad "FRLS" wire in existing conduits, 2x1.5sq mm.	6.00	no.s		0.00
358	SOUND REINFORCEMENT SYSTEM				
359	FOH left & right :1000 Watt 2 Way 15" Powered Loudspeaker with KLARK TEKNIK DSP Technology, Remote Control via iPhone/iPad and Bluetooth Audio Streaming. Make: Turbosound, JBL, EV	2.00	each		0.00
360	Subwoofer system of 1X18" powered subwoofer (Left and Right)Frequency Response: 35Hz-250Hz Power capacity: upto 1000W Maximum SPL: >120dB. Make: Behringer, JBL, EV	2.00	each		0.00

361	Delay speakers left & right & stage monitors: Two way 1X12" powered speakers Frequency Response: 50Hz-20kHz Power capacity: upto 1000W Maximum SPL: >120d. Make: Behringer, JBL, EV	4.00	each		0.00
362	22 channles, 4 band, 4 aux, 2 in 2 out USB, Faders 100mm, Lexicon effect, DBX limiter, Phantom power 48V, Sound craft GB, 2 Sub groups. Make: Soundcraft, Yamaha, Mackie	1.00	each		0.00
363	2 IN 6 out complete speaker management system with EQE,Copm,Delay,Limiter etc. Make: DBX, BSS	1.00	each		0.00
364	Equalizer: Input Connectors 1/4" TRS, female XLR (pin 2 hot), Max Input >+21dBU balanced or unbalanced, Input Impedance Balanced 40k ohm, unbalanced 20k ohm, CMRR >40dB, typically >55dB at 1kHz, Output Connectors 1/4" TRS, male XLR (pin 2 hot), Bandwidth 20Hz to 20kHz, +0.5/-1dB. Make: DBX, BSS	1.00	each		0.00
365	Wired vocal microphone Cardoid or hypercardoid pattern dynamic microphone Make: AKG/Audiotechnica/Shure or Eqvt approved by Engineer in Charge	4.00	each		0.00
366	Wired instrument microphone Cardoid or hypercardoid pattern dynamic microphone Make: AKG/Audiotechnica/Shure or Eqvt approved by Engineer in Charge	2.00	each		0.00
367	Wireless Handheld microphone To include 1 handheld microphones, 1 receiver with power supply, 1 charger for handheld transmitter, Antenna, cables etc. Make: AKG/Audiotechnica/Shure or Eqvt approved by Engineer in Charge	2.00	each		0.00
368	Gooseneck 18" gooseneck cardoid/ hypercardoid pattern dynamic microphone To include mounts, connectors and cables Make: AKG/Audiotechnica/Shure or Eqvt approved by Engineer in Charge	2.00	each		0.00
369	Equipment Rack 20 RU with power, fan.	1.00	each		0.00
370	Wall mount bracket for speakers.	6.00	each		0.00
371	Microphone 2way box for stage mounting	8.00	each		0.00
372	Floor Mic Stand	4.00	each		0.00
373	Desk Mic Stand	4.00	each		0.00
374	Speakon, XLR, Tini & phono Connector.	1.00	lot		0.00
375	Wiring for speakers & microphones in PVC conduits.	1.00	job		0.00

376	Installation, testing & commissioning of the system including training to technical staff.	1.00	job		0.00
377	VIDEO PROJECTION SYSTEM				
378	The VPL-CH370,5000 Lumins WUXGA offers installation flexibility, energy efficiency with a low total cost of ownership, and high image quality, while boasting a stylish design that blends into any decor. Image correction features and a lens shift/zoom capability enable users to easily fit any image onto the screen, even from an offset projection angle. Make: Sony, Barco, Panasonic	1.00	each		0.00
379	Wall/ceiling Mounting kit Universal.	1.00	each		0.00
380	HDMI, VGA, LAN, Power Video Cable.	1.00	lot		0.00
381	Active phase plate (HDMI, VGA,AUDIO,CAT 6 etc). Milestone pro, Extron, Kramer	1.00	each		0.00
382	Receiver for phase plate. Milestone pro, Extron, Kramer	1.00	each		0.00
383	Transmitter receiver over cat 6 cable (1set). Milestone pro, Extron, Kramer	2.00	each		0.00
384	Milestone switcher cum scaler . Milestone pro, Extron, Kramer	1.00	each		0.00
385	Installation, testing & commissioning of the system including training to technical staff.	1.00	job		0.00
386	BOUNDARY WALL				
387	EARTH WORK				
388	Excavation in foundation in ordinary soil, loame, clay or sand including lift upto 1.5 m and lead upto 30 m including filling watering and rammimg of excavated earth in to the trenches or in to the space between the building & the side of foundation trenches or in to the plinth , removal & disposal of surplus earth as directed by the engineer in charge upto a distance of 30 m from the foundation trenches . (Excluding royalty)	804.00	per cum		0.00
389	CONCRETE WORK				
390	Providing and laying in Cement concrete 1:4:8 (1 Cement: 4 approved Coarse sand: 8 Coarse aggregate) size of aggregate shall be 4cm gauge or as approved including supply of all material labor, T&P etc. required for proper completion of the work.	42.00	per cum		0.00

391	Design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately).				
392	All works upto plinth level	69.00	cum		0.00
393	All works above plinth level upto floor level	81.00	cum		0.00
394	Centering and shuttering including strutting, propping etc. and removal of form for :				
395	Foundations, footings, bases of columns, etc. for mass concrete	391.38	Sqm		0.00
396	Lintels, beams, plinth beams, girders, bressumers and cantilevers	599.86	sqm		0.00
397	DAMP PROOF COARSE				
398	Painting in D.P.C with two coats of air blown bitumen 850/50 or 85/25 @ above 1.7 kg/sqm including cost of fuel if any	111.00	per sqm		0.00
399	STEEL				
400	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level/ above Thermo-Mechanically Treated bars of grade Fe-500D or more (Approved makes: Jindal, TATA steel, JSW, vizag).	120.00	per qtl		0.00
401	Mild steel or iron work of small size and sections such as holding down bolts, hold fast , tie rods , gratings etc (when not included in an over all rates) wrought to required form , including cost of supply of steel , lots nuts and wastage etc. and there fixing required for proper completion of work	37.81	per qtl		0.00

402	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer-in-charge, with reinforced barbed tape (R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately)	470.00	metre		0.00
403	Masonry work				
404	First class brickwork in 1:5 cement and coarse sand mortar in superstructure, including necessary cutting and moulding of bricks as required and including honey comb brick work, thickness of wall not to be less 1½ brick thick.	400.00	per cum		0.00
405	Painting and Distempering				
406	12 mm Thick plaster with kankar lime over brick minimum thickness not to be less than 3/8" (10mm) thick including supply of all materials, labour and T&P etc. required for proper completion of the work				
407	but with cement and coarse sand mortar (1:6)	2013.00	per sqm		0.00
408	Add for extra labour and material for plaster over rough face of brick walls	2013.00	per sqm		0.00
409	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
410	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	2013.00	Sqm		0.00
411	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
412	Two or more coats on new work	300.00	sqm		0.00
413	Guard room				
414	EARTH WORK				

415	Excavation in foundation in ordinary soil, loame, clay or sand including lift upto 1.5 m and lead upto 30 m including filling watering and rammimg of excavated earth in to the trenches or in to the space between the building & the side of foundation trenches or in to the plinth , removal & disposal of surplus earth as directed by the engineer in charge upto a distance of 30 m from the foundation trenches . (Excluding royalty)	22.00	per cum		0.00
416	CONCRETE WORK				
417	Providing and laying in Cement concrete 1:4:8 (1 Cement: 4 approved Coarse sand: 8 Coarse aggregate) size of aggregate shall be 4cm gauge or as approved including supply of all material labor, T&P etc. required for proper completion of the work.	3.00	per cum		0.00
418	Design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately).				
419	All works upto plinth level	3.00	cum		0.00
420	All works above plinth level upto floor level	4.00	cum		0.00
421	Centering and shuttering including strutting, propping etc. and removal of form for :				
422	Foundations, footings, bases of columns, etc. for mass concrete	23.00	Sqm		0.00
423	Columns, Pillars, Piers, Abutments, Posts and Struts sqm	19.00	sqm		0.00
424	Suspended floors, roofs, landings, balconies and access platform	15.00	sqm		0.00
425	Lintels, beams, plinth beams, girders, bressumers and cantilevers	23.00	sqm		0.00
426	STEEL				

427	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level/ above Thermo-Mechanically Treated bars of grade Fe-500D or more (Approved makes: Jindal, TATA steel, JSW, vizag).	7.00	per qtl		0.00
428	fabrication of grill and stair case railling	2.00	per qtl		0.00
429	DAMP PROOF COARSE				
430	Painting in D.P.C with two coats of air blown bitumen 850/50 or 85/25 @ above 1.7 kg/sqm including cost of fuel if any	3.30	per sqm		0.00
431	Masonary work				
432	First class brickwork in 1:5 cement and coarse sand mortar in superstructure, including necessary cutting and moulding of bricks as required and including honey comb brick work, thickness of wall not to be less 1½ brickk thick. Add extra labour to above items	16.00	per cum		0.00
433	above but for wall of half brick (4½") thick. Add for extra item over above item	5.00	per cum		0.00
434	Painting and Distempering				
435	12 mm Thick plaster with kankar lime over brick minimum thickness not to be less than 3/8" (10mm) thick including supply of all materials, labour and T&P etc. required for proper completion of the work				
436	but with cement and coarse sand mortar(1:6)	104.00	per sqm		0.00
437	Add for extra labour and material for plaster over rough face of brick walls	32.00	per sqm		0.00
438	Providing and applying plaster of paris putty of 2mm thickness over plastered surface to prepare the surface even and smooth complete	104.00	per sqm		0.00
439	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
440	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	104.00	Sqm		0.00
441	Flooring				

442	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete.				
443	Size of Tile 600x600 mm	8.00	per sqm		0.00
444	DOOR WINDOW				
445	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
446	Powder coated aluminium (minimum thickness of powder coating 50 micron)	8.06	KG		0.00
447	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item)				
448	With float glass panes of 5. mm thickness	5.40	sqm		0.00
449	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				
450	Powder coated aluminium (minimum thickness of powder coating 50 micron)	10.50	kg		0.00
451	Water proofing & ATT				

452	Providing and injecting chemical emulsion for preconstructional antitermite treatment and creating and chemical barrier under and around the column pits, wall and floor along the external per meter of binding expansion joints surrounding of pipes and conduits etc. complete (plinth area of the building at ground floor only shall be measured as per I.S.6313 (part ii 1981) . Aldrine emulsifiable concentrate of any other approved materials such as heptachlor or chlordane will be used. the rates of application of chemical emulsion shall be as follows				
453	Treatment for masonry and foundation 5 litres per sqm				
454	Back fill in immediate contact with foundation 7.5 liters/sqm.				
455	Treatment of top surface of plinth filling 5 liters per sqm				
456	Treatment junction of soil along external per meter building 7.50 liter per sqm				
457	Treatment of soil under apron along external perimeter 5 liter/sqm	20.00	sqm		0.00
458	Providing and laying in situ seven course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40 Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).	15.00	sqm		0.00
459	Furniture				
460	Metal detector with 2X0.75m with LCD backlit display and Audible Alarm on detection with adjustable volume	2.00	Each		0.00
461	X RAY BAGGAGE SCANNERS Small Size X-Ray Baggage Inspection System. 0.6X0.4m passage size, conveyor capacity <=160kgs	1.00	Each		0.00
462	Reception Table, 2.4X0.9m,height is 0.75m, table top finish: Laminate In Colour With Swede Finish 0.6-0.8 Mm Thickness Of Type S, F Or P; no footrest	1.00	Each		0.00

463	Reception Table, 2.1X0.6m,height is 0.75m, table top finish: MDF board of grade SBG II of IS 12406/Latest	1.00	Each		0.00
464	Three seater tubular steel sofa set made of MSERW tube of dia 31.8mmX2mm thick, chrome plated, leather cloth, single seat size 520X560mm	18.00	Each		0.00
465	Two seater tubular steel sofa set made of MS ERW tube of dia 31.8X2mm thick chrome plated, leather cloth, single seat size 520X560mm	30.00	Each		0.00
466	Reception Chair, chrome finish with 5 wheels, PU foam covered with 100% polyester fabric, size 440X520mm	3.00	Each		0.00
467	Single seater sofa set made in MS ERW tube of dia 31.8X2mm thick chrome plated,leather cloth, single seat size 520X560mm	16.00	Each		0.00
468	Indoor planters made in ceramic	20.00	Each		0.00
469	Green Room Chairs, steel frame with headrest, footrest and armrest, soft PVC leatherette seat material,size: 450X500mm	20.00	Each		0.00
470	Stools in MS pipe 25X25mm square section and 1mm thickness, size 350X350mm and 650mm height	6.00	Each		0.00
471	Steel Hooks, screwable in the wall, for hanging clothes	8.00	Each		0.00
472	Central Table, rectangular with flat glass top 1194X584mm,380mm height, material is teak wood	16.00	Each		0.00
473	Lockers made in 1.2mm thick MS sheet, 6 compartments with internal locking, finish is powder coated in steel grey colour	4.00	Each		0.00
474	Office chairs made in ABS plastic/ nylon twin caster wheels minimum 5, PU foam covered with leatherite, only revolving without tilting mechanism	120.00	Each		0.00
475	Lecture hall chairs made in hot pressed board 12mm thick with MS frame covered in black leatherite, without handrest	96.00	Each		0.00
476	Conference Chair -High back revolving office chair , chrome finish pedestal with 5 wheels, mesh fabric back, seat size 500x440mm and 520mm height	12.00	Each		0.00
477	Supreme Plastic chair Plastic Moulded Chair With arms Without Cushion SINGLE PIECE PLASTIC MOULDED	4.00	Each		0.00
478	Office Tables made in three layer prelaminated particle board(Wood Product) of grade II type II of IS 12823/Latest, 1500x750 x750mm	157.00	Each		0.00
479	Meeting Table,circular toughened glass top and anadized aluminium legs, 600mm dia, 750mm height	4.00	Each		0.00

480	Conference Table, 12 seater Godrej interio made in MDF board conforming to Grade-II and type-II of IS 14587/1998 with 0.4mm thick PVC foil membrane pre coated with PU layer and balancing layer of 0.5mm thik on the other side, 600mm per seat, 750mm height	1.00	Each		0.00
481	Coffee Table, wooden legs in 50x50mm of suitable design to take load and 900mm dia	3.00	Each		0.00
482	Low height Storage made in MDF board with balancing lamination, having two hinged doors on top and Drawers at the bottom	7.00	Each		0.00
483	Newspaper and Magazine Stand Wrought Iron 1380 mm and 1300 mm tapered, 5 shelves	2.00	Each		0.00
484	Microwave, IFB 20L with grill and convection heating features, net weight between 5-8kgs	2.00	Each		0.00
485	Refrigerator LG 185kgs, Single Door, Conformity to Indian Standrad IS:1476 latest for, Metallic finish in Grey colour Direct Cool	2.00	Each		0.00
486	Single Beds, made in MS hollow section, size 1950x915x750mm	8.00	Each		0.00
487	Bed Mattresses conforming to IS:13489/2000 Latest, Type 2. Inner Cushioning Material Rubberized Coir Sheets Medium Grade conforming to specification No.IS:8391-87 Latest. Size: 1850 X 550 X 40mm	8.00	Each		0.00
488	curtains size 1219x2438mm , made in cotton and silken, prestitched	40.00	Each		0.00
489	Pillow, Size 700X400X170mm made in Cloth plain weave Polyester cotton (67:33) white	8.00	Each		0.00
490	bedsheet made in Variety No-2; 100 % cotton; 170 gms per sq.m, 2300X1500mm, white colour	8.00	Each		0.00
491	geyser	4.00	Each		0.00
492	SS DUSTBIN (mintage) (MINTAGE AND SWING BIN 10LTR), Non-perforated, swing type lid	15.00	Each		0.00
493	VRF AIR CONDITIONING SYSTEM				
494	SUPPLY & INSTALLATION OF VRF SYSTEM				
495	OUTDOOR UNIT				

496	Supply, Istallation, Testing & Commissionig of modular type outdoor units complete with highly effiient inverter type/ digital type scroll compressors, air cooled condenser with low noise fan having interconnected control wiring and refrigerant piping housed in compact housing. Refrigerant should be R410A. The quoted price shall include the cost of refrigerent top up. All structural frame work platforms required shall be of HVAC vendor as per site conditions. The electrical contractor shall terminate the required size cable in the PDB for ODUs to be supplied under the scope of this tender, further cabling from this PDB to outdoor units shall be provided by HVAC contractor. Make: Hitachi/ Daikin/Blue Star/Toshiba				
497	22 HP (Cooling Only)	5.00	Nos		0.00
498	16 HP (Cooling Only)	4.00	Nos		0.00
499	12 HP (Cooling Only)	1.00	Nos		0.00
500	8 HP (Cooling Only)	1.00	Nos		0.00
501	INDOOR UNITS				
502	Supply, installation, testing & commissioning of indoor Units of VRF system complete in all respect. The indoor unit shall coprise of evaporator with coil, fan and fan motor, necessary galvanised steel supports etc. as per specifications. Refrigerant should be R410A. Make: Hitachi/ Daikin/Blue Star/Toshiba				
503	4 way cassette Type				
504	2.5 TR	30.00	Nos		0.00
505	2.0 TR	22.00	Nos		0.00
506	1.5 TR	2.00	Nos		0.00
507	Ductable Type				
508	8.0 TR/3200 cfm	2.00	Nos		0.00
509	AHU (Air Handling Unit) Floor Mounted				

510	Double skin floor mounted AHU made of 25 mm thick panels consisting of PCGI sheet of thickness 0.6mm as outside layer and 0.6 mm thick plain GI sheet as inside layer with factory injected 25mm PUF insulation. Pre filter section with 10 Micron filters. 4/6 Row Deep Dx type Cooling coil section with coils. Blower section with DIDW blower, drive set Pulley, Common base frame with Vibration isolation pads for Motor Blower Assembly. Actual static pressure & No. of coil rows shall be calculated and confirmed by the vendor at the time of quoting. Motor shall be suitable for 415+/- 10 % volts, 50 cycles, 3 phase AC supply. Suitable inspection doors for filter, coil & blower sections to be provided in the unit. Flanged connection at the outlet of AHU to be provided for the main Duct line. Make: Zeco/Edgetech/System Air/Humidin				
511	12000 CFM/ 30 TR @ 40mm wg TSP	3.00	Nos		0.00
512	AHU Expansion Valve & control kit	3.00	Nos		0.00
513	Supply, installation testing & commissioning of Corded Remote controller with LCD display.	14.00	Nos		0.00
514	Supply & installation of Y Joints/ Branch Distributors				
515	For Indoor Units	64.00	Nos		0.00
516	For Outdoor Units	12.00	Nos		0.00
517	COPPER PIPING (REFRIGERANT PIPING)				
518	Supply, Installation, Testing & Commissioning of high pressure copper refrigerant piping suitable for R 410A refrigerant of suitable size as required and duly insulated with 19mm/13mm thick closed cell elastomeric insulation in tubing form. Piping shall be of following sizes :				
519	41.3 mm dia Pipe (insulation - 19 mm thick)	60.00	Rmt		0.00
520	34.9 mm dia Pipe (insulation - 19 mm thick)	35.00	Rmt		0.00
521	28.6 mm dia pipe (insulation - 19 mm thick)	45.00	Rmt		0.00
522	22.2 mm dia pipe (insulation - 19 mm thick)	80.00	Rmt		0.00
523	19.1 mm dia pipe (insulation - 13 mm thick)	110.00	Rmt		0.00
524	15.9 mm dia pipe (insulation - 13 mm thick)	120.00	Rmt		0.00
525	12.7 mm dia pipe (insulation - 13 mm thick)	100.00	Rmt		0.00
526	9.5 mm dia pipe (insulation - 13 mm thick)	80.00	Rmt		0.00
527	DRAIN PIPING				

528	Supply, installation, testing and commissioning of UPVC of 10 Kg/cm ² condensate drain water piping with necessary clamps, supports, hangers and fitting such as bend, tees, reducers etc. duly insulated with 6 mm thick chemically cross-linked closed cell polyethylene foam.				
529	25 mm DIA	100.00	Rmt		0.00
530	32 mm DIA	80.00	Rmt		0.00
531	40 mm DIA	40.00	Rmt		0.00
532	50 mm DIA	30.00	Rmt		0.00
533	CABLE TRAY				
534	Supply and installation of GI Tray of 300 mm x 75 mm size, constructed from 16G GSS, MS angle support for Tray, covered with 20G GI sheet cover for all copper refrigerent pipes				
535	300 mm x 75 mm	180.00	Rmt		0.00
536	INLINE FAN FOR EXHAUST / FRESH AIR				
537	Supply, installation, testing & commissioning of inline fans for exhaust air as shown on drawings, complete with sheet metal casing, direct driven centrifugal fan, motor with proper protection and inspection door, gravity louvers etc. as per the specifications. Fan should be suitable for operation on 240 +10 %, 50 Hz, single phase AC power supply as required. Fan shall be suitable for following capacities : (Make: Kruger/System Air/Humidin/Cayraire)				
538	Capacity: 600 cfm, Static: 15 mmWg	2.00	Nos		0.00
539	Capacity: 350cfm/400 cfm, Static: 15 mmWg	2.00	Nos		0.00
540	PROPELLER FANS				
541	Supply, Installation, Testing and Commissioning of Propeller Fans for exhaust air of Toilets as shown on drawings. Each fan shall be complete with permanent split capacitor, mounting plate and accessories like wire guard, bird screen and gravity louvers for weather protection as required. Fan shall be suitable for operation on 220 ± 6% volts, 50 Hz cycle single phase power supply. The propeller fan shall be complete in all respects as per the approved drawings & specifications and suitable for the following capacities:-				
542	300 mm dia	6.00	Nos		0.00
543	250 mm dia	6.00	Nos		0.00

544	200 mm dia	10.00	Nos		0.00
545	HVAC Electrical Panel				
546	PDB made of 2.0 mm thick steel sheet duly powder coated, complete with voltmeter,ammeter,indicating lights, selector switch incoming/outgoing isolators,current operated single phase preventor as per specification and drawings. (The electrical contractor shall terminate required size cables at incomer of HVAC Panel. All the cabling from HVAC Panel to ODUs & IDUs shall be in the scope of HVAC contractor)				
547	1 nos Incoming TP+NL MCCB @ 250 A				
548	4 nos Outgoing TP+NL MCB @ 63 A for ODUs				
549	1 nos Outgoing TP+NL MCB @ 50 A for ODUs				
550	1 nos Outgoing TP+NL MCB @ 32 A for ODUs				
551	3 nos starter for AHU motors 7.5 Kw each				
552	Panel as above	1.00	Nos		0.00
553	1 nos Incoming TP+NL MCCB @ 125 A				
554	1 nos Outgoing TP+NL MCB @ 63 A for ODUs				
555	3 nos Outgoing TP+NL MCB @ 50 A for ODUs				
556	1 nos Outgoing TP+NL MCB @ 40 A for ODUs				
557	Panel as above	1.00	Nos		0.00
558	Local isolators for AHU	3.00	Nos		0.00
559	Power wiring				
560	Supply,Installation,testing & layoing of armoured copper cable of size				
561	4C x 16 sqmm	60.00	Rmt		0.00
562	4C x 10 sqmm	50.00	Rmt		0.00

563	3C x 6 sqmm	20.00	Rmt		0.00
564	3C x 4 sqmm	10.00	Rmt		0.00
565	Control Cable				
566	Supply, installation, testing and commissioning of control cabling with PVC insulated, PVC sheathed, multicore copper conductor control cable in suitable conduits between indoor and outdoor units.				
567	2C x 1.5 sqmm	400.00	Rmt		0.00
568	3C x 1.5 sqmm	100.00	Rmt		0.00
569	EARTHING				
570	EARTING Conductor				
571	25 x 3 GI Flat	40.00	Rmt		0.00
572	8 SWG GI Wire	120.00	Rmt		0.00
573	DUCT WORK (Factory Fabricated)				
574	Supply, Installation, testing and balancing of factory fabricated ducts made of galvanised steel sheet complete with fire retardent gasket, slip on flanges, GI fully threaded rods, GI chanel supports etc. in accordance with the approved shop drawings and specifications.				
575	24 gauge GSS	350.00	SqM		0.00
576	22 gauge GSS	230.00	SqM		0.00

577	DUCT INSULATION				
578	Supply and application of insulation on external surface supply air ducting using 9 mm thick closed cell elastomeric insulation with adhesive. Longitudinal & transverse joints shall be sealed with self adhesive tape of same material as per specifications.	500.00	SqM		0.00
579	ACOUSTIC LINING				
580	Supply and application of acoustic lining within supply and return air ducts/ AHU Room walls internally with thick fiber glass insulation of density 32 Kg/m³ as per the approved drawings & specifications.				
581	25 mm thick duct acoustic lining as described above	80.00	SqM		0.00
582	50 mm thick wall acoustic lining as described above	130.00	SqM		0.00
583	Canvas Connection				
584	Supply, Installation and Testing of fire retardant canvas connection for AHUs and Smoke extraction fans as per the approved shop drawings and specifications.	2.00	SqM		0.00
585	DAMPERS				
586	Supply, Installation and Balancing of multiblade box type galvanised steel sheet dampers for ducts to be provided with suitable links, levers and quadrants for manual control of volume of air flow and for proper balancing of the air distribution system as per the approved shop drawings and specifications.	4.00	SqM		0.00
587	Supply, Installation and Balancing of multiblade type grille dampers of Aluminium construction for duct collars to be provided with suitable links, levers and quadrants for manual control of volume of air flow and for proper balancing of the air distribution system as per the approved shop drawings and specifications.	2.00	SqM		0.00
588	Supply, Installation and Balancing of multiblade box type galvanised steel sheet motorised Fire dampers (2 hour fire rated) to be provided at outlet of smoke extract fans.	5.00	SqM		0.00
589	Actuator assembly for motorised dampers	6.00	Nos		0.00
590	GRILLES/ DIFFUSERS				

591	Supply, Installation, Testing & Balancing of powder coated extruded aluminium Supply / Return air diffusers/grilles as per approved shop drawings and specifications.	15.00	SqM		0.00
592	Supply, Installation, Testing & Balancing of powder coated extruded aluminium 300 mm dia supply air jet diffusers with fixing plate as per approved shop drawings and specifications.	45.00	Nos		0.00
593	Supply, Installation, Testing & Balancing of powder coated extruded aluminium Fresh Air Intake / Exhaust Louvers complete with bird screen.	1.50	SqM		0.00
594	FLEXIBLE ROUND DUCTS				
595	Supply, Installation, testing and commissioning of factory insulated flexible round ducts. The inner and outer skin of flexible duct shall be constructed out of aluminum sheet. The flexible ducts shall be of the following sizes in accordance with the approved shop drawings:				
596	Upto 150 mm dia	40.00	Rmt		0.00
597	300 mm dia	30.00	Rmt		0.00
598	UNDERDECK INSULATION				
599	Supply and application of under-deck insulation by using 16 mm thick closed cell elastomeric insulation material in sheet form for the roof exposed to sun. The quoted price shall be inclusive of Pidilite SR-998 as required and in conformity with the specifications.	1200.00	Sqm		0.00
600	HI-SIDE (substation)				
601	Sub Head-I : Equipments-HT Panel Board, Transformers & H.T. / &DG Sets.				
602	11 KV single VCB panel Incomer & Outgoing				

603

Supplying, installation, testing & commissioning of indoor type floor mounted metal clad, 11KV VCB Single panel with 1..No. VCB as INCOMER & OUTGOING, totally enclosed & fully interlocked, horizontal drawout, horizontal/vertical isolation type breaker as per IS13118, as amended upto date and additional specifications, having capacities as mentioned below, single break, trip free mechanism, manually charged and auto/ manually closing breaker suitable for use on 11KV, 3 Phase, 50 Hz A.C. supply with short circuit fault level of 350 MVA, complete with self contained, fully interlocked, rack in and rack out mechanism, air insulated but encapsulated copper bus bars of 800Amps capacity, breaker featured with mechanical ON/OFF indicator with hand trip device, spring release coil, shunt trip coil and auxiliary switch of 4NO +4N Can be equipped with following switchgears and accessories i/c connections suitable for 3x 300*sq. mm. XLPE 11KV cable (cable entry from *bottom/ top/side) end termination with heat shrinkable jointing material etc. as required. (Note- Cost of end termination not included in this item)

604	<p>(a) Incoming & Outgoing:-1 Nos...800 Amp. VCB each having following accessories and mountings.</p> <p>(b) 1* No. – 11 KV / 110 Volts PTCClass 0.5 accuracy and 100 VA burden with 1 No. Voltmeter (0-15KV), analog/digital* type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 36 KV on incomer.</p> <p>(c) 1 No. – (0-200 A) dual scale Ammeter, analog type, selector switches for ammeters.</p> <p>(d) 1* No. – Microprocessor based numerical relay with O/L, E/F and S/Cprotection.</p> <p>(e) 1* No. – Set of dual core dual ratio 3 CTs 200/100/5/5 A of 15 VA burden andaccuracy Class – 0.5 for metering and class 5P10 forprotection.</p> <p>(f) 1.Nos. – (0-150/50/5/5 A) Ammeters, dual scale analog type & selector switchesfor Ammeters.</p> <p>(g) 1 Nos. – Microprocessor based numerical relays with O/L, E/F & S/Cprotections.</p> <p>(h) 1Nos. – Set of dual core dual ratio 3 CTs 150/50/5/5Aof15VAburdenandaccuracy Class-1.0 for metering and class 5P10 for protection.</p> <p>(I) 1 No. Power Pack of 24 Volts DC, 7 AH batteries</p>	1.00	set		0.00
605	Proffered Makes : ABB/SCHNEIDER/SIEMENS/L&T				
606	11kv/433 Volts,ONAN TRANSFORMER:-				

607	Supplying, installation, testing and commissioning of following capacity of 11/0433 KV,ONAN,oil filled, 3 Phase, 50 Hz of following capacities OUTDOOR, ONAN TYPE,DYn11,OIL Cooled copper wound transformer with ON load tap changing arrangement on HV side +5% to -15% in steps of 2.5% with RTCC+AVR panel, Transformer shall having cable end boxes on HV side suitable for 3x300.sqmmXLPE cable of 11KV grade and cable end box on LV side suitable for 4 RUNS OF LT XLPE,ALUMINIUM CONDUCTOR,ARMOURED CABLES Complete with all accessories i/c first filling of filtered dehydrated oil and confirming to IS & as per specification attached complete in all respects as required at site.The permissible Loss figures in the Transformer at NO-LOAD, 75% LOAD & FULL LOAD shall not be more than the figures recommended by latest Energy conservation building code(ECBC).Apart from this,The Transformer shall be manufactured as per the additional specifications attached herewith. 1000 KVA	1.00	set		0.00
608	DIESEL GENERATOR SETS :				
609	Supply of following rating, 415 V, 3 Phase, 4-wire, 50 Hz at 0.8 p.f. silent type diesel generator set with acoustically treated canopy suitable for AMF/Manual operation with Radiator cooling, alternator, of suitable rating 415 Volts at 1500 RPM, 3 phase, 50Hz AC supply with 0.80 lagging power factor at 40°C 50% RH & at 1000 Mtrs. MSL, 24 Volts batteries, charger with battery leads,one day fuel Tank (Capacity as per manufacturer standard),Residential silencer and AVM Pads, all accessories as specified in the specifications, including first fill of lube oil providing common base plate, anti vibration isolators, cable termination adopter box, drip trays, foundation bolts, glands, nuts etc. as required for a complete installation.				

610	<p>DG Sets shall include one day fuel tank (800 liters for 600 kVA DG Set & 350 litres for 250 kVA DG Set / as per design) for each D.G. set. The day fuel tank shall be fabricated out of 2 mm thick MS sheets and shall include the cost of removable cover with locking arrangement, the cost of painting, the cost of providing all the required appurtenances like inlet & outlet connection, float valves, drain connection, mechanical oil level indicator and low level/high level alarms and the cost of support arrangement etc. complete as per specification and as required. The Alternator overload capacity shall not be less than 110% of rated capacity for 1 hour in every continuous running of 12 hours. The DG Set shall be mounted on a fabricated rigid common base frame with anti-vibration mountings to provide at least 98% vibration isolation. The DG set shall include all accessories, fittings, instruments and standard tool kit complete as per specification and as required including control cabling.</p>				
611	<p>Radiator cooling system. Fly Wheel to suit flexible/rigid coupling with guard. Fly wheel housing complete with starter gear ring and coupling. Fuel hoses. Electronic Governor./D.G.CONTROLLER Air Cleaner with Vacuum Indicator. Fuel and Lub Oil Filter. By pass filter Corrosion inhibitor coolant. Fuel Pump PT Type. Lub Oil Pump. Electric Starter 24 Volts DC.</p>				
612	<p>Battery Charging Alternator with Built-in-regulator - 24 Volts, 30 Amps. With MS battery stand complete with insulated matting and instrument panel comprising of switch with key & battery charging voltmeter.</p>				

613	Residential Silencer (as per latest CPCB norms including baffle plates and 75mm thick glass/mineral wool insulation complete with wire mesh chicken mesh and 26 gauge aluminium cladding from engine upto silencer, supporting arrangement complete as required). with dry exhaust manifold.i) Expansion below fabricated out of SS sheet.ii) Fuel pipe of required size from DG set flue outlet up to Silencer.Lube oil pressure gaugeWater temperature gaugeSafety control for low lube oil pressureOver speed and high cooling temperature with indication and tripping etc.Alternator insulation Class "H" suitable to withstand tropical conditions.Fabricated rigid common base frame with anti-vibration mountings.Vibration IsolatorAdaptor box and extension of busbars for aluminium cable termination/bus duct insulation as required.Lube Oil Cooler.Flexible Pipe joints for Silencer.Anti Vibration Pads.Droop setting for the synchronization.Exhaust pipe of suitable dia with MS supportNaturally aspirated turbocharger as per manufacturer's specifications.suitable Acoustic Enclosure Radiator cooled diesel engine.				
614	Fabrication,supply , installation and commissioning of Chimney stack structure and its height including foundation shall be as per CPCB norms Rating of DG Sets as Follows :- 500 kVA, 415 Volts DG Set	2.00	sets		0.00
615	MAIN LT PANEL INDOOR:-				

616

Supplying, installation, testing & commissioning of Indoor cubical type LT panel suitable for 415 V, 3 Phase, 4 Wire 50 Hz AC supply system fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 2000 Amp capacity extensible type TPN aluminium alloy bus bars of high conductivity, DMC / SMC bus bars of high conductivity, DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common COPPER earth bar of size 25 mm x 5 mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with sq. mm. PVC insulated copper conductor S/C cable, cable alleys, cable gland plates in two half. The Panel shall have suitable rating of Ammeter, Voltmeter with selector switches and Phase indicating lights. The Panel shall be installed on suitable foundations with provision of incomin and outgoing LT Cables i/c providing following switch gears :-

617

MAIN INCOMER (FROM 1000 KVA TRANSFORMER)
ACB EDO, 2000A, FP, 65KA MICROPROCESSOR BASED RELEASE, O/L, S/C
& E/F PROTECTION
UNDER VOLTAGE RELEASE, 415V AC FOR ACB
METERING & INDICATION
RYB PHASE INDICATING LIGHT, 230V AC
ON/OFF/TRIP INDICATING LIGHT, 230V AC
CT FOR METERING, 2000/5A , CL-1.0, 15VA
CT FOR APFCR, 2000/5A , CL-1.0, 15VA
DIGITAL MULTIFUNCTION METER with RS-485
TNC SWITCH, 25A
A/M SELECTOR SWITCH
AUXILIARY CONTACTOR, 230V AC 2NO+2NC
VOLTAGE MONITORING RELAY (VMR)
MCB, 63A, FP, 10KA
50 KVAR CAPACITOR BANK, 440V AC controlled by 125Amp,TP MCCB
CONTROL MCB, 6A SP, 10KA
ELECTRICAL & MECHANICAL INTERLOCKING
DG INCOMER - 1&2 (from 2 Nos 500 KVA DG SET)
Each incomer shall consists of following mountings & Accessories.

618	1 nos-ACB EDO, 1000A, FP, 65KA MICROPROCESSOR BASED RELEASE, O/L, S/C & E/F PROTECTION UNDER VOLTAGE RELEASE, 415V AC FOR ACB METERING & INDICATION for each incomer RYB PHASE INDICATING LIGHT, 230V AC ON/OFF/TRIP INDICATING LIGHT, 230V AC CT FOR METERING, 1000/5A, CL-1.0, 15VA DIGITAL MULTIFUNCTION METER with RS-485 TNC SWITCH, 25A A/M SELECTOR SWITCH AUXILIARY CONTACTOR, 230V AC 2NO+2NC CONTROL MCB, 6A SP, 10KA ELECTRICAL & MECHANICAL INTERLOCKING BUS COUPLER 1 nos-ACB, 2000A, FP,EDO, 65KA MICROPROCESSOR BASED RELEASE, O/L, S/C & E/F PROTECTION				
619	OUTGOINGS				

620	2 nos-ACB, 800A, FP,MDO, 50KA with Microprocessor RELEASE, O/L, S/C & E/F PROTECTION 2 no-MCCB, 630A, FP, 50KA MICROPROCESSOR BASED RELEASE, O/L & S/C PROTECTION 3 no-MCCB, 400A, FP, 50KA MICROPROCESSOR BASED RELEASE, O/L & S/C PROTECTION 2 nos-MCCB, 250A, FP, 36KA Microprocessor RELEASE, O/L & S/C PROTECTION 6 nos-MCCB, 125A, FP, 36KA MICROPROCESSOR RELEASE, O/L & S/C PROTECTION 1nos-MCCB, 63A, FP, 36KA MICROPROCESSOR RELEASE, O/L & S/C PROTECTION PLC INTERLOCKING WITH LOAD MANAGEMENT PLC WITH SOFTWARE DEVELOPMENT HUMAN MACHINE INTERFACE (HMI) CONNECTING CABLE & CONNECTORS AUXILIARY RELAY, 24V DC 2 C/O UPS 30 MINUTES BACKUP POWER SUPPLY 24V DC(5 Amp) CONTROL MCB, 16A TP, 10KA CONTROL MCB, 16A DP, 10KA				
621	CONTROL MCB, 6A SP, 10KA BATTERY CHARGER, 24V DC AMMETER, 0-30A DC VOLTMETER, 0-30V HOOTER, 24V DC 6 WINDOW ANNUNCIATOR CONTROL SUPPLY ON/DG NC ON INDICATING LIGHT START/STOP PUSH BUTTON FOR DG SET EMG. STOP PUSH BUTTON	1.00	set		0.00
622	APFC PANEL 400+50 KVAR				

623	<p>Supplying, installation, testing & commissioning of Indoor cubical type LT panel suitable for 415 V, 3 Phase, 4 Wire 50 Hz AC supply system fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 800 Amp capacity extensible type TPN aluminium alloy bus bars of high conductivity, DMC / SMC bus bars of high conductivity, DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common COPPER earth bar of size 25 mm x 5 mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with sq. mm. PVC insulated copper conductor S/C cable, cable alleys, cable gland plates in two half. The Panel shall have suitable rating of Ammeter, Voltmeter with selector switches and Phase indicating lights. The Panel shall be installed on suitable foundations with provision of incoming and outgoing LT Cables i/c providing following switch gears :-</p>				
624	INCOMER TO APFC PANEL				
625	<p>1 NO :ACB, 800A, TP+N,MDO, 50KA microprocessor BASED RELEASE, O/L ,E/F & S/C PROTECTION RYB PHASE INDICATING LIGHT, 230V AC 12 STAGE APFC RELAY CONTROL MCB, 6A SP, 10KA EXHAUST FAN WITH FILTER 10 KVAR CAPACITOR BANK (1 NOS.) MCB, 40A, TP, 10KA 10 KVAR CAPACITOR DUTY CONTACTOR 10 KVAR CAPACITOR BANK, 440V ON INDICATING LIGHT, 230V AC A/M SELECTOR SWITCH 15 KVAR CAPACITOR BANK (1 NOS.)</p>				

626	MCB, 40A, TP, 10KA 15 KVAR CAPACITOR DUTY CONTACTOR 15 KVAR CAPACITOR BANK, 440V ON INDICATING LIGHT, 230V AC A/M SELECTOR SWITCH 25 KVAR CAPACITOR BANK (5 NOS.) MCB, 63A, TP, 10KA 25 KVAR CAPACITOR DUTY CONTACTOR 25 KVAR CAPACITOR BANK, 440V ON INDICATING LIGHT, 230V AC A/M SELECTOR SWITCH 50 KVAR CAPACITOR BANK (5 NOS.) MCCB, 125A, TP, 36KA THERMAL MAGNETIC BASED RELEASE, O/L & S/C PROTECTION 50 KVAR CAPACITOR BANK, 440V ON INDICATING LIGHT, 230V AC A/M SELECTOR SWITCH				
627	100 KVAR CAPACITOR BANK (Nil NOS.) MCCB, 250A, TP, 36KA THERMAL MAGNETIC BASED RELEASE, O/L & S/C PROTECTION 100 KVAR CAPACITOR DUTY CONTACTOR 100 KVAR CAPACITOR BANK, 440V ON INDICATING LIGHT, 230V AC A/M SELECTOR SWITCH PANEL ENCLOSURE & ALU. BUS BAR ALUMINIUM BUS BAR, TPN, 2000 AMP, WITH HEAT SHRINKABLE SLEEVE & SMC/DMC SUPPORT 14/16SWG, PANEL WITH POWDER COATING & WIRING WITH ALL PANEL ACCESSORIES, COMPARTMENTLIZED	1.00	set		0.00
628	SUB PANEL-1	1.00	set		0.00

629	SUB PANEL-2	1.00	set		0.00
630	GATE HOUSE PANEL	1.00	set		0.00
631	COMPOUND LIGHT DB	1.00	set		0.00
632	Power supply to VRF-1&2 (AUDITORIUM)	1.00	set		0.00
633	Power Supply to VRF-3-2(INCUMBATION CENTRE))	1.00	set		0.00
634	AHU STARTER PANEL	1.00	set		0.00
635	BASEMENT VENTILATION PANEL	1.00	set		0.00
636	PLUMBING & WATER SUPPLY PANEL	1.00	set		0.00
637	BUS TRUNKING AIR INSULATED COMPACT TYPE				
638	Supplying,installing on wall or by suspension on ceiling, testing and commissioning of following capacity AIR INSULATED COMPACT TYPE Bus Trunking,for use on 3 phase 4 wire, 415 volts,50Hz, AC Supply,with metal clad enclosure having IP-54,rating after fixing the all accessories made of 1.6mm thicksheet steel duly powder coated in convenient sections complete with 4 nos. Aluminium Bus Bars having current density of 130A/sqcm at nominal current rating ,necessary joints, elbow joints,expansion joints ,continous earthing with 2 nos Al. strip of suitable size (one on each side),including G.I. clamping, brackets suspendors,Angle Iron brackets,steel fastners etc as required. COPPER FLEXIBLE CONNECTION BRAIDED/MULTISTRIP OF SUITABLE CURRENT RATING SHALL BE PROVIDED AT BOTH ENDS OF TRUNKING.				

639	2000 AMP.	10.00	mtr		0.00
640	SUPPLY OF HT/LT CABLES				
641	Supply of HT XLPE Cables 11 KV:				
642	Supply of HT XLPE Cables of 11 KV Grade,Aluminium Armoured,of following sizes as per latest IS Code.				
643	3CORE X 185 Sqmm.	100.00	MTRS		0.00
644	Supply of LT XLPE Cables:				
645	Supply of LT XLPE Cables of 1.1 KV Grade,Aluminium Armoured,of following sizes as per latest IS Code.				
646	3.5 Core X 300 Sqmm.	1000.00	mtr		0.00
647	3.5 Core X 185 Sqmm.	150.00	mtr		0.00
648	3.5 Core X 50 Sqmm.	500.00	mtr		0.00
649	4 Core X 16 Sqmm.	200.00	mtr		0.00
650	4 Core X 10 Sqmm.	100.00	mtr		0.00
651	TOTAL OF NON DSR ITEMS				
652	DSR ITEMS				
653	EARTHING				
654	Earthing with coper Earth Plate 600 mm x 600mm x 3 mm thick i/c accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with salt & Charcoal.	6.00	set		0.00

655	Earthing with GI earth plate 600 mm x600mm x 6 mm thick i/c accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) complete as required.	18.00	set		0.00
656	Providing and fixing 25mm x 5 mm Copper strip in 40 mm dia GI pipe from earth electrode as required.	50.00	mtr		0.00
657	Providing and fixing 25mm x 5 mm GI strip in 40 mm dia GI Pipe				
658	step on surface or in recess for connection etc. as required.	200.00	mtr		0.00
659	providing and fixing 25x5 MM copper strip on surface	20.00	mtr		0.00
660	Providing and fixing 25x5MM GI strip on surface	200.00	mtr		0.00
661	Providing and fixing 6 SWG G.I. Wire on surface or in recess for Loop Earthing along with existing surface/recess conduit/submain /cables etc. as reqd.	200.00	mtr		0.00
662	Laying of LT Cables :				
663	Laying of One number PVC Insulated ,PVC Sheathed/XLPE Power Cables				
664	1.1KV Grade of Following Size direct in Ground including excavation,				
665	Sand Cushioning and protective covering and refilling the trench etc.				
666	Upto 35 sqmm	50.00	mtr		0.00
667	Above 35 & upto 95 sqmm.	300.00	mtr		0.00
668	Above 95 & upto 185 Sqmm.	100.00	mtr		0.00
669	Above 185 & upto 400 Sqmm	900.00	mtr		0.00

670	Laying of One number ADDITIONALPVC Insulated ,PVC Sheathed/XLPE Power Cable 1.1KV Grade of Following Size direct in Ground in the same Trench including excavation,Sand Cushioning and protective covering and Refilling the trench etc as reqd. Upto 35 sqmm	70.00	mtr		0.00
671	Above 35 & upto 95 sqmm.	100.00	mtr		0.00
672	Above 95 & upto 185 Sqmm.	70.00	mtr		0.00
673	Above 185 & upto 400 Sqmm	100.00	mtr		0.00
674	Laying of 1 No. PVC insulated and PVC				
675	sheathed/ XLPE power cable of 1.1 KV				
676	grade of following size in the existing RCC/HDPE/Metal pipe/Open Trench/Cable Trays etc. as required.				
677	Upto 35 sqmm	200.00	mtr		0.00
678	Above 35 & upto 95 sqmm.	60.00	mtr		0.00
679	Above 95 and upto 185 sqmm	50.00	mtr		0.00
680	Above 185 sqmm and upto 400 sqmm	80.00	mtr		0.00
681	Laying of One number PVC Insulated and PVC Sheathed/XLPE power cable of 1.1 KV Grade of following sizes in the Exising Masonary open duct etc. as required.				
682	Upto 35 sqmm	50.00	mtr		0.00
683	Above 35 & upto 95 sqmm.	40.00	mtr		0.00
684	Above 95 & upto 185 Sqmm.	50.00	mtr		0.00

685	Above 185 & upto 400 Sqmm	70.00	mtr		0.00
686	Laying & fixing of One number PVC Insulated and PVC Sheathed/XLPE power cable of 1.1 KV Grade of following sizes on Wall surface etc. as required.				
687	Upto 35 sqmm clamped with 1mm saddle	400.00	mtr		0.00
688	Above 35 & upto 95 sqmm.clamped with 25x3mm MS flat clamp	250.00	mtr		0.00
689	Above 95 & upto 185 Sqmm.clamped with 25x3mm MS flat clamp	300.00	mtr		0.00
690	Above 185 & upto 400 Sqmm clamped with 40x3 mm MS Flat clamp	200.00	mtr		0.00
691	Laying of HT Cables :				
692	Laying of one number HT XLPE Cables of 11 KV Grade,Aluminium Armoured,of following sizes direct in ground including excavation,sand cushioning and protective covering and refilling the trench etc.				
693	Above 120sqmm & upto 400 Sqmm	90.00	mtr		0.00
694	Laying of one number HT XLPE cable of 11 KV grade of following size in the existing RCC/HDPE/Metal pipe/Open Trench/Cable Trays etc. as required.				
695	Above 120 sqmm and upto 400 sqmm	10.00	mtr		0.00
696	TERMINATION OF LT CABLES				
697	Supplying and making end termination with brass				
698	compression gland and Al. lugs for following				
699	size of PVC insulated and PVC sheathed/XLPE				
700	Al. conductor cable of 1.1 KV grade as required.				
701	3.5x300sq. mm	26.00	set		0.00
702	3.5 Core X 35 Sqmm.	8.00	set		0.00

703	4 Core X 16 Sqmm.	16.00	set		0.00
704	4 Core X 10 Sqmm.	8.00	set		0.00
705	TERMINATION OF HT CABLES				
706	Supplying and making indoor cable end termination with heat shirinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core,XLPE,aluminium conductor cable of 11 KV Grade as required.				
707	3 core x 185 sqmm	5.00	set		0.00
708	Internal Electrical,				
709	WIRING IN PVC CONDUIT				
710	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface/recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.				
711	Group A	45.00	Point		0.00
712	Group B	100.00	Point		0.00
713	Group C	500.00	Point		0.00
714	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	10.00	Point		0.00

715	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit along with 1 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	900.00	Meter		0.00
716	Wiring for light/ power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit along with 2 Nos. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	200.00	Meter		0.00
717	Wiring for circuit/ sub main wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.				
718	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire Light Circuit	100.00	Meter		0.00
719	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire UPS Power points	1000.00	Meter		0.00
720	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	100.00	Meter		0.00
721	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required. 20 mm				
722	25 mm	600.00	Meter		0.00
723	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
724	5/6 A switch	645.00	Each		0.00
725	2 way 5/6 A switch	20.00	Each		0.00

726	15/16 A switch	10.00	Each		0.00
727	3 pin 5/6 A socket outlet	20.00	Each		0.00
728	6 pin 15/16 A socket outlet	10.00	Each		0.00
729	Telephone socket outlet	10.00	Each		0.00
730	TV antenna socket outlet	10.00	Each		0.00
731	Bell push	4.00	Each		0.00
732	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	89.00	Each		0.00
733	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	20.00	Each		0.00
734	Supplying and fixing following size/ modules, GI box along with modular base & cover plate for modular switches in recess etc. as required.				
735	1 or 2 Module (75mmX75mm)	20.00	Each		0.00
736	3 Module (100mmX75mm)	20.00	Each		0.00

737	4 Module (125mmX75mm)	30.00	Each		0.00
738	6 Module (200mmX75mm)	10.00	Each		0.00
739	8 Module (125mmX125mm)	20.00	Each		0.00
740	12 Module (200mmX150mm)	20.00	Each		0.00
741	Supplying and fixing following Modular base & cover plate on existing modular metal boxes etc. as required.				
742	1 or 2 Module	20.00	Each		0.00
743	3 Module	20.00	Each		0.00
744	4 Module	30.00	Each		0.00
745	6 Module	10.00	Each		0.00
746	8 Module	20.00	Each		0.00
747	12 Module	20.00	Each		0.00
748	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing No.3 pin 5/6 A modular socket outlet and 1 no 5 A modular switch, connections etc. as required.	20.00	Each		0.00

749	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	91.00	Each		0.00
750	INSTALLATION OF FIXTURES & FANS				
751	Installation ,Testing, Commissioning of wall bracket /ceiling fittings of all sizes and shapes containing up to two GLS/CFL/LED lamps per fitting, complete with all accessories including connections etc. as required.	546.00	Each		0.00
752	Supplying and fixing call bell/ buzzer suitable for single phase, 230 V, complete as required.	4.00	Each		0.00
753	Providing and fixing plain 16/0.20mm (0.50sqmm) twin flat flexible, FRLS PVC insulated, copper conductor cable, in PVC sleeve of suitable size on the floor/ wall, or side of the table/ door etc. as required.	100.00	Meter		0.00
754	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (up to 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	89.00	Each		0.00
755	Installation, testing and commissioning of Exhaust fan, in the existing opening,including making good the damage ,connections,testing & commissioning etc. as required.				
756	Up to 450 mm sweep	10.00	Each		0.00
757	CONDUITING & WIRING OF T.V. , TELEPHONE and LAN SYSTEM				
758	Supplying and drawing following pair 0.5 sq. mm FR PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.				
759	2 Pair (4 core) From LV box to different point	100.00	Meter		0.00
760	Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the existing surface/ recessed Steel/ PVC conduit as required.				

761	1 run of cable	1000.00	Meter		0.00
762	Providing, laying connecting and testing of multi-core telephone armored/ unarmored cable of conductor size 0.5mm dia annealed copper conductor PVC insulated PVC sheathed jelly filled (as per DOT specification) cable as required				
763	20 Pair telephone armored cable	1.00	Meter		0.00
764	Providing, fixing connecting and testing of under noted size of solder less telephone tag block Krone make in surface/recess in wall required size of M.S. box with hinged lockable cover duly stove enamel painted.				
765	20 Pair telephone Tag Block	1.00	Each		0.00
766	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
767	25mm dia conduit pipe	600.00	Meter		0.00
768	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
769	Supplying and fixing M.S. box with modular type telephone (RJ-11) outlet complete as required.	10.00	Each		0.00
770	Modular Type DATA (RJ-45) outlet complete as required	240.00	Each		0.00

771	Supplying & Fixing of UTP Jack Panel, loaded with 48 no's UTP ports for Non-PCB based IO Jacks (RJ45, TIA-568C Category-6, Shall have integrated bonding bar or other mechanism for grounding, Shall be loaded with individually replaceable 24 nos. Category-6 certification by Jacks complying with TIA-568.C.2 , Shall be having a 6 port module construction for better cable dressing at the rear, the jacks shall have RJ-45 type connector with bend limiting and strain relief boot for securing IDC contacts from external forces and for maintaining the bend radius of the cable complete in all respect.	1.00	Each		0.00
772	Supplying & Fixing of Floor Standing Network/Server Rack - 42U / 800w / 800d, with Heavy Duty Extruded Aluminum Frame for rigidity. Top cover with FHU provision. Top & Bottom cover with cable entry gland plates. Two pairs of 19" mounting angles with 'U' marking. Depth support channels - 3 pairs. With a Overall Weight Carrying Capacity of 500Kgs. Side Panels - 42U/800d Front MS Door Perforated honeycomb 42U/800w Rear MS Door Split Perforated honeycomb 42U/800w Fan 90CFM 230V AC, 4" dia Castors with Brake (set of 4) Vertical Cable manager 80mmW 42U Shelf, Stationery 700mm N/W PDU 12Sockets 5/15Amps with MCB Mounting Hardware (Pkt. Of 20) earthing Kit 150mmH Cable manager 1U MS with Loops complete in all respect	1.00	Each		0.00
773	Supplying Installation testing and Commissioning of 48 port 10/100/1000BASE-T ports POE switch and four GbE/10GbE SFP/SFP+ uplink ports, layer 3 from day1 having static & RIP ,stackable up to 10 switches, should support external redundant power supply, certified , each switch should be provided with stacking port/cable complete in all respect	1.00	Each		0.00
774	MODULAR BOXES & SWITCH/SOCKETS				
775	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2 nos. 3 pin 5/6 A modular socket outlet and 2 nos. 5/6 A modular switch, connections etc. as required. (For light plugs to be used in work stations).	40.00	Each		0.00
776	MCCB, MCB & DB'S				

777	Providing and fixing following rating and breaking capacity and pole MCCB with THERMOMAGNETIC RELASE AND TERMINAL spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.				
778	125 A,36KA,FPMCCB	8.00	Each		0.00
779	63 A,36KA,FPMCCB	5.00	Each		0.00
780	63 A,16KA,FPMCB	4.00	Each		0.00
781	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required . (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
782	4 way (4 + 12), Double door	6.00	Each		0.00
783	8 way (4 + 24), Double door	9.00	Each		0.00
784	12 way (4 + 36), Double door	2.00	Each		0.00
785	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				

786	Single pole	250.00	Each		0.00
787	Triple pole	28.00	Each		0.00
788	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	20.00	Each		0.00
789	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 Ma in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
790	40 A	20.00	Each		0.00
791	63 A	20.00	Each		0.00
792	Supplying and fixing Cable End Box (Loose Wire Box) suitable for following triple pole and neutral, sheet steel, MCB distribution board, 415 Volts, on surface/ recess, complete with testing and commissioning etc.as required.				
793	For 4 way, Double door TPN MCBDB	6.00	Each		0.00
794	For 8 way, Double door TPN MCBDB	9.00	Each		0.00
795	For 12 way, Double door TPN MCBDB	2.00	Each		0.00
796	Supplying and fixing Cable End Box (Loose Wire Box) suitable for triple pole and neutral, sheet steel, Vertical MCB distribution board, 415 Volts, on surface/ recess, complete with testing and commissioning etc. as required.	17.00	Each		0.00
797	Laying of LT Cables :				

798	Laying of One number PVC Insulated ,PVC Sheathed/XLPE Power Cables 1.1KV Grade of Following Size direct in Ground including excavation, Sand Cushioning and protective covering and refilling the trench etc. Upto 35 sqmm	50.00	mtr		0.00
799	Laying of One number ADDITIONALPVC Insulated ,PVC Sheathed/XLPE Power Cable 1.1KV Grade of Following Size direct in Ground in the same Trench including excavation,Sand Cushioning and protective covering and Refilling the trench etc as reqd. Upto 35 sqmm	100.00	mtr		0.00
800	Laying of 1 No. PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size in the existing RCC/HDPE/Metal pipe/Open Trench/Cable Trays etc. as required.				
801	Upto 35 sqmm	200.00	mtr		0.00
802	Laying of One number PVC Insulated and PVC Sheathed/XLPE power cable of 1.1 KV Grade of following sizes in the Existing Masonary open duct etc. as required.				
803	Upto 35 sqmm	50.00	mtr		0.00
804	Laying & fixing of One number PVC Insulated and PVC Sheathed/XLPE power cable of 1.1 KV Grade of following sizes on Wall surface etc. as required.				
805	Upto 35 sqmm clamped with 1mm saddle	400.00	mtr		0.00
806	TERMINATION OF LT CABLES				
807	Supplying and making end termination with brass compression gland and Al. lugs for following size of PVC insulated and PVC sheathed/XLPE Al. conductor cable of 1.1 KV grade as required. 3.5 Core X 35 Sqmm.	8.00	set		0.00
808	4 Core X 16 Sqmm.	24.00	set		0.00

809	EARTHING				
810	Earthing with coper Earth Plate 600 mm x 600 mm x 3 mm thick i/c accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with salt & Charcoal.	2.00	set		0.00
811	Earthing with GI earth place 600 mm x600 mm x 6 mm thick i/c accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) complete as required.	6.00	set		0.00
812	Providing and fixing 25mm x 5 mm Copper strip in 40 mm dia GI pipe from earth electrode as required.	10.00	mtr		0.00
813	Providing and fixing 25mm x 5 mm GI strip in 40 mm dia GI Pipe step on surface or in recess for connection etc. as required.	50.00	mtr		0.00
814	providing and fixing 25x5 MM copper strip on surface	20.00	mtr		0.00
815	Providing and fixing 25x5MM GI strip on surface	100.00	mtr		0.00
816	Providing and fixing 6 SWG G.I. Wire on surface or in recess for Loop Earthing along with existing surface/recess conduit/submain /cables etc. as reqd.	100.00	mtr		0.00
817	SUPPLY OF LT CABLES				
818	Supply of LT XLPE Cables:				
819	Supply of LT XLPE Cables of 1.1 KV Grade,Aluminium Armoured,of following sizes as per latest IS Code.				
820	3.5 Core X 35 Sqmm.	200.00	mtr		0.00

821	4 Core X 16 Sqmm.	600.00	mtr		0.00
822	SUPPLY OF UPS				
823	Supplying, installation, testing and commissioning of 40KVA at 0.85 PF UPS with following specifications.				
824	Three phase input, three phase output, True Online Double Conversion fully IGBT based technology including IGBT base Rectifier and IGBT based inverter with inbuilt isolation transformer .				
825	SMF Batteries Bank suitable for minimum 30 minutes backup at full load				
826	Accessories: .This includes the battery racks and interconnecting link from UPS to battery.				
827	External Battery Circuit Breaker with Box, Racks including connection from battery bank to UPS				
828	DC Battery Breaker				
829	Paralleling Kit				
830	Makes : Mitsubishi, Numeric, Socomec.	1.00	set		0.00
831	LANDSCAPE & EXTERNAL ELECTRICAL WORKS				
832	SUB LT PANEL (Landscaping & External Lights),Location New Gate House.				

