



SHIVAJI UNIVERSITY, KOLHAPUR

**EXPRESSION OF INTEREST
FOR
APPOINTMENT
AS
PROJECT MANAGEMENT CONSULTANT
FOR
COMPREHENSIVE PLANNING, ARCHITECTURAL SERVICES,
DETAIL DESIGN, CONSTRUCTION SUPERVISION, QUALITY
CONTROL AND QUALITY ASSURANCE FOR BUILDING
INFRASTRUCTURE PROJECTS
FOR
SHIVAJI UNIVERSITY, KOLHAPUR.**

REGISTERED OFFICE ADDRESS:

**SHIVAJI UNIVERSITY, KOLHAPUR
Vidyanagar, "E" Ward,
Kolhapur - 416 004.**

**Web site: www.unishivaji.ac.in,
email : uwd@unishivaji.ac.in
Phone No. 0231-2609123,**

NAME OF PROJECT MANAGEMENT CONSULTANT (PMC):

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This Expression of Interest for appointment of a Project Management Consultant (PMC) for comprehensive planning, architectural services, detail design, construction supervision, quality control and quality assurance for building infrastructure project (hereinafter referred to as “Expression of Interest”) is made at Kolhapur this _____ day of _____ 2024.

Between

REGISTRAR, SHIVAJI UNIVERSITY, KOLHAPUR having its Registered Office at Vidyanagar, E ward, Kolhapur – 416 004, hereinafter referred to as the “Employer” (which express shall unless it be repugnant to the context or meaning thereof be deemed to mean and include its successors and permitted assigns) of the One Part.

And

M/s. having its Registered Office at..... hereinafter referred to as “the PMC” (which expression shall unless it be repugnant to the context or meaning thereof be deemed to mean and include its successors and permitted assigns) of the Other Part.

(As the context may require, the Employer and PMC, shall individually be referred to as a Party and collectively as “Parties”)

WHEREAS:

(a)The Employer is a State University established under Govt. of Maharashtra Act wishes to design and construct the state-of-the-art buildings and campuses according to specifications and provide adequate infrastructural services, to fulfill requirement(s) of various it’s user department(s).

(b) The Employer desires to implement a project as an when required as per the approval of University authorities (herein after referred to as “Project”) for

developing land located at Shivaji University Campus at Kolhapur (herein after referred to as “Property”) and more particularly described in the Schedule hereunder written.

(c) In this regard the Employer wishes to appoint the PMC for the Project for providing comprehensive planning, architectural services, detail design, construction supervision, quality control and quality assurance services more particularly described herein.

(d) The PMC by its-

- 1)
- 2) and
- 3)

is agree to accept such appointment including the obligation to enter into this Expression of Interest for the consideration and upon the terms and conditions as mentioned herein after.

Now this Expression of Interest witnessed and it is hereby agreed by and between the parties hereto as follows:-

1. DEFINITIONS:

For the purpose of this Expression of Interest the following words are defined as under:

- 1.1 The term “Architect” as used herein shall mean an Architect should be licensed to practice the profession of Architects under the Indian Architects Act, 1972, and registered with the Council of Architecture in India.
- 1.2 The term “Block Estimate” as used herein shall mean the cost of work given by PMC based on approximate estimate.
- 1.3 The term “Budget” as used herein shall mean the sum the Employer proposes to spend on the Project inclusive of professional fees and expenses and statutory charges.
- 1.4 The term “Expression of Interest” as used shall mean the Expression of Interest appointed for construction of the project.
- 1.5 The term “Detailed Estimate” as used herein shall mean the cost of work based on detailed drawing, design and detailed measurements and rate analysis for individual Items of work.

- 1.6 The term “Fees” as used herein shall mean the amount to be paid to the PMC or the services rendered to Employer.
- 1.7 The term “Model” as used herein shall mean digital model prepared using 2D, 3D software to visualize the building / project.
- 1.8 The term “Services” as used herein shall mean the services to be provided by the PMC as specified in the Expression of Interest herein below.
- 1.9 The term “Site” as used herein shall mean the place where those works are to be carried out.
- 1.10 The term “Site Staff” as used herein shall mean the Staff appointed by the PMC / Employer to inspect the works.
- 1.11 The term “Specialist / Expert / Sub Consultant” as used herein shall mean a person or firm, other than the consultant, appointed by the PMC to provide expertise, skill and care, involving design, in the supply or manufacture of goods, materials or components or in the construction of parts of the Project.
- 1.12 The term “Tender cost” as used herein shall mean the offer submitted by the Expression of Interest and accepted by Employer.
- 1.13 The term “Timetable” as used herein shall mean the timetable for the completion of the services by the PMC under this Expression of Interest. Stages into which the process of designing building projects and administering building Expression of Interests is divided in accordance with this Expression of Interest. The same has been mentioned in Para - 8 and Para - 10 of this Expression of Interest.
- 1.14 The term “Works” as used herein shall mean the works to be carried out by the Construction Expression of Interest as described in the Expression of Interest Document executed between the Employer and Construction Expression of Interest.

TERMS & CONDITIONS:

2. **GENERAL SCOPE OF SERVICES:** Subject to the provision of this Expression of Interest, PMC shall be responsible for discharging the scope of services set out hereunder:
 - 2.1 The PMC shall perform services and carry out its obligations here under with all due diligence, efficiency and economy, in accordance with generally accepted

professional techniques and practices, and shall always observe sound management practices. It shall cause to be employed appropriate advanced technology and safe and effective equipment, machinery, materials and methods in connection with the Project at all stages of the Project. The PMC further covenants with Employer to furnish its best skill, care, diligence, and judgment in the rendition of all services under this Expression of Interest which shall be no less than that exercised by a PMC of good reputation performing work for projects of a size, scope and complexity similar to the Project and to further the interest of Employer at all times through efficient business administration, management and construction management services.

2.2 Standard of care :

PMC acknowledges the relationship of trust and confidence established between the PMC and Employer by this Expression of Interest. Accordingly, the PMC acts shall be consistent with this relationship. The PMC shall always act, in respected any matter relating to this Expression of Interest, as an honest and faithful adviser to Employer. The PMC shall at all times support and safeguard Employer's legitimate interests in any dealings with the Expression of Interest or other third parties.

2.3 Adherence to law :

The PMC shall perform works / services under this Expression of Interest in accordance with the applicable laws, bye-laws, rules, regulations, etc. and shall also ensure that his personals comply with the applicable laws, bye-laws, rules, regulations, etc.

2.4 PMC Not to Benefit from Commissions Discounts, Etc. :

The remuneration of the PMC pursuant to Para - 9 of this Expression of Interest shall constitute the PMC sole remuneration in connection with this Expression of Interest and the Project. The PMC shall not accept for its own benefit any trade commission, discount or similar payment in the discharge of its obligations here and the PMC shall ensure that its personnel, agents, sub-agencies, etc. similarly shall not receive any such additional remuneration. The PMC shall at all times perform its responsibilities here under in the best interest of Employer. Any discounts or commissions obtained by the PMC in exercise of

its responsibilities here under, whether from Expression of Interest or any third parties shall be to the account of Employer.

3. Scope of PMC Services:

3.1 The Employer has proposed to construct building / infrastructure on the Shivaji University Campus, Kolhapur

3.2 PMC is supposed to provide architectural concept planning for entire plot and consultancy for building with a built up area proposed.

The total period of assignment will be as decided by the Engineer-In-Charge from the date of signing of Expression of Interest. The period will include time period for designing, estimation and preparation of tender documents, as well as for construction phase of the assignment. Further consultancy services are required during the defect liability period.

3.3 The broad scope of services under this Expression of Interest shall be the preparation of conceptual plans for selection of options by the Employer, detailed architectural drawings including plans, elevations and sections, etc. all Structural Designs and drawings, Electrical, HVAC, indoor and outdoor lighting, plumbing, Sanitary, Fire detection and safety system, Communication system, LAN, Access control, Surveillance Security system, power backup and Green features, Landscape, Certification from respective competent authority etc., includes providing detailed designs and specifications with Bill of Quantities, preparation of tender document, tender drawings for all works involved in the construction.

3.4 Obtaining necessary approvals from local bodies / statutory authorities, State Govt. and Central Govt. if any, etc. as per requirement to start and complete the project without any hindrance.

3.5 Preparation of construction drawings, Modification to the drawings during execution if required and also assist Employer during the execution.

3.6 Preparation of project schedules, broadly monitoring of project, liaisoning with the Employer engineers and the Expression of Interestors for the execution of the project as per the approved designs and drawings, etc. Preparation and submission of completion drawings /diagrams / reports and obtaining

completion / occupancy certificate from the local authorities /statutory authorities / bodies, etc.

3.7 The scope of work shall not include appointment of the Expression of Interest and any direct Expression of Interest dealing with the Expression of Interest during pre-tender stage and during the execution of the work. However, during execution it should be as per scope of stipulated tender conditions of works Expression of Interest and the scope of work shall include any other services normally required by the PMC such as site inspections at various stages of work to ensure successful completion of the project as per approved designs & drawings.

3.8 Through all the project phases Employer expect the PMC to illustrate the interest and commitment to utilize the latest National and International techniques in order to promote fast, efficient, economical and sound techniques for completion of the project.

4. THE DETAILS OF SERVICES TO BE PROVIDED BY THE PMC SHALL INTERALIA, INCLUDE THE FOLLOWING:

4.1 ARCHITECTURAL SERVICES:

4.1.1 Site evaluation, analysis and impact of existing and /or proposed development on its immediate environs.

4.1.2 Preparation of design, site development, Master layout plan of entire plot, Architectural detail drawings, Elevations, Sections etc., with details of area analysis, Building geometry, etc.

4.1.3 Preparation of all good for construction drawing for structural designs, HVAC, electronic, elevators, internal and external works i.e., electrical, water supply, Sanitary works, drinking water, sewerage design, Telecommunications, Networking, Graphic signage, fire fighting arrangements, security systems & other mechanical systems, parking etc., and all related civil works including technical specifications of works as per requirement of Employer.

4.1.4 Preparation of preliminary drawings using Auto CAD or equivalent for various floors, toilets, staircases, elevators, etc. explaining the general planning with

schedule of internal and external materials and finishes and dimensions. Plumbing / Electrical layout indicating internal and external lines, transformer, fire safety detection & fire fighting system, UPS and location of channels for electric cables, telephone, LAN, AC ducts and other conduits for services, complete in accordance with the relevant NBC /local Bye laws including 2D drawings and 3D views, walkthrough presentation using 3Dmax or equivalent at no extra cost and obtaining approval of Employer/any other user suggested by Employer.

4.1.5 Preparation of detailed architectural drawings sufficient to prepare tender documents consisting of floor plan to each level, reflected ceiling plans at each level including coordinated lighting and service features, external (façade) elevations, internal elevations, cross sections and longitudinal sections, terrace plans, electrical/lighting fixtures / switching plan including MCCB, MCB, ELCB, capacitors and earthing, plumbing and schematics, interiors, etc. Storm water drainage detailed plans of ground and terrace plan for effective disposal to ensure no leakages, dampness inside the building. Proper slopes at roof level, ground level for effective drainage without ponding and stagnation of water should be provided as a precautionary measures. Effective protection from rain and heat shall be provided in Architectural plan with due study of rain, wind and sun directions. Proper protective measure should be incorporated in the Architectural plan so that building shall give comfort of living / working atmosphere in all the seasons during rain, winter and summer. Protective measures like fins, chajjas, boxes or any other types of architectural features shall be included as built and no extra works after construction shall be provided. If Architectural plan is not designed considering proper climatic conditions and not in consistency with structural requirements then it shall be rejected out rightly at stage - 1. PMC shall submit alternative plan within 10 days to the satisfaction level of Employer.

4.1.6 For important building projects as per requirement of Employer, block model shall be prepared. After finalization of the working drawings, the PMC shall be required to prepare a block model to a convenient scale, showing the complete details of the building and entire plot, in addition, the PMC is also required to prepare a model to a convenient scale showing the site along with its proposed landscape etc. locating the proposed building in it.

- 4.1.7 Key plan shall be showing details from the main highway and access to the subjected plot for building infrastructure with proper distances boundaries and North direction.
- 4.1.8 Preparation and submission of detailed designs, drawings and documents for all internal utility services like plumbing, electrification, fire fighting, fire detection and lifts, telephones, PABX, LAN, Networking, public address system and other specialized services etc. as per the requirements of the Project, suitable for construction and development to site.
- 4.1.9 Preparation and submission of detailed designs, drawings and documents for all external utility services like water supply, sewerage, storm water drainage, fire hydrants schemes, treatment plants for sewage, rain water harvesting, water supply intakes arrangements, roads, street lighting, telephone system, electrical transformer, electrical substation, lightning arrestor and other related schemes, boundary walls and any other specialized services as per Project requirement suitable for construction and issue to site of work including getting necessary approvals from Employer and other departments.
- 4.1.10 Preparation of landscape architecture, interior architecture, architectural conservation, graphic design and signage, etc.
- 4.1.11 Preparation of detailed specifications, bill of quantities, rate analysis.
- 4.1.12 Preparation of Tender drawings, Technical specifications, vendors / manufacturer for materials and equipments and tender documents for Bidders. Assistance to Employer in providing clarifications to Bidders, Pre bid meeting and specifying the construction Expression of Interest.
- 4.1.13 The approvals of the Employer are required on all drawings, specifications, documents etc. and PMC shall be responsible for modifications, incorporation of suggestions, etc. suggested by Employer.
- 4.1.14 Obtaining of approvals from local bodies / statutory authorities, State Govt. and Central Govt. if any, etc.

- 4.1.15 The PMC shall prepare the drawings, technical specifications and liaison with all departments for statutory approvals, clearances of various authorities in execution of the project and ensure compliance with codes, legislation as applicable, etc.
- 4.1.16 Ensure engaging the required key professionals for services such as architectural, structural, electrical and mechanical systems (MEP), HAVC, Networking and LAN, Sanitary and Public Health system for the project designing and execution, etc.
- 4.1.17 The PMC shall also attend the reviews, meetings, presentations, conferences pertaining to the project and also liaison with the statutory Employer for obtaining the occupancy certificate.
- 4.1.18 Assist Employer in the concerned litigations, court of law in all cases pertaining to this project as they may arise up during the period of their assignment including DLP, as per the directives of Employer.
- 4.1.19 Attend all meetings about this project at various places and prepare minutes and compliances as per directives of Employer.
- 4.1.20 Prepare and arrange Power Point Presentation, walk through or similar Presentation on this project at various forums / locations as per the directives of Employer.
- 4.2 STRUCTURAL ENGINEERING SERVICES:
- 4.2.1 The PMC should specify well in advance the details of Geotechnical surveys, soil investigation and required tests are required to be carried out by P.M.C. The foundation system shall be finalized referring the Soil Investigation reports and in consultation with Employer.
- 4.2.2 Geotechnical, soil investigation and required test shall be the responsibility of PMC for design of foundations. Detail investigation as per IS code / BIS code is essential. The fees of soil investigation agency shall be borne by P.M.C.
- 4.2.3 The building shall be designed to withstand static/dynamic loading (wind/seismic) and the design shall be strictly in accordance with the latest Indian Standard Code of Practices / National Building Code. The structural analysis and design shall be done by using latest version of software packages such as STAADPRO or equivalent. The provisions in various BIS Codes shall override the packages output.

4.2.4 The PMC shall supply all design calculations/computer input and output giving specific reference to BIS/NBC, along with soft copies. The structural drawing showing the reinforcement details / bar bending schedule shall be prepared as per latest edition of SP: 34 (S&T). All overriding conditions prescribed by IS: 13920 as applicable or any other applicable BIS code shall be taken into account while preparing the structural drawings.

4.2.5 For all structural designs and drawings the PMC get the proof check done by specialize structural designer, structural designer firms, institution, etc. Or proof checking consultant / consultants approved by Employer as per requirement and decided by the Employer. Structural Design shall be based on minimum standards specified in codes, standard specifications and design criteria, etc. Design criteria is annexed as Appendix - I. Presentation of structural drawings and design alongwith specified consideration and assumption is mandatory by structural consultant of PMC.

4.3 SERVICES DESIGNS:

The PMC shall be responsible for the design of the following systems and after his suggestion the Expression of Interest shall provide the same -

4.3.1 The design, details, drawing, plans, etc. for the following minimum services shall be carried out as per the provisions of the design brief for respective services and shall be approved by Employer. PMC shall provide detailed walk through presentation of the services and ensure that there is no conflict amongst them.

i. HVAC - It shall be provided with latest features having energy efficiency standards. The approval for the same as per requirements of Competent Employer for access control system/security system shall be responsibility of PMC till DLP.

ii. FIRE DETECTION & FIRE FIGHTING SYSTEM - Highest fire safety norms in accordance with local fire bye-laws/ codes are to be followed and state of the art microprocessor based addressable fire alarm systems shall be considered. And approval for the same as per requirements of Competent Authority for firefighting system shall be the responsibility of PMC till DLP.

- iii. ACCESS CONTROL SYSTEM/SECURITY SYSTEM - Access Control System/ Security system shall be designed and supervise to maximize the performance of fire/intrusion alarms and security systems. Approval for the same as per requirements of Competent Authority for access control system/security system shall be the responsibility of PMC till DLP.
- iv. ELEVATORS - The elevators shall be as per international standard with latest features. The approval for the same as per requirements of Competent Authority for elevators shall be the responsibility of PMC till DLP.
- v. POWER MANAGEMENT SYSTEM -As directed by Competent Authority shall be considered.
- vi. Transformers and HV/ LV panels - As directed by Competent Authority shall be considered.
- vii. DG SETS - As directed by Competent Authority shall be considered.
- viii. UPS -As directed by Competent Authority shall be considered for computers, communication system, etc.
- ix. SOLAR ENERGY SYSTEM (SES) -As directed by Competent Authority. The solar energy system shall be considered for common grid as per requirement of SHIVAJI UNIVERSITY. Supervision of SES shall be the responsibility of PMC till DLP.Solar energy system shall be designed for different purpose like hot water, lighting, pumping water, etc. as specified by Employer.
- x. WATER PURIFIER AND WATER COOLERS - On approval, appropriate capacity have to be considered in the design. Supervision of water purifier and water coolers shall be the responsibility of PMC till DLP.
- xi. WASTE WATER MANAGEMENT AND SOLID WASTE MANAGEMENT SYSTEM - A sewage treatment plant shall be designed to provide soft water for horticultural and other uses. Supervision of waste water management and solid waste management shall be the responsibility of PMC till DLP.Proper

disposal location for waste water and solid waste shall be identified and marked on drawing by the PMC.

