

REQUEST FOR PROPOSAL (RFP)
Landscaping Works at the Academic Building
Asian University for Women (AUW), Arefin Nagar Campus
Summary Sheet

Name of the company	Asian University for Women
Procurement Reference Number	Package/SS-DG-Civil-MEP /25_26
Date of issue of the RFP	9 April 2026
Date and Closing Time for RFP submission	7 May 2026 (12:01 pm) (GMT +6)
Quotation submission mail address	tender160@auw.edu.bd
Address for Communication	Asian University for Women 20/A M. M. Ali Road Chattogram 4000, Bangladesh Tel: +880-31-285-4980 Fax: +880-31-285-4988

Bidders are invited to submit their proposals in accordance with the terms outlined in the enclosed Request for Proposal (RFP).

AUW reserves the right to reject any or all offers without providing any reason.

Confidentiality must be strictly maintained. The information provided here should only be used for its intended purpose and scope. By retaining this RFP, you agree to treat all information as confidential.

All communications regarding this Request for Proposal should be directed to AUW, with copies sent to the email addresses listed in the RFP email.

For any further queries, please contact:

- **Primary Point of Contact for RFP Process and Technical Queries:**

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Contact Number: +8801926673027; Whatsapp: +8801671470348

Proposals should be submitted only to the following email: tender160@auw.edu.bd

No other AUW email address should be used in the "To," "CC," or "BCC" fields. Any proposal that violates this instruction may be disqualified.

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Proposal Summary

Executive Summary

This Request for Proposal (RFP) invites qualified and experienced firms to design, supply, install, test, and commission comprehensive landscape works for the Main Academic Building of the Asian University for Women (AUW). The objective of this project is to develop a functional, sustainable, and aesthetically pleasing outdoor environment that complements the academic facility and meets relevant design and environmental standards.

Project Implementation Schedule

The successful bidder shall complete the works within the stipulated time frame stated in the Letter of Award. The indicative timeline for implementation is as follows:

- Design submission and approval: within 14 working days from award.
- Material delivery and installation: within 110 working days from design approval.
- Testing and commissioning: within 10 working days after installation.
- Total completion period: 134 working days from the date of contract signing.

Proposal Evaluation Methodology

All proposals will be evaluated in accordance with AUW procurement procedures and applicable regulations. Evaluation will be conducted based on the following criteria:

- Technical compliance with specifications (30%)
- Relevant experience and qualifications (20%)
- Financial proposal and competitiveness (50%)

The contract will be awarded to the bidder offering the most advantageous proposal, technically compliant and commercially competitive.

Warranty and Post-Installation Support

The contractor shall provide a minimum one (1) year warranty according to the section 4 ITA 2.7 covering all materials, equipment, and workmanship. During this period, the contractor shall perform preventive and corrective maintenance at no additional cost. The contractor shall also ensure availability of spare parts and service personnel as required.

Training and Handover

Upon completion, the contractor shall conduct a comprehensive training session for AUW's designated staff on system operation, troubleshooting, and maintenance. The contractor shall submit the following documents prior to handover:

- As-built drawings
- Operation and Maintenance (O&M) manuals
- Test reports and commissioning certificates
- Warranty certificates

Confidentiality and Compliance

The contractor shall maintain strict confidentiality of all information and documents provided by AUW. All works shall comply with Bangladesh National Building Code (BNBC), NFPA standards, and local fire safety regulations, IEC. The contractor shall be responsible for obtaining necessary clearances and ensuring safety during execution.

The scope of work shall be updated to focus on the Landscape Works. The contractor shall be responsible for the complete execution, including design, supply, installation, testing, commissioning, and handover of the Landscape Works, in accordance with applicable international codes and standards. The scope includes, but is not limited to, the following:

1. Site Assessment and Mobilization

- Conduct site visits and assessments as required.
- Mobilize resources and set up utility service connections for the site office (if required).

2. Design and Documentation

- Prepare design drawings and obtain approval from relevant authorities.
- Develop shop drawings based on the GFC layout and obtain approval from the Client and Consultant before execution.
- Submit an execution schedule that accounts for both imported and local materials.
- Submit material samples (from the approved BOQ brand list) for approval.
- Prepare all required documentation, including as-built drawings, calculations, and handover documents, in compliance with relevant codes.

3. Supply and Installation

- Provision and installation of equipment and accessories as per drawings and specifications.
- Include any necessary electrical, mechanical, civil, or other items not explicitly covered in the supporting BOQ or technical specifications.
- Manage on-site storage of both imported and local materials, with proper records maintained by the storekeeper.
- Execute work strictly in accordance with approved shop drawings.

4. Testing, Commissioning, and Balancing

- Perform testing, commissioning, and balancing of all installed Landscape Works.
- Ensure quality and compliance with all relevant codes and standards.
- Provide valid calibration certificates for all testing equipment used, attached with the test report.

5. Technical Team Assignment

- Assign a dedicated technical team (Project Manager, Project Engineer, Safety Officer, etc.) to be continuously available throughout execution.

6. Reporting and Progress Monitoring

- Prepare and submit supporting documents, including:
 - Daily field reports
 - Monthly progress reports

- Material inspection reports
- Requests for inspection throughout execution

7. Post-Handover Documentation and Training

- Prepare and submit all post-handover documentation for the Landscape Works including:
 - Operation & Maintenance (O&M) Manuals
 - As-built drawings
 - Warranties
 - Commissioning reports and test certificates
 - Training manuals
 - Spare parts lists
- Conduct training for client personnel on all installed systems.

8. General & Additional

- The Contractor shall prepare detailed shop drawings based on the GFC drawings and actual site conditions and obtain approval from the PMC and Client prior to commencement of work at site. If the Contractor considers that any required item is missing from the GFC drawings, such items may be included in the BOQ. In such cases, a separate note shall be clearly mentioned in the remarks section.
- Submit the actual execution schedule, taking into account both imported and local materials.
- Prepare documentation works including as-built drawings and handover documents, testing, pre-commissioning, post commissioning and all types of calculation in compliance with relevant codes upon completion of execution.
- Submit material samples based on the brand list for approval by the client's technical team and consultant.
- Manage on-site storage for imported and local materials with proper record by the store keeper.
- Include any necessary items (i.e, electrical, mechanical, civil, ICT etc.) which is not included in the supporting BOQ and technical specifications should be considered in the shop drawings before execution.
- Execution works must be carried out in accordance with the approved shop drawings & related GFC drawings.
- Assign a dedicated technical team/engineers (i.e, Project Manager, Project Engineer, Safety Officer etc.) to be continuously available during execution.
- Ensure the quality of execution meets all compliance and code requirements.
- Prepare and submit all necessary supporting documents such as daily field reports, monthly progress reports, material inspection reports, and requests for inspection throughout the execution period.
- Prepare post-handover documents for Substation, Generator, MEP & Civil systems include Operation & Maintenance (O&M) Manuals, as-built drawings, warranties, commissioning reports, test certificates, training manuals, and spare parts lists for all installed systems.
- The contractor will perform the temporary generator installation and termination to facilitate the ant testing and commissioning of the overall working scope with their own cost.
- If any item brands are missing from the BOQ the contractor shall follow the country of origin in the technical specifications when selecting product brands.



- All foreign and local items must undergo factory inspection with necessary test either locally or abroad by the engineers, consultant, and client prior to shipment or delivery.
- The contractor shall be responsible for obtaining approval and the required inspections by DOE.
- All testing equipment's must have a valid calibration certificate.
- The contractor shall carry out all required internal tests, including Megger testing of power cables before connecting and terminating electrical distribution boards. Insulation Resistance tests for earthing and distribution boards, as well as Thermography tests for distribution boards, shall be conducted after system connectivity and completion of the works. The contractor must submit complete and proper test reports for all activities.
- The attic stock should be calculated as 2% of the total quantity of materials installed, to be provided after project handover.
- During execution, if any core cutting/punches is required, the contractor shall be responsible for any leakage that occurs after the work is completed. The contractor must ensure that all core cutting is properly sealed and leak-proof.
- Any **nonstandard work**, use of **unapproved materials**, or **non-compliance with QC policies** will attract a **hefty penalty**, deducted from the R/A bill against the issued NCR.
- The contractor shall ensure the landscape works for academic building is fully operational after completing all works, tests, commissioning activities, and required certifications.
- The contractor must comply with all **EHS (Environment, Health & Safety)** policies and standards.
- If any technical personnel are deemed unsuitable by the Client/Consultant, they must be replaced immediately.
- The contractor shall submit an **RFI** (Request for Information) for drawings/decisions with at least **two weeks' lead time** for consultant feedback.
- The contractor must maintain the site in a **neat and clean condition**. Debris shall be disposed of at designated areas, and a **separate team** must be deployed for curing works.
- The contractor shall submit a detailed **Work Method Statement (WMS)**.
- Contractor shall submit laboratory test reports for topsoil, compost, sand, and other planting media from an approved laboratory prior to commencement of soft landscaping works such as top soil test report, soil fertility, compost /organic fertilizer test, plant health, water test report.
- The Contractor shall be responsible for all civil works associated with the landscape works, including design wherever required & The Contractor shall be solely responsible for such design.
- The Contractor shall assess the existing drainage condition of the building and the available drainage facilities provided within the landscape areas. If the existing system is found to be insufficient, the Contractor shall incorporate additional drainage provisions within the proposed storm water drainage network. The Contractor shall design a complete and detailed storm water drainage system covering both internal and external landscape areas of the building. The Contractor shall be solely responsible for the adequacy and design of the storm water drainage system.
- Any faulty & defective work will be done by contractor shall be rectified by contractor with his own cost.
- Contractor shall give warranty for all plants for period of 36 months from the date of job completion. Contractor shall replace the plant if die during this period.
- Contractor will carry out free of cost maintenance & servicing for 12 months from the date of handover.
- Contractor will train the gardener /authorized person of client for take care of landscape
- Contractor will submit the technical specifications & catalogue.



- An expert horticulturist will provide the technical guidance to the staff to take care of landscape materials time to time during execution of project
- Contractor must take approval of material from PMC & CLIENT prior mass delivery to project
- The contractor must carry out a detailed survey and submit a comprehensive survey report before commencing landscape & road work. Any errors due to inadequate survey or design are fully the contractor's responsibility
- All gradient, level, slope etc. of different element for soft & hard landscape, road work with sections/sketch should clearly mention in shop drawing Considering the GFC drawings and actual site conditions Any information or issue that could potentially hinder the progress of work must be brought to the attention of the PMC and client at least 14 days in advance.
- Contractor must have developed details design for Road work include subbase, subgrade, WBM, WMM base, showing proper road camber & slope etc. (except the item such as prime coat, tack coat etc. that already mentioned in BOQ) & must include the item in BOQ separately & mentioned it in remarks He is the solely responsible for this design. & Road work must be carried out by a contractor with proven experience in similar work (flexible pavement)
- The contractor must assign engineers supervisors with experience in landscape and road works to oversee the jobs. If the client or PMC identifies any technically incompetent personnel, the contractor must replace them within one week.
- Require material sourcing transparency: submit certificates, delivery notes, and sample approvals
- The contractor may propose an alternative brand or manufacturer for the waterproofing work if the item specified in the BOQ is not available in the market. The waterproofing work must come with a 15+year warranty. It must be market "A" listed brand such as Fosroc, BASF, commix, sika etc. necessary water proofing test will be conducted by contractor.
- All required test reports must be submitted prior to the commencement of road work in accordance with AASHTO standards. During the execution of the work, test reports shall be submitted at a frequency as directed by the Engineer-in-Charge (E-I-C). Testing must follow AASHTO and be submitted to the Engineer-in-Charge.
- Contractor must submit the method statement for landscape & road work
- Contractor responsible for crack, settlement & potholes in DLP.
- The road drainage system must be properly integrated with the overall storm water drainage system.
- Prior to the commencement of road work, any required demolition work shall be within the contractor's scope. The contractor may include a separate BOQ item for this work.
- All designs, drawings, and shop drawings must be submitted to the PMC and the Client for review and approval prior to execution of the work.
- Contractor is responsible for designing of irrigation system (if required)
- Contractor will do fair face mockup with his own cost & take approval from client /PMC.
- Contractor is responsible to submit AS-built drawing.
- All walkways, pavements, and hardscape works must be constructed with proper sub-base, bedding layer, and compaction as per approved method statement.
- Contractor shall take necessary precautions to protect existing buildings, utilities, and infrastructure during landscape & road work execution.
- Contractor must engage a qualified landscape architect for proper execution and supervision of landscape works

- The contractor shall provide 2 sets of shop drawings (A1), 2 sets of as-built drawings (A1 and A2), and 2 sets in A3 size. All documents, calculations, operation manuals, maintenance checklists, and color images of approved samples shall be submitted in one A3 set and one A4 set.