833	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 Wire 50 Hz AC supply system having fabricated in compartmentalized design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland, plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having suitable Amp capacity extensible type TPN aluminium alloy bus bars of light conductivity, DMC / SMC bus bars of high conductivity, DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common Aluminium/GI earth bar of size 25 mm x 5 mm at the rear with 2 Nos. earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with sq. mm. PVC insulated copper conductor S/C cable, cable alleys, cable gland plates in two half, i/c providing following switch gears :-				
834	INCOMING SUPPLY FROM NEW GATE HOUSE PANEL:				
835	1 No. 63 A, 4P (100% Neutral) MCCB (36 kA) with Microprocessor based O/L, S/C and E/F releases.				
836	1 set of Timer with Contactor for auto operation of lights				
837	METERING & INDICATING LIGHTS				
838	1 Nos MFM Meters				
839	1 Set of 100/5A, CL-1, 15VA CTs for measuring.				
840	Sets of phase indicating ,ON/OFF,TRIP Indicating lamps with 2A control MCBs.				
841	BUSBAR:				
842	Electrolytic high conductivity TPN (100% Neutral) Aluminium busbars rated at 100 amps (25 kA) with heat shrinkable PVC sleeves.				
843	OUTGOING FEEDER:				
844	4 Nos.32 A 4 Pole MCB .	1.00	Set		0.00
845	CABLING WORK (SUPPLY)				

846	Supply of following size of XLPE / PVC insulated,PVC Sheathed, Aluminium Conductor armoured power cable of 1.1kV grade etc. as required.				
847	4x16 sqmm 1.1kv Al.Arm Cable	100.00	MTR		0.00
848	4C x 10sq.mm 1.1kV Al. Arm.Cable	1000.00	MTR		0.00
849	4C x 6sq.mm 1.1kV Al.Arm. Cable	2000.00	MTR		0.00
850	LAYING OF CABLES :				
851	Laying of one number XLPE / PVC insulated,PVC Shethed armoured power cable of 1.1kV grade of following sizes on perforated cable trays and dressed using cable ties and identified at regular intervals as required./in Existing RCC/HDPE Pipe/Masonry/Trusses etc				
852	4C x 16sq.mm 1.1kV Al Arm.Cable	30.00	MTR		0.00
853	4C x 10sq.mm 1.1kV Al. Arm.Cable	100.00	MTR		0.00
854	4C x 6sq.mm 1.1kV Al.Arm. Cable	200.00	MTR		0.00
855	Laying of one numberXLPE / PVC insulated, PVC sheathed Aluminium Conductor Armoured power cable of 1.1kV grade of following sizes in ground including excavation and backfilling and identified at regular intervals as required.				
856	4C x 16 sq.mm 1.1kV AlArm. Cable	70.00	MTR		0.00
857	4C x 10sq.mm 1.1kV Al. Arm.Cable	900.00	MTR		0.00
858	4C x 6sq.mm 1.1kV Al. Arm.Cable	1800.00	MTR		0.00
859	LT CABLE TERMINATION				
860	End termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				

861	4C x 16sq.mm 1.1kV Al Cable	4.00	Nos		0.00
862	4C x 10sq.mm 1.1kV Al. Cable	116.00	Nos		0.00
863	4C x 6sq.mm 1.1kV Al. Cable	120.00	Nos		0.00
864	LANDSCAPING & STREET LIGHT :				
865	STREET LIGHT POLES 7 MTR Galvanised:				
866	Supply , fixing, Testing & Commissioning of 4.5 mtr long,3mm thick sheet,hot dip galvanised poles of bottomdia 130mm/70mm respectively with base plate dimensions 220X220X14 mm with galvanised Single Arm Bracket of 1.00 mtr length. The pole shall be Erected on a suitable size of Cement Concreate 1:2:4 foundation as per Manufacturers standards along with Grouting the Foundation Bolts,nuts and 1.5 mtr long,50 mm dia suitably bend ,GI ,Medium Class Pipe for cable entry, suitable size Inbuilt Cable End Box opening approx.600 mm above the Pole Base with 2 Nos. 6Way 15 Amp, Bakelite Connectors,1 No 6 Amp, SP MCB C Curve etc as required. The door shall be vandal resistant and shall be weather proof to ensure safety of inside connections. The door shall be flush with the exterior surface and shall have suitable locking arrangement. There shall also be suitable arrangement for the purpose of earthing. The poles shall be complete with integral terminal boxes, MCB cut-outs, pole foundation bolts, lightning arrestor, earthing, etc. as required. The poles shall have provisions for mounting and connecting an additional 45 Watt LRD -type outdoor light fitting	37.00	nos.		0.00
867	POST TOP LANTERNS:				
868	Supplying , Fixing, Testing & Commissioning of Post Top Lanterns of 40 Watt LED Light Fixtures,IP-65 Housing,made of single piece Die Cast Aluminium alloy,as per Manufacturers design.on a suitable length & Dia of GI Pipe	80.00	nos.		0.00
869	BOLLARDS Along Path Ways:				
870	Philips,LED Bollards,BCP-1510, 18Watts,IP-65,Warm White Colour,temp.3000K on 500mm high Rotomoulded LLDPE Pillars duly grouted on a concrete base by means of 4 Nos. M8X75 mm studs with necessary base rings (CatIII)	11.00	Nos.		0.00
871	SPIKE LIGHTS,Garden Tree/Planter Illumination:				

872	Philips make smart,Bright spot light BGP-150,LED 250/WW,6 watt,20 D,corr. Colour Temp.3000K	21.00	No.		0.00
873	Wall LightS:				
874	Philips make,Tempo LED, wall ligths, system wattage (10-16),IP-65,Colour Temp.5700K on a suitable height as per Designer/Consultants.	100.00	No.		0.00
875	STRIP LIGHTS for Street Furniture:				
876	Philips LED Strip light ,12 Watt,Warm White, Colour Temp.3000K,Operating Voltage 220/24 Volts on wall surface/floor etc as reqd. as per drawings etc	8.00	nos.		0.00
877	FLOOR LIGHTS:				
878	Philips make,Floor lights LED, 1Watt,IP-67,40 lumen output,warm white,Colour Temp.3000K operating voltage 220/24 volts. Designer/Consultants.	100.00	No.		0.00
879	pole Lights for 4.5 mtr Poles:				
880	45 Watt,LED type Outdoor,Wall mounted/ pole light fixtures complete in all respect , including 45 Watt LED Lamp,etc as required.	37.00	Nos.		0.00
881	Garden Lights 25 watt LED	15.00	Nos.		0.00
882	UPLIGHTERS 30 watt LED	26.00	Nos.		0.00
883	Music/Speakers:				
884	supply ,Installation, Testing & Commissioning of 20Watt speakers ,outdoor, whether proof installed on the suitable foundations along the walkway etc including providing & Connecting 2 core stranded speaker wires from the console/amplifier up to the speakers in a suitable protective method by using HDPE / GI Pipes.	12.00	Nos.		0.00
885	WI-FI ROUTERS :				
886	Providing wifi routers at diffirent locations as per requirement of designer/consultant.	1.00	Nos		0.00
887	EARTHING SYSTEM				

888	Supply, installation and connecting a Copper CHEMICAL EARTHING SAFE EARTH ELECTRODE 50MM DIA 3 Mtrs earthing electrode with non corrosive hygroscopic Backfill compound The cost of digging and back filling earth electrode as per IS 3043-1987.at a depth of 2000 mm. A masonry strucutre shall be constructed to a depth of 750mm. and a heavy duty CI Cover shall be used to cover the pit. Earth resistance with in 1 ohm. as per requirements of local authorities, With15 years warranty including Masonary chamber with locking arrangements.				
889	for Low Voltage & Data Network	2.00	Set		0.00
890	Supply, installation and connecting a GI CHEMICAL EARTHING SAFE EARTH ELECTRODE 50MM DIA 3 Mtrs earthing electrode with non corrosive hygroscopic Backfill compound The cost of digging and back filling earth electrode as per IS 3043-1987.at a depth of 2000 mm. A masonry strucutre shall be constructed to a depth of 750mm. and a heavy duty CI Cover shall be used to cover the pit. Earth resistance with in 1 ohm. as per requirements of local authorities, With 15 years warranty including masonry chamber				
891	for Body Earthing	4.00	Set		0.00
892	Supplying and installation of following sizes of earth strip & wires by using spacer clamp for main earth flat,suitable clamping with M.S / Cu. flats for earthwires etc.,including terminal crimping type sockets,bolts & washers, etc required for the complete job.				
893	25x 6 mm CU strip.on surface or as required.	10.00	Rmt		0.00
894	25 x 6 mm GI strip on surface or as required.	60.00	Rmt		0.00

895	Providing and fixing 6 SWG GI wire on surface are in recaes for loop earthing long with existing conduit / cable as required	2000.00	MTR		0.00
896	LIGHT FIXTURES & FANS				
897	Supply of Following type of Fans & Fixtures of all sizes and shapes LED lamps per fitting, complete with all accessories.				
898	36 W LED 2'X2' Light Fixtures as marked L1	118.00	Each		0.00
899	18 watt LED Down Lighters as marked L2.	264.00	Each		0.00
900	6 Watt LED Down Lighters as Marked L3	12.00	Each		0.00
901	12 watt LED Down Lighters as marked L4.	35.00	Each		0.00
902	6 watt LED Down Lighters as marked L5.	14.00	Each		0.00
903	14 watt/mtr LED Strip Light warm white as marked DF.	446.00	mtr		0.00
904	Ceiling Fans 48" dia on ceiling without Regulator .Including GI Down Rod as required.	89.00	Each		0.00
905	Exhaust fans.med.duty for Toilets	10.00	Each		0.00

906	Receiving, Storing, Installation, testing and commissioning of Following type of Fans & Fixtures on wall bracket /ceiling fittings of all sizes and shapes LED lamps per fitting, complete with all accessories including connections with 3x1.5 sqmm copper conductor wire etc. as required.				
907	36 W LED 2'X2' Light Fixtures as marked L1	118.00	Each		0.00
908	18 watt LED Down Lighters as marked L2.	264.00	Each		0.00
909	6 Watt LED Down Lighters as Marked L3	12.00	Each		0.00
910	12 watt LED Down Lighters as marked L4.	35.00	Each		0.00
911	6 watt LED Down Lighters as marked L5.	14.00	Each		0.00
912	14 watt/mtr LED Strip Light warm white as marked DF.	446.00	mtr		0.00
913	Ceiling Fans 48"/54" dia on ceiling without Regulator .Including GI Down Rod as required.	89.00	Each		0.00
914	Exhaust fans.up to 450 mm	10.00	Each		0.00
915	FIRE DETECTION AND ALARM SYSTEM (INTELLIGENT)				
916	INTELLIGENT FIRE ALARM SYSTEM				

917	Supplying, installation, testing and commissioning of micro processor based intelligent addressable main fire alarm panel, central processing unit with the following loop modules and capable of supporting not less than 240 devices (including detectors) and minimum 120 detectors per loop and loop length up to 2 km, network communication card, minimum 320 character graphics/ LCD display with touch screen or other keypad and minimum 4000 events history log in the non volatile memory (EPROM), power supply unit (230± 5% V, 50 hz), 48 hrs back-up with 24 volt sealed maintenance free batteries with automatic charger. The panel shall have facility to connect printer to printout log and facility to have seamless integration with analog/digital voice evacuation system (which is part of the schedule of work under SH: PA System) and shall be complete with all accessories . The panel shall be compatible for IBMS system with open protocol BACnet/ Modbus over IP complete as per specifications.				
918	Two Loop Panel.	1.00	Each		0.00
919	Supplying, installation, testing & commissioning of central graphical fire alarm management system to centrally monitor and operate the fire alarm system complete as required.	1.00	Each		0.00
920	Supplying, installation, testing & commissioning of repeater panel wih 320 character/ Touch screen LCD display with inbuilt reset, acknowledge and silence switches complete as required.	1.00	Each		0.00
921	Supplying, installation, testing & commissioning of intelligent analog addressable photo thermal detector complete with mounting base complete as required.	20.00	Each		0.00
922	indicator on surface/recessed MS Box having two LED, metallic cover complete with all connections etc as required.	10.00	Each		0.00
923	Supplying, Supplying, installation, testing & commissioning of intelligent addressable programmable sounder complete as required.	10.00	Each		0.00

924	Supplying, installation, testing & commissioning of fault isolator complete with base as required.	2.00	Each		0.00
925	Supplying, installation, testing & commissioning of intelligent aspiration detector for area coverage of minimum 5000 sq. ft. complete as required.	4.00	Each		0.00
926	Supplying, installation, testing & commissioning of intelligent addressable thermal detector with rate of rise cum fixed temperature thermistor complete with base as required.	2.00	Each		0.00
927	Supplying, installation, testing & Commissioning of addressable fire control module complete as required.	8.00	Each		0.00
928	Supplying, Supplying, installation, testing & commissioning of addressable phone control module as required.	4.00	Each		0.00
929	Supplying, installation, testing & commissioning of addressable beam detector with short circuit isolator (inbuilt or separate) complete with emitter and receiver including connections with remote test features etc complete as required.	1.00	Each		0.00
930	Supplying, installation, testing & commissioning of intelligent addressable duct detector including suitable Photo detector complete with base as required.	8.00	Each		0.00
931	Supplying, Supplying, installation, testing & commissioning of addressable manual call point complete as required.	10.00	Each		0.00
932	Supplying, Supplying, installation, testing & commissioning of addressable horn cum strobe as required	2.00	Each		0.00
933	Supplying, installation, testing & commissioning of fire fighter telephone handset complete as required.	2.00	Each		0.00
934	Supplying, installation, testing & commissioning of fire fighter phone jack complete as required.	2.00	Each		0.00
935	PUBLIC ADDRESS SYSTEM				
936	Supplying, installation, testing & commissioning of 6 zone, voice alarm controller with USB, MP3 player (including 6 zone button paging station) with seamless integration facility with main fire alarm panel for voice evacuation complete as required.	1.00	Each		0.00

937	Supplying, installation, testing & commissioning of 1.5/3/6W ceiling speaker complete as required.	4.00	Each		0.00
938	Supplying, installation, testing & commissioning of 1.5/3/6W metal box ceiling/wall speakers complete as required.	4.00	Each		0.00
939	Supplying, installation, testing & commissioning ceiling of /wall mounted loud speaker, 3/1.5 Watt in ABS enclosure as required.	2.00	Each		0.00
940	Supplying, installation, testing & commissioning of 6 inches dia, 2 watts, 70/100 volts ceiling speaker complete as required.	10.00	Each		0.00
941	Supplying, installation, testing & commissioning of digital audio amplifier 50 Watt, 25V rms operating at 240 volt AC supply complete as required.	1.00	Each		0.00
942	Supplying, installation, testing & commissioning of digital audio amplifier 75 Watt, 25V rms operating at 240 Volt AC supply complete as required.	1.00	Each		0.00
943	Supplying, installation, testing & commissioning of exit point directional sound speaker with voice and integral audio amplifier with selectable sound pulse patterns complete as required.	4.00	Each		0.00
944	Supplying, installation, testing & commissioning of Voice command keypad 6 zone, with microphone assembly complete as required.	1.00	Each		0.00
945	ASPIRATION DETECTOR ACCESSORIES				
946	Supply, installation, testing and commissioning of 25 mm Outer dia CPVC Pipe with end caps including making air sampling opening of appropriate dia on appropriate interval and all accessories as required.	20.00	sqmtr		0.00
947	Rain Water Harvesting PIT				
948	Rain Water Harvesting - Each pit				
949	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, upto 90 metre depth below ground level.				
950	All types of soil				

951	300mm dia	60.00	metre		0.00
952	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.				
953	200 mm nominal size dia	60.00	metre		0.00
954	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	4.92	cum		0.00
955	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	4.92	cum		0.00
956	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -in-charge.	4.92	cum		0.00
957	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	2.46	cum		0.00
958	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	48.00	Hrs		0.00
959	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:				

960	150 mm dia	2.00	each		0.00
961	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.				
962	150 mm clamp	2.00	each		0.00
963	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).				
964	150 mm dia	2.00	each		0.00
965	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality				
966	Circular shape 560 mm internal diameter	2.00	each		0.00
967	E A R T H W O R K				
968	Earth work in excavation of foundation of struts as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sided and bottom backfilling the excavation earth to the extent required and utilizing the reaming earth locally for road work.	69.66	cum		0.00
969	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	38.34	cum		0.00
970	C O N C R E T E W O R K				
971	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level				
972	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)	2.86	cum		0.00
973	REINFORCED CEMENT CONCRETE				
974	Supplying, fitting and placing HYSD bar reinforcement (Fe 415) in substructure complete as per drawings and technical specification Clauses 1002, 1005, 1010 & 1202	2852.86	kg		0.00

975	Plain/reinforced cement concrete in substructure complete as per drawings and technical specification Clauses 802, 804, 805, 806, 807, 1202 and 1204	25.94	cum		0.00
976	FIRE FIGHTING				
977	FIRE PUMPS, EQUIPMENT, PIPING, VALVES & ACCESSORIES :				
978	Electric Motor Driven Pump (Location - Plant Room)				
979	Supplying, installing, testing and commissioning of Fire authority approved Electrical driven fire pump suitable for automatic/ manual operation consisting of the following:				
980	i) Horizontal mounted End Suction type fire pump having cast iron body, bronze impeller, stainless steel shaft & capable of delivering 2850 LPM against a total head of 65M while running at 2900 RPM complete with mechanical seal pressure gauge with GM cock on the delivery side of pump and including 50 mm by pass arrangement (with 50 mm valve and up to 5 meter GI class 'B' pipe) for periodical testing of working of pumping test.				
981	ii) Squirrel cage, induction motor TEFC type suitable for 415 + 10%V, 3 phase, 50 Hz, AC supply, of suitable HP rating for the above pump with synchronous speed of 2900 RPM with flexible coupling and coupling guard .				
982	iii) Common bed plate for mounting pump and motor fabricated of mild steel channel as per manufacturer's recommendation with heavy duty Anti Vibration pads (4 Nos., heavy duty).				
983	iv) Coupling and coupling guard for direct coupling of pump and motor.				
984	v) Drain Pipe with Valve (50 mm dia)				
985	Main Fire Pump/Sprinkler Pump				
986	Discharge : 2850 LPM				
987	App. Head : 65 M	1.00	Set		0.00
988	Diesel Engine Driven Fire Pump [Stand by pump] (Location - Plant Room :)				
989	Supplying, installing, testing & commissioning of fire authority approved Diesel Engine driven fire pump suitable for automatic/manual operations consisting of the following:				

990	i)Horizontal mounted End Suction type fire pump having cast iron body, bronze impeller, stainless steel shaft & capable of delivering 2850 LPM against a total head of 60 M while running at 1800 RPM complete with mechanical seal pressure gauge with GM cock on the delivery side of pump including 50 mm bypass arrangement (with 50 mm valve and upto 5 meter GI class 'B' pipe) for periodical testing of working of pumping set pumps.				
991	ii)Radiator cooled diesel engine of suitable BHP at 1800 RPM for the above pump complete with standard accessories & suitable cooling system as described in specifications.				
992	iii)Common base plate for mounting pump & engine of requisite strength manufactured out of M.S. channels as per manufacture's recommendation with heavy duty Anti Vibration pads. (Cushy foot) (6 nos., heavy duty)				
993	iv)Coupling & coupling guard for direct coupling of engine & pump.				
994	v) 200 liters capacity day oil storage tank fabricated from 16 SWG thick M.S. plates. Tank shall be provided with inlet, outlet, overflow, vent, drain connections, filling connection & level indicator. Tank shall be mounted on a suitable steel structure (Painted with 2 coats of red oxide paint). Tank shall be provided with epoxy coat from inside & two or more coats of synthetic enamel paint outside over two coats of red oxide primer.				
995	vi)24 volts 180 AH lead acid battery (12 volts - 2 Nos) with boost/Trickle charger for starting the engine automatically complete as required.				
996	vii)Provision for starting of Engine automatically in case of power failure at the time of fire				
997	Diesel Engine driven pump of: Discharge: 2850 LPM App. Head: 65 M	1.00	Set		0.00
998	Electrical Motor Driven Jockey Pump Location - Plant Room :				
999	Supplying, installing, testing & commissioning of fire authority approved electrically driven Jockey pump suitable for automatic/manual operation consisting of the following:				

1000	i)Horizontal mounted end suction jockey pump having cast iron body, volute bronze impeller, stainless shaft capable of delivering 180 LPM against total head of 65M while running at 2900 RPM complete with mechanical seal pressure gauge with mechanical seal GM cock on the delivery side of pump including bypass arrangement (with 25 mm GM stop valve and up to 5 meter G.I. class 'B' pipe) for testing of working of the pumping set as required.				
1001	ii)Squirrel cage induction motor suitable for 415 + 10%V, 3 phase, 50 Hz, AC supply of suitable HP rating for the above pump with synchronous speed of 2900 RPM T.E.F.C type connected to pump with flexible coupling and coupling guard .				
1002	iii)Common bed plate for mounting pump and motor fabricated of mild steel channel as per manufacturer's recommendation with heavy duty 4 Nos. Anti Vibration pads.(Cushy foot)				
1003	iv)Drain pipe with valve (25 mm dia)				
1004	v)Jockey Pump :-				
1005	a)Discharge : 180 LPM (3 LPS)				
1006	App Head : 55 M	1.00	Set		0.00
1007	Supply, installation, testing and commissioning of Pressure switch of approved make for Hydrant pump, jockey pump and Diesel Engine Driven pump including necessary wiring and cut off valve up to central panel & other material as described in specifications.	5.00	Each		0.00
1008	Supply, installation, testing and commissioning of Fire authority approved suitable pressure vessel with air release valve (minimum 450 mm dia & 1500 mm height) with all fittings including two nos. pressure gauge on the delivery side, 80 mm dia flanged inlet and 50 mm dia drain line with 50 mm dia G.M. gate valve.	3.00	Each		0.00
1009	Providing, fixing, testing and commissioning of heavy class MS pipe, IS : 1239 marked with all necessary fittings like tees, elbows, flanges, reducers, gaskets, nuts and bolts etc. welded or screwed joints as required including fixing the pipe with necessary structural supports including painting of two coats of synthetic enamel paint over two coats of red oxide primer including all civil breakages and making good the same (Location: Plant room).				
1010	65 mm dia (Nominal Bore)	20.00	RM		0.00

1011	80 mm dia (Nominal Bore)	20.00	RM		0.00
1012	100 mm dia (Nominal Bore)	50.00	RM		0.00
1013	150 mm dia (Nominal Bore)	200.00	RM		0.00
1014	Providing, fixing, testing & commissioning of heavy class MS pipe, IS : 3589 marked with all necessary fittings like tees, elbows, flanges, reducers, gaskets, nuts and bolts etc. welded or screwed joints as required including fixing the pipe with necessary structural supports (for delivery/suction manifold relating to the pumps) including painting of two coats of synthetic enamel paint over two coats of red oxide primer including all civil breakages and making good the same [Location : Plant room].				
1015	200 mm dia (6.35 mm thick) with necessary supports etc. as required. (Nominal Bore)	20.00	RM		0.00
1016	Providing, fixing, testing & commissioning of following dia C.I. Double flanged 'Y' typed Strainer including nut, bolts and 3 mm thick gasket as required.				
1017	200 mm dia	4.00	Each		0.00
1018	150 mm dia	4.00	Each		0.00
1019	100 mm dia	4.00	Each		0.00
1020	Providing, fixing, testing & commissioning of C.I. Butterfly valve conforming to IS : 13095 with flanges, nuts, bolts and washers complete for following sizes :- [PN 1.6 rating].				
1021	200 mm dia (Gear operated)	2.00	Each		0.00
1022	150 mm dia	6.00	Each		0.00
1023	100 mm dia	1.00	Each		0.00

1024	80 mm dia	3.00	Each		0.00
1025	65 mm dia	1.00	Each		0.00
1026	50 mm dia	1.00	Each		0.00
1027	Providing, fixing, testing & commissioning of dual plate non-return valve complete with nuts, bolts and washers.				
1028	200 mm dia	1.00	Each		0.00
1029	150 mm dia	3.00	Each		0.00
1030	100 mm dia	2.00	Each		0.00
1031	80 mm dia	1.00	Each		0.00
1032	65 mm dia	1.00	Each		0.00
1033	Providing, fixing, testing & commissioning of 100 mm dia Burden type, Stainless Steel dial type pressure gauge (in Pump Room) including brass isolation valve and pipe having calibration of 0-15 Kg/cm2.	4.00	Each		0.00
1034	Providing and fixing exhaust, Diesel engine driven pump exhaust M. S. pipe class 'C' 150 mm dia including fitting like flanges, bends, reducers, etc. 50 mm thick fibre wool insulation aluminium cladding, 24 gauge, necessary excavation, fixing of silencer connections at engine exhaust, necessary supports, back filling, cutting and making good, bird proof and weather proof flap complete in all respect as directed.	15.00	RM		0.00
1035	Providing and fixing M.S. structural work fabricated from standard sections, (MS rounds, angles, channels etc.) including cutting to size, drilling welding including cost of fasteners clamps in R.C.C. structural members as directed, including two or more coats of synthetic enamel paints over one coat of primer after surface preparation including cutting and making good walls.	1000.00	Kg		0.00
1036	FIRE HYDRANT SYSTEM :				

1037	Excavation of required width for fire fighting pipes including excavation for sockets and dressing of sides, ramming of bottom depth upto 1.5 m including getting out the excavated soil and then returning the soil as required in layer not exceeding 20 cms in depth including consolidating each deposited layers by ramming, watering etc. and disposing of surplus excavated soil as directed within a lead of 100m for all kinds of soil.				
1038	Pipes, exceeding 80 mm dia but not exceeding 300 mm dia.	600.00	RM		0.00
1039	Supply, Installation testing & commissioning of Black Mild Steel Class 'C' (Heavy Duty) pipes conforming to IS : 1239 Part-I including cutting, threading, welding & all fittings like flanges, tees, elbows, bends junctions, reducers, ball valves etc. welded or screwed joints, clamps structural steel supports (as per TAC norms) or as required/ directed at site including cutting & making good the walls, floors, RCC work etc cutting chases & filling the same with cement concrete 1:3:6 (1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size) (For Internal work).				
1040	Note: Pipes upto and 50 mm dia shall be threaded joints, above 50 mm shall be welded joints.				
1041	25 mm dia (Nominal Bore)	4000.00	RM		0.00
1042	32 mm dia (Nominal Bore)	1000.00	RM		0.00
1043	40 mm dia (Nominal Bore)	200.00	RM		0.00
1044	50 mm dia (Nominal Bore)	100.00	RM		0.00
1045	65 mm dia (Nominal Bore)	80.00	RM		0.00
1046	80 mm dia (Nominal Bore)	200.00	RM		0.00
1047	100 mm dia (Nominal Bore)	600.00	RM		0.00
1048	150 mm dia (Nominal Bore)	750.00	RM		0.00

1049	Supply and painting for M.S. Pipe with a coat of red oxide Primer and two or more coats of synthetic enamel paint of approved colour to give an even shade including surface preparation and cleaning of pipe from all external material.				
1050	25 mm dia (Nominal Bore)	4000.00	RM		0.00
1051	32 mm dia (Nominal Bore)	1000.00	RM		0.00
1052	40 mm dia (Nominal Bore)	200.00	RM		0.00
1053	50 mm dia (Nominal Bore)	100.00	RM		0.00
1054	65 mm dia (Nominal Bore)	80.00	RM		0.00
1055	80 mm dia (Nominal Bore)	200.00	RM		0.00
1056	100 mm dia (Nominal Bore)	600.00	RM		0.00
1057	150 mm dia (Nominal Bore)	750.00	RM		0.00
1058	Providing and applying two coat of 4 mm thick 'PYPKOTE' antirust protection including primer and lap of 25 mm on M.S. pipe in trenches or complete including surface preparation coating and wrapping shall be confirm to ISI 10221 including conducting required Test.				
1059	80 mm dia	20.00	RM		0.00
1060	100 mm dia	10.00	RM		0.00
1061	150 mm dia	100.00	RM		0.00
1062	Providing & Fixing of gun metal double headed hydrant valves with 100 mm dia flanged inlet & 63 mm dia female outlet complete with rubber blank cap and chain as per IS : 5290 (For internal hydrant). [ISI marked should be embosed]	2.00	Each		0.00

1063	Providing & Fixing of gun metal single headed ISI marked oblique pattern hydrant landing valves with 80mm dia flanged inlet & 63 mm dia female outlet complete with gun metal cap and GI chain twist release type plug and all accessories as per IS : 5290-1983 Type A	24.00	Each		0.00
1064	Providing & Fixing of 63 mm dia 15 m long non-percolating flexible hose (RRL-type A) as per IS : 636. Type A with Gunmetal male & female instantaneous type coupling (IS 903)	24.00	Each		0.00
1065	Providing & Fixing of standard gun metal 63 mm dia branch pipe with nozzle of 20 mm nominal bore outlet as per IS:903 suitable to fit with standard instantaneous type 63mm dia coupling ISI marked (IS:903) complete.	24.00	Each		0.00
1066	Providing & Fixing of standard Fireman's Axe with heavy insulated handle conforming to (IS:926).	24.00	Each		0.00
1067	Providing & Fixing of wall mounting swinging type first aid fire hose reel with drum, hanging bracket, 36.5 Mtr. length x 20 mm dia high pressure hose reel tubing as per IS: 444 with gun metal (GM) shut off nozzle having 5 mm dia orifice. The hose reel shall be conforming to IS : 884-1985. Rate shall include 25 mm dia M.S. pipe connection from Riser to hose reel, sockets, nipples, elbows and ball valve (25 mm dia). Drum shall be fixed on adjoining wall through anchor fasteners / cement concrete block as and when required.	24.00	Each		0.00
1068	Providing & Fixing of 100 mm dia gun metal fire brigade suction hose coupling of (gunmetal draw off connection) with 100 mm dia M.S. 'C' Class suction pipe with 100 mm dia C.I. foot valve. (Pipe max. 10 m long). Cost shall include a wall mounted box of M.S. construction (16 SWG) with glass door (4.0 mm thick) to house the above mentioned component to be connected to static water tank.	1.00	Set		0.00
1069	PORTABLE FIRE EXTINGUISHERS :				
1070	Providing & fixing of ISI marked (IS:940) portable chemical Fire Extinguisher, water (gas pressure) type capacity 9 ltrs with gun-metal cap. and nozzle and complete in all respects including initial fill and wall suspension bracket.	70.00	Each		0.00

1071	Providing & fixing of ISI marked (IS:2878) portable fire extinguisher, carbondioxide type flat base including valve, discharge hose of not less than 10 mm dia. 1 M long & complete in all respects including initial fill with CO2 gas confirming to IS:307-1966 filled to a filling ratio of not more than 0.667 of not more than 0.667 and wall suspension bracket.				
1072	Capacity 4.5 kg	30.00	Each		0.00
1073	Providing & fixing of ISI marked (IS: 13386-1992) mechanical foam type fire extinguishers 50 kg consisting of welded M.S. trolley mounted cylindrical body, squeeze lever discharge valve fitted with pressure discharge hose, discharge nozzle, trolley etc., finished externally with red enamel paint and fixed to wall with brackets complete with internal charges.	4.00	Each		0.00
1074	Providing and fixing of carbon-di-oxide fire extinguishers (22.5 kg) trolley mounted with all accessories internal discharge tube, high pressure discharge hose, discharge nozzle, ISI marked as per IS:2878 finished externally with red enamel paint and fixed to wall with brackets complete with internal charge.	4.00	Each		0.00
1075	Providing and fixing of self illuminated / auto glow "EXIT" signs printed on photoluminescent sheet containing self illuminated base chemical, of appropriate size not less than 400 x 150 mm, suspended from ceiling or fixed to the walls with accessories as required and as directed at site.	50.00	Nos		0.00
1076	SUB HEAD-B (FIRE HYDRANT ACCESSORIES)				
1077	Providing and fixing SS304 Single headed landing valve conforming to IS -5290 (Type-A) with 63 mm dia. single instantaneous female coupling on the outlet SS304 metal blank cap and chain, necessary companion flanges, nuts, bolts, washer and gasket complete as per specification. (ISI marked). All parts and body shall be of SS304 as per IS:5290.				
1078	Single outlet	8.00	Nos		0.00
1079	Providing and fixing first aid fire hose reel drum wall mounting, swinging type(Powder coated finish in fire red) fitted with 20 mm dia. 30 m long high pressure hose(IS:444, Type-2) with 5 mm outlet SS nozzle with shut off valve (IS:8090). Name of Manufacturer should be embossed on the drum and complete hose reel drum shall be conforming to IS:884)	6.00	Nos		0.00

1080	Providing and fixing 63 mm dia. 15m long rubberized lined hose including SS304 male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to IS 636 Type-A and coupling to IS 903 -1975 (ISI marked)	16.00	Nos		0.00
1081	Providing and fixing standard short size SS304 branch pipe with gunmetal nozzle 16 mm dia. outlet with standard instantaneous type 63 mm dia. coupling. (ISI marked, IS:903)	8.00	Nos		0.00
1082	Providing and fixing door with frame for all internal fire hydrants fabricated from 20x20x3 mm and 40x20x3 mm aluminium hollow box sections mounted with 3 no. of 100 mm Aluminium butt hinge on Aluminium angle frame of 45x45x5 mm size with hold fasts fixed to wall with P.C.C. (1:2:4) blocks 100x100x100 mm including 2 nos allen key lock for locking along with padlock arrangement & fully glazed with 4 mm thick float glass approved by local Fire Authority, powder coated fire red finish with " fire hose' written on front suitable to house 15 mm long two length of canvas hose with couplings, one no of branch pipe, one fire mans axe and two numbers of portable extinguishers, first aid fire hose and supports for hoses, branch pipes, Axe and hose reel. Size 2100x 900 mm complete as per approved design including necessary fixing arrangement for hoses & axe and branch pipe.)	6.00	Nos		0.00
1083	Providing and fixing fire hose cabinet fabricated from 16 gauge M.S. Sheet with single or double glazed front door and locking arrangement, painted "Fire Red" with powder coated paint "Fire Hose" written on front including suitable supports to place 900 mm above ground level, approximately size 750x600x250 mm deep (to house two lengths of canvas hose with couplings, branch pipe and nozzle for external hydrants)	2.00	Nos.		0.00
1084	Providing and fixing gunmetal fire brigade inlet head as per IS:904 Specification tested for 20 Kg/cm2 with 63 mm dia. instantaneous type inlet and 100/150mm dia.. flanged outlet with built-in check valve for fire brigade connection to under ground tanks and fire risers including companion flanges as portable " E" including nuts, bolts & washers etc.				
1085	Three way	1.00	Nos		0.00

1086	Providing and fixing gunmetal fire brigade suction 150 mm dia. for fire tank complete with PVC Cap companion flange as per table "E" nuts, bolts, gasket etc				
1087	150 mm	1.00	Nos.		0.00
1088	Supplying and fixing of Fire Man's Axe with heavy insulated rubber tested upto 20 KV and confirming to IS :926.	6.00	Nos.		0.00
1089	Air Cushion Tank for Risers				
1090	Providing and fixing of air vessel of the following specifications fabricated with MS Pipe of thickness specified.				
1091	specifications				
1092	a. Diameter : 200 mm				
1093	b. Shell Thickness: 6.35 mm				
1094	c. Dish Ends : 10 mm				
1095	d. Height : 1000 mm				
1096	e. Finishing: Two coats of red enamel paint over primer out side and two coats of epoxy coating inside.				
1097	f. Material of construction: M.S				
1098	g. Test Pressure: 20 Kg/Sq.Cm.				
1099	i. Height of supporting legs: 400 mm				
1100	j. Quantity				
1101	Note: Contractor should submit general arrangement drawings before fabrication of vessel and ultrosonic test report to be submitted on supply of vessel and test to be conducted at the presence of Plumbing-In-Charge. Also cost shall include two nos. Gunmetal NRV(ISI Marked)	1.00	Each		0.00
1102	SUB HEAD-C (SPRINKLERS ACCESSORIES)				
1103	Providing and fixing 15 mm gunmetal sprinkler head with quartz bulb and set to operate at specified temperature pendent/ upright/ side wall /quick response as per instruction fixed with loctite. Temperature of operation 68 deg.C K-80				

1104	Normal response Pendent type/ upright type	1000.00	Nos		0.00
1105	Normal response Pendent type	950.00	Nos		0.00
1106	Normal response Side wall type	100.00	Nos		0.00
1107	Extended throw normal response Side wall type.	100.00	Nos		0.00
1108	Providing & fixing 25mm dia. UL listed gunmetal inspector test and drain valve with integral sight glass connected to drain line complete in all respects.	20.00	Nos		0.00
1109	Providing and fixing electrically operated flow indicating switches model System Sensor in sprinkler branch line on each floor with necessary junction box installed in accessible place (Wiring from switches to panel and stair case pressurization not included)				
1110	100/65/50 mm dia.	20.00	Nos		0.00
1111	Providing and fixing gunmetal installation valve with turbine type automatic alarm to be connected with control valve , drain valve, test valve and piping as per manufacturer's specifications complete in all respects.				
1112	150 mm dia.	4.00	Nos		0.00
1113	Providing and fixing UL/Fm listed powder coated finish Escutcheon plate complete including fixing in position on pipe and ceiling complete in all respects. (Size=15NB)	950.00	Each		0.00
1114	Providing and fixing UL/Fm listed SS braided flexible pipe with accessories complete with all accessories specified in technical specifications(Size=15B)				
1115	a. 780mm long	150.00	Each		0.00
1116	b. 1000mm long	100.00	Each		0.00

1117	UG Tank				
1118	EARTH WORK				
1119	Excavation in foundation in ordinary soil, loame, clay or sand including lift upto 1.5 m and lead upto 30 m including filling watering and rammimg of excavated earth in to the trenches or in to the space between the building & the side of foundation trenches or in to the plinth , removal & disposal of surplus earth as directed by the engineer in charge upto a distance of 30 m from the foundation trenches . (Excluding royalty)	381.00	Cum		0.00
1120	CONCRETE WORK				
1121	Providing and laying in Cement concrete 1:4:8 (1 Cement: 4 approved Coarse sand: 8 Coarse aggregate) size of aggregate shall be 4cm gauge or as approved including supply of all material labor, T&P etc. required for proper completion of the work.	12.00	Cum		0.00
1122	Design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately).				
1123	All works upto plinth level	113.00	Cum		0.00
1124	Centering and shuttering including strutting, propping etc. and removal of form for :				
1125	Foundations, footings, bases of columns, etc. for mass concrete	613.80	sqm		0.00
1126	STEEL				

1127	Mild steel or iron in plain work such as reinforced concrete or reinforced brickwork (when not included in an over all rates) wrought to required shape as necessary including bending for proper completion of the work and including supply of all steel and waste and overlap and hooks .	90.40	qtl		0.00
1128	Mild steel or iron work of small size and sections such as holding down bolts, hold fast , tie rods , gratings etc (when not included in an over all rates) wrought to required form , including supply of steel , lots nuts and waste etc. and there fixing required for proper completion of work	25.00	Qtl		0.00
1129	FINISHING WORKS				
1130	12 mm Thick plaster with kankar lime over brick minimum thickness not to be less than 3/8" (10mm) thick including supply of all materials, labour and T&P etc. required for proper completion of the work				
1131	but with cement and coarse sand mortar(1:6)	446.00	Sqm		0.00
1132	Add for extra labour and material for plaster over rough face of brick walls	446.00	Sqm		0.00
1133	Commercial Tile	346.00	Sqm		0.00
1134	MISCELLANEOUS & WATER PROOFING				
1135	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI- 212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.				
1136	For vertical surface two coats @ 0.70 kg per sqm	185.00	sqm		0.00

1137	For horizontal surface one coat @1.10 kg per sqm.	139.00	sqm		0.00
1138	Roads				
1139	EARTH WORK				
1140	Excavation in foundation in ordinary soil, loame, clay or sand including lift upto 1.5 m and lead upto 30 m including filling watering and rammimg of excavated earth in to the trenches or in to the space between the building & the side of foundation trenches or in to the plinth , removal & disposal of surplus earth as directed by the engineer in charge upto a distance of 30 m from the foundation trenches . (Excluding royalty)	1672.00	cum		0.00
1141	External Development				
1142	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.	4180.00	Sqm		0.00
1143	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.				
1144	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	836.00	cum		0.00
1145	Providing and laying bituminous concrete with 60-90 TPH batch type hot mix plant producing an average output of 75 tonne per hour using crushed aggregates of specified grading, premixed with bituminous binder VG-30 @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with a hydristatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H Specifications clause 509 complete in all respects.	168.00	cum		0.00

1146	Providing and laying dense graded bituminous macadam with 60-90 TPH batch type HMP producing an average output of 75 tonne per hour using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 4.5 percent by weight of total mix and filler, transporting the hotmix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH Specifications clause 507 complete in all respects.	314.00	cum		0.00
1147	Providing and laying tack coat with bitumen VG-10 using bitumen pressure distributor at the rate of 0.30 Kg. Per sqm on the prepared bitumenous surface cleaned with mechanical broom.	4180.00	sqm		0.00
1148	Providing and applying 2.5 mm thick road marking strips (retroreflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	193.50	Sqm		0.00
1149	Construction of dry lean cement concrete sub base over a prepared sub-grade with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per specifications, cement content not to be less than 150 Kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, for all leads & lifts, laid with a mechanical paver, compacting with 8-10 tonne vibratory roller, finishing and curing etc. complete as per direction of Engineerin-charge.	418.00	cum		0.00
1150	Providing and laying factory made 80 mm thick interlocking Cement Concrete tiles (30 mpa) including 25 mm thick compacted bed of fine sand compacting and proper embedding /laying of interlocking tiles leveling and dressing of surface and including labour and T&P etc. but excluding of all material, labour T&P etc. required for proper completion of work as directer by engineer in charge	500.00	sqm		0.00

1151	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	5.00	cum		0.00
Total in Figures					0.00
Quoted Rate in Figures			Select		0.0000
Quoted Rate in Words					

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REQUEST FOR PROPOSAL

Name of the Work: “Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited”

Volume 2: Scope of Work



BAREILLY SMART CITY LIMITED (BSCL)

BAREILLY (UTTAR PRADESH, INDIA)



Employer: - Bareilly Smart City Limited (BSCL)

Nagar Nigam, Bareilly- 243001 Telephone: 0581-25510074

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TABLE OF CONTENTS

Table of Contents

Volume 2: Section 1-Scope of work	3
1.1 Broad Scope.....	3
1.2 Detail Scope of Works	5
Volume 2- Section 2: Relevant IS Codes.....	26
2.1 Code For structures.....	26
2.2 ARHITECTURE & FINIHING WORKS	27
2.2.1 Code for Architecture and Finishing Works	27
2.2.2 Electircal works.....	28
2.2.3 HVAC.....	32
2.2.4 Fire fighting works requirements.....	33
2.2.5 Plumbing works system	36
2.2.6 FIRE DETECTION ALARM SYSTEM	38
2.2.7 OTHER WORKS.....	39
Volume 2- Section 3- Defect Liability Period.....	40
Volume 2- Section 4- Repair / Rectification of Defects and Deficiencies.....	41
4.1 Architectural, Civil maintenance	41
4.2 Landscape.....	41
4.3 Electrical	41
4.4 HVAC, Fire Fighting and Plumbing.....	41
4.5 Fire detection, alarm system, access control and surveillance.....	41
4.6 Roads and Parking Areas	42
Volume 2- Section- 5- Applicable Permits.....	44
5.1 Applicable Permits.....	44
5.2 Local Development Authority	44
5.3 Civil & Structures	44
5.4 Electrical	44
5.5 Fire Fighting.....	44
5.6 FDA Access Control & Security.....	44
Volume 2- Section 6- Tests on Completion.....	45
6.1 Schedule for Tests	45
6.2 Tests	45
6.3 Audits	46
Volume 2- Section 7- Project Management Requirements.....	47
ANNEXURE 10- TENDER DRAWING SET	49

Volume 2: Section 1-Scope of work

1.1 Broad Scope

- Contractors are requested to visit the site prior to filing/submission and undertake self-assessment of all the necessary works as per the specification and plans including all attributes/matters related for completion of this project.
- The Contractor is to seek clarification prior to the submission date (where necessary), to have clarity of all the activities required to be carried out for a successful and timely completion of this project and the works which shall be carried out by the successful contractor.
- The works under this Contract comprises, building of GIC Incubation and Auditorium and all related works.
- The contractor shall furnish all labour, material, tools and equipment necessary to complete the works as indicated or inferred in the supporting drawing package. Any item not specifically shown in the drawings or specified, but normally required to conform to the required outcome or such intent, should be considered part of the work unless identified by the contractor prior to commencement of works. The contractor shall include and price for such item in the BOQ accordingly.
- The works shall be completed within the scheduled time unless otherwise approved by the Client or its representatives and shall be certified by the Employer upon Practical Completion.
- The landscape planting shall be provided and in a healthy and vigorous growing condition.
- The contractor shall submit for approval within 7 days of the issue of Letter of Award, his proposed Work Programme based on the criteria of the overall schedule of works, showing the intended sequences, stages and order of proceeding with the works together with the period of time he has estimated for each and every stage of the progress including the resources and plant required.
- The successful bidder shall have to prepare and submit execution presentation and 'shop Drawings' before execution and 'As Built Drawings' after execution depicting the exact construction carried out on site, in soft and hard copy format. Statutory and other charges for getting various required approvals as required shall be in scope of Successful bidder.
- The successful bidder shall undertake confirmatory survey for accuracy and completeness of data prior to commencing the site works. The drawings provided with this document are also available in CAD and Bidders can collect the same, (if required) from the Employer. It is in scope of successful Bidder to undertake all relevant Site surveys, obtaining all required approvals from the relevant regulatory authorities, , Prepare and submit maintenance manual to client for approval at least 4 weeks before start of post construction maintenance period. Key tasks/deliverables by the Contractor include:

The contractor should submit a detailed timeline for scope of work to be carried out including details of the man power deployment for the projects prior to commencing the works for approval by the Employer.

- The Employer or his representatives will supervise and monitor the progress of construction phase and Contractor shall provide necessary coordination.

- Procurement programme indicating purchasing and dispatch of materials as per the implementation timelines. Shall also provide the supporting evidence for all the items delivered to the site and take possession of said items.
- The Contractor shall prepare presentation, shop drawings/fabrication drawings for the all works in accordance with the approved concept design approved by Employer.
- Preparation and submission of periodical progress report for all the stages on a weekly basis. The Contractor must be aware of general and specific site conditions, topography and any existing landscape prior to commencement of any landscape works on site.

Note: If work item is not detailed under Indian Standards, appointed contractor should refer to relevant international standard (BS or equivalent). This should be approved by Employer prior to commencing any works on site;

1.2 Detail Scope of Works

General

Contractor shall be responsible for making the facility fit for the intended purpose while performing all of its obligations covered under the Contract Document in its entirety. The work shall be done in accordance to the drawings approved by the statutory authorities. Scope includes Site / Campus Planning, Demolition of existing structures(if any), boundary wall, shop drawings and construct entire campus in accordance with the same. The scope shall also include preparation of as-built drawings before handing over the work to the Employer, maintaining the Quality assurance & Quality control (QA&QC) including control, corrective actions, reporting and arranging for regular inspections by all concerned. As deemed necessary by the Employer/Employer's Engineer/PMC, Contractor shall execute necessary mock-ups of all items/activities related to the Work performed required under this Contract as indicated below and the cost for the same shall be deemed to be included in the Contract price. The Contractors are advised to visit the site before submitting the Proposal for the works. The Scope includes all temporary works required for the completion of works, testing and commissioning and handover till Defect liability Period.

Specifications and Standards

The GIC Incubation and Auditorium Building shall be designed and constructed in conformity with the Specifications and Standards given. Wherever the requisite specification for any material, workmanship, execution, testing. etc are not specified in this document, the contractor shall refer to up to date NBC / IS code specifications.

Built Up Area Details and area programming

Total Plot Area : 10980 Sqm -

S. No.	Particulars	Total Area (sqm)
A	Total Auditorium Built Up Area	4082
B	Total Incubation Center Built Up Area	1548
1	Total Plot Area	10980
2	Total Ground Floor Area	3490
3	Total First Floor Area	2140
4	Total Basement Area(125 Cars)	4030
5	TOTAL BUILT UP AREA	9660

Documents at Site

The Contractor shall maintain in a conspicuous place on the site a copy of development permission and a copy of approved drawings and specifications.

1.2.1 Landscape Works

Scope

The Landscape scope includes procure, supply, construction, installation, furnishing, equipping, testing, commissioning and execution of landscaping works [softscape], irrigation and fountains for entire GIC building complex including mockup for Landscaping items in accordance with the Drawings in RFP,

- Site grading as per the requirements
- Good garden earth & manure
- Trees, shrubs, ground covers, lawns
- Drip irrigation system for trees and shrubs.
- Sprinkler system for lawns
- Tree Plantation
- The Contractor will supply and install barricades for safeguarding landscape development area and works. He may also install the barricades in the landscape development area according to his own understanding if he feels that any part of the landscape area is bound to be damaged for any reason, Contractor shall follow pre construction and during construction soil erosion control measures as per the NBC.

1.2.2 Civil and Structure Works

Scope

The Contractor shall carry out, and be responsible for the execution of Works of GIC Incubation and Auditorium Building complex that includes structure, Auditorium Installations, HVAC, Electrical, Plumbing, Interior, Landscape, compound wall, fencing, security cabins, pavements, hardscape, drains, etc. The Scope of Work includes but is not limited to the following in relation to the design, construction, and operation of the Works:

- Prepare Report based on the design regarding time schedule and submit for approval.
- Setting out the works: Site Topographic Survey and Geotechnical Investigations as deemed necessary by the Contractor. Site Clearing, Site Grading, and Excavation including excavation for sump pits / lift pits.
- foundation & substructure works.
- Implement Anti termite treatment / Water proofing / Insulation works.
- Superstructure RCC works.
- Masonry.
- Plastering.
- Structural Steel work.
- Ancillary PCC / RCC works including equipment foundations / pedestals, etc.

Outline Specifications : the following are the minimum specifications to be followed in the project. However, the contractor shall be liable to implement the entire project in totality:

- 1. DEMOLITION WORK:** Demolition of all existing structures on the site and removal / disposal of the debris.
- 2. EARTH WORK:** Excavation of Basement trenches for foundations as per structural drawings and BOQ

including backfilling.

3. **BOULDER / AGGREGATE SOLING:** Boulderling with road roller compaction with specified boulderling as specified by Structure engineer.
4. **PLAIN CEMENT CONCRETE WORK:** Plain Cement Concrete work shall be in 1:4:8 (1 Cement: 4 stone dust: 8 stone ballast) shall be laid under column footing, Raft, plinth beams etc as specified in the structural drawings made by contractor and approved by Vetting Institute
5. **D.P.C. & ANTI-TERMITE WORK:** 1.5" Thick damp proof coarse in 1:2:4 be laid over the bricks on edge mixed with one packet of water proofing compound in every bag of cement with a coat of bitumen. Anti-termite work to be done in foundation, backfilling & below raft.
6. **MASONARY:** Red Bricks / Fly ash Bricks / concrete blocks may be used in cement mortar in 1:5(1 Cement: 5 coarse sand). Half brick (4.5") walls shall be in 1:4 (1 Cement: 4 Coarse sand) and 6mm dia. Bars shall be placed at every fourth layer embedded in cement mortar.
7. **RCC WORKS:** Reinforced cement concrete work shall be in M25 or higher as per structural details in beams, slab, footings, raft, retaining walls, columns etc. Ready mix concrete / on-site concrete mixers shall be used for concreting. Curing of slab / footings etc. shall be done as per standard practice.
8. **SHUTTERING / FORMWORK:** All shuttering / Formworks shall be done as per standard practice wherever required.
9. **STEEL RE-INFORCEMENT / STRUCTURE:** The contractor shall be responsible for the Building structure & shall provide a Structural Stability certificate of the building. All steel reinforcement with fe500 tmt bars or higher, as per the vetted structure deisgn shall be executed at site.
10. **PLASTERING:** External plaster 15mm in cement mortar 1:5 with 70% coarse sand & rest fine sand. Internal plaster 12mm in cement mortar 1:5 with 70% coarse sand & rest fine sand. All RCC and masonry junctions to be covered with chicken wire mesh. External plaster, wherever required, to be with waterproof compound.
11. **WATERPROOFING:** Waterproofing with elastomeric membrane for toilets/ balconies / lift pit & APP membrane for the terrace shall be done. Basement waterproofing to be done with Guniting / PU membrane with injection grouting. To be done by a professional team & certified warranty provided. Contractor shall give at least 8 year guarantee of the waterproofing.
12. **Building Exterior:**
 - a. Structure Glazing with Saint Gobain ST 450 / ET450 8mm toughened glass and powder coated aluminium framework with 3M tape, silicon filling complete.
 - b. Spider Glazing with Saint Gobain ST 167 / ST 136 / ST 450 or equivalent 12mm toughened glass with spider fittings complete as specified by consultant.
 - c. Elevation cladding with 9mm Alstrong Zinnia panel (HPL) or equivalent with Aluminium framework and 3M tape + silicon fixing with V / C groove complete. Exposed Brickwork Cladding as per the elevation of the Block.
 - d. GRC / WPC jali with paint complete.
 - e. Entrance canopy with MS framework & 4mm / 0.5 coil thickness ACP cladding complete
 - f. Boundary wall with brickwork / RCC work and SS 304 grill with paint complete.
 - g. Main Gate: SS 304/MS grade framework with sliding / folding mechanism as desired.

13. Auditorium (As per the specification provided in the BOQ)

- a) Acoustic wall panels to be installed on the walls & ceiling.
- b) Audio visual equipment to be completely installed.
- c) Carpet flooring.
- d) Wooden flooring on the stage.
- e) Cyclorama screen and other stage curtains / wings.
- f) Auditorium fixed chairs with push backs.
- g) Stage lighting.
- h) Hall lighting.

1.2.3 Electrical Works

Scope

The scope of work shall cover unloading, storing at site of all equipment, erection and commissioning, test at site, performance guarantee test run, training of Employer's personnel and handing over of the complete electrical system along with mandatory spares as per the terms & conditions.

The scope of work shall comprise of, but not limited to the following:

- Power Supply system from nearest CSS to RMU.
- High Side and Low Side equipment such as Transformers and Switchgear.
- Non-segregated phase Busduct and sandwich Busduct with all associated accessories.
- Main Power Control Centers (PCC), Sub-Power Control Centers (Sub-PCC) and Motor Control Centers (MCC).
- Power Distribution boards.
- Automatic Power Factor Correction Panel with capacitors.
- Metering system.
- All HT/LT Power, control cables.
- Cable carrier system with necessary cabling accessories such as cable glands, lugs, termination and jointing kits etc.
- Fire proof sealing system comprising of fire stops and fire breaks.
- Lighting system including Fittings and fixtures.
- Common area lighting, Office space lighting and outdoor Lighting system comprising of lighting distribution boards, lighting transformers, light fittings, lighting poles, Power socket, associate lighting switches/sockets, associated cable, conduit and wiring.
- 100% DG Backup System with Diesel Storage Capacity.
- DG synchronizing panel.
- Vertical Transportation system with a waiting time of 35-40 sec and Passenger Lifts with a minimum speed of 1.75 m/s
- Earthing system comprising of Earthing Electrodes, Earthing strips/ conductors and associated accessories.
- Lightning Protection system as per early streamer emission method.
- Miscellaneous items such as Local control push buttons, Welding Receptacles
- Safety Equipment's such as rubber mats, sign boards
- All related civil works required for completion, commissioning but not limited to trenches, foundations etc.
- Maintenance requirements as per Schedule E.
- Geysers 15 / 25 ltr. / as specified.
- Electrical connection for Lift, HVAC system, lab testing equipment etc.

System Design Requirements

The following design criteria shall be considered by the Contractor for the equipment and services supplied under this contract:

- Safety to personnel and equipment during the maintenance.
- Reliability of service.
- Minimum fire risk.
- Ease of maintenance and convenience of operation.
- Automatic protection of all electrical equipment through selective relaying system.
- Electrical supply to equipment within the design operation limits.
- Adequate provision for future extension and modifications.
- Fail safe features.
- Suitability for applicable environmental factors.
- Maximum interchangeability of equipment.
- The design and equipment shall ensure satisfactory operation under variations of voltage $\pm 10\%$, frequency (+) 5% to (-) 5%, combined voltage and frequency 10% for A.C., -15% to +10% for DC as may be met under operating conditions, including those due to starting loads and short circuit and other fault conditions.

Specific requirements for Electrical Equipment's

The following additional design requirements shall be considered.

HT and RMU Panel

- RMU panel shall be metal clad, self-standing dust proof construction, outdoor cubicle type fitted with incoming load break isolators and outgoing feeders as vacuum circuit breakers with aluminium bus bar, fully draw out type. Degree of protection of RMU panel shall be IP65 or better.
- Required margin of (20%) shall be considered while sizing the bus bars and breakers for switchgear
- The relays in the 11kV RMU and 11kV HT panel shall be numerical type with IEC 61850 compatibility.

Busduct and Rising Main

- Non-segregated phase Busduct shall be TPN, Bus bar material shall be of high conductivity electrolytic Aluminium conductor. Bus duct shall have degree of protection better than or equal to IP-54.
- 415V rising main bus bar shall be of sandwich construction and made up of high conductivity electrolytic aluminium conductor, non-ventilated design and the degree of enclosure protection shall be IP 52.
- Each Rising Main shall be equipped with an end feed unit / MCCB panel, at both ends.

Main LT Panel and Sub-Distribution panels

- Main LT panels shall be metal clad, self-standing dust proof construction, fully draw out type and IP 54.
- For feeders rated more than 400A, ACB with Numerical protection/built in microprocessor release, discrete multi-function meters or metering as part of ACB shall be provided. For all other rating feeders Microprocessor based MCCB shall be used. All ACB feeders shall be compatible for remote control, metering and monitoring.
- Incomer and busbar shall be rated for full load current of the total load connected plus a margin of 20%, rounded off to the next standard rating. All outgoing feeder modules from each PCC shall be rated for the full load current plus 10% margin, rounded off to the next standard rating. All PCC shall be provided with 20% spare feeders.
- Incoming feeders shall be provided with ACB breaker with Numerical protection relay compatible with IEC 61850.

APFC Panel

- Automatic Power Factor Correction (APFC) capacitor panels with capacitor bank of adequate kVAR rating to maintain the power factor of 0.98 lag at main LT panels.
- All Poly Propylene (APP) type Capacitor banks shall be housed in APFC Panel cabinet.

Motors

- Motors shall be energy efficient (IE2) squirrel cage induction type, TEFC, IP-55 enclosure (including terminal boxes and bearing housing) with Class-F insulation (and temperature rise limited to Class B).
- Lockable Stop Push Button (press to stop and key to release) shall be provided near to the each equipment. The enclosure shall be engineering plastic (scratch resistant), weather proof, corrosion resistant, dust and vermin-proof, suitable for mounting on wall or structures. The enclosure shall have degree of protection not less than IP55.

DC System

- The DC system shall be designed to cater the loads for control, protection and indication of 11kV switchgear, 415V breaker controlled feeder, control panel, DG AMF panel, RTCC panel shall be designed for 110V DC battery with 2 hours back-up time.
- 110V, 2 x 100%, float cum boost charger with a common 100% tubular lead acid / or better battery shall be provided which shall be located at ground floor level.

DG Set

- Emergency DG set shall be designed for complete 100% Building load redundancy. The Prime rated DG set shall be an Indoor type open construction mounted on base frame through anti vibration mounts. The cooling system for DG set is radiator type. The DG room shall be acoustically insulated along with panels to limit the noise in line with the norms as set by pollution control board.

Vertical Transportation (Elevators)

- Building shall be provided with passenger elevators.
- Building shall be provided with passenger elevators as specified.
- SS doors & enclosures of elevators shall be fire rated for not less than 2 hours.

Power, Control Cables and Cable carriers system

- The cables shall be 11000V un-earthed grade, single / multicore, stranded aluminium, XLPE insulated with PVC inner sheath, armoured and overall sheathed with specially formulated Fire Retardant Low Smoke (FRLS) PVC. Single core cables shall have aluminium wire / formed wire armour, whereas multicore cables shall have galvanised steel strip armour.
- LT power cables shall be 1100V grade, single / multicore, stranded aluminium conductor, XLPE insulated, with PVC inner sheath, armoured and outer sheath made of specially formulated FRLS PVC compound.
- The overall voltage drop shall be limited to 5% and the voltage dip shall be limited to 15%.
- The LT control cables shall be 1100V grade, multicore, 2.5 sq.mm cross section, stranded copper conductor having 7 strands, PVC insulated, inner PVC sheathed, galvanised steel wire/formed wire armoured and outer sheath made of FRLS PVC compound conforming to the performance requirements outlined above shall be used . The cables shall conform to IS:1554 (Part-I) - 1988 / IEC-502 (1983) in all other respects.
- Cable carrier system shall be designed for 70% loading.
- Power cables and control cables shall run in different shafts. Separate riser and trays shall be provided for the LV system.
- All cabling/wiring works shall be concealed wiring except for risers and in other areas where public or tenants do not have access or approved areas by the Employer.

Lighting system

- LED Light fittings should be installed with effective reflectors. Mercury light fittings should not be used, instead Metal halide fittings shall be used.
- The luminaries shall be selected to suit architectural, functional and aesthetic requirements.

UPS system

- UPS are provided for critical system loads, servers and work stations, FACP (Fire Alarm Control Panel) & FARP (Fire Alarm Repeater panel), CCTV and Emergency lighting etc. with 3hrs battery back-up.
- The UPS will be 3ph to 3 ph, 50 Hz, Modular type, On-line, Redundant UPS power supply and with static bypass. The UPS output will be connected to the UPS DB for further distributions.
- During normal operation, the AC Supply will be fed to UPS Distribution boards through UPS and a

small trickle charging current will be feeding to tubular lead acid battery for charging. Once the AC supply fails, for a momentary time till the DG picks up the battery will feed the UPS distribution loads through UPS.

1.2.4 HVAC:

VARIABLE REFRIGERANT FLOW (VRF) AIRCONDITIONING SYSTEM:

System Description:

Air cooled split type multi-system air conditioning system consisting of:

- i. Outdoor condensing units connected to multiple indoor units.
- ii. The indoor units may be of different type/ configuration / capacities.
- iii. Each indoor unit shall have the capability of individual temperature set point control.
- iv. The system should have the ability to connect each condensing unit to various nos. of indoor units of different types and capacities on one refrigerant circuit, as indicated on the tender drawings. The bidder shall check the layouts and check whether the system offered meets the desired requirements.
- v. Each condensing unit shall incorporate inverter driven variable speed hermetic scroll compressor, to obtain 10% to 100% step-less capacity control for enhanced power saving.
- vi. Each indoor unit shall be provided with signal receiving kit to facilitate operation through remote control. Each indoor unit shall be provided with wireless or wired remote control, as specified in BOQ.
- vii. The indoor and outdoor units shall be BMS compatible.

Refrigerant:

All the condensing units and indoor evaporating units shall be factory assembled and tested.

The entire refrigerant required to operate the system satisfactorily shall form part of the machines and nothing extra shall be payable on this account.

Any additional refrigerant required to meet the requirements of piping lengths shall be added at site. Nothing extra shall be payable on this account.

Additional refrigerant charge weight must be calculated based on the actual length of the refrigerant pipe work. The refrigerant charging process must be carried out with an appropriate charging station and under supervision.

Acceptable Refrigerants: R-410A.

Refrigerant Piping Distance Limits:

The system shall be capable of refrigerant piping runs suitable to the layouts indicated in the tender drawings. The bidder shall check the layouts and check whether the system offered meets the desired piping distance limits of all types.

The oil equalizing lines shall be inside the condensing units.

Refrigerant Piping:

Pipe Material: Up to 3/4" dia: soft drawn copper tube coils and
Above 3/4" dia: hard drawn copper pipes of grade L

Fittings Material: Hard wrought copper or brass, suitable for flared / copper soldered
/ Silver soldered connections.

Pitching: All refrigerant pipes shall be pitched to ensure proper oil return to
the compressor.

Joints: Sweat joints using low temperature brazing and/or silver soldered

Maintenance: Isolation valves shall be provided at suitable locations for ease of
maintenance.

Installation:

The installation shall be carried out strictly as per the refrigeration equipment manufacturer's recommendations including the required distribution joints and headers. The number of brazed joints shall be kept as minimum as possible/practical. The pipe work shall be supported on saddling arrangement with maximum 2-meter center distance. The refrigerant piping (inside the building and/or outside the building) shall be supported on perforated GI cable trays, which shall be covered from top with GI open able covers.

Orientation of Joints:

All the proprietary Distribution refrigeration pipe joints and headers shall be installed in an appropriate orientation to enable correct distribution of refrigerant. The Distribution Joints shall be factory insulated with pre-formed sections of expanded polystyrene or Equivalent insulation material.

Cleanliness of Piping:

All pipe work shall be kept clean and free from contamination to prevent breakdown of the system. All pipe ends shall be sealed and kept sealed until immediately prior to making a joint.

Testing:

After the completion of the installation of the refrigerant piping, the entire system shall be pressure tested with dry nitrogen at a pressure of 20 Kg/Sqcm (high side) and 10 Kg/Sqcm (Low side). The pressure shall be maintained for a period of 24 hours. The system shall then be evacuated to a minimum possible vacuum, which shall be maintained for 24 hours before flushing and charging the system with the refrigerant.

Insulation of Refrigerant Piping:

All suction pipes and low temperature / pressure liquid pipes of the Refrigerant pipe work shall be insulated with slip on Closed Cell Nitrile Rubber fire retardant pipe insulation having a wall thickness of not less than 13 mm. The thermal conductivity of the insulation material shall not exceed 0.032 W/m K at 0 degree C mean temperature. The density of the insulation material shall not be less than 33 + 3 Kg/cum.