- xii. ENVIRONMENTAL PROTECTION - Cautious effort shall be made to ensure the project provides positive contribution to the Environment and conform to local pollution control norms. Suitable environmental impact assessment study and mitigation measures if applicable by law shall be suggested by PMC. The approval from the Competent Authority shall be the responsibility of the PMC, if applicable for the project.
- xiii. INTERIOR DESIGN - The interiors of the building shall be designed to ensure pleasant environment that encourages excellence and working comfort. The design of the furniture and interior design shall be the responsibility of PMC. The Interior Design shall be carried out by qualified interior designer and the design shall be approved by Employer in consultation with user of building.
- xiv. LANDSCAPING AND HORTICULTURE - Appropriate hard and soft landscaping shall be designed to be in harmony with the surrounding Environment and neighbourhood. The objective is to provide a harmonious and friendly environment with green area and landscape features.
- xv. GREEN BUILDING CONCEPT – While designing the building, the green building concept shall be used by the PMC as per the direction of Employer for special type of buildings and certification from Green Rating for Integrated Habitat Assessment (GRIHA) or LEED shall be obtained by PMC.
- xvi. ELECTRIC / WATER SUPPLY CONNECTION – The PMC shall be responsible for completing all formalities regarding electric / water supply connection.
- xvii. STORM WATER DISPOSAL – Storm water disposal shall be designed and accordingly plans shall be prepared. No stagnation, ponding of water on terrace and on ground shall be allowed. Ensure effective disposal of storm water at the lowest level of land. Water bodies shall be designed and planned and developed according to existing site topography. Proper disposal location for

- storm water shall be identified and marked on drawing by the PMC.
- xviii. DUCTS – Suitable and sufficient ducts shall be provided required for utilities and services considering maintenance facilities
- xix. ELECTRICAL CABLES AND APPLIANCES – Services, safety, etc. shall be ensured while designing and planning.
- xx. PLINTH LEVEL AND GROUND LEVEL – Plinth and ground level of the building shall be designed and planned so that no rain water should be stagnated or entered into any part of building infrastructure.
- xxi. TREE PLANTATION – Existing trees shall be preserved. If tree removal is unavoidable then first priority to transplantation shall be ensured before cutting. Permission for the same is the responsibility of PMC after approval for the same. Arboriculture / tree plantation shall be considered while planning and designing of infrastructure around the building and on available land as requirement of users and tree authority. Tree plantation shall be as per Appendix - II.
- xxii. EXISTING STRUCTURE – Existing structure shall not be demolished without prior permission of Employer. If existing structure needs to be demolished then proper valuation and value for credit shall be considered in the estimate. For such structure separate cost valuation shall be prepared by PMC and approval from Employer is mandatory. No objection certificate shall be obtained from competent authority before demolition. It is the responsibility of PMC.
- xxiii. SOURCE OF ELECTRICITY, WATER, TELEPHONE – Source of electricity, water, and telephone, other services, etc. shall be marked on plan and frame the estimate accordingly. Permission for the same shall be the responsibility of PMC.
- xxiv. OCCUPANCY CERTIFICATE - The PMC shall responsible for completing the all formalities regarding and obtaining occupancy certificate.

xxv. OTHER SERVICES - Any other services connected with the work shall be designed as per standard practice. Preparation of the lighting scheme including HVAC, Sanitary and plumbing, drainage system, landscaping, signages, information board and all other appurtenances, etc.

xxvi. ZONES – While planning and designing of the building structure, due consideration to the climatic conditions, locations, situations, surroundings, rainfall, temperature, local heritage, surrounding habitants, natural resources, etc. shall be given preference.

4.3.2 The PMC shall ensure the durability, serviceability, structural adequacy, conformation to the design standards aesthetics, structural component of the project before recommending the same for approval. After scrutiny by Employer, the corrected design and drawings shall be prepared for approval and issue the drawings good for construction and the process. Any component which requires redesigning on account of exigencies of the site like redesigning the foundations, utilities etc., during the execution shall be approved as expeditiously as possible.

4.4 ENGINEERING DOCUMENTS / DETAILED ESTIMATES:

4.4.1 Preparation of Detailed estimate along with general description and abstract as per P.W.D. Standard Specifications, works manual, Common Schedule of Rates and DSRs of MJP, Parks and gardens, FMR of MCGM, MSEB, etc. for engineering works. For items not covered in these then NBC/ CPWD/ CBRI Standard and specifications or any other standard specifications and rates as applicable with complete working details, rate analysis, schedules such as internal and external finishes, hardware sanitary fitting and tap ware, building specifications including specification for all trades and services, and bill of quantities including those of various services all based on schedule of rates conforming to specifications and procedures approved and prescribed by the Employer to describe the whole project adequately. Submitting details of calculations of such Schedule of quantities to enable the Employer to check them before preparation of draft tender documents. PMC should submit estimate analysis sheet as per Form No.11.

4.4.2 Where prescribed specifications and/or schedule of rates do not provide for certain items/services specification and rates based on proper market rate analysis supported by competitive quotations from reputed/specialized / authorized agencies shall be adopted for these items with the approval of the Employer.

4.5 PREPARATION OF TENDER DOCUMENT:

4.5.1 The PMC may indicate any special requirements to suit his Architectural/Structural concepts as well as timely completion of the Project. However, the final decision for stipulating the special conditions for Pre-Qualification / Post- Qualification of the Expression of Interest shall be determined by the Employer. The PMC shall prepare a DRAFT TENDER DOCUMENT based on the standard Expression of Interest document approved by the Employer incorporating construction methodology and special conditions as felt necessary by him in consultation with the Employer.

4.5.2 On approval of the draft tender document, the PMC shall prepare sufficient number of tender documents.

4.5.3 The Team leader of PMC shall attend pre-bid meetings with the bidders and offer clarifications, if any, sought by the intending bidders. The PMC shall prepare minutes of such meetings and also prepare Common Sets of Deviations duly considering technical, financial and legal aspects and in consultation with Employer for issuing to the bidders within two days.

4.5.4 The PMC shall attend opening of tenders/offers. He should prepare evaluation report to evaluate the bids received for work Expression of Interest. The PMC in consultation with Employer shall scrutinize the bids received, prepare comparative statements, carry out assessment of bids and give his recommendations including advice on acceptability or otherwise of the bids received and attend meetings as and when called by the Employer.

4.6 EXECUTION STAGE:

4.6.1 Prepare and issue of working drawings with all details for proper execution of the work. This shall include preparation of fabrication / shop drawings for

select items as well as scrutiny / approval of shop drawings submitted by Expression of Interestors for various services.

- 4.6.2 Revision of drawing details and specifications as required by construction process.
- 4.6.3 Prepare critical path method chart (CPM) for material, manpower, machineries, etc. for implementation and completion of project within prescribed time period as per works Expression of Interest, consultation with Expression of Interestor and submitted duly signed by PMC, Expression of Interestor to Employer for approval. The PMC shall also prepare SOPs (Standard Operating Practices) and got approved from Employer prior to start of work.
- 4.6.4 Preparation of Project planning on MS Project/Primavera along with sequence of construction. The PMC shall prepare and plan all design details, deliverables and plan the construction program to complete the project.
- 4.6.5 The PMC shall attend all the review meetings conducted by Employer from time to time without any extra cost and shall also be available for any clarifications and bring out any issues related to construction which may lead to difficulties, litigation, delays etc.
- 4.6.6 Preparation of the As-Built drawings within a month of the occupation for release of final bills to the Expression of Interestor.
- 4.6.7 Preparation of Bill shall be done in time by PMC on actual measurements at site of work.
- 4.6.8 PMC shall provide material sample for approval from Employer.
- 4.6.9 Testing of material , quality checking, quality assurance, etc. shall be done by Expression of Interestor in time and 25% of the testing shall be witnessed by PMC.

4.7 ROLE OF PMC KEY TECHNICAL PERSONNELS DURING ENTIRE EXECUTION:

- 4.7.1 The PMC shall assist in pre-commencement/ Construction / post completion activities / defect liability period with respect to the project, for ensuring that the work is carried out as per approved drawings, designs and specifications through a team of qualified and experienced technical personnel's to be provided at site of work, including Architects, Engineers

etc., and to bring out deviations, if any, to the notice of the Employer for its rectifications in advance to keep the specified progress of work as per conditions of works Expression of Interest.

4.7.2 In the event of differences relating to the interpretations of drawings /designs/specifications/ any other part of the Consultancy between the PMC and the Expression of Interestors, the interpretation and the decision of the Employer shall be final and binding. Assisting and preparing the compliances in arbitration and litigation cases that may arise out of the Expression of Interests entered into in respect of any of the works.

4.7.3 Exercising cost control & economy measures to ensure that the approved Estimates are not exceeded.

4.7.4 The PMC shall obtain the approval of the Employer for any of the material deviation in the design or specification that may be required and felt necessary during execution due to technical or administrative reasons.

4.7.5 The PMC should analyze any deviations provide detailed specifications and rate as supplemental items, additional items and remains for deletions if any arises during the construction stage.

4.7.6 Non-SSR Items:- PMC shall submit the no. of SSR and Non-SSR items. The Non-SSR items to be approved from regional office, if not done the penalty of 25% of fees will recovered and Expression of Interest Expression of Interest will be terminated if necessary.

4.7.7 The PMC should be take the approval from MSPH&WC Head Office.

- If any changes in layout / specification
- Any Excess work in the scope of Expression of Interest.
- Any extra work which is not in scope.

4.8 POST COMPLETION:

4.8.1 The PMC shall submit required number of sets of completion drawings and other details to local authorities and obtain completion certificates. The PMC shall be responsible for obtaining final completion certificates from different authorities in respect of various building and services and securing permission of Municipal Corporation and such other authorities for occupation of the building and assist Employer in obtaining refund of deposit if any, made by the Employer to the corporation or any such other Employer. The PMC shall prepare and submit maintenance manual and

housekeeping schedule for the completed building, infrastructure, all utilities, all services, etc.

4.8.2 The PMC shall be responsible for scrutinizing the “AS BUILT DRAWINGS” of the building prepared by Expression of Interest and submit it to the Employer. PMC is also responsible for all services for reference and records to Employer both in hard cloth mounted drawings and digital mode.

4.8.3 The PMC shall submit record of all warranties and guaranties of electro mechanical systems and contact numbers and details for service.

4.9 CONSTRUCTION MANAGEMENT

The PMC shall;

4.9.1 Act as Employer’s representative at project site and depute required engineers for supervision, monitoring for construction activities.

4.9.2 Organize construction planning and management services at site to enable monitoring of work in accordance with construction schedule as per construction manual prepared by PMC and approved by Employer.

4.9.3 Provide quality control checks at site based on standard specifications and certify quality of work performed by Expression of Interest as per PWD norms on site & in laboratory also.

4.9.4 Scrutinize, certify and approve invoices, bills and other documents submitted by Expression of Interest against for releasing advance/stage/ final payments.

4.9.5 Work carried out would be measured and certified by an independent Quantity Surveyor of the PMC.

4.9.6 Co-ordinate with the various concerned agencies on behalf of the Employer and obtain all necessary approvals wherever required.

4.9.7 Take measurement and certify the work, recommend for payment of the work which shall be fully consistent with quality and specifications prescribed in the Expression of Interest entered into. While submitting such bills of Expression of Interest the PMC shall follow the rules and instructions issued by the Employer from time to time. The PMC shall be deemed to guarantee the correctness, scrutiny, checking or approval by

them, as to quality of the work concerned. The Employer or its authorized representative(s) may also check a certain percentage of the measurements and bills as felt necessary.

4.9.8 Supervise the work and also check measurements of hidden items to be done jointly by the PMC staff in the presence of the Expression of Interest or his authorized representative. The PMC shall affix their signature as a token of their check.

4.9.9 Furnish monthly reports on monitoring of Quality Control to the Employer covering the above-mentioned aspects and any other important point relevant to the quality of work and the extent of his inputs.

4.9.10 Submit monthly progress reports to the covering physical progress against targets, financial progress against targets, all quality control results and suggestions for corrective actions, quality aspects compliance with tender specifications / provisions and suggestions for wiping out back-log if any. The progress reports shall also include the PMC inputs on the job for the period of reporting and any other observations.

4.9.11 PMC shall also submit progress details of work with respect to scheduled program and shall submit causes for delay if any and suggestions if any to maintain progress work as per schedule.

4.10 PROCESSING OF BILLS

4.10.1 Interim monthly bill, payments shall be based on the actual work done at site of work and certificates which includes detailed measurements & abstract, photos, etc. processed by the PMC on the submission by the Expression of Interest(s). In processing Expression of Interest's payments, the initial (rough) recording of bill shall be done by the Expression of Interest and submitted to PMC with a copy to Employer. After checking 100% measurements, the PMC will certify the measurements and abstract and the same shall be recorded in the measurement book /digital records while recommending interim / final payments to Employer. The PMC shall be responsible for accuracy of the measurement and shall be responsible for any excess payment to the Expression of Interest at any stage of the works. The PMC shall also be responsible for timely submission of bills to the Employer for in time payment to the Expression of Interest. PMC shall be responsible for

progress of work and respective cash flow by submitting bills of the Expression of Interest to the Employer.

4.10.2 Online recording of measurement (e-measurement) and online submission of bills (e-bills) may be adopted to save the time by the PMC.

4.11 SERVICES DURING DEFECT LIABILITY PERIOD:-

4.11.1 The PMC's Team leader/Resident engineer shall participate in the joint inspection of the work (which shall be carried out every calendar months and as required by Employer) with the Expression of Interest or Expression of Interest's representatives. After the inspections, the PMC shall submit inspections note / report (in six copies) detailing the defects along with photos noticed and the remedial measures to be taken by the Expression of Interest.

4.11.2 The PMC shall also supervise the rectification work executed by the Expression of Interest or any other agency on behalf of Employer.

4.11.3 The PMC shall scrutinize the maintenance manual for all the services prepared by the Expression of Interest. The PMC shall insure the annual maintenance of the building carried out by the Expression of Interest. The Expression of Interest shall also carryout fire drill and check the effectiveness of all services during the defect liability period.

4.11.4 The PMC shall prepare and get approval from Employer for the Expression of Interest document for annual maintenance Expression of Interest for the services required to be kept for level of services of all utilities of building infrastructure to the required standards after DLP. The PMC shall be responsible for timely supervision of all maintenance activities including annual maintenance during the DLP.

4.12 SERVICE OF P.M.C. IN BRIEF:-

In brief the PMC shall provide comprehensive planning details including architectural planning designing, construction supervision, Quality assurance, Quality control, including Architectural services and monitoring services in respect of the work of planning and construction from a day of work order to completion including defect liability period of the assigned projects. Without prejudice to the generality of the aforesaid, the same shall, in particular, includes the above and following:-

- 4.12.1 To obtain details of ownership of land and other details about DP Reservations and restrictions like CRZ, SEZ, Civil Aviation, MOEF, Encroachments, Forest, submergences, etc.
- 4.12.2 Soil Investigation and Soil Tests.
- 4.12.3 Demarcation of land from DILR.
- 4.12.4 Site evaluation and analysis including Total Survey, Digital Survey, Plane Table Survey, Arial Survey, Contour Survey etc.
- 4.12.5 Preparation of Master Layout Plan.
- 4.12.6 Architectural work and site development.
- 4.12.7 Infrastructure development works.
- 4.12.8 Structural engineering works.
- 4.12.9 Sanitary, plumbing, drainage, water supply & sewage works etc.
- 4.12.10 Electrical work (internal and external, etc).
- 4.12.11 Installation and cabling of Air conditioning, Fire frightening, e- data, etc.
- 4.12.12 Road Works.
- 4.12.13 Landscape, Arboriculture, etc.
- 4.12.14 Furniture.
- 4.12.15 Solar energy, Solar hot water, Rain water harvesting, Sewage treatment plant, Water treatment plant, Waste disposal management system Wind energy, concept of green building, etc.
- 4.12.16 Liaisoning with local statutory bodies such as Municipal authorities, Town Planning, PWD, MSEB, BSNL, Water Supply, Railway, Civil Aviation, MOEF, MCZMN, High Rise Committee, Heritage Committee, Fire Employer, Tax Employer, etc.
- 4.12.17 To prepare and supply necessary drawing documents to various agencies for obtaining permissions from Statutory Authorities.

- 4.12.18 Preparation of detailed estimate as per current D.S.R. (District Schedule Rates) and Rate Analysis based on comparable market rate approved by Employer.
- 4.12.19 Preparation of draft tender document, with all accompaniments including all working drawings.
- 4.12.20 Obtaining all approvals from local competent authorities.
- 4.12.21 Day to day site supervision of the project. Digital Photographs, Video, etc.
- 4.12.22 Comprehensive coordination during the course of the execution during construction and defect liability period of the project.
- 4.12.23 Ensuring the optimum desired quality and workmanship of the work and to do all needful activities for the same.
- 4.12.24 To record and maintain requisite registers required for quality assurance as specified in para. –10.3, Activity no. 1(iv).
- 4.12.25 To record measurement of items in the measurement book.
- 4.12.26 Recording, scrutinizing and certifying all types of Expression of Interest's bills.
- 4.12.27 Submission of Completion Certificate.
- 4.12.28 Scrutinization and Submission of as built drawings.
- 4.12.29 Scrutinization of Maintenance Manual wherever necessary.
- 4.12.30 Visits after completion and handing over of project, during defect liability period is mandatory and inspection note to that effect should be issued keeping close liaisoning with the User Department for remedial measure of the defects noticed during DLP.
- 4.12.31 Obtaining intermediate certificates of various stages of construction and Occupation Certificate, Completion Certificate, etc.

5. QUALIFICATION AND EXPERIENCE OF STAFF / PROFESSIONAL EXPERTISE

5.1 To provide above services, PMC shall have following key staff, in-house expertise or shall appoint sub-consultants or the experts, etc. The PMC shall be headed by a person who is Civil Engineer or Architect. He and his expertise, consultants, etc., must have qualified degree from recognized university.

Sr. No.	In house Expertise / sub Consultant (Sr.1, 2, 3 –key Staff)	Minimum Essential Qualification	Minimum Experience in Relevant Field for	
			Project more than BUA – 30,000sq.mt.	Project less than BUA – 30,000sq.mt.
1.	Team Leader / Project In charge / Sr. Civil Engineer	BE/ME Civil or equivalent	20 years	15 years
2.	Resident Engineer	BE/ME Civil or equivalent	15 years	10 years
3.	Architect	Graduate / Post Graduate in Architecture	15 years	10 years
4.	Site Engineer/ Site Supervisor /quantity Surveyor/ Quality Control Engineer	Diploma / Degree in Civil Engineering	5 years	3 years
5.	Structural Consultant	M. tech./ M.S.	15 years	10 years
6.	Electrical Consultant	Diploma / Degree in Electrical Engineering	5 years	3 years
7.	Water supply and Drainage Consultant	Graduate/ Post Graduate in Environmental Engineering /Civil Engineering	5years	3 years
8.	Geotechnical Consultant	Post Graduate in Geotechnical Engineering	10 years	5 years
9.	Consultant for MOEF/CRZ wherever applicable	Graduate / Post Graduate in Environmental Engineering / Environmental Science	5 years	3 years
10.	Consultant for Lift, Fire, Solar Energy and Hot water, Air Condition, STP, WTP, Acoustic, PT Vendor /Agency, Landscape, Safty and any other expert required for the project as directed by Employer.	Expert as per project requirement in specified field shall be provided	10 years	5 years

The PMC shall submit the names along with detailed credentials and addresses with contact number and email ID of abovementioned key staff, experts, Consultant, etc. designated / appointed by PMC for this project before signing the Expression of Interest. This information shall be submitted in forms as per Appendix – V. The Employer may call for the interview of above mentioned personals before appointment. PMC shall

submit their Expression of Interest copy with the staff, along with fee schedule & Terms and Conditions of Expression of Interest to Employer.

The above mentioned key staff/ expertise designated /appointed by PMC shall be got approved from Employer and shall not be substituted without the permission of Employer. The substituted staff of PMC shall have equivalent or higher qualification and experience. However, the replacement of the staff on medical ground (on valid reason and proof) shall be permissible with the permission of Employer.