Summary of Qualification of Tenderers

The Applicant must meet the following qualification criteria:

1. A minimum of Ten (10) years of experience in Landscape Works Design, installations and operations.
2. Specific experience as a Prime Contractor in Landscape Works Design, installations and operations, with at least one (01) contract of similar nature, complexity, and construction methods/technology successfully completed within the last five (05) years, having a minimum value of Tk. 3 (Three) crore.
3. Experience in completing Landscape Works Design, installations and operations for a building with a total built-up area of at least 9,000 square meters.
4. The average annual turnover shall be greater than Tk. 6 (Six) crore, calculated over the best three (3) years within the last five (5) years.
5. The minimum amount of liquid assets, i.e., working capital or credit line(s), of the Tenderer shall be Tk. 6.50 (Six Point Five Zero) crore.
6. Proven reputation as a constructor in both the public and private sectors, supported by a detailed company profile, client list, and work accomplishment certificates.
7. The applicant must not have any record of contract non-performance in the **last 5 years** from the RFP publication date.
8. All pending litigation must not exceed **15% of the applicant's net worth**.
9. At least **1 contract** of similar nature and complexity in Landscape Works, completed within the last **3 years**.
10. Applicants must demonstrate: Relevant **professional and technical qualifications, Managerial capability, A reliable reputation** for contract performance, Adequate and **skilled personnel**.
11. The successful Applicant, who later becomes the Tenderer, is required to perform the works and services as described in the subsequent Tender.
12. Applicants must have access to the **necessary equipment and physical facilities** to perform the work, either by: **Owning** the equipment; having **proven access** through a **contractual arrangement** (e.g., lease or hire); or having **assured access** to such equipment for the required duration. All required equipment must be in **full working condition**



Section 1. Instructions to Applicants

1. Interpretation 1.1 Throughout this qualification Document:

- (a) the term “**in writing**” means communication written by hand or machine duly signed and includes properly authenticated messages by facsimile or electronic mail;
- (b) if the context so requires, **singular** means plural and vice versa;
- (c) “**day**” means calendar days unless otherwise specified as working days;
- (d) “**Qualification Document**” means the Document provided by the Employer to an Applicant as a basis for preparation of the Application; and
- (e) “**Application**” depending on the context, means an application submitted by an Applicant for Qualification to participate in the subsequent Tenders and to perform the Contract, in response to an Invitation for Qualification.

2. Corrupt, Fraudulent, Collusive or Coercive Practices

2.1 It is the Employer’s policy to require that Employer’s staff, as well as Applicants/Tenderers, suppliers, and contractors and their subcontractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Authority-

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) “**corrupt practice**” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - (ii) “**fraudulent practice**” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
 - (iii) “**collusive practice**” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - (iv) “**coercive practice**” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - (v) “**obstructive practice**” is (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or (bb) acts intended to materially impede the exercise of the Authority’s inspection and audit rights provided.
- (b) will reject a proposal for award if it determines that the Tenderer recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;

(c) will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a contract.

3. Source of Funds

The Employer will arrange fund towards the cost of the project named in the ADS. The Employer intends to apply a portion of that funds to eligible payments under the contract(s) resulting from the Tendering for which this prequalification is conducted.

4. Eligible Applicants

- 4.1 This Invitation for Qualification is open to all potential Applicants from all countries, except Israel. An Applicant will be eligible if it is a citizen, or is constituted, registered and operates in conformity with the provisions of the laws of that country.
- 4.2 Applicants may be a physical or juridical individual or body of individuals, or company, association or any combination of them in the form of a Joint Venture, Consortium or Association (JVCA) invited to take part in public procurement or seeking to be so invited or submitting an Applicant in response to an Invitation for Qualification.
- 4.3 Applicants shall have the legal capacity to enter into the Contract under the Applicable Law.
- 4.4 Applicants and all parties constituting the Applicant shall not have a Conflict of Interest. Applicants in its own name or its other names or also in the case of its Persons in different names shall not be under a declaration of ineligibility for corrupt, fraudulent, collusive or coercive practices.
- 4.5 Applicants with a poor performance, consistent history of litigation or arbitration awards against it shall not be eligible for Qualification.
- 4.6 Applicants shall not be insolvent, be in receivership, be bankrupt, be in the process of bankruptcy, be not temporarily barred from undertaking business and it shall not be the subject of legal proceedings for any of the foregoing.
- 4.7 Applicants shall have fulfilled its obligations to pay taxes and social security contributions under the provisions of laws and regulations of the country of its origin.
- 4.8 Applicants shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer will reasonably request.
- 4.9 Applicants' requirements for eligibility will extend, as applicable, to each JV partner and Specialist Subcontractor proposed by the Applicant.

5. Eligible Materials, Equipment and Associated Services

5.1 All materials, equipment and associated services to be supplied under the Contract are from eligible sources, unless their origin is from Israel.

5.2 For the purposes of this Clause, “origin” means the place where the Materials and Equipment’s are mined, grown, cultivated, produced or manufactured or processed, or through manufacturing, processing, or assembly, another commercially recognized new product results that differs substantially in its basic characteristics from its components or the place from which the associated services are supplied.

6. Site Visit

6.1 Applicants are advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Application, submission of subsequent Tender and entering into a contract.

6.2 Applicants and any of its personnel or agents will be granted permission by the Employer to enter into its premises and lands for the purpose of such visit, but only upon the express condition that the Applicant, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

6.3 The costs of visiting the Site shall be at the Applicants’ own expense.

7 Qualification: General

Qualification Document

7.1 The Sections comprising the Qualification Document are listed below, and should be read in conjunction with any Addendum issued under ITA Clause 11.

- Section 1 Instructions to Applicants (ITA)
- Section 2 Application Data Sheet (ADS)
- Section 3 Application Forms
- Section 4 Scope of Works

7.2 Applicants are expected to examine all instructions, forms, terms, and specifications in the Qualification Document as well as in Addendum to Qualification, if any.

8 Clarification of Qualification Document

8.1 Applicants requiring any clarification of the qualifications Document shall contact the Employer in writing at the Employer’s address indicated in the RFP before **two-third** of the time allowed for preparation and submission of Application elapses.

8.2 Non-performance of a contract shall not occur within the last years, prior to the deadline for Application submission based on all information on fully settled disputes or litigation.

9 Litigation History

9.1 For the purpose, a fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract and where all appeal instances have been exhausted.

9.2 For a Joint Venture under ITA Sub Clause 18.1, the precise minimum requirements of Leading Partner and other partners shall be as specified in the ADS.

10 Joint Venture, Consortium or Association (JVCA)

10.1 Applicants may participate in the qualification process and subsequent procurement proceedings by forming a Joint Venture, Consortium or Associations (JVCA) or alternately with the intent to enter into such an agreement supported by a Letter of Intent.

- 10.2 The JV agreement, indicating at least the parts of the Works to be executed by the respective partners, shall be legally entered into case-by-case in the Applicant's Leading Partner's country of origin, as specified in the ADS, duly signed by all legally authorized representatives of the Persons who are parties to such agreement.
- 10.3 Applicants, as an alternate to ITA Sub Clause 9.2, may intend to enter into a JV agreement case-by-case in the form of a Letter of Intent along with the proposed agreement, indicating at least the parts of the Works to be executed by the respective partners, duly signed by all partners of the intended JV and authenticated by an authority of the Applicant's Leading Partner's country of origin, as stated in the ADS, with the declaration that the partners will execute the Joint Venture agreement in the event the Applicant, in the first place pre-qualified and then successful in the subsequent Tender.
- 10.4 Applicants shall submit the Letter of Intent and the proposed JV agreement along with the Application.
- 10.5 For a Joint Venture under ITA Sub Clause 9.1, the precise minimum qualification requirements of Leading Partner and other partners shall be as specified in the ADS.
- 10.6 In cases where a JV partner's, personnel capacity, equipment capacity and financial capacity individually fulfils the precise minimum qualifying requirement of that particular component as specified, capacities of such partner(s) in the JV will be combined together for summation to determine the total precise minimum qualifying requirements criterion of that JV as stated under ITA Sub Clause 9.5.
- 10.7 Each partner of the JV shall be jointly and severally liable for the execution of the Contract, all liabilities and ethical and legal obligations in accordance with the Contract terms.
- 10.8 The JV shall nominate a Representative (partner-in-charge) who shall have the authority to conduct all business for and on behalf of any and all the partners of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution including the receipt of payments for and on behalf of the JV.
- 10.9 The composition or the constitution of a JV once formed shall not be allowed to be altered prior to signing of the Contract.
- 10.10 Alteration of partners to the composition or constitution at a date later than the signing of the Contract during execution shall be allowed by the Employer only when any of such partners is found to be incompetent or has serious difficulties which may impact the overall implementation of the proposed Works, where the incoming partner shall require to have qualifications higher than that of the outgoing partner.
- 10.11 Each partner of the JV shall complete the JV Partner Information (Form F3) for submission with the Application.

11 Contents of Application

11.1 The Application prepared by the Applicants shall comprise the following:

11.1.1 Application Submission Letter (**Form F-1**);

11.1.2 Applicant Information (**Form F-2**);

11.1.3 documents demonstrating that they are enrolled in the relevant professional or trade organizations registered in their country of origin;

11.1.4 written confirmation authorizing the signatory of the Application to commit the Applicant;

11.1.5 documents confirming the legal capacity stating that there are no existing orders of any judicial court that prevents either the Applicant or employees of that Applicant subsequently entering into or signing a Contract with the Employer;

11.1.6 documents confirming that the Applicant is not insolvent, in receivership, bankrupt or in the process of bankruptcy, temporarily barred from undertaking business and shall not be the subject of legal proceedings for any of the foregoing;

11.1.7 documents confirming that all claims, arbitration or other litigation cases have been satisfactorily resolved, and if not, they shall have no serious negative impact on the financial capacity of the Applicant;

11.1.8 documents confirming that the Applicant has fulfilled its obligations to pay taxes and social security contributions under the provisions of laws and regulations of its country of origin as a proof of fulfilment of taxation obligations;

11.1.9 documents establishing the Applicant's eligibility to perform the contract;

11.1.10 documents establishing the origin of all Materials, Equipment and services to be supplied under the Contract, as stated under ITA Clause 26;

11.1.11 documents establishing the minimum qualifications of the Applicant required to be met for due performance of the Works and physical services under the contract;

11.1.12 any other document as specified in the ADS.

11.2 In addition to the requirements stated under ITA Sub Clause 9.1, Applications submitted by a JV or proposing a Specialized Subcontractor shall include:

11.2.1 Joint Venture Agreement legally entered into in the Applicant's Leading Partner's country of origin, by all partners, as stated under ITA Sub Clause 18.2;

Or,

11.2.2 Letter of Intent along with the proposed agreement duly signed by all partners of the intended JV and authenticated by an authority of the Applicant's Leading Partner's country of origin with the declaration that it will execute the Joint Venture Agreement in the event the Applicant and the Tenderer is successful in the subsequent Tender, as stated under ITA Sub Clause 18.3;

11.2.3 the JV Partner Information (**Form F-3**), as stated under ITA Sub Clause 18.11;

11.2.4 the Specialist Subcontractor Information (**Form F-4**), as stated under ITA Sub Clause 19.6.