All joints of the insulation shall be sealed with 100 mm width x 3 mm thick self adhesive tape of the same material as insulation and shall be of the same make as the basic insulation material. Insulation material exposed to atmosphere shall be of the material as described above and shall be provided with UV protective coating/lamination. The joint sealing tape shall also be provided with identical UV protective coating/lamination. Where indoor refrigerant pipe work is located in roof spaces or spaces where temperature may exceed 30 degree C and RH may exceed 80%, the thickness of pipe insulation shall be selected accordingly.

Outdoor Condensing Units:

- i. The unit shall be fully weatherproof, factory assembled and pre-wired with all necessary electronic and refrigerant controls. The casing shall be constructed of mild steel panels finished with baked enamel or powder coating. The unit shall be completely factory wired and tested with all controls before dispatch. The unit shall be of rugged & anti-corrosion design with strong base plate for easy mounting. The unit shall be complete with state of the art microprocessor control panel. The microprocessor panel shall incorporate controls for precise monitoring of status of the system.
- ii. Larger Condensing Units: The condensing units larger than 5 HP capacities shall incorporate minimum two scroll compressors with at least one inverter driven scroll compressor. The unit shall be capable of operating even if one of the compressors is unserviceable.
- iii. Modular Design: The modular design of the condensing units shall allow for side-by-side installation. The outdoor unit when consisting of separate modules, each module shall have one separate inverter driven compressor.
- iv. Fan Motor Speed Control: The condensing unit fan motors shall have multi-speed operation to maintain constant head pressure control in all ambient temperatures and modes of operation.
- v. Compressors: Compressors shall be highly efficient hermetic scroll type of industrial quality, rugged construction direct driven, with scroll plates & suction/discharge service valves, with industrial solid motor mounts, internal motor protection and vibration isolators. The compressors shall be completely enclosed in a chamber with no leakage path and shall have the capability for scroll plates to separate.
At least one of the compressors shall be inverter driven and the controller shall vary the speed of the compressor to meet the variations in the cooling / heating loads. Each compressor shall be independently wired and piped to its own circuit for efficient operation & ease of maintenance. All parts of the compressor shall be suitable and sufficiently lubricated. Oil heaters shall be provided in compressor casing.
- vi. Heat Exchanger: The heat exchanger shall be constructed from seamless copper tubes mechanically bonded to aluminum fins to form a cross fin coil. The heat exchanger shall be with sub cooling feature for effective usage of the entire coil surface through proper circuiting in order to prevent flushing of refrigerant owing to large length of piping.
- vii. Refrigerant Circuit: The refrigeration circuits of the condensing unit shall be complete with refrigeration compressors, motors, fans, condenser coils, electronic expansion valve, solenoid valves, 4 way valve, distribution headers, capillaries, filters, shut down valves, service ports, receivers and accumulators and all other components which are essential for safe and satisfactory operation of the system.
- viii. Safety Devices: The condensing unit shall be complete with the following safety devices as minimum: High pressure switch, Fan Drive Overload protection switch, Fuses, Crank case heater, Fusible plugs, over current protector.

- ix. Oil Recovery: The unit shall be equipped with an oil recovery system to ensure stable operation of system with long refrigerant piping. The oil recovery system shall be operated after the first hour of operation and then every consecutive 4 hours of operation. The unit shall be provided with high efficiency oil separators on the discharge side of the compressor together with factory fitted oil equalization system.
- x. Fans: The unit shall be provided with necessary numbers of direct driven low noise propeller fans arranged for vertical discharge. Each fan shall be with a safety guard.

Indoor Unit:

- xi. The indoor unit shall be Cassette type. The indoor unit shall be compact and shall have elegant appearance. They shall have low noise centrifugal blowers driven by special motors. The cooling coil shall be of direct expansion type made of copper tubes and integrally fitted with aluminum fins. The indoor unit shall be provided with removable and washable type polypropylene filters. Each unit shall be provided with multi-functional cordless remote control unit with special features like programmable timer and soft dry mode etc.

REFRIGERANT PIPING :

- xii. All refrigerant piping for the air conditioning system shall be constructed from hard drawn/soft seamless copper refrigerant pipes with copper fittings and silver-soldered joints. The refrigerant piping arrangements shall be in accordance with good practice within the air conditioning industry, and to include charging connections, suction line insulation and all other items normally forming part of proper refrigerant circuits.
- xiii.
- xiv. All joints in copper piping shall be sweat joints using low temperature brazing and or silver solder. Before joining any copper pipe or fittings, its interiors shall be thoroughly cleaned by passing a clean cloth via wire or cable through its entire length. The piping shall be continuously kept clean of dirt etc. while constructing the joints. Subsequently, it shall be thoroughly blown out using nitrogen. After the refrigerant piping installation has been completed, the refrigerant piping system shall be pressure tested using nitrogen at pressure of 20Kg per sq.cm and 10 Kg per sq.cm (low side). Pressure shall be maintained in the system for 24 hours. The system shall then be evacuated to minimum vacuum if 70mm hg and held for 24 hours.
- xv. The thickness of copper piping shall not be less than mentioned below:

Pipe Size in mm(OD)	Wall Thickness in mm
a) 54.1	1.5
b) 41.3	1.3
c) 34.9	1.3
d) 28.6	1.2
e) 25.4	1.2
f) 22.2	1.0
g) 19.1	1.0
h) 15.9	1.0

i) 12.7	0.8
j) 9.5	0.8
k) 6.4	0.8

- i. The suction line pipe size and the liquid line pipe size shall be selected according to the manufacturers specified outside diameter. All refrigerant pipes shall be properly supported and anchored to the building structure using steel hangers, anchors, brackets and supports which shall be fixed to the building structure by means of inserts or expansion shields of adequate size and number to support the load imposed thereon.

CONDENSATE DRAIN PIPING :

Condensate Drain Pipes shall be UPVC of 10 Kg/cm² condensate drain water piping with necessary clamps, supports, hangers and fitting such as bend, tees, reducers etc. duly insulated with 6 mm thick chemically cross-linked closed cell polyethylene foam.

The drain lines shall be provided at all the lowest points in the system, as well as at equipment, to remove condensate. All condensation drainage shall be pitched in the direction of flow to ensure adequate drainage, with an adequate trap seal to prevent leakage of air due to static pressure developed by air conditioning units. The Pitch shall be 20 mm per meter wherever possible, but not less than 10 mm per meter piped to nearest drain.

INLINE FANS:

This specification outlines the minimum requirements for design, engineering, selection, manufacture, test and supply of ducted inline fans with all accessories complete in all respect.

Construction:

Inline Fan shall be rectangular or circular in shape and shall have mixed flow impeller directly driven with single phase IP-44 external rotor motor having class F insulation. The casing & impeller shall be made of durable & high quality plastic. The construction of the assembly shall be such that impeller & motor block is fixed to the mounting bracket frame by means of special clamps with latches. This should also facilitate removal of impeller & motor block only without disconnecting the ducting & necessity of removal of complete assembly. The assembly must have Fan speed regulator supplied by the Fan manufacturer for air balancing. The regulator shall be mounted on the Fan Motor block itself at manufacturer works. The motor shall have in-built thermal overload protection with automatic restart. Fan motor shall be equipped with ball bearing designed for at least 40000 working hours service life. The fan shall be connected to power mains through the external terminal block. The Fans shall be compatible to be used with matching size round ducts. Fan Impeller shall be dynamically balanced. The Fan assembly shall be fixed to ceiling/wall with mounting bracket supplied by Fan manufacturer along with Fan assembly. Mounting shall be possible at any angle.

Installation:

Fan shall have rigid supports and fitted to both ends of the casing. Wherever the fans are to be suspended from ceiling or mounted on the wall, the contractor shall include supply and fixing of all the material that may be required to complete the installation in all respect. Fan inlet and outlet connections shall be by means of flexible canvas connections having flexibility and slackness as per relevant IS Codes.

DUCTING:**Duct Material:**

The ducts shall be fabricated from galvanized steel sheets of approved make. Zinc coating on galvanized steel sheets shall not be less than 120 gm / sq m. Galvanized steel sheets shall be of lock forming quality. Test certificates from the manufacturer to be submitted by the contractor along with the every lot of sheets supplied. In addition, if deemed necessary, samples of raw material, selected at random by Clint's site representative shall be subject to approval and tested for thickness & zinc coating at contractor's expense. All ducts shall be factory fabricated from galvanized steel sheets, with no intermediate bracing. Thickness of sheet shall be as per the following details: -

RECTANGULAR DUCTS (GSS)	DUCT SECTION LENGTH 1200 mm		
MAXIMUM DUCT SIZE (mm)	GAUGE	TYPE OF JOINT	BRACING
1-750	26	C & SS	Nil
751 – 1000	26	E-Flange	Nil
1001 – 1200	24	E-Flange	Nil
1201 – 1500	24	H-Flange	Nil
1501 – 1800	22	H-Flange	Nil
1801 – 2100	20	J-Flange	Nil
Above 2100	18	J-Flange	Nil

Abbreviations: (a) C – Cleat, (b) S – S Cleat (c) SS – Standing S Cleat

Duct fabrication:

All ducts shall be factory fabricated in workman like manner in accordance with SMACNA standard. The following points shall be considered during duct fabrication. Ducts to be fabricated from coil (sheet metal in roll form) to facilitate longitudinal seams at corners/ folded edges only. All ducts, to be made on CNC profile cutter for requisite accuracy of dimensions. All edges to be machine treated using lock formers. Duct shall be straight and smooth on the interior surfaces. If space available, bends shall be made with radius not less than one-half the width of the duct. Changes in dimensions and shapes of ducts shall be gradual. Tapering angles shall not be more than 30 degrees (tapering ratio shall be between 1:4 and 1:7). Cutting vanes shall be provided in all bends and duct collars to permit the air to make turn without turbulence. Splitter dampers shall be provided at all T connections.

Ducts shall be fabricated as per details on approved shop drawings. All ducts shall be rigid and adequately supported and cross- braced where required for preventing buckling, vibration or breaking. All ducts and supports shall be spray painted with white color at outer surface on site.

Duct installation:

All ducts shall be installed in workman like manner in strict accordance with the approved shop drawings. The following points to be considered during duct installation. All necessary allowances and provisions shall be made by the contractor for beams or other obstructions in the building, whether or not the same are shown on the drawings. If a duct cannot run as shown on the drawings, the contractor shall install the duct between the required points by any path available, subject to the approval of the client/ architect/ consultant. All ductwork shall be independently supported from building elements. All horizontal ducts shall be rigidly and securely supported, by using hangers formed by fully threaded GI rods and GI channel under ducts as per SMACNA standards.

All ducts shall be totally free from vibration under all conditions of operations. Whenever ductwork is connected to fans, ducts shall be provided with flexible connections. Flexible connection shall be made from fire resistant flexible double canvas sleeves at least 100 mm deep, secured properly and bolted at both ends. The two mating flanges of the ducts shall be made air tight by providing 2 mm thick rubber gasket fixed on both mating flanges by using good quality adhesive. Wherever ducts pass through masonry walls an angle iron frame of 40 x 40 x 5 mm properly primer coated shall be riveted to the duct position passing through the wall to prevent any buckling of the duct. All ducts and supports shall be spray painted with white color at outer surface on site.

Collar dampers:

All supply air diffusers/ grilles shall be provided with removable key-operated multi-blade type louver dampers. Dampers installed in supply air grilles of air conditioning lines shall be made of aluminum and those installed in air cooling lines shall be made of mild steel or galvanized steel. Collar dampers shall be provided with suitable links, louvers and quadrants for manual control of volume of airflow and proper balancing of the air distribution system.

Duct dampers:

Duct dampers shall be multi blade box type of robust construction made out of galvanized steel and tightly fitted. Dampers shall be provided with suitable links, levers and quadrants as required for manual control of volume of airflow and proper balancing of the air distribution system. Every damper shall be having an indicating device clearly showing the damper position at all times.

Testing:

After completion of the installation of air distribution system all ducts shall be tested for air leaks. Before painting the interiors, air distribution system shall be allowed to run continuously for 24 hours for driving away any dust or foreign material lodged within the ducts during installation.

Balancing:

The entire air distribution system shall be balanced using anemometer. Air quantities at the discharge and at various outlets shall be identical to, or less than 5% in excess of, those specified and quoted. Leakage in each air distribution system shall be within 3%. Dampers shall be permanently marked after air balancing is complete so that these can be restored to their correct position if disturbed at any time. Complete air balancing report shall be submitted to the consultants for scrutiny and approval.

Duct Insulation:

All supply air ducts shall be insulated with 9 mm thick Closed Cell Elastomeric Nitrile Rubber. Thermal conductivity of elastomeric nitrile rubber shall not exceed 0.036 W/m²K at an average temperature of 0 °C. The insulation shall have fire performance such that it passes minimum CLASS 1 as per BS476 Part 7 for surface spread of flame. The closed cell elastomeric nitrile rubber insulation shall be applied as follows:-

- i. Clean the surface with a wire brush and make it free from rust and oil. Apply one coat of rubber adhesive SR 998.
- ii. Fix the nitrile rubber insulation on duct surface of the thickness as mentioned in BOQ.
- iii. All longitudinal & transverse joints shall be sealed with self adhesive tape of same material 50 mm wide x 3 mm thick.

Linear grilles:

The supply and return air grilles shall be powder coated fabricated from aluminum extruded sections. The grille shall have 3 mm thick single horizontal extruded section fixed louvers. The grille flange shall be fabricated out of 20x20x1.5 mm aluminum angle. Grilles longer than 450 mm shall have intermediate supports for the horizontal louvers. The samples of grilles shall have to be got approved by the consultant/ architect/ client.

Testing and balancing of air distribution system:

After completion of the installation of air distribution system all ducts shall be tested for air leaks. Before painting the interiors, air distribution system shall be allowed to run continuously for 24 hours for driving away any dust or foreign material lodged within the ducts during installation. The entire air distribution system shall be balanced to supply the air quantity for each area and the final balance of air quantity for each area shall be submitted to the Project Manager/Engineer-in-charge, for approval. The entire instrument required for testing and balancing i.e. rotating vane anemometer, thermometer, duct hood, inclined manometer etc. shall be provided by the Contractor.

1.2.5 Fire fighting

Scope

The Scope of works shall cover complete Fire Fighting system including Fire alarm system of Auditorium (part) building. The scope includes all the related things like testing at manufacturers' works, packaging, transportation, shipping, unloading at port, transportation to site, unloading, storage, insurance, transportation from stores to erection site etc.

System Design Requirements

- Main design components include Wet risers and the hydrant System including all pumps and pipe networks.
- All Accessories, but not limited to field instruments like pressure gauge & pressure switch and control cabling including junction box, erection hardware, etc., to MCC & diesel engine control panel should be included.
- Electrical panels, Cabling & earthing from MCC panels to various fire fighting system, control wiring & interlocking.
- Instrumentation and Control equipment shall be complete with primary elements, initiating contacts for alarms, instrument impulse lines, fittings, power and control cables with suitable glands and terminations and instrument installation hardware.
- 4mm thick wrapping & coating for underground piping with proper testing.
- Sprinkler System for the complete development (within the scope of this contract).

- Contractor shall carryout the hydraulic calculation using validated software.
- Fire extinguisher including mounting fixtures, anchor bolts, clamps, structures, etc. for all buildings in all the areas.
- Photo luminescent signage.
- Fire alarm system
- Firewater Storage at underground of utility building and Terrace level of each building.
- Yard hydrant system around GIC building.

Associated Works

- The complete electrical work related to Fire fighting including, but not limited to installation of pumps, shall be carried out by Contractor.
- All associated Plumbing Works are also in the scope of Contractor.
- The Scope includes the associated works like Structural works for pipe supports for above ground pipes, wall supports, hose cabinet supports, etc., Civil works like wall opening, chipping of foundation, grouting of foundations, sand filling and compacting for underground pipes, etc.
- Painting of equipment, piping, supports etc. with 2 coats of primer & 2 coats of synthetic enamel as per IS: 5 shade 536 (Fire Red).
- Supply of One set of special erection and maintenance tools and tackles.
- Start up and Essential spares.
- Recommended spares for 5 years operation.
- Anchor fasteners required for pipe supports of all the systems which are engineered by vendor and all anchor bolts, nuts, washers and inserts to be embedded in concrete for the equipment and piping.
- Shop inspection (in Vendor's works & at project site after installation along with all required Calibrated measuring instruments).]

Fire protection system shall be designed and install as per the following codes and standards

- NBC, 2016: National building code, part IV
- IS 2189:1999: Installation & maintenance of fire detection and alarm System
- 2002: Design and installation of fixed automatic sprinkler fire extinguishing system
- IS 13039:1991: Yard hydrant system
- IS 3844:1989: Internal hydrant system
- IS 1239 / IS 3589: Specification for MS Pipes
- IS 5290:1993: Specifications for hydrant landing valves
- IS 15683:2006: ABC powder type extinguishers
- IS 9457:1980: Safety colours and safety signs
- IS 12349:1988: Fire protection – safety sign and Local fire authority requirements

1.2.6 Plumbing

The Scope of works shall cover the complete Plumbing system including Internal and External Water Supply, Internal and External drainage including Sewerage, Storm water drainage, Rain water harvesting system of GIC Incubation and Auditorium building. The scope includes all the related things like procurement, manufacture, testing at manufacturers' works, packaging, transportation, shipping, unloading at port, transportation to site, unloading, storage, insurance, transportation from stores to erection site etc.

System Design Requirements

- For Utility area at Ground floor/Basement additional features to include:
 - All the transfer pumps, connection between underground tanks and transfer pumps, related piping, valves and accessories etc.
 - Auto level sensors with required controls like solenoid valve for each tanks (both

- underground tanks and overhead tanks) for automatic operation of transfer pumps.
 - Transfer pumps (1w + 1s) for each potable water & non-potable water system Water supply pipes in Utility building
 - Separate piping from utility building to each overhead tank through trench with required supports.
- Complete distribution of potable and non-potable water distribution for proposed building.
 - There are three piping outlet to be taken from each potable and non-potable OHT. Water supply for top levels shall be supplied through booster pumps with pressure sensors. Individual piping connections shall be taken for next levels respectively to maintain the uniform pressure.
 - Works to include for air vents, PRV, water meters, valves, pressure gauges, water hammer arrestors, Nahni traps, Floor gratings, Gully trap, grease trap, man holes, inspection chambers, required piping connections etc.
 - Required capacity booster pumps with pressure sensor system with required controls and instruments at terrace level for each drinking water system and flushing water system with standby for each building.
 - Cabling & earthing from MCC panels to various plumbing/ sanitary system, control wiring & interlocking.
 - Field instruments like pressure gauge & pressure switch and control cabling including junction box, erection hardware, etc., to MCC
 - Instrumentation and Control equipment included in the package unit shall be complete with primary elements, initiating contacts for alarms, instrument impulse lines, fittings, power and control cables with suitable glands and terminations and instrument installation hardware.
 - Supply & Installation of following complete Sanitary Fixtures and Fittings as per the model and make mentioned in the tender specifications.
 - Provision for Wall hung EWC, counter top wash basins, press and close faucets, exhaust inbuilt windows.
 - Urinal with sensor system (Model: C05075 New Magnum & Jaguar Concealed urinal flush sensor 51087).
 - Pantry sink.
 - Shower assembly.
 - taps.
 - ABS Rinsing spray.
 - Janitor sink.
 - Tower ring, soap dispenser, toilet paper holder, twin coat hook etc.

Associated Works

- The complete electrical work related to Plumbing works including, but not limited to cabling and earthing of various fixtures and control wiring shall be carried out by Contractor.
- The Scope includes the associated works like Structural works for pipe supports for above ground pipes, wall supports, hose cabinet supports, etc., Civil works like wall opening, chipping of foundation, grouting of foundations, sand filling and compacting for underground pipes, etc.,
- Painting of equipment, piping, supports etc. with 2 coats of primer & 2 coats of synthetic enamel as per relevant IS codes.
- Start up and Essential spares.
- Recommended spares for 5 years operation
- Anchor fasteners required for pipe supports of all the systems which are engineered by vendor and all anchor bolts, nuts, washers and inserts to be embedded in concrete for the equipment and piping.
- Supply of One set of special erection and maintenance tools and tackles.
- Cutting holes, chases & like through all types of walls /floors and finishing for all services crossings, including sealing, frame works, fire proofing, providing sleeve, cover plates, making good structure and finishes to an approved standard.

1.2.7 Fire Detection Alarm System

Scope

The scope includes execution of Solution consisting of Fire Detection & Alarm System and Public Address system in accordance with the RFP requirements.

System Design Requirements

For Fire Detection system and Public Address System

- The system shall comprise of heat and smoke detectors, manual call points, hooters and Public Address System.
- The system shall comprise of microprocessor based addressable fire detection system.
 - Integrated smoke and heat detectors.
 - Manual call points.
 - Hooter sounders with flashers.
 - Ceiling mounted speakers for PA system.

CCTV Video Surveillance System

- The main objective is to monitor and record the activities, movement of people and vehicles through entry points inside the building, to monitor perimeter.
- Cameras to be positioned at all areas to enable a total secured building.
- Video Cameras should be - IP Mini Dome Color IR, 2 MP, Varifocal lens

Network Management System

- The features in the design should include:
 - 12 Port Managed Network Edge / Access Switch, 10/100 Mbps with POE.
 - 8 Port Managed Network Edge / Access Switch, 10/100 Mbps.
 - 24 Port Managed Network Aggregation Switch, 10/100 Mbps.
 - Network Management Server / Workstation with software.
 - Network Rack (42U).
 - PVC Conduit pipe + installation.
 - AT6 Cable + installation.

Associated Works

- All associated electrical / civil work related to above works including, but not limited to cabling, earthing and structural works for support / fixing of various fixtures, wall openings, grouting, foundations, sand filling and control wiring shall be carried out by Contractor.
- Required UPS Power only will be made available by the Employer. The power cabling & Ethernet / Optical Fiber cabling, Ethernet Switches and other network hardware shall be provided by the Contractor.

1.2.8 Road Works

Scope

The scope of proposed road works includes development of internal roads/driveways, pathways and parking areas within building site. The Contractor shall carry out, and be responsible for, execution of the roads works, including any site surveys, subsoil investigations and all other things necessary for proper planning, design and construction.

Design Requirements

- Contractor shall undertake the Site Topographic Survey and Geotechnical Investigations as deemed necessary.
- Contractor shall give proposed finished road levels (FRLs) / finished ground levels (FGLs) in due relation with accessibility to various buildings or developed areas and proper drainage of overall site including Site Grading.
- Contractor shall prepare and submit Shop drawings, fabrication Drawings, Site Layouts, etc., necessary for execution.
- The construction works shall include but not limited to Soil stabilization or other measures to be implemented to improve soil subgrade strength as per design intent.

1.2.9 Storm Water Drainage Network

Scope

- The Scope of Work for proposed storm water drainage system under this contract includes but is not limited to the following in relation to the construction, testing and commissioning of storm water drainage system of the Works.
- Storm water collection and disposal system.
- Excavation, dewatering, ramming, refilling, and disposal of surplus excavated soil for pipe / box trench.
- Construction of all type inspection chambers.
- Supply, laying jointing, testing and commissioning of RCC NP-3 pipe/precast RCC rectangular drains with all section sizes as required.
- Hydraulic Testing and commissioning of the entire work.

1.2.10 Interior Works

Kitchen / Pantry:

- a. Ceramic Wall tiles of size as specified in the drawings up to roof size as specified in drawings. Granite counter to be made or as per Drawings.
- b. Double / Single bowl SS sink with drain board, Swivel tap, bottle trap etc complete of Indian range of reputed company (Jayna, Jaguar, Nirali)

Toilets: Ceramic Wall tiles of size specified in the drawing set and with large mirror. Toilet sanitary ware & CP fittings including accessories (towel rail, towel ring, soap dispenser, toilet paper holder, hand dryer, Paper towel dispenser, bottle trap, floor trap / drain) to be included of Indian range of any reputed brand (Kohler, Grohe, Jaguar).

Railings: SS 304 grade stainless steel railings with balusters and toughened glass panel as desired.

Door Windows:

- c. All toilet / pantry area doors to have Wooden frames (second class teak) with 38mm Flush doors with laminate.
- d. All office area doors to match the partition system or as specified. These may be of 12mm Toughened frameless glass with floor spring and patch fittings or Aluminium frame with aluminium doors with prelam board & glass panel or Wooden 38mm flush doors with laminate and glass.
- e. All service area / Basement / car parking area doors to be in Aluminium frame with Aluminium panel doors with all hardware.

- f. Staircase doors – Fire rated doors with push bar mechanism.
- g. Auditorium doors with acoustic panel – Acoustic doors.
- h. External doors of the building to be Toughened glass / Aluminium doors on patch fittings.

Modular Furniture:

1. Modular Furniture / Cupboards / storages with all hardware complete:

- a. Workstations: 45/75mm thick Aluminium / CRCA partitions with panel of fabric/ prelaminated board / pinup board / glass / writing board etc with 25mm post formed board table tops.
- b. Cubicle tables with 25mm thick post formed table top and side storages complete with metal powder coated / CRCA frame.
- c. Cabin tables with main table with 25mm thick post formed table top and side storages complete with metal powder coated / CRCA frame
- d. Cupboards : Prelaminated board modular storages & cupboards.
- e. Furniture: All furniture for sofas, beds, center / side table, reception table etc. **Furniture (Executive Tables, Work Stations, Meeting Tables, Side Tables, Cots)**

Manufacture of executive tables, work stations, meeting tables, side table, cots Using 18/36mm thickness plywood of BWP 710 (Wingor) or Equivalent make as per the design of the furniture, finished with 1 mm thick colour laminates Externally and Internally finish using Greenlam or equivalent make laminates. Using all S.S Hardware. (shades and hardware approved By Commissioner) Edge band make: Rehau, Hardware make : Hettich, Ebco OR Equivalent make furniture approved by concerned authorities.

- f. Chairs for workstations, office, auditorium, pantry, dining areas, interpretation center etc of reputed brand.
- g. Exhibition boards / display boards.

Paint / Polish: Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm, Complete synthetic enamel paint. External Brick Cladding to be used

1. Internal Partition: The various types of partitions that will be used are:

- a. 12mm Toughened Frameless / Slimline Glass partitions with aluminium channel / 3M tape / silicon as specified.
- b. Powder coated Aluminium partitions with prelam board and glass panel as specified.
- c. Wooden partition with Marandi/pine wood frame, 10mm ply with laminate on both sides or glass as desired.
- d. Movable / foldable acoustic partitions.

False Ceiling: Combination of Gypsum board/PVC ceiling with GI framing / taping and grid ceiling as shown in the drawings. Auditorium would have acoustic paneling.

FLOORING: Flooring shall be laid as per the architecture drawing.

- a. All internal building areas / : Full Body vitrified / porcelain tiles digitally printed of size 1200x600 / 600x600mm.

- b. Kitchen / Pantry/ Staircase / balconies : Indian Granite stone.
- c. Toilets : Anti skid ceramic tiles 300mm x300mm / 600x600mm.
- d. Terrace : Granite / Kotah stone polished with adequate slope.
- e. Driveway / internal road / Car Parking area: Cement Concrete with nominal steel and groove fillers complete.
- f. Basement Flooring: RCC Trimix floor with groove cutting , filling complete.
- g. External Pathway Flooring as per the final approved landscape drawing with sandstone, pavers, tiles, grit wash etc complete.
- h. Any other flooring as specified in the detailed design.

Volume 2- Section 2: Relevant IS Codes

Standards and Specifications of following project components are given in this section;

- Structure design works should follow the latest applicable IS codes and the updates thereof.

The Structure works design shall comply with the all the specified minimum requirements of the Authorities Structures analysis , design and detailing works shall be done by the latest software's.

- The Structural design shall be vetted by a Accredited Structural Engineer approved by the Employer
This approved design shall form the basis of Construction.

2.1 Code For structures

IS-875 (Part 1) – 1987	Code of Practice for Design Loads (other than earthquake) for buildings and structures – Unit weights of buildings materials and stored material.
IS-875 (Part 2) – 1987	Code of Practice for Design Loads (other than earthquake) for buildings and structures – Imposed loads.
IS-875 (Part 3) – 1987	Code of Practice for Design Loads (other than earthquake) for buildings and structures – Wind loads.
IS-875 (Part 4) – 1987	Code of Practice for Design Loads (other than earthquake) for buildings and structures – Snow loads.
IS-875 (Part 5) – 1987	Code of Practice for Design Loads (other than earthquake) for buildings and structures – Special loads and load combinations.
IS: 456 – 2000	Code of Practice for Plain and Reinforced Concrete.
IS: 1786 - 1985	Specification for High Strength Deformed Bars and Wires for Concrete Reinforcement
IS: 432 (Part 2) - 1982	Specification for Mild Steel and Medium Tensile Steel Bars and Hard Drawn Steel Wire for Concrete Reinforcement – Hard Drawn Steel Wire.
IS: 1343 – 1980	Code of Practice for Pre-stressed Concrete
IS: 13920 - 1993	Ductile detailing of reinforced concrete structures subjected to seismic forces - Code of practice
IS: 14268 - 1995	Uncoated Stress Relieved low relaxation seven-ply strand for Pre stressed Concrete – Specification
IS: 2062 – 1999	Steel for General Structural Purposes. Specification.
IS: 1161 – 1998	Specification for Steel tubes for Structural Purposes.
IS: 800 – 1984	Code of Practice for General Construction in Steel.
IS: 1893 – 2002	Criteria for Earthquake resistant design of structures.
IS: 2210 – 1998	Criteria for Design of Reinforced Concrete structures and Folded plates.
IS : 269 – 1989	Specification for Ordinary, rapid hardening and low heat Portland cement.

IS : 455 - 1989	Specification for Portland blast furnace slag cement.
IS : 1489 -1991	Specification for Portland pozzolana cement
IS : 383 - 1970	Specification for coarse and fine aggregates from natural sources for concrete.
IS : 516 -1959	Method of test for strength of concrete.
IS : 432 -1982	Specification for mild steel and medium tensile steel bars and hard drawn steel wire for concrete reinforcement.
IS : 4990 -1993	Specification for plywood for concrete shuttering works
IS : 2645 -1975	Specification for integral cement water proofing compounds.

2.2 ARCHITECTURE & FINIHING WORKS

- The Codes, Standards and Technical Specifications applicable for the design and construction of project components are:
- The following list is included for guidance only and the omission from the list does not relieve the contractor from compliance there with:

2.2.1 Code for Architecture and Finishing Works

Code	Description
IS 1200	Mode of measurement.
IS 269	Ordinary portland cement.
IS 3812, 1981	Flyash for use as pozzolana and admixtures,
IS 2386	Method of test for aggregate for concrete.
IS 516	Method of test for strength of concrete
	Coarse and fine aggregate from natural sources for concrete.
IS 1077, 1970	Method of test for Bricks.
IS 456	Code of practice for plain and reinforced concrete.
IS 1597	Code of practice for construction of stone masonry.
IS 1597 PART 1	Code of practice for construction of rubble stone masonry.
IS 1130	Marble (blocks, slabs and tiles)
IS 287	Recommendation for maximum permissible moisture contents of Timber used for different purposes.
IS 1141	Code of practice for seasoning of timber.
IS 6313 PART 2	Anti-termite measures in buildings, pre-constructional chemical treatment measures.
IS 2571	Code of practice for laying in situ cement concrete flooring
IS : 226	Structural Steel (Standard Quality)
IS : 451	Technical Supply Conditions for Wood Screws

IS : 800	Code of Practice for Use of Structural Steel in General Building Construction
IS : 806	Code of Practice for Use of Steel Tubes in General Building Construction
IS : 813	Scheme of Symbols for Welding
IS : 814	Covered Electrodes for Metal Arc Welding of (part I & II) Structural Steel
IS : 816	Code of Practice for Use of Metal Arc Welding for General Construction in Mild Steel
IS : 822	Code of Practice for Inspection of Welds
IS : 961	Structural Steel (High Tensile)
IS 73	Paving bitumen.
IS 702	Industrial Bitumen
IS 1322	Bitumen felts for waterproofing and damp proofing.
IS 1609	Code of practice for laying damp proof treatment using bitumen felts.
IS 13711 & 13712	Ceramic tiles
IS 13630 Part 1 to 13	Testing for Ceramic tiles
IS 104	Specification for ready mixed painted, brushing, zinc chrome, priming.
IS 137	Ready mixed paint, brushing, matt or eggshell flat, finishing, interior to Ind standard colour as required.
IS 5410	Cement paint, colour as required.
IS 6241	Method of test for determination of stripping value of road aggregate.
IS 2720	Density test of aggregate.

2.2.2 Electircal works

Standards and Specifications for the Design and Construction of Electrical works are given in this section;

BACKGROUND

The contractor shall comply with all the minimum requirements of the Design and Construction of Electrical works as per the Latest Standards, Statutory requirements, National Building codes and all other relevant regulations

CODES AND STANDARDS

The system, design, materials, equipment, installation, testing and commissioning shall, in addition to all other applicable codes and standards, comply with the latest requirements of the following standards, codes, principles and specifications issued by Indian standards or IEC codes :-

Code for Electrical Works

Codes	Description
IS 335	Insulating oil
IS 2026	Power transformers (part I - V)
IS 10028	Code of practice for selection, installation and maintenance of transformers
IS 2099	Bushing for alternating voltages above 1000 V
IS 4257	Porcelain bushings for transformers
IS 3639	Power transformer fittings and accessories
IS 2705	Current transformers
IS 8468	On load tap changer
IS 8478	Application guide for tap changers
IS 6600	Guide of loading of oil immersed transformer
IEC 2544	Creepage distance for insulators & bushing congenial
IEC 76	Power transformers
IEC 214	On load tap changers
IEC 616	Terminal and tapping markings for power transformers
IEC 551	Determination of transformer and reactor sound levels.
IEC 137	Bushings for alternative voltage above 1000V.
IEC 354	Loading guide for oil immersed transformer
IS: 3043	Code of practice for earthing.
IEEE: 32	Neutral Grounding Devices, standard requirements, Terminology & procedure.
IS 1271	Classification of Insulating Materials.
IS 2099	Bushing for alternating voltages above 1000 V
IS 2705	Current transformers
IS 3202	Code of practice for climate proofing
IS 3639	Power transformer fittings and accessories
IS 4257	Porcelain bushings for transformers
IS 11171	Dry type Transformer
IS 8478	Application guide for tap changers
IS10028	Code of practice for selection, installation and maintenance of Transformers
IS 1248 & 3107	Direct acting Electrical indicating instruments
IS 2099	Bushings for alternating voltages above 1000V
IS 2516	AC Circuit Breakers
IS 2705	Current Transformers

IS 3156	Voltage Transformers.
IS 3427	Metal enclosed switchgear and control gear for voltages Above 1000V but not exceeding 11000 V
IS 6875	Control switches for voltages up to and Including 1000V AC and 1200 V DC
IEC 56	HV alternating current circuit breakers.
IEC 137	Bushings for alternating voltages above 1000V
IEC 298	AC metal enclosed switchgear and control gear for rated voltages above 1kV and up to and including 72.5 kV.
IS 2147	Degree of protection for enclosure
IS 3842	Specification for electrical relays for AC system
IS 2208	Specification for HRC cartridge fuse links up to 650 Volts.
IS 5082	Wrought Al. And aluminum alloys, bars, rods, tube and Sections for electrical purposes.
IEC 694	Common clauses for high voltage switchgear and control gear standards
IS 1248 & 3107	Direct acting Electrical indicating instruments
IS 2959	AC contactors up to 1000V
IS 13947	AC Circuit Breakers
IS 2705	Current Transformers
IS 3156 & 4146	Potential Transformers.
IS 4047	Specification for air break switches and combination fuse switch units for voltage not exceeding 1000V.
IS 6875	Control switches for voltages upto and including 1000V AC and 1200V DC.
IS 1822	Motor duty Switches
IS 12021	Specification for control transformer.
IS 8623	Factory built assembly of switchgear & control gear for voltage not exceeding 1000V
IS 13947 (Part I)	Degree of protection for enclosure
IS 3842	Specification for electrical relays for AC system
IS 2208 & 9224	Specification for HRC fuses.
IS 5082	Wrought Al. and aluminum alloys, bars, rods, tube and sections for electrical purposes.
IS 4237	General requirement for switchgear & control gear for voltage not exceeding 1000V.
IS 3231	Electrical relays for power system protection
IS 375	Marking and arrangement for switchgear bus bars, main connection and control aux. wiring.
IS 5578	Guide for marking of insulated conductors.
IS 3618	Pre-treatment of MS sheets for phosphatising.

IS: 4722	Specification for rotating machinery
BS: 649	Performance and testing of diesel engines for general purposes.
IS 4729	Measurement and evaluation of vibration of rotating electrical machines.
IS 1950 (1962)	Code of Practice for Sound insulation of Non Industrial Buildings.
IS 8084-1976	Interconnecting bus bars for AC voltages above 1kV
IS 8623 (part-2)	Factory built assemblies-particular requirements of bus bar trunking systems.
IEC 439 (part-2)	Particular requirements of bus bar trunking systems
IS 13925	Shunt capacitors for power system
IS 3231	Electrical relays for power system Protection
IS 2705	Current Transformers
IS 1248	Direct acting electrical indicating instruments
IS 2147	Degree of protection
IS 5578	Marking & arrangement of switchgear, bus bars, main connection and auxiliary wiring
IS: 1554 (PART-I)-	PVC insulated (heavy duty) electric cables working voltage up to and including 1100V
IS: 7098 (PART-II)	Cross-linked polyethylene insulated PVC sheathed cables for working voltages from 3.3 kV up to and including 33 kV
IS: 8130	Conductors for insulated electric cables and flexible cords.
IS: 5831	PVC insulation and sheath of electric cables.
IS:3975	Mild steel wires, strips and tapes for armoring of cables.
IS:2633	Methods of testing weight, thickness and uniformity Of coating on hot dipped galvanized articles.
IS: 209	Specification of zinc.
IS: 3961(PART-II)	Recommended current ratings for PVC insulated And PVC sheathed heavy duty cables.
IS: 10418	Wooden drums for electric cables.
IEC: 540 & 540A	Test methods for insulation and sheaths of electric cables and cords.
IS: 10462 (PART I)	Fictitious calculation method for determination of dimensions of protective coverings of electrometric and thermoplastic insulated cables.
IS: 10810 (PART 58)	Oxygen Index test
IEC 146	Semiconductor Converters
IEC 1131-2	Programmable Controllers
IEC Publication 947, 1988	
IEC Publication 439, 1985	
IS 13947, 1993	Specifications of Low Voltage Switchgear & Control Gear
IS 8623, 1993	Specifications of Low Voltage Switchgear & Control Gear assemblies.
Indian Electricity Act, 1910	

Indian Electricity Rules, 1956	
National Electrical Code 1985	
EN50081-1	EMI Emissions standard
EN50082-1	EMI Immunity standard
Electrical safety	EC730-1and CE directives effective from 1 January 1996.
IEC 146-4	Method of specifying the performance and test requirements
IEC 146-5	Switches for UPS
IEC 439	Low Voltage switch gear and control gear assemblies
IEC 801	Electromagnetic compatibility for industrial process Measurement
IEC 950	Safety of IT equipments including electrical business equipments
1000-2-2	Electromagnetic compatibility – Compatible levels for low frequency conducted disturbances and signaling in public low voltage power supply systems
IS 3043	Code of practice's for earthing in Electrical installation.
IEEE 1100	Recommended practice for powering and grounding of sensitive Electronic equipment.

2.2.3 HVAC

Code of Reference for HVAC works

Codes	Description
	National Building Code 2005
	Energy Conservation Building Code 2008
ASHRAE 90.1-2009	ANSI/ ASHRAE/ IESNA standard 90.1-2009: Energy standard for buildings except low rise residential buildings.
	AMCA : Air Movement and Control Association
	ARI - American Refrigeration Institute
AHRI 410-2001 with Addenda 1, 2 and 3	Forced-Circulation Air-Cooling and Air-Heating Coils
ANSI/AHRI 430-2009	Central Station Air Handling Units
ANSI/AHRI 440-2008	Performance Rating of Room Fan-Coils
AHRI 550	Standard for centrifugal or rotary screw water chilling packages.
AHRI 575	Standard for method of measuring machinery sound within equipment room.
ASME: Section VIII Div.1	Code for Unfired Pressure Vessels Section VIII (Design; construction, testing and certification of pressure vessels) with 'U' stamping
ANSI B31.5	Code for Refrigeration piping
ASME B31.1	Code for Process piping
	Cooling Technology Institute, CTI
ATC-105-00	Acceptance Test Code for Water-cooling Towers (CTI Std-103 Code Tower Standard Specifications).

ATC-201-96	Standard for Certification of Water Cooling Tower Performance (CTI Code Tower Standard Specifications).
ISO 2858, 5199	Specifications for pumps
ASHRAE 52.1-1992	Air Filters
ASHRAE 62-1-2007	Indoor Air Quality
	Duct Fabrication as per SMACNA
IS : 277 – 1977	GI Sheets
IS : 737	Aluminum Sheets
IS : 325	Three-phase induction motors
IS : 659	Safety code for air conditioning,
IS : 660	Safety code for mechanical refrigeration
IS : 4671	Expanded polystyrene for thermal insulation purposes
IS : 4894	Centrifugal Fans
IS : 1239 & IS 3589	Pipe & Pipe Fitting
	Fire Damper UL555, CBRI approved
IS : 659 – 1964 (Reaffirmed 1991)	Air conditioning (Safety Code)
IS : 660 – 1963 (Reaffirmed 1991)	Mechanical Refrigeration (Safety Code)
BS : EN:779 – 1993	Filters
ASHRAE Hand Books	American Society of Heating Refrigeration & Airconditioning Application 2007. Fundamentals 2005.
IEC	Relevant Sections.

2.2.4 Fire fighting works requirements

The design shall comply with rules of the local fire service department / authorities.

The Fire Protection System design shall be based on the following codes & Standards:

Code for Fire fighting

Codes/ Specifications	Description
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National Building Code 2005	Part 4, Fire & Life Safety
Tariff Advisory Committee (TAC)-12th Edition-1998	Fire Protection Manual
Tariff Advisory Committee (TAC)-1998 Edition	Rules for automatic Sprinkler Installations
Tariff Advisory Committee (TAC)	Rules for Water Spray System
IS:3844-1989 (1995)	Fire Protection Manual
IS:13039:1991	Fire Protection Manual
IS 15105: 2002	Design and Installation of Fixed Automatic Sprinkler Fire Extinguishing System-Code of Practice
IS 12459: 1988	Code of Practice For Fire Safety In Cable Runs
IS 12469: 1988	Fire Fighting Pumps
IS 5120: 1977	Technical requirement for Rotodynamic Special Purpose Pumps
IS 325: 1996	Three-Phase Induction Motor
IS 3042: 2003	Specification For Single Faced Sluice Gates
IS 2190: 2010	Selection, Installation and Maintenance of First-Aid Fire Extinguishers-Code of Practice
IS 15683:2006	Potable Fire Extinguishers - Performance and Construction Specification
IS 5: 1994	Colours for Ready Mixed Paints and Enamels (Fourth Revision)
IS 1239 (part-I): 1990	Mild Steel Tubes, Tubulars and Other Wrought Steel Fittings: Part-I Mild Steel Tubes (Fifth Revision)
IS 1239: (Part-II): 1992	Mild Steel Tubes, Tubulars and Other Wrought Steel Fittings: Part-II Mild Steel Tubulars and Other Wrought Steel Pipe Fittings (Fourth Revision)
IS 3589: 2001	Steel Pipes for Water and Sewage (168.3 to 2540 mm Outside Diameter) – Specification (Third Revision)
IS 6392: 1999	Specification for Steel Pipe Flanges (Seventh Reprint)
IS 12835: Part I: 1989	Code of practice for design and installation of fixed fire extinguishing system Part 1 Low expansion foam

IS:10221:1982	Code of Practice for Coating & Wrapping of underground Mild Steel Pipe Lines
IS: 5290:1983	Specification for Valve Landing (Second Revision)
IS:8442:1977	Specification for stand post type water monitor for fire fighting
IS:636:1988	Non-percolating flexible fire fighting delivery hose
IS:8423:1977	Specification for Controlled percolating hose for fire fighting
IS:4927:1968	Specification for unlined flax canvas hose for fire fighting (Amendment Nos. 1 & 2)

IS:903:1984	Specification for Fire Hose Delivery Couplings, Branch Pipe, Nozzles and Nozzle Spanner (Third Revision)
IS:906:1988	Specification for branch with revolving head for fire fighting purposes
IS 907: 1984	Specification for suction strainers, cylindrical type for fire fighting purposes(second revision)
IS:2871:1983	Specification for branch pipe, universal for fire fighting purposes (First revision)
IS: 884:1985	Specification for First Aid Hose Reel for fire fighting (First Revision) (Amendment No.1)
IS:940:1989	Specification for Portable Fire Extinguisher (Gas Pressure)
IS:2171:1985	Specification of Portable Fire Extinguisher, Dry Powder (Cartridge Type) (third Revision)
IS:2878:1986	Portable & Trolley Mounted CO2 type fire extinguisher (Third Revision)
IS:4947:1985	Specification for Gas Cartridges for use in fire Extinguishers-CO2 type (Second Revision) (Amendment Nos. 1 and 3)
IS:944:1979	Functional requirements for 1800 L/min. Trailer pump for Fire brigade use.(Second Revision) (Amendment No. 1)
IS:946:1977	Functional requirements for Engines for Motor Fire Engines (First Revision)
IS:947:1985	Functional requirements for towing tender for trailer fire pump for Fire brigade use (First Revision)
IS:10001, IS:10002	Diesel Engine-General Purpose
IS:13095: 1991	Butterfly valves
IS: 14846	Sluice Valves for Water Works 50-1200mm
IS: 9890	Ball Valves for General Purposes
IS 3624: 1987	Pressure and Vacuum Gauge (Second Revision)
IS 2097: 1983	Specification for foam making branch pipe (first revision)
IS: 5312	Specification for Swing Check Valve
ASME B 36.10	Welded and Seamless Wrought Steel Pipe
BS:5150	C.I. Gate Valves/ Rising Stem types PN 16
BS:5153	C.I. Reflux Valves/Check Valves (Swing Type) PN16

BS:1414	Steel Wedge Gate Valves
BS:1868	Steel Check Valves
NFPA 1	NFPA Fire Prevention Code
NFPA 10	Standard for Portable Fire Extinguishers 1998 Edition
NFPA-11	Standard for installation of Low expansion Foam system
NFPA-13	Standard for installation of Sprinkler System
NFPA-15	Standard for Water Spray fixed system for the fire protection system
NFPA-20	Standard for the Installation of Stationary Pumps for Fire Protection

NFPA-2001	Standard on clean agent fire extinguishing system
NFPA-25	Standard for the Inspection, Testing, and Maintenance of. Water-Based Fire Protection Systems
NFA-16	Standard for installation of Foam water sprinkler system or Foam water spray system
NEMA	National Electricity Manufacturers Association
IEEE	Institute of Electrical and Electronic Engineers
ISA	Instrumentation, Systems and Automation society
ANSI	American National Standards Institute
DIN	Deutsche Industries Norman
IEC	International Electrochemical Commission
VDE	Verin Deutschar Eisechnhuttenleutte
ISI	Indian Standard Institute
BS 5839	Code of practice for installation of fire alarm system
IS 2189	Code of practice for installation of automatic fire alarm system
IS:817/2008	Welded joints
UL / FM	Underwriters Laboratory / Factory Manual

2.2.5 Plumbing works system

i. WATER SUPPLY SYSTEM

CODES AND STANDARDS

Unless specifically mentioned otherwise, all the applicable codes and standards published by the Bureau of Indian Standards and their subsequent revision shall govern in respect of design, workmanship, quality and properties of materials and method of testing.

The material supplied shall comply with the latest applicable Indian and / or British Standards. Other National Standards are acceptable, if they are established to be equal or superior.

Following codes and standards are made part of this specification:

IS 10446 – 1983	Glossary of terms relating to water supply and sanitation.
IS 7558-1974	Code of practice for domestic hot water piping installations
IS 2692-1989	Specification for Ferrules For Water Services.
IS 1239	Mild steel tubular and other wrought steel pipes and fittings (Part-I)
IS 1239	Mild steel tubular and other wrought steel pipes and fittings (Part-II)
IS 779 -1978	Specifications for Water Meters - Domestic Type
IS 2104 – 1981	Specification for water meter boxes (Domestic type).

IS 2401–1973	Code of practice for selection, installation, and maintenance of domestic water meters.
IS 7413-1981	Insulation Material
IS 2065 –1983	Code of practice for Water Supply In Buildings (Second Revision)
IS 778- 1984	Specifications for copper alloy Gate, Globe And Check Valves for water supply purposes.
IS 1703 – 1977	Specification for ball valves (horizontal plunger type) including floats for water supply purposes.
IS 3004 – 1979	Specification for plug for water supply purposes.
IS 3950 – 1979	Specifications for surface boxes for sluice valves.
IS 9338 – 1984	Specification for cast iron screw-down stop valves and stop and check valves for water works.
IS 4346 – 1982	Specification for washers for use with fittings for water services.
IS 5219 – Part 1	Specification for cast copper alloy traps – Part1 1982
IS 5312 – part 1	Specification for swing check type reflux (Non-return) 1969 valve for water works purposes part 1 single door pattern
IS 13049 – 1919	Diaphragm type (plastic body) float operated valve for cold water services – specification.
IS 13114 – 1991	Forged brass gate, globe and check valves for water works purposes – specification.
IS 14399 – part 1	Hot press moulded thermosetting glass fibre reinforced & Part 1 – 1996 polyester (GRP) resin sectional water storage tanks.
IS 310 –1965	Code of Practice for Water Supply
SP –35	Handbook of water supply and drainage (with special emphasis on plumbing)
IS 1172-1983	Code of Basic Requirement For Water Supply, Drainage & Sanitation (Third Revision)
IS 12183	Code of practice for Plumbing In Multi- Storey buildings Part I) – 1987 (Part 1 water supply)
IS 1200 - 1992	Method of Measurement Of Building And Civil Engg. Works.(Part 1 earthwork)
IS 2379 –1963	Specification of colour code for the identification of pipes.
SP 7 – 1983	National building code of India (Part IX – Plumbing services)
IS 2401 – 1973	Code of practice for selection, Installation and maintenance of domestic water meters.
IS 780-1984	Specification for Sluice valves for water works purposes (50 to 300mm size) (Sixth Revision)
	The Contractor shall comply with the water requirement, water supply lines and sewer lines as per the following manuals and Standards.
CPHEEO	Manual on water supply and treatment
CPHEEO	Manual on sewerage and sewage treatment

- All the requirements must be in accordance with the statutory / authorities requirements

ii. SANITARY AND SEWERAGE SYSTEMS CODES AND STANDARDS

Unless specifically mentioned otherwise, all the applicable codes and standards published by the Bureau of Indian Standards and their subsequent revision shall govern in respect of design, workmanship, quality and properties of materials and method of testing.

Codes for Sanitary and Sewerage System

Codes	Description
IS 10446 – 1983	Glossary of terms relating to water supply and sanitation.
IS 11208 –1985	Guidelines for registration of Plumbers
IS 5382 – 1985	Specification for rubber sealing rings for gas mains, water mains and sewers.
SP – 35	Handbooks of water supply and drainage (with special emphasis on plumbing)
IS 1172-1983	Code of Basic Requirement For Water Supply, Drainage & Sanitation (Third Revision)
IS 1200 - 1992	Method of Measurement Of Building and Civil Engg. Works.(Part 1 earthwork)
IS 2379 –1963	Specification of colour code for the identification of pipes.
SP 7 – 1983	National building code of India (Part IX – Plumbing services)
IS 1742 – 1983	Code Of Practice For Building Drainage (Second Revision)
IS 301 – 1971	Code of practice for Building Drainage
IS12251- 1987	Code Of Practice For Drainage In Basement
BS 5572 -1978 (Amendment No.2)	Sanitary pipe Works
BS 4660- 1973 (Amendment No.1)	PVC Underground Drain Pipes & Fittings.
IS 5329 – 1983	Code of practice for sanitary pipe work above ground for buildings First Revision)
IS 2527 – 1984	Code of practice for fixing rain water gutters and down take pipes for roof drainage. (First Revision) I
IS 5961 – 1970	Specification for cast iron gratings for drainage purposes.
IS 2527 – 1984	Code of practice for fixing rain water gutters and down take pipes for roof drainage. (First Revision)
CPHEEO	Manual on sewerage and sewage treatment
IS 1626 (Part 1)	Specification for asbestos cement building pipes and pipe –1980 fittings, gutter and gutter fittings, and roof fittings

2.2.6 FIRE DETECTION ALARM SYSTEM

Following codes and standards are made part of this specification:

Codes	Description
BIS 15908 -	Selection, Installation and Maintenance of Control and Indicating Equipments for Fire Detection and Alarm System--Code of Practice (2011)
IS:2189:1988	- Code of practice for selection, installation and maintenance of Automatic Fire Detection and alarm system (second revision)

2.2.7 OTHER WORKS

PLANTATION OF TREES AND HEDGES.

Scope

The work shall consist of:

- a) Planting of tree saplings in median or other designated locations.
- b) Planting of hedges within median area.

Materials

Dump Manure

Dump manure shall be of well decayed (at least six months) organic or vegetable matter, obtained in the dry state from the municipal dump or other similar sources approved by the Employer's Engineer. The manure shall be free from earth, stone, brickbats or other extraneous matter.

Farmyard Manure

Farmyard Manure shall be well decayed (should be at least 6 months covered in dump), free from grits and any other unwanted materials.

Good Earth

The soil shall be agricultural soil of sandy-loam texture, free from kankar, murrum, shingle, stone, brickbats, building rubbish and any other foreign matter. The earth shall be free from clods or lumps of sizes bigger than 75mm in any direction. It shall have pH value ranging between 6.0 to 8.5.

Sapling of Trees

The sapling of trees shall be of medium height, leafy type and draught resistant variety native to the area and be of good quality of minimum of 2m height or caliper dia of 25mm as directed by the Employer's Engineer.

Sapling of Hedges

The saplings shall be of draught resistant variety normally grown for hedges in the area, approved by the Employer's Engineer.

Volume 2- Section 3- Defect Liability Period

In addition to the defect/s to be rectified by the contractor as per terms of the contract/ work order, the contractor shall be responsible to make good and remedy at his own expense the defect/s mentioned hereunder within such period as may be stipulated by the Engineer-in-Charge in writing:

a) Any defect/defects in the work detected by the Engineer-in-Charge within a period of 6 (six) months from the date of issue of Defect Liability certificate / completion certificate.

b) In the case of building works or other works of similar nature any defect in the work detected by the Engineer-in-Charge within a period of 6 (six) months from the date of issue of Defect Liability certificate/ completion certificate or before the expiry of one full monsoon period i.e. June to September whichever is later in point of time.

A programme shall be drawn by the contractor and the Engineer-in-Charge for carrying out the defects by the contractor detected within the defect liability period and if the contractor fails to adhere to this programme, the Engineer-in-Charge shall be at liberty to procure proper materials and carry out the rectifications in any manner considered advisable under the circumstances and the cost of such procurement of materials and rectification work shall be chargeable to the contractor and recoverable from any of the pending dues of the contractors. The defect liability period can be extended by the company on getting request from the contractor only for valid reasons.

There will be no defect liability period for works like Grass Cutting, Jungle Cutting, Surface Dressing & any other work of similar nature to be decided by the Engineer-in-Charge

Extension of Time Limit

Notwithstanding anything to the contrary specified in this Schedule, if the nature and extent of any Defect or deficiency justifies more time for its repair or rectification than the time specified below, the Contractor shall be entitled to additional time in conformity with Good Industry Practice. Such additional time shall be determined by the Employer's Engineer and conveyed to the Contractor and the Employer with reasons thereof.

Emergency Repairs/Restoration

Notwithstanding anything to the contrary contained in this Schedule, if any Defect, deficiency or deterioration in the Project Components (Administrative and Business Centre) poses a hazard to safety or risk of damage to property, the Contractor shall promptly take all reasonable measures for eliminating or minimizing such danger.

Volume 2- Section 4- Repair / Rectification of Defects and Deficiencies

The Contractor shall repair and rectify the Defects and deficiencies specified here

4.1 Architectural, Civil maintenance

- Any break down of door / window / hatch accessories should be replaced / rectified within 24 hours.
- Any breakage of flooring, false ceiling, peeling of paint should be rectified in 48 hours.
- Any damage to External stone cladding, flooring, paving, hardscape, façade etc. shall be rectified within 48 hours.
- Any crack / peeling of Plaster shall be repaired within 48 hrs
- Any water leak in building shall be stopped with 2 hrs and suitable rectification process undertaken.

4.2 Landscape

- Any non-surviving/ unhealthy saplings should be replaced within 48 hours.
- Trees uprooted / damaged should be removed within 8 hours and replaced in one week time.
- Blockages/ leakages / damages in Irrigation System, Water Features Including Filtration System should be made good in 24 hours.
- Any Hardscape / signage damage shall be repaired within 24 hrs.

4.3 Electrical

- Any Electrical equipment / Apparatus/ cables, etc. shall be restored within two hours in case of minor faults and within eight hours in case of major faults.
- Faulty lighting fixtures should be rectified within six hours.
- Essential spares to be available for immediate repairs.

4.4 HVAC, Fire Fighting and Plumbing

- Pumps - Minor repair shall be rectified within 4 hrs. and major repair (motor/bearing failure) shall be rectified within 8 hours.
- AHU - Minor repair shall be rectified within 4 hrs. and major repair (motor/bearing failure) shall be rectified within 8 hours.
- VRF units - Minor repair shall be rectified within 4 hrs. and major repair (motor failure) shall be rectified within 24 hours.
- Fans - Minor repair shall be rectified within 4 hrs. and major repair (motor/bearing failure) shall be rectified within 8 hours.
- Piping/valve/ traps/ fittings / Taps leakages - Shall be rectified/replaced within 2 hrs.
- Instruments like gauges/sensors - Shall be rectified / replaced within 2 hrs.
- Any damage to sanitary ceramic fixtures or CP fittings shall be replaced or rectified within 24 hours.
- Essential spares to be available for immediate repair.

4.5 Fire detection, alarm system, access control and surveillance

- Any damage breakage of any apparatus, equipment, sensors and system in general should not remain non-functional for more than two hour.
- Essential spares to be available for immediate repair.

4.6 Roads and Parking Areas

Nature of Defect or Deficiency		Time Limit For Repair/Rectification
(a)	Carriageway and Paved Areas	
(ii)	Roughness value exceeding 2000 mm in a stretch of 1 km (as measured by a calibrated bump integrator)	30 days
(iii)	Pot holes	24 hours
(iv)	Any cracks in road surface	15 (fifteen) days
(v)	Any depressions, rutting exceeding 10 mm in road surface	30 (thirty) days
(vi)	Bleeding/skidding	7 (seven) days
(vii)	Any other defect/distress on the road	15 (fifteen) days
(viii)		
(ix)	Removal of debris	6 hours
(b)	Earthen Shoulders, Side Slopes, Drains and Culverts	
(i)	Variation by more than 1 % in the prescribed slope of camber/cross fall (shall not be less than the camber on the main carriageway)	7 (seven) days
(ii)	Edge drop at shoulders exceeding 40 mm	7 (seven) days
(iii)	Variation by more than 15% in the prescribed side (embankment) slopes	30 (thirty) days
(iv)	Rain cuts/gullies in slope	7 (seven) days
(v)	Damage to or silting of culverts and side drains	7 (seven) days
(vi)	De-silting of drains	24 hours
(vii)	Railing, parapets, crash barriers	7 (seven) days (Restore immediately if causing safety hazard)
(d)	Road Lighting	
(i)	Any major failure of the system	24 hours
(ii)	Faults and minor failures	8 hours
(e)	Trees and Plantation	
(i)	Obstruction in a minimum head-room of 5 m above carriageway or obstruction in visibility of road signs	24 hours

Nature of Defect or Deficiency		Time Limit For Repair/Rectification
(ii)	Removal of fallen trees from carriageway	4 hours
(iii)	Deterioration in health of trees and bushes	Timely watering and treatment
(iv)	Trees and bushes requiring replacement	30 (thirty) days
(v)	Removal of vegetation affecting sight line and road structures	15 (fifteen) days
(f)	Other Project Facilities and Approach Roads	
(i)	Damage in approach roads and pedestrian facilities	15 (fifteen) days
(ii)	Damaged vehicles or debris on the road	4 (four) hours

Volume 2- Section- 5- Applicable Permits

5.1 Applicable Permits

- The Contractor shall obtain, as required under the Applicable Laws, the following Applicable Permits:
- Permission from Forest Department needs to be obtained,
- Permission of the State Government for extraction of boulders from quarry;
- Permission of Pollution Control Board for installation of crushers;
- Permission of the State Government for drawing water from river/reservoir;
- License from inspector of factories or other competent Authority for setting up batching plant;
- Clearance of Pollution Control Board for setting up batching plant;
- Clearance of Village Panchayats and Pollution Control Board for setting up asphalt plant;
- Permission of Village Panchayats and State Government for borrow earth; and
- Any other permits, clearances or approvals required under Applicable Laws.

5.2 Local Development Authority

- Building Sanction, Commencement Certificate, Intermediate Certificates, Occupancy Certificate and Completion Certificate from local municipal body or designated authority for the buildings.

5.3 Civil & Structures

- Water Connection from Public Health Engineering Department (State).
- Provision and permit for connection to proposed municipal sewage collection system at directed location from local municipal body.
- Project Clearance from General Inspectorate for Emergency Situations.
- Project Clearance from the Solid Waste Management Authority.

5.4 Electrical

- Incoming Power Supply (Main and temporary): State electricity board or power supply authority.
- Substation & Elevators & Solar PV system: CEIG (chief electrical inspector to government) / local statutory authority / PWD
- License to Operate the Elevators from Ministry of Labour or relevant authority.

5.5 Fire Fighting

- Preliminary approval from Chief Fire Officer prior to construction and final approval on completion of project.

5.6 FDA Access Control & Security

- Fire Detection & Alarm System - Compliance with IS:2189:1988, BIS: 15908 standards and certification from the Regional Fire Officer / Chief Fire Officer.
- If any hazardous waste is generated from the facility like used DG oil, used batteries etc., the same should be handed over to only SPCB approved agencies for handling hazardous waste.

Volume 2- Section 6- Tests on Completion

6.1 Schedule for Tests

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

6.2 Tests

- **Architectural & Interior Finishes:** Visual and physical check for all Architectural and Interior finishes, including but not limited to flooring, painting, glazing, HPL cladding, Murals, false ceiling, door hardware, cladding & dado, polishes, etc. Operations of doors, windows, louvers shall also be checked.
- **Landscape / softscape works:** Visual and physical check for softscape works, plants & saplings, lawns, shrubs, irrigation system including sprinklers & drip irrigation, fountains, water circulation and filtration system, etc., including performance verification.
- **Civil and Hardscape works:** Visual check of construction to determine that all civil, structural and hardscape works conform to the provisions of this Agreement. Physical test if required by the client.
- **Electrical:** Visual and physical and commissioning test for HT and LT panels, Dry type transformers, UPS, DG set, DC System, busducts, rising mains, distribution boards, power & control cables, elevators, solar PV panels, lighting DB's, switches & sockets, safety features, luminaires / lighting fixtures, street lighting and pole, power supply, grounding, communication between luminaire to control panel and central control system, etc. including performance verification.
- **HVAC:** Visual and physical and commissioning test for HVAC cooling system, dampers, VAV's, sensors, Ventilation system, drives, control gauges, instrumentations, flow meters, automation, vibration & acoustic insulation, etc including performance verification.