5.2 If Employer wants to appoint separate Structural Consultant or any other Consultant on account of importance of project, then the such work will be allotted to separate Structural Consultant or any other Consultant and their fee will be paid as per approved fee structure by EMPLOYER. In such case Fee will not be paid to PMC for structural Consultant or any other Consultant.

5.3 The PMC is already impaneled by the Employer. However the latest information of the PMC regarding organisation structure, details of similar consultancy works completed, consultancy works in hand, annual financial turnover, details of in house key personals and PMC firm's references shall be submitted in the forms as per Appendix - V before signing the Expression of Interest.

6. TIME SCHEDULE:

6.1 The date of commencement of services of PMC will be reckoned from the signing date of Expression of Interest.

6.2 Completion of various professional services/activities shall be achieved within the time schedule from the date of commencement of the consultancy.

6.3 As the project is to be completed on fast track, the work of Stage – I shall be carried out as per time schedule specified in Para – 8.

6.4 The total time period of completion for the consultancy Expression of Interest shall be up to the end of defect liability period (DLP) from the date of signing of Expression of Interest. It is envisaged that months (to be decided by the University authority) is for pre-tender stage for design, planning, statutory approvals, estimation, tendering etc. andmonths (to be decided by the University authority) for the actual construction and completion of the building

infrastructure project and last ----- months (to be decided by the University authority) for defect liability period.

6.5 The PMC shall take into account likely delay in completing works by Expression of Interestors for any reason whatever. The payment to the Project management consultant shall be as specified in the payment schedule and nothing extra shall be paid for delay on any account.

6.6 Further the PMC shall not be entitled for any reimbursement, whatsoever; in case the delay in completion/occupation is on account of such reasons, which are attributable to the PMC.

7. Requirement of key staff, experts, sub- Consultant and their manmonths is as per MANNING SCHEDULE indicated in Appendix – III

Before signing the Expression of Interest, the PMC shall submit and get approval to the estimate for Manning schedule with detail names, address & phone number of staff as per Para-5. Similarly PMC shall submit the time table (milestone) for Pre-tender activities.

8. STIPULATED PERIOD SCHEDULE (MILESTONES) TO COMPLETE VARIOUS PRE TENDER ACTIVITIES:

Sr. No	Description of the Activity	Maximum No. of days to complete each activity from the date of work order
1.	(a) Submission of soil investigation report on soil conditions based on trial pits/trial bores, similarly submission of report on soil tests conducted by appointing an expert in soil investigation illustrating the soil details, foundation strata, safe bearing capacity, type of foundation etc for foundation design . 1. Stand alone building 2. Layout less than 50 acre area 3. Layout more than 50 acre area (b) These fees shall be borne by the Architect or sole PMC. (c) Quotations from the soil investigation agency or expert shall be approved by the Architect or sole PMC with prior scrutiny from the Employer.	30 days 45 days 60 days

	<p>structure could be obtained.</p> <p>Also site reports with details of existing features such as topography of surrounded area, surrounding structures, heritage structures, Water Course sand developments etc. and amenities viz. Source of water ,electricity, approach road, drainage facility etc. available.</p>	
5.	<p>Carrying out and submission of plane table, topographic survey, digital survey, contour survey, etc. as per Employer's standard format (Appendix – VII) for the entire plot of land, preparing the drawings showing all details such as existing structure, trees, drainage works, Canals, water bodies, poles, all over headlines, layout of utility lines, fire hydrants, etc. and submit the drawings and details.</p> <p>The expenses to carry out plane table survey of total land shall be borne by Architect or sole</p>	35 days
6.	<p>Preparation and submission of Preliminary Master Layout Plan for the entire land and preliminary individual building plans including tentative Infrastructural amenities layout plan considering the User's requirements.</p>	40 days
7.	<p>Preparation and submission of Final Master Layout Plan for the entire land and get approved. In Final Master Layout plan location of entrance / exit gate shall be shown. Similarly typical cross section and elevation of the compound wall shall be shown.</p>	50 days
8.	<p>Submission of Detailed R.C.C. Design and get it approved from EMPLOYER.</p> <ol style="list-style-type: none"> 1. Stand alone building 2. Layout less than of 50 acre area 3. Layout more than 50 acre area 	<p>45 days</p> <p>60 days</p> <p>75 days</p>
9.	<p>Submission of detail Tender Drawings, Detailed Estimate considering existing structures which are required to be dismantled shall be considered or credit of value of dismantled valuable material of the dismantled structures in the estimate and DTP and get it</p>	

	approved by EMPLOYER and NIT publication. 1. Stand alone building 2. Layout less than of 50 acre Area 3. Layout more than 50 acre Area	90 days 105 days 120 days
10.	To obtain the permission from statutory authorities, municipal corporation /council, N.A. permission, Tree cutting NOC, Commencement certificate, MOEF/CRZ/Civil aviation clearance etc. 1. Stand alone building 2. Layout less than 50 acre area 3. Layout more than 50 acre area	120 days 135 days 150 days

Note:

1) For the projects within Kolhapur Corporation jurisdiction, above stipulated time period may be extended up to 30 days (for Sr. No. 10) in addition to above mentioned period after proper justification from PMC and on recommendation of Technical Committee on the approval of BUILDING AND WORKS COMMITTEE, SHIVAJI UNIVERSITY & WC.

2) From above activities, if some activities are completed by the Employer then the period and respective fees of such activities may be deducted from total period and fees of Pre Tender Activities after review of period schedule as stipulated in above para.

3) Above mentioned activities shall be completed simultaneously.

4) Fee shall be paid only on completed part of above mentioned activities.

5) If total activities as mentioned above is not required and only part there of is essential then fee shall be payable only on executed part and no claim shall be allowed on non-executed activities.

8.1 Levy of compensation for delay –

8.1.1 If PMC fails on account of its incompetency / default to complete each activity within the stipulated time period (milestone) as mentioned in Para- 8 above, then levy of compensation of 0.25 percentage of the total fee payable per day will be imposed. The cumulative amount of compensation will be limited to 5 percent of the total fees payable to the PMC. 5 Percent compensation shall be for respective stages (stage 1- pretender activity,

stage 2- post tender activity, and stage 3- DLP). Milestone of each activity shall be observed to levy compensation/bonus.

- 8.1.2 If the PMC manages to publish NIT within 90/105/120days and manages to get all permission within 120/ 135/ 150 days (as stipulated in Sr.No.9 and 10 of Para. - 8) then recommendation for waiving of compensation may be considered by Project Co-ordination Committee of Employer.
- 8.1.3 Also Project Co-ordination Committee may consider for recommendation for extension of time period to the various pre tender activities mentioned in above Para – 8 on account of genuine difficulties (for which PMC is not responsible) due to which PMC could not achieve the milestones by keeping all the reasons / correspondence on record submitted by PMC.
- 8.1.4 Timely correspondence and action in this regard shall be verified as correctness and rightness to that effect by the project co-ordination committee.
- 8.1.5 On recommendation of Project Co-ordination Committee, decision of Shivaji University, SHIVAJI UNIVERSITY is final and binding on PMC.
- 8.1.6 Enhancement of penalty also may be considered on not achieving milestones on the default of PMC as stipulated in above Para- 8. If the milestones are achieved within less than 75% of stipulated period as mentioned in above Para – 8. then the bonus will be paid at the rate of
1.00% of the total fee payable for Pre-tender Activities.

9. FEES PAYABLE TO THE PMC

- 9.1. The PMC will be paid fees @ 3% (in numerical) three percentage (in words) (Excluding Service Tax at applicable rate) of Final Estimated Cost of work portion or Accepted Tender Cost of the project whichever is lower subject to satisfactory completion of all activities as mentioned in this Expression of Interest.
- 9.2. PMC's fee is including the fee of all key staff, expert/sub consultant as per Para-5 required for completion of the project.
- 9.3 If any expert required at any stages of works which is not accounted for in this Expression of Interest then fees of such expert shall be reimbursed by Employer provided prior approval is taken from the University authorities.

9.4 The fee of surveyor for plane table survey, contour survey, digital survey, Drone survey, soil investigation agency MOEF & CRZ agency, liaisoning Architect, land consultant etc. shall be borne by Architect or sole PMC.

9.5 If the project is not taken up due to some or other reason(s), the PMC will be paid upto the stage(s) accomplished, on the actual estimated cost of building / project as per actual submission of the data of the project. However, decision regarding stage wise completion and fees to be paid to PMC will be taken by the University authorities and will be binding on the PMC. Complaint of whatsoever nature will not be considered after the decision is taken by University authorities.

10. DUTIES AND RESPONSIBILITIES OF THE PMC AND CORRESPONDING STAGES FOR MAKING PAYMENTS:

The PMC has to render the services in stages as mentioned below. The PMC will be paid fees in the following manner on account of services provided. The fee is expressed as percentage of total payable fee as per Para-9.

10.1 PAYMENT SCHEDULE

No escalation shall be paid on the fees of Project Management Consulting Assignment for stage I, II and III. All Payments to the Project management Consultant shall be “on account” and shall be subject to Income Tax deduction at source. The PMC shall be paid for each of the services in the schedule as far as possible by 15th working day after the day of presentation of the bill to the Employer at various stages as follows:

Stage wise pre tender fees payable

Sr. No	Stages	Particulars	% of Pre-tender fees due	Actual % of total fees
A	B	C	D	E
1	Stage - I :-	(1) Survey of plot, site plan, 7/12 details. Preparation of concept master layout Upto Planning Approval by Building and Works Committee	10.00%	
		(2) Obtaining planning Approval by Management Council approval.	10.00%	

		3) Obtaining Administrative Approval from Management Council.	10.00%	
2	Stage - II :	(1) Preparation of Drawing, Estimate, DTP for publishing Tender	20.00%	
		(2) Providing Assistance in Tender Scrutiny.	10.00%	
		(3) After all permission taken and work started.	30.00%	
		All necessary permissions from statutory bodies like KMC, Pradikaran etc. viz. Commencement certificate, Tree cutting permission, Firefighting NOC, MoEF clearance, Special other permissions if any required.		
		(4) Supervision and monitoring during DLP period	10.00%	
		Total	100.00%	20% of Total Fees.
	Note: -			
		1) Fees for the stage I will be paid after Administrative Approval / Revised AA if required given by Management Council.		
		2) Fees for the stage II will be payable after tender acceptance by Management Council.		
		3) Structural Consultant & Soil Investigation Consultant, MEP Consultant, Fire Consultant fee to be borne by the PMC.		
		4) All other consultant fees required for the project and proof checking charges will be paid by PMC and reimbursed by Shivaji University, Kolhapur after approval to consultant is given.		
		5) The PMC will be paid fees (Excluding Service Tax at applicable rate) of Final Completion Cost of work portion or Accepted Tender Cost of the project whichever is lower.		

10.2 Stage – (I) :The fee would be paid for different activities as follows –

Pre Tender Activities (20%)

Activity No.	Description of the work.	Total fees payable for the stage.	Fees payable for the sub stages of work.
1A	(a) Obtaining and submission of latest property cards / 7-12 Extract of land where proposed building or project is planned (b) Submissions details along with information about the DP reservations, encroachment(s), MOEF, Agricultural land and other restrictions like CRZ, SEZ, Civil Aviation etc if any.	0.25%	0.25%
	(c) Carrying out the work of Title clearance on Property Card,7/12 Extract in the name of Unit Commandant of user Department i.e. S.P., C.P., PTC, \ SRPF etc. if required.	*5% (For Kolhapur) & *2.5% (For rest of Kolhapur)	*5% (For Kolhapur) & *2.5% (For rest of Kolhapur)
	Note:- (i) % of payment will be applicable if issue is involved for transfer of ownership of land & this will be read as 5% & 2.5% for Kolhapur City & Rest of Kolhapur, respectively. For Kolhapur projects, stage 5 & 7 shall be reduced as 2.5% & 2.50%. For rest of Kolhapur, stage 5 & 7 shall be reduced as 1.25% and 1.25%. (ii) Payment for (a), (b) & (c) will be made only after the complete service.		
1B	(ii) Obtaining and submission of land details from local competent authorities, details of boundaries, demarcation and measurements of land from DILR (District Inspector Land Record) or TILR (Taluka Inspector land Record) any other competent agency as may be applicable in that area	0.75%	0.25%
	(iii) Submission of a site plan of entire land to a suitable scale showing all details such as existing structures with dimensions, poles, trees, overhead lines, boundaries, existing roads and proposed roads of PWD, ZP, Municipal corporations or councils and other bodies		0.25%

	such as nearby Cemetery / Graveyard (kabrastan) etc., high flood levels, existing over ground or underground services and utility lines and such other lines from which the connections for the proposed buildings or structure could be obtained.		
	(iv) Fixing boundary stones or poles as per the specifications with approval of Employer. The cost towards fixing the boundary stones or poles will be reimbursed by the Employer based on the approved estimate by the Employer as per the prevailing DSR rates of the year. PMC shall ensure that the work of compound wall should not be delayed due to non-demarcation of boundary. In case the land is already demarcated, then PMC shall confirm it and certify accordingly.		0.12%
	(v) Submission of preliminary site report with details of existing features such as topography of surrounded area, surrounding structures, heritage structures, water courses etc. and amenities viz. sources of water and electricity, approach roads etc. available and furnishing of block estimate based on DSR, if required by the Employer.		0.12%
2.	(i) Carrying out and submission of Plane Table Survey, Digital Survey, Contour Survey as per Employer standard format with interval of 1 to 5 as suitable for the entire land showing value and location of Temporary Bench Mark (TBM) on permanent structure, with the help of latest sophisticated digital instruments, viz. total station, one second theodolite, Electronic Distance Measurements	1%	0.25%

	<p>(EDM) etc.</p> <p>(ii) Performing Plane Table Survey as per Employer's standard format (Appendix – VII) for the entire plot of land, preparing the drawings thereof showing all details such as existing structures / trees / poles / all over head lines / layout of utility lines / fire hydrants etc. and submit the drawings and details to the Employer.</p> <p>Note :- The cost of Digital Survey, Drone, Plane table & contour survey shall be borne by Architect or sole PMC.</p>		0.12%
	<p>(iii) The PMC shall show the position of buildings on ground to the Employer and user departments before finalizing the layout. The PMC should verify D.P. reservations nearby cemetery, kabrastan etc. before starting any work. The PMC should avoid shifting of High Tension and Low Tension electrical cables, pipe lines, etc. as far as possible. PMC shall contact competent authorities and also study the site conditions for obtaining above details. Correspondence shall be made with various agencies viz. MSED, MJP, PWD, MIDC, ZP, MGL, BSNL, and municipal corporations or councils for detecting the various utility lines, wherever applicable.</p>		0.10%
	<p>(iv) Preparation and submission of Preliminary master layout plan for the entire land and preliminary individual building plans including tentative infrastructural amenities layout plans for</p>		0.12%

	the entire project/ land.		
	(v) Getting approval to the master layout plan from the Employer and other appropriate Employer as may be required.		0.15%
	(vi) PMC shall submit the names alongwith detailed credentials, Experience Certificate and addresses with contact number and e-mail ID of various Inhouse Expertise / PMCs designated / appointed by him for this project as per Para – 5. Note: The PMC shall select staff with the permission of Employer and shall not be changed without the permission of the Employer.		0.5%
	(vii) PMC shall arrange discussions and meetings, power point presentations at the Employers office or site as may be decided by the Employer as and when required.		0.07%
	(viii) PMC shall give detailed suggestions / advice from time to time to the Employer in respect of any questions involving economy, aesthetics and necessity during the planning and execution of the work, as and when required by the Employer. Note: The PMCs shall not make changes without permission of the Employer. Any changes required shall be intimated to the Employer in advance in written form.		0.12%
	(IX) Submission to and approval by the Employer of detailed layout plan, building plans etc., along with reports from professional experts mentioned in Para – 5 whenever required.		0.12%

	(X)PMC shall prepare and arrange the power point presentation indicating the scope of work, all the salient features of the work and drawing etc.to the Employer. PMC shall submit the Photos, Video, CD / Walk through, Perspective view, Brochure, Bird view of plan with furniture, Aerial view of project, cost details, etc .		0.12%
3.	(i)(a) PMC should take trial pits /trial bores/ plate load test and relevant soil laboratory tests for soil investigation for evaluation Safe Bearing Capacity (SBC) and depth of foundations will be responsibility of PMC with prior approval of the Employer and conducting soil investigation in co-ordination with the Employer.	0.5%	0.25%
	(i)(b) Furnishing soil investigation reports based on trial bore / plate load test on soil conditions and on soil tests by appointing an expert / consultant in soil investigation by obtaining soil details of foundation strata, Safe Bearing Capacity, type of foundation and recommendations of soil improvement(if any) etc for foundation design. The evaluation of Safe Bearing Capacity (SBC) for the foundation strata should be followed as specified in I.S codes and relevant other methods is mandatory. Foundation design shall strictly be based on soil investigation report from trial bores/ plate load tests. Note:- 1) The cost of soil investigation agency in respect of required laboratory		0.25%

	<p>tests and field tests viz, plate load test / footing load test, SPT etc. will be borne by Architect or sole PMC.</p> <p>2) The Plate load test is to be done in accordance with the IS Code 1888-1971 and no vehicular loading i.e. truck/JCB loading is not permitted for conducting the test.</p> <p>3) For high rise buildings the boreholes should be drilled upto minimum 30 meters from ground level and the soil structure interaction / Finite Element analysis be done in accordance with IS Code 16700-2017.</p> <p>4) The Report shall be submitted in the standard format containing all the technical details and justifications with certifications of the PMC.</p> <p>5) The minimum quantity of boreholes should be proposed from Architect or Sole PMC according to I.S. Code 1892-1979 and approved from the Employer, prior to the approval of quotations of the same.</p>		
4.	<p>(i) Submission of detailed working drawings required for execution of individual buildings and individual internal items of project such as window M.S. Grill pattern, design of gates, door details, kitchen platform, center line plans, plumbing details, sanitation details, flooring patterns, toilet block details, staircase and railing details, internal electrification details, typical furniture arrangement details, etc. for approval to the Employer.</p>	2.5%	1%
	<p>(ii) Submission of detailed working drawings required for execution of individual external items of the project such as external electrification details including load calculation, road cross section, longitudinal section, Storm Water drains, sewerage details, water supply</p>		1%

	<p>details, Elevated Storage Reservoir / Ground Storage Reservoir including design calculation report, colour shades of the buildings, etc. for the approval to the Employer. Rainwater disposal plant of terrace and at ground along with gutters and downtake pipes detail plan is mandatory. Plan with special emphasis on leakproof, damproof and crackproof structures is mandatory.</p>		
	<p>(iii) Submission of detailed working drawings required for execution of individual items viz. landscaping, tapping points of water and electricity, structural drawing, etc. PMC shall ensure that all the details necessary for the execution of the project are submitted to the Employer for approval.</p> <p><u>Note:</u></p> <p>1) PMC should prepare Architectural plans considering seasonal natural effect like rain, wind, temperature of local surrounding to suit the local requirement and to create optimum suitable working conditions as per requirement of users.</p>		0.5%
5	<p>(i) Submission of structural details including earthquake and wind resistant Reinforced Cement Concrete (R.C.C.) and Steel design of buildings / structures and Hydraulics designs of infrastructure amenities such as water supply scheme, drainage scheme, Cross Drainage works, Nalla crossing and training works,</p>	<p>*5% OR 2.5% For Kolhapur and 1.25% for rest of Kolhapur (Please refer stage 1A, if applicable)</p>	<p>*5% OR 2.5% For Kolhapur and 1.25% for rest of Kolhapur (Please refer stage 1A, if applicable)</p>