12 Documents Establishing the Applicant's Qualification

12.1 Applicants shall complete and submit the Applicant Information (**Form F-2**) and shall include documentary evidence, as applicable to satisfy the following:

- 12.1.1 details on the financial standing of the Tenderer, such as profit and loss statements and corresponding auditor's report establishing the liabilities and assets;
- 12.1.2 details of general experience in Fire management works on case-by-case procurement proceedings performed for each of the last years along with the sums, dates and recipients;
- 12.1.3 details of specific experience in construction works of similar nature and size on case-by-case procurement proceedings performed for each of the last years along with the sums, dates and recipients;
- 12.1.4 details of average annual turnover for a period;
- 12.1.5 details of existing commitments and works to assess the minimum Tender Capacity;
- 12.1.6 details of adequacy of working capital for the subsequent Tender i.e., access to line(s) of credit and availability of other financial resources;
- 12.1.7 details of numbers of technical and administrative personnel along with their qualification and experience proposed for the subsequent Tender;
- 12.1.8 details of Applicant's technical facilities, available major construction equipment's, measures for ensuring quality such as, ISO certification and design, research and development facilities proposed to carry out the Contract;
- 12.1.9 details of Procuring Entities who may be contacted, if necessary, by the Employer; and authority to seek references from the Applicant's bankers or any other sources.

12.2 Applicants, if applying as an existing or intended JV, shall submit documentary evidence to establish its qualifications as stated under ITT and, in particular, it shall submit an affidavit nominating one of the JV partners as the REPRESENTATIVE (partner-in-charge) who shall have the authority to conduct all business for and on behalf of any and all the partners of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution including the receipt of payments for and on behalf of the JV.

13 Bank Guarantees

13.1 Performance Bank Guarantee Clause

- 13.1.1 The successful bidder, upon receiving the Notification of Award (NoA), shall furnish an unconditional and irrevocable **Performance Bank Guarantee** in favor of *Asian University for Women (AUW)*.
- 13.1.2 The amount of the Performance Bank Guarantee shall be **ten percent (10%) of the total Contract Price**, issued from any scheduled bank operating in Bangladesh and acceptable to AUW.
- 13.1.3 The Performance Bank Guarantee shall remain **valid until twenty-eight (28) days after the completion of the Defects Liability Period** or final acceptance of the works, whichever is later.

- 13.1.4 Failure to submit the Performance Bank Guarantee within the stipulated time may result in the cancellation of the award and forfeiture of any right to the contract.
- 13.1.5 The Performance Bank Guarantee shall be returned to the Contractor upon satisfactory completion of all contractual obligations and submission of all completion documents as per AUW's satisfaction.
- 13.1.6 AUW reserves the right to **invoke the Performance Bank Guarantee**, in whole or in part, in the event of the Contractor's default, non-performance, or breach of any contractual terms.

13.2 Advance Payment Bank Guarantee (if applicable)

- 13.2.1 If the Employer provides any **advance payment** to the Contractor, the Contractor shall furnish an **unconditional and irrevocable bank guarantee** for the full amount of the advance, valid until the advance is fully recovered.
- 13.2.2 The Employer may encash the bank guarantee in the event the Contractor **fails to utilize the advance for the purpose of contract execution**.

13.3 Invocation of Bank Guarantee

- 13.3.1 The Bank Guarantee shall be **payable on demand and irrevocable**, and the Employer's written statement regarding Contractor's default shall be **conclusive** for the purpose of encashment.
- 13.3.2 The Bank Guarantee shall remain valid regardless of any disputes under the Contract, until it is **released in writing by the Employer**.

14 Insurance Requirements

14.1 General Insurance Coverage

The Contractor shall, at its own cost and expense, maintain insurance coverage throughout the duration of the Project to adequately cover risks associated with the performance of the Work. All insurance policies shall be issued by insurers acceptable to the Employer and shall remain in force until the completion of the Project.

14.2 Material Insurance

The Contractor shall insure all materials, equipment, and supplies brought to or used on the Project site against loss or damage due to fire, theft, vandalism, natural hazards, or any other risks associated with handling, storage, and transportation. The coverage shall be for the full replacement value of the materials.

14.3 Personnel Insurance

The Contractor shall provide adequate insurance coverage for all personnel, including employees, subcontractors, and consultants, engaged in the execution of the Project. This shall include, but is not limited to:

- 14.4 Workers' compensation or equivalent coverage as required by law
- Personal accident and injury insurance
- Health and medical coverage in case of work-related incidents

14.5 Liability Insurance

The Contractor shall maintain public liability and third-party liability insurance to cover claims arising from bodily injury, death, or property damage caused by the Contractor's activities, equipment, or

personnel during the execution of the Project.

14.6 Proof of Insurance

Prior to commencement of work, the Contractor shall submit certified copies of all insurance policies or certificates of insurance to the Employer. All insurance policies shall require that no cancellation or material modification shall be effective without at least thirty (30) days prior written notice to the Employer.

14.7 Additional Requirements

The Contractor shall ensure that all subcontractors maintain similar insurance coverage. The Contractor shall be responsible for any gaps in coverage resulting from subcontractor non-compliance.

15. Liquidated Damages

15.1 If the Contractor fails to complete the Works or any part thereof within the time specified in the Contract, the Contractor shall be liable to pay **liquidated damages** at the rate of **1% (one percent) of the Contract Price per week** of delay, unless otherwise specified in the Contract.

15.2 The total amount of liquidated damages shall not exceed **10% (ten percent) of the Contract Price**.

15.3 Liquidated damages shall be **deducted from any payments due to the Contractor**, including the Performance Security, without prejudice to any other rights of the Employer under this Contract.

16 Termination

16.1 Termination for Default

16.1.1 If the Contractor:

- a. Fails to commence, continue, or complete the Works in accordance with the Contract; or
- b. Fails to remedy any breach, delay, or defect within the period specified in a written notice from the Employer; the Employer may, at its sole discretion, **terminate the Contract for default**, in whole or in part.

16.1.2 Upon termination for default, the Employer shall have the right to:

- a. **Cancel the Contract** immediately;
- b. **Engage another Contractor** to complete the Works at the risk and cost of the defaulting Contractor;
- c. **Recover from the Contractor all additional costs, losses, and damages** incurred as a result of the Contractor's failure, including legal and administrative expenses;
- d. **Forfeit any Performance Security or other guarantees** provided by the Contractor;
- e. **Restrict or debar the Contractor** from future contracts with the Employer for a period as deemed appropriate.

16.1.3 Termination under this Clause shall be **without prejudice to any other remedies** available to the Employer under the Contract or applicable law, including claims for additional damages or specific performance.

16.2 Termination for Convenience

16.2.1 The Employer may, at any time, **terminate the Contract, in whole or in part, for convenience**, without assigning any reason.

16.2.2 In such cases, the Contractor shall be entitled to payment for:

- a. Work executed up to the date of termination; and
- b. Reasonable costs incurred for materials or commitments directly related to the terminated portion, but shall not be entitled to any loss of profit or unperformed work.

16.3 Termination for Insolvency or Bankruptcy

16.3.1 If the Contractor becomes insolvent, bankrupt, or enters into receivership or liquidation, the Employer may terminate the Contract immediately.

16.3.2 The Employer shall have the right to recover costs incurred to complete the Works from any outstanding payments or Performance Security.

16.4 Termination for Force Majeure

16.4.1 If a Force Majeure event persists for a period exceeding [insert period, e.g., 90 days], the Employer or Contractor may terminate the Contract by giving written notice.

16.4.2 Upon termination due to Force Majeure:

- a. Neither party shall be liable for damages resulting directly from the termination;
- b. The Contractor shall be paid for all work executed up to the date of termination.

16.5 Acceleration and Material Breach

16.5.1 In case of delays or partial non-performance, the Employer may issue a directive for accelerated performance.

16.5.2 Failure to comply with the acceleration directive shall constitute a material breach, justifying immediate termination under Clause 14.1

16.6 Effect of Termination

16.6.1 Termination of the Contract under any of the above clauses shall be without prejudice to any other rights or remedies of the Employer under the Contract or applicable law.

16.6.2 All obligations of the Contractor regarding confidentiality, indemnity, and warranty shall survive termination.

16.7 Acceleration of Completion

16.7.1 In the event of any delay or failure to accomplish the task, the Employer may issue a written directive for accelerated performance, specifying the revised timeline and milestones.

16.7.2 Failure to comply with the acceleration directive shall be treated as a material breach, justifying immediate termination and enforcement of ITA 14.2.

17. Descope and Backcharge

17.1 Descope of Work

17.1.1 The Employer reserves the right to descope, reduce, or modify the scope of work under the Contract, in whole or in part, by giving written notice to the Contractor.

17.1.2 Upon receiving a descope notice, the Contractor shall:

- a. Immediately stop work on the descoped items;
- b. Submit a revised work plan, cost estimate, and schedule within 7 working days; and

c. **Deliver any completed work, materials, or documentation** related to the descoped items.

17.1.3 The Employer shall **adjust the Contract Price** proportionally to reflect the descoped work. Such adjustment shall include:

- a. Reduction of contract payment corresponding to the value of descoped items; and
- b. Recovery of any **unapproved costs incurred by the Contractor** on the descoped items.

17.2 Back charge

17.2.1 The Employer may **back charge the Contractor** for costs or damages incurred due to:

- a. Non-performance, defective work, or delay caused by the Contractor;
- b. Failure to comply with specifications, drawings, or contractual obligations; or
- c. Additional work or remedial work carried out by the Employer or third parties to complete the Contractor's scope.

17.2.2 Back charge amounts shall be:

- a. **Deducted from any payment due** to the Contractor, including Performance Bank Guarantee; or
- b. **Payable by the Contractor directly** within 15 days of written notice.

17.2.3 The Contractor shall **not be entitled to any extension of time, additional payment, or claim** for costs related to the back charged items.

17.3 Procedure for Issuing Descope or Backcharge Notices

15.3.1 The Employer shall issue **written notice specifying:**

- a. The descoped work or backcharged items;
- b. The reason for descope or backcharge;
- c. The monetary amount, if applicable; and
- d. The time for compliance or payment.

15.3.2 The Contractor shall **acknowledge receipt of the notice** and comply with all instructions without delay.

18 Survival of Rights

All rights of the Employer to descope, backcharge, recover costs, or enforce compliance under this Clause shall **survive the termination or completion of the Contract.**

19 Employer's Entitlement to Remedy Default

If the Contractor fails to execute any part of the Works, to remedy a defect, or to complete outstanding work within a reasonable time following notice from the Employer, the Employer shall be entitled to carry out all necessary work at the Contractor's cost by employing other persons. All necessary costs so incurred shall constitute a debt due from the Contractor to the Employer, recoverable by deduction from payments due or otherwise; provided always that the Contractor's liability and obligations under the Contract shall not be affected or diminished by the exercise of this right by the Employer.

20 DISPUTES

In no event shall AUW be liable to the Contractor for payments for any extra work the Contractor performs in addition to that required under the Statement of Work above unless the Contractor performs such work by written directive of AUW and unless the contract is amended accordingly. No officer, director, employee, or agent of

AUW is authorized to direct any extra work by oral order. In the event of any claims or disputes arising from or relating to this Purchase Order, the parties shall use their best efforts to settle the claims or disputes. To this effect, they shall consult and negotiate with each other in good faith and, recognizing their mutual interests, attempt to reach a just and equitable solution satisfactory to both parties. If they fail to reach such a solution within THIRTY (30) days, either Party may refer the matter to arbitration, as per the law of Bangladesh, which shall be the exclusive method of resolving such disputes. The arbitration shall be conducted in Chattogram, Bangladesh. The results of arbitration shall be final and binding on the Parties and shall be in lieu of any other remedy.

○ **Engineer's Instructions**

The Engineer may issue to the Contractor (at any time) instructions which may be necessary for the execution of the works, all in accordance with the Contract. The Contractor shall only take instructions from the Engineer or from the Engineer's Representative (if appointed) or an assistant to whom the appropriate authority to give instruction has been delegated under Sub-clause 3.4 (Delegation by the Engineer).