At an appropriate time in consultation with Client / Consultant / Project In Charge the contractor shall demonstrate performance (noise level, power consumption, actual capacity at design conditions etc.) at rated capacity over a period of 6 working days on continuous operating hours. If the tests specified above show that the performance of Air-conditioning & Ventilation system has failed to achieve all the guaranteed parameters or some of them, the contractor shall rectify the defects and carry out modifications if necessary to meet the guaranteed figures and the guarantee tests shall be repeated at no extra cost.

- **Fire Protection System:** Visual and physical and commissioning test for complete firefighting system equipment's, internal & external hydrants, sprinklers, electric & diesel engine pumps, portable fire extinguishers, etc., including performance verification.
- **Plumbing & Drainage:** Visual and physical and commissioning test for Plumbing & drainage system including water pressure, faucets & valves, sanitary fittings, flush tanks, urinals, faucet & urinal , leakages, etc. including performance verification.
- **FDA & Public Address:** Visual and physical test for Fire Alarm sensors / detectors, alarms / hooters, Public address system etc., including performance verification.
- **Road (Riding quality test):** Riding quality of each lane of the carriageway shall be checked with the help of a calibrated bump integrator and the maximum permissible roughness for purposes of this Test shall be 1800 (Eighteen Hundred) mm for each kilometer.
- **Storm Water:** Visual and physical test for Rain water drainage system, storm water drains, manholes & manhole covers, rain water harvesting system, etc., including performance verification.
- **Other tests:** The Employer's Engineer may require the Contractor to carry out or cause to be carried additional tests, in accordance with Good Industry Practice, for determining the compliance of the project components with Standards and Specifications.

6.3 Audits

- **Environment Health and Safety Requirements:** The Employer's Engineer shall carry out a check to determine conformity of the project components with the environmental requirements set forth in Applicable Laws and Applicable Permits.
- **Safety Audit:** The Employer's Engineer shall carry out, or cause to be carried out, a safety audit to determine conformity of the project components with the safety requirements and Good Industry Practice.

Volume 2- Section 7- Project Management Requirements

The Contractor shall perform all the Project Management activities necessary for proper planning, management and control of the work. Below are the project management requirements which Contractors needs to comply at different stage of the projects:

1. Participate in the project kick-off workshop with project stakeholders designated by Employer/ PMC. The kick-off workshop shall accomplish the following objectives:
 - Common understanding of the project goals and objectives
 - Define respective roles and responsibilities and
 - Agree on the methods of communication and reporting throughout the project duration.
2. Participate in monthly project status review meetings and present the project progress update in the meeting. The frequency of project status review meetings may change based on actual requirements.
3. Schedule: The Contractor shall submit a Level 3 schedule that cover's the full scope of Contractor's work within 30 calendar days of date of appointment. This will be reviewed within 15 calendar days by Employer /PMC. The Contractor shall incorporate the comments and resubmit the schedule no later than 15 calendar days after receiving the comments from Employer/ PMC. Upon approval the level 3 schedule will become the baseline schedule for all the future monitoring and tracking.

The Contractor should keep to the following guidelines

- i. Develop and incorporate a detailed Work Breakdown Structure (WBS) for all project schedules that are submitted.
- ii. All schedules shall be created, maintained and submitted to Employer /PMC in the latest version of MS Project or equivalent in an electronic format.
- iii. All schedules shall follow the Critical Path Method (CPM) of scheduling and shall have meaningful and realistic logical ties and relationships between activities.
- iv. The use of negative lags is not permitted in the baseline and all other versions of the schedule.
- v. The schedule must contain all the long lead procurement items identified.
- vi. Shall exercise reasonableness while assigning constraints in schedule and milestones
- vii. Upon approval, the copy of the Baseline schedule will become the first Current Schedule.
- viii. The Current schedule shall be actively updated and maintained by the Contractor every month.
- ix. The updated MS Project or equivalent schedule file should be submitted every month along with Monthly progress report in electronic format. A pdf copy of the updated schedule with all activities also needs to be submitted

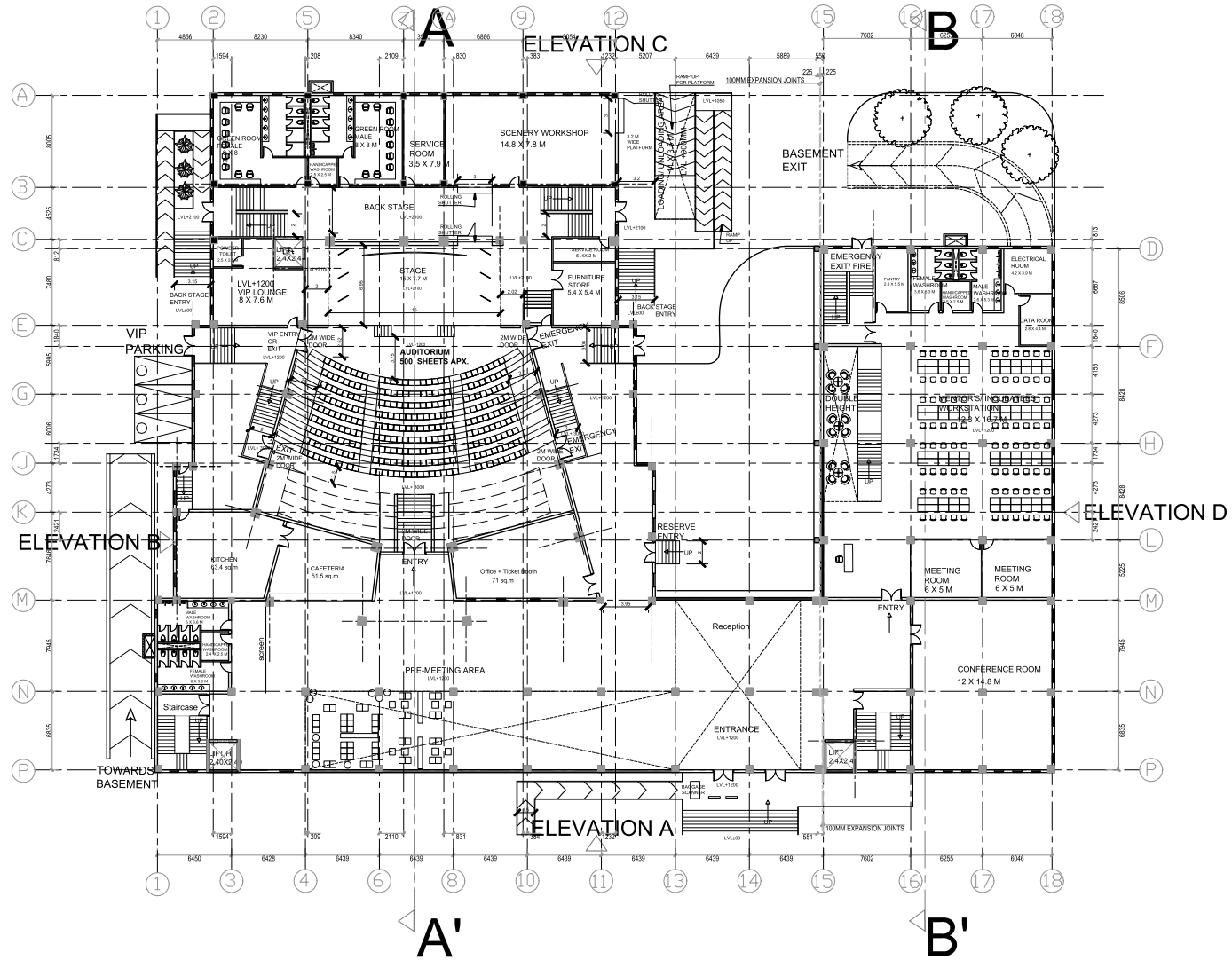
- x. A schedule narrative document shall accompany the updated electronic schedule describing the work performed in the reporting period.
 - xi. The contractor should also submit a level 4 schedule within 60 calendar days from approval of baseline level 3 schedules.
 - xii. In the level 4 schedule activity durations should be reasonable (typically no more than 15 days duration except for project management tasks, procurement activities for long lead items or any other activity that obviously needs to be of longer duration).
4. Cash Flow: Prepare project cash flow at the start of the project. Prepare monthly statements to show the actual versus plan spending; update the cost periodically
 5. Lessons Learned Database: The Contractor shall develop and actively maintain a “lessons learned” database on a monthly basis (to be included in the monthly project report) and submit it to Employer/PMC at the end of the project during closeout.
 6. Risk Register: Maintain an active risk register addressing the risks and mitigation measures (could be in excel format) that lists the project risks related to their Scope of Work.
 7. Inter-Project Links: Identify potential inter-project links, inter-dependencies or conflicts/interference to work or work areas and narrate them in the monthly progress report.
 8. Monthly Progress Report: Prepare and submit a monthly progress report (standard format and template will be provided by Employer /PMC at a later date). Items 3 to 7 mentioned above shall be the minimum information that will need to be included in the monthly progress report.
 9. For better collaboration, Contractor shall use the Programme and Document Management system that will be provided by Employer/PMC at a later date and pay for the cost of procuring licenses to use the system.

Monthly payments are subject to timely submission of monthly progress report and the monthly updated electronic schedule file in the required

ANNEXURE 10- TENDER DRAWING SET

ANNEXURE 2

DRAWING SET



GENERAL NOTES:

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4. For details such as pathways, fencing, railing, grills, lighting fixtures, street sections etc. refer relevant architectural/landscape drawings.

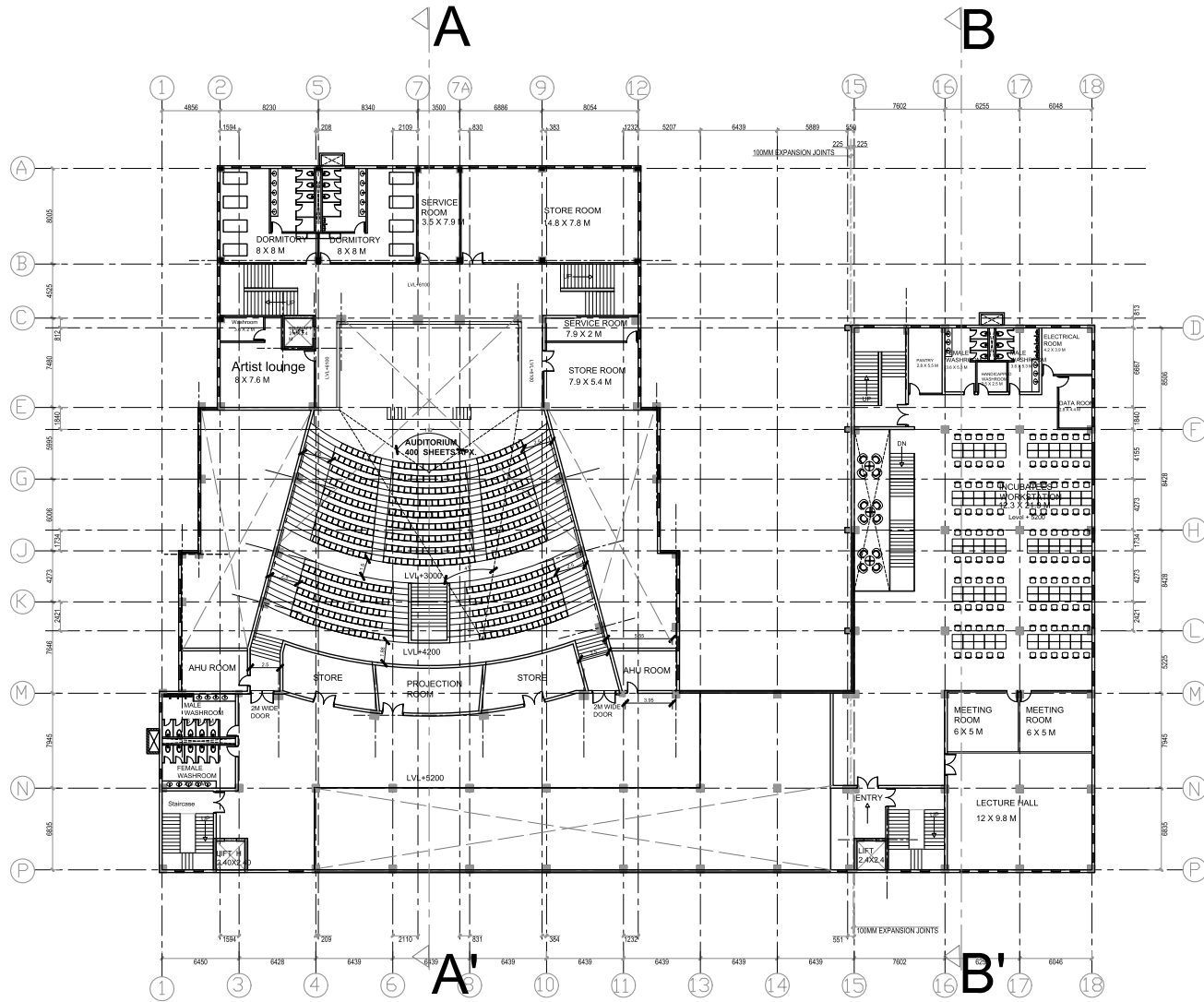
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PURPOSE:

DESIGN DRAWING

Client: BAREILLY SMART CITY LTD.		
Project: GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North: 	Drw No: AR-01-01
Drawn by: AKS	Checked by: NG	Date: 06.11.20
Title: GROUND FOOR PLAN		



GENERAL NOTES:

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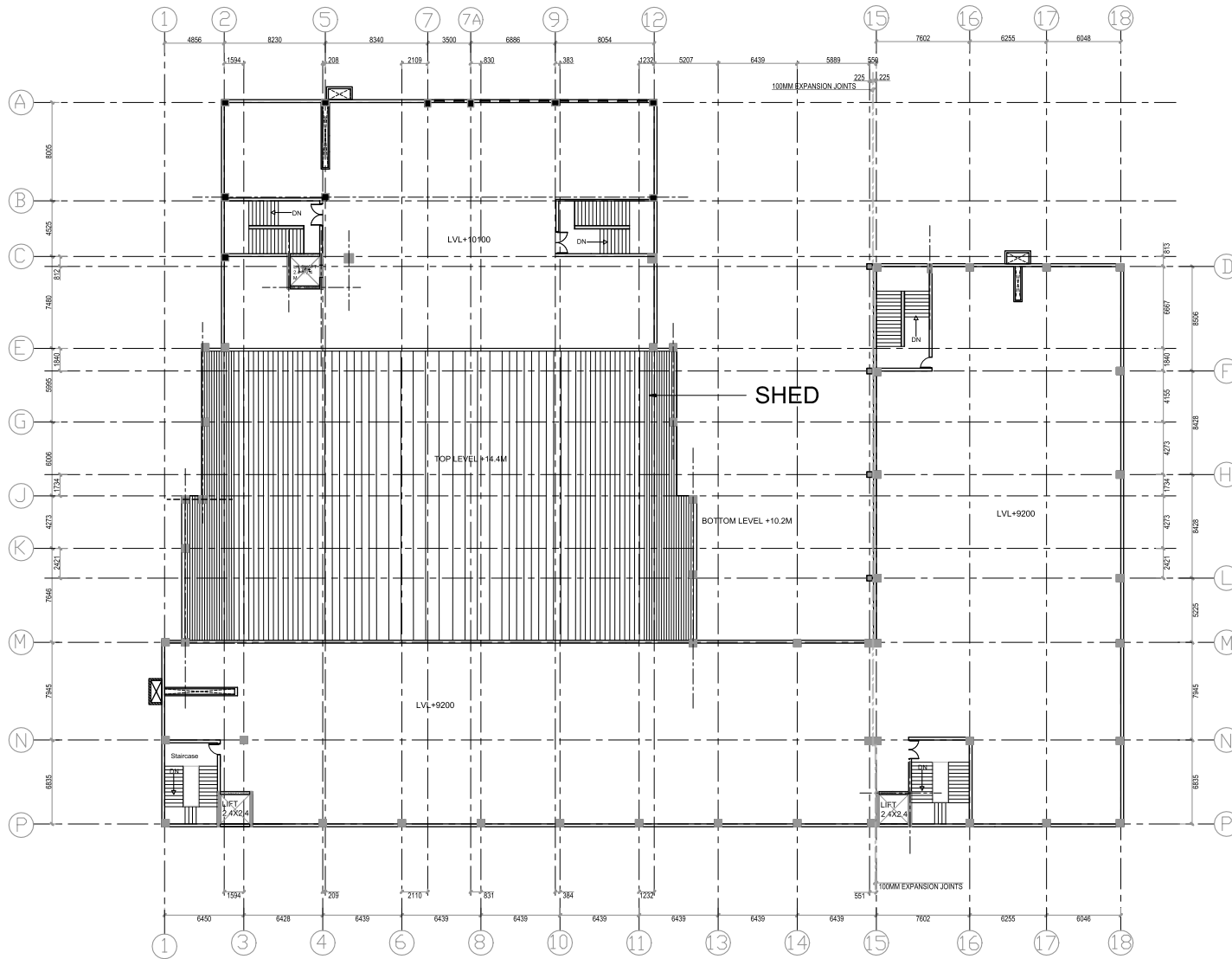
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PURPOSE:

DESIGN DRAWING

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Project: GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North: 	Drp No: AR-01-02
Drawn by: AKS	Checked by: NG	Date: 06.11.20
Title: FIRST FOOR PLAN		



GENERAL NOTES:

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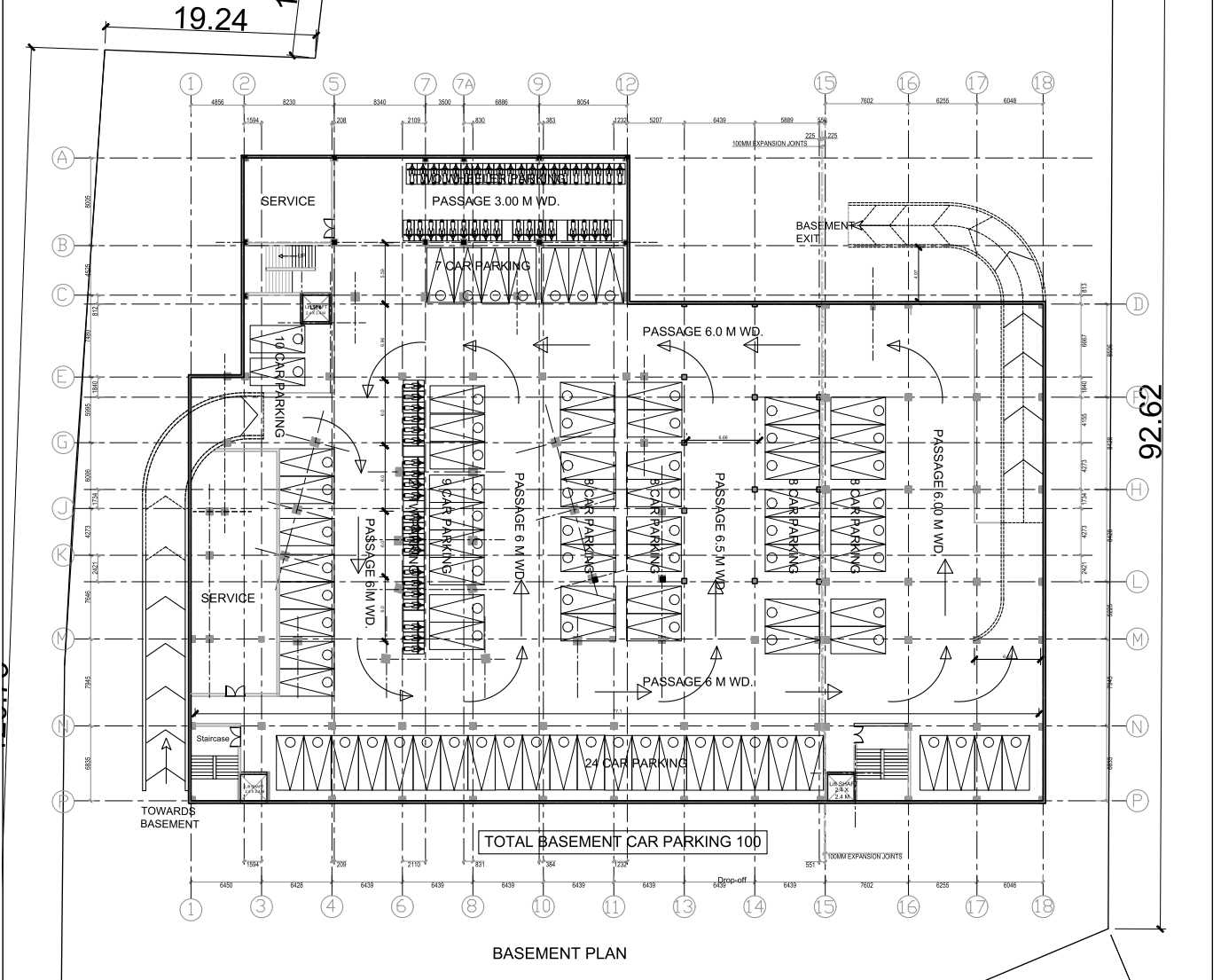
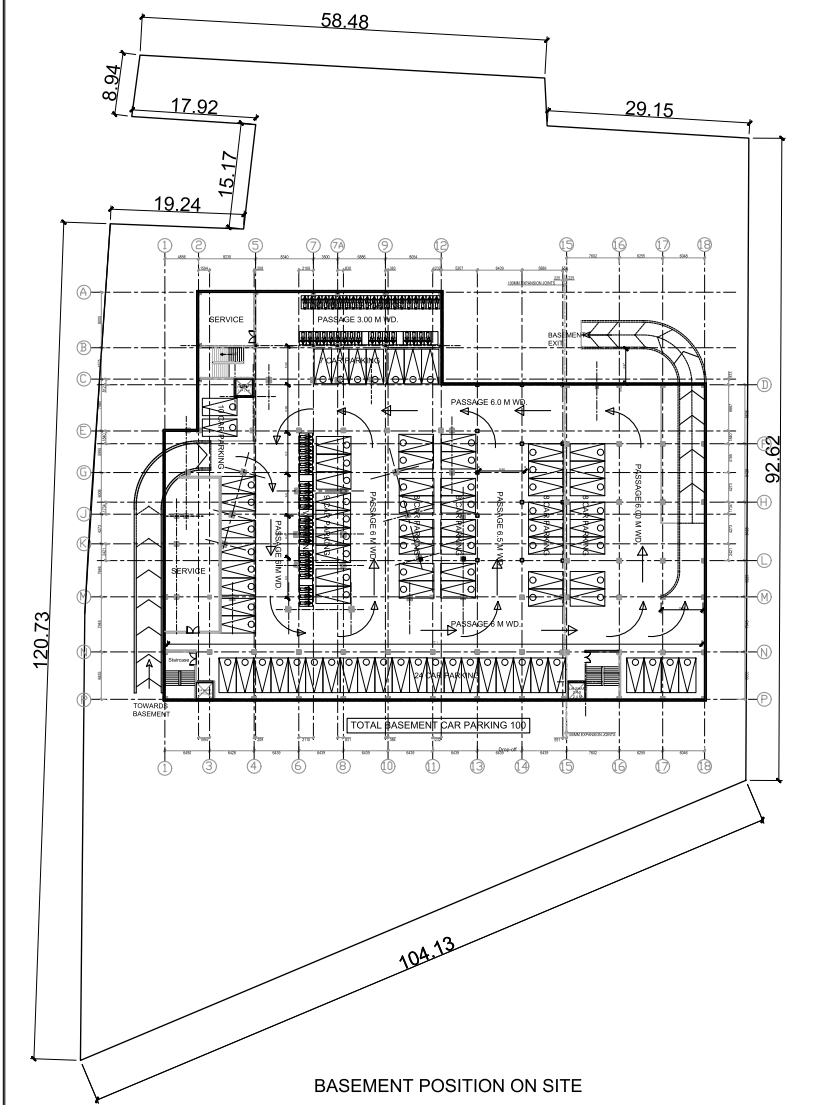
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
PURPOSE:

DESIGN DRAWING

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Project: GIC INCUBATION CENTRE AND AUDITORIUM		
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Drawn by: AKS	Checked by: NG	Date: 06.11.20

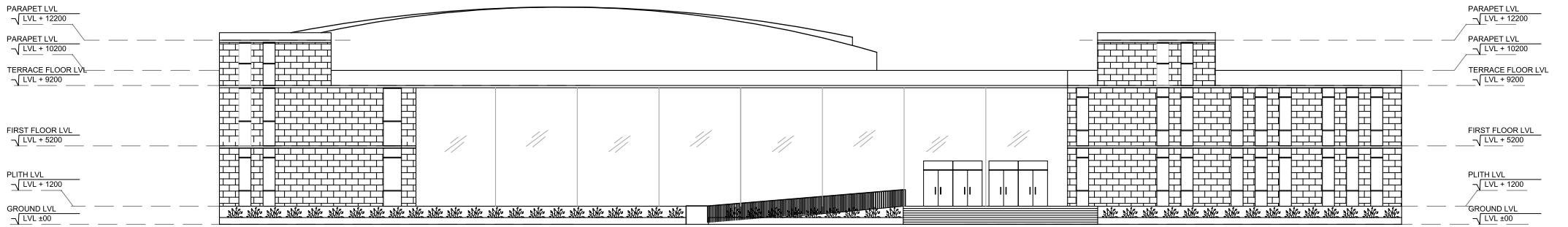
Title:
**TERRACE
FOOR PLAN**



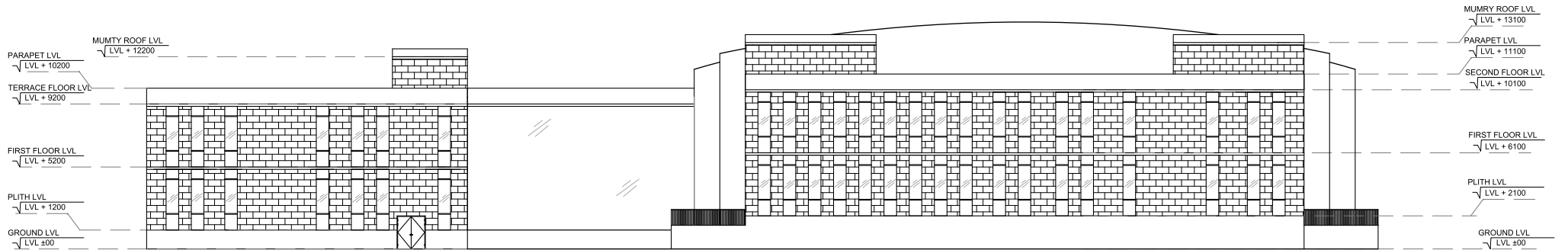
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<div>GENERAL NOTES:</div> <div>1. All dimensions are in metres and are dimensions unless otherwise specified.</div> <div>2. All levels are in millimetres and are finished unless otherwise specified. All levels are mentioned in the section.</div> <div>3. Do not scale drawings. Only written dimensions shall be followed, any discrepancy noted shall be brought to the notice of the Architect prior to the execution.</div> <div>4.For details such as pathways, fencing, railing, grills, lighting fixtures, street sections etc. refer relevant architectural/landscape drawings.</div>	REVISION	DATE	CHECKED BY	<div>This drawing is copyright. It is the property of the Project Management Consultant and is not to be reproduced, copied, handed over to a third party or used for any purpose other than for which it has been issued.</div>	PURPOSE:	DESIGN DRAWING	<div>Client:-</div> <div>BAREILLY SMART CITY LTD.</div>		
	<div>Project:-</div> <div>GIC INCUBATION CENTRE AND AUDITORIUM</div>								
	Scale: Not to Scale @ A3	North: 	Dwg No: AR-01-05						
	Deall by: AKS	Checked by: NG	Date: 06.11.20						
	Title:								
	SECTIONS								



ELEVATION A



ELEVATION C

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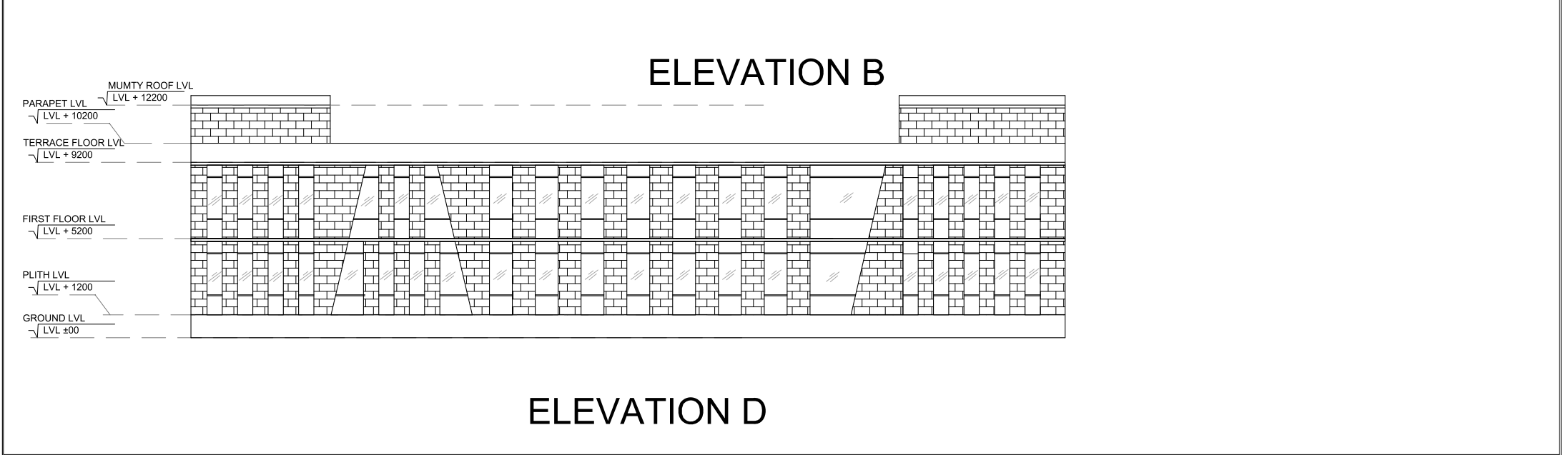
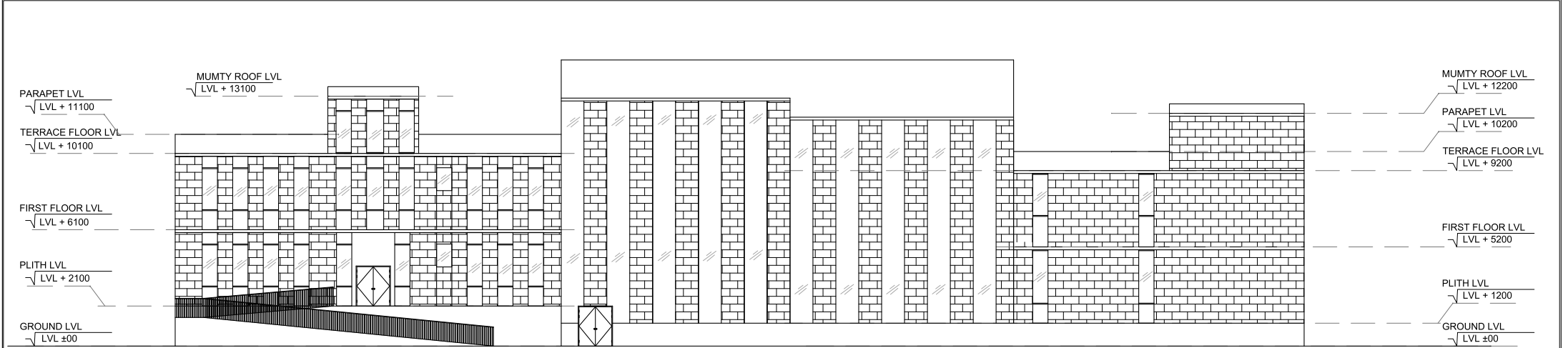
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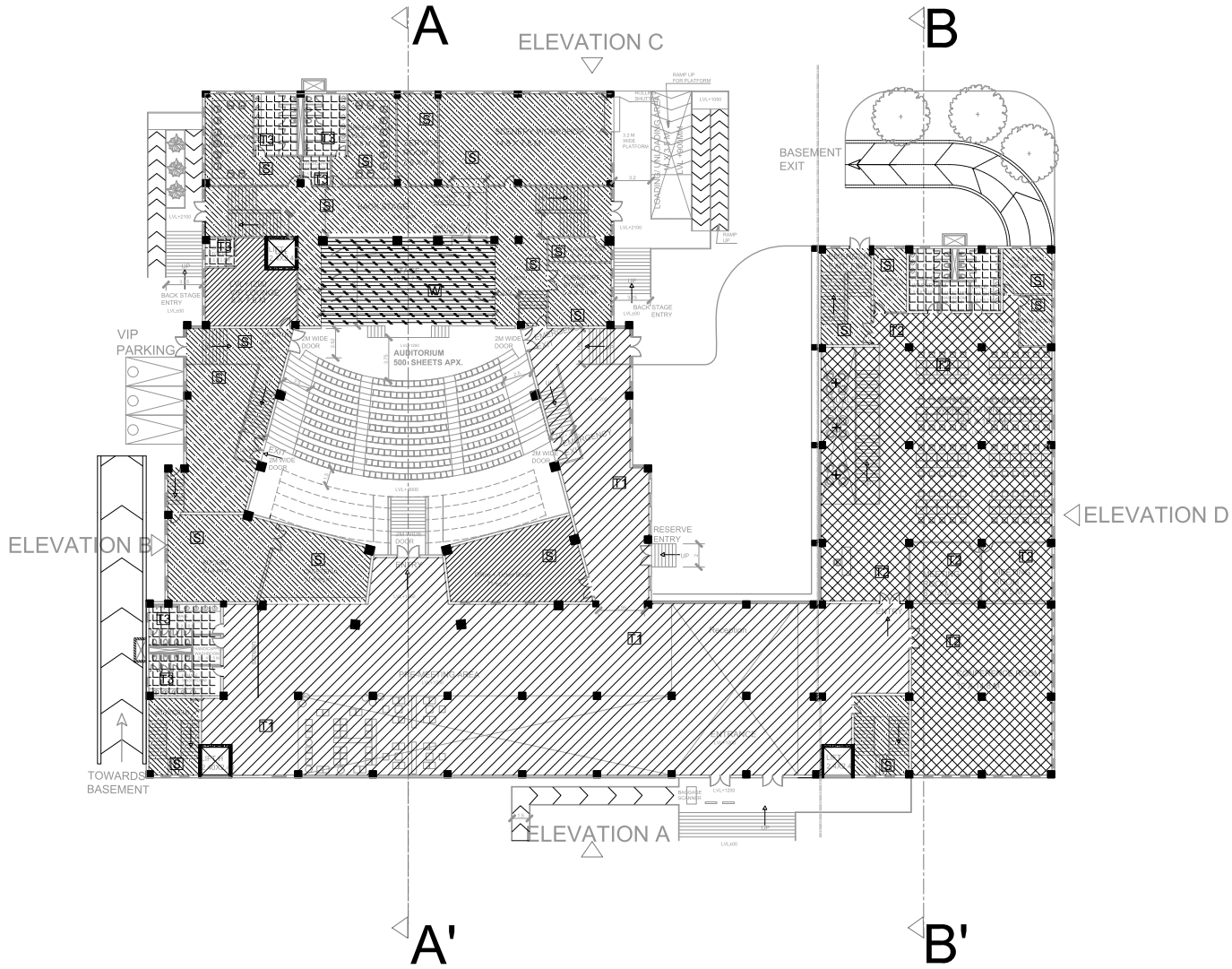
PURPOSE:

DESIGN DRAWING

Client: BAREILLY SMART CITY LTD.		
Project: GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North: 	Drw No: AR-01-06
Drawn by: AKS	Checked by: NG	Date: 06.11.20
Title: ELEVATIONS 1		



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						<div>Project:</div> <div>GIC INCUBATION CENTRE AND AUDITORIUM</div>		
						<div>Scale:</div> <div>Not to Scale @ A3</div>	<div>North:</div> <div></div>	<div>Drp No:</div> <div>AR-01-07</div>
						<div>Dealt by:</div> <div>AKS</div>	<div>Checked by:</div> <div>NG</div>	<div>Date:</div> <div>06.11.20</div>
	<div>Title:</div> <div>ELEVATIONS</div> <div>2</div>							



GENERAL NOTES:

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2. All levels are in millimetres and are finished unless otherwise specified. All levels are mentioned in the section.
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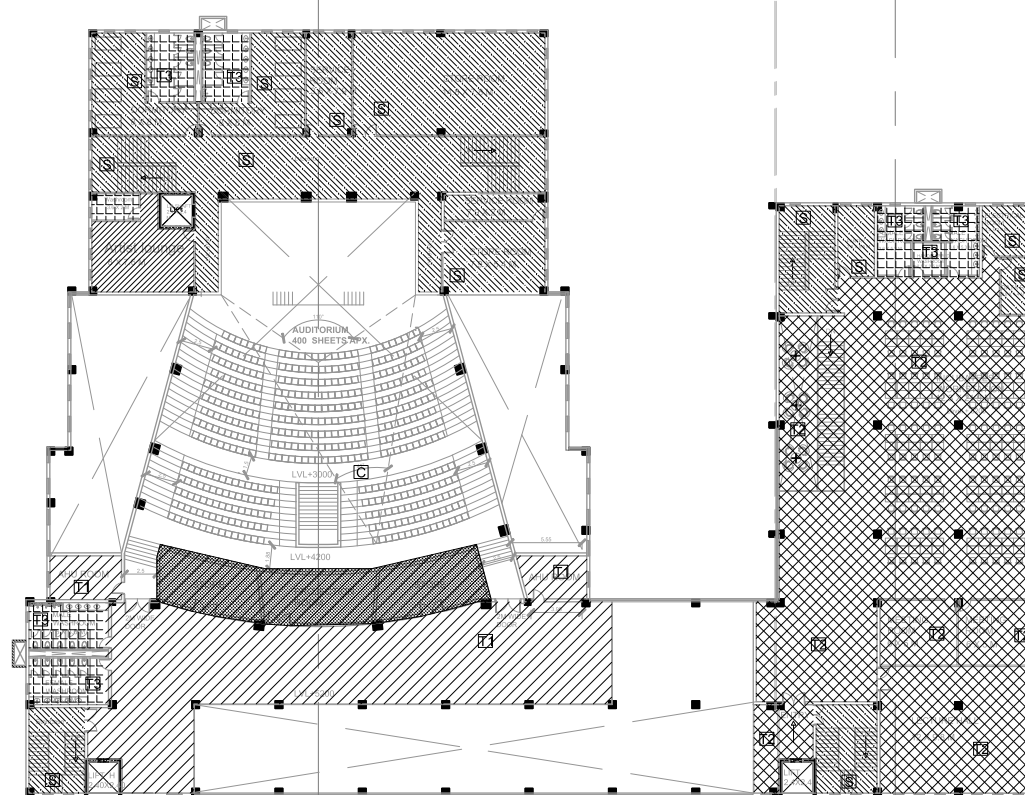
REVISION	DATE	CHECKED BY

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LEGEND		
TILE TYPE	HATCH	DESCRIPTION
T1		TILE TYPE-1: 400X600
T2		TILE TYPE-2: 600X600
T3		TILE TYPE-3: 600X600
S		STONE TYPE-1
W		WOODEN FLOORING
B		BRICK CORA
C		CARPET

PURPOSE:
TENDER DRAWING

Client: BAREILLY SMART CITY LTD.		
Project: GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North: 	Dwg No: AR-01-08
Drawn by: AKS	Checked by: NG	Date: 06.11.20
Title: GROUND FLOOR FLOORING PLAN		



A'

B'

FIRST FLOOR

GENERAL NOTES:

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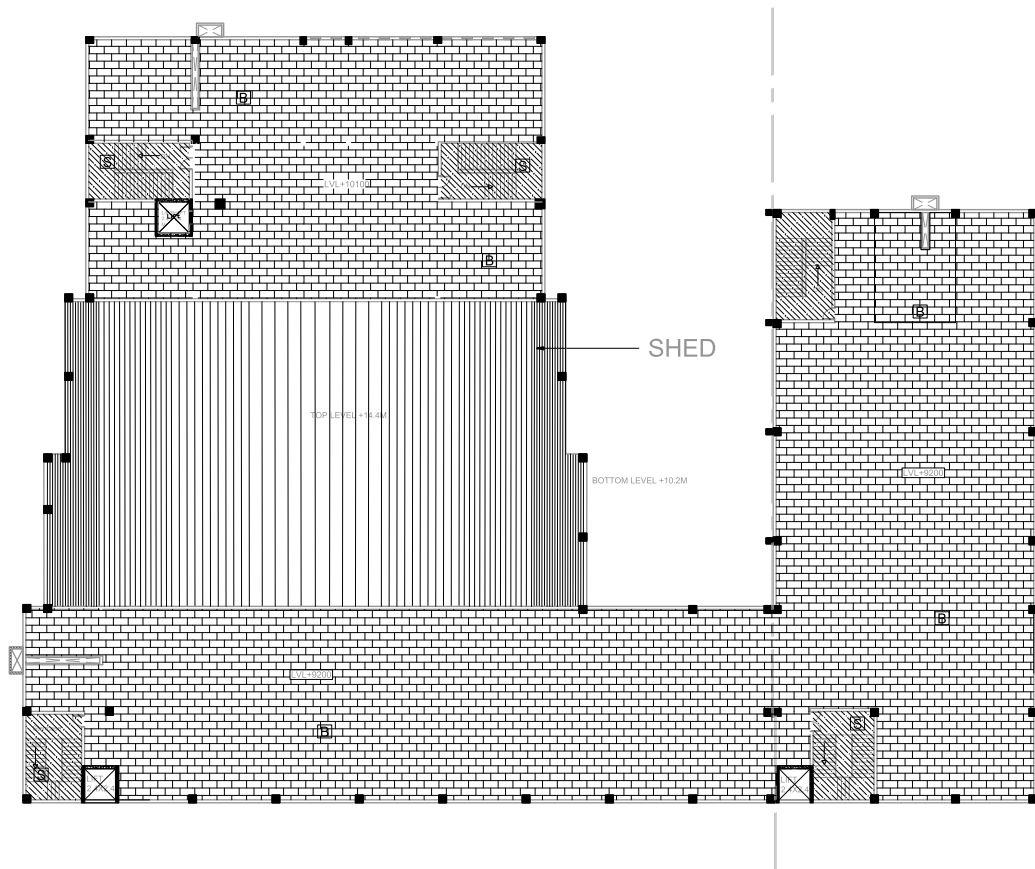
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LEGEND		
TILE TYPE	HATCH	DESCRIPTION
T1		TILE TYPE-1: 400X600
T2		TILE TYPE-2: 600X600
T3		TILE TYPE-3: 600X600
S		STONE TYPE-1
W		WOODEN FLOORING
B		BRICK CORA
C		CARPET

PURPOSE:

TENDER DRAWING

Client: BAREILLY SMART CITY LTD.		
Project: GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North:	Dwg No: AR-01-09
Drawn by: AKS	Checked by: NG	Date: 06.11.20
Title: FIRST FLOOR FLOORING PLAN		C:\Users\Koushik\Downloads\Picture1.jpg



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REVISION DATE CHECKED BY

REVISION	DATE	CHECKED BY

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LEGEND		
TILE TYPE	HATCH	DESCRIPTION
T1		TILE TYPE-1: 400X600
T2		TILE TYPE-2: 600X600
T3		TILE TYPE-3: 600X600
S		STONE TYPE-1
W		WOODEN FLOORING
B		BRICK CORA
C		CARPET

PURPOSE:

TENDER DRAWING

Client: BAREILLY SMART CITY LTD.

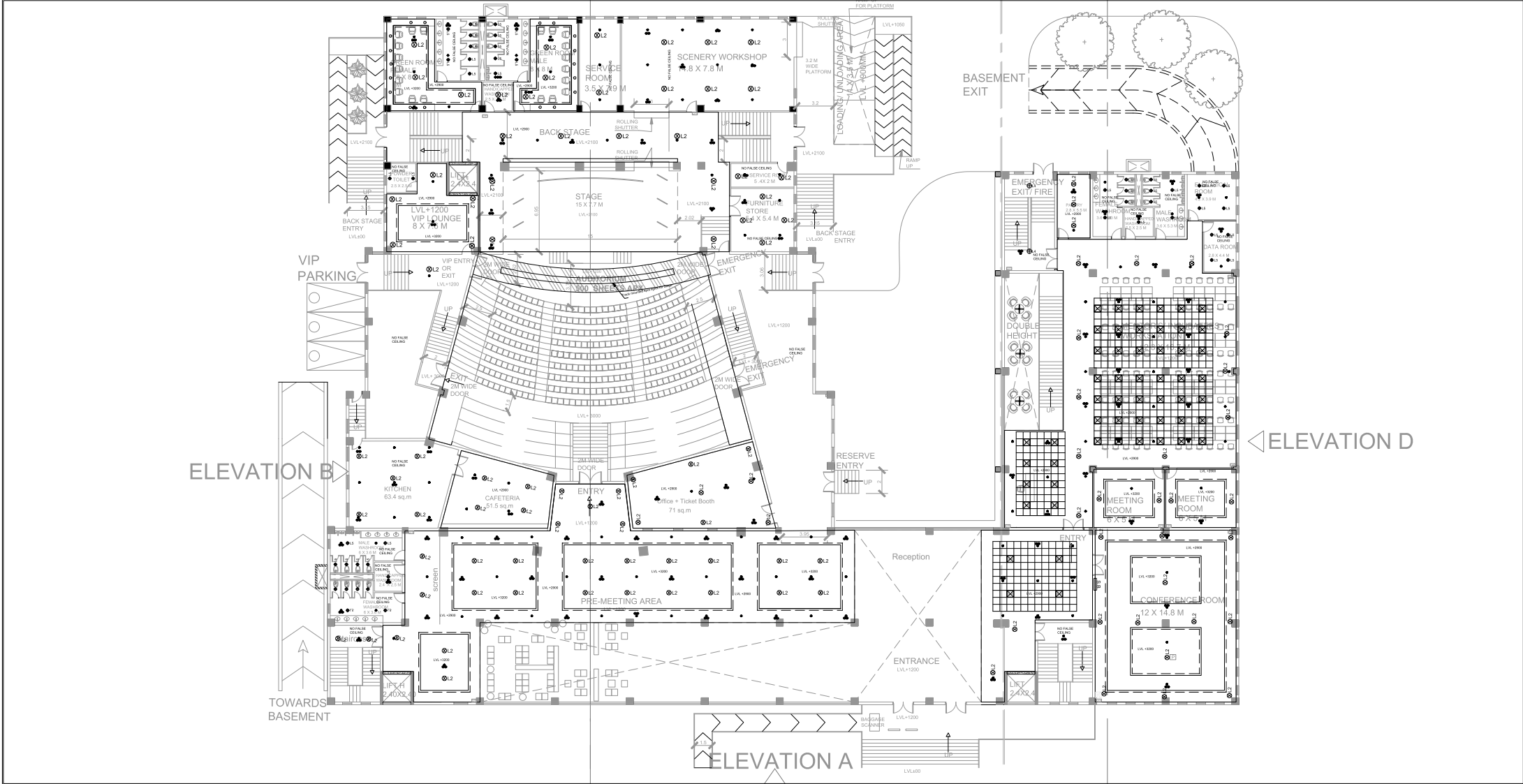
Project: GIC INCUBATION CENTRE AND AUDITORIUM


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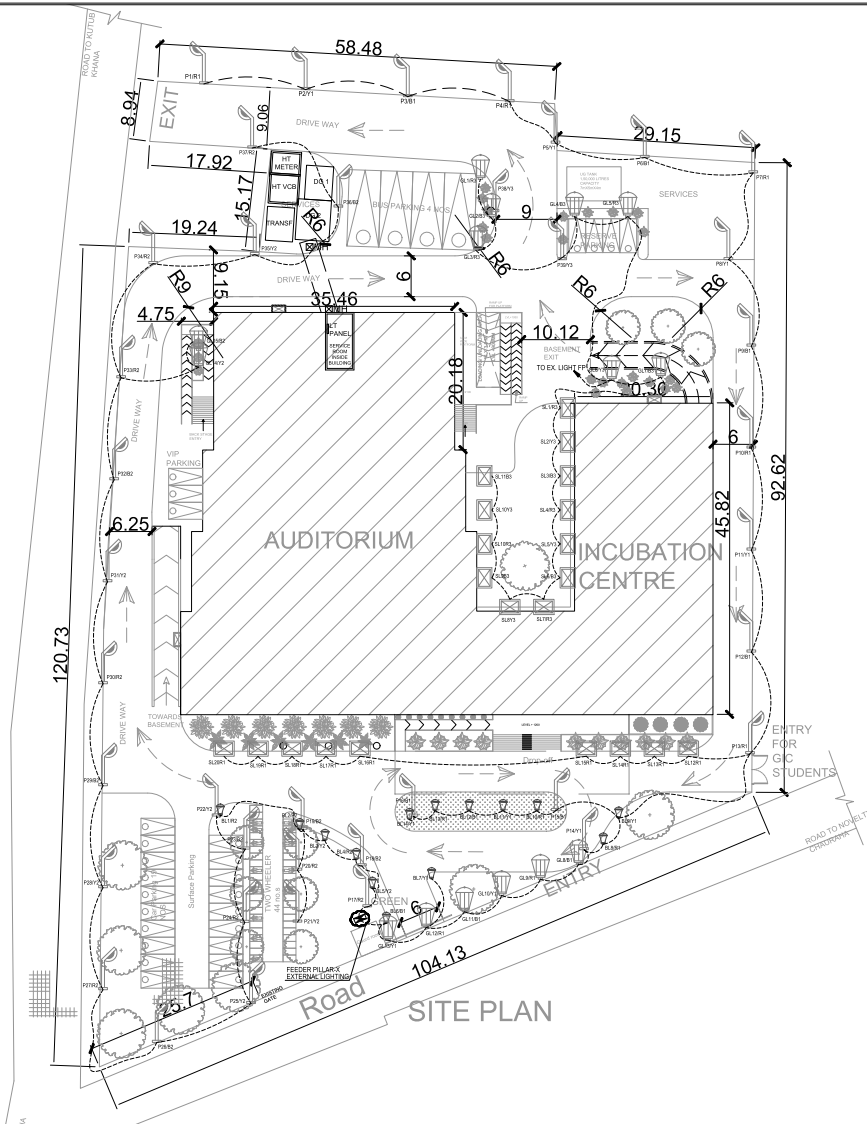
Drawn by: AKS Checked by: NG Date: 06.11.20

Title: TERRACE FLOOR FLOORING PLAN

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REVISION			DATE			CHECKED BY					



External Lighting Feeder Pillar-X Outdoor Double Door

Location :- NEAR GATE

Load in KW :- 6.50KW

Rating of Incomer :-63A, 4P, MCCB, 25KA + CONTACTOR + TIMER

Size of Sub Main :- 4Cx16 Sqmm LTXLPE

Ckt No.	No. of Points	Connected Load Watt	Size of Wire In Sqmm	Rating of MCB
R1, Y1, B1,	Poles P-1 to P-16 = 16x150=2400 SL-12 to SL-20 = 9x6=54 BL-6 to BL-14 = 9x18=162 GL-8 to GL-13 = 6x25=150	2766	4x6 Arm. Cable	32A, FP, MCB
R2, Y2, B2,	Poles P-17 to P-37 = 21x150=3150 BL-1 to BL-5 = 5x18=90 GL-14 to GL-15 = 2x25=50	3290	4x6 Arm. Cable	32A, FP, MCB
R3, Y3, B3,	Poles P-38 to P-39 = 2x150=300 GL-1 to GL-7 = 7x18=126 SL-1 to SL-11 = 11x6=66	492	4x6 Arm. Cable	32A, FP, MCB
R4, Y4, B4,	SPARE			
Total		6548		
Say		6.50 KW		

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LIGHTS LEGEND :

S. No.	SYMBOL	DESCRIPTION	WATTAGE
1.		4.5 METER HEXAGONAL POLE WITH SINGLE LIGHT FIXTURE	150 WATT
2.		Rotant Light CN-4000-6000 mm. High Pole	18 WATT
3.		Garden light CN-7500mm	25 WATT
4.		Lightgazer	30 WATT
5.		Floor Lights	4 WATT
6.		Step Light for Steps	12 WATT LED
7.		Spike light	6 WATT LED

PURPOSE:

TENDER DRAWING

Client:

BAREILLY SMART CITY LTD.

Project:

GIC INCUBATION CENTRE AND AUDITORIUM

Scale:

Not to Scale @ A3

North:



Dwg No:

EL-00-01

Drawn by:

AKS

Checked by:

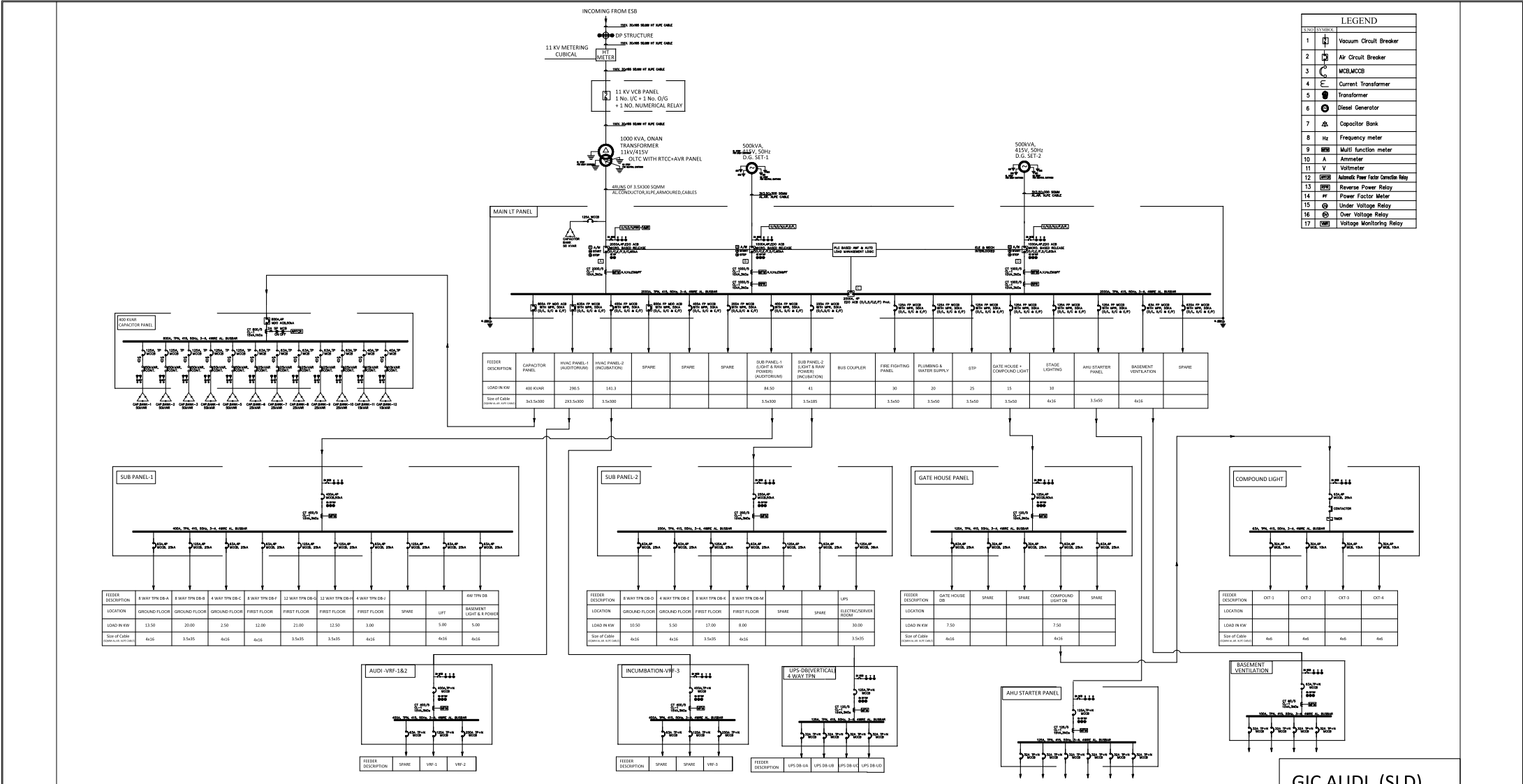
NG


Date:

08.11.20

Title:

SITE ELECTRICAL PLAN



<div>GENERAL NOTES:</div> <div>1. All dimensions are in metres and are dimensions unless otherwise specified.</div> <div>2. All levels are in millimetres and are finished unless otherwise specified. All levels are mentioned in the section.</div> <div>3. Do not scale drawings. Only written dimensions shall be followed, any discrepancy noted shall be brought to the notice of the Architect prior to the execution.</div> <div>4. For details such as pathways, fencing, railing, grills, lighting fixtures, street sections etc. refer relevant architectural/landscape drawings.</div>	REVISION	DATE	CHECKED BY	<div>This drawing is copyright. It is the property of the Project Management Consultant and is not to be reproduced, copied, handed over to a third party or used for any purpose other than for which it has been issued.</div>
<div>PURPOSE:</div> <div>TENDER DRAWING</div>				
<div>Client: BAREILLY SMART CITY LTD.</div> <div>Project: GIC INCUBATION CENTRE AND AUDITORIUM</div> <div><div>Scale: Not to Scale @ A3</div><div>North: </div><div>Dwg No: EL-00-01A</div></div> <div><div>Drawn by: AkS</div><div>Checked by: NG</div><div>Date: 06.11.20</div></div> <div><div>Title:</div><div>MAIN SLID</div></div>				

DB-A (Light & Raw Power 8 Way TPN DB)

Location - GROUND FLOOR, Backstage Area

Size of Sub Main -4Cx16Sgmm ALARM XLPE CABLE				
Rating of Incomer - 63 Amp 4 Pole MCCB,25KA)				
Ckt No.	No. of Points	Excessed Load Watt	Size of Wire in Sqmm	Rating of MCB
AR1	L2=5X18 L3=2X8 FP=2X60 SL=18mX14	482	3 x 1.5	10A/SP
AY1	L2=3X18 L3=9X6 FP=3X60 SL=26mX14	652	3 x 1.5	10A/SP
AB1	L5=7X6 BL=3X15 EX=2X60	207	3 x 1.5	10A/SP
AR2	L5=7X6 L2=3X18 BL=3X15 EX=2X60	261	3 x 1.5	10A/SP
AY2	L2=3X18 L3=9X6 FP=3X60 SL=26mX14	652	3 x 1.5	10A/SP
AB2	1x1000	1000	3 x 4	20A/SP
AR3	1x1000	1000	3 x 4	20A/SP
AY3	1x1000	1000	3 x 4	20A/SP
AB3	1x1000	1000	3 x 4	20A/SP
AR4	1x1000	1000	3 x 4	20A/SP
AY4	1x1000	1000	3 x 4	20A/SP
AB4	1x1000	1000	3 x 4	20A/SP
AR5	1x1000	1000	3 x 4	20A/SP
AY5	1x1000	1000	3 x 4	20A/SP
AB5	1x1000	1000	3 x 4	20A/SP
AR6	1x1000	1000	3 x 4	20A/SP
AY6, AB6, AR7, AY7, AB7 AR8, AY8 & AB8	SPARE			
TOTAL	13254W			
SAY	13.50KW			

DB-B (Light & Raw Power 8 Way TPN DB)

Location - GROUND FLOOR, Outside Scenery Workshop

Size of Sub Main -3.5Gx35 Sgmm AL ARM XLPE CABLE				
Rating of Incomer - 125 Amp 4 Pole MCCB,25KA)				
Ckt No.	No. of Points	Excessed Load Watt	Size of Wire in Sqmm	Rating of MCB
BR1	L2=8X18 FP=8X60	624	3 x 1.5	10A/SP
BY1	L2=10X18 FP=2X60	300	3 x 1.5	10A/SP
BB1	1x1000	1000	3 x 4	20A/SP
BY2	1x1000	1000	3 x 4	20A/SP
BB2	1x1000	1000	3 x 4	20A/SP
BR3	1x1000	1000	3 x 4	20A/SP
BY3	1x1000	1000	3 x 4	20A/SP
BB3	1x1000	1000	3 x 4	20A/SP
BB4	1x1000	1000	3 x 4	20A/SP
BB4	1x1000	1000	3 x 4	20A/SP
BB4	1x1000	1000	3 x 4	20A/SP
BY5	1x1000	1000	3 x 4	20A/SP
BB5	1x1000	1000	3 x 4	20A/SP
BR6	1x1000	1000	3 x 4	20A/SP
BY6	1x1000	1000	3 x 4	20A/SP
BB6	1x1000	1000	3 x 4	20A/SP
BR7	1x1000	1000	3 x 4	20A/SP
BY7	1x1000	1000	3 x 4	20A/SP
BB7	1x1000	1000	3 x 4	20A/SP
BR8, BY8 & BB8	SPARE			
TOTAL	19824W			
SAY	20.00KW			

DB-C (Light & Raw Power 4 Way TPN DB)

Location - GROUND FLOOR, Next to kitchen and Cafeteria

Size of Sub Main -4Cx16Sgmm AL ARM XLPE CABLE				
Rating of Incomer - 63 Amp 4 Pole MCCB,25KA)				
Ckt No.	No. of Points	Excessed Load Watt	Size of Wire in Sqmm	Rating of MCB
CR1	L5=7X6 L2=5X18	132	3 x 1.5	10A/SP
CY1	L5=6X6 L2=5X18 SL=19mX14	388	3 x 1.5	10A/SP
CB1	L2=10X18 SL=25mX14	532	3 x 1.5	10A/SP
CR2	L2=13X18 SL=40mX14	764	3 x 1.5	10A/SP
CY2	L2=12X18 SL=30mX14	580	3 x 1.5	10A/SP
CB2 CR3, CY3, CB3 CR4, CY4 & CB4	SPARE			
TOTAL	2436W			
SAY	2.50KW			

DB-D (Light & Raw Power 8 Way TPN DB)

Location - GROUND FLOOR, At the Entry of INCUBATION hall

Size of Sub Main -4Cx16Sgmm AL ARM XLPE CABLE				
Rating of Incomer - 63 Amp 4 Pole MCCB,25KA)				
Ckt No.	No. of Points	Excessed Load Watt	Size of Wire in Sqmm	Rating of MCB
DR1	L1=4X36 L2=3X18	180	3 x 1.5	10A/SP
DY1	L2=12X18 FP=4X60 SL=30mX14	876	3 x 1.5	10A/SP
DB1	L2=4X18 FP=4X60 SL=30mX14	737	3 x 1.5	10A/SP
DR2	L1=8X36 L2=2X18 FP=2X60	444	3 x 1.5	10A/SP
DY2	L1=12X36 L2=2X18 FP=3X60	648	3 x 1.5	10A/SP
DB2	L1=12X36 L2=4X18 FP=2X60	624	3 x 1.5	10A/SP
DR3	1x1000	1000	3 x 4	20A/SP
DY3	1x1000	1000	3 x 4	20A/SP
DB3	1x1000	1000	3 x 4	20A/SP
DR4	1x1000	1000	3 x 4	20A/SP
DY4	1x1000	1000	3 x 4	20A/SP
DB4	1x1000	1000	3 x 4	20A/SP
DR5	1x1000	1000	3 x 4	20A/SP
DY5, DB5 DR6, DY6, DB6 DR7, DY7, DB7 DR8, DY8 & DB8	SPARE			
TOTAL	10509W			
SAY	10.50KW			