	<p>Bridge(s), Box or Pipe culverts, Retaining wall , etc.</p> <p><u>Note :-</u></p> <p>a) PMC shall appoint Structural Consultant having experience in design of multi-storied structures. Structural Consultant shall have professional registration with local authority such as Municipal Corporation/Council or with Government / Reputed private organization in respective category.</p> <p>b) Project Management Consultancy shall get approval to appoint Structural Consultant or Consulting firm from Employer before start of his work.</p> <p>c) The structural designer shall sign on each plans and schedules. Schedule should also provide with detailed bar bending details.</p> <p>d) Details of structural consultant including experience is essential to be submitted to Employer.</p> <p>e) The design shall satisfy all provisions of latest Indian Standards (I.S.) codes including seismic/wind loads and other loads as may be applicable.</p> <p>f) Structural PMC shall design structures based on Staad – Pro,E-tab, SAFE, SAP etc. software of latest edition as per IS 456(2000) and IS - 1893 and submit all computer Input / outputs file (soft and hard copy) duly signed to Employer.</p> <p>The detailing of reinforcement shall be as per IS 13920 (1993) (Reaffirmed 1998 edition 1,2) (2002-03)</p> <p>g) PMC shall obtain / get approval to</p>		
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	<p>beam and slab etc. from Employer before start of designing of structure.</p> <p>h) Submission of Input data file soft and hard copy duly signed by PMC & Structural Consultant with detail such as joint coordinate, design data of concrete, steel, wall load, slab load, earthquake and wind forces, design load combination , expansion join , etc.</p> <p>i) Submission of output data file soft / hard copy duly signed by Project Management Consultancy and Structural PMC in respect of design of foundation, column, beam, slab, Retaining Wall, deflection of structures or any heavy span of member ,etc.</p> <p>j) Submission of structural drawing duly signed by PMC and structural design PMC.</p> <p>k) Detailing of reinforcement plan shall be with notes and for each type of bars with proper nomenclature on drawing to understand while actual work at site. All length and diameter of bars shall be shown on drawing with proper care. e.g. In column / beam junction, the end bar shall be anchored for required development length of bar, necessity of top bar at column junction of required diameter and length to resist moment at support due to seismic / wind load and close stirrups in Column and Beam.</p> <p>l) PMC's fee is including the fee of all experts, sub-consultants required for</p>		
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	<p>supply and Drainage Consultant, Air-conditioning Consultant, Landscape Consultant, etc. as mentioned in Para -5.</p> <p>m) Structural Consultant and Electrical Consultant ifnot visiting the sites regularly or not providing services as per Appendix -I due to non payment by the PMC then the fee of PMC will be deducted at penal rate i.e. double the fee as mentioned in the Expression of Interest between them and will be paid to Structural Consultant, electrical Consultant or any other consultant of such nature as per approved fee structure by the Employer. Thereafter firm of PMC will be delisted from the empanelment of corporation.</p> <p>n) If structural Consultant is not doing design as per IS code for the stipulated provisions, earthquake, wind forces etc. adopting design software i.e. Staad – Pro, E-tab, SAFE, SAP considering structural suitability and economic or doing the design exorbitantly for heavy section and Steel consumption then liquidity damages will be recovered from PMC’s fee as decided by Employer under Para No. - 27.1.</p> <p>o) If Employer finds structural design to be done by separate Structural designer(s) on account of importance of project then the same will be allotted. And its fee will be paid as per approved fee structure by Employer. In such case Fee will not paid to PMC for structural design/ drawings.</p>		
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6.	(i) Submission of perspective view(s), 3D views, walks through presentations, etc. with various colour schemes.	*5%	0.25%
	(ii) Obtaining approval from competent statutory authorities, viz. Non Agricultural (NA) permission, tree cutting permission(s), building permission(s). Commencement Certificate, MOEF / Civil Aviation clearance, etc., wherever required. <u>Note :</u> a) Statutory fees in all these respects will be paid by the Employer. b) Amount of MOEF agency will be borne by Architect or sole PMC, if required		*2.75%
	(iii) Detailed estimates shall be prepared in the standard manner and format of PWD, Maharashtra State, based on SSR. Regarding non-SSR item, rate analysis shall be prepared (as per PWD Manual) and got approval from Employer In written form. All the measurements, quantity, rate analysis and abstract sheets, lead chart duly certified by PMC and personally shall be verified by visiting location of source of material by vehicle to read the lead distance. PMC shall submit the detail report in bound booklet form with hard and transparent cover. The name of the project, year of the SSR and cost of project shall clearly appear on the front page of booklet.		1.5%
	(iv) All drawings and estimates shall be duly signed with name and date and stamped by the PMC.		0.12%

	<u>Note:</u> All calculations shall be done in MS Excel or equivalent format. Soft and hard copy of the estimate shall be produced.		
	(v)PMC shall submit steel consumption diameter wise and work wise based on Structural drawing / Bar bending schedule including measurements in a bound booklet form.		0.12%
	(vi)PMC shall also submit the actual item wise and work wise cement consumption based on estimate in a bound booklet form.		0.12%
	(vii)PMC shall also submit the concrete quantity work wise based on estimate in a bound booklet form.		0.12%
7.	(i)PMC shall submit draft tender papers and detailed working drawings alongwith required documents sufficient for the publication of notice inviting tenders and finalization of tender, along with soft copy of the same to the Employer	*5% 2.5% (Please refer stage 1A, if applicable)	*5% (Please refer stage 1A, if applicable)
	(ii)PMC's Team Leader and Resident Engineer shall remain present and give power point presentation illustrating the scope of work, all salient features of the project including planning, designing and estimates with perspective views of all buildings and infrastructure for the prebid meeting. He shall prepare the minutes of meeting, CSD and reply to queries of the Expression of Interestor within two days after prebid. If PMC fails to produce minutes of meeting and CSD within two days then 2 % payment will not be paid.		1%
	Total	20%	20%

Note:1) Above mentioned activities are minimum required, however PMC shall be responsible for verification, certification, updating, authentic documents, etc.for all activities and records to complete the pre tender documentation for the purpose of implementation of project. Any omissions on the part of PMC will not be accepted and if it affects NIT processing and finalization of Tender then PMC will be held responsible. (e.g.-i) 7/12 extract is available with Employer - PMC should verify its authenticity and updating. ii)Land boundary information is available with Employer - PMC should verify its authenticity and updating as per latest record.)

Title clearance on Property Card & 7/12 Extract in the name of Registrar, Shivaji University, Kolhapur will be the responsibility of PMC.

2) Fee will be deducted for the activities which are already conducted by the Employer. PMC shall get the documents of such activities from the Employer for further necessary action.

3) Fee will be paid for completed activities only as per instruction of Employer.

4) For Pre Tender activities up to pre Administrative Approval payment of fees will be made as per fee structure table enclosed at Clause No.9.2.

5) Fees proposed for Activity No.5 @ 10% will be paid only after submission of Receipt of fees received from various Consultants, viz. Structural Consultant, Electrical Consultant, MOEF Consultant, Water supply Consultant & Drainage Consultant, Air- Conditioning Consultant, Landscaping Consultant etc.

10.2.1. Time period for Stage - (I) shall be ----- months

Total fees payable shall remain unchanged during above basic period, inclusive of valid extensions and no payment shall be made beyond this period for Stage-I. In case the EMPLOYER intends to terminate the Expression of Interest at any stage mentioned above, the PMC shall not be entitled for payment of fees for next stage of phase I or part there of from the activities stated under Stage- I. Fees shall be due and payable only on completion of activities as specified in Para –10.2. Further beyond the above (-----months + valid extensions, if, any) period, fees shall remain

unchanged. During the period of consultancy, Employer may ask the PMC to demobilize and remobilize staff, in part or full, with a fifteen (15) days written notice. No extra payment / compensation / claims shall be entertained on account of such demobilization and remobilization.

10.2.2. Levy of compensation for Delay due to default of PMC in Stage – (I)

The period for pre tender activities (Stage – I) is specified in Para - 8. If the PMC does not complete the pre tender activities within the period as stipulated in the Para - 8, then payment due to him towards the Stage - I will be reduced by 0.25% per day of total fee payable against stage – I of PMC subject to a maximum of 10% of total fee payable against stage – I, unless valid extension decided and recommended by project co-ordination committee and approved by Registrar, Shivaji University, Kolhapur.

10.2.3. Extension to time limit for Stage– I:

- i) If there is genuine (for reasons not attributable to PMC) delay to complete the pre tender activities by PMC on account of reasons beyond his control, then PMC should obtain valid extension for Stage – I. In the meantime, the PMC should put in every effort to remove the cause of delay.
- ii) The reduction in the fees if any for want of valid extension made for the delay may be released only after the valid extension is granted.
- iii) Project Co-ordination Committee shall study the record of PMC in this references and recommend the proposal to Registrar, Shivaji University, Kolhapur
- iv) The decision of Building and Works Committee of Shivaji University, Kolhapur for granting extension and compensation shall be final and binding.

10.2.4. The payment about services provided by earlier Architect, Architect cum PMC or sole PMC, will not be considered for payment & same amount will be deducted from the fee of present Architect, Architect cum PMC or Sole PMC (if applicable)

10.3 Stage – II : The fee would be paid for different activities as follows –

POST TENDER ACTIVITIES EXECUTION & SUPERVISION (50%)

Activity No.	Description of the work.	Total fees payable for the stage.	Fees payable for the sub stages of work.
1.	(i) On appointing the required staff as mentioned in Para -5& Appendix-III and their acceptance of such assignment.	5%	0.5%
	(ii) Submission of bio data of the staff as appointed and submission of their permanent address and telephone numbers, mobile numbers etc. along with pass port size colour photograph.		0.5%
	(iii) On maintaining following instruments on site and submission of their details to the Employer ; a) The odolite and Dumpy level with staff(s); b) Vernier caliper; c) Measuring tapes of 5m, 10m, 15m and 30m length; d) Measuring tapes of steel of 3m, 5m and 10m length; e) Helmets of standard size and make for the staff of PMC and also for inspecting officers of Employer. f) Micrometers. g) Camber plates. h) Magnets, etc. Computer with highest calibre with web camera and with internet connection.		0.5%
	(iv) On maintaining records and		0.5%

	<p>submission of Xerox copies of following records to Employer;</p> <ol style="list-style-type: none"> 1) Attendance register of PMC staff and Bio-Data 2) Labour attendance register 3) Work order book 4) Foundation passing register 5) Anti termite treatment register 6) Register of Material brought by Expression of Interest on site of work in terms of No. of vehicle, date, quantity, etc.along with Challans for the same 7) Register for concreting work i.e. RMC Register 8) Cement testing register 9) Cement consumption register 10) Steel consumption register 11) Steel testing register 12) Concrete cube testing register 13) Deviation register 14) Accident register 15) Safety precaution registers <p>Note :- Minimum registers mentioned in the Expression of Interest as above in para (iv) are mandatory as per appendix –</p> <p>VIII.However,PMC/Expression of Interest should maintain more registers as per site requirements.</p>		
	<p>(v) On maintaining following books on site and submission of details of the same to the Employer;</p>		<p>0.5%</p>

	<p>a) Standard specifications (Vol. I and II);</p> <p>b) MORTH specifications of latest edition;</p> <p>c) National Building Code of latest edition;</p> <p>d) IS: 456</p> <p>e) IS: 13920</p> <p>f) IS: 1893</p> <p>g) IS: 800</p> <p>h) SP : 16, 20, 36</p> <p>i) IS : 10260</p> <p>j) PWD – Civil Engineering Handbooks</p> <p>k) Central Public Health Engineering Manual</p> <p>Any other IS code or book as may be required; etc</p>		
	<p>(vi) PMC shall prepare Quality Assurance Manual (QAM) indicating the methodology of execution of various items of work and submit the same to MSPH&WC.</p>		0.5%
	<p>(vii) On establishing and submission of details of site laboratory and PMC's site office by Expression of Interest. If the Expression of Interest fails to establish site laboratory as mentioned in the tender document in full working condition within 15 days from the date of work order then PMC shall establish the laboratory and claim the expenses and deduct the amount from the bill of Expression of Interest.</p>		0.5%

	(viii) Maintain the Measurement Books (MB) issued by Employer for recording the measurement of steel and all hidden measurements. Hidden measurements will include foundations, WBM, BBM and other layers of road work, Underground water lines etc. The certified Xerox copy of this MB shall be submitted along with the PMC's bill.		0.5%
	(ix) PMC should check the mix design for various grades of concrete to be used on work and cast trial cubes as per the mix design obtained and verify at least 7 days results and subsequently for 28 days results. PMC should calculate the cement consumption and maintain the record. This activity shall be repeated for each change in mix design. <u>Note:</u> i) This amount will be paid on completion of R.C.C. work and satisfactory report of all NDT of concrete items. ii) For all purpose of measurements / billing, e-measurements and e-billing is permissible on approval of software from Employer.		1%
2.	(i) Complete day to day supervision of the project work, Expression of Interest's bill will be paid in proportion to the actual work done by the Expression of Interest. PMC	27%	

	<p>shall submit the certified copies of all registers and documents maintained by him at site.</p> <p>PMC shall also submit the compliance of inspection notes issued by MSPH&WC during the construction period since last bill of the Expression of Interest. Bill will be paid only after receipt of the data as above.</p> <p>Note:</p> <ol style="list-style-type: none"> a) The PMC shall engage Safety Team (Safety Engineer and Assistants) during the requisite execution stage. b) Check, certify and forward the bill to the Employer (either Running Account i.e. RA or Final Bill) prepared by Expression of Interest, after due checking and recording in M.B. c) Check, certify and forward the escalation bill of the Expression of Interest after due checking and recording in M.B. if clause of escalation included in Expression of Interest. d) PMC or his engineer shall not indulge in any way in preparation of the bill of the Expression of Interest. e) The main responsibility of the PMC is getting the work executed as per the tender specifications and drawings and 		
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	<p>maintains the desired quality and workmanship of work. PMC shall not recommend and forward bill of the Expression of Interest if the work is not done as per the desired specifications and quality. If Expression of Interest's bill is submitted for payment by the PMC it will be assumed that the work is being done as per the desired specifications, quantity and quality with specified workmanship.</p> <p>For assurance of quality PMC should be that 30% test shall be carried out in Govt. Lab. & 70% test in other lab. And also frequency of the test shall be strictly observed.</p> <p>f) PMC shall certify whether the work for which payment is recommended by him is being executed as per the specifications, quality and as per the tender drawings in the prescribed format by the Employer.</p> <p>g) PMC shall notify to the Employer whose signature on his behalf on various documents such as bills of Expression of Interest etc. is to be accepted by Employer as authorized signatory. Such signature shall</p>		
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	<p>specify the name of the signatory on the document and date.</p> <p>h) PMC shall submit day to day report about daily consumption of Cement, Steel & Tiles etc. and daily presence of Skilled/Unskilled labours at site to Employer.</p> <p>i) For High rise buildings, more than 7 stories, MEP Consultants, viz. Structural Consultant, Electrical Lift, Air Conditioning Consultant, Geotechnical Consultant, Water supply, sewage, STP, WTP Consultant, Consultants for MOEF, CRZ, SEZ, Acoustic, Solar Energy, Landscaping, Fire Fighting etc. should work under Shivaji University, Kolhapur. These Consultants must be aware of Tender Conditions & Specifications. PMC should submit Expression of Interest with their payment conditions.</p>		
3.	(i) PMC shall obtain requisite certificates, viz. Foundation checking, Plinth checking, sill level, Lintel level, Slab level, etc. certificate, tree cutting certificate, fire NOC Certificates for drainage, storm water disposal, sewage disposal, source of drinking water and other certificates as	9.50%	2%

	<p>may be required from local statutory authorities during construction period.</p>		
	<p>(ii)PMC shall have to visit the site of work, office of the Employer, office of the unit Commander, user, the various other offices of the Statutory bodies etc.as and when required for which no traveling or daily allowances or other expenses are payable.</p> <p><u>Note:</u></p> <p>Fees prescribed for this stage will be paid after completion of the project.</p>		2%
	<p>(iii)PMC shall ensure the visit of Structural Consultant as per Appendix – III to the site who should personally inspect and certify in writing the suitability of foundation strata, reinforcement checking of columns, beams and floor slabs, anchor of bar at column / beam junction, required length of top bar at column support provided for seismic/ wind moment etc. and other important structures such as Under Ground Water Tank, Elevated StorageReservoir, Heavy loaded / Longer span of Beam / Slab, Overhead water tank, etc. and all other RCC structures under such Building infrastructure project.</p>		1%

	<p>(iv)PMC shall arrange at least weekly visit of Architect as per Appendix – III to the projectand check the specifications adopted and advise Expression of Interestor over the quality, workmanship, modification of design, planning if necessary as per working drawing of site condition of the R.C.C. work and other finishing works, etc. <u>Note:</u> If it is observed that Architect/PMC has not visited the work as per Appendix – III ,then the fees of PMC will be deducted at the penal rate i.e. double the fee as mentioned in the Expression of Interest.</p>		2%
	<p>(v) PMC shall approve various samples according to the Expression of Interest Expression of Interest with the Expression of Interestor during the course of execution and certify the RA Bills of the Expression of Interestor by referring the chapter of list of approved materials mentioned in tender document. The certificate shall clearly mention whether the entire work has been carried out as per the tender drawings and specifications mentioned in tender.</p>		1.50%
	<p>(vi) All other PMC's staff , expert , sub-consultant, etc. shall also visit the project during the period while the particular activity is in progress or otherwise. Visits of the PMC along with his name, date of report shall be notified to the Employer by the PMC through M.P.R..Observations shall be</p>		1%

	<p>mentioned in the visit book kept at site of work and shall be recorded with dated signature.</p> <p>Note :</p> <p>A) Report of Electrical Consultant about material, material quality, specification, design load, test report, etc, and submission of completion certificate.</p> <p>B) Report of water supply and drainage Consultant about material, material quality, specification, test report, design calculation etc., and Submission of completion certificate.</p>		
4.	<p>(i) On completion of work and obtaining the completion certificate from competent Employer, ensuring drainage connection, water connection, electrical connection and finally completion and Occupation Certificate and other approvals from all statutory bodies.</p> <p><u>Note:</u> The actual charges, deposits and all other dues, etc. towards obtaining the various connections will be paid by the Expression of Interest or the Employer as the case may be.</p>	5%	3%
	<p>(ii) Actual handing over of the project to the User Department and taking the same on the Printed Register of Buildings (PRB) of the PWD.</p> <p>(iii) Projects for which maintenance will be done other than PWD in that case PMC shall prepare Maintenance</p>		2%

	Manual and Draft for Maintenance Expression of Interest between user department and maintenance agency required during DLP and after DLP.		
5.	To scrutiny the As Built Drawings received from Expression of Interest and submit to the Employer along with the multiangle coloured photographs of A4 size in five sets and VDO in Pen drive.	3%	3%
6.	Submission of detailed working drawings such as Structural detailing drawings, MEP drawings as per the site measurements, any other detailed drawings required during Construction.	0.5%	0.5%
	Total	50 %	50 %

10.3.1 Time period for Stage – (II) shall be ----- months.

Total fees payable shall remain unchanged during above basic period, inclusive of valid extensions and no payment shall be made beyond this period for Stage-II. In case the Employer intends to terminate the Expression of Interest at any stage mentioned above, the PMC shall not be entitled for payment of fees for next stage of stage II. Fees shall be due and payable only on completion of activities as specified in Para – 10.3. Further beyond the above (----months + valid extensions, if, any) period, fees shall remain unchanged. During the period of consultancy, Employer may ask PMC to demobilize and remobilize staff, in part or full, with a fifteen (15) days written notice. No extra payment / compensation / claims shall be entertained on account of such demobilization and remobilization. Time period for consultancy activities in Stage II shall be ---- months. This tentative time period may change as per requirement of project.