Subject to the following provisions of this Sub-clause, the Contractor shall comply with the instructions given by the Engineer or the Engineer's Representative (if appointed) or delegated assistant, on any matter related to the Contract.

If an instruction states that it constitutes a Variation, Sub-Clause 13.3.1 (Variation by instruction) shall apply.

If not so stated and the Contractor considers that the instruction:

- (a) Constitutes a Variation (or involves work that is already part of an existing Variation); or
- (b) does not comply with applicable laws or will reduce the safety of the works or is technically impossible.

the Contractor shall immediately, and before commencing any work related to the instruction, give a Notice to the Engineer with reasons. If the Engineer does not respond within 7 days after receiving this Notice, by giving a Notice confirming, reversing or varying the instruction, The Engineer shall be deemed to have revoked the instruction. Otherwise the Contractor shall comply with and be bound by the terms of the Engineer's response.

○ **Defects and Rejection**

If, as a result of an examination, inspection, measurement or testing, any plant, Materials, Contractor's design (if any) or workmanship is found to be defective or otherwise not in accordance with the Contract, the Engineer shall give a Notice to the Contractor describing the item of Plant, Materials, design or workmanship that has been found to be defective. The Contractor shall then promptly prepare and submit a proposal for necessary remedial work.

The Engineer may Review this proposal, and may give a notice to the Contractor stating the extent to which the proposed work, if carried out, would not result in the Plant, Materials, Contractor's design (if any) or workmanship complying with the Contract. After receiving such a Notice, the Contractor shall promptly submit a revised proposal to the Engineer. If the Engineer gives no such notice within 14 days after receiving the Contractor's proposal (or revised proposal), The Engineer shall be deemed to have given a notice of No-objection.

If the Contractor fails to promptly submit a proposal (or revised proposal) for remedial work, or fails to carry out the proposed remedial work to which the engineer has given (or is deemed to have given) a notice of No-objection, the Engineer may:

- (a) instruct the Contractor under sub-paragraph (a) and/or (b) of Sub-clause 7.6 (Remedial work); or



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(b) reject the plant, materials, Contractors design (if any) or workmanship by giving a Notice to the Contractor, with reasons, in which case subparagraph (a) of Sub-Clause 11.4 (Failure to remedy defects) shall apply.

After remedying defects in any plant, materials, design (if any) or workmanship, if the Engineer requires any such items to be retested, the tests shall be repeated in accordance with Sub-Clause 7.4 (Testing by the Contractor) at the Contractor's risk and cost. If the rejection and retesting cause the Employer to incur additional costs, the Employer shall be entitled Subject to Sub-Clause 20.2 (Claims for payment and/or EOT) to payment of these costs by the Contractor.

23 Employer's Entitlement to Remedy Default

If the Contractor fails to execute any part of the Works, to remedy a defect, or to complete outstanding work within a reasonable time following notice from the Employer, the Employer shall be entitled to carry out all necessary work at the Contractor's cost by employing other persons. All necessary costs so incurred shall constitute a debt due from the Contractor to the Employer, recoverable by deduction from payments due or otherwise; provided always that the Contractor's liability and obligations under the Contract shall not be affected or diminished by the exercise of this right by the Employer.

24 Alternatives due to failure of completion by the contractor

If the contractor fails to complete specific items of work within the time schedule, the client reserves the right to assign to the completion of works those specific items to another contractor. The cost incurred for completing those items will be deducted from the original contractor's total bill. Additionally, the Defects Liability Period (DLP) for the reassigned work will still be the responsibility of the original (general) contractor.



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Section 2. Application Data Sheet

ITA Clause	Amendments of, and Supplements to, Clauses in the Instructions to Applicants
	RFP IDENTIFICATION NO: _____
A. General	
ITA 1.1	The Employer is <i>Asian University for Women represented by Deputy Project Director, Asian University for women, 20/A, M.M Ali Road, Chattogram-4000, Bangladesh.</i>
	<p>The Name of the Subsequent Tender is: Landscaping Works</p> <p>Application Ref:.....</p> <p>Package No:.....</p> <p><i>[if there is more than one(1) lot, individual lots are to be identified]</i></p>
ITA3.1	The source of public funds is: <i>AUW own fund.</i>
ITA3.3	The name of the Development Partner is: <i>None</i>
ITA6.1	Materials, Equipment's and associated services from the following countries are not eligible: <i>Israel</i>

B. Qualification Criteria	
ITA13.1	Non-performance of a contract shall not occur within the last <i>5 (five)</i> years. [years counting backward from the date of publication of RFP]
ITA13.2	All pending litigation shall in total not represent more than <i>15 (fifteen)</i> percent of the Applicant's net worth.
ITA 14.1 (a)	The minimum number of years of general experience of the Applicant in public or private Landscaping as Prime Contractor shall be <i>10 (ten)</i> years. [years counting backward from the date of publication of RFP]
ITA14.1 (b)	The minimum specific experience as a Landscaping works of at least <i>1 (one)</i> contract(s) of similar nature, complexity and methods/technology completed over a period of <i>5 (five)</i> years shall be required. [years counting backward from the date of publication of RFP.]
ITA 14.1(c)	A satisfactory completion of similar works of at least BDT <i>3 (Three) crore</i> under a single contract over a period of <i>5 (Five)</i> years shall be required. [years counting backward from the date of publication of RFP.]

ITA 15.1	The required average annual <i>Landscaping Works</i> turnover shall be greater than <i>BDT 6 (Six) crore</i> over the last <i>5 (five) years</i> . <i>[years counting backward from the date of publication of RFP.]</i>																								
ITA 15.1(c)	The minimum amount of liquid assets or working capital or credit facilities of the Applicant shall be greater than <i>BDT 1.50 (one point five zero) crore</i> on a day after publication of RFP.																								
ITA 16.1(a)	A Project Manager shall have the following qualifications and experience: <table border="1" data-bbox="352 465 1437 613"> <thead> <tr> <th data-bbox="352 465 461 539">No</th> <th data-bbox="461 465 788 539">Position</th> <th data-bbox="788 465 1137 539">Total Works Experience (years)</th> <th data-bbox="1137 465 1437 539">In Similar Works Experience (years)</th> </tr> </thead> <tbody> <tr> <td data-bbox="352 539 461 613">1.</td> <td data-bbox="461 539 788 613">Project Manager (Architect)</td> <td data-bbox="788 539 1137 613">12 yrs</td> <td data-bbox="1137 539 1437 613">10 yrs</td> </tr> </tbody> </table>	No	Position	Total Works Experience (years)	In Similar Works Experience (years)	1.	Project Manager (Architect)	12 yrs	10 yrs																
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ITA 16.1(b)	The minimum number of Engineers with qualifications and experience shall be as follows: <table border="1" data-bbox="352 663 1437 891"> <thead> <tr> <th data-bbox="352 663 432 786">No.</th> <th data-bbox="432 663 919 786">Position</th> <th data-bbox="919 663 1158 786">Total Works Experience (years)</th> <th data-bbox="1158 663 1437 786">In Similar Works Experience (years)</th> </tr> </thead> <tbody> <tr> <td data-bbox="352 786 432 824">1.</td> <td data-bbox="432 786 919 824">Project Engineer, B.Sc. Engr. (Civil)</td> <td data-bbox="919 786 1158 824">Min. 7 yrs</td> <td data-bbox="1158 786 1437 824">Min. 5 yrs</td> </tr> <tr> <td data-bbox="352 824 432 891">2.</td> <td data-bbox="432 824 919 891">Project Engineer, B.Sc. Engr. (Electrical & Mechanical)</td> <td data-bbox="919 824 1158 891">Min. 7 yrs</td> <td data-bbox="1158 824 1437 891">Min. 5 yrs</td> </tr> </tbody> </table>	No.	Position	Total Works Experience (years)	In Similar Works Experience (years)	1.	Project Engineer, B.Sc. Engr. (Civil)	Min. 7 yrs	Min. 5 yrs	2.	Project Engineer, B.Sc. Engr. (Electrical & Mechanical)	Min. 7 yrs	Min. 5 yrs												
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ITA 16.1(c)	Other key staff with qualifications and experience shall be as follows <i>[state requirements]</i> : <table border="1" data-bbox="352 1003 1437 1160"> <thead> <tr> <th data-bbox="352 1003 432 1115">No.</th> <th data-bbox="432 1003 919 1115">Position</th> <th data-bbox="919 1003 1110 1115">Total Works Experience (years)</th> <th data-bbox="1110 1003 1437 1115">In Similar Works Experience (years)</th> </tr> </thead> <tbody> <tr> <td data-bbox="352 1115 432 1160">1.</td> <td data-bbox="432 1115 919 1160">Material Engineer, Dip-in Engr. (Civil)</td> <td data-bbox="919 1115 1110 1160">Min. 6 yrs.</td> <td data-bbox="1110 1115 1437 1160">Min. 5 yrs</td> </tr> </tbody> </table>	No.	Position	Total Works Experience (years)	In Similar Works Experience (years)	1.	Material Engineer, Dip-in Engr. (Civil)	Min. 6 yrs.	Min. 5 yrs																
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ITA 17.1	The Applicant shall own or have proven access to hire or lease of the major equipments to accomplish the tasks, Mention the equipment lists to accomplish the tasks as below: <table border="1" data-bbox="352 1357 1437 1805"> <thead> <tr> <th data-bbox="352 1357 432 1440">No</th> <th data-bbox="432 1357 1142 1440">Equipment Type and Characteristics</th> <th data-bbox="1142 1357 1437 1440">Minimum Number Required</th> </tr> </thead> <tbody> <tr> <td data-bbox="352 1440 432 1487">1.</td> <td data-bbox="432 1440 1142 1487">Essential tools & equipment</td> <td data-bbox="1142 1440 1437 1487"></td> </tr> <tr> <td data-bbox="352 1487 432 1534">2.</td> <td data-bbox="432 1487 1142 1534">Essential tools & equipment for small scale metal works</td> <td data-bbox="1142 1487 1437 1534"></td> </tr> <tr> <td data-bbox="352 1534 432 1581">3.</td> <td data-bbox="432 1534 1142 1581"></td> <td data-bbox="1142 1534 1437 1581"></td> </tr> <tr> <td data-bbox="352 1581 432 1628">4.</td> <td data-bbox="432 1581 1142 1628"></td> <td data-bbox="1142 1581 1437 1628"></td> </tr> <tr> <td data-bbox="352 1628 432 1675">5.</td> <td data-bbox="432 1628 1142 1675"></td> <td data-bbox="1142 1628 1437 1675"></td> </tr> <tr> <td data-bbox="352 1675 432 1722">6.</td> <td data-bbox="432 1675 1142 1722"></td> <td data-bbox="1142 1675 1437 1722"></td> </tr> <tr> <td data-bbox="352 1722 432 1769">7.</td> <td data-bbox="432 1722 1142 1769"></td> <td data-bbox="1142 1722 1437 1769"></td> </tr> </tbody> </table>	No	Equipment Type and Characteristics	Minimum Number Required	1.	Essential tools & equipment		2.	Essential tools & equipment for small scale metal works		3.			4.			5.			6.			7.		
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4.																									
5.																									
6.																									
7.																									
ITA 18.2	In the case the Applicant's Leading Partner's country of origin is Bangladesh, the value of non-judicial stamp for execution of the Joint Venture agreement shall be <i>BDT BDT 300 (three hundred) only</i>																								
ITA 18.3	In the case the Applicant's Leading Partner's country of origin is Bangladesh, the Letter of Intent along with the proposed agreement shall be authenticated by a Notary Public.																								