DB-E (Light & Raw Power 4 Way TPN DB)

Location - GROUND FLOOR (INCUBATION),Next to data room

Size of Sub Main -4Cx16Sgmm AL ARM XLPE CABLE				
Rating of Incomer - 63 Amp 4 Pole MCCB,25KA)				
Ckt No.	No. of Points	Excessed Load Watt	Size of Wire in Sqmm	Rating of MCB
ER1	L1=12X36 L2=2X18 FP=3X60	648	3 x 1.5	10A/SP
EY1	L1=8X36 L2=3X18 FP=3X60	450	3 x 1.5	10A/SP
EB1	L5=13X6	78	3 x 1.5	10A/SP
ER2	L5=6X6 L2=3X18 L4=3X12	114	3 x 1.5	10A/SP
EY2	1x1000	1000	3 x 4	20A/SP
EB2	1x1000	1000	3 x 4	20A/SP
ER3	1x1000	1000	3 x 4	20A/SP
EY3	1x1000	1000	3 x 4	20A/SP
EB3 ER4, EY4, EB4	SPARE			
TOTAL	5290W			
SAY	5.50KW			

DB-UA (UPS Power 8 Way TPN DB)

Location - GROUND FLOOR, Incubation Hall Entry


Size of Sub Main -4Cx10 Sgmm AL ARM XLPE CABLE				
Rating of Incomer - 63 Amp 4 Pole MCB, 10KA)				
Ckt No.	No. of Points	Excessed Load Watt	Size of Wire in Sqmm	Rating of MCB
UAR1	B=2x(2upx) B=2x(2upx) B=2x(1upx)	400	3 x 2.5	10A/SP
UAY1	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UAB1	B=2x(2upx) B=2x(2upx) B=2x(2upx)	400	3 x 2.5	10A/SP
UAR2	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UAY2	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UAB2	B=2x(2upx) B=2x(2upx) B=2x(2upx)	400	3 x 2.5	10A/SP
UAR3	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UAY3	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UAB3	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UAR4	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UAY4	B=2x(2upx) B=2x(2upx) B=2x(2upx)	400	3 x 2.5	10A/SP
UAB4	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UAR5	B=2x(2upx)	200	3 x 2.5	10A/SP
UAY5, UAB5 UAR6, UAY6, UAB6 UAR7, UAY7, UAB7 UAR8, UAY8, & UAB8	SPARE			
TOTAL	6600W			
SAY	6.60KW			

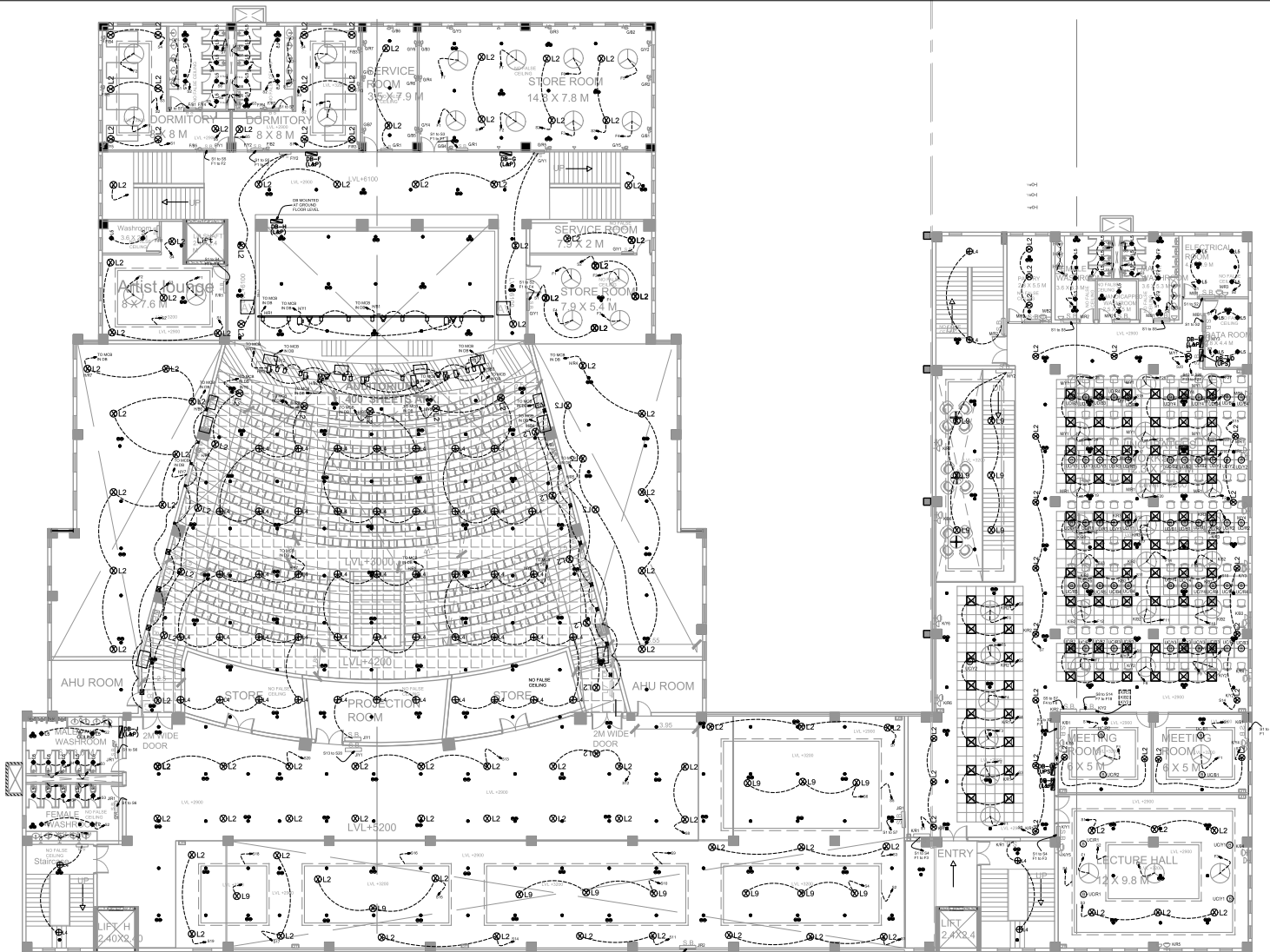
DB-UB (UPS Power 4 Way TPN DB)

Location - GROUND FLOOR, Incubation, Outside Data Room

Size of Sub Main -4Cx10 Sgmm AL ARM XLPE CABLE				
Rating of Incomer - 63 Amp 4 Pole MCB, 10KA)				
Ckt No.	No. of Points	Excessed Load Watt	Size of Wire in Sqmm	Rating of MCB
UBR1	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UBY1	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UBB1	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UBR2	B=2x(2upx) B=2x(2upx) B=2x(2upx)	400	3 x 2.5	10A/SP
UBY2	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UBB2	B=2x(2upx) B=2x(2upx) B=2x(2upx)	400	3 x 2.5	10A/SP
UBR3	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UBY3	B=2x(2upx) B=2x(2upx) B=2x(2upx)	600	3 x 2.5	10A/SP
UBB3, UBR4,UBY4, & UBB4	SPARE			
TOTAL	4400W			
SAY	4.40KW			

GR

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ELECTRICAL SYMBOLS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	1-phase 2-wire supply		3-phase 4-wire supply
	3-phase 3-wire supply		1-phase 3-wire supply
	1-phase 4-wire supply		3-phase 5-wire supply
	1-phase 5-wire supply		3-phase 6-wire supply
	1-phase 6-wire supply		3-phase 7-wire supply
	1-phase 8-wire supply		3-phase 9-wire supply
	1-phase 9-wire supply		3-phase 10-wire supply
	1-phase 10-wire supply		3-phase 11-wire supply
	1-phase 11-wire supply		3-phase 12-wire supply
	1-phase 12-wire supply		3-phase 13-wire supply
	1-phase 13-wire supply		3-phase 14-wire supply
	1-phase 14-wire supply		3-phase 15-wire supply
	1-phase 15-wire supply		3-phase 16-wire supply
	1-phase 16-wire supply		3-phase 17-wire supply
	1-phase 17-wire supply		3-phase 18-wire supply
	1-phase 18-wire supply		3-phase 19-wire supply
	1-phase 19-wire supply		3-phase 20-wire supply
	1-phase 20-wire supply		3-phase 21-wire supply
	1-phase 21-wire supply		3-phase 22-wire supply
	1-phase 22-wire supply		3-phase 23-wire supply
	1-phase 23-wire supply		3-phase 24-wire supply
	1-phase 24-wire supply		3-phase 25-wire supply
	1-phase 25-wire supply		3-phase 26-wire supply
	1-phase 26-wire supply		3-phase 27-wire supply
	1-phase 27-wire supply		3-phase 28-wire supply
	1-phase 28-wire supply		3-phase 29-wire supply
	1-phase 29-wire supply		3-phase 30-wire supply
	1-phase 30-wire supply		3-phase 31-wire supply
	1-phase 31-wire supply		3-phase 32-wire supply
	1-phase 32-wire supply		3-phase 33-wire supply
	1-phase 33-wire supply		3-phase 34-wire supply
	1-phase 34-wire supply		3-phase 35-wire supply
	1-phase 35-wire supply		3-phase 36-wire supply
	1-phase 36-wire supply		3-phase 37-wire supply
	1-phase 37-wire supply		3-phase 38-wire supply
	1-phase 38-wire supply		3-phase 39-wire supply
	1-phase 39-wire supply		3-phase 40-wire supply
	1-phase 40-wire supply		3-phase 41-wire supply
	1-phase 41-wire supply		3-phase 42-wire supply
	1-phase 42-wire supply		3-phase 43-wire supply
	1-phase 43-wire supply		3-phase 44-wire supply
	1-phase 44-wire supply		3-phase 45-wire supply
	1-phase 45-wire supply		3-phase 46-wire supply
	1-phase 46-wire supply		3-phase 47-wire supply
	1-phase 47-wire supply		3-phase 48-wire supply
	1-phase 48-wire supply		3-phase 49-wire supply
	1-phase 49-wire supply		3-phase 50-wire supply
	1-phase 50-wire supply		3-phase 51-wire supply
	1-phase 51-wire supply		3-phase 52-wire supply
	1-phase 52-wire supply		3-phase 53-wire supply
	1-phase 53-wire supply		3-phase 54-wire supply
	1-phase 54-wire supply		3-phase 55-wire supply
	1-phase 55-wire supply		3-phase 56-wire supply
	1-phase 56-wire supply		3-phase 57-wire supply
	1-phase 57-wire supply		3-phase 58-wire supply
	1-phase 58-wire supply		3-phase 59-wire supply
	1-phase 59-wire supply		3-phase 60-wire supply
	1-phase 60-wire supply		3-phase 61-wire supply
	1-phase 61-wire supply		3-phase 62-wire supply
	1-phase 62-wire supply		3-phase 63-wire supply
	1-phase 63-wire supply		3-phase 64-wire supply
	1-phase 64-wire supply		3-phase 65-wire supply
	1-phase 65-wire supply		3-phase 66-wire supply
	1-phase 66-wire supply		3-phase 67-wire supply
	1-phase 67-wire supply		3-phase 68-wire supply
	1-phase 68-wire supply		3-phase 69-wire supply
	1-phase 69-wire supply		3-phase 70-wire supply
	1-phase 70-wire supply		3-phase 71-wire supply
	1-phase 71-wire supply		3-phase 72-wire supply
	1-phase 72-wire supply		3-phase 73-wire supply
	1-phase 73-wire supply		3-phase 74-wire supply
	1-phase 74-wire supply		3-phase 75-wire supply
	1-phase 75-wire supply		3-phase 76-wire supply
	1-phase 76-wire supply		3-phase 77-wire supply
	1-phase 77-wire supply		3-phase 78-wire supply
	1-phase 78-wire supply		3-phase 79-wire supply
	1-phase 79-wire supply		3-phase 80-wire supply
	1-phase 80-wire supply		3-phase 81-wire supply
	1-phase 81-wire supply		3-phase 82-wire supply
	1-phase 82-wire supply		3-phase 83-wire supply
	1-phase 83-wire supply		3-phase 84-wire supply
	1-phase 84-wire supply		3-phase 85-wire supply
	1-phase 85-wire supply		3-phase 86-wire supply
	1-phase 86-wire supply		3-phase 87-wire supply
	1-phase 87-wire supply		3-phase 88-wire supply
	1-phase 88-wire supply		3-phase 89-wire supply
	1-phase 89-wire supply		3-phase 90-wire supply
	1-phase 90-wire supply		3-phase 91-wire supply
	1-phase 91-wire supply		3-phase 92-wire supply
	1-phase 92-wire supply		3-phase 93-wire supply
	1-phase 93-wire supply		3-phase 94-wire supply
	1-phase 94-wire supply		3-phase 95-wire supply
	1-phase 95-wire supply		3-phase 96-wire supply
	1-phase 96-wire supply		3-phase 97-wire supply
	1-phase 97-wire supply		3-phase 98-wire supply
	1-phase 98-wire supply		3-phase 99-wire supply
	1-phase 99-wire supply		3-phase 100-wire supply

PURPOSE:

TENDER DRAWING

Client: BAREILLY SMART CITY LTD.		
Project: GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North:	Dwg No: EL-01-02
Drawn by: A/S	Checked by: NG	Date: 08.11.20
Title: FIRST FLOOR ELECTRICAL PLAN		

Ch. No.	No. of Panels	Component	Size of Panel	Rating of MCB	
F81	L2X18 L2X20 FPX-2000 SL=18mX16	482	3 x 1.5	10A/SP	
FV1	L2X17 L2X20 SL=18mX16	470	3 x 1.5	10A/SP	
F81	L3X76 BLX315 DX-2600	207	3 x 1.5	10A/SP	
F82	L5X76 BLX315 DX-2600	261	3 x 1.5	10A/SP	
FV2	L2X11X18 L2X20 SL=18mX16	542	3 x 1.5	10A/SP	
F82	1x1000	1000	3 x 4	20A/SP	
F83	1x1000	1000	3 x 4	20A/SP	
FV3	1x1000	1000	3 x 4	20A/SP	
F83	1x1000	1000	3 x 4	20A/SP	
FV4	1x1000	1000	3 x 4	20A/SP	
F84	1x1000	1000	3 x 4	20A/SP	
F85	1x1000	1000	3 x 4	20A/SP	
FV5	1x1000	1000	3 x 4	20A/SP	
F85	1x1000	1000	3 x 4	20A/SP	
F86, FV6, F86 F87, FV7, F87 F88, FV8, F88					SPARE
TOTAL		119620			
SAY		12.00K0			

Ch.	No. of Pairs	Accession No.	Size of lot	Dates of Abn.
GR1	12x18 PP-0000	624	3 x 1.5	10A/SP
GV1	12x18 PP-0000	438	3 x 1.5	10A/SP
GR1	1x1000	1000	3 x 4	20A/SP
GR2	1x1000	1000	3 x 4	20A/SP
GV2	1x1000	1000	3 x 4	20A/SP
GR2	1x1000	1000	3 x 4	25A/SP
GR3	1x1000	1000	3 x 4	20A/SP
GV3	1x1000	1000	3 x 4	25A/SP
GR3	1x1000	1000	3 x 4	25A/SP
GR4	1x1000	1000	3 x 4	20A/SP
GV4	1x1000	1000	3 x 4	20A/SP
GR4	1x1000	1000	3 x 4	20A/SP
GR5	1x1000	1000	3 x 4	25A/SP
GR5	1x1000	1000	3 x 4	20A/SP
GR5	1x1000	1000	3 x 4	20A/SP
GR6	1x1000	1000	3 x 4	25A/SP
GV6	1x1000	1000	3 x 4	25A/SP
GR6	1x1000	1000	3 x 4	20A/SP
GR7	1x1000	1000	3 x 4	20A/SP
GV7	1x1000	1000	3 x 4	20A/SP
GR7	1x1000	1000	3 x 4	25A/SP
GR8	1x1000	1000	3 x 4	25A/SP
GV15, GR8 GR9, GV9, GR9 GV10, GR10, GV10 GV12, GR12, GV12				SPARE
GV11, GR11 GV13, GR13, GV13				21962W
SAY				21.000W

State of Illinois - 155 Amp 3-Phase AL-ARM AL-CABLE					
Ch. No.	Part Name	Quantity	Unit	Rate	Amount
H#1	PAN LIGHT PAR-LX102	648	3 x 2 1/2	10A/SP	
H#1	PAN LIGHT PAR-LX102	600	3 x 2 1/2	10A/SP	
H#1	PAN LIGHT PAR-LX102	1010	3 x 2 1/2	10A/SP	
H#2	PAN LIGHT PAR-LX102	800	3 x 2 1/2	10A/SP	
H#2	PAN LIGHT PAR-LX102	810	3 x 2 1/2	10A/SP	
H#2	PAN LIGHT PAR-LX102	900	3 x 2 1/2	10A/SP	
H#2	PAN LIGHT PAR-LX102	600	3 x 2 1/2	10A/SP	
H#3	PAN LIGHT PAR-LX102	800	3 x 2 1/2	10A/SP	
H#3	PAN LIGHT PAR-LX102	800	3 x 2 1/2	10A/SP	
H#3	PAN LIGHT PAR-LX102	748	3 x 2 1/2	10A/SP	
H#3	PAN LIGHT PAR-LX102	800	3 x 2 1/2	10A/SP	
H#4	PAN LIGHT PAR-LX102	144	3 x 2 1/2	10A/SP	
H#4	PAN LIGHT PAR-LX102	48	3 x 2 1/2	10A/SP	
H#4	PAN LIGHT PAR-LX102	90	3 x 2 1/2	10A/SP	
H#4	PAN LIGHT PAR-LX102	72	3 x 2 1/2	10A/SP	
H#5	PAN LIGHT PAR-LX102	126	3 x 2 1/2	10A/SP	
H#5	PAN LIGHT PAR-LX102	126	3 x 2 1/2	10A/SP	
H#6	PAN LIGHT PAR-LX102	108	3 x 2 1/2	10A/SP	
H#6	PAN LIGHT PAR-LX102	108	3 x 2 1/2	10A/SP	
H#6	PAN LIGHT PAR-LX102	54	3 x 2 1/2	10A/SP	
H#7	PAN LIGHT PAR-LX102	162	3 x 2 1/2	10A/SP	
H#7	PAN LIGHT PAR-LX102	90	3 x 2 1/2	10A/SP	
H#7	PAN LIGHT PAR-LX102	132	3 x 2 1/2	10A/SP	
H#7	PAN LIGHT PAR-LX102	72	3 x 2 1/2	10A/SP	
H#8	PAN LIGHT PAR-LX102	132	3 x 2 1/2	10A/SP	
H#8	PAN LIGHT PAR-LX102	1000	3 x 4	20A/SP	
H#9	PAN LIGHT PAR-LX102	1000	3 x 4	20A/SP	
H#9	PAN LIGHT PAR-LX102	1000	3 x 4	20A/SP	
H#9	PAN LIGHT PAR-LX102	1000	3 x 4	20A/SP	
H#10	PAN LIGHT PAR-LX102	1000	3 x 4	20A/SP	
H#11	PAN LIGHT PAR-LX102	1000	3 x 4	20A/SP	
H#12	PAN LIGHT PAR-LX102	1000	3 x 4	20A/SP	
SPARE					
TOTAL		123800			
SAY		123800			

Box of Sub Main ->C4165qmm ALFMM XLPE CABLE					
Rating of Incoming -> 63 Amp 4 Pole 250V, 20KA					
Cat.No.	No. of phases	Approximate cost / Meter	Size of Wire in Sq.mm	Rating of MCB	
JR1	L1->1400 IL->5X15 EL->4000	390	3 x 1 x 5	10A/SP	
JY1	L2->1018 L4->312 L4->100X14	598	3 x 1 x 5	10A/SP	
JB1	L2->15X18 L5->90X14	1006	3 x 1 x 5	10A/SP	
JR2	L2->10X18 L5->30X14	642	3 x 1 x 5	10A/SP	
JY2	SPARE				
JB2					
JR3, JY3, JB3					
JR4, JY4 & JB4					
	TOTAL	2759W			
	SAY	3.00KW			

Box of Sub Main - 3.50x5 Square AL ARM XLPE CABLE					
Rating of Incomer - 125 Amp 4 Pole MCCB (25KA)					
Ch No.	No. of poles	Rating of Incomer (Amps)	Rating of Outcomer (Amps)	Size of Cable (mm ²)	Rating of MCCB
K01	L1-B08 L2-B10 FP-3000	612	3 x 1.5	15A/SP	
K01	L2-B010 FP-3000	1072	3 x 1.5	15A/SP	
K01	L2-B10 FL-30m/34	617	3 x 1.5	15A/SP	
K02	L2-B10 FP-3000	622	3 x 1.5	15A/SP	
K02	L1-12008 L2-B10 FP-3000	666	3 x 1.5	15A/SP	
K03	L1-12008 FP-3000	792	3 x 1.5	15A/SP	
K03	L1-12008 FP-3000	612	3 x 1.5	15A/SP	
K03	1x1000	1000	3 x 4	25A/SP	
K03	1x1000	1000	3 x 4	25A/SP	
K04	1x1000	1000	3 x 4	25A/SP	
K04	1x1000	1000	3 x 4	25A/SP	
K04	1x1000	1000	3 x 4	25A/SP	
K05	1x1000	1000	3 x 4	25A/SP	
K05	1x1000	1000	3 x 4	25A/SP	
K06	1x1000	1000	3 x 4	25A/SP	
K06	1x1000	1000	3 x 4	25A/SP	
K07	1x1000	1000	3 x 4	25A/SP	
K07, K08 K09, K10	SPARE				
TOTAL	168339				
SAY	17,00,000				

State of Maharashtra - 4C1658gm ALRMLXPE CABLE					
Chk No.	TOTAL	2000000	2000000	Size of Sample	Rating of MC/S
	11-12938 12-1218 11-29380	648	3 x 15	15A/SIP	
NY11	11-29380 12-12018 FP-10000	846	3 x 15	15A/SIP	
MB1	L5-1306	78	3 x 15	15A/SIP	
NR2	L5-896 12-1218 FP-10000	114	3 x 15	15A/SIP	
NY12	12-4518	108	3 x 15	15A/SIP	
NR3	L4-1000	1000	3 x 4	25A/SIP	
NY13	1x1000	1000	3 x 4	25A/SIP	
NR3	1x1000	1000	3 x 4	25A/SIP	
NR4	1x1000	1000	3 x 4	25A/SIP	
NR4	1x1000	1000	3 x 4	25A/SIP	
MB4	MB4 MB5 MB6 MB7 MB8 MB9 MB10 MB11 MB12 MB13 MB14 MB15 MB16 MB17 MB18 MB19 MB20 MB21 MB22 MB23 MB24 MB25 MB26 MB27 MB28 MB29 MB30 MB31 MB32 MB33 MB34 MB35 MB36 MB37 MB38 MB39 MB40 MB41 MB42 MB43 MB44 MB45 MB46 MB47 MB48 MB49 MB50 MB51 MB52 MB53 MB54 MB55 MB56 MB57 MB58 MB59 MB60 MB61 MB62 MB63 MB64 MB65 MB66 MB67 MB68 MB69 MB70 MB71 MB72 MB73 MB74 MB75 MB76 MB77 MB78 MB79 MB80 MB81 MB82 MB83 MB84 MB85 MB86 MB87 MB88 MB89 MB90 MB91 MB92 MB93 MB94 MB95 MB96 MB97 MB98 MB99 MB100				
SAY	779400	8.000K			

State of Sub Main - AC/103 Supply AL-ARM-MC P.CABLE					
Sl. No.	Particulars	Quantity	Unit	Rate	Amount
UCR1	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR2	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR3	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR4	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR5	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR6	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR7	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR8	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR9	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR10	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR11	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR12	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR13	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR14	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR15	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR16	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR17	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR18	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR19	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR20	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR21	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR22	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR23	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR24	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR25	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR26	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR27	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR28	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR29	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR30	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR31	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR32	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR33	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR34	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR35	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR36	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR37	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR38	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR39	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR40	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR41	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR42	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR43	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR44	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR45	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR46	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR47	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR48	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR49	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR50	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR51	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	
UCR52	B10-200mm B10-200mm	400	3 x 2.5	10A/SP	


[illegible]

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2. All levels are in millimetres and are finished unless otherwise specified. All levels are mentioned in the section.
3. Do not scale drawings. Only written dimensions shall be followed, any discrepancy noted shall be brought to the notice of the Architect prior to the execution.
4. For details such as pathways, fencing, railing, grills lighting fixtures, street sections etc. refer relevant architectural/landscape drawings.

[illegible]

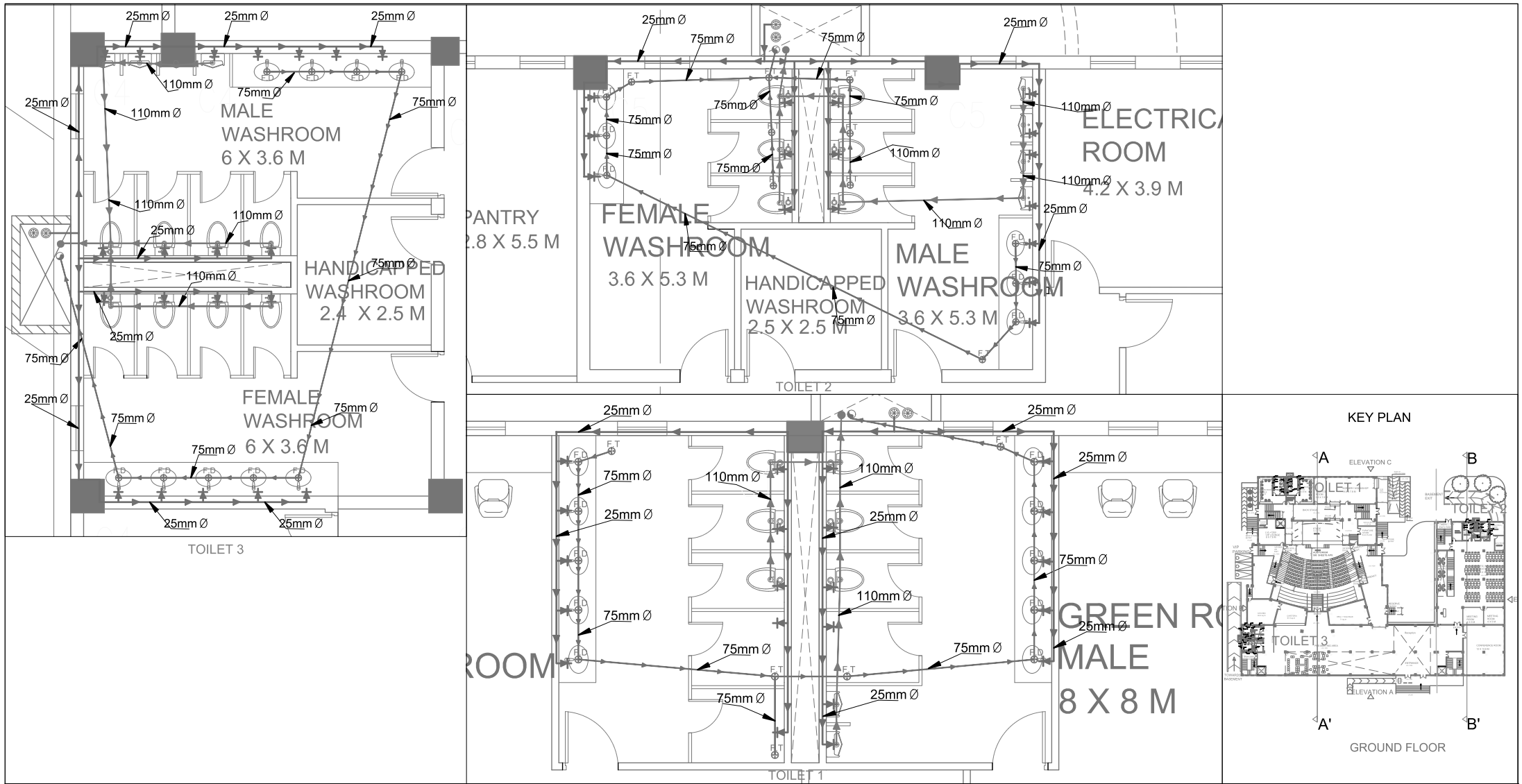
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TENDER DRAWING

Client: BAREILLY SMART CITY LTD.		
Project: GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North: 	Dwg No: EL-01-02A
Drawn by: AKS	Checked by: NG	Date: 08.11.20

Title:

**FIRST FLOOR DB
DETAILS**



GENERAL NOTES:

1. All dimensions are in metres and are dimensions unless otherwise specified.
2. All levels are in millimetres and are finished unless otherwise specified. All levels are mentioned in the section.
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REVISION DATE CHECKED BY

REVISION	DATE	CHECKED BY

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PURPOSE:

TENDER DRAWING

Client- BAREILLY SMART CITY LTD.		
Project- GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North:	Dwg No: PL-01-01
Drawn by: AKS	Checked by: NG	Date: 06.11.20
Title: PLUMBING GROUND FLOOR PLAN		

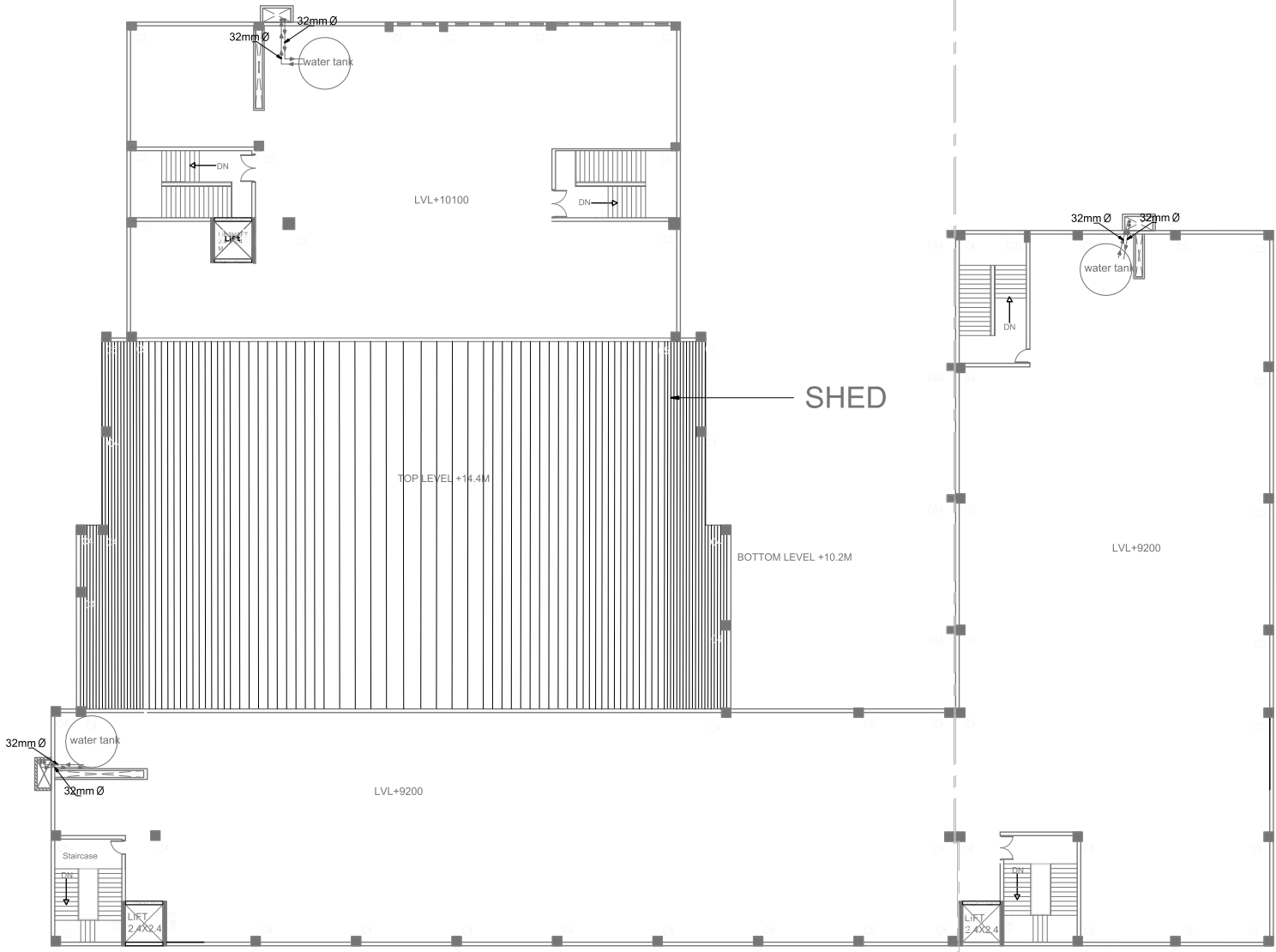
KEY PLAN

TOILET 4

TOILET 5

TOILET 6

First Floor



GENERAL NOTES:

1. All dimensions are in metres and are dimensions unless otherwise specified.
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4. For details such as pathways, fencing, railing, grills, lighting fixtures, street sections etc. refer relevant architectural/landscape drawings.

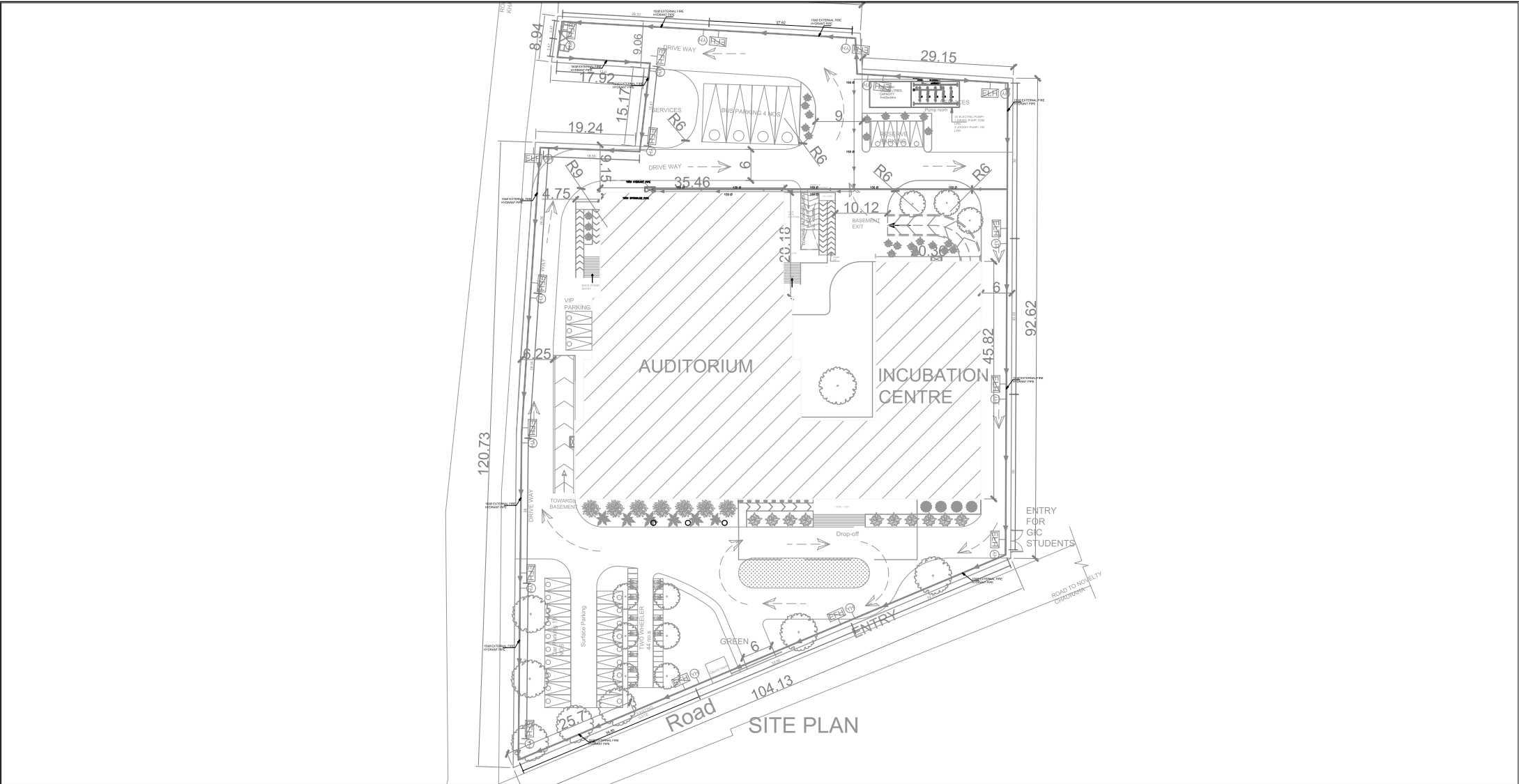
REVISION	DATE	CHECKED BY

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PURPOSE:

TENDER DRAWING

Client- BAREILLY SMART CITY LTD.		
Project- GIC INCUBATION CENTRE AND AUDITORIUM		
Scale- Not to Scale @ A3	North-	Dwg No- PL-01-03
Drawn by- AKS	Checked by- NG	Date- 06.11.20
Title- PLUMBING TERACE FLOOR PLAN		



GENERAL NOTES:

- 1. All dimensions are in metres and are dimensions unless otherwise specified.
- 2. All levels are in millimetres and are finished unless otherwise specified. All levels are mentioned in the section.
- 3. Do not scale drawings. Only written dimensions shall be followed, any discrepancy noted shall be brought to the notice of the Architect prior to the execution.
- 4. For details such as pathways, fencing, railing, grills, lighting fixtures, street sections etc. refer relevant architectural/landscape drawings.

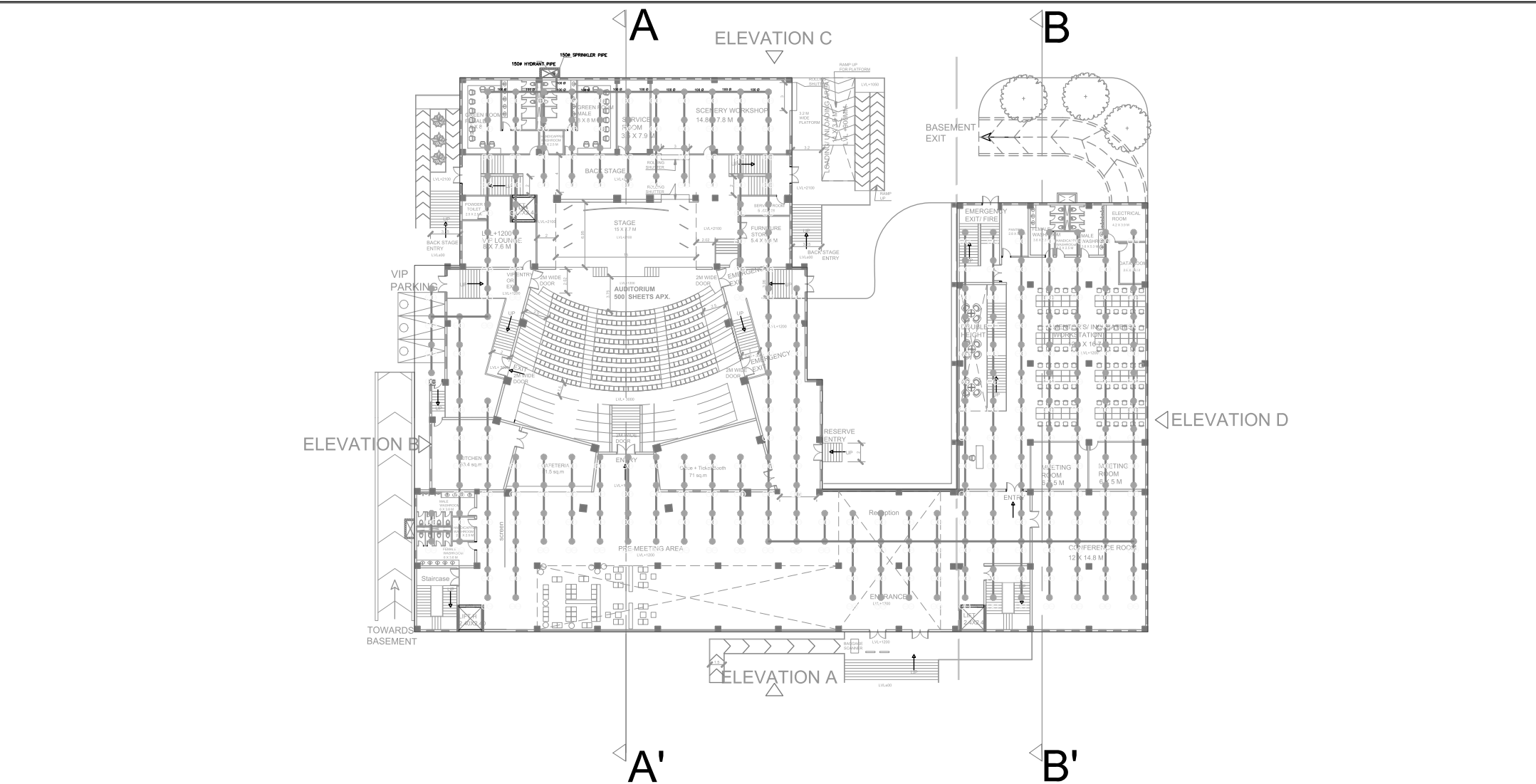
REVISION	DATE	CHECKED BY













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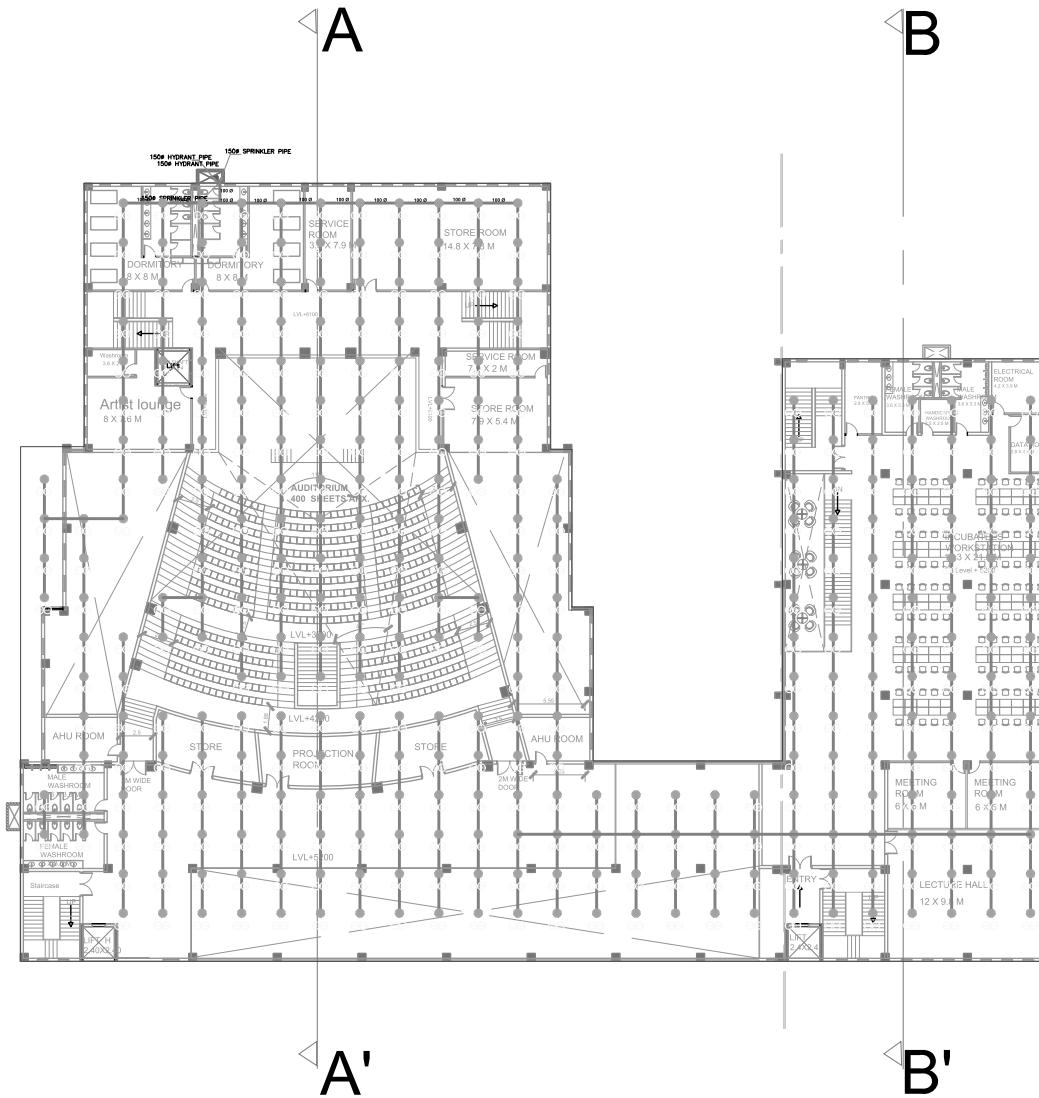
SYMBOL	DESCRIPTION
	YARD HYDRANT/ FIRE HYDRANT
	SPRINKLER
	SMOKE DETECTOR

PURPOSE:
TENDER DRAWING

Client- BAREILLY SMART CITY LTD.		
Project- GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North:	Dwg No: FF-00-01
Drawn by: AKS	Checked by: NG	Date: 06.11.20
Title: FIREFIGHTING SITE PLAN		



<p>GENERAL NOTES:</p> <p>1. All dimensions are in metres and are dimensions unless otherwise specified.</p> <p>2. All levels are in millimetres and are finished unless otherwise specified. All levels are mentioned in the section.</p> <p>3. Do not scale drawings. Only written dimensions shall be followed, any discrepancy noted shall be brought to the notice of the Architect prior to the execution.</p> <p>4. For details such as pathways, fencing, railing, grills, lighting fixtures, street sections etc. refer relevant architectural/landscape drawings.</p>	REVISION	DATE	CHECKED BY	<p>This drawing is copyright. It is the property of the Project Management Consultant and is not to be reproduced, copied, handed over to a third party or used for any purpose other than for which it has been issued.</p>	<table><tr><th>SYMBOL</th><th>DESCRIPTION</th></tr><tr><td></td><td>YARD HYDRANT/ FIRE HYDRANT</td></tr><tr><td></td><td>SPRINKLER</td></tr><tr><td></td><td>SMOKE DETECTOR</td></tr></table>	SYMBOL	DESCRIPTION		YARD HYDRANT/ FIRE HYDRANT		SPRINKLER		SMOKE DETECTOR	<p>PURPOSE:</p> <p>TENDER DRAWING</p>	<p>Client- BAREILLY SMART CITY LTD.</p> <p>Project- GIC INCUBATION CENTRE AND AUDITORIUM</p> <table><tr><td>Scale: Not to Scale @ A3</td><td>North: </td><td>Drg No: FF-01-01</td></tr><tr><td>Dealt by: AKS</td><td>Checked by: NG</td><td>Date: 06.11.20</td></tr></table> <p>Title: FIREFIGHTING GROUND FLOOR PLAN</p>	Scale: Not to Scale @ A3	North: 	Drg No: FF-01-01	Dealt by: AKS	Checked by: NG	Date: 06.11.20
	SYMBOL	DESCRIPTION																			
		YARD HYDRANT/ FIRE HYDRANT																			
		SPRINKLER																			
		SMOKE DETECTOR																			
	Scale: Not to Scale @ A3	North: 	Drg No: FF-01-01																		
	Dealt by: AKS	Checked by: NG	Date: 06.11.20																		



GENERAL NOTES:

1. All dimensions are in metres and are dimensions unless otherwise specified.
2. All levels are in millimetres and are finished unless otherwise specified. All levels are mentioned in the section.
3. Do not scale drawings. Only written dimensions shall be followed, any discrepancy noted shall be brought to the notice of the Architect prior to the execution.
4. For details such as pathways, fencing, railing, grills, lighting fixtures, street sections etc. refer relevant architectural/landscape drawings.

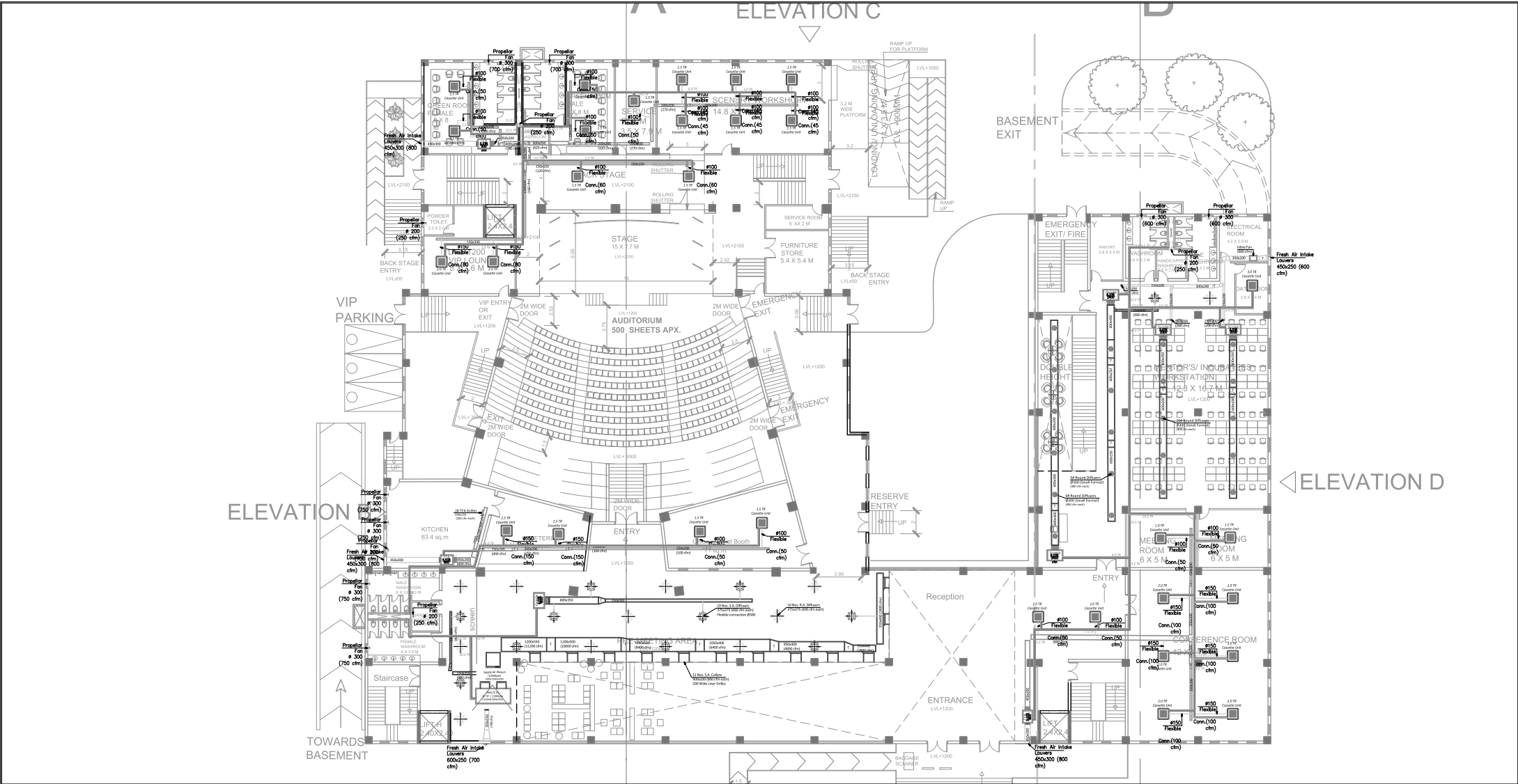
REVISION	DATE	CHECKED BY


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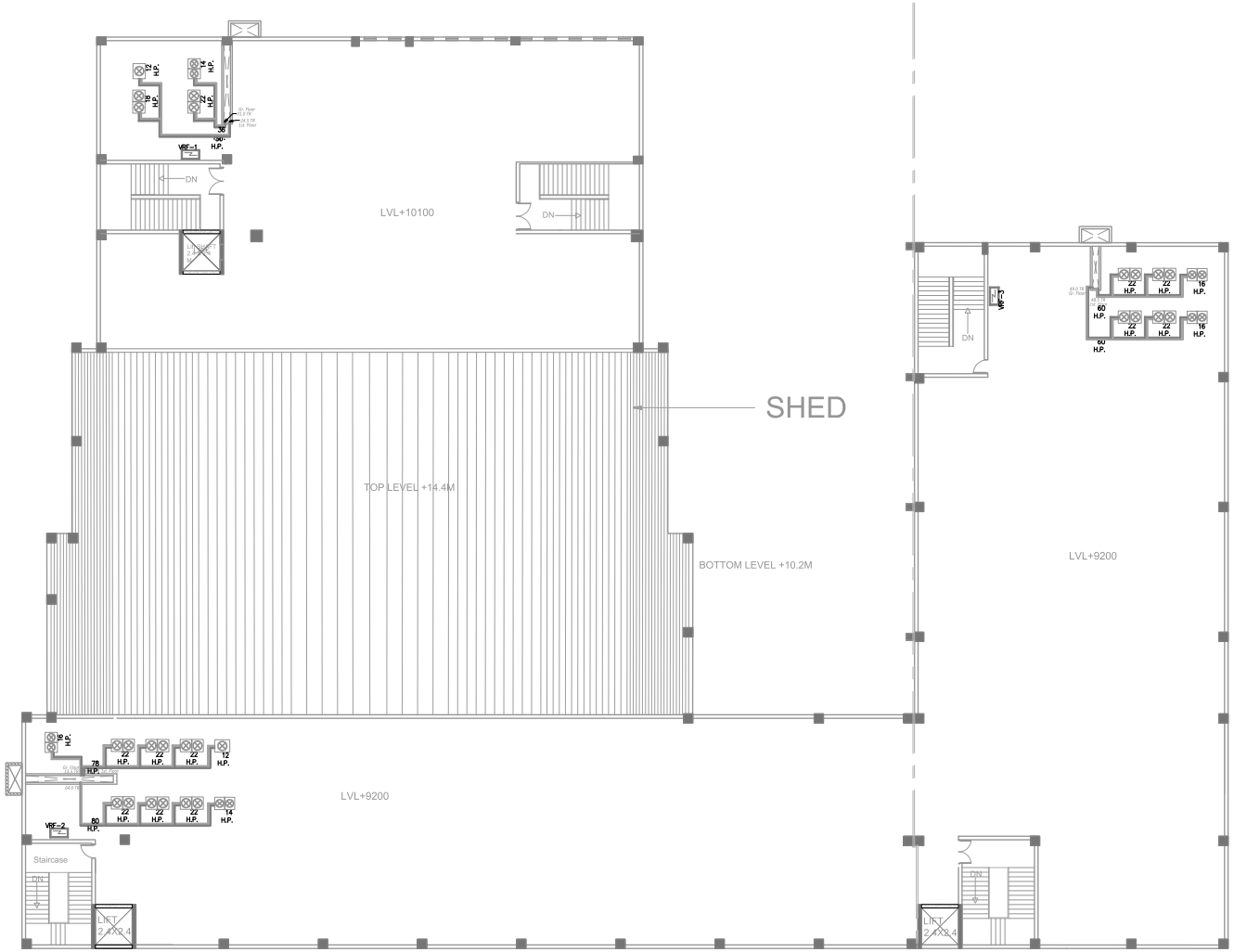
SYMBOL	DESCRIPTION
	YARD HYDRANT/ FIRE HYDRANT
	SPRINKLER
	SMOKE DETECTOR

PURPOSE:
TENDER DRAWING

Client- BAREILLY SMART CITY LTD.		
Project- GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North:	Dwg No: FF-01-02
Drawn by: AKS	Checked by: NG	Date: 06.11.20
Title: FIREFIGHTING FIRST FLOOR PLAN		



<div>GENERAL NOTES:</div> <div>1. All dimensions are in metres and are dimensions unless otherwise specified.</div> <div>2. All levels are in millimetres and are finished unless otherwise specified. All levels are mentioned in the section.</div> <div>3. Do not scale drawings. Only written dimensions shall be followed, any discrepancy noted shall be brought to the notice of the Architect prior to the execution.</div> <div>4. For details such as pathways, fencing, railing, grills, lighting fixtures, street sections etc. refer relevant architectural/landscape drawings.</div>	REVISION	DATE	CHECKED BY	<div>This drawing is copyright. It is the property of the Project Management Consultant and is not to be reproduced, copied, handed over to a third party or used for any purpose other than for which it has been issued.</div>	<div>PURPOSE:</div> <div>TENDER DRAWING</div>	Client-	BAREILLY SMART CITY LTD.		
	Project- GIC INCUBATION CENTRE AND AUDITORIUM								
	Scale: Not to Scale @ A3	North: 	Dwg No: UT-01-02						
	Drawn by: AKS	Checked by: NG	Date: 06.11.20						
	Title: HVAC GROUND FLOOR PLAN								



GENERAL NOTES:

1. All dimensions are in metres and are dimensions unless otherwise specified.
2. All levels are in millimetres and are finished unless otherwise specified. All levels are mentioned in the section.
3. Do not scale drawings. Only written dimensions shall be followed, any discrepancy noted shall be brought to the notice of the Architect prior to the execution.
4. For details such as pathways, fencing, railing, grills, lighting fixtures, street sections etc. refer relevant architectural/landscape drawings.

REVISION	DATE	CHECKED BY

This drawing is copyright. It is the property of the Project Management Consultant and is not to be reproduced, copied, handed over to a third party or used for any purpose other than for which it has been issued.

PURPOSE:
TENDER DRAWING

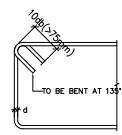
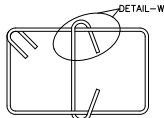
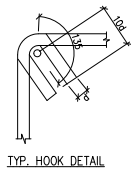
Client- BAREILLY SMART CITY LTD.		
Project- GIC INCUBATION CENTRE AND AUDITORIUM		
Scale: Not to Scale @ A3	North:	Dwg No: UT-01-04
Drawn by: AKS	Checked by: NG	Date: 06.11.20
Title: HVAC TERRACE FLOOR PLAN		

COLUMN SCHEDULES FOR TOWER & NON TOWER AREA

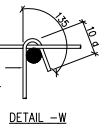
COLUMN MARK	COLUMN SIZE	FOUNDATION TO GROUND FLOOR LVL. (BASEMENT ROOF LVL.)	GROUND FLOOR LVL. TO FIRST FLOOR LVL.	FIRST FLOOR LVL. TO TERMINATION LVL.	TIES
C1	600	A= 4-32ϕ B= 4-32ϕ C= 4-25ϕ D= 4-25ϕ E= 2-25ϕ	A= 4-32ϕ B= 4-32ϕ C= 4-25ϕ D= 4-25ϕ E= 2-25ϕ	A= 4-32ϕ B= 4-32ϕ C= 4-25ϕ D= 4-25ϕ E= 2-25ϕ	
C2	600	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 4-25ϕ E= 4-25ϕ	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 4-25ϕ E= 4-25ϕ	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 4-25ϕ E= 4-25ϕ	
C3	750	A= 4-25ϕ B= 4-25ϕ C= 4-20ϕ D= 2-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ	A= 4-25ϕ B= 4-25ϕ C= 4-20ϕ D= 2-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ	A= 4-25ϕ B= 4-25ϕ C= 4-20ϕ D= 2-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ	
C4	600	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 4-20ϕ E= 4-20ϕ	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 4-20ϕ E= 4-20ϕ	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 4-20ϕ E= 4-20ϕ	
C5	600	A= 4-32ϕ B= 4-32ϕ C= 4-32ϕ D= 4-25ϕ E= 4-25ϕ	A= 4-32ϕ B= 4-32ϕ C= 4-32ϕ D= 4-25ϕ E= 4-25ϕ	A= 4-32ϕ B= 4-32ϕ C= 4-32ϕ D= 4-25ϕ E= 4-25ϕ	
C6	600	A= 4-20ϕ B= 4-16ϕ C= 4-16ϕ D= 4-16ϕ E= 4-16ϕ	A= 4-20ϕ B= 4-16ϕ C= 4-16ϕ D= 4-16ϕ E= 4-16ϕ	A= 4-20ϕ B= 4-16ϕ C= 4-16ϕ D= 4-16ϕ E= 4-16ϕ	
C6A	450	A= 4-20ϕ B= 4-20ϕ C= 4-20ϕ			
C7	750	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 4-25ϕ E= 4-25ϕ F= 4-25ϕ G= 2-20ϕ			
C7A	500	A= 4-25ϕ B= 4-20ϕ C= 4-20ϕ	A= 4-20ϕ B= 4-20ϕ C= 4-20ϕ	A= 4-20ϕ B= 4-20ϕ C= 4-20ϕ	
C8	750	A= 4-20ϕ B= 4-20ϕ C= 4-20ϕ D= 2-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ	A= 4-20ϕ B= 4-20ϕ C= 4-20ϕ D= 2-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ		
C9	750	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 4-25ϕ E= 4-25ϕ F= 4-25ϕ G= 2-20ϕ	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 4-25ϕ E= 4-25ϕ F= 4-25ϕ G= 2-20ϕ	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 4-25ϕ E= 4-25ϕ F= 4-25ϕ G= 2-20ϕ	
C10	750	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 2-25ϕ E= 2-25ϕ	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 2-25ϕ E= 2-25ϕ	A= 4-25ϕ B= 4-25ϕ C= 4-25ϕ D= 2-25ϕ E= 2-25ϕ	

SHEAR WALL SCHEDULES FOR TOWER AREA

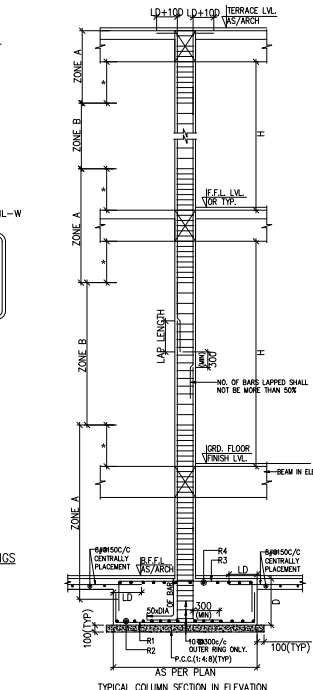
SHEAR WALL MARK	SHEAR WALL SIZE	FOUNDATION TO GROUND FLOOR LVL. (BASEMENT ROOF LVL.)	GROUND FLOOR LVL. TO FIRST FLOOR LVL.	FIRST FLOOR LVL. TO TERMINATION LVL.	TIES
SW1	2860 600 1660 600	A= 8-25ϕ B= 8-25ϕ C= 8-25ϕ D= 4-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ H= 2-20ϕ	A= 8-25ϕ B= 8-25ϕ C= 8-25ϕ D= 4-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ H= 2-20ϕ	A= 8-25ϕ B= 8-25ϕ C= 8-25ϕ D= 4-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ H= 2-20ϕ	
SW2	2860 600 1660 600	A= 8-25ϕ B= 8-25ϕ C= 8-25ϕ D= 4-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ H= 2-20ϕ	A= 8-25ϕ B= 8-25ϕ C= 8-25ϕ D= 4-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ H= 2-20ϕ	A= 8-25ϕ B= 8-25ϕ C= 8-25ϕ D= 4-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ H= 2-20ϕ	
SW3	2860 600 1660 600	A= 8-25ϕ B= 8-25ϕ C= 8-25ϕ D= 4-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ H= 2-20ϕ	A= 8-25ϕ B= 8-25ϕ C= 8-25ϕ D= 4-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ H= 2-20ϕ	A= 8-25ϕ B= 8-25ϕ C= 8-25ϕ D= 4-20ϕ E= 4-20ϕ F= 4-20ϕ G= 2-20ϕ H= 2-20ϕ	



DETAILS OF 135° HOOK TO BE PROVIDED TO ALL RINGS



CROSS THE TIE MUST ENGAGE PERIPHERAL TIE ALONG WITH VERTICAL BAR.