10.3.2 Liquated Damages for Delay in Stage – (II)

The period for post tender activities is specified in Para – 10.3. If due to default of the PMC the post tender activities delayed then payment due to

him towards the Stage - II will be reduced by the liquated damages up to decided and recommended by Project Co-ordination committee & approved by Building and Works Committee of Shivaji Univesity, Kolhapur. Liquated damages will be maximum up to 10% of total fee payable under stage – II to PMC.

10.3.3 Extension to time limit for Stage– (II):

- i) If there is genuine (for reasons not attributable to PMC) delay to complete the post tender activities by PMC on account of reasons beyond his control, then PMC should obtain valid extension for the required period for Stage –II. In the meantime, PMC should put in every effort to remove the cause of delay.
- ii) The reduction in the fees if any for want of valid extension made for the delay may be released only after the valid extension is granted.
- iii) If extension for the services of PMC is required for the reason beyond the control of PMC then its validity shall be verified by project co-ordination committee. After verification of causes of delay project co-ordination committee may recommend suitable extension for the approval to the Registrar, Shivaji Univesity, Kolhapur.
- iv) The decision of Registrar, Shivaji Univesity, Kolhapur for granting extension and penalty shall be final and binding on PMC.

10.3.4 Payment for construction stage –II and preparation of final bill.

1.	During actual execution of work on spread over the period of construction	45% of stage –II payment fee of PMC
2.	Preparation and submission of final bill and submission of as built drawing	5% of stage –II payment fee of PMC

Note:

- i) According to progress of work Expression of Interestor should submit R.A.Bill to the PMC on 1st day of next calendar month duly dated signed copy to Employer.
- ii) According to progress of work submission of monthly bill up to 5th day of next calendar month is mandatory for payment to Employer.
- iii) If during month/months no new work done then ‘Nil’ amount R.A.Bill is also mandatory to watch the progress of work and to get timely cash flow to achieve target / milestone of the project.

- iv) On failure of submission of bill as mentioned above compensation of Rs.500/- per day will be levied from the 6th day of next calendar month until submission of bill.
- v) Final Bill along with all records and documents shall be submitted within 30 days by PMC for payment to Employer with all as built drawings as per actual completion of project.
- vi) PMC shall submit R.A. Bills / Final Bill along with documents mentioned in Appendix – IV.
- vii) Its mandatory to submit R.A. bill of PMC for post tender activities (Execution and Supervision) on the basis of expenditure booked on Expression of Interest's R.A. bill of particular month. R.A. bill of PMC and Expression of Interest shall be submitted at the same time to the Employer.

10.3.5 Duties of PMC during non progressing of work.

If project is delayed by Expression of Interest due to his own problems then PMC shall study the site situation & have discussion with Expression of Interest & his representative & to take efforts to get the progress of work from the Expression of Interest by giving delay task & record the work done by Expression of Interest on daily basis by issuing work programme, deployment of labour & machineries & by giving directions about material management & labour management. After taking such efforts PMC shall inform to Employer & suggest the next steps & methodology according to Expression of Interest Expression of Interest. Also PMC shall issue the show cause notice to Expression of Interest in an advance regarding levie of compensation & liquidated damages. Accordingly PMC shall process the bill of Expression of Interest by deducting such proposed amount, subject to approval from SHIVAJI UNIVERSITY.

If PMC fails to perform his duties then PMC will be penalized as well as the services of PMC will be terminated as suitable to Employer.

The proposed penalty is as under

Sr. No.	Period from which penalty to be propose	Penalty
1	2	3
1	% of Balance cost of tender from which Expression of Interestor fails to achieve the milestone.	1% of fee of PMC or 1 lakh per month whichever is higher

If the deducted amount of PMC is more than 10% of total fee or 5 lakh whichever is more then PMC Expression of Interest will be terminated by SHIVAJI UNIVERSITY.

If the project is delayed beyond 10%, then the PMC or sole PMC shall submit his performance evaluation report along with his bill.

The checklist for performance evaluation of PMC or sole PMC for delayed work is attached herewith as Form No. 12

10.3.6 Minimum scale of Staff to be deployed by Architect on site of work.

Sr. No.	Designation	Minimum Qualification	Experience in civil engineering	Minimum No. of personnel
1	2	3	4	5
1	Project Incharge	B.E. CIVIL	15 Years	2 (Two)
2	Site Engineer	B.E. CIVIL / D.C.E.	5 Years	4 (Four)
3	Site Engineer (Electrical)	B.E. (Elect.) / D.C.E.	5 Years	1 (One) (during work of electrification)
4	Supervisor for curing	X th Std. Pass	Nil	1 (One)

Note:

- i) Amount of salary of staff as decided by Shivaji University will be recovered from sole PMC i.e. Architect cum PMC if staff is not appointed on site of work.
- ii) If required staff on site of work is not appointed by sole PMC i.e. Architect cum PMC then SHIVAJI UNIVERSITY has full right to deploy department engineer till appointment of such staff.

- iii) Architect may reduce staff in extended period of Expression of Interest with the written permission of SHIVAJI UNIVERSITY.
- iv) Architect shall appoint engineering staff throughout the construction period.
- v) Architect shall inform the working day of staff on site of work through MPR which shall taken into account during deduction of fee. Leaves of staff deployed on site of work will be considered as 7 days per year and leaves should be informed to SHIVAJI UNIVERSITY by Emails and it is mandatory.
- vi) PMC's/ sole PMC's Project Engineer should be knowledgeable and experienced than the Expression of Interest's engineers, if it is not, it should be removed and suitable candidate having experience and capacity to execute such quantum of work shall be appointed.

10.4 Stage – III : The fee would be paid for different activities as follows –
Defect Liability Period (10%)

Activity No.	Description of Work	Total fees payable for stage	Fees payable for the sub stage of work
1	(i) Paying regular fortnightly visit (as per Appendix – III)to the project during the Defect Liability Period (DLP) of 5 (five) years or period stipulated in the works Expression of Interest Expression of Interest from the date of handing over of the project to the user department and advising the Employer and Expression of Interest to point out the defects arisen during the DLP and the rectification scheme to over come the defects. Defects and remedies shall be communicated within 3 days to the Expression of Interest and Employer.	20%	15%
	(ii) Keeping close liaison with the user department for remedial measures of		6%

	the defects noticed during the Defect Liability Period and compliance of any further specific requirements of the Employer as may be required during defect liability period. The quarterly report of the visits to the project during the DLP period shall be submitted to Employer duly certified and authenticated by user agency.		
2	PMC shall ensure that there are no dampness or leakages or any damages of any sort to the items of the water proofing for which the guarantee period is of 7 (seven) years.	10%	9%
3	Regular visits and such observations during DLP shall be recorded in visit book kept at site of work is mandatory.		
	<p>Note:</p> <p>i) The fees will be paid after expiry of the period of 7 (seven) years upon receipt of PMC certificate and jointly signed with User Department.</p> <p>ii) PMC will be fully responsible for any settlement, cracks, leakages and dampness due to lack of supervision improper design, etc.</p>		
	TOTAL	30%	30%

10.4.1 Time period for Stage – (III) shall be ----- months.

Total fees payable shall remain unchanged during above basic period, inclusive of valid extensions and no payment shall be made beyond this period for Stage-III. In case the Employer intends to terminate the Expression of Interest at any stage mentioned above, the PMC shall not be entitled for payment of fees for next stage -III. Fees shall be due and payable only on completion of activities as

specified in Para – 10.4 .Further beyond the above (---months + valid extensions, if, any) period, fees shall remain unchanged. During the period of stage - III, Employer may ask the PMC to demobilize and remobilize staff, in part or full, with a fifteen (15) days written notice. No extra payment / compensation / claims shall be entertained on account of such demobilization and remobilization.

10.4.2 Limitation of fees due to default of PMC in Stage – (III)

The period for activities specified under defect liability Stage – III is specified in 10.3. If PMC does not complete the activities as stipulated in the Para 10.4 above, then payment due to him towards the Stage - III will be reduced by 0.25% per day of total fee payable against stage – III subject to a maximum of 100% of the total fee payable against stage – III and forfeiture of security deposit unless valid extension is decided and recommended by project co-ordination committee and approved by REGISTRAR, SHIVAJI UNIVESITY, KOLHAPUR

10.4.3 Extension to time limit for Stage– III:

- i) If there is genuine delay to complete the activities by PMC on account of reasons beyond his control, then PMC should obtain valid extension for the required period for Stage –III. In the meantime, the PMC should put in every effort to remove the cause of delay.
- ii) The reduction in the fees, if any for want of valid extension made for the delay may be released only after the valid extension is decided and recommended by project co-ordination committee.
- iii) The decision of Building and Works Committee of SHIVAJI UNIVERSITY for granting extension and compensation shall be final and binding.

10.5 PMC Payment :-

10.5.1 PMC shall submit his bill along with full details and description about services provided and pending services.

10.5.2 PMC shall not claim payment against pending services or incomplete stages of work as stipulated in Expression of Interest.

10.5.3 All payments paid to PMC are advance payments in the form of running account bills and it can be adjusted at any stage or in final bill.

10.5.4 PMC shall submit Expression of Interest Expression of Interest executed with other sub consultant such as R.C.C. Consultant, Electrical Consultant, Water Supply and Drainage Consultant, any other Consultants, experts for verification of terms and conditions and for record purpose.

10.5.5 The Total Fee to be paid to the PMC shall be all inclusive lump-sum payment for the services covering all costs, out of pocket expenses (excluding service tax). The PMC Fee shall be subject to total deductions of taxes at source as per Applicable Law. The PMC shall also quote the service tax registration number, nature of service for which registration is obtained and its PAN No. on all the invoices raised for the payment.

10.5.6 Payments will be made to the PMC according to the payment schedule stated in this Expression of Interest as per stages specified.

10.5.7 No payment shall become payable for the next stage till the PMC completes to the satisfaction of the Employer the work pertaining to the preceding stage and obtains a certificate thereof.

10.5.8 Deductions will be made from the fees of the PMC on account of levy of compensation, liquidated damages.

10.5.9 In case only a part of the project is continued beyond any stage, no further payment shall be made to the PMC for the part not executed.

10.5.10 The expenditure to be made by the PMC to his in house professional experts or outside professional experts are included in PMC's fees and nothing extra will be paid by the Employer on this account.

10.5.11 Any extra, other than this Expression of Interest, professional experts if required, on the permission of Employer, PMC may deploy for the purpose of special advice. Fees for the same shall be born by the PMC.

10.6 Payment of fee after defect liability period

After the defect liability period for the purpose of settlement of claims or judicial cases if arises, the services of team leader/ resident engineer will have to be made available to the Employer. No extra additional payment shall made on that account.

11. ADDITIONS AND ALTERATIONS:

The Employer shall have the right to make changes, additions, alterations, modifications or deletion, etc. in the design and drawings or any part of work and instructions given in writing for any such additions, alterations,

modifications, deletions during the progress of the work and the same shall be complied by the PMC without any extra cost.

12. OUTPUT OF THE PMC:

12.1 The output of the PMC to the Employer shall be neat , clear and readable form and any other details envisaged under this Expression of Interest shall be supplied as specified in minimum but not limited to as in the following table :

Sr. No.	Description	No. of Copies
1.	Initial concept plan, master plan, specifications including block estimates, Technical feasibility report, financial feasibility report, digital survey, Plane table survey, contour survey, inception report, CPM and PERT chart	5 copies
2.	Initial design of all services	5 copies
3.	Master Layout plan, Preliminary Drawings incorporating final version of (1) and (2) above	5 copies
4.	Building plan and layout plan with carpet area, built up area, FSI calculation sheet for submission to local / statutory authorities for seeking permissions and approvals	As reqd.
5.	Working drawings i.e. Plans, sections, elevations for building , infrastructures , etc.	3 copies
6.	Interior designs and furniture layout, Sitting arrangement, storage, internal partitions, false ceiling, arrangement for work station, platforms, arrangement of openings and places for equipment, etc.	3 copies
7.	Storm water / rain water disposal plan for ground / terrace , plan for effective disposal drainage systems , etc.	3 copies
8.	Drainage , sewage disposal arrangement plan ,system , etc.	3 copies
9.	Drawings of Electrical Installation, Electrical Layout (both internal & external), Pump sets, Diesel generator set, transformers and HV/ LV panels, Fire fighting systems, sprinkler system, wet riser system, ventilation system for basements, Elevators, Intelligent building Management System, Fire detection system, Firefighting system, Access control, UPS,	3 copies

	standard operating system plans, etc.	
10.	Structural design , drawings , etc.	3 copies
11.	Detailed estimate with rate analysis, drawings, specifications, etc.	3 copies
12.	Draft Tender document	3 copies
13.	Approved tender Documents	5 copies
14	Detailed working drawing for execution of work (good for construction) such as foundation plan, RCC layouts, floor plans and sections, elevations , steel scheduling, etc.	5 copies
15.	Layout plans including details of partitions, flooring, ceiling, finishing, layout for electrical/telephone/LAN cables, staircase Railing, landscaping, horticulture, etc. along with Integration of the building infrastructure.	3 copies
16.	Completion drawings for submission to local authorities	5 copies
17	Architectural 3 D virtual model, Estimate , Schedule, Views , walk through presentations, etc.	5 CDs /Pen drives
18.	A soft copy of all drawings in AutoCAD or equivalent software , designs that of reports that of reports and statements in Microsoft Word, Excel or equivalent , etc.	5 CDs / Pen drives
19.	Any other report/drawing asked by Employer	As required

Note: Above minimum output of PMC shall be given in appropriate scale only.

- 12.2 The agency shall be supplied with such drawings along with one reproducible copy in A0/A3 size. If there is any revision of any detail in any drawing for any reason what's ever, same number of drawings shall be reissued after such corrections without any extra charge.
- 12.3 All drawings (Architectural, Structural and Services) shall be prepared by using AutoCAD or equivalent software.
- 12.4 In case of revision of drawing and design necessitated due to changes suggested by approving authorities, no additional payment shall be payable to the PMC.
- 12.5 Above specified drawings are minimum required. If more drawings and copies demanded by Employer then it shall be provided by PMC without any extra cost.

13. COPYRIGHT:-

13.1 All these drawings shall become the absolute property of the Employer and he shall have no right to use the same anywhere else. Such drawings and designs shall not be issued to any other person, firm or Employer or used by the PMC for any other project. No copies of any drawings or documents shall be issued to anyone except the Employer and/or his authorized representatives.

13.2 All design calculations along with original Architectural/Structural drawings on computer floppy/CDs shall be submitted for record and shall be the property of Employer.

14. PMC may be -

14.1 Proprietary Firm

14.2 Partnership Firm

14.3 Limited Company

14.4 Limited Liability Partnership

14.5 Private Limited.

14.6 Government Undertakings

14.7 Educational Institutional

15. PROJECT CO-ORDINATION COMMITTEE:

15.1 Project Co-ordination Committee comprises as follows:-

Sr. No.	Officers	Designation
1.	Hon'ble Vice-Chancellor	Chairman
2.	Hon'ble Pro Vice-Chancellor	Member
3.	Representative of Executive Engineer.	Member
4.	Er. Sadanand Bhaskar Sabnis	Member
5.	Ar. Mahesh Doiphode	Member
6.	The Registrar	Member
7.	Dy. Registrar (Civil), Shivaji University, Kolhapur	Member Secretary

15.2 The Project Co-ordination Committee shall discuss the drawings, records, documents, presentation etc. submitted by the PMC and give recommendations thereon within 15 days to avoid unreasonable delay in the progress of the work.

- 15.3 The Committee shall also decide the payment of claims of PMC, actual cost for additional services rendered by PMC if any on the basis of man days and approved fees structure.
- 15.4 The Shivaji University may co-opt more members and also change the composition of the Project Co-ordination Committee as and when required.
- 15.5 On recommendation of Project Co-ordination Committee, decision of Building and Works Committee, Shivaji University is final and binding on PMC.

16. RESPONSIBILITIES ON EXTRA ITEM (EIRLs):

- 16.1 All conditions as mentioned in the payment schedule shall be applicable for EIRLs also.
- 16.2 PMC shall prepare drawings, layouts, structural designs etc. for the new and additional works i.e. Extra Items cropping up during the course of execution of the original works stipulated in tender.
- 16.3 If it is noticed that the Extra Items are cropping up due to the defective planning, designing or due to wrong decisions, orders of the PMC, no fees will be paid over the cost of such extra items. If such event observed due to defaulted planning, estimation by PMC then such PMC may be delisted from the empanelment of Employer. In this effect decision of Building and Works Committee on recommendation of Project Co-ordination Committee will be final and binding on PMC.
- 16.4 However, if the extra or additional items crop up due to demand of the user department or due to suggestions from the Employer, PMC shall submit proposal accordingly at the earliest within 7 days to complete the project within stipulated time.
- 16.5 Fee on account of variation and EIRL will be paid at the rate of 0.5% of cost of EIRL and it will be in addition to fee payable under this Expression of Interest.

17. RESPONSIBILITY DURING THE EXTENDED PERIOD / TERMINATION

- 17.1 No payment will be made to the PMC during the period of termination and reappointment of the Expression of Interest for the Project.
- 17.2 In case of termination of Expression of Interest between the Employer and the Expression of Interest, PMC shall prepare detailed estimate based on the current DSR and draft tender papers of balance work based on the joint

measurements taken by the PMC and the Expression of Interest or his representative.

17.3 PMC will be paid for stages of work as may be applicable based on new balance estimated cost of work.

17.4 In case of any judicial matter, dispute, claims, etc. PMC shall prepare the para wise reply and submit to Employer within 7 days.

18. DISQUALIFICATION FOR FURTHER ASSIGNMENTS TO THE PMC AND WITHDRAWAL OF WORK / ASSIGNMENT:

18.1 If the PMC fails to act in conformity with the practices and ethics of the profession and/or his works / services are not found satisfactory, he will be delisted from panels of the Employer for the period as decided and recommended by Project Co-ordination Committee and approved by Registrar, Shivaji University, Kolhapur and for that period he will not be eligible to assignment of any further works of the SHIVAJI UNIVERSITY. Thereafter, any services for such works of remaining stages will be withdrawn by issuing 7 (seven) days notice.

18.2 If the Architect of PMC is disqualified / blacklisted / debarred or his / her registration is suspended / cancelled by the council of Architect, the PMC should replace this Architect with immediate effect and substitute by another one with intimation to Employer.

19. GENERAL CONDITIONS:

19.1 All the stages of work shall be completed by the PMC and the necessary approval shall be given by the Employer according to the time schedule mutually agreed upon. The works throughout the stipulated period of Expression of Interest will be carried out with due diligence.