ITA 18.5	The minimum qualification requirements of Leading Partner and other Partner(s) of a JV shall be as follows:			
	ADS Clauses References	Requirements by summation	Requirements for Leading Partner	Requirements for another Partner(s)
	ITA-14.1(a)	Summation not applicable	Same as stated in ADS	Same as for Leading Partner
	ITA-14.1(b)	100%	At least one characteristic	Not applicable
	ITA-14.1(c)	100%	At least one characteristic	Not applicable
	ITA-15.1(a)	100%	40%	25%
	ITA-15.1(b)	100%	40%	25%
	ITA-15.1(c)	100%	40%	25%
	ITA-16.1(a)	Summation not applicable	To be appointed by lead partner	Not applicable
	ITA-16.1(b)	100%	At least one characteristic	Not applicable
	ITA-16.1(c)	100%	At least one characteristic	Not applicable
ITA-17.1	100%	At least one characteristic	Not applicable	
ITA 19.4	The Employer intends to execute the following specific components of the proposed Works by the Nominated Subcontractor(s): <i>None</i>			
ITA 20.1	Domestic Preference <i>shall not</i> be applicable for eligible National Tenderers			
D. Application Preparation				
ITA 23.4	Use of Qualification Document posted in the website <i>is not</i> permitted for preparation of Applications.			
ITA 25.1	The Applicant shall provide with its Application the following additional documents: <i>None</i>			



E. Application Submission

ITA31.1

For Application submission purposes only, the Employer's address is:

For Tender submission purposes only, the Procuring Entity's address is:

TO AUW PROCURMENT COMMITTEE

Email address: tender160@auw.edu.bd

The deadline for the submission of Applications is:

Time & Date: 12:01pm. 7.05.2026

Section 3. Application Forms

Form Title

Application Forms

- F – 1 Application Submission Letter
- F – 2 Applicant Information
- F – 3 JV Partner Information (*if applicable*)
- F – 4 Subcontractor Information (*if applicable*)
- F – 5 Historical Contract Non-Performance
- F – 6 Personnel Information

Application Submission Letter (Form F-1)

[This letter should be completed and signed by the Authorized Signatory preferably on the Letter-Head Pad of the Applicant]

To:

Date:[dd/mm/yy]

[Contact Person]

[Name of Employer]

[Address of Employer]

Invitation for Qualification No:

[indicate RFP No]

Tender Package No:

[indicate Package No]

This Package is divided into the following Number of Lots ***[indicate number of Lot(s)]***

We, the undersigned, apply to be qualified for the referenced Works and Physical Services and declare that:

- (a) We have examined and have no reservations to the Qualification Document, issued by you on *[insert date]*; including *[state numbers]*.
- (b) We, including as applicable, any JVCA partner or Specialist Subcontractor for any part of the contract resulting from this Qualification process, have nationalities from eligible countries according to the ITA. *[insert the nationality of the Applicant, including that of all partners in case of a Joint Venture, and the nationality of each already identified subcontractor, if applicable];*
- (c) we are submitting this Application as a sole Applicant;
or
we are submitting this Application as the partners of a JVCA, comprising the following other partners;

Sl. No	Name of Partner	Address of Partner
1		
2		
3		

or

- (e) we, including as applicable any JVCA partner, declare that we are not associated, nor have been associated in the past, directly or indirectly, with a consultant or any other entity that has prepared the design, specifications and other documents in accordance with ITA;
- (f) we intend to subcontract an activity or part of the Works, to the following Specialist Subcontractor(s);

Activity or part of the Works	Name of Specialist Subcontractor with Address

- (g) we, including as applicable any JVCA partner, confirm that we do not have a record of poor performance, such as abandoning the works, not properly completing contracts, inordinate delays, or financial failure as stated in ITA, and that we do not have, or have had, any litigation against us, other than that stated in the Applicant Information (**Form -2**);
- (h) we, including as applicable any JVCA partner, confirm that we do not have a record of insolvency, receivership, bankrupt or being wound up, our business activities were not been suspended, and it was not been the subject of legal proceedings in accordance with ITA;
- (i) we, including as applicable any JVCA partner, confirm that we have fulfilled our obligations to pay taxes and social security contributions applicable under the relevant national laws and regulations of our country(s) of origin in accordance with;
- (j) we, including as applicable any JVCA partner or Specialist Subcontractor for any part of the contract resulting from this Qualification process, have not been declared ineligible by any International Development Agency or the Government of Bangladesh on charges of engaging in corrupt, fraudulent, collusive or coercive practices in accordance with ITA; or by an act of compliance with a decision of the United Nations Security Council.
- (k) furthermore, we are aware of ITA concerning such practices and pledge not to indulge in such practices in competing for or in executing the Contract;
- (l) we are not participating as Applicants in more than one Application in this pre-qualification process;
- (m) we understand that you may cancel the prequalification process at any time and that you are neither bound to accept any Application that you may receive nor to invite the pre-qualified Applicants to tender for the contract subject of this prequalification, without incurring any liability to the Applicants.

Signature:	<i>[insert signature of authorised signatory of the Applicant]</i>
Name:	<i>[insert full name of signatory with National ID Number]</i>
In the capacity of:	<i>[insert capacity of signatory]</i>

Duly authorized to sign the Application for and on behalf of the Applicant

[If there is more than one (1) signatory, or in the case of a JVCA, add other boxes and sign accordingly]

Attachment 1:

Written confirmation authorizing the above signatory to commit the Applicant and the subsequent Tenderer
[and, if applicable]

Attachment 2:

JV Agreement / Letter of Intent to form JV with draft proposed Agreement



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Applicant Information (Form -2)

[This Form should be completed only by the Applicant, preferably on its Letter-Head Pad]

Invitation for Qualification No: *[indicate IFP No]*
 Tender Package No: *[indicate Package No]*
 This Package is divided into the following Number of Lots: *[indicate number of Lot(s)]*

1. Eligibility Information of the Applicant [According to ITT]	
1.1	Nationality of individual or country of registration
1.2	Applicant's legal title
1.3	Applicant's registered address
1.4	Applicant's legal status <i>[complete the relevant box]</i>
	Proprietorship
	Partnership
	Limited Liability Concern
	Government-owned Enterprise
	Others <i>[please describe, if applicable]</i>
1.5	Applicant's year of registration
1.6	Applicant's authorised representative details
	Name
	National ID number, if any
	Address
	Telephone / Fax numbers
	e-mail address
1.7	Litigation ITT
	Information on non-performance of contract and pending litigation furnished in Form F-5
1.8	Applicant to attach photocopies of the original documents mentioned aside
	<i>[All documents required under ITT Clauses]</i>
The following two information are applicable for national Applicants	

1.9	Applicant's Value Added Tax Registration (VAT) Number		
1.10	Applicant's Tax Identification Number(TIN)		
[The foreign Applicants, in accordance with ITT Clause 5, shall provide evidence by a written declaration to that effect to demonstrate that it meets the criterion]			
2. Qualification Information of the Applicant [According to ITT Clause]			
2.1 General Experience in HVAC Works of Applicant			
	Start Month Year	End Month Year	Years
	Contract No and Name of Contract Name and Address of Employer Brief description of Works		Role of Applicant [Prime/Sub/Management]
2.2 Specific Experience in HVAC Works of Applicant Completed Contracts of similar nature, complexity and methods/ technology			
	Contract No	[insert reference no] of [insert year]	
	Name of Contract	[insert name]	
	Role in Contract [tick relevant box].	Prime Contractor	Subcontractor
	Award date	[insert date]	
	Completion date	[insert date]	
	Total Contract Value	[insert amount]	
	Employer's Name Address Tel / Fax e-mail		
	Brief description with justifications of the similarity compared to this Employer's requirements	[state justification in support of its similarity compared to the proposed works]	
2.3 Average annual turnover <i>[total certified payments received for contracts in progress or completed for each year of works in progress or completed; using selling exchange rate quoted by the source being Bangladesh Bank on the date reported, if applicable]</i>			
	Year	Amount & Currency	

2.4	Existing commitments and works [targeted to be completed by the Intended Completion Date of the proposed works]		
	Name of Contract Contract No [reference] of [year] Name of Employer Contact Address Tel/fax e-mail	Target Completion Date	Value of Existing Commitments and Works Amount & Currency
2.5	Financial Resources available to meet the HVAC System cash flow		
	No	Source of Financing	Amount Available
			Amount & Currency
In order to confirm the above statements the Applicant shall submit, as applicable, the documents			
2.6	Contact Details [According to ITT]		
	Name, address, and other contact details of Applicant’s Bankers and other Employer(s) that may provide references, if contacted by this Employer		
2.7	Qualifications and experience of key technical and administrative personnel proposed for Contract administration and management [According to ITT]		
	Position Name Years of General Experience	Years of Specific Experience	
<i>[Tenderer to complete details of as many personnel as are applicable .Each personnel listed above should complete the Personnel Information (Form-6)]</i>			
2.8	Major Construction Equipment’s proposed to carry out the Contract [According to ITT]		
	Item of Equipment	Condition (new, good, average, poor)	Owned, leased or to be purchased (state owner, lessor or seller)
[Applicant to list details of each item of major construction equipment, as applicable]			

JVCA Partner Information (Form -3)

[This Form should be completed by each JVCA partner].

Invitation for Qualification No:

[indicate IFP No]

Tender Package No

[indicate Package No]

This Package is divided into the following Number of Lots

1. Eligibility Information of the JVCA Partner <i>[According to ITT]</i>		
1.1	Nationality of Individual or country of Registration	
1.2	JVCA Partner's legal title	
1.3	JVCA Partner's registered address	
1.4	JVCA Partner's legal status <i>[complete the relevant box]</i>	
	Proprietorship	
	Partnership	
	Limited Liability Concern	
	Government-owned Enterprise	
	Other (please describe, if applicable)	
1.5	JVCA Partner's year of registration	
1.6	JVCA Partner's authorised representative details	
	Name	
	National ID number, if any	
	Address	
	Telephone / Fax numbers	
	e-mail address	
1.7	Litigation	
	Information on non-performance of contract and pending litigation furnished in Form-5	
1.8	JVCA Partner to attach copies of the original documents mentioned aside	[All documents required under ITT Clauses]
The following two information are applicable for national JVCA Partners only		
1.9	JVCA Partner's Value Added Tax Registration (VAT) Number	

1.10	JVCA Partner's Tax Identification Number(TIN)				
[The foreign JVCA Partners, in accordance with ITT, shall provide evidence by a written declaration to that effect to demonstrate that it meets the criterion]					
2. Key Activity(ies) for which it is intended to be joint ventured [According to ITT]					
	Elements of Activity	Brief description of Activity			
3. Qualification Information of the JVCA Partner [ITT]					
3.1	General Experience in Construction Works of JVCA Partner				
	Start Month Year	End Month Year	Years	Contract No and & Name of Contract Name and Address of Procuring Entity Brief description of Works	Role of JVCA Partner [Prime/Sub/Management]
3.2	Specific Experience in Construction Works of JVCA Partner Completed Contracts of similar nature, complexity and methods/construction technology				
	Contract No	[insert reference no] of [insert year]			
	Name of Contract	[insert name]			
	Role in Contract [tick relevant box]	Prime Contractor	Subcontractor	Management Contractor	
	Award date	[insert date]			
	Completion date	[insert date]			
	Total Contract Amount	[insert amount]			
	If partner in a JV, specify participation of the total Contract Amount	_____ %	Amount & Currency	[insert amount] USD/GBP/EUR/JPY Equivalent [insert amount] delete not appropriate	
	Employer's Name Address Tel / Fax <u>e-mail</u> Brief description with justifications of the similarity compared to this Employer's requirements	[state justification in support of its similarity compared to the proposed works]			
3.3	Average annual construction turnover <i>[total certified payments received for contracts in progress or completed for each year of works in progress or completed; using selling exchange rate quoted by the source being Bangladesh Bank on the date reported, if applicable]</i>				
	Year	Amount & Currency			

3.4	Existing commitments and works [targeted to be completed by the Intended Completion Date of the proposed works;]		
	Name of Contract Contract no [reference] of [year] Name of Employer Contact Address Tel/fax e-mail	Target Completion Date	Value of Existing Commitments and Works
			Amount & Currency
3.5	Financial Resources available to meet the construction cash flow		
	No	Source of financing	Amount Available
			Amount & Currency
	In order to confirm the above statements the JVCA Partner shall submit, as applicable, the documents mentioned in ITT Clause 28.		
3.6	Contact Details		
	Name, address, and contact details of Tenderer's Bankers and other Employer(s) that may provide references if contacted by this Employer		
3.7	Qualifications and experience of key technical and administrative personnel proposed for Contract administration and management		
	Position Name Years of General Experience	Years of Specific Experience	
	<i>[Tenderer to complete details of as many personnel as are applicable. Each personnel listed above should complete the Personnel Information (Form -6)]</i>		
3.8	Major items of Construction Equipment proposed for carrying out the works [ITT Clause 28]		
	Item of Equipment	Condition (new, good, average, poor)	Owned, leased or to be purchased (state owner, leaser or seller)
	<i>[Tenderer to list details of each item of Major equipment, as applicable]</i>		