- ZONE A - 10 875/c (OUTER TIES) + 8 875/c (INNER TIES)
- ZONE B - 8 875/c (OUTER TIES) + 8 875/c (INNER TIES)
- IN LAP PORTION STIRRUPS SPACING SHALL BE 150mm/c (MIN.)
- ZONE A - 8 875/c (OUTER TIES) + 8 875/c (INNER TIES)
- ZONE B - 8 875/c (OUTER TIES) + 8 875/c (INNER TIES)
- IN LAP PORTION STIRRUPS SPACING SHALL BE 150mm/c (MIN.)
- ZONE A - 10 875/c (OUTER TIES) + 8 875/c (INNER TIES)
- ZONE B - 8 875/c (OUTER TIES) + 8 875/c (INNER TIES)
- IN LAP PORTION STIRRUPS SPACING SHALL BE 150mm/c (MIN.)
- ZONE A - 8 875/c (OUTER TIES) + 8 875/c (INNER TIES)
- ZONE B - 8 875/c (OUTER TIES) + 8 875/c (INNER TIES)
- IN LAP PORTION STIRRUPS SPACING SHALL BE 150mm/c (MIN.)

GENERAL NOTES -

NOTES & REFERENCES

1. READ THIS DRAWING IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWINGS. ANY DISCREPANCY FROM DRAWING SHALL BE BROUGHT TO THE NOTICE OF CONSULTANT.
2. ALL DIMENSIONS & LEVELS ARE IN MILLIMETERS.
3. DO NOT SCALE ANY DIMENSION.
4. CONTAIN LOCATION OF WALLS WITH RELEVANT HATCH DRIS.
5. FOR R.C.C. WORK USE DESIGN AS/SHEDULE CONFORMING TO IS 456 : 2000 OR AS SPECIFIED IN RESPECTIVE DWG.
6. THE REINFORCEMENT SHALL BE COUNTERED SPOPPING BARS (C/S) OR T.A.C. BARS RE-5000 HAVING YIELD STRENGTH NOT LESS THAN 500 N/mm² AND CONFORMING TO IS 1786 : 2008.
7. THE CLEAR COVER TO THE REINFORCEMENT SHALL BE AS FOLLOWS:-
 - (a) FOUNDATION : 50 mm surface in contact with earth
 - (b) COLUMN : 40 mm
 - (c) BEAMS (top & bottom) : 30 mm side cover 25mm
 - (d) SLAB : 20 mm
 - (e) CHALKS/CANOPY : 25 mm
 - (f) R.C.C. WALL : 25 mm
8. NORMAL COVER & THE DEPTH OF CONCRETE COVER TO ALL STEEL REINFORCEMENT INCLUDING UNITS/TEST STRIPS.
9. NOT MORE THAN ONE OF THE BARS SHALL BE LAPPED AT ANY SECTION LAPS CLOSE TO THE MID SPAN IN BOTTOM BARS & CLOSE TO SUPPORTS IN TOP BARS SHALL BE AVOIDED.
10. ALL R.C.C. TO BE MACHINE WELDED, VIBRATED AND CURED THOROUGHLY AS PER IS 456-2000.
11. ALL FORMS ARE CENTRALLY PLACED WITH RESPECTED TO THE CENTER LINE OF COLUMN.
12. REINFORCEMENT SHALL BE PROVIDED IN TWO LAYERS WHEREVER FOUND NECESSARY WITH SPACER SPACER BAR TO BE PROVIDED BETWEEN TWO LAYERS OF REINFORCEMENTS AS PER IS-456.
13. ALL DIMENSIONS MUST BE CHECKED WITH ARCHITECT'S DRAWS & IN CASE OF ANY DISCREPANCY ARCHITECT'S DRAWS SHALL PREVAIL.
14. ALL CONSTRUCTION JOINTS SHALL BE APPROVED BY CONSULTANT ON THE BASIS OF SOME PREPARED BY CONTRACTOR.
15. TOP AND BOTTOM EXTRA BARS IN BEAMS TO EXTEND BEYOND THE FACE OF SUPPORT AS SHOWN IN AND UNLESS OTHERWISE SPECIFIED.
16. THE FIRST STRIPS IN BEAMS SHALL BE AT A DISTANCE OF 50MM FROM THE JOINT FACE THE SPECIAL CONSTRUCTION REINFORCEMENT SHALL BE PROVIDED THROUGH THE JOINT AT THE GIVEN SPACING & COLUMNS.
17. ALL WALLS ARE REINFORCED WITH 100mm/c (MIN.)
18. PROVIDE DIST STEEL OVER EXTRA TOP BARS IS 8mm/c (MIN.)
19. BLACK COTTON ROPE OF ENOUGH SIZE IN FIVE LITS SHALL BE FULLY REINFORCED.
20. ALL LOOSE PROCKETS OF SOIL BELOW FOUNDATION SHALL BE FILLED WITH M.C.C.1:4:8
21. FORMWORK ARE DESIGNED FOR A SAFE BEARING CAPACITY OF 7 T/M² AT 100mm BELOW N.G.L. AS PER SOIL TEST REPORT. THAT TO BE CONFIRM BEFORE EXECUTION OF WORK.
22. THIS BUILDING HAS BEEN DESIGNED FOR CH1 FLOOR ONLY.

SPL. NOTES-

1. IN NORMAL CIRCUMSTANCES AND WHERE ORDINARY PORTLAND CEMENT IS USED, FORMS MAY GENERALLY BE REMOVED AFTER THE EXPIRY OF THE FOLLOWING PERIODS:-
 - * WALLS (COLUMNS AND BEAMS) : 36 to 48 HOURS
 - * SLABS (PROPS LEFT UNDER) : 3 DAYS
 - * BEAM COTTIES (PROPS LEFT UNDER) : 7 DAYS
 - * REMOVAL OF PROPS UNDER BEAMS : 7 DAYS
 - * REMOVAL OF PROPS UNDER SLABS : 14 DAYS
 - * REMOVAL OF PROPS UNDER ROOFS : 14 DAYS
 - * REMOVAL OF PROPS UNDER ROOFS : 14 DAYS
 - * REMOVAL OF PROPS UNDER ROOFS : 14 DAYS
2. WHERE POSSIBLE, THE FORMWORK SHALL BE LEFT LONGER, AS IT HELPS ADJUST CURING.
3. THE CENTERING SUPPORTING THE OVERHANGING STRUCTURAL MEMBERS SHALL NOT BE REMOVED UNTIL SUFFICIENT BRACING UNDER THE BEAMS HAS BEEN PROVIDED IN BUILDING MEMORY OR OTHERWISE.
4. THE CENTERING OF CANTILEVER BEAMS & SLABS SHALL BE REMOVED STARTING FROM OVERHANGING EDGE.
5. UNLESS OTHERWISE INDICATED IN THE DRAWING, CONSTRUCTION JOINTS IN FLOORS SHALL BE LOCATED NEAR THE MID SPAN OF STRUCTURAL MEMBERS (SLABS, SECONDARY BEAMS). UNLESS A SECONDARY BEAM REQUESTS A MAIN BEAM AT THIS POSITION. IN SUCH CASE, THE JOINTS IN THE MAIN BEAM SHALL BE OFFSET BY DISTANCE EQUAL TO THREE TIMES THE WIDTH OF THAT A SECONDARY BEAM.
6. WHILE FORMING CONCRETE THE MAXIMUM FREE FALL SHALL NOT BE MORE THAN 1500 mm. TO AVOID SEGREGATION.
7. STRICT SUPERVISION SHALL BE DONE AS PER NATIONAL BUILDING CODE (RECENT VERSION).
8. ALL SUPERVISION ON CONSTRUCTION WORKS SHALL BE DONE BY ENGINEER IN CHARGE OF SITE.
9. ANY DISCREPANCY IN EXISTENCE OF WORK AS/ NOT DONE AS PER STRUCTURAL DRAWING WILL BE TOTALLY RESPONSIBLE OF ENGINEER IN CHARGE OF SITE.

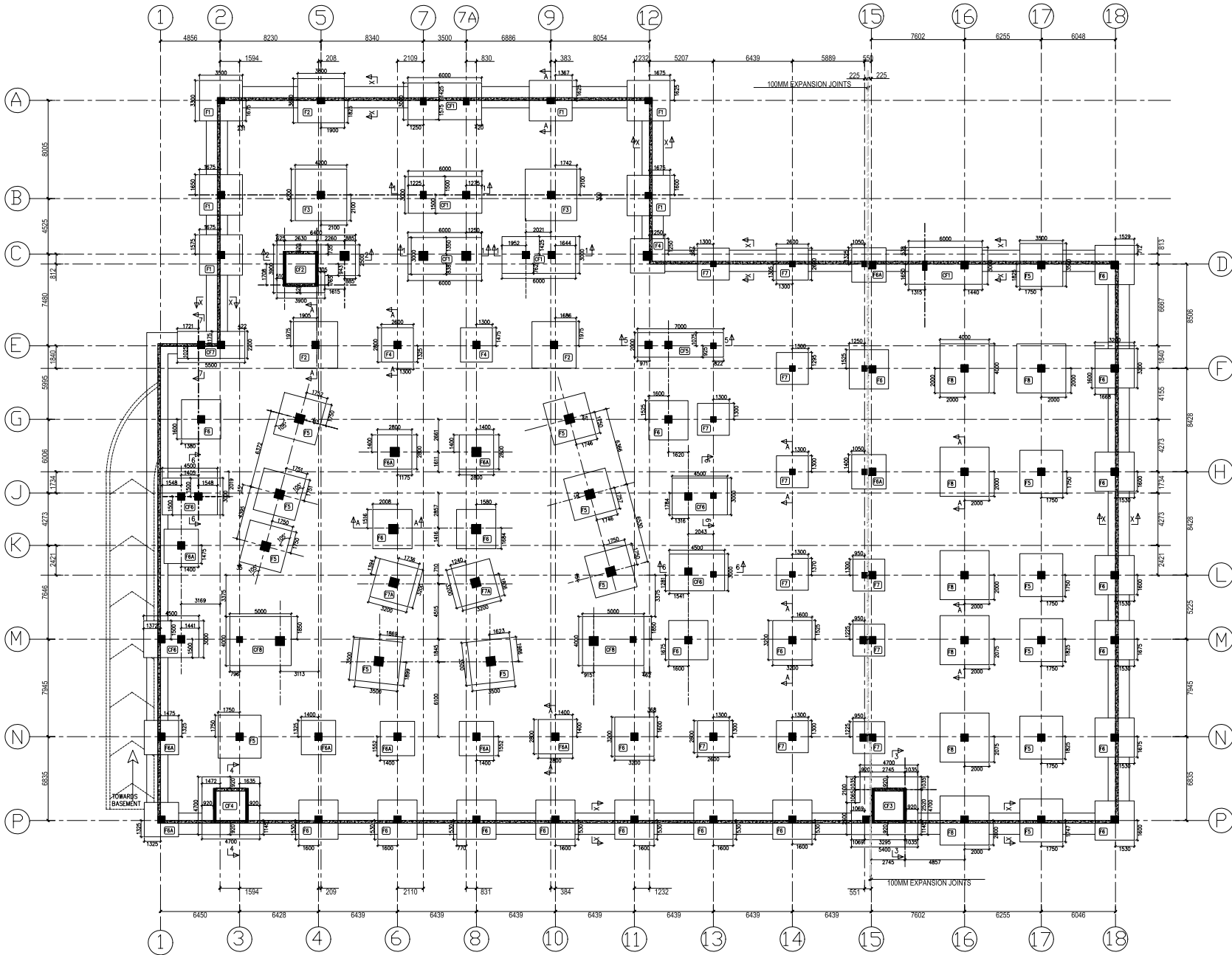
R2	19-11-2020	FOR APPROVAL
R1	03-11-2020	FOR APPROVAL
R0	02-11-2020	FOR APPROVAL
REV.NO.	DATE	REVISION

CLIENT NAME: BAREILLY SMART CITY LTD.

PROJECT TITLE: AUDITORIUM & INCUBATION CENTER GC BAREILLY

DRAWING TITLE :	DWG NO.
COLUMN & SHEAR WALL SCHEDULES FOR TOWER & NON TOWER AREA	ST-01-02
SCALE:-	N.T.S
DRAWN BY:-	NASEEM/RAJESH
DESIGNED BY:-	ROSHAN
CHECKED BY:-	ROSHAN
DATE:-	02-11-2020

DRAWING RELEASED FOR:	
<input checked="" type="checkbox"/> APPROVAL	<input type="checkbox"/> FOR TENDER
<input type="checkbox"/> ADVANCE COPY	<input type="checkbox"/> CONSTRUCTION
ARCHITECT'S SIGN	OWNER'S SIGN



FOUNDATION PLAN

GENERAL NOTES -

NOTES & REFERENCES

1. READ THIS DRAWING IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWINGS, ANY DISCREPANCY FROM THIS SHALL BE BROUGHT TO THE NOTICE OF CONSULTANT.
2. ALL DIMENSIONS & LEVELS ARE IN MILLIMETERS.
3. DO NOT SCALE ANY DIMENSION.
4. CONFIRM LOCATION OF WALLS WITH RELEVANT WORK DROPS.
5. FOR R.C.C. WORK USE DESIGN MIX AS SPECIFIED IN IS 456 : 2000 OR AS SPECIFIED IN RESPECTIVE DWG.
6. THE REINFORCEMENT SHALL BE COLLECTED FROM BEAMS (C12) OR T12, BARS R1-5000 HAVING YIELD STRENGTH NOT LESS THAN 500 N/mm² AND CONFORMING TO IS 1786 : 2008.
7. THE CLEAR COVER TO THE REINFORCEMENT SHALL BE AS FOLLOWS:-
 - (a) FOUNDATION : 50 mm surfaces in contact with earth
 - (b) COLUMNS : 40 mm
 - (c) BEAMS (top & bottom) : 30 mm side cover 25mm
 - (d) SLAB : 20 mm
 - (e) CHIMNEYS/CANOPY : 20 mm
 - (f) R.C.C. WALL : 25 mm
8. MINIMUM COVER IS THE DEPTH OF CONCRETE COVER TO ALL STEEL REINFORCEMENT INCLUDING LAPS/ TIES/ STRIPS.
9. NOT MORE THAN ONE OF THE BARS SHALL BE LAPPED AT ANY SECTION LAPS CLOSE TO THE MID SPAN IN BOTTOM BARS & CLOSE TO SUPPORTS IN TOP BARS SHALL BE AVOIDED.
10. INDICATES TOP BARS
11. INDICATES BOTTOM BARS
12. INDICATES OPENING IN STRUCTURAL MEMBER
13. ALL DIMENSIONS MUST BE CHECKED WITH ARCHITECT'S DRAWING IN CASE OF ANY DISCREPANCY ARCHITECT'S DRAWING SHALL PREVAIL.
14. ALL CONSTRUCTION JOINTS SHALL BE APPROVED BY CONSULTANT ON THE BASIS OF SOME PREPARED BY CONTRACTOR.
15. TOP AND BOTTOM EXTRA BARS IN BEAMS TO EXTEND BEYOND THE FACE OF SUPPORT AS SHOWN IN AND UNLESS OTHERWISE SPECIFIED.
16. THE FIRST STRIPS IN BEAMS SHALL BE AT A DISTANCE OF 50MM FROM THE JOINT FACE THE SPECIAL OVERLAP REINFORCEMENT SHALL BE PROVIDED THROUGH THE JOINT AT THE GIVEN SPACING IN COLUMNS.
17. IF WALLS ARE NOT WALLS UNDER BEAMS, THE WALLS SHALL NOT BE MORE THAN 1000 mm. TO AVOID SEGREGATION.
18. PROVIDE DIST STEEL OVER EXTRA TOP BARS IS 8mm @ 1/4 (Ø)
19. BLACK COTTON OIL IS ENCLOSED IN FIVE PITS, SHALL BE FULLY REMOVED.
20. ALL LOOSE PRODUCTS OF SOIL BELOW FOUNDATION SHALL BE FILLED WITH M.C.C. 1:4:8.
21. FOOTINGS ARE DESIGNED FOR A SAFE BEARING CAPACITY OF 1 T/M AT 100mm DEPTH BELOW N.G.L. AS PER SOIL TEST REPORT THAT TO BE CONFIRM BEFORE EXECUTION OF WORK.
22. THIS BUILDING HAS BEEN DESIGNED FOR CH1 FLOOR ONLY.

SPL. NOTES-

1. IN NORMAL CIRCUMSTANCES AND WHERE ORDINARY PORTLAND CEMENT IS USED, FORMING MAY GENERALLY BE REMOVED AFTER THE EXPIRY OF THE FOLLOWING PERIODS:
 - WALLS, COLUMNS AND VERTICAL FACES OF ALL MEMBERS : 36 TO 48 HOURS
 - SLAB (PROPS LEFT UNDER) : 3 DAYS
 - BEAM (PROPS LEFT UNDER) : 7 DAYS
 - REMOVAL OF PROPS UNDER SLABS : 14 DAYS
 - REMOVAL OF PROPS UNDER BEAMS : 14 DAYS
 - REMOVAL OF PROPS OVER BEAMS : 14 DAYS
 - REMOVAL OF PROPS OVER 6000 : 14 DAYS
2. WHERE POSSIBLE, THE FORMWORK SHALL BE LEFT LONGER, AS IT WOULD ADJUST DURING THE CURING PERIOD. THE OVERHANGING STRUCTURAL MEMBERS SHALL NOT BE REMOVED UNTIL SUFFICIENT FRAMING LOAD OVER THE BEAMS HAS BEEN ATTAINED BY BUILDING MASONRY OR OTHERWISE.
3. THE CURING OF CANTILEVER BEAMS & SLABS SHALL BE REMOVED STARTING FROM OVERHANGING EDGE.
4. UNLESS OTHERWISE INDICATED IN THE DRAWING, CONSTRUCTION JOINTS IN FLOORS SHALL BE LOCATED NEAR THE MID SPAN OF STRUCTURAL MEMBERS (SLAB, SECONDARY BEAMS), UNLESS A SECONDARY BEAM REQUESTED A MAIN BEAM AT THIS POINT. IN WHICH CASE, THE JOINTS IN THE MAIN BEAM SHALL BE OFFSET BY DISTANCE EQUAL TO THREE TIMES THE WIDTH OF THAT A SECONDARY BEAM.
5. WHILE FORMING CONCRETE THE MAXIMUM FREE FALL SHALL NOT BE MORE THAN 1000 mm. TO AVOID SEGREGATION.
6. STRICT SUPERVISION SHALL BE DONE AS PER NATIONAL BUILDING CODE (RECENT VERSION).
7. ALL SUPERVISION IN CONSTRUCTION WORK SHALL BE DONE BY ENGINEER IN CHARGE OF SITE.
8. ANY DISCREPANCY IN EXECUTION OF WORK AT/ SITE OR NOT DONE AS PER STRUCTURAL DRAWING SHALL BE TOTALLY RESPONSIBLE OF ENGINEER IN CHARGE OF SITE.

R2	19-11-2020	FOR APPROVAL
R1	03-11-2020	FOR APPROVAL
R0	02-11-2020	FOR APPROVAL

REV. NO. DATE REVISION

CLIENT NAME: BAREILLY SMART CITY LTD.

PROJECT TITLE: AUDITORIUM & INCUBATION CENTER GC BAREILLY

DRAWING TITLE : DWG NO.

FOUNDATION PLAN & DETAILS FOR TOWER & NON TOWER AREA ST-01-03

SCALE:-	N.T.S.
DRAWN BY:-	NASEM/RAJESH
DESIGNED BY:-	ROSHAN
CHECKED BY:-	ROSHAN
DATE:-	02-11-2020

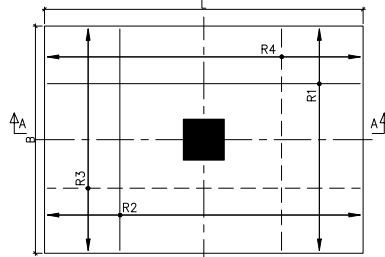
DRAWING RELEASED FOR:

- ☒ APPROVAL
 ☐ FOR TENDER
 ☐ ADVANCE COPY
 ☐ CONSTRUCTION

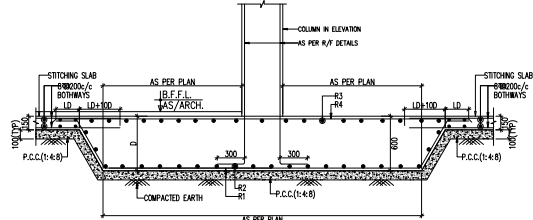
ARCHITECT'S SIGN OWNER'S SIGN

FOOTING SCHEDULES:-

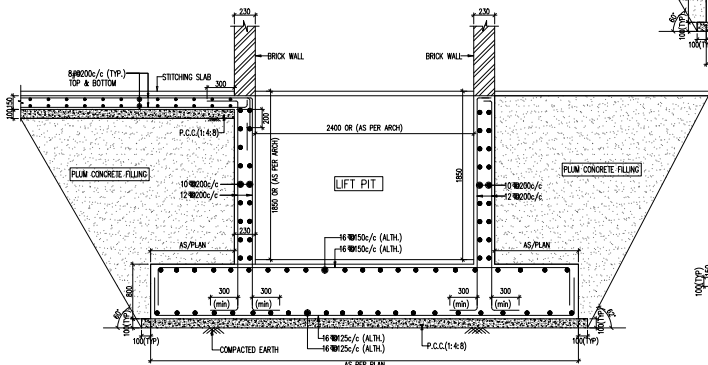
FOOTING MARK	SIZE				BOTTOM REINFORCEMENT		REF. SEC.
	L	B	D	d	ALONG THE LENGTH (R1)	ALONG THE WIDTH (R2)	
F1	3500	3300	750	---	12 Φ 25/c	12 Φ 25/c	1-1
F2	3800	3600	750	---	12 Φ 25/c	12 Φ 25/c	2-2
F3	4200	4000	900	---	16 Φ 150/c	16 Φ 150/c	3-3
F4	2800	2800	600	---	12 Φ 100/c	12 Φ 100/c	4-4
F5	3500	3500	750	---	16 Φ 25/c	16 Φ 25/c	A-A
F6	3200	3200	750	---	12 Φ 100/c	12 Φ 100/c	A-A
F6A	2800	2800	600	---	12 Φ 100/c	12 Φ 100/c	A-A
F7	2600	2600	600	---	12 Φ 25/c	12 Φ 25/c	A-A
F7A	2600	2600	600	---	12 Φ 25/c	12 Φ 25/c	A-A
F8	4000	4000	900	---	16 Φ 25/c	16 Φ 25/c	A-A
CF1	6000	3000	600	---	12 Φ 150/c	16 Φ 25/c	1-1
CF2	AS/PLAN	AS PER R/F. REFER SECTION					2-2
CF3	AS/PLAN	AS PER R/F. REFER SECTION					3-3
CF4	4700	4700	AS PER R/F. REFER SECTION				4-4
CF5	7000	2000	AS PER R/F. REFER SECTION				5-5
CF6	4500	3000	AS PER R/F. REFER SECTION				6-6
CF7	5500	2200	AS PER R/F. REFER SECTION				7-7
CF8	4000	5000	AS PER R/F. REFER SECTION				1-1



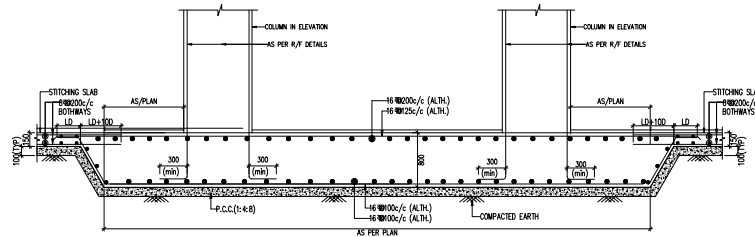
TYP. ISOLATED FOOTING PLAN FOR (F1 TO F8)



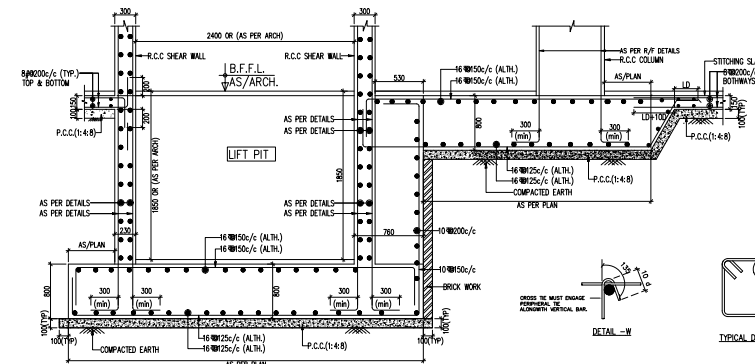
TYP. ISOLATED FOOTING DETAILS FOR (F1 TO F8)
(SECTION A-A)



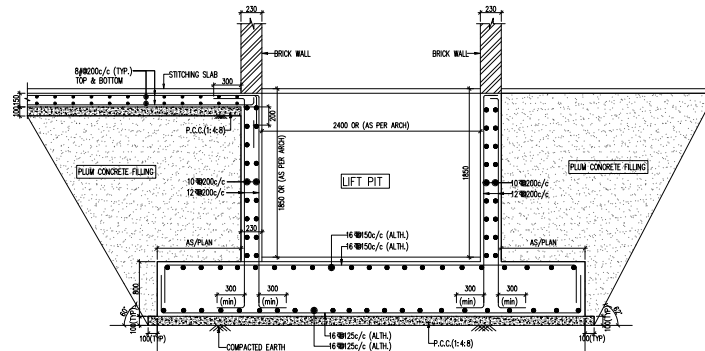
TYP. LIFT PIT DETAIL FOOTING FOR (CF4)
(SECTION 4-4)



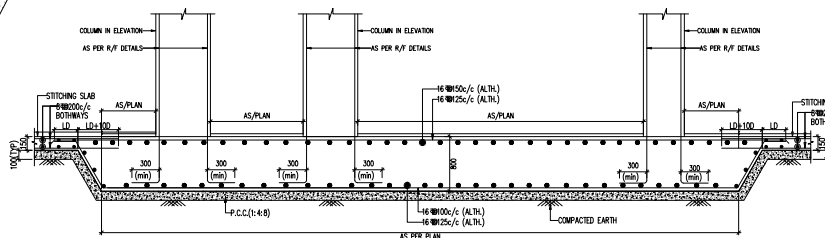
TYPICAL COMBINED FOOTING DETAILS FOR (CF1)
(SECTION 1-1)



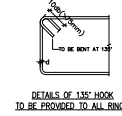
TYP. LIFT PIT DETAIL FOOTING FOR (CF2)
(SECTION 2-2)



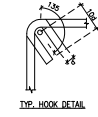
TYP. LIFT PIT DETAIL FOOTING FOR (CF3)
(SECTION 3-3)



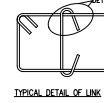
TYPICAL COMBINED FOOTING DETAILS FOR (CF5)
(SECTION 5-5)



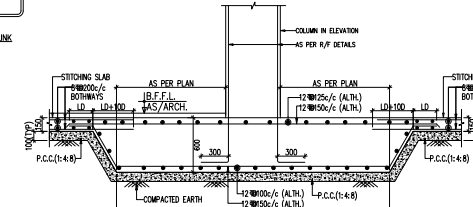
DETAILS OF 135° HOOK
TO BE PROVIDED TO ALL RINGS



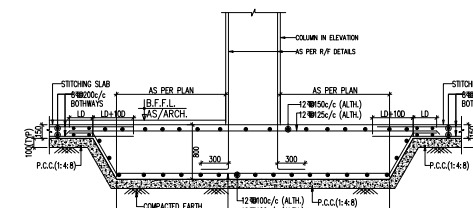
TYP. HOOK DETAIL



TYPICAL DETAIL OF LINK



TYP. LIFT PIT DETAIL FOOTING FOR (CF6)
(SECTION 6-6)



TYP. LIFT PIT DETAIL FOOTING FOR (CF7)
(SECTION 7-7)

GENERAL NOTES -

NOTES & REFERENCES

1. READ THIS DRAWING IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWINGS, ANY DISCREPANCY TO BE RECTIFIED BY THE ARCHITECT.
2. ALL DIMENSIONS & LEVELS ARE IN METERS.
3. DO NOT SCALE ANY DIMENSIONS.
4. CONTAIN LOCATION OF WALLS WITH RELEVANT ARCH. DRS.
5. FOR R.C.C. WORK, THE DESIGN MAY ALSO CONFORMING TO IS 456 : 2000 OR AS SPECIFIED IN RESPECTIVE DRS.
6. THE REINFORCEMENT SHALL BE COLLECTED FROM THE BASE (C/L) OR TAIL, BARS RE-5000 HAVING YIELD STRENGTH NOT LESS THAN 500 N/mm² AND CONFORMING TO IS 1786 : 2008.
7. THE CLEAR COVER TO THE REINFORCEMENT SHALL BE AS FOLLOWS:-
 - (a) FOUNDATION : 50 mm
 - (b) COLUMN : 40 mm
 - (c) BEAMS (top & bottom) : 30 mm
 - (d) SLAB : 20 mm
 - (e) CHANALS/CANOPY : 25 mm
 - (f) R.C.C. WALL : 25 mm
8. NORMAL COVER IS THE DEPTH OF CONCRETE COVER TO ALL STEEL REINFORCEMENT INCLUDING UNITS/VEY STRIPS.
9. NOT MORE THAN ONE OF THE BARS SHALL BE LAPPED AT ANY SECTION LAID CLOSE TO THE MID SPAN IN BOTTOM BARS & CLOSE TO SUPPORTS IN TOP BARS SHALL BE AVOIDED.
10. INDICATES TOP BARS
11. INDICATES BOTTOM BARS
12. ALL DIMENSIONS MUST BE CHECKED WITH ARCHITECT'S DRS. IN CASE OF ANY DISCREPANCY ARCHITECT'S DRS. SHALL PREVAIL.
13. ALL CONSTRUCTION JOINTS SHALL BE APPROVED BY CONSULTANT ON THE BASIS OF SOME PREPARED BY CONTRACTOR.
14. TOP AND BOTTOM EXTRA BARS IN BEAMS TO EXTEND BEYOND THE FACE OF SUPPORT AS SHOWN IN DRG UNLESS OTHERWISE SPECIFIED.
15. THE FIRST STRIPS IN BEAMS SHALL BE AT A DISTANCE OF 50MM FROM THE JOINT FACE THE SPECIAL CONFINING REINFORCEMENT SHALL BE PROVIDED THROUGHOUT THE JOINT AT THE GIVEN SPACING IN COLUMNS.
16. IN WALLS ARE FIRST WALLS UNLESS OTHERWISE SPECIFIED.
17. PROVIDE DIST. STEEL OVER TOP BARS IS 8mm Φ @ 150
18. BLACK COTTON OIL / ENOCHMENTED IN FINE PLY, SHALL BE FULLY REPAIRED.
19. ALL LOOSE PRODUCTS OF SOIL BELOW FOUNDATION SHALL BE FILLED WITH P.C.C. (1:4:8)
20. FOOTINGS ARE DESIGNED FOR A SOIL BEARING CAPACITY OF 150 kN/m² AT 150mm DEPTH BELOW N.G.L. AS PER SOIL TEST REPORT, THAT TO BE CONFIRMED BEFORE EXECUTION OF WORK.
21. THIS BUILDING HAS BEEN DESIGNED FOR CH-1 FLOOR ONLY.

SPL NOTES:-

1. IN NORMAL CIRCUMSTANCES AND WHERE ORDINARY PORTLAND CEMENT IS USED, FILING MAY GENERALLY BE REMOVED AFTER THE EXPIRY OF THE FOLLOWING PERIODS:-
 - WALLS, COLUMNS AND VERTICAL FACES OF ALL MEMBERS : 36 TO 48 HOURS
 - SLAB (PROPS LEFT UNDER) : 3 DAYS
 - BEAM (PROPS LEFT UNDER) : 7 DAYS
 - REMOVAL OF PROPS UNDER SLABS : 7 DAYS
 - REMOVAL OF PROPS UNDER BEAMS : 14 DAYS
 - REMOVAL OF PROPS OVER 6000 : 21 DAYS
2. WHERE POSSIBLE, THE FORMWORK SHALL BE LEFT LONGER, AS IT HELPS AVOID CRACKING.
3. THE CENTERING SUPPORTING THE OVERHANGING STRUCTURAL MEMBERS SHALL NOT BE REMOVED UNTIL SUFFICIENT BRACING LOAD OVER THE BEAMS HAS BEEN ATTAINED BY BUILDING MASONRY OR OTHERWISE.
4. THE CENTERING OF CANTILEVER BEAMS & SLABS SHALL BE REMOVED STARTING FROM OVERHANGING EDGE.
5. UNLESS OTHERWISE INDICATED IN THE DRAWING, CONSTRUCTION JOINTS IN FLOORS SHALL BE LOCATED NEAR THE MID SPAN OF STRUCTURAL MEMBERS, SLABS, SECONDARY BEAMS, UNLESS A SECONDARY BEAM REQUESTS A MAIN BEAM AT THIS POINT, IN WHICH CASE, THE JOINTS IN THE MAIN BEAM SHALL BE OFFSET BY DISTANCE EQUAL TO THREE TIMES THE WIDTH OF THAT A SECONDARY BEAM.
6. WHILE FORMWORK CONCRETE THE MINIMUM FREE FALL SHALL NOT BE MORE THAN 1500 mm. TO AVOID SEGREGATION.
7. STRICT SUPERVISION SHALL BE DONE AS PER NATIONAL BUILDING CODE (RECENT VERSION).
8. ALL SUPERVISION IN CONSTRUCTION WORKS SHALL BE DONE BY ENGINEER IN CHARGE OF SITE.
9. ANY DISCREPANCY IN EXECUTION OF WORK AS/ SITE OR NOT DONE AS PER STRUCTURAL DRAWING SHALL BE TOTALLY RESPONSIBLE OF ENGINEER IN CHARGE OF SITE.

R2	19-11-2020	FOR APPROVAL
R1	03-11-2020	FOR APPROVAL
RO	02-11-2020	FOR APPROVAL
REV.NO.	DATE	REVISION

CLIENT NAME: BAREILLY SMART CITY LTD.

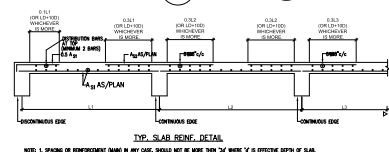
PROJECT TITLE: AUDITORIUM & INCUBATION CENTER GC BAREILLY

DRAWING TITLE : FOUNDATION DETAILS FOR TOWER & NON TOWER AREA

SCALE:- N.T.S.
DRAWN BY:- NASEEM/RAJESH
DESIGNED BY:- ROSHAN
CHECKED BY:- ROSHAN
DATE:- 02-11-2020

DWG NO. ST-01-04

DRAWING RELEASED FOR:
☒ APPROVAL ☐ FOR TENDER
☐ ADVANCE COPY ☐ CONSTRUCTION
ARCHITECT'S SIGN OWNER'S SIGN



SLAB REINFORCEMENT PLAN AT GROUND FLOOR LVL. OR (BASEMENT ROOF LVL.)
ALL SLABS SIZE 150MM THICKNESS (U.N.O)
(PROVIDE DIST. STEEL OVER EXTRA TOP BARS IS : 8#@200/C)

GENERAL NOTES -

NOTES & REFERENCES

1. READ THIS DRAWING IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWINGS, ANY DISCREPANCY IF FOUND SHALL BE BROUGHT TO THE NOTICE OF CONTRACTOR.
2. DIMENSIONS ARE GIVEN IN METERS AND MILLIMETERS. ALL DIMENSIONS SHALL BE TO FACE UNLESS SPECIFICALLY NOTED OTHERWISE.
3. DO NOT SCALE ANY DRAWING.
4. COORDINATION OF ALL WORK WITH RELEVANT AGENCIES.
5. SLOPE RATIO: WORK DESIGN MAX SLOPE WAS CONFIRMED TO BE 1:048 = 40% OR AS SPECIFIED IN RELEVANT DRAWINGS.
6. THE REINFORCEMENT SHALL BE CONSTRUCTED DEFORMED BARS AS F.C.C (OR T.B.) AND T.B. FIVE - 5000 METER LONG NOT MORE THAN 70% OF THE TOTAL LENGTH OF THE JOINT TO BE JOINTING TO L.S. 1750M - 2000M.
7. THE CLEAR COVER TO THE REINFORCEMENT SHALL BE AS FOLLOWS:-
- | | | |
|--------------------------|-------|-------------------------------|
| (a) Foundation | 50 MM | surface in contact with earth |
| (b) Columns | 50 MM | all other surfaces |
| (c) BEAMS (top & bottom) | 40 MM | side cover 25mm |
| (d) R.C.C. walls | 25 MM | |
| (e) CHANSELS/CHAMFER | 25 MM | |
| (f) S.L.C.C. walls | 20 MM | |
8. REINFORCEMENT OF THE DEPTH OF THE JOINT SHALL BE TO ALL STEEL REINFORCEMENT INCLUDING LUGGING 'TIE' STRIPS.
9. NOT MORE THAN 5% OF THE BARS SHALL BE LAPPED AT ANY SECTION LAPS CLOSE TO THE MID SPAN IN BOTTOM BARS AND CLOSE TO SUPPORTS IN TOP BARS SHALL BE AVOIDED.
10. INDICATES TOP BARS
11. INDICATES TOP BARS
12. INDICATES TOP BARS
13. INDICATES TOP BARS
14. ALL REINFORCING TO BE MACHINE MADE, WELDED AND CURVED THOROUGHLY AS PER IS 456-2000.
15. THE JOINTS ARE CENTRALLY PLACED WITH RESPECTED TO THE CENTER LINE OF COLUMN.
16. THE JOINTS ARE TO BE REINFORCED WITH REINFORCEMENT COVER NECESSARY WITH SPOKER PAGES BAR TO BE PROVIDED BETWEEN TWO LAYERS OF REINFORCEMENTS AS PER IS 456-2000.
17. ALL DIMENSIONS SHALL BE DONE BY ARCHITECT'S DESIGNER IN CASE OF ANY DISCREPANCY ARCHITECTS DROPS SHALL PREVAILE.
18. THE CONTRACTOR SHALL BE RESPONSIBLY APPROVED BY CONSULTANT ON THE BASIS OF SOMEONE PREPARED BY CONTRACTOR.
19. THE CONTRACTOR SHALL BE RESPONSIBLE TO BE AT EXTENSION OF THE FACE OF SUPPORT AS SHOWN IN DRAWING UNLESS OTHERWISE SPECIFIED.
20. THE JOINTS OF THE BEAMS SHALL BE AT A DISTANCE OF SOME FROM THE JOINT FACE OF THE BEAM. REINFORCEMENT SHALL BE PROVIDED THROUGHOUT THE JOINT AND ON EITHER SIDE OF THE JOINT.
21. ALL ANGLES ARE RIGHT ANGLES UNLESS OTHERWISE SPECIFIED.
22. PROVIDE 50% STEEL OVER EACH TOP BARS AND 50% STEEL UNDER EACH TOP BARS.
23. ALL REINFORCING SHALL BE DONE AS PER F.C.C. OR T.B. SHALL BE REINFORCED.
24. ALL REINFORCING SHALL BE DONE AS PER F.C.C. OR T.B. SHALL BE REINFORCED.
25. FOOTINGS ARE DESIGNED FOR A SAFE BEARING CAPACITY OF ≈ 7.5 T/M² AT ≈ 100 MM DEPTH BELOW GRADE OR AS PER TEST REPORT OF SOIL.
26. THIS BUILDING HAS BEEN DESIGN FOR F1.001 ONLY.

SPL. NOTES-

1. IN NORMAL, CONCRETE AND OTHER ORNAMENTAL PORTLAND CEMENT IS USED, FORMS MAY BE REMOVED 14 DAYS AFTER THE SETTING OF THE FOLLOWING PERIODS:
- | | |
|--|----------------|
| • WALLS, COLUMNS AND VERTICAL FACES OF ALL MEMBERS | 30 TO 48 HOURS |
| • SLABS, BEAMS AND OTHER HORIZONTAL MEMBERS | 7 TO 14 DAYS |
| • SMALL DETAILS (POPS) LEFT UNDECKED | 7 TO 14 DAYS |
| • FINISHES, PROTECTIVE COATINGS, ETC. | 7 TO 14 DAYS |
| • SPANNING OVER 6000" | 14 DAYS |
| • REMOVAL OF PROTECTIVE BARRIERS | 14 DAYS |
| • SPANNING UP TO 6000" | 14 DAYS |
| • REMOVAL OF THE OVERHANGING STRUCTURE | 14 DAYS |
2. WHERE POSSIBLE, THE FORMWORK SHALL BE LEFT UNDECKED, AS IT WILL ASSIST DURING THE CURE OF THE CONCRETE. IF THE FORMWORK IS TO BE REMOVED, IT SHOULD BE REMOVED WITH SUFFICIENT BALANCING LOAD ON THE BEARING HAS BEEN ACHIEVED BY BUILDING MASONRY OR STEEL BRACING.
3. THE CENTERING OF CANTILEVER BEAM & SLABS SHALL BE REMOVED STARTING FROM OUTWARD END OF THE BEAM OR SLAB.
4. UNLESS OTHERWISE SPECIFIED IN THE DRAWING, CONSTRUCTION JOINTS IN FLOORS SHALL BE LOCATED AT THE CENTER OF THE SPAN.
5. THE CONSTRUCTION JOINTS IN WALLS SHALL BE LOCATED AT THE CENTER OF THE SPAN. SHALL BE OPENED UP BY DETACHING COLD, TO TRIM THE SURFACE OF THAT A SECONDARY BENCH TO AVOID WEAK JOINTS.
6. WALL FORMWORK SHOULD BE REMOVED 14 DAYS AFTER SETTING OF CONCRETE 100 mm TO AVOID WEAK JOINTS.
7. STRICT SUPERVISION SHALL BE DONE AS PER THE NORMAL BUILDING CODE (RECENT VERSION).
8. THE CONSTRUCTION JOINTS SHALL BE LOCATED AT THE CENTER OF THE SPAN.
9. ANY DISCREPANCY IN EXISTENCE OF WORK AS PER THE SET OUT DRAWING, DRAWING WILL BE THE FINAL.

R1	23-12-2020	FOR APPROVAL
R0	18-12-2020	FOR APPROVAL

CLIENT NAME:	
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BAREILLY SMART CITY LTD.

PROJECT TITLE

AUDITORIUM & INCUBATION CENTER GIC BAREILLY

DRAWING TITLE :

DWG NO.

SLAB REINFORCEMENT PLAN AT GROUND
FLOOR LVL. OR (BASEMENT ROOF LVL.)

ST-01-06

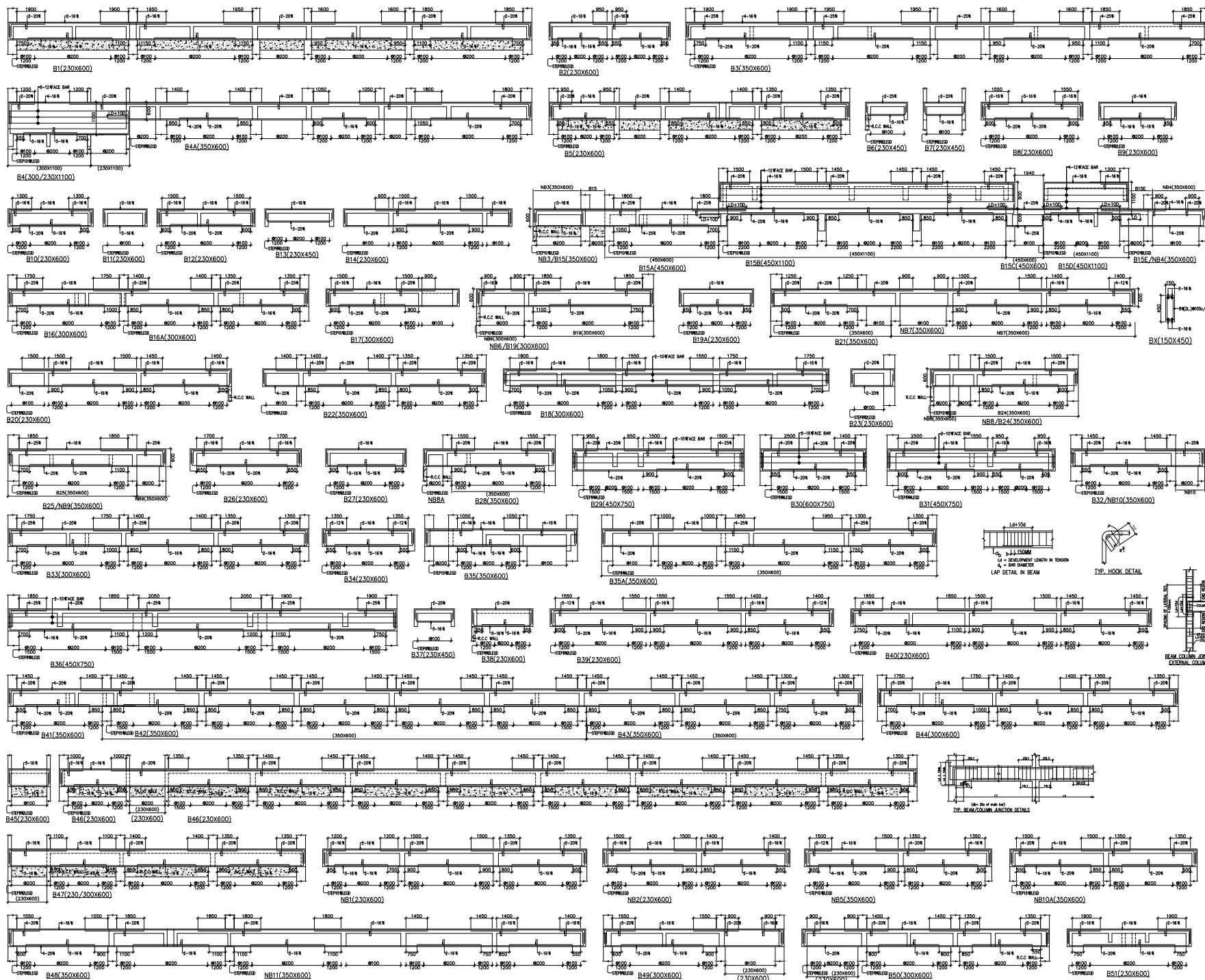
SCALE: -	N.T.S
DRAWN BY: -	NASIM
DESIGNED BY: -	ROSHAN
CHECKED BY: -	ROSHAN
DATE: -	18-12-2020

DRAWING RELEASED FOR:

- ☒ APPROVAL ☐ FOR TENDER
☐ ADVANCE COPY ☐ CONSTRUCTION

ARCHITECT'S SIGN

OWNER'S SIGN _____



GENERAL NOTES -

NOTES & REFERENCES

1. READ THIS DRAWING IN CONNECTION WITH RELEVANT ARCHITECTURAL DRAWINGS. ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF CONSULTANT.
2. ALL DIMENSIONS & LEVELS ARE IN METERS.
3. DO NOT SCALE ANY DIMENSIONS.
4. CONFIRM LOCATION OF WALLS WITH RELEVANT WORK DROPS.
5. FOR R.C.C. WORK, USE DESIGN MIX AS SPECIFIED IN RESPECTIVE DWS.
6. THE REINFORCEMENT SHALL BE COLLECTED FROM BEAMS (C/L) ON T&C. BEAMS T&C-5000 HAVING YIELD STRENGTH NOT LESS THAN 500 N/mm² AND CONFORMING TO U.S. 1708 - 2008.
7. THE CLEAR COVER TO THE REINFORCEMENT SHALL BE AS FOLLOWS:-
 - (a) FOUNDATION : 50 mm
 - (b) COLUMN : 40 mm
 - (c) BEAMS (top & bottom) : 30 mm
 - (d) SLAB : 20 mm
 - (e) CHALKS/CANOPY : 25 mm
 - (f) R.C.C. WALL : 20 mm
8. NOMINAL COVER IS THE DEPTH OF CONCRETE COVER TO ALL STEEL REINFORCEMENT INCLUDING UNITS T&C STRIPS.
9. NOT MORE THAN ONE OF THE BEAMS SHALL BE LAPPED AT ANY SECTION LAPS CLOSE TO THE MID SPAN IN TOP BARS & CLOSE TO SUPPORTS IN TOP BARS SHALL BE AVOIDED.
10. INDICATES TOP BARS
11. INDICATES BOTTOM BARS
12. ALL R.C.C. TO BE MACHINE MIXED, VIBRATED AND CURED THOROUGHLY AS PER IS 456-2000.
13. ALL FOOTING ARE CENTRALLY PLACED WITH RESPECT TO THE CENTER LINE OF COLUMN.
14. REINFORCEMENT SHALL BE PROVIDED IN TWO LAYERS WHEREVER FOUND NECESSARY WITH SPACER BARS TO BE PROVIDED BETWEEN THE TWO LAYERS OF REINFORCEMENTS AS PER IS 456-2000.
15. ALL DIMENSIONS MUST BE CHECKED WITH ARCHITECT'S DRAWING & CASE OF ANY DISCREPANCY ARCHITECT'S DRAWING SHALL PREVAIL.
16. ALL CONSTRUCTION JOINTS SHALL BE APPROVED BY CONSULTANT ON THE BASIS OF SOMEONE PREPARED BY CONTRACTOR.
17. TOP AND BOTTOM EXTRA BARS IN BEAMS TO EXTEND BEYOND THE FACE OF SUPPORT AS SHOWN IN PLAN AND ALSO EXTEND BEYOND THE FACE OF SUPPORT AS SHOWN IN PLAN AND ALSO EXTEND BEYOND THE FACE OF SUPPORT AS SHOWN IN PLAN.
18. THE FIRST STRIP IN BEAMS SHALL BE AT A DISTANCE OF 50MM FROM THE JOINT FACE OF THE SPECIAL OVERLAPPING REINFORCEMENT SHALL BE PROVIDED THROUGH THE JOINT AT THE GIVEN SPACING & COLUMNS.
19. IF WALLS ARE NOT WALLS UNDER THESE SPECIAL OVERLAPPING REINFORCEMENT SHALL BE PROVIDED THROUGH THE JOINT AT THE GIVEN SPACING & COLUMNS.
20. PROVIDE DETAIL STEEL OVER EXTRA TOP BARS IS 800MM x 1/8"
21. BLACK COTTON ROPE IS ENCLOSED IN FIVE METERS.
22. ALL LOSS PRODUCTS OF SOL. BELOW FOUNDATION SHALL BE FILLED WITH P.C.C. 1:4:8.
23. FORMING ARE DESIGNED FOR A LIVE LOADING CAPACITY OF 5 kN/m² AT 100mm DEPTH BELOW R.O.L. AS PER SOIL TEST REPORT. THAT TO BE CONFIRM BEFORE EXECUTION OF WORK.
24. THIS BUILDING HAS BEEN DESIGNED FOR 50% FLOOD ONLY.

SPL. NOTES-

1. IN NORMAL CIRCUMSTANCES AND WHERE ORDINARY PORTLAND CEMENT IS USED, FORMING MAY GENERALLY BE REMOVED AFTER THE EXPIRY OF THE FOLLOWING PERIODS:-
 - WALLS, COLUMNS AND VERTICAL FACES OF ALL MEMBERS : 36 TO 48 HOURS
 - SLABS (PROPS LEFT UNDER) : 7 DAYS
 - BEAM BOTTOMS (PROPS LEFT UNDER) : 7 DAYS
 - REMOVAL OF PROPS UNDER SLABS : 7 DAYS
 - REMOVAL OF PROPS UNDER BEAMS : 14 DAYS
 - REMOVAL OF PROPS UNDER ROOFS : 14 DAYS
 - REMOVAL OF PROPS OVER ROOFS : 14 DAYS
2. WHERE POSSIBLE, THE FORMWORK SHALL BE LEFT LONGER, SO IT MAY ASSIST DURING THE CURING PERIOD.
3. THE CENTERING SUPPORTING THE OVERHANGING STRUCTURAL MEMBERS SHALL NOT BE REMOVED UNTIL SUFFICIENT BRACING LOAD OVER THE BEAMS HAS BEEN APPLIED BY BUILDING MASONRY OR OTHERWISE.
4. THE CENTERING OF CANTILEVER BEAMS & SLABS SHALL BE REMOVED STARTING FROM OVERHANGING EDGE.
5. UNLESS OTHERWISE INDICATED IN THE DRAWING, CONSTRUCTION JOINTS IN FLOORS SHALL BE LOCATED NEAR THE MID SPAN OF STRUCTURAL MEMBERS. SLABS, SECONDARY BEAMS, UNLESS A SECONDARY BEAM BEHIND A MAIN BEAM AT THIS POINT, SHALL BE FILLED WITH P.C.C. 1:4:8.
6. WHILE FORMING CONCRETE THE MAXIMUM FREE FALL SHALL NOT BE MORE THAN 1500 mm. TO AVOID SEGREGATION.
7. STRICT SUPERVISION SHALL BE DONE AS PER NATIONAL BUILDING CODE (RECENT VERSION).
8. ALL SUPERVISION OF CONSTRUCTION WORKS SHALL BE DONE BY ENGINEER IN CHARGE OF SITE. ANY DISCREPANCY IN EXECUTION OF WORK SHALL BE NOTED AND AS PER STRUCTURAL DRAWING SHALL BE TOTALLY RESPONSIBLE OF ENGINEER IN CHARGE OF SITE.

R1 23-12-2020 FOR APPROVAL

R0 18-12-2020 FOR APPROVAL

REVNO. DATE REVISION

CLIENT NAME: BAREILLY SMART CITY LTD.

PROJECT TITLE: AUDITORIUM & INCUBATION CENTER GC BAREILLY

DRAWING TITLE : DWG NO.

BEAM DETAILS AT GROUND FLOOR LVL. OR (BASEMENT ROOF LVL.) ST-01-07

SCALE:- N.T.S.

DRAWN BY:- NASIM

DESIGNED BY:- ROSHAN

CHECKED BY:- ROSHAN

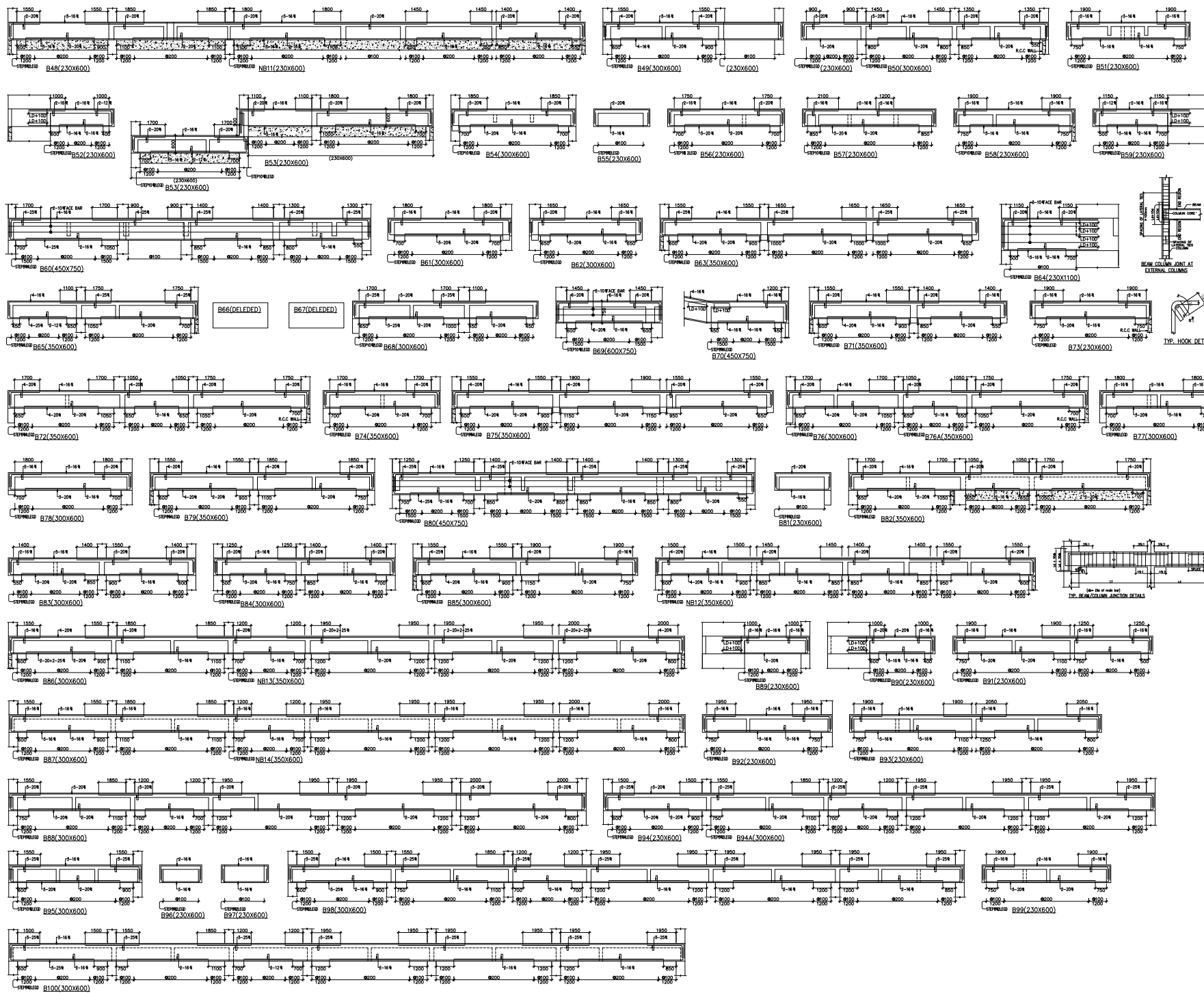
DATE:- 18-12-2020

DRAWING RELEASED FOR:

APPROVAL FOR TENDER

ADVANCE COPY CONSTRUCTION

ARCHITECT'S SIGN OWNER'S SIGN



GENERAL NOTES -

NOTES & REFERENCES

1. READ THIS DRAWING IN CONNECTION WITH RELEVANT ARCHITECTURAL DRAWINGS. ANY DISCREPANCY FROM THIS SHALL BE BROUGHT TO THE NOTICE OF CONSULTANT.

2. ALL DIMENSIONS & LEVELS ARE IN MILLIMETERS.

3. DO NOT SCALE ANY DIMENSIONS.

4. CONFIRM LOCATION OF WALLS WITH RELEVANT ARCH. DRS.

5. FOR R.C.C. WORK, THE DESIGN MIX MUST CONFORMING TO IS 456 : 2000 OR AS SPECIFIED IN RESPECTIVE DRS.

6. THE REINFORCEMENT SHALL BE COUNTERSINKED STEEL BARS (C.I.) OR T.A.C. BARS (E-6000) HAVING YIELD STRENGTH NOT LESS THAN 500 N/mm² AND CONFORMING TO IS 1786 : 2008.

7. THE CLEAR COVER TO THE REINFORCEMENT SHALL BE AS FOLLOWS:-
(a) FOUNDATION : 50 mm
(b) COLUMNS : 40 mm
(c) BEAMS (top & bottom) : 30 mm side cover 25mm
(d) SLAB : 20 mm
(e) CHALISA/CANOPY : 25 mm
(f) R.C.C. WALL : 20 mm

8. REINFORCEMENT COVER OF THE DEPTH OF CONCRETE COVER TO ALL STEEL REINFORCEMENT INCLUDING UNITS TEST STRIPS.

9. NOT MORE THAN 2 LAYERS OF THE BARS SHALL BE LAPPED AT ANY SECTION LAPS CLOSE TO THE MID SPAN IN BOTTOM BARS & CLOSE TO SUPPORTS IN TOP BARS SHALL BE AVOIDED.

10. INDICATES TOP BARS

11. INDICATES BOTTOM BARS

12. OPENING IN STRUCTURAL MEMBER

13. BRICK WORK

14. ALL R.C.C. TO BE MACHINE WELDED, WELDED AND CURED THOROUGHLY AS PER IS 456-2000.

15. ALL FOOTING ARE CENTRALLY PLACED WITH RESPECTED TO THE CENTRE LINE OF COLUMN.

16. REINFORCEMENT SHALL BE PROVIDED IN TWO LAYERS WHEREVER FOUND NECESSARY WITH SPACER SPACER BAR TO BE PROVIDED BETWEEN TWO LAYERS OF REINFORCEMENTS AS PER IS 456.

17. ALL DIMENSIONS MUST BE CHECKED WITH ARCHITECT'S DRS. & IN CASE OF ANY DISCREPANCY ARCHITECT'S DRS. SHALL PREVAIL.

18. ALL CONSTRUCTION JOINTS SHALL BE PROVIDED BY CONSULTANT ON THE BASIS OF SOMEONE PREPARED BY CONTRACTOR.

19. TOP AND BOTTOM EXTRA BARS IN BEAMS TO EXTEND BEYOND THE FACE OF SUPPORT AS SHOWN IN THE WALLS OTHERWISE SPECIFIED.

20. THE FIRST STRIPS IN BEAMS SHALL BE AT A DISTANCE OF 50MM FROM THE JOINT FACE THE SPECIAL OVERLAP REINFORCEMENT SHALL BE PROVIDED THROUGH THE JOINT AT THE GIVEN SPACING IN COLUMNS.

21. IF WALLS ARE NOT WALLS UNDER CHARGES SPECIFIC SPECIFICATION.

22. PROVIDE DIST. SILL OVER EXTRA TOP BARS IS 800MM (1/3) (9")

23. BLACK COTTON ROPE 10mm ENLIGHTENED IN FIVE PITS, SHALL BE FILLED WITH R.C.C. 1:1.5:8

24. ALL FLOORING TO BE DONE BELOW FOUNDATION SHALL BE FILLED WITH R.C.C. 1:1.5:8

25. FORMING ARE DESIGNED FOR A LIVE LOADING CAPACITY OF 5 kN/m² AT 100mm SPACING BELOW R.C.C. AS PER PER SOIL TEST REPORT, THAT TO BE CONFIRM BEFORE EXECUTION OF WORK.