19.2 In the event of the failure on the part of the PMC to complete his work in time or the PMC committing a breach of any one or more of the terms and conditions of the Expression of Interest, the Employer shall be entitled to rescind this Expression of Interest without prejudice to its rights to claim damages or remedies under the law. The period of notice to be given to rescind the Expression of Interest will be 7 days from the date of issue of letter by Employer. After termination notice issued by Employer, new PMC will be appointed and no hindrance or correspondence in this regard will be accepted by Employer. Employer will complete the balance work by appointing fresh PMC.

- 19.3 PMC shall advise and give written comments on the “time and progress chart” prepared by the Expression of Interestors for the completion of the work.
- 19.4 The PMC shall assume full responsibility for the professional requirements and correctness of the designs and specifications for all the items of work described in the scope of work. The Employer will have full access to the details of the calculations and the structural designs for purpose of scrutiny.
- 19.5 The PMC shall advise officers of the Employer regarding the work under execution during their visits to the site and submit reports on their observations. PMC shall be invariably remain present at site of work during such inspection of Employer.
- 19.6 The PMC shall make necessary revisions as may be required by the Employer in the drawings, proformae and other documents submitted by them free of cost.
- 19.7 No changes shall be made in the approved drawings and specifications at site by the PMC without the prior consent of the Employer.
- 19.8 The Employer shall have the liberty to postpone or not to execute any work and the PMC shall not be entitled to any compensation or damage for such postponement or non- execution of the work except the fees which are payable to the PMC up to stages of services rendered.
- 19.9 The executive control of the work, as far as this Expression of Interest is concerned, shall be with the Employer or any other officer so designated by the Employer.
- 19.10 The PMC shall ensure that the Expression of Interestor is furnished with drawings, plans, bills, etc. in time. If the PMC fails or neglects or omits to furnish drawings, plans, bills, etc. within limit to the Expression of Interestor, accordingly the PMC shall pay to the Employer a compensation for any loss or damage arising from such neglect, failure or omission, particularly to meet with the claim or demand if any, presented by the Expression of Interestor against the Employer for loss or damage suffered in consequence of the delayed supply of drawings, plans, bills, etc. in time to the Expression of Interestor.
- 19.11 It is hereby agreed and declared that the Expression of Interest herein is intended to be job oriented and achievement of milestone stipulated in Expression of Interest and the PMC shall not be entitled to claim any compensation in the event

of the time estimated for the completion of the job being extended other than the valid extensions given to the Expression of Interest for completion of the work by Employer.

19.12 Law Governing Expression of Interest:

This Expression of Interest, if accepted by Shivaji University, Kolhapur its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law in India.

19.12.1 Relation between the Parties:

Nothing contained herein shall be construed as establishing a relation of master and servant or of agent and principal as between the Employer and the PMC or its Personnel. The PMC, shall be fully responsible for the services performed by his personnel.

19.12.2 Language:

This Expression of Interest has been executed in English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Expression of Interest.

19.12.3 Heading:

The headings shall not limit, alter or affect the meaning of this Expression of Interest.

19.13 Notices:

19.13.1 Any notice, request or consent required or permitted to be given or made pursuant to this Expression of Interest shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed specified in this Expression of Interest.

19.13.2 A Party may change its address for notice hereunder by giving the other Party notice in writing of such change to the address specified in this Expression of Interest.

19.13.3 Notice will be deemed to be effective as specified in this Expression of Interest.

19.14 Location: The Services shall be performed at such location as is specified in work order.

19.15 Authorized Representatives :

Any action required or permitted to be taken, and any document required or permitted to be executed under this Expression of Interest by the Employer or the PMC may be taken or executed by the officials specified in this Expression of Interest.

19.16 Taxes and Duties:

The PMC and their Personnel shall pay all such taxes, duties, fees, and other impositions levied under the Applicable Law, the amount of which is deemed to have been included in the Expression of Interest Price. Increase, if any, in such taxes, duties, fees, etc. shall be borne by the PMC.

20. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF EXPRESSION OF INTEREST

20.1 Effectiveness of Expression of Interest

This Expression of Interest shall come into effect on the date the Expression of Interest is signed by both Parties.

20.2 Commencement of Services:

This Expression of Interest shall come into effect on the date the Expression of Interest is signed by both Parties.

Expiration of Expression of Interest:

Unless terminated earlier, this Expression of Interest shall expire at the end of valid extension approved by Employer.

20.3 Modifications:

Any modification or variation of the terms and conditions of this Expression of Interest, including any modification or variation of the scope of the Services, can only be made by written Expression of Interest between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party.

20.4 Variation:

20.4.1 If the approved built up area of the project varies from the built up area as defined in the DPR excluding parking, the fees shall be adjusted as below:

i) If the variation mentioned under 20.5.1, is plus or minus 10% then no Adjustment in the fees shall be made.

ii) If the variation mentioned under 20.5.1 is more than 10%, then the Fee shall be adjusted by following formula:

$$[(\text{Total BUA except parking for which execution is to be done} - \text{original BUA} + 10\% \text{ of original BUA}) / \text{original BUA}] \times \text{approved Total fee}$$

iii) If the variation mentioned under 20.5.1, is less than 10%, then the fee shall be adjusted by following formula :

$$\{[(\text{Total original BUA except parking} - 10\% \text{ of original BUA}) - (\text{Total BUA except parking for which execution is to be done})] / \text{original B.U.A.}\} \times \text{approved total fee.}$$

20.5 Force Majeure :

20.5.1 Definition

For the purposes of this Expression of Interest, "Force Majeure" means an event or circumstance or combination of events or circumstances which prevents the Party claiming Force Majeure (The Affected Party) from performing its obligations under this Expression of Interest and which event or circumstance (i) which is beyond the reasonable control and not arising out of the default of the Affected Party; (ii) the Affected Party has been unable to overcome such circumstance or event by the exercise of due diligence and reasonable efforts, skill and care; and (iii) which has a Material Adverse Effect on the subsistence of this Expression of Interest. Such events or circumstances shall include, without limitation, the effect of any natural element or other acts of State or God, including but not limited to, fire, flood, earthquake, lightning, cyclone, landslides or other natural disasters, strikes or other industrial disturbances, war, riots, civil commotion, terrorist attacks, embargoes, blockades, governmental restriction, intervention of civil, naval or military authorities, change in Applicable Law.

- i) Force Majeure shall not include (i) any event which is caused by the Negligence or intentional action of a Party or employees, nor (ii) any Event which a diligent Party could reasonably have been expected to, both
 - a) Take into account at the time of the conclusion of this Expression of Interest; and
 - b) Avoid or overcome in the carrying out of its obligations hereunder.
- ii) Force Majeure shall not include insufficiency of funds or personnel or failure to make any payment required hereunder.

20.5.2 No Breach of Expression of Interest

The failure of a Party to fulfill any of its obligations under the Expression of Interest shall not be considered to be a breach of, or default under, this Expression of Interest in so far as such inability arises from an event of Force Majeure, provided that

- i) The Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Expression of Interest; and
- ii) Has informed the other Party as soon as possible, but not later than 2 (two) days from such event, about the occurrence of such an event.

20.5.3 Measures to be taken

- i) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfill its obligations hereunder with a minimum of delay.
- ii) A party affected by an event of Force Majeure shall notify the other

Party of such event as soon as possible, and in any event not later than seven (7) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible.

- iii) The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

20.5.4 Extension of Time

Any period within which a Party shall, pursuant to this Expression of Interest, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

20.5.5 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the PMC shall be entitled to the payment 10% extra fee over the fees decided under this Expression of Interest for the services rendered by him in case of termination of Expression of Interest. Such extra fee shall be verified and recommended by the Project Co-ordination Committee and after approval of Registrar, Shivaji Univesity, Kolhapur.

20.5.6 Consultation

Not later than thirty (30) days after the PMC, as the result of an event of Force Majeure, have become unable to perform a material portion of the Services or in case the Employer is not able to perform any of its obligations, the Parties shall consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.

20.6 Termination

20.6.1 By the Employer

The Employer may terminate this Expression of Interest in case of the occurrence of any of the events specified in paragraphs (a) to (k) below. In such an occurrence the Employer shall give, seven (7) days written notice of termination to the PMC.

- i) In the event of the Employer not satisfied with the work done by the PMC, the Employer shall give 7 (seven) days notice in writing to rectify the defects and or to complete/restart the work. If the Employer

is not satisfied with reply of aforesaid notice, the Employer can terminate this Expression of Interest and the PMC shall be liable to pay liquidated damages which shall be calculated on the basis of actual work done by PMCs decided and recommended by the Project co-ordination committee and approved by Registrar, Shivaji University or professional expert of the Employer.

- ii) In case of slow progress by the PMC the Expression of Interest may be terminated –
 - a) At the initial stage only when the amount of cumulative compensation accumulated is equal or more than deposited performance security at that stage by giving 7 days notice to the PMC.
 - b) Part of assignment can be withdrawn with 7 days notice to the PMC.
 - c) When the cumulative amount of compensation is upto 10% or more the total fees payable to the PMC. After termination of appointment, new PMC will be appointed immediately irrespective of the settlement of dues of the PMC while settling the dues 10% of actually payable fee to the PMC will be deducted either through fee payable or from deposited Performance Security.
- iii) if the PMC becomes insolvent or bankrupt.
- iv) If the PMC, in the judgment of the Employer has engaged in corrupt Or fraudulent practices in competing for or in executing the Expression of Interest.
- v) If, as the result of Force Majeure, the PMC are unable to perform a material portion of the Services for a period of not less than Fifteen (15) days.)
- vi) The Employer shall have the liberty not to execute any work more, then
Expression of Interest of PMC can be terminated by giving 7 days notice to the PMC. The PMC shall not be entitled to any compensation or damage for non-execution of the work except the fee which are payable to the PMC for services rendered by him.
- vii) If the PMC fails to comply with any final decision pursuant to Para –

28 hereof.

- viii) In the event of the PMC through death, incapacity, malpractices or any reasons of incapacity is unable to provide the services, the appointment shall thereby be terminated.
- ix) In the event of the PMC's firm closing its business, the appointment shall be thereby terminated and the Employer shall have the power to employ any other agency to complete the work irrespective of settling of dues of the PMC by the Project Co-ordination Committee.
- x) The termination of the appointment of the PMC shall be without Prejudice to the accrued rights and remedies of the Employer.
- xi) In the event of failure to comply with or abide by the general conditions and other conditions mentioned in this Expression of Interest.

20.6.2 By the PMC

The PMC may terminate this Expression of Interest, by not less than Fifteen (15) days written notice to the Employer, such notice to be given after the occurrence of any of the events specified in paragraphs 20.7.2.(i) to 20.7.2(iii)below.

- i) If the Employer fails to pay any money due to the PMC pursuant to this Expression of Interest and not subject to dispute pursuant to Clause "Dispute" within Thirty (30) days after receiving written notice from the PMC that such payment is overdue.
- ii) If, as the result of Force Majeure, the PMC is unable to perform a material portion of the Services for a period of not less than Thirty (30) days.
- iii) If the Employer fails to comply with any final decision pursuant to Para – 28 hereof.
- iv) The PMC can apply for termination of appointment, if the project is likely to be too much delayed / cancelled due to administrative technical reasons agreed by Employer with notice not less than Thirty (30)days to Employer. The PMC shall not be entitled to any compensation or damage for non-execution of the balance work except the fees which are payable to PMC for the services rendered by him.

20.6.3 Payment upon Termination:

Upon termination of this Expression of Interest the Employer shall make the payments to the PMC against services rendered till effective date of termination.

Project Co-ordination Committee shall decide the causes of termination as mentioned above to recommend to the Registrar, Shivaji Univesity, Kolhapur. The decision of Registrar, Shivaji Univesity, Kolhapur is final and binding on both the parties.

20.7 Cessation of Rights and obligations :

Upon termination of this Expression of Interest pursuant to Para – 20.7 hereof, or upon expiration of this Expression of Interest, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Para- 21.3 hereof, and (iii) any right which a Party may have under the Applicable Law.

21. OBLIGATIONS OF THE PMC

21.1 General

21.1.1. Standard of Performance:

The PMC shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The PMC shall always act, in respect of any matter relating to this Expression of Interest or to the Services, as faithful advisers to the Employer, and shall at all times support and safeguard the Employer's legitimate interests in any dealings with third Parties.

21.1.2. PERFORMANCE SECURITY:

- i) The PMC shall as security for the due and faithful performance and discharge of all its PMC's obligations in terms of the protract, procure and furnish to the Employer a Performance Security from a nationalized bank / Scheduled bank valid for the period of 36 months from the date of work order. Consultant shall extend the B.G. as required by the Employer further such Security shall be in the form set forth in Appendix - VI hereto, or in such other form, as the Employer shall have approved in writing.
- ii) The PMC shall submit an irrevocable PERFORMANCE SECURITY of 2.5% (Two point Five Percent) of the total fee payable to PMC for his proper Performance of the Expression of Interest Expression of Interest in the prescribed Performa attached in Appendix – VI and 2.5 % (Two point Five percent) from bill payable to the PMC not with standing and/ or Security without prejudice to any other provisions in

the Expression of Interest) within 7 days of issue of letter of Acceptance. Performance Security may be in the form of Fixed Deposit receipt of scheduled bank or Nationalized Bank or Bank guarantee of scheduled bank or Nationalized Bank for the Expression of Interest period including valid extension period.

- iii) In case the PMC fails to deposit Performance Security within 7 days or not more than 7 days further of issue of further extension of 15 days from the date of letter of acceptance, the offer of appointment of PMC shall stand cancelled.
- iv) PERFORMANCE SECURITY shall be released only after completion of building including all infrastructures and obtaining Occupancy certificate and after defect liability period / Expression of Interest period / valid extension period whichever is maximum.

21.2 Prohibition of Conflicting Activities

The PMC shall not engage, and shall cause their Personnel and not to engage, either directly or indirectly, in any business or professional activities which would conflict with the activities assigned to them under this Expression of Interest.

21.3 Confidentiality

Except with the prior written consent of the Employer, the PMC and its Personnel shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the PMC and its Personnel make public the recommendations formulated in the course of, or as a result of, the Services.

21.4 Insurance to be Taken Out by the PMC

The cost of such insurance or increase in insurance shall be at the expenses of the PMC. Worker's compensation insurance in respect of the personnel of PMC in accordance with the relevant provisions of applicable law, as well as, with respect to such personnel, any such life, health, accident, travel or other insurance as may be appropriate and insurance against loss of or damage to

- (i) The PMC's property used in the performance of the services, and
- (ii) Any documents prepared by the PMC in the performance of the services.

The PMC shall take out and maintain at their own cost on terms and conditions approved by competent authority, insurance against the risks

and for coverage as shall be specified in the act and maintained and the premiums therefore to be paid.

21.5 Reporting Obligations

The PMC shall submit to the Employer the reports and documents, in the form, and, in the numbers as specified in this Expression of Interest.

21.6 Documents Prepared by the PMC to be the Property of the Employer

21.6.1 All plans, drawings, specifications, designs, reports, other documents and software submitted by the PMC under this Expression of Interest shall become and remain the property of the Employer, and the PMC shall, not later than upon termination or expiration of this Expression of Interest, deliver all such documents to the Employer, together with a detailed inventory thereof.

21.6.2 The PMC may retain copy of such documents and software with written permission of the Employer.

21.7 Law Governing services

Exclusive responsibility of complying with all the requirements of the Applicable Laws/ local customs and practices shall be of the PMC and the PMC shall keep the Employer(including its Directors, employees, agents and representatives) fully indemnified against all costs, charges, damages, penalties litigation expenses etc. that may arise on account of any contravention or violation thereof.

21.8 Compliance of Labor Law

21.8.1 The PMC shall employ its own competent, experienced staff/employees/ personnel for the purpose of providing the Services.

21.8.2 This Expression of Interest does not and shall not be construed to create any employer-employee or principal-agent relationship between Authorities and any employees, Expression of Interest labor, representatives and personnel engaged by the PMC in the performance of Services.

21.8.3 The PMC, inter alia, agrees that the Services shall be rendered in strict compliance with the provisions of all Applicable Laws. The PMC shall make statutory payments / remittances, applicable tax deductions including service tax etc. as are required to be made under labour related and other Applicable Laws. The Employer reserves the right to recover from the PMC or withhold any amounts payable to the PMC towards discharge of any claim or statutory obligations arising out of the breach of any of the Expression of Interest labour laws or other Applicable Laws by the PMC, without prejudice to any of its rights and other remedies herein stated or available under other Applicable Laws.

21.8.4 The contract labour, if any, engaged by the PMC shall be at their own risk and

cost. The contract labour employed to render the Services in terms of these present shall be paid by the PMC, the wages in conformity with the applicable wages notified by the respective State Government/ authorities from time to time. The PMC shall be solely responsible for payment of all wages, salaries and any expenses of the personnel employed including, without limitation, all amounts payable towards insurance, provident fund, pension, or employment compensation, or any other payment to be made under the Applicable Law and/or otherwise to the professionals, technicians or workmen employed and/or contracted in relation to the provision of Services under this agreement.

21.8.5 The PMC shall, in timely manner, obtain and / or maintain the licenses, registrations, employment records, registers, certificates and other records and file returns as are required under various Act/ Rules / Regulations of the State Government in force or as amended from time to time and furnish proof of the same to the Employer on demand. The PMC shall abide by and comply with all the statutory requirements under the existing Central, State and local body regulations, laws or those made applicable from time to time, such as the Expression of Interest Labour (Regulations and Abolition) Act 1965, the Employees Provident Fund and (Miscellaneous Provisions) Act, 1952 and Payment of Gratuity Act, 1972, Employees State Insurance Act, 1948, Minimum Wages Act 1949, Payment of Wages Act 1936, Payment of Bonus Act 1965, Public Liability Insurance Act, 1991, respective State Shops and Establishments Act, and other the labour related laws and regulations as are applicable and in force from time to time and all lawful orders made by the Competent authorities under the aforesaid Acts. The PMC shall obtain requisite registrations, statutory permissions, licenses from concerned authorities and furnish proof of the same to the Employer on demand. The PMC shall have the absolute control and /or supervision on its employees / staff / Expression of Interest labour there being no nexus of employment between the PMC and the Employer. The Employer shall not be liable for any dispute, which may arise between the PMC and its employees /staff/ contract labour. The PMC shall itself regulate the engagement of its workers and their working conditions, providing statutory benefits, uniform, food etc. at its sole discretion in accordance with Applicable Law.

21.8.6 During the validity of this Expression of Interest, the PMC shall be solely responsible for: All acts and/or omissions by the workmen, technicians, Expression of Interest-labour, Expression of Interestors and other personnel engaged in the performance of the Services as set forth in this Expression of Interest;
Health, safety and security of the workmen, technicians, Expression of Interest-labour, Expression of Interestors and other personnel engaged in the performance of the Services as set forth in this Expression of Interest;

21.8.7 The PMC shall maintain proper books of accounts, registers, records, bills, invoices, receipts, vouchers etc.in respect of the Services carried on by the PMC and shall regularly cause proper entries to be made therein and of all other particulars and matters necessary thereto and furnish a certification of compliance thereof on demand by the Employer. The PMC shall make available such information and documents as may be required by the authorized representatives of the Employer for verification.