 Signatur
 e (Name of Authorized Signatory of the JVCA
 Partner)

Specialist Subcontractor Information (Form F-4)

[This Form should be completed by each Subcontractor, preferably on its Letter-Head Pad]

Invitation for Qualification No:

[indicate IFP No]

Tender Package No

[indicate Package No]

This Package is divided into the following Number of Lots

1. Eligibility Information of the Subcontractor [ITT]		
1.1	Nationality of Individual or country of Registration	
1.2	Subcontractor's legal title	
1.3	Subcontractor's registered address	
1.4	Subcontractor's legal status <i>[complete the relevant box]</i>	
	Proprietorship	
	Partnership	
	Limited Liability Concern	
	Government-owned Enterprise	
	Other (please describe)	
1.5	Subcontractor's year of registration	
1.6	Subcontractor's authorized representative details	
	Name	
	Address	
	Telephone / Fax numbers	
	e-mail address	
1.7	Subcontractor to attach copies of the following original documents	All documents to the extent relevant to ITT Clause in support of its qualifications
The following two information are applicable for national Subcontractors		
1.8	Subcontractor's Value Added Tax Registration (VAT) Number	
1.9	Subcontractor's Tax Identification Number (TIN)	

[The foreign Subcontractors, in accordance with ITT, shall provide evidence by a written declaration to that effect to demonstrate that it meets the criterion]

2. Key Activity(ies) for which it is intended to be Subcontracted

2.1	Elements of Activity	Brief description of Activity
2.2	List of Similar Contracts in which the proposed Subcontractor had been engaged	
	Name of Contract and Year of Execution Value of Contract Name of Employer Contact Person and Contact details Type of Work Performed	

Signature (Name of Authorized Signatory of the Proposed Sub-Contractor)



**ASIAN UNIVERSITY
FOR WOMEN**

Historical Contract Non-Performance (Form F-5)

[The following table shall be filled in for the Applicant and for each partner of a Joint Venture]

Applicant's Legal Name: *[insert full name]*

Date: *[dd/mm/yy]*

Joint Venture Party Legal Name: *[insert full name]* IFP No. and title: *[insert RFP number and title]*

Page *[insert page number]* of *[insert total number]* pages

Non-Performing Contracts in accordance with Qualification Criteria and Requirements			
<input type="checkbox"/> Contract non-performance did not occur during the <i>[number]</i> years specified in Qualification Criteria and Requirements, <input type="checkbox"/> Contract(s) not performed during the <i>[number]</i> years specified in Qualification Criteria and Requirements,			
Year	Non performed portion of contract	Contract Identification	Total Contract Amount (Current value)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for non performance: <i>[indicate main reason(s)]</i>	
Pending Litigation, in accordance with Qualification Criteria and Requirements			
<input type="checkbox"/> No pending litigation in accordance with Qualification Criteria and Requirements,. <input type="checkbox"/> Pending litigation in accordance with Qualification Criteria and Requirements, as indicated below.			
Year	Outcome as Percentage of Total Assets	Contract Identification	Total Contract Amount (current value)
<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: <i>[indicate complete contract name, number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i>	Total Contract Amount (current value)



**ASIAN UNIVERSITY
FOR WOMEN**
Personnel Information (Form -6)

[This Form should be completed for each person proposed by the Tenderer on Form PW5-2& PW5-3, where applicable]

Name of the Applicant:	<i>[insert Title]</i>
Invitation for Tender No:	<i>[indicate RFP No]</i>
Tender Package No	<i>[indicate Package No]</i>
This Package is divided into the following Number of Lots	<i>[indicate number of Lot(s)]</i>

A. Proposed Position (tick the relevant box)		
<input type="checkbox"/> Electrical/Mechanical Engineer	<input type="checkbox"/> Prime Candidate	<input type="checkbox"/> Alternative Candidate
<input type="checkbox"/> Key Personnel	<input type="checkbox"/> Prime Candidate	<input type="checkbox"/> Alternative Candidate
B. Personal Data		
Name:		
Date of Birth:		
Years overall experience:		
National ID Number:		
Years of employment with the Tenderer:		
Professional Qualifications: 1. 2. 3. 4.		
C. Present Employment <i>[to be completed only if not employed by the Applicant]</i>		
Name of the Employer:		
Address of the Employer:		
Present Job Title:		
Years with the present Employer:		
Tel No:	Fax No:	e-mail address:

Contact [<i>manager/personnel officer</i>]:			
D. Professional Experience			
Summaries professional experience over the last twenty (20) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.			
	From	To	Company / Project / Position / Relevant technical and management experience.
1			
2			
3			
4			
5			

(Name and Signature of the Proposed Personnel)

TECHNICAL SPECIFICATIONS

Landscaping Works

DETAIL SPECIFICATION OF LANDSCAPING WORKS

1.00 BRICK PAVING WORKS

1.01 **Description:** The work under this item shall consist of Brick proving work as per drawings, schedule of items and bill of quantities, and instructions of the Engineer-in-Charge and this specification.

1.02 **Construction requirements:** All materials shall meet the requirements of the relevant sections of Material specifications.

- a. Bricks shall be 1st Class bricks of CONFORCE LTD or approved equivalent and shall be 242mmx 115mmx 70 mm sizes unless otherwise required.
- b. Cement shall be Portland cement Type-1 ASTM C-1.5
- c. Sand shall be clean, well graded natural sand having a minimum FM of 1.5
- d. Water shall be same as required for concrete.

Mortar for brick paving work unless otherwise required shall consist of 1 part of cement and 3 parts of sand.

Cement and sand shall be mixed dry in the specified proportions until the color of the mixture is uniform. Water shall then be added sparingly, only the minimum necessary being used to produce a workable mixture of normal consistency. The water cement ratio in no case shall exceed 0.50 by weight, or as directed by the Engineer-in-Charge.

The mixing shall be done on a clean hard platform within water-tight points to avoid leakage. At the close of each day's work, the mixing through and the pans shall be thoroughly cleaned and washed.

Mortar shall be mixed in quantities required for immediate use. Mortar, which has taken its initial set, shall, no account be used on work, not shall be remixed with or without additional materials or re-tempered by other means

Brick paving work shall be face 242mmx70mm mm facing with handmade, machine mould & gas burn 242mmx 115mmx 70 mm size 1st class bricks of CONFORCE LIMITED (CFC) or approved equivalent quality.

Pointing work in cement mortar (1:2) (Proportion of white & Grey cement shall be 2:1) shall be done after cleaning the facing surfaces.

Curing at least for 7 days shall be done properly. Sand shall be washing and screening before use Soaking bricks at least for 24 hours before use.

1.03 **Method of Measurement:** Measurement for payment shall be made in square meter (sqm) of actual area covered by Brick Paving work.

1.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per square meter (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour including storage handling and transport of material, cleaning, preparing, cutting, laying, fixing, curing, pointing, sorting out 50% 1st class bricks etc. As well as all incidentals necessary to complete the work.

2.00 FAIR FACE BRICK VENEER WORKS

- 2.01 **Description:** The work covered by this item consist of constructing fair face brick veneered work with 1st class handmade, machine mould & gas burn 50% sorted out CFC (CONFORCE LIMITED) bricks of size 241.30mmx114.30mmx69.85mm with 1:3 sand cement mortar paste on wall, including high flush pointing 1:2 (proportion of white and grey cement shall be (2:1) in wall and elsewhere required as per drawings and instruction of the Engineer-in-Charge.
- 2.02 **Workmanship:** Brick veneered work shall be built plumb and shall be carried up regularly throughout the entire length of structure by very skilled mason. Brick shall be laid as per design and drawing and only the smooth face of the handmade bricks shall be used as exposed Thickness of horizontal & vertical joints are as per drawing. Exposed joints shall be raked and pointed. The face of the work shall be kept clean as work proceeds. In exposed situations the work shall be protected against harmful effect of weather during and for a period immediately following construction until the mortar has sufficiently hardened. All brick work shall be thoroughly cured for a period of at least 15 days.
- 2.03 **Method of Measurement:** Brick veneered walls shall be measured in square meter (sq.m) of actually exposed brick surfaces wall. Deducting all opening and incorporated foreign structures, such as lintels, columns, beams, etc. Square, rectangular, circular section brick veneered work shall be measure through the centre length of brick work and then multiplied with the height.
- 2.04 **Basis of Payment:** Payment shall be made at the contract unit price per square meter (sqm) of completed and accepted work measured as provided above which price shall constitute full compensation for furnishing, storing, transporting, preparing, laying, flush pointing, sorting out 50% bricks and curing all materials and for all labour, scaffolding, tools and equipment and for all incidentals necessary to complete the item.

3.00 BRICK CLADDING WORKS

- 3.01 **Description:** The work covered under this item shall consist of Brick cladding work with 242mmx70mm mm facing as stated in the schedule of items and bill of quantities, drawing and these specification.
- 3.02 **Construction Requirement:** Similar to item no.01.
- 3.03 **Method of Measurement:** Similar to item no.01.
- 3.04 **Basis of Payment:** Similar to item no.01.

4.00 SUPPLYING FITTING & FIXING GRANITE

- 4.01 **Description:** The work covered by this item consist of supplying and placing of 18 mm and 50mm thick granite stone (foreign made) Greens or approved equivalent on floor or anywhere is required as stated in the schedule of items & Bill of quantities and these specifications.
- 4.02 **Construction Requirements:** Natural Stone shall be of foreign made Green or approved equivalent in any size having approved colour on 25 mm thick sand cement mortar bed (1:2) including providing cement slurry and water proofing sealant immediately before laying the stone slab with sight pressure to ensure close contact with bed. Joint should be straight and thin not exceeding 1 mm gap filled with white cement grout and then grinding, rubbing, washing and polishing as mirror glazed. Supplying and applying COTTO sealers FILA MP/90 @ 1 litre for 40 square metre.
- 4.03 **Method of Measurement:** Measurement for payment shall be made in square meter (sqm) finished stone surface. No allowance will be made for cutting and wastage.
- 4.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per square meter (sqm) which payment shall constituted full compensation for furnishing all materials, equipment and labour, including storage, handling and transport of materials, cleaning, preparing and laying bed and cutting, fixing grouting, water proofing sealant as well as all incidentals necessary to complete the work.

5.00 UNGLAZED FLOOR TILES

- 5.01 **Description:** The work covered under this item shall consist of supplying and fixing of approved imported unglazed tiles on floor and where necessary on a 1:4 cement-sand screed in accordance with the applicable drawings, schedule of items and bill of quantities and these specifications. Tiles shall be of COTTO or approved equivalent (imported).
- 5.02 **Construction Requirements:** Unglazed tiles unless otherwise specified, shall be standard grade 300 mm x 300 mm x 6 mm or as approved by the Engineer MATT finish floor tiles free from blemishes and dimensional defects and conforming to the standards of Federal Specification SS-T- 308b.

Mortar for installation shall consist of 1 part cement to 4 parts sand (FM 1.5).

Grout for tile joints shall be made of white cement, colored as and where specified with inert pigments.

Supplying and applying COTTO Hygienic grout (anti-bacteria, anti-fungi, antialgae, anti-crack, acid resistance) Modified ASTM-D5590 & ASTM-D5589, JIS Z-2801, ANSI A118.6 i

Preparation of floor surface and specification of mortar bed shall comply with the provisions of specified item. If the surface needs leveling a scratch coat of plaster shall be applied leveled and scratched key and allowed to dry for 12 hours before installing tiles. The setting mortar shall be applied evenly and a neat cement paste to a thickness of about 2 mm shall be trowel led to the back of title

- 5.03 **Method of Measurement:** Measurement for payment shall be made in square meter (sqm) finished tiled surface. No allowance will be made for cutting and wastage.