26. THIS BUILDING HAS BEEN DESIGNED FOR 50% FLOOR ONLY.

SPL NOTES-

1. IN NORMAL CIRCUMSTANCES AND WHERE ORDINARY PORTLAND CEMENT IS USED, FORMS MAY GENERALLY BE REMOVED AFTER THE EXPIRY OF THE FOLLOWING PERIODS:
• WALLS, COLUMNS AND VERTICAL FACES OF ALL MEMBERS : 36 TO 48 HOURS
• SLAB (PROPS LEFT UNDER) : 5 DAYS
• BEAM (PROPS LEFT UNDER) : 7 DAYS
• REMOVAL OF PROPS UNDER SLABS : 7 DAYS
• REMOVAL OF PROPS UNDER BEAMS : 14 DAYS
• REMOVAL OF PROPS OVER ROOF : 14 DAYS

2. WHERE POSSIBLE, THE CONCRETE SHALL BE LEFT LONGER, AS IT HELPS AVOID CRACKING.

3. THE CENTERING SUPPORTING THE OVERHANGING STRUCTURAL MEMBERS SHALL NOT BE REMOVED UNTIL SUFFICIENT FINISHING LOAD UNDER THE BEAMS HAS BEEN ATTAINED BY BUILDING MEMORY OR OTHERWISE.

4. IN CASE OF CANTILEVER BEAMS & SLABS, SHALL BE REMOVED STATING FROM OVERHANGING (FACE).

5. THE CENTERING INDICATED IN THE DRAWING, CONSTRUCTION JOINTS IN FLOORS SHALL BE LOCATED NEAR THE MID SPAN OF STRUCTURAL MEMBERS (SLABS, SECONDARY BEAMS), UNLESS A SECONDARY BEAM REQUESTED BY MAIN BEAM AT THE POINT WHERE THE JOINTS IN THE MAIN BEAM ARE REQUESTED BY DISTANCE EQUAL TO THREE TIMES THE WIDTH OF THAT A SECONDARY BEAM.

6. WHILE FORMING CHECKS THE MAXIMUM FREE FALL SHALL NOT BE MORE THAN 1500 mm, TO AVOID SEGREGATION.

7. STRICT SUPERVISION SHALL BE DONE AS PER NATIONAL BUILDING CODE (RECENT VERSION).

8. ALL SUPERVISION IN CONSTRUCTION WORKS SHALL BE DONE BY ENGINEER IN CHARGE OF SITE, AND DISCREPANCY IN EXISTENCE OF WORK, SIZE OR NOT DONE AS PER STRUCTURAL DRAWING, SHALL BE TOTALLY RESPONSIBLE OF ENGINEER IN CHARGE OF SITE.

R1 23-12-2020 FOR APPROVAL

R0 18-12-2020 FOR APPROVAL

REVNO. DATE REVISION

CLIENT NAME: BAREILLY SMART CITY LTD.

PROJECT TITLE: AUDITORIUM & INCUBATION CENTER GC BAREILLY

DRAWING TITLE : DWG NO. ST-01-08

BEAM DETAILS AT GROUND FLOOR LVL. OR (BASEMENT ROOF LVL.)

SCALE:- N.T.S.

DRAWN BY:- NASIM

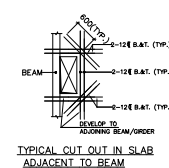
DESIGNED BY:- ROSHAN

CHECKED BY:- ROSHAN

DATE:- 18-12-2020

DRAWING RELEASED FOR:
☒ APPROVAL ☐ FOR TENDER
☐ ADVANCE COPY ☐ CONSTRUCTION





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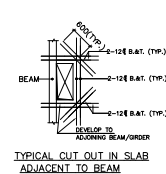
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DRAWING TITLE :		DWG NO.
FRAMING PLAN AT FIRST FLOOR LVL. OR (GROUND FLOOR ROOF LVL.)		ST--01--09
SCALE:--	N.T.S	
DRAWN BY:--	NASIM	
DESIGNED BY:--	ROSHAN	
CHECKED BY:--	ROSHAN	
DATE:--	18-12-2020	

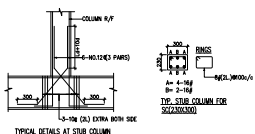
ARCHITECT'S SIGN	OWNER'S SIGN
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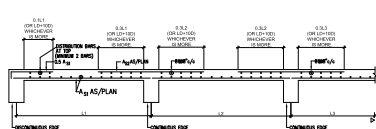
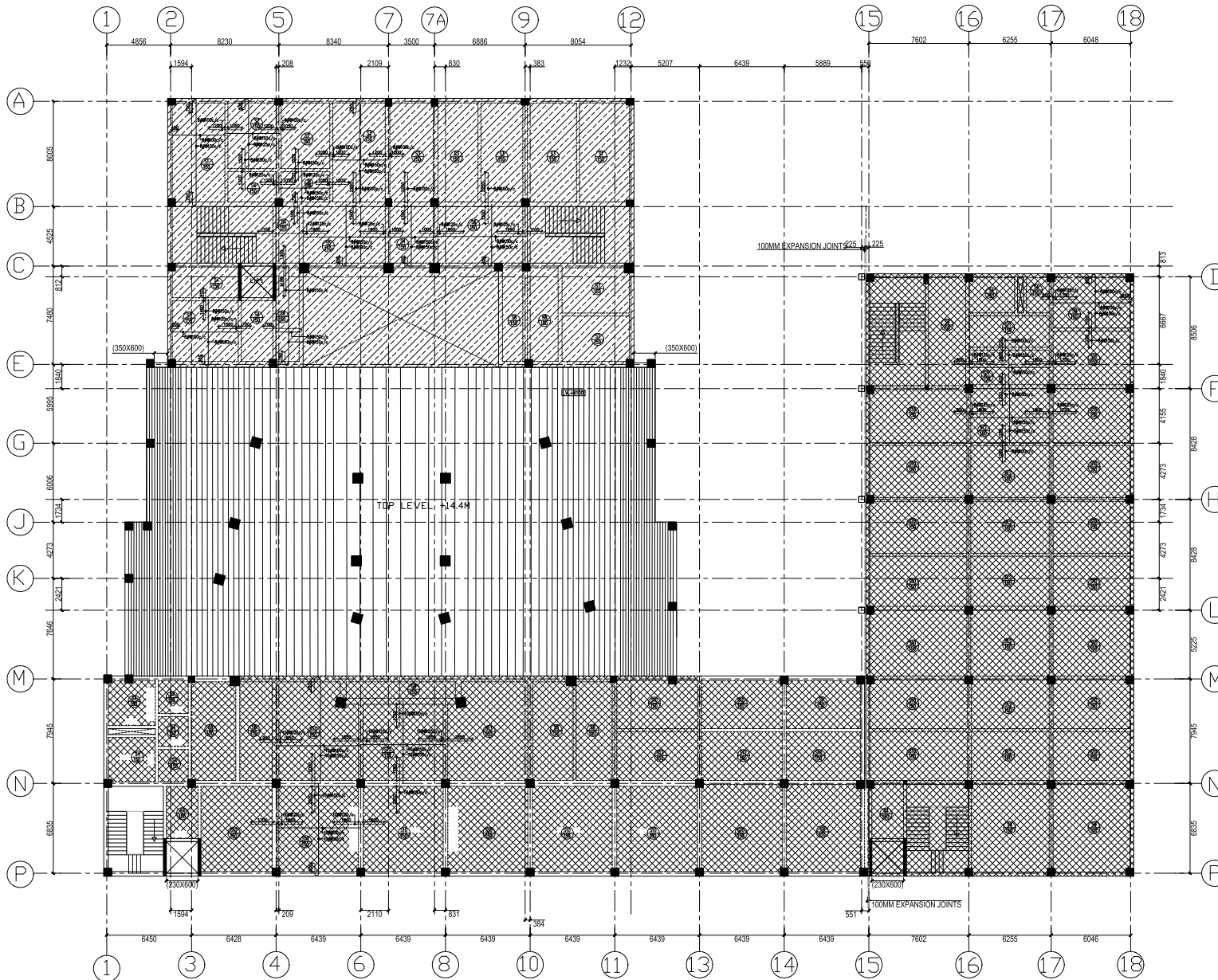
GENERAL NOTES -																					
NOTES & REFERENCES																					
<p>1. READ THIS DRAWING IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWINGS. ANY DISCREPANCY IF FOUND SHALL BE BROUGHT TO THE NOTICE OF CONSULTANT.</p> <p>2. ALL DIMENSIONS & LEVELS ARE IN MILLIMETERS.</p> <p>3. DO NOT SCALE ANY DIMENSIONS.</p> <p>4. CONTAIN LOCATION OF WALLS WITH RELEVANT WORK DRIS.</p> <p>5. FOR R.C.C. WORK, USE DESIGN MIX M20 CONFORMING TO IS 456 : 2000 OR AS SPECIFIED IN RESPECTIVE DWS.</p> <p>6. THE REINFORCEMENT SHALL BE COLDWATERED STEEL BARS (C.I.S) OR T.M.C. BARS (E-5000) HAVING YIELD STRENGTH NOT LESS THAN 500 N/mm² AND CONFORMING TO IS 1786 : 2008.</p> <p>7. THE CLEAR COVER TO THE REINFORCEMENT SHALL AS FOLLOWS:-</p> <table><tr><td>(a) Foundation</td><td>: 50 mm</td><td>surface in contact with earth</td></tr><tr><td>(b) COLUMNS</td><td>: 40 mm</td><td></td></tr><tr><td>(c) BEAMS (top & bottom)</td><td>: 30 mm</td><td>slab cover 25mm</td></tr><tr><td>(d) SLABS</td><td>: 20 mm</td><td></td></tr><tr><td>(e) CHIMNEYS/CANOPY</td><td>: 25 mm</td><td></td></tr><tr><td>(f) R.C.C. WALL</td><td>: 20 mm</td><td></td></tr></table> <p>8. MINIMUM COVER IS THE DEPTH OF CONCRETE COVER TO ALL STEEL REINFORCEMENT INCLUDING UNUSY TIEB STRIPS.</p> <p>9. ALL TIEBARS ARE CENTRALLY PLACED WITH RESPECTED TO THE CENTRE LINE OF COLUMN.</p> <p>10. ALL REINFORCEMENT SHALL BE LAPPED AT ANY SECTION LAPS CLOSE TO THE MID SPAN IN BOTTOM BARS & CLOSE TO SUPPORTS IN TOP BARS SHALL BE AVOIDED.</p> <p>11.  INDICATES TOP BARS</p> <p>12.  INDICATES BOTTOM BARS</p> <p>13.  Opening in structural element</p> <p>14.  Rein work</p> <p>15. ALL R.C.C. TO BE MACHINE MIXED, VIBRATED AND CURED THOROUGHLY AS PER IS 456-2000.</p> <p>16. ALL FOOTING ARE CENTRALLY PLACED WITH RESPECTS TO THE CENTRE LINE OF COLUMN.</p> <p>17. REINFORCEMENT SHALL BE PROVIDED IN TWO LAYERS HAVING MINIMUM REINFORCEMENT WITH SPACER SPACER BAR TO BE PROVIDED BETWEEN TWO LAYERS OF REINFORCEMENTS AS PER IS 456-2000.</p> <p>18. ALL DIMENSIONS MUST BE CHECKED WITH ARCHITECT'S DWS & IN CASE OF ANY DISCREPANCY ARCHITECT'S DWS SHALL PREVAIL.</p> <p>19. ALL CONSTRUCTION JOINTS SHALL BE APPROVED BY CONSULTANT ON THE BASIS OF SOMEONE PREPARED BY CONTRACTOR.</p> <p>20. TOP AND BOTTOM EXTRA BARS IN BEAMS TO EXTEND BEYOND THE FACE OF SUPPORT AS SHOWN IN DWS UNLESS OTHERWISE SPECIFIED.</p> <p>21. THE FIRST STRIPS IN BEAMS SHALL BE AT A DISTANCE OF 50MM FROM THE JOINT FACE THE SPECIAL CONCRETE REINFORCEMENT SHALL BE PROVIDED THROUGH THE JOINT AT THE GIVEN SPACING IN COLUMNS.</p> <p>22. IF WALLS ARE NOT WALLS UNLESS OTHERWISE SPECIFIED.</p> <p>23. PROVIDE DIST STEEL OVER EXTRA TOP BARS IS 8mm @ 1/3 (9")</p> <p>24. BLACK COTTON OIL OR ENOCHMENTED IN FIVE ITS, SHALL BE FULLY REMOVED.</p> <p>25. ALL LOOSE PORTS OF SOIL BELOW FOUNDATION SHALL BE FILLED WITH P.C.C. 1:4:8</p> <p>26. FORMING ARE DESIGNED FOR A LIVE LOADING CAPACITY OF 5 kN/m² AT 100mm BELOW R.C.C. AS PER SLO TEST REPORT, THAT TO BE CONFIRMED BEFORE EXECUTION OF WORK.</p> <p>27. THIS BUILDING HAS BEEN DESIGN FOR G+1 FLOOR ONLY</p>				(a) Foundation	: 50 mm	surface in contact with earth	(b) COLUMNS	: 40 mm		(c) BEAMS (top & bottom)	: 30 mm	slab cover 25mm	(d) SLABS	: 20 mm		(e) CHIMNEYS/CANOPY	: 25 mm		(f) R.C.C. WALL	: 20 mm	
(a) Foundation	: 50 mm	surface in contact with earth																			
(b) COLUMNS	: 40 mm																				
(c) BEAMS (top & bottom)	: 30 mm	slab cover 25mm																			
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(f) R.C.C. WALL	: 20 mm																				
SPL. NOTES-																					
<p>1. IN NORMAL CIRCUMSTANCES AND WHERE ORDINARY PORTLAND CEMENT IS USED, FORMS MAY GENERALLY BE REMOVED AFTER THE EXPIRY OF THE FOLLOWING PERIODS:-</p> <table><tr><td>• WALLS, COLUMNS AND VERTICAL FACES OF ALL MEMBERS</td><td>: 36 TO 48 HOURS</td></tr><tr><td>• SLABS (PROPS LEFT UNDER)</td><td>: 3 DAYS</td></tr><tr><td>• BEAM BOTTOM (PROPS LEFT UNDER)</td><td>: 7 DAYS</td></tr><tr><td>• REMOVAL OF PROPS UNDER SLABS</td><td>: 7 DAYS</td></tr><tr><td>• REMOVAL OF PROPS UNDER BEAMS</td><td>: 14 DAYS</td></tr><tr><td>• REMOVAL OF PROPS UNDER ROOFS</td><td>: 14 DAYS</td></tr><tr><td>• REMOVAL OF PROPS UNDER ROOFS</td><td>: 14 DAYS</td></tr></table> <p>2. WHERE POSSIBLE, THE FORMWORK SHALL BE LEFT LONGER, AS IT HELPS ACCELERATE CURING.</p> <p>3. THE CENTERING SUPPORTING THE OVERHANGING STRUCTURAL MEMBERS SHALL NOT BE REMOVED UNTIL SUFFICIENT BRACING LOAD FROM THE BEARING HAS BEEN ATTAINED BY BUILDING MEMORY OR OTHERWISE.</p> <p>4. THE CENTERING OF CANTILEVER BEAMS & SLABS SHALL BE REMOVED STARTING FROM OVERHANGING SLAB.</p> <p>5. UNLESS OTHERWISE INDICATED IN THE DRAWING, CONSTRUCTION JOINTS IN FLOORS SHALL BE LOCATED NEAR THE MID SPAN OF STRUCTURAL MEMBERS (SLABS, SECONDARY BEAMS). UNLESS A SECONDARY BEAM REQUESTED AT MAIN BEAM AT THE BEARING WALLS, THE JOINTS IN THE MAIN BEAMS SHALL BE OFFSET BY DISTANCE EQUAL TO THREE TIMES THE WIDTH OF THAT A SECONDARY BEAM.</p> <p>6. WHERE FORMING CONCRETE THE MAXIMUM FREE FALL SHALL NOT BE MORE THAN 1500 mm, TO AVOID SEGREGATION.</p> <p>7. STRICT SUPERVISION SHALL BE DONE AS PER NATIONAL BUILDING CODE (RECENT VERSION).</p> <p>8. ALL SUPERVISION IN CONSTRUCTION WORKS SHALL BE DONE BY ENGINEER IN CHARGE OF SITE.</p> <p>9. ANY DISCREPANCY IN EXISTENCE OF WORK AS NOT DONE OR NOT DONE AS PER STRUCTURAL DRAWING WILL BE TOTALLY RESPONSIBLE OF ENGINEER IN CHARGE OF SITE.</p>				• WALLS, COLUMNS AND VERTICAL FACES OF ALL MEMBERS	: 36 TO 48 HOURS	• SLABS (PROPS LEFT UNDER)	: 3 DAYS	• BEAM BOTTOM (PROPS LEFT UNDER)	: 7 DAYS	• REMOVAL OF PROPS UNDER SLABS	: 7 DAYS	• REMOVAL OF PROPS UNDER BEAMS	: 14 DAYS	• REMOVAL OF PROPS UNDER ROOFS	: 14 DAYS	• REMOVAL OF PROPS UNDER ROOFS	: 14 DAYS				
• WALLS, COLUMNS AND VERTICAL FACES OF ALL MEMBERS	: 36 TO 48 HOURS																				
• SLABS (PROPS LEFT UNDER)	: 3 DAYS																				
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• REMOVAL OF PROPS UNDER BEAMS	: 14 DAYS																				
• REMOVAL OF PROPS UNDER ROOFS	: 14 DAYS																				
• REMOVAL OF PROPS UNDER ROOFS	: 14 DAYS																				
R1	23-12-2020	FOR APPROVAL																			
R0	18-12-2020	FOR APPROVAL																			
REV.NO.	DATE	REVISION																			
CLIENT NAME: BAREILLY SMART CITY LTD.																					
PROJECT TITLE: AUDITORIUM & INCUBATION CENTER GC BAREILLY																					
DRAWING TITLE :		DWG NO.																			
BEAM DETAILS AT FIRST FLOOR LVL OR (GROUND FLOOR R/LVL)		ST-01-12																			
SCALE:-				N.T.S.																	
DRAWN BY:-				NASIM																	
DESIGNED BY:-				ROSHAN																	
CHECKED BY:-				ROSHAN																	
DATE:-				18-12-2020																	
DRAWING RELEASED FOR:																					
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ARCHITECT'S SIGN		OWNER'S SIGN																			



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ARCHITECT'S SIGN	OWNER'S SIGN



FRAMING PLAN AT TERRACE FLOOR LVL. OR (FIRST FLOOR ROOF LVL.)
ALL BEAM SIZE ARE (230X600),(300X600),(350X600),(450X750) U.N.O
ALL SLABS SIZE 150MM THICKNESS (U.N.O)



NOTE: 1. SPACING OF REINFORCEMENT BARS IN ANY CASE, SHOULD NOT BE MORE THAN 1/4th OF EFFECTIVE DEPTH OF SLAB.

SLAB REINFORCEMENT PLAN AT TERRACE FLOOR LVL. OR (FIRST FLOOR ROOF LVL.)

ALL BEAM SIZE ARE (230X600),(300X600),(350X600),(450X750) U.N.O

ALL SLABS SIZE 150MM THICKNESS (U.N.O)

GENERAL NOTES -

NOTES & REFERENCES

1. READ THIS DRAWING IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWINGS, ANY DISCREPANCY IF FOUND SHALL BE BROUGHT TO THE NOTICE OF CONSULTANT.
2. ALL DIMENSIONS & LEVELS ARE IN METERS.
3. DO NOT SCALE ANY DIMENSIONS.
4. CONFIRM LOCATION OF WALLS WITH RELEVANT WORK DROPS.
5. FOR R.C.C. WORK USE DESIGN MIX M20 CONFORMING TO IS 456 : 2000 OR AS SPECIFIED IN RESPECTIVE DWS.
6. THE REINFORCEMENT SHALL BE COLDWATERED STEEL BARS (E25) OR 14M.E. BARS IF 5000 YANING YIELD STRENGTH NOT LESS THAN 500 N/mm² AND CONFORMING TO U.S. 1706 - 2006.
7. THE CLEAR COVER TO THE REINFORCEMENT SHALL BE AS FOLLOWS:-
 - (a) FOUNDATION : 50 MM surfaces in contact with earth
 - (b) COLUMNS : 40 MM
 - (c) BEAMS (top & bottom) : 30 MM side cover 25mm
 - (d) SLAB : 20 MM
 - (e) CHALKS/CANOPY : 20 MM
 - (f) R.C.C. WALL : 25 MM
8. NOMINAL COVER IS THE DEPTH OF CONCRETE COVER TO ALL STEEL REINFORCEMENT INCLUDING LAPS/ TIE/ STRIPS.
9. NOT MORE THAN ONE OF THE BARS SHALL BE LAPPED AT ANY SECTION LAPS CLOSE TO THE MID SPAN IN BOTTOM BARS & CLOSE TO SUPPORTS IN TOP BARS SHALL BE AVOIDED.
10. ALL R.C.C. TO BE MACHINE MIXED, VIBRATED AND CURED THOROUGHLY AS PER IS 456-2000.
11. ALL FORMS ARE CENTRALLY PLACED WITH RESPECT TO THE CENTRE LINE OF COLUMN.
12. REINFORCEMENT SHALL BE PROVIDED IN TWO LAYERS WHEREVER FOUND NECESSARY WITH SPACER BARS TO BE PROVIDED BETWEEN TWO LAYERS OF REINFORCEMENTS AS PER IS 456.
13. ALL DIMENSIONS MUST BE CHECKED WITH ARCHITECT'S DWS & IN CASE OF ANY DISCREPANCY ARCHITECT'S DWS SHALL PREVAIL.
14. ALL CONSTRUCTION JOINTS SHALL BE APPROVED BY CONSULTANT ON THE BASIS OF SOME PREPARED BY CONTRACTOR.
15. TOP AND BOTTOM EXTRA BARS IN BEAMS TO EXTEND BEYOND THE FACE OF SUPPORT AS SHOWN IN AND UNLESS OTHERWISE SPECIFIED.
16. THE FIRST STRIPS IN BEAMS SHALL BE AT A DISTANCE OF 50MM FROM THE JOINT FACE THE SPECIAL OVERLAP REINFORCEMENT SHALL BE PROVIDED THROUGH THE JOINT AT THE GIVEN SPACING IN COLUMNS.
17. ALL WALLS ARE FOOT WALLS UNLESS OTHERWISE SPECIFIED.
18. PROVIDE DIST STEEL OVER EXTRA TOP BARS IS 8mm @ 1/4 (9")
19. BLACK COTTON OIL IF ENCOUNTERED IN FOM ITS, SHALL BE FULLY REMOVED.
20. ALL LOOSE PRODUCTS OF SOIL BELOW FOUNDATION SHALL BE FILLED WITH P.C.C. 1:4:8
21. FORMS ARE DESIGNED FOR A LIVE LOADING CAPACITY OF 5 T/M² AT 100mm DEPTH BELOW N.G.L. AS PER SOIL TEST REPORT THAT TO BE CONFIRM BEFORE EXECUTION OF WORK.
22. THIS BUILDING HAS BEEN DESIGNED FOR G+1 FLOOR ONLY.

SPL NOTES-

1. IN NORMAL CIRCUMSTANCES AND WHERE ORDINARY PORTLAND CEMENT IS USED, FORMS MAY GENERALLY BE REMOVED AFTER THE EXPIRY OF THE FOLLOWING PERIODS:
 - WALLS, COLUMNS AND VERTICAL FACES OF ALL MEMBERS : 36 TO 48 HOURS
 - SLABS (PROPS LEFT UNDER) : 5 DAYS
 - BEAM COTTES (PROPS LEFT UNDER) : 7 DAYS
2. REMOVAL OF WORK UNDER SLABS:
 - SPACING UP TO 1000 : 14 DAYS
 - SPACING OVER 1000 : 18 DAYS
 - REMOVAL OF PROPS UNDER BEAMS : 14 DAYS
 - SPACING UP TO 1000 : 14 DAYS
 - SPACING OVER 1000 : 18 DAYS
3. WHERE POSSIBLE, THE FOUNDATION SHALL BE LEFT LONGER, SO IT WOULD NOT BE REMOVED UNTIL SUFFICIENT FRAMING LOAD UNDER THE BEAMING HAS BEEN ATTAINED BY BUILDING MEMORY OR OTHERWISE.
4. THE CENTERING OF CANTILEVER BEAMS & SLABS SHALL BE REMOVED STARTING FROM OVERHANGING EDGE.
5. UNLESS OTHERWISE INDICATED IN THE DRAWING, CONSTRUCTION JOINTS IN FLOORS SHALL BE LOCATED NEAR THE MID SPAN OF STRUCTURAL MEMBERS (SLABS, SECONDARY BEAMS), UNLESS A SECONDARY BEAM RESISTS A MAIN BEAM AT THIS POINT. IN SUCH CASE, THE JOINTS IN THE MAIN BEAMS SHALL BE OFFSET BY DISTANCE EQUAL TO THREE TIMES THE WIDTH OF THAT A SECONDARY BEAM.
6. WHILE FORMING CONCRETE THE MAXIMUM FREE FALL SHALL NOT BE MORE THAN 1500 mm. TO AVOID SEGREGATION.
7. STRICT SUPERVISION SHALL BE DONE AS PER NATIONAL BUILDING CODE (RECENT VERSION).
8. ALL SUPERVISION OR CONSTRUCTION WORKS SHALL BE DONE BY ENGINEER IN CHARGE OF SITE.
9. ANY DISCREPANCY IN LOCATION OF WORK/SL/ SITE OR NOT DONE AS PER STRUCTURAL DRAWING WILL BE TOTALLY RESPONSIBLE OF ENGINEER IN CHARGE OF SITE.

R1	23-12-2020	FOR APPROVAL
RO	18-12-2020	FOR APPROVAL
REV.NO.	DATE	REVISION
CLIENT NAME:		
BAREILLY SMART CITY LTD.		
PROJECT TITLE		
AUDITORIUM & INCUBATION CENTER GIC BAREILLY		
DRAWING TITLE :		DWG NO.
SLAB REINFORCEMENT PLAN AT TERRACE FLOOR LVL. OR (FIRST FLOOR ROOF LVL.)		ST-01-14
SCALE:--	N.T.S	
DRAWN BY:--	NASIM	
DESIGNED BY:--	ROSHAN	
CHECKED BY:--	ROSHAN	
DATE:--	18-12-2020	
DRAWING RELEASED FOR:		
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<input type="checkbox"/> ADVANCE COPY <input type="checkbox"/> CONSTRUCTION		
ARCHITECT'S SIGN		OWNER'S SIGN

REQUEST FOR PROPOSAL

Name of the Work: “Construction of GIC Incubation and 400 seater Auditorium building in Bareilly with 1 year Defect Liability Period for the Bareilly Smart City Limited”

Volume 3: Conditions of Contract and Contract Forms



BAREILLY SMART CITY LIMITED (BSCL)

BAREILLY (UTTAR PRADESH, INDIA)



Employer: - Bareilly Smart City Limited (BSCL)

Nagar Nigam, Bareilly- 243001 Telephone: 0581-25510074

[Email: ceo.bscl01@gmail.com](mailto:ceo.bscl01@gmail.com)

TABLE OF CONTENTS

Table of Contents

Volume 3: Conditions of Contract and Contract Forms	3
1.1. General Conditions of Contract	3
1.1.1. General.....	3
1.1.2. Time Control.....	10
1.1.3. Quality Control.....	12
1.1.4. Cost Control	13
1.1.5. Finishing of Contract	18
1.2. Particular Conditions of Contract.....	61
1.3. Contract Forms.....	65

Volume 3: Conditions of Contract and Contract Forms

1.1.General Conditions of Contract

1.1.1. General

1. Definitions	<p>1.1. Boldface type is used to identify defined terms.</p> <ul style="list-style-type: none">a) The Accepted Contract Amount means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.b) The Activity Schedule is a schedule of the activities comprising the Supplying, Erection, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.c) The Adjudicator is the person appointed jointly by the Employer and the Implementing Agency to resolve disputes in the first instance, as provided for in GCC23.d) Gol means Government of Indiae) Activity schedule means the Detailed Project Plan covering break-up of each phase into the key activities, along with the start and end dates forming part of the Bid.f) Compensation Events are those defined in GCC hereunder.g) The Completion Date is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause53.1.h) The Contract is the Contract between the Employer and the Implementing Agency to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub- Clause 2.3below.i) The Implementing Agency is the party whose Bid to carry out the Works has been accepted by the Employer.j) The Implementing Agency's Bid is the completed bidding document submitted by the Implementing Agency to the Employer.k) The Contract Price is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.l) Days are calendar days; months are calendar months.m) A Defect is any part of the Works not completed in accordance with the Contract.n) The Defects Liability Certificate is the certificate issued by Project Manager upon correction of defects by the Implementing Agency.o) The Defects Liability Period is the period named in the PCC pursuant to Sub-Clause 34.1 and calculated from the Completion Date.
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	<p>p) Drawings means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.</p> <p>q) The Employer is the party who employs the Implementing Agency to carry out the Works, as specified in the PCC.</p> <p>r) Equipment is the Implementing Agency's machinery and vehicles brought temporarily to the Site to construct the Works.</p> <p>s) "In writing" or "written" means hand-written, type-written, printed or electronically made, and resulting in a permanent record;</p> <p>t) The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.</p> <p>u) The Intended Completion Date is the date on which it is intended that the Implementing Agency shall complete the Works. The Intended Completion Date is specified in the PCC. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.</p> <p>v) Materials are all supplies, including consumables, used by the Implementing Agency for incorporation in the Works.</p> <p>w) The Project Manager is the person named in the PCC (or any other competent person appointed by the employer and notified to the Implementing Agency, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.</p> <p>x) PCC means Particular Conditions of Contract.</p> <p>y) The Site is the area defined as such in the PCC.</p> <p>z) Site Investigation Reports are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.</p> <p>aa) Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.</p> <p>bb) The Start Date is given in the PCC. It is the latest date when the Implementing Agency shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.</p> <p>cc) A Sub-Implementing Agency is a person or corporate body who has a Contract with the Implementing Agency to carry out a part of the work in the Contract, which includes work on the Site.</p> <p>dd) Temporary Works are works designed, constructed, installed, and removed by the Implementing Agency that are needed for construction or installation of the Works.</p>
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	<p>ee) A Variation is an instruction given by the Project Manager which varies the Works.</p> <p>ff) The Works are what the Contract requires the Implementing Agency to construct, install, and turn over to the Employer, as defined in the PCC.</p>
2. Interpretation	<p>If the context so requires it, singular means plural and vice versa</p> <p>2.1. In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.</p> <p>2.2. If sectional completion is specified in the PCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).</p> <p>2.3. Entire Agreement: The Contract constitutes the entire agreement between Authority and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract.</p> <p>2.4. Amendment: No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.</p> <p>2.5. Severability : If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract</p> <p>2.6. The documents forming the Contract shall be interpreted in the following order of priority:</p> <ol style="list-style-type: none"> (a) Agreement, (b) Letter of Acceptance, (c) Implementing Agency's Bid, (d) Particular Conditions of Contract, (e) General Conditions of Contract, including Appendix, (f) Specifications, (g) Drawings, (h) Activity schedule, (i) Any other document listed in the PCC as forming part of the Contract.

3. Language and Law	3.1. The language of the Contract and the law governing the Contract are stated in the PCC
4. Project Manager's Decisions	4.1. Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Implementing Agency in the role representing the Employer.
5. Delegation	5.1. Otherwise specified in the PCC , the Project Manager may delegate any of his duties and responsibilities to other people except to the Adjudicator, after notifying the Implementing Agency, and may revoke any delegation after notifying the Implementing Agency.
6. Communications	6.1. Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.
7. Subcontracting	7.1. The Implementing Agency may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Implementing Agency's obligations.
8. Other Implementing Agency	8.1. The Implementing Agency shall cooperate and share the Site with other Implementing Agency, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Implementing Agency, as referred to in the PCC. The Implementing Agency shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Implementing Agency, and shall notify the Implementing Agency of any such modification.
9. Personnel and Equipment	<p>9.1. The Implementing Agency shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.</p> <p>9.2. If the Project Manager asks the Implementing Agency to remove a person who is a member of the Implementing Agency's staff or work force, stating the reasons, the Implementing Agency shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.</p> <p>9.3. If the Employer, Project Manager or Implementing Agency determines, that any employee of the Implementing Agency be determined to have engaged in or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with Clause 9.2 above.</p>

10. Employer's and Implementing Agency's Risks	<p>10.1. The Employer carries the risks which this Contract states are Employer's risks, and the Implementing Agency carries the risks which this Contract states are Implementing Agency's risks.</p>
11. Employer's Risks	<p>11.1. From the Start Date until the Defects Liability Certificate has been issued and then during the Maintenance Period, the following are Employer's risks:</p> <ul style="list-style-type: none"> (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Materials, and Equipment), which are due to <ul style="list-style-type: none"> (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or (ii) Negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Implementing Agency. (b) The risk of damage to the Works, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed. <p>11.2. From the Completion Date until the Defects Liability Certificate has been issued and then during the Maintenance Period, the risk of loss of or damage to the Works, and Materials is an Employer's risk except loss or damage due to</p> <ul style="list-style-type: none"> (a) a Defect which existed on the Completion Date, (b) an event occurring before the Completion Date, which was not itself an Employer's risk, or (c) The activities of the Implementing Agency on the Site after the Completion Date.
12. Implementing Agency's Risks	<p>12.1. From the Starting Date until the Defects Liability Certificate has been issued and then during the Maintenance Period, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Materials, and Equipment) which are not Employer's risks are Implementing Agency's risks.</p>
13. Insurance	<p>13.1. The Implementing Agency shall provide, in the joint names of the Employer and the Implementing Agency, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the PCC for the following events which are due to the Implementing Agency's risks:</p> <ul style="list-style-type: none"> a) loss of or damage to Equipment (if any); b) loss of or damage to property (except the Works, Materials, and Equipment) in connection with the Contract; and c) Personal injury or death. <p>13.2. Policies and certificates for insurance shall be delivered by the Implementing Agency to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall</p>

	<p>provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.</p> <p>13.3. If the Implementing Agency does not provide any of the policies and certificates required, the Employer may effect the insurance which the Implementing Agency should have provided and recover the premiums the Employer has paid from payments otherwise due to the Implementing Agency or, if no payment is due, the payment of the premiums shall be a debt due.</p> <p>13.4. Alterations to the terms of insurance shall not be made without the approval of the Project Manager.</p> <p>13.5. Both parties shall comply with any conditions of the insurance policies.</p>
14. Site Data	<p>14.1. The Implementing Agency shall be deemed to have examined any Site Data referred to in the PCC, supplemented by any information available to the Implementing Agency.</p>
15. Implementing Agency to Construct the Works	<p>15.1. The Implementing Agency shall construct and install the Works in accordance with the Specifications.</p>
16. The Works to Be Completed by the Intended Completion Date	<p>16.1. The Implementing Agency may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Implementing Agency, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.</p>
17. Approval by the Project Manager	<p>17.1. The Implementing Agency shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.</p> <p>17.2. The Implementing Agency shall be responsible for design of Temporary Works.</p> <p>17.3. The Project Manager's approval shall not alter the Implementing Agency's responsibility for design of the Temporary Works.</p> <p>17.4. The Implementing Agency shall obtain approval of third parties to the design of the Temporary Works, where required.</p> <p>17.5. All Drawings prepared by the Implementing Agency for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.</p>
18. Safety	<p>18.1. The Implementing Agency shall be responsible for the safety of all activities.</p>

19. Discoveries	<p>19.1. Anything of historical or other interest or of significant value Unexpectedly discovered on the Site shall be the property of the Employer. The Implementing Agency shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.</p>
20. Possession of the Site	<p>20.1. The Employer shall give possession of all parts of the Site to the Implementing Agency. If possession of a part is not given by the date stated in the PCC, the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.</p>
21. Access to the Site	<p>21.1. The Implementing Agency shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.</p>
22. Instructions, Inspections and Audits	<p>22.1. The Implementing Agency shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.</p> <p>22.2. The Implementing Agency shall keep, and shall make all reasonable efforts to cause its Sub Implementing Agencies and sub consultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.</p> <p>22.3. The Implementing Agency shall permit and shall cause its Sub Implementing Agencies and sub consultants to permit, the Bank and/or persons appointed by the Bank to inspect the Site and/or the accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Implementing Agency's and its Sub Implementing Agencies' and sub consultants' attention is drawn to Sub-Clause 25.1 which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Sub-Clause 22.2 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).</p> <p>22.4. As per PCC.</p>
23. Appointment of the Adjudicator	<p>23.1. The Adjudicator shall be appointed jointly by the Employer and the Implementing Agency, at the time of the Employer's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, if the Adjudicator not appointed, the same may be appointed by the Employer within 14 days of receipt of such request from the Implementing Agency.</p> <p>23.2. Should the Adjudicator resign or die, or should the Employer and the Implementing Agency agree that the Adjudicator is not functioning in accordance with the provisions of the Contract; a new Adjudicator shall be jointly</p>

	appointed by the Employer and the Implementing Agency. In case of disagreement between the Employer and the Implementing Agency, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the PCC at the request of either party, within 14 days of receipt of such request.
24. Settlement of Disputes	<p>24.1. – Amicable Settlement</p> <p>a) The Parties shall seek to resolve any dispute amicably by mutual consultation</p> <p>b) If either Party objects to any action or inaction of the other Party, the objecting Party may file a written Notice of Dispute to the other Party providing in detail the basis of the dispute. The Party receiving the Notice of Dispute will consider it and respond in writing within fourteen (14) days after receipt. If that Party fails to respond within fourteen (14) days, or the dispute cannot be amicably settled within fourteen (14) days following the response of that Party, Clause GCC 24.2 shall apply</p> <p>24.2. Dispute Resolution</p> <p>Any dispute between the Parties arising under or related to this Contract that cannot be settled amicably may be referred to by either Party to the adjudication/arbitration in accordance with the provisions specified in the PCC</p>
25. Corrupt and Fraudulent Practices	<p>25.1. The Employer requires compliance with Prevention of Corruption Act 1988 (INDIA) and its subsequent amendments on Preventing and Combating Corruption</p> <p>25.2. The Employer requires the Implementing Agency to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.</p>

1.1.2. Time Control

26. Program	<p>26.1. Within the time stated in the PCC, after the date of the Letter of Acceptance, the Implementing Agency shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.</p> <p>26.2. An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.</p> <p>26.3. The Implementing Agency shall submit to the Project Manager for approval an updated Program at intervals no longer than the period stated in the PCC. If the Implementing Agency does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the PCC from the next</p>
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	<p>payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Implementing Agency shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.</p> <p>26.4. The Project Manager's approval of the Program shall not alter the Implementing Agency's obligations. The Implementing Agency may revise the Program and submit it to the Project Manager again at any time. A revised Program may show the effect of Variations and Compensation Events.</p>
27. Extension of the Intended Completion Date	<p>27.1. The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Implementing Agency taking steps to accelerate the remaining work, which would cause the Implementing Agency to incur additional cost.</p> <p>27.2. The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Implementing Agency asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Implementing Agency has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.</p> <p>27.3. If at any time during performance of the Contract, the Supplier or its Subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services, the Supplier shall promptly notify authority in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, authority shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment.</p> <p>27.4. Except in case of Force Majeure, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages, unless an extension of time is agreed upon.</p>
28. Acceleration	<p>28.1. When the Employer wants the Implementing Agency to finish before the Intended Completion Date. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Implementing Agency.</p>
29. Delays Ordered by the Project Manager	<p>29.1. The Project Manager may instruct the Implementing Agency to delay the start or progress of any activity within the Works.</p>
30. Management Meetings	<p>30.1. Either the Project Manager or the Implementing Agency may require the other to attend a management meeting. The business of a</p>

	<p>management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.</p> <p>30.2. The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.</p>
31. Early Warning	<p>31.1. The Implementing Agency shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase and/or decrease in the Contract Price, or delay the execution of the Works. The Project Manager may require the Implementing Agency to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Implementing Agency as soon as reasonably possible.</p> <p>31.2. The Implementing Agency shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.</p>

1.1.3. Quality Control

32. Identifying Defects	<p>32.1. The Project Manager shall check the Implementing Agency's work and notify the Implementing Agency of any Defects that are found. Such checking shall not affect the Implementing Agency's responsibilities. The Project Manager may instruct the Implementing Agency to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.</p> <p>32.2. Penalty of 0.5% of the contract value per day from the due date for rectifying the defects identified by the Project manager.</p> <p>32.3. Contract Quality Assurance as discussed in PCC.</p>
33. Tests	<p>33.1 If the Project Manager instructs the Implementing Agency to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Implementing Agency shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.</p>

34. 34. Correction of Defects	<p>34.1. The Project Manager shall give notice to the Implementing Agency of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the PCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.</p> <p>34.2. Every time notice of a Defect is given, the Implementing Agency shall correct the notified Defect within the length of time specified by the Project Manager's notice.</p>
35. Uncorrected Defects	<p>35.1. 35.1 If the Implementing Agency has not corrected a Defect within the</p> <p>35.2. time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Implementing Agency shall pay this amount.</p>

1.1.4. Cost Control

36. Contract Price	<p>36.1. 36.1 The Implementing Agency shall provide updated Activity Schedules within 14 days of being instructed to by the Project Manager. The Activity Schedule shall contain the priced activities for the Works to be performed by the Implementing Agency. The Activity Schedule is used to monitor and control the performance of activities on which basis the Implementing Agency will be paid. If payment for materials (if any) on site shall be made separately, the Implementing Agency shall show delivery of Materials (if any) to the Site separately on the Activity Schedule.</p>
37. Changes in the Contract Price	<p>37.1. The Activity Schedule shall be amended by the Implementing Agency to accommodate changes of Program or method of working made at the Implementing Agency's own discretion. Prices in the Payment Schedule shall not be altered when the Implementing Agency makes such changes to the Activity Schedule.</p> <p>37.2. If requested by the Project Manager, the Implementing Agency shall provide the Project Manager with a detailed cost breakdown of any rate.</p>

38. Variations	<p>38.1. All Variations shall be included in updated Programs and Activity Schedules produced by the Implementing Agency.</p> <p>38.2. The Implementing Agency shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.</p> <p>38.3. If the Implementing Agency's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Implementing Agency's costs.</p> <p>38.4. If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.</p> <p>38.5. The Implementing Agency shall not be entitled to additional payment for costs that could have been avoided by giving early warning.</p>
39. Cash Flow Forecasts	<p>39.1. 39.1 When the Program and activity schedule is updated, the Implementing Agency shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.</p>
40. Payment Certificates	<p>40.1. 40.1 The Implementing Agency shall submit to the Project Manager payment statements of the estimated value of the work executed less the cumulative amount certified previously.</p> <p>40.2. 40.2 The Project Manager shall check the Implementing Agency's payment statement and certify the amount to be paid to the Implementing Agency.</p>
41. Payments	<p>41.1. Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Implementing Agency the amounts certified by the Project Manager within 28 days of the date of each certificate.</p> <p>41.2. If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Implementing Agency shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.</p> <p>41.3. Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.</p> <p>41.4. Items of the Works for which no rate or price has been entered in shall not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.</p> <p>41.5. The certified payments shall be made as specified in the PCC</p>

42. Compensation Events	<p>42.1. The following shall be Compensation Events:</p> <ul style="list-style-type: none"> a) The Employer does not give access to apart of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1. b) The Employer modifies the Schedule of Other Implementing Agency's in a way that affects the work of the Implementing Agency under the Contract. c) The Project Manager orders a delay or does not issue Drawings/approved drawings (as the case may be), Specifications, or instructions required for execution of the Works on time. d) The Project Manager instructs the Implementing Agency to uncover or to carry out additional tests upon work, which is then found to have no Defects. e) The Project Manager unreasonably does not approve a subcontract to be let. f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site. g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons. h) Other Implementing Agencies, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Implementing Agency. i) The advance payment is delayed, if any. j) The effects on the Implementing Agency of any of the Employer's Risks. k) The Project Manager unreasonably delays issuing a Certificate of Completion. <p>42.2. If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.</p> <p>42.3. As soon as information demonstrating the effect of each Compensation Event upon the Implementing Agency's forecast cost has been provided by the Implementing Agency, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Implementing Agency's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Implementing Agency shall react competently and promptly to the event.</p> <p>42.4. The Implementing Agency shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Implementing Agency's not having given early warning or not having cooperated with the Project Manager.</p>
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43. Tax	<p>43.1. The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 28 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Implementing Agency, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 44 and GCC</p>
44. Currencies	<p>44.1. Where payments are made in currencies other than the currency of the Employer's country specified in the PCC, the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Implementing Agency's Bid.</p>
45. Price Adjustment	<p>45.1. Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the PCC. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies to each Contract currency:</p> <p>$P_c = A_c + B_c I_{mc} / I_{oc}$ where:</p> <p>P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency "c."</p> <p>A_c and B_c are coefficients specified in the PCC, representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency "c;" and</p> <p>I_{mc} is the index prevailing at the end of the month being invoiced and I_{oc} is the index prevailing 28 days before Bid opening for inputs payable; both in the specific currency "c."</p> <p>45.2. If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.</p>
46. Retention	<p>46.1. The Employer shall retain from each payment due to the Implementing Agency the proportion stated in the PCC until Completion of the whole of the Works.</p> <p>46.2. Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 51.1, half the total amount retained shall be repaid to the Implementing Agency and has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Implementing Agency before the end of this period have been corrected. The Implementing Agency may substitute retention money with an "on demand" Bank guarantee.</p>
47. Liquidated Damages	<p>47.1. Failure to Perform the Contractual Obligations</p> <p>I. In the event of total default / failure of the Implementing Agency in execution of the services, the Employer reserves the right to get the work executed by any other agency/ firm at the risk and cost of the defaulting implementing Agency. Decision of employer is final & binding on the implementing agency firm.</p> <p>47.2. I1 In this case liquidated damages @ 1% of the fee cost of balance work per week of delay subject to maximum of 10% shall be levied by the authority.</p>

48. Bonus	<p>48.1. The Implementing Agency shall be paid a Bonus calculated at the rate per calendar day stated in the PCC for each day (less any days for which the Implementing Agency is paid for acceleration) that the Completion is earlier than the Intended Completion Date.</p>
49. Advance Payment	<p>49.1. The Employer shall make advance payment to the Implementing Agency of 10% mobilisation after the personels are mobilised on the site by contractor, against provision by the Implementing Agency of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Implementing Agency. Interest shall not be charged on the advance payment.</p> <p>The Implementing Agency is to use the advance payment only to pay for Equipment, Materials, and mobilization expenses required specifically for execution of the Contract. The Implementing Agency shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.</p> <p>The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Implementing Agency, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.</p>
50. Securities	<p>50.1. The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount specified in the GCC 100.4 and PCC, by a bank acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until the completion including defect liability period.</p>
51. Day works	<p>51.1. If applicable, the Dayworks rates in the Implementing Agency's Bid shall be used only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.</p> <p>51.2. All work to be paid for as Dayworks shall be recorded by the Implementing Agency on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.</p> <p>51.3. The Implementing Agency shall be paid for Dayworks subject to obtaining signed Dayworks forms.</p>
52. Cost of Repairs	<p>52.1. Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Implementing Agency at the Implementing Agency's cost if the loss or damage arises from the Implementing Agency's acts or omissions.</p>

1.1.5. Finishing of Contract

53. Completion	53.1 The Implementing Agency shall request the Project Manager to issue a Certificate of Completion of the Works including all other associated works, proceeding further Maintenance; the Project Manager shall do so upon deciding that the whole of the Works is completed.
54. Taking Over	54.1. The Employer shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.
55. Final Account	55.1. The Implementing Agency shall supply the Project Manager with a detailed account of the total amount that the Implementing Agency considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Implementing Agency within 56 days of receiving the Implementing Agency's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Implementing Agency and issue a payment certificate.
56. Maintenance Manuals	<p>56.1. If "as built" Drawings and/or maintenance manuals are required, the Implementing Agency shall supply them by the dates stated in the PCC.</p> <p>56.2. If the Implementing Agency does not supply the Drawings and/or manuals by the dates stated in the PCC pursuant to GCC Sub-Clause 56.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount stated in the PCC from payments due to the Implementing Agency.</p>

57. Termination

57.1. The Employer or the Implementing Agency may terminate the Contract if the other party causes a fundamental breach of the Contract.

57.2. Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- (a) the Implementing Agency stops work for 28 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;
- (b) the Project Manager instructs the Implementing Agency to delay the progress of the Works, and the instruction is not withdrawn within 28 days;
- (c) the Employer or the Implementing Agency is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (d) a payment certified by the Project Manager is not paid by the Employer to the Implementing Agency within 84 days of the date of the Project Manager's certificate;
- (e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Implementing Agency fails to correct it within a reasonable period of time determined by the Project Manager;
- (f) the Implementing Agency does not maintain a Security, which is required;
- (g) the Implementing Agency has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the PCC; or
- (h)
- (i) if the Implementing Agency, in the judgment of the Employer, has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving fourteen (14) days written notice to the Implementing Agency, terminate the Contract and expel him from the Site.

57.3. When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

57.4. Notwithstanding the above, the Employer may terminate the Contract for convenience.

57.5. If the Contract is terminated, the Implementing Agency shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

57.6. Termination for Default

- (a) Authority, without prejudice to any other remedy for breach of Contract, by Notice of default sent to the Supplier, may terminate the Contract in whole or in part:
 - If the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by authority.
 - If the Supplier fails to perform any other obligation under the Contract.
- (b) In the event authority terminates the Contract in whole or in part, authority may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to

	<p>57.7. Termination for Insolvency Authority may at any time terminate the Contract by giving Notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to Authority.</p> <p>57.8. Termination for Convenience Authority, by Notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The Notice of termination shall specify that termination be for Authority's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.</p>
58. Payment upon Termination	<p>58.1. If the Contract is terminated because of a fundamental breach of Contract by the Implementing Agency, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as specified in the PCC. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Implementing Agency, the difference shall be a debt payable to the Employer.</p> <p>58.2. If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Implementing Agency's personnel employed solely on the Works, and the Implementing Agency's costs of protecting and securing the Works, and less advance payments received up to the date</p>
59. Property	<p>59.1. All Materials on the Site, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Implementing Agency's default.</p>
60. Release from Performance	<p>60.1. If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Implementing Agency, the Project Manager shall certify that the Contract has been frustrated. The Implementing Agency shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.</p>
61. Suspension of Bank Loan or Credit	<p>61.1. In the event that the Government of India (GoI) and/or State Government (Government of Uttar Pradesh) suspends the Loan or Credit to the Employer, from which part of the payments to the Implementing Agency are being made:</p> <ul style="list-style-type: none"> (a) The Employer is obligated to notify the Implementing Agency of such suspension within 7 days of having received the Government of India (GoI) and/or State Government (Government of Uttar Pradesh) suspension notice. (b) If the Implementing Agency has not received sums due to it within the 28 days for payment provided for in Sub-Clause 40.1, the Implementing Agency may immediately issue a 14-day termination

62. Force Majeure	<p>(a) The Implementing Agency shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination For default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.</p> <p>(b) For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Implementing Agency that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Implementing Agency. Such events may include, but not be limited to, acts of the Authority in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.</p> <p>(c) If a Force Majeure situation arises, the Implementing Agency shall promptly notify the Authority in writing of such condition and the cause thereof. Unless otherwise directed by the Authority in writing, the Implementing Agency 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.</p> <p>(d) As per PCC.</p>
63. Governing Law and jurisdiction	<p>(a) This Agreement shall be governed by the laws of India. The courts in Uttar Pradesh, Bareilly shall have jurisdiction over all matter arising out of or relating to this Agreement.</p> <p>(b) The Jurisdiction limits will be the Bareilly</p>
64. Possession of Goods	<p>(a) Goods have to be delivered to the site only after prior the approval form the Engineer-In-Charge.</p> <p>(b) Such Goods once delivered to Site will not be allowed to taken back except the construction equipments and the construction equipments should be permitted after the successful completion of the Project and as well as the Operation and Maintenance period.</p> <p>(c) In pursuant to GCC64.B, Goods will be allowed to taken back only after the written permission from the Engineer-In-Charge.</p>

<p>65. Warranty</p>	<ul style="list-style-type: none"> (a) The Implementing Agency warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract. (b) The Implementing Agency further warrants that the Goods shall be free from defects arising from any act or omission of the Implementing Agency or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination. (c) Unless otherwise specified in the PCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the PCC (d) The Authority shall give notice to the Implementing Agency stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Authority shall afford all reasonable opportunity for the Implementing Agency to inspect such defects. (e) Upon receipt of such notice, the Implementing Agency shall, within the period specified in the PCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Authority. (f) If having been notified, the Implementing Agency fails to remedy the defect within the period specified in the PCC, the Authority may proceed to take within a reasonable period such remedial action as may be necessary, at the Implementing Agency's risk and expense and without prejudice to any other right which the Authority may
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<p>66. Exit Management Plan</p>	<p>An Exit Management plan shall be furnished by IMPLEMENTING AGENCY in writing to the Client within 90 days from the date of signing the Contract, which shall deal with at least the following aspects of exit management in relation to the Contract as a whole and in relation to the Project Implementation, and Service Level monitoring.</p> <ul style="list-style-type: none"> (i) A detailed program of the transfer process that could be used in conjunction with a Replacement Service Provider including details of the means to be used to ensure continuing provision of the Services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer; (ii) Plans for provision of contingent support to Project and Replacement Service Provider for a reasonable period after transfer. (iii) Exit Management plan in case of normal termination of Contract Period. (iv) Exit Management plan in case of any eventuality due to which Project is terminated before the Contract period. (v) Exit Management plan in case of termination of IMPLEMENTING AGENCY. <p>A. Under Contract Completion</p> <p>Exit Management plan shall adhere to the following:</p> <ul style="list-style-type: none"> (i) Three (3) months of the support to Replacement Service Provider post termination of the Contract. (ii) Complete handover of the Planning documents, bill of materials, functional requirements specification, technical specifications of all equipment, change requests if any, sources codes / Quality manuals, wherever applicable, reports, documents and other relevant items to the Replacement Service Provider/Client. (iii) The IMPLEMENTING AGENCY shall be responsible for transferring all the knowledge regarding the Systems, technically and operationally to enable the new agency / Client to carry out the requisite functions. (iv) All latest operations & technical manuals, configuration files, software, licenses, quality manuals, warranties, guarantee, as-built drawings etc. shall be handed over to Client at least 3 months before contract completion. (v) Client shall release the performance security to the IMPLEMENTING AGENCY only after satisfactory Exit Management is achieved as part of the project and IMPLEMENTING AGENCY is obligated to perform all required additional functions to facilitate the same for a smooth transfer of the duties. (vi) Certificate of Acceptance from authorized representative of Replacement Service Provider issued to IMPLEMENTING AGENCY on successful completion of handover and knowledge transfer. <p>In the event of termination or expiry of the Contract, Project Implementation, or Service Level monitoring, both Bidder and client shall comply with the Exit Management Plan.</p> <p>During the exit management period, IMPLEMENTING AGENCY</p>
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A. Other Terms and conditions of the contract.

67. Scope of Supply	<p>1) The Goods and Related Services to be supplied shall be as per Schedule of Supply mentioned in the bid document.</p> <p>2) Unless otherwise stipulated in the Contract, the Scope of Supply shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Delivery and Completion of the Goods and Related Services as if such items were expressly mentioned in the Contract.</p>
68. Delivery	The Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion at Bareilly
69. Supplier's Responsibility	The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with Delivery and Completion Schedule.
70. Notices	All notices or other communications to be given or made under this agreement shall be in writing, shall either be delivered personally or sent by courier or registered post with an additional copy to be sent by facsimile or e-mail. The address for service of each party, its facsimile number and e-mail address are set out under its name on the signing pages hereto. A notice shall be effective upon actual receipt thereof, save that where it is received after 5:30 (Five Thirty) P.M. on any day, or on a day that is a public holiday, the notice shall be deemed to be received on the first working day following the date of actual receipt. Without prejudice to the foregoing, a party giving or making a notice or communication by facsimile or e-mail shall promptly deliver a copy thereof personally, or send it by courier or registered post to the addressee of such notice of communication. It is hereby agreed and acknowledged that any party may by notice change the address to which such notices and communications to it are to be delivered or mailed. Such changes shall be effective when all the parties have notice of it.
71. Information provided by the Authority	All drawings, Data and documentation that are given to the Implementing Agency by the Authority for the execution of the order are the property of the Authority and shall be returned when demanded. Except for the purpose of executing the order of the Authority, Implementing Agency shall ensure that the above documents are not used for any other purpose. The Implementing Agency shall further ensure that the information given by the Authority is not disclosed to any person, firm, body, corporate and / or authority and every effort shall be made to keep the above information confidential. All such information shall remain the absolute property of the Authority.

<p>72. Implementing Agency's Responsibilities</p>	<p>The Implementing Agency shall supply all the Goods and Related Services included in the Scope of Supply and the Delivery and Completion Schedule. The Implementing Agency shall be responsible for the adequacy, stability and safety of all services being provided.</p> <p>The Implementing Agency shall comply with all applicable safety regulations and take care for the safety of all persons entitled to be on as the operation and maintenance.</p> <p>The Implementing Agency shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Authority shall be entitled to audit any aspect of the system.</p> <p>The Implementing Agency shall be deemed to:</p> <ul style="list-style-type: none"> a) have satisfied himself as to the correctness and sufficiency of the Accepted Contract Amount, and b) Have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters. <p>Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Implementing Agency's obligations under the Contract and all things necessary for the proper discharge of the contract agreement.</p> <p>The Implementing Agency shall be wholly and solely responsible for full compliance with the provisions under all labour laws and/or regulations such as Payment of Wages Act 1948, Employees Liability Act 1938, Workmen's Compensation Act 1923, Employees State Insurance Act 1948, Employees Provident Fund Act 1952, Industrial Disputes Act 1947, the Maternity Benefit Act 1961, the Contract Labour (Regulation and Abolition) Act 1970 and the Factories Act 1948 or any modifications thereof or any other law relating thereto and rules there under introduced from time to time.</p> <p>The Implementing Agency shall assume liability and shall indemnify the Authority from every expense, liability or payment by reason of the application of any labour law, act, rules or regulations existing or to be introduced at a future date during the term of the Contract.</p> <p>In general, in respect of all labour directly or indirectly employed in the Work for the performance of Implementing Agency's part of the Contract, the Implementing Agency shall comply with all the rules framed by the Government authorities concerned from time to time for protection of the health and welfare of the workers.</p> <p>The Implementing Agency shall not employ any children/ child labour below the age of 18 years.</p>
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	<p>The Implementing Agency shall include in the Contract Price all expenses necessary to meet his obligations for making contributions toward employee benefits funds such as Employee Provident fund (EPF), Employee State Insurance Scheme (ESI) benefits, old age pension and/or any other benefits/compensation legally payable in compliance with all the statutory regulations and requirements. All records in this connection shall be properly maintained by the Implementing Agency and produced for scrutiny by the concerned authorities and the Authority</p>
73. Taxes and Duties	<p>a) For goods manufactured outside the Authority's Country, the Implementing Agency shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Authority's Country.</p> <p>b) For goods Manufactured within the Authority's Country, the Implementing Agency shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Authority.</p> <p>c) If any tax exemptions, reductions, allowances or privileges may be available to the Implementing Agency in the Authority's Country, the Authority shall use its best efforts to enable the Implementing Agency to benefit from any such tax savings to the maximum allowable extent.</p>
74. Copyright	<p>The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with Delivery and Completion Schedule.</p> <p>The copyright in all drawings, documents, and other materials containing data and information furnished to the Authority by the Implementing Agency herein shall remain vested in the Implementing Agency, or, if they are furnished to the Authority directly or through the Implementing Agency by any third party, including Implementing Agencies of materials, the copyright in such materials shall remain vested in such third party</p>

<p>75. Confidential Information</p>	<p>The Authority and the Implementing Agency shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Implementing Agency may furnish to its Subcontractor such documents, data, and other information it receives from the Authority to the extent required for the Subcontractor to perform its work under the Contract, in which event the Implementing Agency shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Implementing Agency under GCC Clause 71.</p> <p>The Authority shall not use such documents, data, and other information received from the Implementing Agency for any purposes unrelated to the contract. Similarly, the Implementing Agency shall not use such documents, data, and other information received from the Authority for any purpose other than the performance of the Contract.</p> <p>The obligation of a party under GCC Sub-Clauses 71 above, however, shall not apply to information that:</p> <ol style="list-style-type: none"> now or hereafter enters the public domain through no fault of that party; can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or Otherwise, lawfully becomes available to that party from a third party that has no obligation of confidentiality. The above provisions of GCC Clause 71 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof. <p>The provisions of GCC Clause 71 shall survive completion or termination, for whatever reason, of the Contract</p>
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76. Specifications and Standards	<p>Technical Specifications and Drawings</p> <p>a. The Supplier shall ensure that the Goods and Related Services comply with the technical specifications and other provisions of the Contract. The Goods and Related Services supplied under this Contract shall conform to the standards mentioned Schedule of Supply and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate.</p> <p>b. Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Authority and shall be treated in accordance with GCC Clause 11.1.32</p>
77. Packing and Documents	<p>a) The Implementing Agency shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.</p> <p>b) The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, and in any other instructions ordered by the Authority</p>

<p>78. Transportation and Incidental Services</p>	<p>The Implementing Agency responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms. Transportation of the goods shall be in accordance with the Schedule of Supply.</p> <p>The Implementing Agency may be required to provide any or all of the following services, including additional services:</p> <ul style="list-style-type: none"> a. performance or supervision of on-site assembly and/or start-up of the supplied Goods; b. furnishing of tools required for assembly and/or maintenance of the supplied Goods; c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods; d. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Implementing Agency of any warranty obligations under this Contract; and e. training of the Authority's personnel, at the Implementing Agency's on-site, in assembly, start-up, , maintenance, and/or repair of the supplied Goods. f. Prices charged by the Implementing Agency for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Implementing Agency for similar services
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79. Patent Indemnity

The Implementing Agency shall, subject to the Authority's compliance with GCC Sub-Clause 75, indemnify and hold harmless the Authority and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Authority may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

- a. the installation of the Goods by the Implementing Agency or the use of the Goods in the country where the Site is located; and
- b. Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, or materials not supplied by the Implementing Agency, pursuant to the contract.

If any proceedings are brought or any claim is made against the Authority arising out of the matters referred to in GCC Sub- Clause 75, the Authority shall promptly give the Implementing Agency a notice thereof and the Implementing Agency may at its own expense and in the Authority's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claims.

If the Implementing Agency fails to notify the Authority within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Authority shall be free to conduct the same on its own behalf.

The Authority shall, at the Implementing Agency's request, afford all available assistance to the Implementing Agency in conducting such proceedings or claim, and shall be reimbursed by the Implementing Agency for all reasonable expenses incurred in so doing.

The Authority shall indemnify and hold harmless the Implementing Agency and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Implementing Agency may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Authority.