21.8.8 Indemnification

The PMC hereby agrees to indemnify and defend the Employer and its representatives and employees, and hold the Employer, its representatives, employees harmless from:

- i) Against all and any claims or other lawsuits or proceedings, that may arise on account of breach of any of the applicable labour and other related laws and / or that may arise out of breach of any covenants of this Expression of Interest including those arising out of any accident that may occur during or in relation to the Services as may be proceeded against the Employer for any reason whatsoever and assume full responsibility for whatsoever including the payment of indemnification, penalties, attorneys' fees, legal costs and other charges, if any ;
- ii) Damages and losses caused by its negligent or intentional act or omission or any damages and losses caused by the negligent act of any third party or agency engaged by PMC;
- iii) Damages and losses resulting from the non-compliance with the obligations established.
- iv) Any environmental damages caused by it and/or its representatives or employees or employees of any third party or agency engaged by the PMC.
- v) Breach (either directly by it or through its representatives and/or employees) of any representation and warranty declared herein by it.
- vi) Any and all claims, actions, suits, proceedings, taxes, duties, levies, costs, expenses, damages and liabilities, including attorneys' fees, arising out of, connected with, or resulting from or arising in relation to this Expression of Interest due to neglect, omission or intentional act of the PMC.

22. PMC's PERSONNEL

22.1 Description of Personnel

The PMC shall employ and provide such qualified and experienced Personnel (In house expertise / sub consultants) as are required to carry out the Services. The titles, agreed job descriptions, minimum

qualifications, and estimated periods of engagement in the carrying out of the Services of the PMC's Personnel as per Manning Schedule (Appendix– III) are described in Appendix – V.

22.2 Removal and/or replacement of personnel

22.2.1 The Employer will not consider substitutions during Expression of Interest / Expression of Interest implementation except in cases of incapacity of key personnel for reasons of health. Similarly, after award of Expression of Interest the Employer expects all of the proposed key personnel to be available during implementation of the Expression of Interest. The Employer will not consider substitutions during Expression of Interest negotiations/ Expression of Interest implementation except under exceptional circumstances for the reason other than death/ extreme medical ground where replacement is proposed by PMC due to non-availability of the originally proposed key personnel or in cases where replacement has become necessary as a key personnel proposed by PMC has been found to be unsuitable for the project by Employer during Expression of Interest negotiations / Expression of Interest implementation.

22.2.2 In case progress of the work during Construction period is not as per accepted time schedule of the project, EMPLOYER reserves the right to direct PMC to curtail key personnel / professional staff to be deployed with proportionate decrease in PMC fees as may be decided and recommended by project co-ordination committee and approved by Registrar, Shivaji Univesity, Kolhapur from time to time.

22.2.3 If the Employer finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the PMC shall, at the Employer's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Employer.

22.2.4 The PMC shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

23. OBLIGATIONS OF THE EMPLOYER

23.1 Providing requirements of the Project such as type wise number of tenements required, details of scope e.g. number of buildings and land details.

- 23.2 Approval to broad outline of project, detailed specifications, the layout and building plans, etc. within 7 days.
- 23.3 Paying the fees of the PMC within 15 days.
- 23.4 Advising condition to the PMC regarding the relative priorities of the Employer's requirement and the time table and inform the PMC of any variations to any of them.
- 23.5 The Employer shall give such decisions and approvals as are necessary for the performance of the services and at such times as to enable the PMC to comply with the time table.
- 23.6 The Employer shall use its best efforts to ensure that the Employer shall provide the PMC such assistance and exemptions as specified in this Expression of Interest.
24. Responsibility for Accuracy of Project Documents
- 24.1 The PMC shall be responsible for accuracy of the data collected, by him directly or procured from other agencies/authorities, the designs, drawings, estimates and all other details prepared by him as part of these services. It shall indemnify the Employer or other agencies/authorities against any inaccuracy in the work which might surface during implementation of the project. The PMC will also be responsible for correcting, at his own cost and risk, the drawings including any re-survey / investigations /re-investigations and correcting layout etc. if required during the execution of the Services
- 24.2 The PMC shall be fully responsible for the accuracy of design and drawings of the structures. All the designs and drawings for structures including all their components shall be fully checked by a Senior Engineer after completion of the designs. All drawings for structures shall be duly signed by the (a) Designer, (b) Senior Checking Engineer, and (c) Senior Structure Expert. The designs and drawings not signed as mentioned above shall not be accepted. The PMC shall indemnify the Employer against any inaccuracy / deficiency in the designs and drawings of the structures noticed during the construction and even thereafter and the Employer shall bear no responsibility for the accuracy of the designs and drawings submitted by the PMC.
25. Levy of Compensation for delay:
- In case of delay in completion of services, compensation will be levied and shall be recovered from payments due/performance security. However in case of delay due to reasons beyond the control of the PMC, suitable extension of time will be granted.
26. GOODFAITH

The Parties undertake to act in good faith with respect to each other's rights under this Expression of Interest and to adopt all reasonable measures to ensure the realization of the objectives of this Expression of Interest.

27. RECOVERY OF COMPENSATION:

27.1 PMC will be subjected to recovery of compensation in the form of liquidated damages in the following events:

27.1.1 In the event of failure to comply with the instructions of the Employer;

27.1.2 If the faults in planning, designing and execution are noticed by Employer at any time;

27.1.3 If there is over payment to the Expression of Interest due to wrong certification of the bills;

27.1.4 If the perfunctionary approach towards the work is noticed by Employer at any stage.

27.1.5 Delay in submission and services stipulated under this Expression of Interest.

27.2 The amount of the liquidated damages will be decided by the Employer depending upon the situation. This amount will be decided and recommended by Project Co-ordination Committee and approved by M.D., SHIVAJI UNIVERSITY.

27.3 The amount of compensation may be equivalent to the loss suffered by the Employer.

28. DISPUTE RESOLUTION MECHANISM:

Any difference and dispute arising between the Employer and the PMC on any matter pertaining with the clauses of this Expression of Interest will be deemed to have arisen on work will be studied/ verified and decided by the Project Co-ordination Committee. Project Co-ordination Committee will recommend the observations over the claims submitted by PMC to Registrar, Shivaji Univesity, Kolhapur for approval.If the PMCis not satisfied with the decision of Registrar, Shivaji Univesity, Kolhapur, such difference or dispute will be referred to the expert/ experts, mutually appointed by the Employer and PMCwithin 30 days. After expiry of 30 days decision of experts, is binding on PMC.

29. ABBREVIATIONS -

29.1 BEST : BrihanKolhapur Electric Supply And Transportation

29.2 BIS : Bureau of Indian Standard.

29.3 BUA : Built Up Area

29.4	CIDCO	: City and Industrial Development Corporation
29.5	CRZ	: Coastal Regulation Zone
29.6	DILR	: District Inspector of Land Record
29.7	DLP	: Defect Liability Period
29.8	DP	: Development Plan
29.9	DSR	: District Schedule of Rates for the particular year and area/ region
29.10	EIRL	: Extra Item Rate List
29.11	ESR/ GSR	: Elevated Storage Reservoir / Ground Storage Reservoir
29.12	FMR	: Fair Market Rate
29.13	GRIHA	: Green rating for integrated habitat assessment
29.14	ID	: Irrigation Department, Government of Maharashtra State
29.15	IGBC	: Indian Green Building Council
29.16	IRC	: Indian Road Congress
29.17	LEED	: Leadership in Energy and Environmental Design
29.18	MCGM	: Municipal Corporation of Greater Kolhapur
29.19	MEP	: Mechanical, Electrical and Plumbing
29.20	MGL	: Mahanagar Gas Limited
29.21	MHADA	: Maharashtra Housing And Development Authority
29.22	MIDC	: Maharashtra Industrial Development Corporation
29.23	NIT	: Notice Inviting Tender
29.24	MJP	: Maharashtra Jeevan Pradhikaran, Government of Maharashtra State.
29.25	MOEF	: Ministry of Environment and Forest (both State and Central Govt.)
29.26	MORT	: Ministry of Road Transport and Highways
29.27	MSEDCL	: Maharashtra State Electricity Distribution Company Ltd
29.28	MTNL	: Mahanagar Telephone Nigam Limited
29.29	NBC	: National Building Congress
29.30	NDT	: Non Destructive Test
29.31	OHL	: Over Head Lines
29.32	PMC	: Project Management Consultant
29.33	PWD	: Public Works Department, Government of

Maharashtra State.

- 29.34 RA Bill : Running Account Bill
- 29.35 SEZ : Special Economic Zone
- 29.36 TILR : Taluka Inspector of Land Record
- 29.37 USGBC : United State Green Building Council
- 29.38 ZP : Zilla Parishad

DESIGN CRITERIA FOR CONSTRUCTION OF BUILDINGS

DESIGN CRITERIA FOR STRUCTURAL DESIGNS OF BUILDINGS.

General description regarding parameters incorporated in the design shall be considering following requirements.

1. GENERAL REQUIREMENTS:

The design consultant while preparing design of building generally fulfills the following requirements:

- (i) It shall be economical.
- (ii) It shall ensure soundness of design and strength and durability of the structure, based on designs on requirement of adequate strength and satisfactory serviceability.
- (iii) It shall ensure speedy and easy construction, and lead to appreciable economy.
- (iv) It shall be accompanied by preliminary but detailed drawings and detailed description of work and specification of materials and item. If called upon, Consultant shall furnish any additional information necessary for appreciation and comparison with other alternative proposals received.
- (v) At the time of detail designs, the Consultant shall not normally deviate from the basic scheme proposed by him.
- (vi) It shall maintain the aesthetics as per the Architect's Plans and Architectural beauty as a whole.
- (vii) It shall evolve good engineering designs based on the latest state of the Art Technology.
- (viii) The designs shall be of a high professional standard and shall be complete and shall cover all the structural members.
- (ix) The necessary certificate of structural stability shall be given by the PMC, before issue of completion certificate by the PMC.
- (x) Consultant shall have the experience of similar type of work and he has to submit the documented proof for the same.

2. RESTRICTIONS ON TYPE OF STRUCTURES:

The following types of structural arrangements shall not be permitted:

- (i) Structures, which require material for which foreign exchange is required.

- (ii) Structures, which require floating columns.
- (iii) Cantilevers of Span more than 3 meters.
- (iv) Structural configuration with soft storey /weak storey.
- (v) Configuration inducing large torsion in Horizontal / Vertical planes.

If any variation in above conditions then prior permission of Chief Engineer is required.

3. REQUIREMENTS AND DATA:

- i) The designs of building, Number of storeys and other details shall be based on Architect's drawings and satisfying prevailing by-laws of Local Municipal Authority.
- ii) If there is any vertical expansion in future, the design shall cater for that expansion.
- iii) If there is any horizontal expansion planned in future, provision for the same shall be made by way of providing expansion joints, combined footings, etc. or other provisions required for the same. Foundation near such joints also shall be designed accordingly; taking this factor into account.
- iv) The parameters as mentioned below, which will affect the designs, shall be considered, while carrying out the designs.
 - (a) Location of building :
(Coastal/Non Coastal)
 - (b) Exposure to environments :
as defined in I.S.:456-2000
 - (c) Seismic Zones for which the designs :
are to be prepared. (This shall be
as per seismic zone given in I.S.:1893-2002.
 - (d) Seismic co-efficient to be adopted :
(As applicable in 'c' above) for static
Method of analysis as per
I.S.:1893-2002.
 - (e) Importance factor as :
defined in I.S.:1893-2002
 - (f) Type of foundation proposed :
[Depending upon the height of
the building and S. B. C. of
founding strata.]

- (g) Presence of sulphate, chloride and other harmful chemicals in the sub-soil as per test results and measures proposed to obviate their effects. :
- (h) Bearing capacity of founding strata (shall be got Approved by Field Executive Engineer of concerned work) :
- (i) Depth of founding strata below finished ground level. :
- (j) Values of K1, K2, K3 factors required to calculate design wind speed as per I.S.875-1987 (Part-3) :
- (k) Type of Anti corrosive treatment : (to be approved by Building and Works Committee, SUK.)

4. OBLIGATORY PROVISIONS:

4.1 Because of the possibility of reversal of shears in beams, due to the earthquake forces shear reinforcement shall be provided in the form of vertical stirrups only as they will be effective both for upward and downward shear. Closely spaced stirrups are preferable.

4.2 Design of Structural Components shall conform to the Criteria laid down in the latest editions of the following IS Codes of Practice and Standard specifications published up to the last date of receipt of tender form subject to the departures stipulated.

(A)	IS:456-2000 (Fourth Revision)	Indian Standard code of Practice for plain and Reinforced Concrete. (Fourth Revision)
(B)	IS:800-2007	Indian Standard code of Practice for use of structural steel in General Building construction.
(C)	IS:875-1987 (All parts)	Indian Standard code of Practice for structural safety of Building: Loading standards.
(D)	IS:1080-1985	Indian Standard code of Practice for design and

		construction of shallow foundation in soils (other than raft, ring and shell)
(E)	IS:2950-1981	Indian Standard code of Practice for design and construction of Raft foundation.
(F)	IS:1893-2002/2005	Criteria for Earthquake resistant design of structure
(G)	IS:4326-1993	Indian Standard code of Practice for Earthquake resistant design and construction of buildings.
(H)	IS:1904-1986	Indian Standard code of Practice for structural safety of Building: Shallow foundation.
(I)	IS:3370-2009 (All parts)	Code of practice for concrete structures for storage of liquids (All parts)
(J)	IS:3414-1968	Indian standard for Designs and Installation of joints in buildings.
(K)	IS:2911- Part I- 2010 Part II & III- 1980 Par IV – 1985	Code of practice for Designs and construction of pile foundation (All parts)
(L)	IS:13920-1993 [Reaffirmed 1998 edition 1,2 (2002-03)]	Code of practice for ductile detailing of reinforced concrete structures subjected to seismic force.
(M)	IS:1642-1989	Code of practice for Fire safety of Buildings (General)
(N)	IS:1643-1988	Code of practice for Fire safety of Buildings (General): Exposure Hazards.
(O)	IS:1644-1988	Code of practice for fire safety of buildings. (General): Exit Requirements and personal Hazards.
(P)	IS: 1786 - 2008	High strength Deformed steel bars admires for concrete reinforcement. (third revision)
(Q)	IS:432 - 1982 (Part I)	Mild steel and medium tensile steel bars and hard drawn steel wire for concrete reinforcement.
(R)	IS:13620 - 1993	Fusion bonded epoxy coated reinforcing bars.

For special provisions, like shells, folded plates, prestressed concrete, pre-cast elements etc., relevant I.S. Codes shall be followed. For aspects which are not covered by these codes or any other I.S. Codes available, relevant A.C.I./British Standard Codes may be referred to. As for the stipulations which are not dealt with in any of these codes, the decision of the Chief Engineer concerned shall be final and binding.

4.3 The Designer should also take into consideration the recommendations made in the following I.S.I. publications. (Latest editions)

- (a) SP:16 : Designs aids for reinforced concrete to I.S. 456-2000.
- (b) SP:24 : Explanatory Hand-Book on I.S.456-2000 (Code of practice for plain & reinforced concrete).
- (c) SP:34 (S & T) : Hand-Book on Concrete Reinforcement and Detailing.
- (d) SP:22 : Explanatory Hand-Book on code of Earthquake Engineering.
- (e) SP:7 : National Building code of India.

4.4 In addition to the above, the following design requirements shall also be Satisfied:

- 4.4.1 Loading to be considered for designs for different parts of the structure shall be as per I.S.875 or as specified by competent authority.
- 4.4.2 Load of B.B. Coba for sanitary blocks shall be 2000 Kg/m³.
- 4.4.3 Load of AAC blocks shall be 750 Kg/m³.
- 4.4.4 Lift machine room floor slabs shall be designed for live load of 1000 Kg/m². of floor area or as specified.
- 4.4.5 Lift load shall be as per relevant I. S. Codes and shall be increased by 100% for impact while designing lift machine room floor beams supporting R. S Joist, which will be affected, by the impact.

- 4.4.6 Live Load for stack parking, Mechanical parking, compacter, gonbay or similar components shall be designed for live load obtained from manufacturers.
- 4.4.7 Live Load for podium parking shall be considered in design basis report.
- 4.4.8 Equivalent static load on R. S. Js. supporting lifts shall be considered as per the relevant codal provisions.
- 4.4.9 Loading for the Electrical Installations (e.g. A. C. Ducting, exhaust etc.) shall be based on design report from electrical Executive Engineer / Superintending Engineer.
- 4.4.10 Ductility provisions specified in I.S.: 4326-1993 and I.S.13920-1993 shall be adopted in designs and detailing.
- 4.4.11 False ceiling shall be designed for a load of 100 Kg/m² and suitable loading shall be adopted for catwalks, interior decoration etc. (for particular catwalk member)
- 4.4.12 Any other loads which may be required to be considered in designs due to special type or nature of structure/any other reason/construction method to be adopted, shall be based on design report.
- 4.4.13 Structural layout of building and tentative sizes of structural members of each floor based on the Architectural drawings shall be submitted to the Executive Engineer, Chief Architect and the Superintending Engineer of Police Housing Corporation.
- 4.4.14 The detail procedure to be adopted by Consultant while designing the building is given in the Para, Sr.No.10.
- 4.4.15 Foundations, Columns, beams, slabs shall be numbered, as per prescribed procedure to avoid confusion during checking and scrutiny of designs and later on in execution. The numbering procedure is given in Annexure-A
- 4.4.16 Sizes of beams shall be so fixed as to satisfy the deflection criteria given in I.S.456-2000. The beams shall also be designed as deep beams/slender beams, etc., as the case may be.
- 4.4.17 Where obligatory sizes are needed for beams, columns, etc., as necessitated by Architectural / Constructional requirements, they shall be provided accordingly.
- 4.4.18 The analysis and design shall be carried out by Staad-Pro, E-tab, SAFE, SAP etc. as per IS 456 (2000) & IS: 1893. The detailing of reinforcement shall be as per IS 13920 (1993). (Reaffirmed 1998) edition 1, 2 (2002-03).
- 4.4.19 The analysis shall be carried out separately for Dead loads, Live loads, Seismic loads and Wind loads etc. All the structural components shall be designed for the worst combination of the above loads, as per relevant codal provisions.
- 4.4.20 Nodal/Dynamic analysis shall be done for horizontal forces for buildings, if required as per relevant I.S. codes.

- 4.4.21 The Procedure for scrutiny of detailed calculations and working drawings and their approval shall be as mentioned hereinafter clause 10.
- 4.4.22 Columns shall, as far as, possible be tied in both directions preferably at the same level.
- 4.4.23 The column shall be designed for Bi-axial bending due to dead load, live load, seismic load and wind load etc.- with the appropriate load combination as given in I.S. 456-2000. The beams also shall be designed for the appropriate combination of loads.
- 4.4.24 The R.C.C. detailing in general may be done as per SP:34 & IS:13920 (only for Zone-III, IV & V). The Designer shall give sketches of reinforcement detailing in case of critical and complicated and important components separately.
- 4.4.25 The sequence of de-propping of beams shall be given in the beam schedules wherever it is required especially where cantilevers, grid slabs, and beams of considerably long spans are involved.
- 4.4.26 Reinforcement for cantilevers shall be properly anchored. The cantilevers shall also be provided with adequate counter-weight to safe guard against overturning. The factor of safety against overturning shall not be less than 2.0.
- 4.4.27 Cantilever chajjahs and slabs shall be anchored preferably in an internal slab wherever possible instead of anchoring in beams in which case beams shall be designed for torsion. Detailed drawings showing torsion stirrups, etc., shall be given whenever cantilever slabs are anchored in beams.
- 4.4.28 The terrace slabs, in addition to normal live load shall also be designed for load of water-proofing treatment consisting of B. B. Cob of 112 mm. thickness or as specified.
- 4.4.29 In case of future vertical expansion, the top slabs to be constructed in first phase shall be checked for terrace loading also.
- 4.4.30 Requirements for fire resisting structures as per relevant I.S. codes shall be satisfied.
- 4.4.31 Thickness of slab in case of water tank, slab in W.C. shall be minimum 15 cm in both cases.
- 4.4.32 In case of terrace slab, layout of drainage of terrace including the rainwater pipes shall be got approved from Shivaji University.