- 5.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per square meter (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour, including storage, handling and transport of materials, cleaning, preparing and laying bed and cutting, fixing, COTTO sealer, grouting, and curing ties as well as all incidentals necessary to complete the work.

6.00 GLAZED WALL TILES

- 6.01 **Description:** The work covered under this item shall consist of supplying and fixing of approved imported glazed ceramic tiles on walls and where necessary on a 1:3 cement-sand screed in accordance with the applicable drawings, schedule of items and bill of quantities and these specifications. Tiles shall be of COTTO or approved equivalent (imported)
- 6.02 **Construction Requirements:** Glazed tiles unless otherwise specified, shall be standard grade 150 mm x 75mm x 6 mm /150mmx150mmx6mm or as approved by the Engineer MATT finish wall tiles free from blemishes and dimensional defects and conforming to the standards of Federal Specification SS-T-308b.

Mortar for installation shall consist of 1 part cement to 3 parts sand (FM 1.5).

Grout for tile joints all is made of white cement, coloured as and where specified with inert pigments.

Supplying and applying COTTO Hygienic grout (anti-bacteria, anti-fungi, anti-antialgae, anti-crack, acid resistance) Modified ASTM-D5590 & ASTM-D5589, JIS Z-2801, ANSI A118.6 i

Preparation of wall surface and specification of mortar bed shall comply with the provisions of specified item. If the surface needs leveling a scratch coat of plaster shall be applied leveled and scratched key and allowed to dry for 12 hours before installing tiles. The setting mortar shall be applied evenly and a neat cement paste to a thickness of about 2 mm shall be trowel led to the back of tile

- 6.03 **Method of Measurement:** Measurement for payment shall be made in square meter (sqm) finished tiled surface. No allowance will be made for cutting and wastage.
- 6.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per square meter (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour, including storage, handling and transport of materials, cleaning, preparing and laying bed and cutting, fixing, COTTO sealer, grouting, and curing ties as well as all incidentals necessary to complete the work.

7.00 PRE-CAST R.C.C BENCH

- 7.01 **Description:** The work covered by this item shall consist of Supplying, fitting & fixing pre-cast R.C.C Bench whose top floor width 600mm and thickness is 220mm, leg width 600mm and thickness is 220mm, height 350mm with 1% reinforcement and granite Stone topping t as per drawing, as stated in the schedule of items and bill of quantities, these specification and direction of Engineer in Charge.
- 7.02 **Construction Requirements:** All materials shall meet the requirements of the relevant sections of Material specifications.

Fair Face Pre-cast concrete bench made with R.C.C work with 40% grey cement and 60% white cement with 1% reinforcement, coarse sand of F.M 2.5, stone chips etc. Forms work shall be with ply wooden board and Formica pasted with aika fix ornamental frame including M.S section. Curing to be done minimum 28 days. Casting face shall be of fair face finish, no plastering work shall be need for smooth finishing.

Greatest care shall be exercised during handling, shifting and placing the bench in position. Table top or any other places to be fixed granite as stated in the bill of quantities. All other exposed faces shall be of approved best quality and colour synthetic enamel painting if suggested in the drawing or by the Engineer -in-Charge.

7.03 **Method of Measurement:** Measurement shall be the basis of Each.

7.04 **Basis of Payment:** The amount of completed and accepted work, measured as provided above, will be paid for at the contract unit price Each which price shall be full compensation for all material, transporting, placing and all labour, equipment, fitting and fixing granite, tools and incidentals necessary to complete the work.

8.00 FAIR FACE R.C.C PLANTERS & INTERNAL ELEMENTS

8.01 **Description:** The item shall consist of providing pre-cast fair face R.C.C coping on R.C.C planter box in/c filling gravel stone inside, water proofing work in floor and wall with Chemical Crystal Seal compound as per drawing, specified in schedule of items and bill of quantities and these specification.

8.02 **Construction Requirements:** All materials shall meet the requirements of the relevant sections of Material specifications. Fair face concrete shall be as specified in the item no7. Filling 6mm and 18 mm size stone, required quantity of earth, fertilizer, water proofing work with Chemical Crystal Seal compound providing ply wooden shutter as specified in the relevant section. Providing 1% reinforcement during R.C.C work unless otherwise specified.

8.03 **Method of Measurement:** Actual area shall of R.C.C planter box (External length and width in a horizontal plane) measured in square metre (sqm) basis for payment

8.04 **Basis of Payment:** Payment shall be made at the contract unit price per square metre of completed & accepted work measured as above which price shall constitute full compensation for furnishing all materials, labour, tools, equipment in mixing, placing and curing of concrete, form work, removing form, reinforcement work, water proofing works, fertilizer etc. all to complete the work according to the application plans.

9.00 METAL GRATING

9.01 **Description:** The work covered under this item shall consist of manufacturing, supplying, fitting and fixing metal grating fixed on floor drain manufacturing with galvanized M.S section in accordance with applicable drawings, design and mentioned in the schedule of items and bill of quantities and these specifications.

9.02 **Construction Requirements:** Galvanized M.S sections meeting the requirements stated under mild steel item and size should be according to the drawings.

Metal grating shall be fabricated of materials indicated on the plans and fixed to accurate form and position.

- 9.03 **Method of Measurement:** Measurement shall be made in square metre (sqm) basis.
- 9.04 **Basis of Payment:** The amount of completed and accepted work, measured as provided, shall be paid at the contract unit price per square metre (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour including transport, storage and handling of materials, cutting, forming, fabricating, placing, fixing, finishing, Galvanizing, welding etc as well as all incidentals necessary to complete the work according to applicable plans

10.00 UPVC PIPE & PIPE FITTING:

10.01 **Description:** The item shall consist of Supplying fitting and fixing of 100mm dia PVC rain water pipe embedded on concrete or any other means as shown in the drawing, as specified in the schedule of items and bill of quantities and these specifications.

10.02 **Construction Requirements:** 100 mm dia u PVC pipe fixed with galvanized metal clamp in/c proper gradient as shown in the drawing.

All uPVC pipe and pipe fitting such as Pipe, P-trap, S-trap. Y-joint, T-joint, Bend, Door bend, Offset Bend, service door, loose socket, Vent Cowl adopter etc. shall be as per ASTM D-792 standard. Specification of pipe and pipe fittings of uPVC pipe shall be as follows;

- | | | |
|-------|--------------------------|---------------------------------------|
| i) | Specific gravity | 1.40 |
| ii) | Hardness | 120 Rockwell R |
| iii) | Water Absorption | $5.7- 8.5 \times 10^{-6}$ |
| iv) | Tensile strength at 15°C | 500-550 kg/cm ² . |
| v) | Bending Strength | 850 kg/cm ² |
| vi) | Compressive strength | 650 kg/cm ² |
| vii) | Shearing strength | 400 kg/cm ² |
| viii) | Elongation at UTS | 100-170% |
| ix) | Modulus of Elasticity | 4.10×10^5 kg/cm ² |
| x) | Impact strength | 5.0 kg-cm/cm ² |
| xi) | Flame Resistance | Self Extinguishing |
| xii) | Softening Temperature | 75°C |

Pipe dimension shall be as follows;

Dia of pipe	Nominal dia of pipe	Minimum wall thickness
300 mm	300 mm	6.5 mm
250 mm	250 mm	6.2 mm
200 mm	225 mm	5.5 mm
150 mm	160 mm	4.5 mm
100 mm	110 mm	3.4 mm
80 mm	82.4 mm	3.0 mm
50 mm	55.75 mm	2.4 mm
40 mm	42.75 mm	2.2 mm

Before installation all pipe fittings shall be cleaned properly.

Pipe fittings shall be installed as per drawing and direction. Fittings shall be located in such a way so that clean out door shall be accessible easily. Hangers, clamps or wall bracket shall be used at all ends of each fittings and it shall be of approved type.

Pipe joints as per schedule shall be sufficiently water tight to withstand a water column of 4 m. Approved type of solvent shall be used for pipe and pipe fittings joint.

All M.S. material required shall be painted with two coats of red oxide paint before installation.

10.02.1. **Y-Joint:**

Supply, fitting and fixing of Y-Joint shall be all hub end type and shall be with door as per schedule shall be as per drawing and direction. Any leak or sweating in the wall or at the Joint shall not be acceptable. Before fixing, fitting shall be properly cleaned.

10.02.2. **T-Joint:**

Supply, fitting and fixing of T-Joint shall be with hub on all end and with service door and shall be as per schedule drawing and direction. Before fixing T- Joint shall be leak tested by water. Any leak or sweating in the wall or at the Joint shall not be acceptable.

10.02.3. **P-Trap:**

Supply, fittings, fixing, of P-Trap, U-trap, S-trap etc. shall be with hub in inlet and 50 mm dia vent connection and shall be as per schedule, drawing and direction. Trap shall be P or S type as per site requirement. Each trap shall be provided with vent door. Water level inside trap shall be within 19 mm to 25 mm above air break.

Before fixing, fittings shall be properly cleaned.

10.02.4. **Bend:**

Supply, fittings, fixing, of Bend shall be with double hub and shall be as per schedule, drawing and direction. uPVC. Bend shall be provided with clean out door as per site requirement. Long Bend or Short Bend shall be provided as per direction.

10.02.5. **Door Bend:**

Supply, fittings, fixing, of Door Bend shall be with double hub and shall be as per schedule, drawing and direction uPVC Door Bend shall be provided with clean out door as per site requirement. Long Door Bend or Short Door Bend shall be provided as per direction.

10.02.6. **Offset Bend:**

Supply, fittings, fixing, of Offset Bend shall be with double hub and shall be as per schedule, drawing and direction uPVC offset Bend shall be provided with clean out door as per site requirement. Offset Bend shall be provided as per direction.

10.02.7. **Vent Cowl:**

Supply, fittings, fixing, of Vent Cowl as per schedule shall be as per drawing and direction. Before fixing, fittings shall be properly cleaned.

10.02.8. **Loose Socket:**

Supply, fittings, fixing, of Loose Socket with both side hub to adopt straight pipe and shall be as per schedule.

10.03 **Method of Measurement:** Actual length of U PVC pipe shall be measured in lineal metre basis. No measurement shall be taken for wastage, fittings & fixtures.

10.04 **Basis of Payment:** The amount of completed and accepted works shall be paid for at the contract unit price which payment shall constitute installing and connecting to water pipe including all jointing materials and fittings in/c testing etc.

11.00 **METAL TRAP**

11.01 **Description:** The work under this item shall consist of supplying, fitting and fixing of galvanized metal trap on drain and connection with water disposal pipe line as shown in the drawing, as specified in the drawing or these specifications.

Galvanized metal trap shall meet the requirements as specified in the specification in the respective item.

11.02 **Construction Requirements:** Galvanized metal grating shall be fixed in position with best quality concrete or mortar. Necessary finishing work around the trap shall be done as required. Greatest care should be exercised so the connection shall not be lose or water con never be licked.

11.03 **Method of Measurement:** Galvanized meal trap shall be measured in Each.

11.04 **Basis of Payment:** The amount of completed and accepted works shall be paid for at the contract unit price Each. which payment shall constitute of supplying, installing and connecting to water pipe including all jointing materials and fittings in/c testing etc. complete the work to the application plans.

12.00 **WATER PROOFING WORKS WITH CHEMICAL CRYSTAL SEAL COMPOUND**

12.01 **General:** The work under this section includes the specification of cementations capillary waterproofing in court yard, roof or as indicated in drawing to provide immediate and positive water proofing.
Chemical Crystal Seal compound is a surface applied material, which waterproof and protect concrete in-depth.

When these materials are applied to the concrete surface, the additives penetrate the capillaries of the concrete, the chemicals form crystals and thereby block the capillaries.

12.02 **Surface Preparation:** The substrate to be treated must be sound and even, open-pored, roughened and its surface free from voids, large cracks (> 0.3 mm) or ridges. Any adhesion reducing substances like bitumen, oil, grease, remains of paint or laitance have to be removed by suitable means.