80. Limitation of Liability	<p>Except in cases of criminal / gross negligence or willful misconduct:</p> <p>a. The Implementing Agency shall not be liable to the Authority, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Implementing Agency to pay liquidated damages to the Authority and</p> <p>b. The aggregate liability of the Implementing Agency to the Authority, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Implementing Agency to indemnify the Authority with respect to patent infringement.</p>
81. Change in Laws and Regulations	<p>Unless otherwise specified in the Contract, if after the bid submission date, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Implementing Agency has thereby been affected in the performance of any of its obligations under the contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC's Contract Price Clause.</p>

82. Change order and Contract Amendments	<p>The Authority may at any time order the Implementing Agency through notice, to make changes within the general scope of the Contract in any one or more of the following:</p> <ul style="list-style-type: none"> a. specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Authority; b. the method of shipment or packing; c. the place of delivery; and d. the Related Services to be provided by the Implementing Agency. <p>If any such change causes an increase or decrease in the cost of, or the time required for, the Implementing Agency's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Implementing Agency for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Implementing Agency's receipt of the Authority's change order.</p> <p>Prices to be charged by the Implementing Agency for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Implementing Agency for similar services.</p> <p>Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.</p>
83. Assignment	<p>Neither the Authority nor the Implementing Agency shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.</p>
84. Export Restriction	<p>Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Authority, to the country of the Authority, or to the use of the products/goods, systems or services to be supplied, which arise from trade regulations from a country supplying those products/goods, systems or services, and which substantially impede the Implementing Agency from meeting its obligations under the Contract, shall release the Implementing Agency from the obligation to provide deliveries or services, always provided, however, that the Implementing Agency can demonstrate to the satisfaction of the Authority and of the Bank that it has completed all formalities in a timely manner, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract. Termination of the Contract on this basis shall be for the Authority's convenience pursuant to Termination Clause.</p>

85. Time is of the Essence	Time shall be of the essence in respect of any date or period specified in this contract or any notice, demand or other communication served under or pursuant to any provision of this contract and in particular in respect of the completion of the activities by implementing agency by the specified completion date.
86. Ownership and Retention of Documents	<p>The authority shall own the documents, prepared by implementing agency arising out of or in connection with the contract.</p> <p>Forthwith upon expiry or earlier termination of this contract and at any other time on demand by the client, Implementing Agency shall deliver to the authority all documents provided by or organizing from the authority and all documents produced by or for implementing agency in the course of performing the services, unless otherwise directed in writing by the authority at no additional cost. Implementing Agency shall not, without the prior written consent of the client store, copy distribute or retain any such documents.</p>
87. Records of Contract Document	<p>Implementing Agency shall at all-time make and keep sufficient copies of the process manuals, operating procedures, specifications, Contract Documents and any other documentation for them to fulfil their duties of the contract.</p> <p>Implementing Agency shall keep on the site at least three copies of each and every specification and contract document. In excess of their own requirement and those copies shall be available at all times for use by the authority and by any other person authorized by the authority.</p>
88. Security and Safety	<p>Implementing Agency shall comply with the directions issued from time to time by the authority and the standards related to the security and safety, in so far as it applies to the provision of the services.</p> <p>Implementing Agency shall upon reasonable request by the authority or its nominee(s) participate in regular meetings when safety and matters are reviewed.</p>
89. Addition /Alteration / Modifications	<p>The Authority reserves the right to make additions/alterations/modifications to the quantity of items in the contract. The Implementing Agency shall supply such quantities also at the same rate as originally agreed to + 20% of the quantity ordered and incorporated in the contract. The variation shall, however, be limited Waiver.</p> <p>Any waiver by the authority of any breach of the conditions of the Contract shall not constitute any right for subsequent waiver of any other terms and conditions.</p>

90. Rating & Name Plate	<p>Equipment should be provided with name plate giving full details of manufacture, capacity and other details as specified in the relevant IS or other specification stipulated. The purchase order No and date and year of Supply and the words “(BSCL)” must be etched on the name plate.</p> <p>RATING PLATE: Each main and auxiliary item of building shall have permanently attached to it a rating plate in a conspicuous position. This shall be of a non-corrodible material preferably chromium plated steel to stand the prevalent atmospheric conditions as indicated. The inscription shall be engraved in black on the plate. The size of the rating plate shall depend Upon space availability and inscriptions shall be approved by the client. The plates shall be reasonably sized for clarity and clear inscription. The plates shall be attached to the body of the equipment by screws.</p> <p>NAME PLATE: Each item of building shall be provided with a name plate or label designating the service of the particular equipment. The shape and size of the plate and inscriptions shall be approved by the client. Such name plates shall be of non- corrodible material preferably chromium plated steel having engraved black lettering or otherwise as specified. In case of indoor equipment, the plate shall be of transparent plastic material with black lettering engraved on the back. The name plates shall be screwed to the body of the equipment.</p>
91. Interchangeability	<p>All similar materials and removable parts of similar equipment shall be interchangeable with each other. A specific confirmation of this should be furnished along with the invoices for the Supplies</p>
92. Material and Workmanship	<p>Implementing Agency shall fully warrant that the stores, equipment and component Supplied shall be new and first quality, according to the specifications and shall be free from defects (even concealed faults, deficiency in design, materials and workmanship).</p>
93. Spare Parts, Oil and Lubricants	<p>Wherever applicable, the Implementing Agency shall furnish to the Authority, item-wise price list of spares required for regular operation and maintenance of the ordered equipment. The Implementing Agency shall also furnish necessary instructions and drawings to identify the spare part numbers and their location as well as an interchange ability chart</p>

94. Implementing Agency's Liability	<p>Implementing Agency accepts full responsibility and indemnifies the Authority and shall hold the Authority harmless from all acts of omission and commission on the part of the Implementing Agency, his agents, his subcontractors and employees in execution of the contract. The Implementing Agency also agrees to defend and undertakes to indemnify the Authority and also hold it harmless from any and all claims for injury to or death of any and all persons including but not limited to employees and for damage to the property arising out of or in connection with the performance of the work under the contract. The Implementing Agency's liability and indemnity under the Contract shall be limited to execution and maintenance except in case of Force Majeure</p>
95. Access to Implementing Agency's Premises	<p>The Authority and /or its authorized representative shall be provided Access to Implementing Agency's and / or his sub- contractor's premises, at any time during the pendency of the contract, for expediting the Supplies, inspection, checking etc.</p>

<p>96. Packing and Marking</p>	<p>All materials/equipment shall be securely packed to the requirement of transportation by Rail/Road/Sea transport. All exposed Services/connections/ protrusions shall be properly protected. All Unexposed parts shall be packed with due care and the packages should bear the words "Handle with Care". The packing requirements of Rail/ Road transport shall be complied with so as to obtain clear Railway/Lorry Receipt i.e. without any qualifying remarks.</p> <p>All packages and unpacked materials shall be marked with the name of the Consignor, Consignee, Purchase Order/Contract No., gross and net weight, sign of handling, if any, with indelible paint in English at least at two places. In tagged with such bundles.</p> <p>All Equipment case of bundles, metallic plates marked with the above details shall be/material shall be protected for ocean shipment, in land transport, carriage at the Site and outdoor storage during transit and at the Site, strictly according to the instructions given in this specification.</p> <p>The contractor shall be responsible for any damage to the equipment during transit due to improper and inadequate packing. Only packages constructed out of sound material and of dimensions proportional to the size and weight of contents shall be used. Bundled materials shall be strapped rigidly with steel band over the protective covering. Fragile materials shall be securely braced with the containers or otherwise amply fastened and packed to prevent hitting or rattling. Soft non-hygroscopic packing materials shall be placed between the hard packing materials and the fragile equipment. Articles which do not completely fill the selected container must be cushioned, braced, fastened or blocked to prevent damage to the article itself or destruction of the container. Inner bracing or blocking must be such that the content's weight is distributed over interior surfaces rather than concentrate on one or two critical points. Loose material, e.g. bolts, nuts etc., shall be packed in gunny bags and sealed in polythene bags with proper tagging.</p> <p>Components containing glass shall be carefully covered with shock absorbing protective material such as expanded polystyrene ('ThermoCole').</p> <p>All openings in the equipment shall be tightly covered, plugged or capped to prevent foreign material from entering.</p>
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In the case of large and bulky equipment, the contractor shall be responsible for ascertaining transport limitations and Supply the equipment in the minimum number of components or subassemblies, within the framework of transport limitations.

Wherever necessary, proper arrangements for attaching slings for lifting shall be provided.

The contents of the packages shall be sealed in thick polythene sheet and all the inside walls of the packages shall be lined with waterproof paper to protect the equipment from damage due to dust and moisture.

All equipment shall be protected for the entire period of dispatch, storage and erection against corrosion, incidental damage due to vermin, sunlight, rain, high temperature, humid atmosphere, rough handling in transit and storage in the open including possible delays in transit. Material and equipment shipped across the sea shall be packed to withstand without damage, the effects of salt spray. All machined and plated parts shall be protected with anti-rust grease. At such points, wrapping impregnated with anti-rust composition or vapour phase inhibitors shall be used. These shall have sufficient strength to resist chafing and indentation due to the movement which is likely to occur in transit. The protective wrappings and impregnation shall last for a minimum period of three months.

Silica-gel or approved equivalent moisture absorbing material in small cotton bags shall be placed and tied at various points on the equipment, wherever necessary. Adequate provision of skids or pallets shall be made to keep the packages above the collecting drainage. Crates, event collection and other large containers should have drain holes in the bottom top of water within the packing. This is especially important where the cargo itself is subject to condensation (cargo sweat).

All cases shall be provided with suitable cut outs, closed by bolted wooden planks to facilitate inspection by customs authorities. Waterproof transparent papers shall be provided at the cut-out locations to prevent water ingress into the casing through the cut-out. Each crate or package shall contain a packing list in a waterproof envelope. Copies of the packing list, in triplicate, shall be forwarded to the Prior to dispatch.

All items of material shall be clearly marked for Authority easy identification against the packing list. All spare parts shall be packed and treated for long storage conditions at site. Any material found short inside the packing cases shall be supplied by the contractor at no extra cost to the client. All packing cover and packing material shall become the property of the client.

The Contractor is responsible for safe delivery of the material and no compensation for any losses in transit or handling shall be compensated.

Marking:

All packages shall be clearly, legibly and durably marked with uniform block letters (preferably with waterproof paint) on at least three sides with:

- a) Destination address as communicated.
- b) Contract No.:
- c) Dimensions.
- d) Net and gross weights.
- e) Sign showing 'side Up'.
- f) Sign showing 'fragile' marks in case of delicate Equipment.
- g) Sign showing slinging and sling position.
- h) Any handling and unpacking instructions, if considered necessary.
- i) Identification mark relating them to the appropriate shipping documents.
- j) In case of spare parts, each spare part shall be clearly marked and labelled on the outside of its packing with its description and catalogue/part number.

Erection Marks:

All equipment comprising multipart assemblies, e.g. steel frame works, piping etc., shall be marked with identifying numbers and/or letters corresponding to those of the approved drawings or material lists. These erection marks shall be clearly readable. The contents of the package shall be punched on non-corrosive metal plate and nailed to the package on a prominently visible place. If the number of items in the package is too many, a typed list in transparent waterproof bag shall be kept inside a galvanized steel sheet pocket nailed on to the outside of package in prominently visible location.

97. Storage of Mechanical and Electrical Equipments at Site

The types of storage are broadly classified as

- i) Special storage - Air conditioned,
- ii) Closed storage,
- iii) Semi-closed storage and
- iv) Open storage.

The equipment covered under this Specification shall be stored in the type of storage as recommended by the manufacturer.

STORAGE:

Authority shall make available the place at site for storing the material, if available on chargeable basis. The contractor shall arrange construction of storage sheds, etc. for proper storage of materials and to minimize wasteful handling during retrieval of items required for erection. The outdoor storage areas as well as semi-closed stores shall be provided with adequate drainage facilities to prevent water logging.

The stores sheds shall be built in conformity with fire safety requirements and with adequate lighting and fire extinguishers. No smoking signs shall be placed at strategic locations. Safety precautions shall be strictly enforced.

Adequate lighting facility shall be provided by the contractor in storage areas and storage sheds and security personnel positioned to ensure enforcement of security measures to prevent theft and loss of materials.

The contractor shall carry out regular inventory of materials received, issued and erected and notify the client of any loss when noticed. The contractor shall provide adequate number of competent stores personnel including store-keepers, clerical staff, inspection engineers, watchmen and security staff to efficiently store and maintain the equipment/material entrusted to him.

Any equipment left in the open under such conditions shall be, if required, covered with tarpaulin.

MAINTENANCE DURING STORAGE:

The Contractor is responsible for maintenance of the equipment stored at site as per standard practices for storage and as per manufacturer's recommendations of each of the equipment.

98. Progress Reports and Photographs/ Videos

During various stages of the manufacture in the pursuance of the contract, the contractor shall at his own cost submit progress reports as may be reasonably required by the Client with such materials, such as charts, networks, photographs/Videos, test certificates etc., Such progress reports, shall be in the form and size as per industry standards and shall be submitted at least in four copies. During coordination meetings or review meetings, presentation shall be made by power point presentation with photographs for important mile stones.

Progress Reports:

Daily/weekly and Monthly progress reports shall be prepared by the Contractor and submitted to the client in three copies. The first report shall cover the period Up to the end of the first calendar month following the Commencement Date.

Reporting shall continue until the Contractor has completed all work, which is shown to be satisfactory outstanding at the completion date stated in the Taking-Over Certificate for the Works. Each report shall include:

- a) Charts and detailed descriptions of progress, including each stage of surveys, Investigation, design, Contractor's Documents, procurement, manufacture, delivery to Site, construction, commissioning and trial operation;
- b) Digital photographs/videos showing the status of progress on the Site;
- c) For the manufacture of each main item of building and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of: Commencement of manufacture, Contractor's inspections, tests, and Dispatch and arrival at the Site;
- d) The details of Contractor's Personnel and Equipment;
- e) Copies of quality assurance documents, test results and certificates of Material;
- f) List of Variations, notices given
- g) Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and Comparisons of actual and planned progress, with details of any events or circumstances which may jeopardize the completion in accordance with the Contract, and the measures being (or to be) adopted to minimize or overcome delays.

99. Documentation	<p>The contractor's store keeping function will include maintaining various records. These records shall include but not limited to Supplier-wise record of equipment/material received, stored and issued for erection as well as stock position.</p> <p>Record of inspection and repairs carried out, protective measures and lubrication equipment in storage as well as erected until the same is taken over by the owner.</p>
100. Dispatch of Materials	<p>The Implementing Agency is responsible for the safe delivery of the goods in good condition at the project site of the pant. Destination stores. The Implementing Agency should acquaint himself of the conditions for handling and transport of the goods to destination and shall include and provide for security and protective packing of the goods so as to avoid damage in transit. Packing of the materials / equipment shall be strictly as per the provision of the contract or standards or as required. All formalities related to allotment of wagons, loading permission from railways shall be completed by the Implementing Agency. The Implementing Agency shall communicate immediately the dispatch details to the consignee as specified in the contract. The original dispatch documents shall be forwarded immediately either directly or through bank, failing which the Implementing Agency shall be responsible for any delay in payment and consequential payments of demurrages and wharf ages to the transporter.</p>
101. Demurrage / Wharf age	<p>Implementing Agency shall also be responsible for all payments due to late receipt of RR/LR and other documents.</p>
102. GST Number	<p>All the tenderers should have a valid GST number. Failure to comply with this instruction shall render his/her/their incomplete and shall be rejected with other punitive action against the said as deemed fit by BSCL. In any change or amendment made by the Government will be applicable according to the instructions.</p>
103. Incomplete tender and seeking clarification	<p>Tenders received in incomplete shape or found incomplete during evaluation of the bids, are liable for rejection. However, during evaluation if felt necessary by BSCL that, further clarification(s) is/are required on any document(s) submitted by any bidder(s) then BSCL may, at its sole discretion, resort to any procedure(s) deemed fit and by assigning reasonable time(s), as BSCL may decide just & proper for completion of the procedure(s). The result(s) of this /these time bound pursuit(s) shall have bearing(s) upon further evaluation/finalization of the corresponding tender(s) of the bidder(s) or on the tender for the work.</p>

104. Urgent Work	If any urgent work in the opinion of BSCL becomes necessary to be executed and the contractor is unable and unwilling at once to carry out, the Engineer in Charge may be his own or through other agency carry it out, as he may consider necessary. All incurred on it shall be recoverable from the contractor or shall be adjusted against any sum payable to the contractor.
105. Change(s) in Name and Constitution of the Contractor:	Any change(s) in the name/constitution of the contractor, shall be forthwith notified by the contractor to BSCL for information. In case of failure to notify the change(s) within 15 days, BSCL may, by notice in writing, rescind the contract and the security deposit of the contractor shall, thereupon, stand forfeited and be absolutely at the disposal of BSCL and, the same consequences shall be ensured as if the contract had been rescind there of and in addition the contractor shall not be entitled to recover or to be paid for any work thereof actually performed under the contract.
106. Custody of Materials:	The contractor shall be responsible for safe custody of his/her/their materials at the work sites and BSCL will not be responsible for any loss or damage of the property at site. There should not be any conflict of interest or relaxation/exoneration of responsibility of the contractor as per this RFP/Contract, on any account whatsoever, regarding the work(s)/material(s)/property, of BSCL or of, any other agency/organization engaged/allowed by BSCL, available/to be made available/going on/to be started, at or in connection with the works of road and traffic junction development, failing which BSCL shall adopt any action deemed fit against the contractor with a view to continuing and complete the works. The portion or whole of the work executed by the contractor in connection with this contract shall remain in safe custody, watch & ward of the contractor till the same are handed over by the contractor to BSCL in required shape and manner or till, BSCL takes them over either unilaterally or as per this contract. Responsibility arising out of this safe custody, watch and ward till BSCL declares/assumes its right over the same, shall lie with the contractor. No claim in this regard by the contractor shall be acceptable by BSCL.

<p>107. Contractor to Provide and Facilitate Inspection, Safety Gear, etc:</p>	<ul style="list-style-type: none"> i. Inspection: BSCL will have the right to inspect the work and can reject partly or fully, if found defective in its opinion. ii. Safe means of Access: Safe means of access shall be provided to all working platforms and other working places. iii. Precaution against Electrical Equipment: Adequate precaution shall be taken to prevent danger from electrical equipment. Hand lamps shall be provided with Mesh guard, wherever required. iv. Preventing Public from Accident: No materials on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or public. The contractor shall provide all necessary fencing and light to protect the public from accident and shall be bound to bear expenses of defence or any suit action or other proceedings at law that may be brought by any persons for injury sustained owing to neglect of the above precaution and to pay any damages and cost which may be awarded in any such suit action or proceedings to any such person or which may with the consent of the contractor, be paid to compromise any claim by any such person. The contractor not to come cause blockage of traffic/disruption of traffic. v. Personal Safety Equipment: All personal safety equipment shall be made adequately available by the contractor for use of persons employed at the site of work and maintained in a condition suitable for immediate use. The contractor shall take adequate steps to ensure proper use of the equipment by persons concerned. vi. Demolition: Before any demolition work is commenced and also during process of work; <ul style="list-style-type: none"> a. All roads and open areas adjacent to the work site shall either be closed or suitably protected. b. No electric cable or apparatus which is liable to be a source of danger shall remain electrically charged. c. All practical steps shall be taken to prevent danger to persons employed from the risk of fire, explosion or flooding.
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108. Fair Wages Clause	<p>The contractor shall not employ for the purpose of this contract any person who is below the age of fourteen years and shall pay to each labor for work done by such laborers fair wages.</p> <p>Explanation- “Fair Wage” means wages, whether for time or piece work prescribed by the State Public Works Department provided that where higher rates have been prescribed under the minimum wages act 1948 wages at such higher rates should constitute fair wages.</p> <p>BSCL shall have the right to enquire into and decide any complaint alleging that the wages paid by the contractor to any labor for the work done by such labor is less than the wages described above.</p>
109. Contractor to Respond for Disengagement of Unruly Labor/Personnel	<p>BSCL are to have round the clock access to the work sites during execution and defect liability period. BSCL may require the contractor to remove dismiss any labour / representative(s) of person of the contractors found to be incompetent or ill-mannered/behaved or of doubtful background/integrity, etc., and the contractor shall comply with such requirements.</p>
110. Provisions for Workman Compensation	<p>BSCL shall not be held liable to pay any compensation to any workman under workman’s compensation Act, 1923. The contractor shall have to pay the entire compensation as decided in any court of law for any injury/loss sustained by any workman during execution of the work. If, by order of any authority/court, BSCL pays any compensation to honor and abide the order, then said amount(s) shall be recovered from the contractor.</p>

111. Rescission of Contract

Subject to other provisions contained in this RFP or in the agreement, BSCL may, without prejudice to any other right or remedy available to the contractor in respect of any delay, inferior workmanship, any claims for damages and / or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, rescind the contract in any of the following cases:

- I. If the contractor having been given by BSCL a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper manner shall omit/ fail to comply with the requirement of such notice for a period of seven days thereafter.
- II. If the contractor being a company shall pass a resolution or the honorable court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the honorable court or the creditor to appoint a receiver or a manager or which entitle to honorable court to make a winding up order.
- III. If the contractor has, without reasonable cause, suspended the progress of the work with due diligence so that in the opinion of CHIEF EXECUTIVE OFFICER (which shall be final and binding) he will be unable to secure completion of the work by the due date of completion and continues to do so after a notice in writing of seven days from Chief Executive Officer, BSCL.
- IV. If the contractor fails to follow and comply with the relevant provisions this RFP and/or agreement.
- V. If the contractor fails to complete the work within the stipulated date or items of the work with individual date of completion. If any stipulated, on or before such date(s) of completion and does not complete them within the stipulated period.

When the Contractor has made himself liable for action under any of the cases aforesaid, BSCL shall have the power to rescind the contract(of which rescission notice in writing to the contractor under the hand of CHIEF EXECUTIVE OFFICER shall be conclusive evidence), 20% of the value of the left over work will be realized from the contractor as Penalty in addition to other punitive measures deemed fit by BSCL including debarring the contractor from participating in BSCL Tenders at least for 3 years, blocking his/her/their Digital Signature Certificate(DSC) in the e-procurement portal and recommending the corresponding license issue authority not to renew the license of the contractor. In case of rescission of contract, the contractor shall have no claim for compensation for any loss sustained by him by reasons of having purchased or procured any materials or entered any engagement on account of or with a view to execute the work/ performance of the contractor.

112. Black Listing	<p>A Contractor may be blacklisted for :-</p> <ol style="list-style-type: none"> Misbehavior/ threatening of Departmental & supervisory officers during execution of work/tendering process. Involvement in any sort of tender fixing. Constant non-achievement of milestones on insufficient and imaginary grounds and non-adherence to quality specifications despite being pointed out. Persistent and intentional violation of important conditions of contract. Security consideration of the State i.e., any action that jeopardizes the security of the state. Submission of False/ fabricated/ forged documents for consideration of a tender. <p>In case a contractor is black listed, it will be widely published and intimated to all Departments of Government and also to Govt. of India Agencies working in the State</p>
113. Force majeure	<p>Neither the contractor nor BSCL shall be considered in default in delayed performance of its obligation if such performance is prevented or delayed because of work to hostilities, revolution, civil commotion, epidemic, accidental fire, cyclone, flood, earthquake or because of any law and order proclamation, regulations or ordinance of the Government thereof or because of an act of god or for any cause beyond reasonable control of the party affected. Should one or both the parties be prevented from fulfilling their contractual obligations due the aforesaid a state of force majeure lasting continuously for a period of 6 months, the two parties may consult each other regarding the further execution of the contract for mutual settlement.</p>

114. Conditions:

Prices:

- Price(s) shall be firm and not subject to escalation on any account, till the contract is executed in full and its subsequent amendments accepted by the Implementing Agency even though the completion/execution of order may take longer time than delivery period incorporated and accepted in contract.
- The bidder shall quote their prices for Supply, Erection & Commissioning portion separately as per schedule of prices indicated in the schedules.
- The prices quoted shall be lump sum and on for Destination basis inclusive of all taxes and duties. The prices shall be FIRM throughout and until Survey, Design, Supply, Delivery, Erection, Testing and commissioning of the equipment/system including Maintenance as specified in the Volume -2 of this RFP document.

- iv. All applicable taxes/duties/levies such as GST, Excise duty, Works Contract Tax, Octroi, Cess, Entry Tax etc., and any other taxes and duties that are applicable for such contracts in the State of Uttar Pradesh as on the date of Opening of bid shall be considered.

Taxes, Levies and Duties:

GST, Excise Duty and other payable shall be shown separately in the invoice.

Variations in Statutory Levies:

All Taxes and Duties paid by the bidder shall be reimbursed as per the prevailing taxation laws. In cases where delivery schedule is not adhered to by the Implementing Agency and there is upward variation/revision after the agreed delivery date, the bidder/Implementing Agency shall bear the impact of such increased levies and if there is downward variation/revision, the Authority shall be given advantage to that extent.

All royalties for patent or charges for the use or infringement thereof that may be involved in the construction or use of any equipment shall be included in the bid price. The bidder /Implementing Agency shall protect the Authority against any and all claims arising on account of the use thereof. The Authority agrees to furnish the Implementing Agency any appropriate information or assistance.

Delivery Period:

The bidder has to submit a detailed Bar/PERT Chart conforming to the delivery schedules for material and completion of erection, testing and commissioning of the building stipulated in the bid documents.

Timely Completion:

The projects are proposed by (BSCL) under smart City Development are time bound. and thus, the completion period is essence of the contract and the successful bidder shall take all necessary measures to execute the project in the least possible period preferably before scheduled completion period.

Removal of Rejected Goods and Replacement:

- a) If Upon delivery, the material/ equipment is found not in Conformity with the specifications stipulated in the contract, whether inspected and approved earlier or otherwise, those shall be unacceptable to the Authority or its authorized representative. A notification to this effect shall be issued to the Implementing Agency, normally within 10 days from the date of receipt of materials at stores/ project site.
- b) Implementing Agency shall arrange suitable replacement Supplies and remove the rejected goods within 10 days from the date of notification failing which, the goods shall be dispatched to vendor by road transport on freight to pay basis at Implementing Agency risk and cost.
- c) External damages or shortages that are prima-facie the results of rough handling in transit or due to defective packing shall be intimated within a fortnight of the receipt of the materials.

In case of internal defects, damage or shortages or any internal parts, which cannot ordinarily be detected on a superficial visual examination, though due to bad handling in transit or defective packing should be intimated within 3 months from the date of receipt of these articles. In either case the damaged or defective material should be replaced by the Implementing Agency free of cost to the Authority.

- d) If no steps are taken within 30 days of receipt of intimation of defects or such other reasonable time as the Authority may deem proper to afford, the Authority may without prejudice to its other rights and remedies arrange for repairs/rectification of the defective materials or replace the same and recover the expenditure incurred from the deposits such as EMD, Performance Security/guarantees or other monies available with the Authority or by resorting to legal action.

ERECTION CONDITIONS OF CONTRACT:

CONDITIONS:

The following shall Supplement the conditions already contained in the other parts of these specifications and documents and shall govern the scope of contract related to the erection, testing and commissioning. Scope of services: - The scope of the work and duties and responsibilities of the Implementing Agency shall broadly include the following:

1. Re-checking and re-verification of equipment and materials Supplied by the Implementing Agency and their sub-vendors
2. Erection including disassembly, pre-assembly etc. and performing trial and pre-commissioning tests, adjustment, calibration, etc, of equipment.
3. Initial operation of the building and equipment till successful completion of trial operations.
4. Carrying out the performance and guarantee tests in terms of General technical conditions.
5. Repairs, modifications and alterations, etc., of equipment, whenever necessary.
6. Training personnel of the Client in erection, testing and operation and maintenance of the building and equipment at site.
7. Rendering clarification and guidance, on technical problems and drawings/ documents relating to the building and equipment.
8. Preparation of detailed programmes/schedules for erection, testing and commissioning activities of the equipment including material and manpower planning.
9. Any other related services though not specifically mentioned herein before but necessary for proper execution of the work, as stipulated.
10. The bidder shall indicate the requirement for adequate storage space at site on the basis of availability.

WORK AND SERVICE

The Implementing Agency shall undertake to perform the complete job as per scope above. Such parts as may have not been specifically included but otherwise form part of the job are deemed to be included unless otherwise specifically excluded.

The Implementing Agency shall arrange for the services of fully qualified and competent supervising Engineer/Engineers and necessary number of personnel as the Implementing Agency deems it absolutely necessary with the requisite specialized skills for the erection, testing and commissioning of equipment.

All tools required for installation shall be arranged by the Implementing Agency. Inspection and testing of the complete installation and putting in regular service and shall bear the overall responsibility of the satisfactory installation, testing and commissioning of the equipment. The Implementing Agency shall make his own arrangements for Boarding & Lodging of his personnel. The following facilities and services are also covered in the scope of Tenderer. Unloading and loading of equipment and accessories, transportation to the site and storage. Providing of necessary labour force required for the execution of the job. Providing of necessary transport facilities for the staff to be deputed by the contractor for installation work.

ERECTION LABOUR AND TOOLS:

- I. The Implementing Agency shall furnish the list of special erection tools. Special tools which in the opinion of the Implementing Agency would be required for erection work during maintenance should be indicated in schedule for special tools and plants.
- II. The Implementing Agency may select to bring with him certain personal tools required for erection which will remain his property at all times. Use of such personal tools for erection work shall not entitle the Implementing Agency to any additional payment. Any assistance required by the Implementing Agency in securing entry and exit permits for such tools shall be rendered by the Authority.
- III. Checking for necessary positions, levels and dimension of foundation shall be done by the Implementing Agency.
- IV. Cleaning and Servicing: The Implementing Agency shall ensure that inside of all tubes, pipes, valves fittings and actuators shall be free from dirt and loose scales by thoroughly blowing and /or flushing of service before being erected by them.

FIELD ENGINEERING CLARIFICATIONS:

The Implementing Agency shall provide all necessary field engineering clarifications to the client that they may require for the purposes of their works. The Implementing Agency shall also provide all engineering clarifications and details to the client for the overall engineering / start-Up of the plant and equipment Supplied by them.

IMPLEMENTATION AND FIELD QUALITY PLANS:

It will be the responsibility of the Implementing Agency to ensure that the erection of the equipment is carried out according to the quality plans and standard manufacturing practices / instructions as given by the manufacturer without any deviations in performing the erection in accordance with such quality plans, etc. The Implementing Agency shall further identify specific hold points beyond which work will not

proceed without Client's consent so as to further ensure that he performs the above quality functions effectively.

PRE-COMMISSIONING TRIALS AND INITIAL OPERATIONS:

1. On completion of all works, all the measurements shall be jointly taken by the Implementing Agency and client and a protocol signed. The tests and trial operations shall be conducted only after signing of the protocol.
2. The pre-commissioning trials and initial operations of the equipment Supplied by the Implementing Agency shall be the responsibility of the Implementing Agency. The Implementing Agency shall provide, in addition, any special instruments/calibrating devices, etc., if required for the successful performance of these trials.

COMMISSIONING REPORT:

The client and Implementing Agency shall properly maintain in the agreed formats their respective records of all observations and measurements taken in respect of all tests and operations. Joint protocol shall be signed on completion of each and every test / check till the trial operation. During trial operations, all readings shall be jointly maintained and signed. On successful completion of trial operations, a report shall be jointly prepared and signed indicating results of all the tests / checks and trial operation readings.

RELEASE OF CLAIMS:

After completion of work and prior to final payment, Implementing Agency shall furnish a release of claims against the Authority arising out of the contract other than the claims specifically identified, evaluated and accepted.

TAKING OVER:

Upon successful completion of erection, testing and commissioning in respect of all equipment's under the scope of the specification, (Engineer-in-Charge) shall issue to the Implementing Agency, a taking over certificate as a proof of final acceptance of the equipment. Such certificate shall not unreasonably be held up on account of minor omission or defects, which does not affect the commercial operation or do not constitute any serious risk to the equipment. The Implementing Agency shall undertake to make good such omissions and defects at the earliest possible time. The estimated amount as decided by the (Engineer-in-Charge) for making good such omissions or defects or deficiency in observed performance over the assessed or guaranteed performance shall be deducted from the invoice of the Implementing Agency and the amount deducted shall be paid as soon as the omissions or defects are rectified or made good the financial loss, etc. to the satisfaction of (BSCL). The taking over certificate however shall not relieve the Implementing Agency of his obligation which otherwise survive by the terms and conditions of the contract after issuance of such certificate.

REGULATION OF LOCAL AUTHORITIES AND STATUS:

The Implementing Agency shall, to the extent relevant and applicable, comply with all the rules and regulations of local authorities/governments, during the performance of his field activities. He shall also comply with the minimum wage Act: 1948 and any modifications thereof and the payment of wages Act (both of the Government of India) and the rules made there under, in respect of employees or workmen

employed or engaged by him. The Implementing Agency shall also Supply the equipment in conformity with the electricity laws, rules, etc. and obtain all permissions and approvals from the competent authorities such as CEIG, etc. before charging the equipment for testing and commissioning.

CONSTRUCTION MANAGEMENT:

1. The field activities of different Implementing Agency working at site, will be co-ordinated by the (Engineer-in-Charge) and his decision shall be final in resolving any disputes or conflicts between the Implementing Agency another Contractors and regarding scheduling and co-ordination of work. For any disputes, the decision of Authority shall be final and binding on both the parties.
2. The Engineer-in-Charge or his representative shall hold meetings of all the Implementing Agency working at site, at a time and a place to be designated. The Implementing Agency shall attend such meetings and take notes of discussions during the meeting and the decisions of (Engineer-in-Charge) and shall strictly adhere to these decisions in performing his services. In addition to the above weekly meetings, (Engineer-in-Charge) may call for other meetings either with individual Implementing Agency or with selected number of Implementing Agency and in all such cases the Implementing Agency, if called shall attend such meetings.

HOWEVER, any delay in timely completion of the work under the contract on account of any such decision of the Engineer-in-Charge causing such delay or suspension of work for any period of time shall not be attributable to the Implementing Agency.

IMPLEMENTING AGENCY'S ASSISTANCE IN WORK PLAN FOR FIELD OPERATION:

1. Erection network submitted by the Implementing Agency and discussed with the client and finalized with necessary modifications to form a part of Contract documents will be the essence for planning erection activities. Accordingly, the Implementing Agency will prepare work plan in line with erection network for erection activities to be performed.
2. First preparation of such erection plan will cover erection activities to be performed for two months' period. Every subsequent plan prepared in the last week of every month, will contain Updated report for reflecting progress achieved Up to 20th day of the month (hereinafter "reporting month") a firm programme for the first ensuing month and tentative programme for the second ensuing month. The firm erection programme for the first ensuing month will reflect the progress of the reporting month erectable equipment and material available at site, resources at the immediate disposal of the Implementing Agency and the inputs to be provided by the Client. The firm work plan shall be broken down by the Implementing Agency in week-wise erection plan. The tentative work plan must set target for complete work based on progress achieved in the reporting month, progress likely to be achieved through firm plan of first ensuing month and identify constraints.
 - I. The erection work plan will be reviewed periodically for effective implementation of work plan.
 - II. The Implementing Agency shall also intimate the programme of the visit of his personnel to site and departure from site. (Engineer-in-Charge) will have the right to review the list of such personnel and ask for increase in the strength or reschedule the visits of such personnel, if in the opinion of (Engineer-in-Charge), the list of personnel furnished by the Implementing

Agency is not sufficient for effective performance of the Contract.

- III. The Implementing Agency shall have the complete responsibility for the safety of all persons employed by him, and all the properties under his custody during the Contract. This requirement with respect to the persons employed by the Implementing Agency shall be limited to work site only and with respect to the equipment and properties shall apply continuously till the completion of the contract and shall not be limited to normal working hours.

ACCESS TO SITE:

1. The Contract, so far as it is executed on the client premises, shall be carried out till such time as the client may approve.
2. During the execution of the work, no person's other than the Implementing Agency, or his duly appointed representative, sub-contractors and workmen shall be allowed to do work on the site, except by the special permission in writing. But access to the works at all times shall be accorded to the (Authority) representatives and other authorized officials.

IMPLEMENTING AGENCY'S SITE OFFICE ESTABLISHMENT:

The Implementing Agency shall establish a site office at the site and keep posted a client authorized representative for the purpose of Contact. Any written order or instructions of (Engineer-in-Charge or his representative) shall be handed over to the Implementing Agency's representative under receipt duly taken from the said representative and such communication shall be treated as a communication to the Implementing Agency's legal address.

CO-OPERATION WITH OTHER IMPLEMENTING AGENCYS:

1. The Implementing Agency shall co-operate with all other Contractors and staff of the Client, who may be performing other services on behalf of the Client and the workmen who may be employed by the Client and doing work in the vicinity of the Contractor's work site.
2. Client shall be informed promptly by the Implementing Agency of any defects in the work that could affect the performance of the equipment. The Implementing Agency and the client shall determine the corrective measures, if any, required to rectify this situation after inspection of the works.

QUALIFICATION OF IMPLEMENTING AGENCYS PERSONNEL:

1. The Implementing Agency's personnel will be adequately qualified, trained and experienced so as to carry out the duties most efficiently and effectively as expected of them. The Implementing Agency's personnel shall have adequate experience of working on similar type of the equipment and similar job.
2. Not with standing above if any of the personnel is not found to be performing his services in a manner as expected of him, under the contract, the Implementing Agency on advice from (Engineer-in-Charge), shall replace such person(s) at his cost with those acceptable to (Engineer-in-Charge), by mutual agreement.

DISCIPLINE OF WORKMEN:

The Implementing Agency shall adhere to the disciplinary procedure set by (Engineer-in-Charge) in respect of his employees and workmen, if any, at site. The (Engineer-in-Charge) shall be at liberty to object to the presence of any representative or employee of the Implementing Agency at the site, if in the opinion of (Engineer-in-Charge), such employee has committed misconduct, or is incompetent or negligent or otherwise undesirable, and then the Implementing Agency, after mutual agreement, shall replace such a person objected to.

MANPOWER REPORT:

The Implementing Agency shall furnish, on the first day of every month, manpower report of the previous month detailing the number of persons scheduled to have been deployed and actually deployed for timely and successful commissioning of the equipment.

CLEANLINESS:

The offices and the residential areas of the Implementing Agency's employees within the premises of the client or those allotted by the client, shall be kept neat and clean to the entire satisfaction of the client.

FIELD OFFICE RECORD:

The Implementing Agency shall maintain at his office, Up-to-date copies of all drawings, specifications and other contract documents and any other Supplementary data, complete with all the latest revisions thereto. The Implementing Agency shall also maintain, in addition, the continuous record of all changes to the above Contract documents, drawings, specifications, Supplementary data etc., effected at the field and on completion of his total assignment under the Contract shall incorporate all such changes on the drawings and other engineering data to indicate "as installed" conditions of the equipment furnished under the Contract. Such drawings and engineering data shall be submitted to (Engineer-in-Charge) in requisite number of copies as per terms of the Contract.

EPF& INSURANCE:

If an existing EPF account code is not in place, then the bidder should obtain independent EPF account code in his name, from the competent authority. Documentary evidence for the same should be produced at the time of entering into agreement or before commencement of works, as demanded by (Engineer-in-Charge).

The insurance of all Implementing Agency" personnel against any accident during erection, testing and commissioning etc., shall be arranged by the Implementing Agency at his cost. The Implementing Agency shall also indemnify the Authority against all liabilities arising out of any accidents, loss and/ or any other reasons. The personal insurance for the Implementing Agency's personnel deputed to site shall also be arranged by the Implementing Agency at his cost.

i. COMPREHENSIVE AUTOMOBILE INSURANCE:

This insurance shall be in such a form as to protect the Implementing Agency against all claims for injuries, disability, disease and death to member of public including the Authority's men and damage to the property of others arising from the use by the Implementing Agency's personnel of motor vehicles during on or off the site operations, irrespective of the ownership of such vehicles.

ii. WORKMEN'S COMPENSATION INSURANCE:

This insurance shall protect the Implementing Agency against all claims applicable under the Workmen's Compensation Act, 1948 (Government of India). This policy shall also cover the Implementing Agency against claims for injury, disability, disease or death of his or his sub-contractor's employees which for any reason are not covered under the Workmen's Compensation Act, 1948. The responsibility and liability of this insurance be as provided in the statutes and the liability shall not be less than the liability provided in the statutes.

iii. COMPREHENSIVE GENERAL LIABILITY INSURANCE:

This insurance shall protect the Implementing Agency against all claims arising from injuries, disabilities, disease or death of members of public or damage to property of others, due to any act or omission on the part of the Implementing Agency, his agents, his employees, his representatives and sub-contractors or from riots, strikes and civil commotion.

The hazards to be covered will pertain to all the works and areas where the Implementing Agency, his Sub-Contractors, his agents and his employees have to perform work pursuant to the Contract. The above are only illustrative lists of insurance covers normally required and it will be the responsibility of the Implementing Agency to maintain all necessary insurance coverage to the extent both in time and amount to take care of all his liabilities either direct or indirect in pursuance of the Contract.

SERVICE AND FACILITIES TO BE PROVIDED BY THE AUTHORITY:

Necessary area required for construction of Implementing Agency's office and quarters for Implementing Agency's supervisors/workmen shall be arranged by themselves by the Implementing Agency near project site. It is the responsibility of the Implementing Agency to establish the office and to provide necessary residential accommodation to his employees at his own cost. Power Supply for construction purpose shall be arranged by themselves by the Implementing Agency. Implementing Agency shall arrange distribution of power as required for construction works. The distribution shall be with proper protection with MCCB's/MCB's etc. as per Indian standards. Implementing Agency has to make his own arrangement for water for construction activities and maintenance of building or providing water to the employees and their residential quarters.

WORKING HOURS:

The personnel shall work normally 8 hours per day in one shift during the hours in between 6.00AM to 8.00PM including one-hour rest and six days working per week. The works can be allowed to be carried out during night, Sundays or authorized holidays in order to meet the schedule targets keeping in view;

1. The provisions of labour laws are adhered to,
2. Adequate lighting, Supervision and safety measures are established,
3. Authority's approves the construction program given by the Implementing Agency and agree for working during Sundays or authorized holidays.

REGULATIONS OF LOCAL AUTHORITIES:

The Implementing Agency shall, throughout the continuance of the contract and in respect of all matters arising in the performance thereof obtain consents, way leaves, approvals and permissions required in connection with the regulations and by-laws of the local or other authority which shall be applicable to the works.

All work shall be executed in accordance with the Indian Electricity Rules, 1956 and any statutory modifications thereof, and any local regulation and laws, wherever applicable, unless otherwise agreed to in writing by the Engineer.

All works shall be carried out by and under the supervision of qualified personnel having required skills and certifications. The necessary approvals for installation and operating the equipment such as CEIG approval, etc. shall be obtained by the Implementing Agency. The Authority shall provide necessary assistance in furnishing the required details.

LIABILITY FOR ACCIDENTS AND DAMAGE:

The bidder shall be responsible for all loss, damage or depreciation to the building until the building is taken over or extended period as agreed. The bidder shall, during the progress of the work, properly cover up and protect the building from injury by exposure to the weather, and shall take every reasonable, proper, timely, and useful precaution against accident or injury to the same from any cause and shall remain answerable and liable for all accidents or injuries thereto which until the same or be deemed to be taken over, may arise or be occasioned by the acts or omissions of the bidder or his workmen or sub-bidder, and all losses and damages arising from such accidents or injuries as aforesaid shall be made good in the most complete and substantial manner by and at the sole cost of the bidder to the reasonable satisfaction of the Authority.

Until the building shall be or be deemed to be taken over as aforesaid the bidder shall also be liable for and shall be deemed to have indemnified the Authority in respect of all damage or injury to any person or property of the Authority or of other occasioned by the negligence of the bidder or his workmen or sub-bidders or by defective design, work or material, but not otherwise provided that the bidder shall not be liable under the contracts for any loss of profit or loss of contracts or any claims made against the Authority not already provided for in the contract, nor for any damage or injury caused by or arising from the acts of the Authority or of others, or (save as to damage by fire, acts of God or any event of force majeure as hereinafter provided) due to circumstances over which the bidder has no control, nor shall his total liability for loss, damage or injury exceed the total value of the contract.

The bidders shall be deemed to have indemnified and saved harmless the Authority against mal actions, suits, claims, costs or expenses arising, in connection with injuries suffered prior to the date when the building shall have been taken over and during maintenance period by persons employed by the bidder or his sub-bidders on the works whether under the General law or under the Workmen's Compensation Act, 1923, or any other statute in force at the date of the contract dealing with the question of the liability of employers for injuries suffered by employees and to have taken steps properly to insure against any claims hereunder.

On the occurrence of an accident which results in the death of any of the workmen employed by the bidder or which is so serious as to be likely to result in the death of any such workmen, the bidder shall within 24 hours of the happening of such accident, intimate in writing to the (Engineer-in-Charge), the fact of such accident. The bidder shall indemnify (authority) against all loss or damage sustained by the Authority resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or fines if any payable by the Authority as a consequence of its failure to give notice under the

Workmen Compensation Act or otherwise, to conform to the provision of the said Act in regard to such accident.

In the event of any claim made, or action brought against the Authority involving the bidder and arising out of the matter referred to and in respect of which bidder is liable under this clause, the bidder shall immediately notify, and he shall, with the assistance, if he so required, of the Authority, but at the sole expense of the bidder conduct all negotiations for the settlement of the same or of any litigation that may arise there from. In such case the Authority shall, at the expense of the bidder, afford all available assistance for any such purpose.

In the event of an accident in respect of which compensation may become payable under workmen's Compensation Act VIII of 1923, whether by the bidder or by the (AUTHORITY) as principal, it shall be lawful for (AUTHORITY) to retain out of moneys due and payable to the bidder such sums of money as may be in the opinion of the said Engineer be sufficient to meet such liability. The decision of (Engineer-in-Charge) shall be final in regard to all matters arising under this clause.

FENCING AND LIGHTING:

Except as herein after provided the bidder shall, unless otherwise specified, be responsible for the proper fencing, guarding, lighting, and watching of all works comprised in the contract and for the proper provision of temporary roadway, footways, guards, and fences as far as the same may be rendered necessary by reason of the work for the accommodation and protection of foot passengers or other traffic and of the owners and occupiers of adjacent property and of the public. Fencing & lighting provided in and around control rooms.

MATERIALS BROUGHT ON TO THE SITE:

All materials, and equipment brought to and delivered Upon the site for the purpose of the work shall, from the time of their being so brought, vest and be the property of the Authority but may be used for the purpose of the work but for that purpose only and shall not on any account be removed or taken away by the bidder or any other person without the express permission in writing of the Engineer but the bidder shall never the less be solely liable and responsible for any loss or destruction thereof or damage there to unless resulting from causes beyond the bidder's control not being causes insurance against destruction or damage.

BIDDER REPRESENTATIVE AND WORKMEN:

Complete Erection, Testing and Commissioning is included in scope of works. The bidder shall employ at least one competent representative, whose name or names shall have previously been communicated in writing to the Authority by the bidder, to supervise the erection of the building and carrying out the works. The said representatives, or if more than one shall be employed then one of such representatives, shall be present at the site during working hours and any written orders or instructions to the said representative of the bidder, shall be deemed to have been given to the bidder. The Authority shall be at liberty to object to any representative or person employed by the bidder in the execution or otherwise about the works who shall misconduct himself or be incompetent or negligent, and the bidder shall remove the person so objected to Upon receipt of notice in writing from the Authority requiring him (the bidder) so to do, and provide in his place a competent representative

at the bidder's expense.

ENGINEER'S SUPERVISION:

All the works shall be carried out under the direction and to the reasonable satisfaction of the Engineer-in-Charge. The bidder shall be responsible for the correctness of the positions, levels, and dimensions of the works according to the drawings notwithstanding that he may have been assisted by the Engineer in setting out the same.

REPLACEMENT OF DEFECTIVE WORK OR MATERIALS:

If during the progress of work the Engineer-in-Charge decides and notifies in writing to the bidder that the bidder has executed any unsound or imperfect work, or has Supplied any building or materials inferior quality or quantity to these specified, the bidder on receiving details of such defects or deficiency shall, at his own expense, within seven days of his receiving the notice, or within such time as may reasonably necessary for making it good, proceed to alter, reconstruct, or remove such work or Supply fresh materials Up to the standard of the specification, and in case the bidder fails to do so, the Authority may on giving the bidder seven days' notice in writing of his intention so to do proceed to remove the works, the materials complained of, and at the cost of the bidder, perform all such work or Supply all such materials, provided that nothing in this clause shall be deemed to deprive the Authority of or affect any rights under the contract which he may otherwise have in respect of such defects or deficiencies.

TESTS ON COMPLETION:

Whenever possible all tests shall be carried out before shipment should, however, it be necessary for the final tests as to performance and guarantees to be held over until the building is erected at site they shall be carried out in the presence of the bidder's representative within one month of the completion of erection or the taking over by the Authority whichever is earlier.

TESTS AT SITE:

In all cases where the contract provides for tests at site, the bidder except where otherwise specified, shall provide, free of charge, such labour, materials, fuel, stores, apparatus and instruments as may be required from time to time, and as may reasonably be demanded, efficiently to carry out such tests of the material, or workmanship in accordance with the contract.

In the case of contracts requiring electricity for carrying out tests on site at the time of commissioning, such electricity shall be Supplied free of costs to the bidder.

POWER TO VARY OR OMIT WORK:

No alterations, amendments, omissions, additions, suspensions, or variations of the work (herein after referred to as "Variations") under the contract as shown by the contract drawings or the specification shall be made by the bidder except as directed in writing by the Authority, but the Authority shall have full power, subject to the provision herein after contained, from time to time during the execution of the contract by notice in writing to instruct the bidder to make such variation without prejudice to the contract, and the bidder shall carry out such variations, and be bound by the same conditions, as far as applicable, though the said variations not occurred in the specification and the

bidder will compensate in this situation if applicable.

If any suggested variations, would, in the opinion of the bidder, if carried out, prevent him fulfilling any of his obligations or guarantees under the contract, he shall notify the Authority thereof in writing, and the Authority shall decide forthwith whether or not the same shall be carried out, and if the Authority confirms his instructions, the bidder's obligations and guarantees shall be modified to such an extent as may be justified. The difference of cost, if any, occasioned by any such variations shall be added to or deducted from the contract price as the case may require. The amount of such difference, if any, shall be ascertained and determined in accordance with the rates specified in the schedules of prices, so far as the same may be applicable, and where the rates are not specified in the said schedules, they shall be settled by the Authority and bidder jointly. But the Authority shall not become liable, for the payment of any charge in respect of any such variations, unless the instructions for the performance of the same shall have been given in writing by the Authority.

In the event of the Authority requiring any variations, such reasonable and proper notice shall be given to the bidder as will enable him to make his arrangements accordingly, and in cases where goods or materials are already prepared, or any designs, drawing, or patterns made or work done that require to be altered, a reasonable sum in respect thereof shall be allowed by the Authority. Provided that no such variation shall, except with the consent in writing of the bidder, be such as will involve an increase or decrease of the total price payable under the contract by more than 10 (Ten) percent thereof.

In any case in which the bidder has received instructions, from the Authority as to carrying out the work, which either then or later will, in the opinion of bidder, involve a claim for additional payment, the bidder shall, as soon as reasonably possible after the receipt of the instructions, aforesaid, advise the Authority to that effect.

NEGLIGENCE:

If the bidder neglects to execute the work with due diligence and expedition or shall refuse or neglect to comply with any reasonable orders given to him in writing by the Engineer-in-charge in connection with the work, or shall contravene the provisions of the contract, the Authority may give seven days' notice, in writing, to the bidder, to make good the failure, neglect, or contravention complained of and should the bidder fail to comply with the notice within a reasonable time from the date of service thereof in the case of failure, neglect or contravention capable of being made good within that time or, otherwise within such time as may be reasonably necessary for making good, and in such case, the Authority shall be at liberty to employ other workmen, and forthwith perform such work as the bidder may have neglected to do or if the Authority shall think fit, it shall be lawful for him to take the work wholly, or in part, out of the bidder's hands and re-contract at a reasonable price with any other person or persons, or provide any other materials, tools, tackle or labour for the purpose of completing the work or any part thereof and in that event the Authority shall, without being responsible to the bidder for fair wear and tear of the same to have the free use of all the materials, tools, construction plant or other things which may be on the site, for use at any time in connection with the work, to the exclusion of any right of bidder over the same, and the Authority shall be entitled to retain and apply any balance which may be otherwise

due on the contract by him to the bidder or such part thereof as may be necessary to the payment of cost of executing such work as aforesaid.

If the cost of executing the work as aforesaid shall exceed the balance due to the bidder and the bidder fail to make good the deficit, the said materials, tackle, construction plant or other things, the property of the bidder may be sold by the Authority, and the proceeds applied towards the payment of such difference and the cost of an incidental to such sale. Any outstanding balance existing after crediting the proceeds of such sale shall be paid by the bidder on the certificate of the Engineer, but when all expenses, costs and charges incurred in the completion of the work are paid by the bidder, all such materials, tools, tackles, construction plant or other things remaining unsold shall be removed by the bidder.

DEATH, BANKRUPTCY, ETC:

If the bidder die or commit any act of Bankruptcy, or being a Department commence to be wound Up except for reconstruction purposes or carry on its business under a receiver, the executor successors, or other representative in law of the estate of the bidder or any such receiver, liquidator, or any person in whom the contract may become vested, shall forthwith give notice thereof in writing to the Authority and shall for one month, during which he shall take all reasonable steps to prevent as stoppage of the works, have the option of carrying out the contract subject to his or their providing such guarantee as may be required by the Authority but not exceeding the value of the work for the time being remaining unexecuted. In the event of stoppage of the work the period of the option under this clause shall be 14(fourteen) days only. Provided that, should above option not be exercised, the contract may be determined by the Authority by notice in writing to the bidder. And the same power and provisions so reserved to the Authority in the last proceeding clause on taking of the work out of the bidder's hands shall immediately become operative.

Bidder shall guarantee that before going out of production the spare parts, he will give adequate notice to the Authority so that the latter will have adequate time to order for future requirement of spares. Seller shall further guarantee that if he goes out of production of spare parts, then he will make available the blue prints, drawings of the spare parts and specification of material at no cost to the Authority if and when required.

RELEASE OF INFORMATION:

The Implementing Agency shall not communicate or use in advertising, publicity, sales releases or in any other medium photographs or other reproduction of the works under this contract, or description of the site, dimensions, quality or other information, concerning the work unless prior written permission has been obtained from the Authority.

LIMIT OF CONTRACT:

Equipment Supplied shall be complete in every respect with all mountings, fittings, fixtures and standard accessories normally provided with such equipment's and / or needed for erection, completion and safe operation of the equipment's as required by applicable codes though they may not have been specifically

detailed in the respective specifications unless included in the list of exclusions. All similar standard equipment's provided, shall be interchangeable with one another.

GENERAL:

The Bidder shall be responsible for provision of health and sanitary arrangement more particularly described in contract labour (regulation and abolition Act), safety precautions, etc. as may be required for safe and satisfactory execution of the contract.

The Bidder shall fulfil all his obligations in respect of accommodation including proper facilities for the personnel employed by him.

The bidder shall be responsible for the proper behaviour at site and observance of all regulations by the staff employed by him. Insurance for the labour engaged shall be the responsibility of the bidder till the equipment is taken over after completion of works in full shape and completion of maintenance period, as per applicability, by the (AUTHORITY). The insurance of the labour engaged for maintenance of the building by the Implementing Agency shall also be the responsibility of the Implementing Agency. The bidder shall be responsible for settlement of insurance claims arising out of accident/injury to staff employed by him.

Cancellation of Order:

The Authority reserves the right to cancel the contract in part or in full by giving two weeks' notice there by, if The Implementing Agency fails to comply with any of the terms of the contract. The Implementing Agency becomes bankrupt or goes into liquidation. The Implementing Agency makes general assignment for the benefit of the creditors and Any Receiver is appointed for the property owned by the Implementing Agency.

1.2.Particular Conditions of Contract

Except where otherwise specified, all PCC should be filled in by the Employer prior to issuance of the Bidding Documents. Schedules and reports to be provided by the Employer should be annexed.

A. General	
GCC 1.1 (d)	The financing institution is: Government of India (GoI) and Government of Uttar Pradesh(GoUP)
GCC 1.1 (s)	The Employer is : Bareilly Smart City Limited
GCC 1.1 (v)	The Intended Completion Date for the whole of the Works be <i>As specified in the scope of works</i>
GCC 1.1 (y)	The Project Manager is : Authorized Representative of BSCL:
GCC 1.1 (aa)	Location of Site : <i>Government Inter College, Bareilly</i>
GCC 3.1	The language of the contract is <i>English</i> . The law that applies to the Contract is the law of <i>India</i> .
GCC 5.1	The Project manager <i>may</i> delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other Implementing Agency: <i>[insert Schedule of Other Implementing Agency, if appropriate]</i>
GCC 13.1	<p>The minimum insurance amounts and deductibles be:</p> <ul style="list-style-type: none"> (a) For loss or damage to the Works, Materials, For loss or damage to Equipment, for loss or damage to property (except the Works, Materials, and Equipment) in connection with Contract, For loss or damage to Equipment, for loss or damage to property (except the Works, Materials, and Equipment) in connection with Contract and for personal injury or death (of the Implementing Agency's employees and of other people): equivalent to the accepted <i>value of the contract</i>. (b) The Contractor insure against each liability for any loss, damage, death or bodily injury which may occur to any physical property (mechanical, electrical, automation work, all civil works, Storage etc. excluding pipe line) or to any person which may arise out of the Contractor's performance of his obligations under these Conditions during the O&M Period. (c) This insurance be for a limit of per occurrence of not less than the amount of Rs. 5 lakh, with no limit on the number of occurrences.
GCC 14.1	Site Data are: <i>Attached in DPR</i>

GCC 20.1	The Site Possession Date(s) be: <i>within 7 days from the date of signing the contract</i>
GCC 23.1 & GCC 23.2	Appointing Authority for the Adjudicator: <i>Chief Executive Officer, Bareilly Smart City Limited, Bareilly</i>
GCC 24.2	<p>Disputes be settled by arbitration in accordance with the following provisions:</p> <ol style="list-style-type: none"> <u>Selection of Arbitrators.</u> <ol style="list-style-type: none"> Each dispute submitted by a Party to arbitrations be heard by a sole arbitrator or an arbitration panel composed of three (3) arbitrators, in accordance with the following provisions: Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to <i>[Chairman (Bareilly Smart City Ltd.)]</i>, for a list of not fewer than five (5) nominees and, on receipt of such list, the Parties alternately strike names there from, and the last remaining nominee on the list s be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, <i>Chairman (Bareilly Smart City Ltd.)</i>, Bareilly appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute. <u>Rules of Procedure.</u> Except as otherwise stated herein, arbitration proceedings be conducted in accordance with the rules of procedure for arbitration under the relevant statute applicable. <u>Substitute Arbitrators.</u> If for any reason an arbitrator is unable to perform his/her function, a substitutes be appointed in the same manner as the original arbitrator <u>Nationality and Qualifications of Arbitrators.</u> The sole arbitrator or the third arbitrator appointed pursuant to paragraphs 1(a) through 1(c) above be an internationally recognized legal or technical expert with extensive experience in relation to the matter in dispute and snot be a national of the Consultant's home country <i>[Note: If the Consultant consists of more than one entity, add: or of the home country of any of their members or Parties]</i> or of the Government's country. For the purposes of this Clause, "home country" means any of: <ol style="list-style-type: none"> the country of incorporation of the Consultant <i>[Note: If the Consultant consists of more than one entity, add: or of any of their members or Parties];</i> or the country in which the Consultant's [or any of their members' or Parties'] principal place of business is located; or the country of nationality of a majority of the Consultant's [or of any members' or Parties'] shareholders; or the country of nationality of the Sub-consultants concerned, where the dispute involves a subcontract. <u>Miscellaneous.</u> In any arbitration proceeding hereunder: <ol style="list-style-type: none"> proceedings shall, unless otherwise agreed by the Parties, be held in <i>[select a country which is neither the Client's country nor the Consultant's country];</i>

	the <i>English</i> language be the official language for all purposes; and the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) be final and binding and be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement
B. Time Control	
GCC 26.1	The Implementing Agency submit for approval a Program for the Works within 14 days from the date of the Letter of Acceptance.
GCC 26.3	The period between Program updates is <i>monthly</i> .
C. Quality Control	
GCC 34.1	The Defects Liability Period after issue of project completion certificate (after completion of construction and commissioning of the project): 1 year. Specified in GCC
GCC 41.5	<p>Payment Schedule</p> <p>Building Component:</p> <ul style="list-style-type: none"> • 10% mobilization advance (that will be deduced in 3 instalments in subsequent payments) • 15% payment – Post Excavation / Site Grading (Excavation, earthwork, piling and piling reinforcement/foundations/raft/ complete upto plinth) • 15% payment - Post Sub structure (Basement works complete) • 25% payment – Super Structure (Building Construction complete Works) • 15% payment – On Architectural Finishes (with Interiors, Facade, Glazing, windows, louvers, doors and skylights etc.) • 15% payment – On MEP finishes (including water, wastewater, electrical, HVAC, Fire Fighting, Security Cabin, etc.) • 10% payment – On Landscape Finishes (Completion of all works related to Hardscape & Soft-scaping works (complete finish) • 5% payment – on completion of building and site works (Internal Driveways, Pavements, Parking and Storm Water Drains and facilities etc.) <p>During Capex.</p> <ul style="list-style-type: none"> • 10% mobilization advance (that will be deduced in 3 instalments in subsequent payments) • 60% payment - Post procurement of all Hardware/software • 15% payment – Post installation of hardware/software • 25% payment – Post fully operational auditorium

D. Cost Control	
GCC 44.1	The currency of the Employer's country is: Indian Rupees
GCC 45.1	The Contract <i>is not</i> subject to price adjustment in accordance with GCC
GCC 46.1	The proportion of payments retained is: <i>5% for the certified payments.</i>
GCC 48.1	The Bonus for the whole of the Works is <i>Not applicable</i>
GCC 49.1	The Advance Payments is applicable
GCC 50.1	The Performance Security amount is 10% of the accepted contract amount <i>in the form of</i> Bank Guarantee.
	E. Finishing the Contract
GCC 56.1	<p>The date by which maintenance manuals are required is during implementation stage.</p> <p>The date by which "as built" drawings are required within one month after the completion of the work.</p>
GCC 56.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required in GCC 58.1 is <i>1% of the Final Contract amount.</i>

1.3.Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, only be completed by the successful Bidder after contract award.

Draft Contract Agreement

THIS AGREEMENT made theday of,, between **[Name of the Employer]**. (Hereinafter “the Employer”), of the one part, and **[name of the Implementing Agency]**.(hereinafter “the Implementing Agency”), of the other part:

WHEREAS the Employer desires that the Works known as **[name of the Contract]**.should be executed by the Implementing Agency, and has accepted a Bid by the Implementing Agency for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Implementing Agency agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents to be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - (i) the Letter of Acceptance
 - (ii) the Letter of Bid
 - (iii) the addenda Nos _____(if any)
 - (iv) the Particular Conditions
 - (v) the General Conditions of Contract, including appendix;
 - (vi) the Specification
 - (vii) the Drawings
 - (viii) Activity Schedule and
 - (ix) any other document **listed in the PCC** as forming part of the Contract,
3. In consideration of the payments to be made by the Employer to the Implementing Agency as specified in this Agreement, the Implementing Agency hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Implementing Agency in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of ***[name of the borrowing country]***. . . .on the day, month and year specified above.

Signed by:
for and on behalf of the Employer

Signed by:
for and on behalf the Implementing Agency

in the presence of: _____ in the presence of: _____

Witness, Name, Signature, Address, Date

Witness, Name, Signature, Address, Date