4.5 Open Footings/Columns :

- (i) The footing generally shall have minimum projection of 30 cms. beyond column face.

- (ii) Minimum diameter of reinforcement in footing shall be 12 mm except in severe exposer conditions. In case of severe exposer conditions diameter of bar shall be 16 mm.

4.6 Pile foundation:

- (i) Minimum diameter of circular piles shall be 450 mm in case of end bearing.
- (ii) Minimum 2 Nos. of piles shall be provided upto 7 storied building structure. Minimum 3 Nos. of piles shall be provided for more than 7 storied building structure and each column and each pile cap shall be tied in both directions by beams at pile-cap level.
- (iii) All the exposed surfaces of the pile caps likely to the chemical attack should be provided with a coat of coal tar, epoxy material as per the provision of tender.
- (iv) Relevant I.S. Codes will be applicable for the work. In case of any discrepancy, sound engineering practice shall be followed.
- (v) The pile caps in general shall be located above high tide level to avoid chemical attack and deterioration of exposed concrete surfaces.
- (vi) Testing of piles shall be carried out as per MORT specification. The routine static load test shall be mandatory. Dynamic Load test & Integrity test shall be mandatory for all piles.

4.7 BasementandRaft :- (If provided)

- (a) Bottom slabs of basement shall be designed to resist the upward soil pressure and up-lift pressure due to sub-soil water.
- (b) Side walls shall be designed to resist lateral load due to earth pressure and vertical loads and water pressure from the structure above.
- (c) Raft also shall be checked for flotation.
- (d) The mix of concrete shall be as per I.S. Code of Practice in contaminated subsoil water.
- (e) The basement shall be leak-proof and suitable water-proofing treatment shall be given up to 30 cm. above the highest ground water level.
- (f) Expansive soil shall be removed minimum up to 2.5 m. from ground level or 60 cm. below raft level whichever is more and surrounding area of walls for a distance of 45 cm. and shall be replaced by Granularsoil.
- (g) Raft top shall be suitably treated with floor finish so that the raft, which is a structural member, should not be subjected to wear.

- (h) Bedding concrete 10 cm. thick shall be provided above the granular material before laying raft and the minimum thickness of granular material shall 90 cm.
- (i) Suitable drainage arrangement for storm and sub-soil water shall be proposed and considered in designs.
- (j) Tentative selection of foundation for economy.
- (k) Cover of concrete to slab, beam, Column, footing shall be as per respective code and Exposure condition.

4.8 Shoring of R.C.C. pile or shoring & struting in steel frame structure : (if required) Design of shoring R.C.C.pile shall be provided as per site requirement & to check the possibility of shoring struting in steel frame structure, if possible.

5. In case of (4.5, 4.6, 4.7) or any such other cases any changes in provisions are to be done by SE (PHC) then for appointment of Authority / Consultant for such purpose , decision of Chief Engineer (PHC) is required.

6. Approval to the type of foundation shall be taken from the Chief Engineer based on opinion of Geotechnical Consultant, Soil Investigation and opinion of Structural Designers as the case may be.

7. CLARIFICATIONS:

Any clarification about Design Criteria, if required, may be obtained in advance from SUPERINTENDING ENGINEER, PHC

8. BORE DATA AND SOIL AT SITE :

The Consultant shall make his own assessment regarding Safe Baring Capacity, depth of foundation and other relevant soil characteristics, and shall be got approved from Superintending Engineer, PHC as well as field Executive Engineer of concerned work before submitting the design to Superintending Engineer, PHC for checking. The necessary test including the plate / footing load test for open foundations, test for verification of S.B.C. of strata and other parameters required for design of foundation shall be carried out by consultant before actual design and then parameters shall be approved by Field Executive Engineer / Superintending Engineer, PHC. Required numbers of Bore Holes shall be taken as per relevant IS codes and as approved by Employer on the basis of site condition for Soil Investigation.

9. EXPANSION JOINTS :

Expansion joints of waterproof type shall be adequately designed to suit the structure proposed by the Architect. Relevant I.S. Codes shall prevail.

10. **REINFORCEMENT** :

Steel shall be obtained from original steel manufactures company only; like Arcelor mittal, Essar, Sail, Tata, Jsw, RINL (Rashtriya ISPAT Nigam Ltd.),i.e. vizac For severe exposure conditions only Corrosion Resistance Steel (CRS) from original manufactures company onlyshall be used with fusion bonded epoxy coating.

11. **DOCUMENTATIONANDINSTRUMENTATION** :

- i) All final drawings and soft copies of all approved drawings and “as built” drawings and calculations shall be supplied by the Consultant / PMC as per tender condition for the whole project.
- ii) Video film in Pen drive (Soft Copy) of various stages like foundation, Plinth, Sill level, Lintel level, slab level, finishing, etc. of the project covering the different phase of construction from start to finish shall be supplied by the Consultant / PMC as per tender condition for the whole project.
- iii) A “Quality Assurance Manual” covering designs and drawings, mix-designs, materials, testing, soil and rock properties, statistical Quality Control etc. shall be prepared by the Consultant as per tender condition well before starting the work and get it approved from Engineer-in-charge within 30 days from the date of work order.

12. **PROCEDURE FOR SCRUTINY OF DETAILED CALCULATIONS AND WORKINGDRAWINGSANDTHEIRAPPROVAL** :

- (i) Initially the Consultant shall obtain the Architectural drawings from the Executive Engineer/ Chief Architect, PHC of the concerned work. The approved drawing shall only be used for the designs of building.
- (ii) The Consultant shall obtain field data in the format as prescribed by PHC and along with the bore data from Executive Engineer, PHC of concerned work and shall get the safe bearing capacity, type and depth of foundation approved from Superintending Engineer/ PMC/ Consultant of the concerned work. The Expression of Interest shall confirm the test results of the Safe Bearing Capacity before actual execution and if required the design shall be revised.
- (iii) Consultant shall prepare the preliminary R.C.C. layout and design conception note (duly signed by concerned PMC) and submit the same to the Superintending Engineer, PHC along with the sizes of the beams and

columns, orientation of column. The designs conception note shall consist of the following items and got approved from concerned Superintending Engineer,

- (a) Number of storeys for which building shall be designed,
- (b) The details of future horizontal and vertical extension +Expansion joints /movement joint proposed,
- (c) Type of foundation and safe bearing capacity adopted,
- (d) Exposure condition as per I.S.456:2000,
- (e) Type of material, Grade of Concrete and steel and Anti-Corrosive / Protective Treatment adopted and covers adopted for different members,
- (f) Designs Loads:- Dead load /material density assumed, the live load as per the relevant I.S Code, Live load occupancy Classifications and live load used.
- (g) Wind load:- Wind load along with wind pressure calculation,
- (h) Earthquake forces along with calculations of seismic co-efficient,
- (i) Load combinations to be adopted in analysis and design.
- (j) Structural System as per I.S 1893
- (k) Importance factor adopted as per I.S.1893 (Part I):2002,
- (l) Capacity and type of water tank,
- (m)All the details of lift if provided.
- (n) Any other assumptions made in designs.

The R.C.C. layout and design conception note shall be scrutinized by Proof Consultant/ Executive Engineer, PHC and approved by Superintending Engineer, PHC. On approval of the R.C.C. layout, the copy of the R.C.C. layout shall be submitted to the Superintending Engineer/Chief Architect, PHC by Consultant and approval of the Chief Architect and Superintending Engineer, PHC shall be obtained by the Consultant.

- (iv) After obtaining the approval to R.C.C. layout from Chief Architect/Superintending Engineer, PHC the Consultant shall prepare the Design Model using STAAD Pro E-Tabs, SAP or any standard software available in the market (appropriate version). However copy of the same shall have to be made available to the Superintending Engineer, PHC without any extra cost.
- (v) The Consultant (PMC) shall submit the detailed designs of the different components such as footing, beams, columns, and slabs as per the priority decided by Executive Engineer, PHC of the concerned work in the

prescribed format. The consultant shall submit a programme of submission of designs. The programme of submission of designs of various component shall be consistent with the programme of submission of detailed estimate and DTP prepared by Executive Engineer, PHC of the concerned work. Detailed design calculation and working tracings of all the component parts of building shall be submitted well in advance of work in accordance with above programme. Initially two copies of the schedules duly signed by consultant shall have to be submitted along with soft copy of designs calculations. The schedules shall be submitted in the format prescribed and also on compact Disc (C.D.). In case of any query/modifications, revisions in the schedule scrutinize by the PHC, the Consultant shall have to revise /modify the schedules and shall have to submit the same to Superintending Engineer, PHC without any extra cost. The schedules shall initially be approved along with the modifications in the red ink and one copy of the schedules shall be returned by Superintending Engineer, PHC to Consultant (PMC).

- (vi) On getting the initial approval, the Consultant (PMC) shall submit 5 copies of the schedule along with the tracing and one soft copy on the C.D. to Superintending Engineer, PHC. The schedules should be finally approved by Superintending Engineer, PHC and 3 copies shall be returned to the PMC of the concerned work and one copy of the schedule shall be returned to the Consultant (PMC) for record.
- (vii) The Consultant shall have to attend the office of Superintending Engineer, PMC for scrutinizing the R.C.C. layout, scrutinizing the Design Model and designs work of all components at his own cost. The Consultant shall have to attend the Superintending Engineer, PHC in connection with the designs work stipulated above as and when required and directed by officers from PHC at his own cost.
- (viii) The Consultant (PMC) shall have to submit manually done sample calculation for adequate number of typical cases of programme as developed in house are used for designs of reference copies of soft ware used for the designs The consultant (PMC) shall also have to submit copies soft ware used for the designs work at his own cost. The programme as submitted will be further tested by comparison with solutions of worked

examples. The Consultant (PMC) shall normally follow the time schedules and the priorities of the designs as approved by Superintending Engineer, PHC.

The drawings and designs shall be in SI unit only. Calculations shall be neat and clean and supplemented by explanatory notes and sketches wherever required. The drawings of initial submission and final approval shall be in 450 mm x 625 mm size only. It is entirely the responsibility of consultant (PMC) to submit the designs in good time to enable the Superintending Engineer, PHC to approve them with in time. No claim shall be granted on account of late approval to design and consequently delay in the execution. Schedule of reinforcement and rate of reinforcement per cum of concrete quantity (and also percentage with respect to gross cross sectional area of the component) should also be shown on each drawing.

- (ix) In any case of any disputes regarding any designs of work as stipulated above, the decisions of Chief Engineer, PHC shall be conclusive and binding on the Consultant (PMC). The approval to the drawing and designs calculations by Superintending Engineer, PHC shall not any way relieve the Consultant (PMC) from the responsibility of correctness, soundness of structure and the safety of the structure.
- (x) The Consultant shall have to submit the component wise R.C.C. quantity, quantity of steel, quantity of different material other than above to Executive Engineer, PHC without any risk and cost.
13. The approved drawings and design calculations of the building shall be property of PHC.

14. DISPUTES:

In case of disputes arising between the Designer Consultant (PMC) and the Superintending Engineer, PHC/ Proof Consultant the matter, shall be referred to the CHIEF ENGINEER, PHC. The decision of the CHIEF ENGINEER shall be final and binding on the Consultant (PMC).

15. The relevant rules and regulations of local Municipal Authority shall be binding and approval to the same shall be conveyed to the Executive Engineer, PHC from time to time.
16. In case of building if future expansion is proposed, structural safety of

existing structures shall be verified by condition survey with all possible tests, including NDT (Non Destructive Testing) and the results shall be got approved from the Superintending Engineer, PHC. This data shall be got approved from the approving authorities and then shall be used for design purpose.

17. Structural stability certify
18. cate shall be submitted duly signed by Consultant (PMC) after verifying all structural item after completion of building project.

APPENDIX - II

MANNING SCHEDULE

Deployment of Inhouse Expertise/Sub Consultant by the PMC for the Project

S.N.	In house Expertise/ Sub Consultant	Total Project Assignment		
		At site (MM)	At Office (MM)	Total Time Period (MM)
A.	<u>WorksofBUAbelow5,000 sq.mt</u>			
I)	Pre Tender Stage (As needed)			
1.	Resident Engineer	0.50	2.00	2.50
2.	Architect (Design / Liasoning)	0.50	2.50	3.00
3.	Site Engineer/Supervisor/ Quantity surveyor	1.00	2.50	3.50
4.	Structural Consultant	0.25	1.00	1.25
5.	Geotechnical Consultant	0.25	0.25	0.50
6.	Electrical, Lift, Air Conditioning, Consultant , etc.	0.25	0.50	0.75
7.	Water supply sewage STP, WTP Consultant	0.25	0.50	0.75
8.	Consultant for MOEF, CRZ, SEZ, Acoustic, Solar Energy, Landscaping, Fire fighting, safety precautionary measures and any other expert/ Consultant required for the project.	0.50	0.50	1.00
II)	Post Tender Stage (As per time period of work)			
1.	Resident Engineer	11.00	1.00	12.00
2.	Architect (Design / Liasoning)	1.50	0.75	2.25
3.	Site Engineer/Supervisor/ Quantity surveyor / Qaulity Control Engineer	15.00	3.00	18.00
4.	Structural Consultant	1.00	0.50	1.50
5.	Geotechnical Consultant	0.15	0.10	0.25
6.	Electrical, Lift, Air Conditioning, Consultant , etc.	1.00	0.25	1.25
7.	Water supply sewage STP, WTP Consultant	1.25	0.25	1.50
8.	Consultant for MOEF, CRZ, SEZ, Acoustic, Solar Energy, Landscaping, Fire fighting, safety precautionary measures and any other expert/ Consultant required for the project.	2.00	1.00	3.00
9.	Safety Consultant	1.50	0.25	1.75
III)	Defect Liability Period (60 Months)			
1.	Resident Engineer	1.00	0.50	1.50
2.	Civil Engineer	4.00	1.00	5.00
3.	Electrical Engineer	2.00	0.50	2.50
4.	Architect	1.00	0.50	1.50

** MM= manmonths. e.g. 0.5 MM = 0.5 X 30 = 15 Man Days.

Note:

1. Above mentioned manmonths are representative. However required manmonths for submission of proposal is to be provided by PMC as per schedule given for various activities essential to implement and completion of the projects.
2. In addition to the above mentioned staff and its manmonths, necessary additional staff shall be deployed by the PMC as and when required as per time schedule stipulated in the Expression of Interest.
3. PMC have to provide a certificate that all the key personnel and other staff members as envisaged in the Expression of Interest Expression of Interest have been actually deployed in the project. PMC have to furnish the certificate regarding deployment of personals at the time of submission of the bill. The same staff of PMC shall be physically verified and certified by the Deputy Registrar (Civil) / Deputy Engineer (Electrical) or Project Engineer of Employer and payment to PMC shall be based on such certificate from Employer based on actual availability of staff.
4. Amount of salary of staff as decided by Employer will be recovered from the PMC, if staff is not deployed on site of work and absent from the assigned activities, meeting, presentation etc. stipulated in the Expression of Interest.
5. If required staff on site of work is not deployed by PMC then Employer has full right to deploy such staff. If such staff is not deployed by PMC within 8 days then Employer will deploy such staff and its salary will be paid by Employer. Recovery of such staff will be recovered at penal rate (i.e. double the salary of specified staff as per estimate submitted by PMC) from the feepayable /performance security deposited with Employer by PMC. No claim or extension will be granted to the PMC on this account.
6. PMC shall appoint engineering staff throughout the Expression of Interest stipulated period for the effecting and intelligent services in the specified time.
7. PMC shall pay monthly to staff deployed by cheque or online as documentary evidence that the staff is getting regular and decided remuneration. Such details shall be submitted to the Employer along with bills.

8. Employer has full power to remove the Team Leader / Resident Engineer / Site Engineer or any other staff of PMC if they are not competent or have not capacity to work on this project.
9. Employer may direct to the PMC to employ additional staff for special type of works / structures if required without any extra cost within stipulated period.
10. Employer may take action to reduce the fee if submission of proposal is getting delayed beyond stipulated time during pretender activity and if program of work suffered due to default of PMC during progress of work.
11. PMC should maintain daily attendance register of staff and submit to Employer on weekly basis.
12. PMC should intimate leave details of staff 3 days in advance to the Employer . If while physical verification if any staff found absent then salary of staff will be deducted.
13. The substituted staff shall have equal or more qualifications than the qualification of personal against whom the substitution is made.
14. Proper requisite trained staff required to handle the project is the responsibility of PMC.
15. Level of services of PMC shall be considered to write yearly monthly Performance Report by Employer.

APPENDIX - III

LIST OF DOCUMENTS TO BE ATTACHED WITH R.A. BILLS/FINAL BILL

Sr. No	Document	Attached Yes/No
1.	Letter of Expression of Interest to PMC with copy to EMPLOYER (No. and Date) (Form B - 1)	
2.	Letter of PMC to EMPLOYER with copy to Expression of Interest (No. and Date) (Form B - 2)	
3.	Submission of Running Account Bill No. --- (No. and Date) (Form B - 3)	
4.	Certificate of PMC with bill and in MB (Form B - 4)	
5.	Certificate of Expression of Interest with bill (Form B - 5)	
6.	Certificate by PMC regarding deployment of key staff and other staff (Form B - 6)	
7.	Certificate by Dy. R. (Civil) / DE / PE regarding deployment of key staff and other staff by PMC (Form B - 7)	
8.	FORM NO 67 (P.W. 466) (Form B - 8)	
9.	Abstract of Bill (Form B - 9)	
10.	Account of Work (Form B - 10)	
11.	Payment Schedule as per Tender (Form B - 11)	
12.	Payment Schedule Abstract (Form B - 12)	
13.	Details about withheld amount (Form B - 13)	
14.	Reasons of Delay of work (Form B - 14)	
15.	Abstract of test reports with copies of test reports. (Form B - 15)	
16.	Test Frequency Chart (Form B - 16)	
17.	Sample Approved During Period of Bill (Form B - 17)	
18.	Abstract of Steel Receipt and Challans (Form B - 18)	
19.	Steel Consumption Statement (Form B - 19)	
20.	Abstract of Cement Receipt (Form B - 20)	
21.	Cement Consumption Statement (Form B - 21)	
22.	Bar Chart (Physical) (Form B - 22)	
23.	Bar Chart (Financial)	
24.	Other document attached if any	
25.	Progress Report (in pictorial diagram of each building)	
26.	Photographs	
27.	Aquitance (Form B - 23)	

Note : Every page shall be signed by PMC and Expression of Interest.