Water leaks must be stopped in accordance with the Chemical Crystal Seal compound specification.

Thoroughly moisten the substrata, it must be damp but not wet at the time of application. Any surface water on horizontal surfaces must be removed. Concrete must not contain any water-repellent additives.

12.03 **Mixing:** Mix by volume 5 parts of Chemical Crystal Seal compound with approx. 2 parts of tap water (25 kg + approx. 7-8.5 litres) in a clean container for at least 3 minutes to a lump-free, homogeneous consistency of thick oil paint. Use a mechanical mixer.

12.04 **Application:**

Do not apply at temperatures below +5 °C or to a frozen substrate.

Chemical Crystal Seal compound is applied with brush, suitable spray equipment or by dry sprinkling.

Brush application

Ensure that all cavities in the substrate are filled. Crosswise application: vertically bottom-up, then horizontally.

Spray application

Chemical Crystal Seal compound can be applied with a suitable fine mortar spraying device. For maximum spray pattern it should be possible to adjust volume of product as well as air pressure and volume. The nozzle diameter is approx. 4 mm. The first layer of Chemical Crystal Seal compound is applied in circular motion with the spray nozzle held at a 90° angle to the substrate. The final layer can be left as a spray finish or treated to a specified finish.

Apply subsequent coat whilst previous coat is still damp at the surface. The waiting time before applying the following coat depends on local climate conditions such as humidity, temperature, etc. The previous coat must not be damaged during application of the following coat.

To maintain workability of the material do not add water, simply re-stir the mixture.

Dry sprinkle and power trowel application

The concrete is poured, vibrated and screeded as usual. When the concrete to be treated starts to reach initial set, the specified amount of Chemical Crystal Seal compound is dry-distributed by hand using a sieve (mesh size of 1 mm) or suitable spreader on to the concrete surface. The powder is then trowel led into the substrate until coverage is uniform and the specific finish is achieved.

12.05 **Curing:** Keep damp for at least 5 days and provide suitable protection against extreme weather conditions (e.g. sun, wind, frost) while setting. The freshly treated surface should be protected from rain for a minimum period of 24 h. In closed spaces and deep pits, suitable air circulation should be provided for 24 hours following the Chemical Crystal Seal compound treatment.

12.06 **Method of Measurement:** Actual applying area shall measure in square meter (sqm)

12.07 **Mode of Payment:** Payment shall be made at the contract unit price per square meter of completed & accepted work measured as above which price shall constitute full compensation for furnishing all materials, labour, tools, equipment in mixing, applying, curing etc. to complete the work according to the application plans.

13.00 PRE-CAST CEMENT CONCRETE TILES ON ROOF TOP

- 13.01 **Description:** The work covered by this item shall consist of supplying, fitting and fixing approved best quality and colour 1200mmx600mm / 600mmx600mm pre-cast cement concrete tiles on roof top over 12 mm thick sand cement mortar (1:4).
- 13.02 **Construction Requirements:** Pre-cast cement concrete tiles shall be fixed on roof top or anywhere at location shown on the drawing and according to the manufacturer's specification. The work includes providing cement mortar as stated in the schedule of items and drawing etc. complete. Cement mortar shall meet the requirements as per detailed in the plaster items in section 2. Before fitting and fixing of roof tiles the surface should be cleaned and washed with safe water. Top surface of tiles to be kept proper gradient as shown in the drawing.
- 13.03 **Method of Measurements:** Measurement for payment shall be made in square metre basis i.e. covered area of pre-cast concrete tiles shall be measured for payment. No extra measurement shall be allowed for wastage etc.
- 13.04 **Basis of Payment:** The amount of completed and accepted work measured as provided shall be paid at the contract unit price per square metre (sqm) which payment shall constitute full compensation for furnishing all materials, equipment, tools and plants and labour, mortar, cleaning the surface, curing etc. as well as incidentals necessary to complete the work.

14.00 SUPPLYING, FITTING & FIXING OF CONCRETE HOLLOW BLOCK ON ROOF TOP

- 14.01 **Description:** The work covered by this item shall consist of supplying fitting and fixing concrete hollow block on roof top in accordance with applicable drawing as stated in the schedule of items and bill of quantities and these specifications.
- 14.02 **Construction Requirements:** Concrete hollow blocks lying with mortar (cement lime and sand ratio 1:1:6). The roof topping shall be laid preferably not later than 24 hours after the top slab is poured. When concrete hollow block is to be laid on an older concrete slab, the base surface shall be thoroughly cleaned of laitance and all loose materials by stiff wire brush, roughened if deemed necessary, and washed and soaked and clean water. Surplus water shall be removed.
- The mixture of the mortar shall be as stated in the schedule of items. Filling the interstices with mortar making bond with each other Curing at least 7 days.
- 14.03 **Method of Measurement:** Measurement for payment shall be made in square meter (sqm) of finished concrete hollow block surface. No extra measurement shall be allowed for wastage etc.
- 14.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per square meter (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour, including storage, handling and transport of materials, cleaning, preparing and laying bed and cutting, fixing as well as all incidentals necessary to complete the work.

15.00 SCREEDING ON ROOF TOP

- 15.01 **Description:** The work covered by this item shall consist of constructing 38 mm thick steel-trowel
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led 1:1.50:3 concrete topping on roof top with 10 mm downgraded stone chips, sand and cement in accordance with these specifications.

- 15.02 **Construction Requirements:** Materials and construction shall be in accordance with the requirements concrete.

The roof topping shall be laid preferably not later than 24 hours after the top slab is poured. When topping is to be laid on an older concrete slab, the base surface shall be thoroughly cleaned of laitance and all loose materials by stiff wire brush, roughened if deemed necessary, and washed and soaked and clean water. Surplus water shall be removed and neat-cement coating supplied to the surface before flooring is placed.

The mixture shall be spread evenly. When the moisture has disappeared from the surface, the surface shall be steel-trawled neat cement finishing under firm pressure to produce a dense uniform smooth surface free from trowel marks.

The neat cement application shall be minimum 2.0 mm thick. A little extra thickness shall be allowed for polishing. The top shall be polished, 3 weeks after it is laid, step by step, with different grades of soft polishing stone till a perfectly smooth glazy surface is obtained. The work shall be cured and protected for at least 21 days immediately following the laying.

- 15.03 **Method of Measurement:** Measurement for payment shall be made in square meter (sqm) finished screed surface.

- 15.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per square meter (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour, including storage, handling and transport of materials, cleaning, preparing and laying bed and cutting, grouting and curing as well as all incidentals necessary to complete the work.

16.00 WATER PROOFING POLYTHENE SHEET

- 16.01 **Description:** The work covered under this item shall consist of supplying and laying in place double layers of polythene sheets weighing one kilogram per 6.50 sqm. where needed in accordance with the applicable plans, schedules of items & bill of quantities and these specifications.

- 16.02 **Construction Requirement:** The sheets shall be laid under screed covering the entire inside area. Before laying the sheet, the surface shall be cleaned to give a surface free from damage, tear or other imperfections and shall be laid such that there is a minimum of 225 mm (9") overlap between adjacent strips.

- 16.03 **Method of Measurement:** Measurement for payment shall be made in square meter (sqm) of area covered by the sheet. No allowance will be made for overlaps.

- 16.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per square meter (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour including storage handling and transport of material, cleaning, preparing, cutting, laying, fixing as well as all incidentals necessary to complete the work.

17.00 DOUBLE LAYER SCREEDING ON ROOF TOP

- 17.01 **Description:** The work covered by this item shall consist of providing Double layer screeding work
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on roof top as shown in the drawing applying primer etc complete as per drawing, as specified in the schedule of items & bill of quantities and this specification.

- 17.02 **Construction Requirements:** Materials and construction shall be in accordance with the requirements concrete.

Double layer screed work on roof top with minimum 50 mm thick screed finishing with (1:1.5:3) concrete with cement, best quality coarse sand (50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.5 and 50% best local sand of FM 1.5) as first layer, applying primer @ 0.01 litre per square metre, application of first body coat @ 0.60 litre per square metre and then application of second body coat @ 0.60 litre per square metre.

After completion as above, second layer of minimum 38mm thick screed work as and finishing the top with neat cement and curing at least 7 days.

The roof topping shall be laid preferably not later than 24 hours after the top slab is poured. When topping is to be laid on an older concrete slab, the base surface shall be thoroughly cleaned of laitance and all loose materials by stiff wire brush, roughened if deemed necessary, and washed and soaked and clean water. Surplus water shall be removed and neat-cement coating supplied to the surface before flooring is placed.

The mixture shall be spread evenly. When the moisture has disappeared from the surface, the surface shall be steel-trawled neat cement finishing under firm pressure to produce a dense uniform smooth surface free from trowel marks.

The neat cement application shall be minimum 2.0 mm thick. A little extra thickness shall be allowed for polishing. The top shall be polished, 3 weeks after it is laid, step by step, with different grades of soft polishing stone till a perfectly smooth glazy surface is obtained. The work shall be cured and protected for at least 21 days immediately following the laying.

- 17.03 **Method of Measurement:** Measurement for payment shall be made in square meter (sqm) finished screed surface. No extra payment shall be made for each layer.

- 17.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per square meter (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour, including storage, handling and transport of materials, cleaning, preparing and laying bed and cutting, fixing grouting, and curing as well as all incidentals necessary to complete the work.

18.00 **BRICK WORK (75/125 MM THICK)**

- 18.01 **Description:** The work covered by this item shall consist in constructing flat-brick, brick-walls with 1st class bricks in 1:4 cement mortar and brick-on-edge brick-walls with first class brick 1:3 cement mortar at any heights are required by the Plans.

- 18.02 **Construction Requirements:** Materials and method of construction shall be as stated as above.

- 18.03 **Method of Measurement:** Brick walls shall be measured in square meter (sq.m) of actually exposed brick surfaces wall. Deducting all opening and incorporated foreign structures if any.

- 18.04 **Basis of Payment:** Payment shall be made at the contract unit price per square meter (sqm) of completed and accepted work measured as provided above which price shall constitute
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full compensation for furnishing, storing, transporting, preparing, laying and caring all materials and for all labour, scaffolding, tools and equipment at any level and for all incidentals necessary to complete the item.

19.00 12MM THICK PLASTER WITH NEAT CEMENT FINISH

19.01 Description: This item shall consist of providing 12 mm thick 1:4 cement sand plaster on wall surfaces and where necessary including neat cement finish on top.

19.02 Construction Requirements: Materials shall meet requirements specified below and in the relevant section of Materials specifications:

- a. Cement shall be Portland cement Type-1, ASTM C-150
- b. Sand shall be clean well-graded natural sand having a fineness module of 1.50
- c. Water shall be potable and clean and contain no salt or organic materials

Plaster shall consist of 1 part of cement to 4 parts of sand and have a nominal thickness of 12mm.

Only enough water shall be added to provide plasticity. Mortar shall be mixed only in quantities for immediate use. Mortar, which has taken initial set, shall not be used on the work with or without addition of fresh materials.

Before application of plaster, the joints in brick-walls shall be adequately raked out where necessary and smooth concrete surfaces shall be roughened to provide key. The surfaces shall be scrubbed clean of loose materials and soaked with water and dept damped for 24 hours in case of brick masonry and 2 hours in case of concrete before plastering. A neat cement coat shall be applied on all concrete surfaces before placing plaster.

Plaster shall consist of two coats, under and finish, when applied over brick masonry and shall consist of a grout application and finish coat when applied direct to concrete, the under and finish coats shall be applied without any interval to permit the undercoat to set.

The undercoat shall have minimum thickness of 6mm and shall be leveled with straight-edge and scratched for key, the finished coat shall be toveled over with care and leveled with a straight-edge to obtain a flat smooth surface. All edges and corners unless otherwise shown on the Plans shall be rounded or chamfered as directed by the Engineer-in-Charge. All moldings shall be neat, clean and true to template.

Plaster shall be kept moist and protected from weather for 10 days immediately following completion.

If any cracks appear in the plaster or any parts sound hollow when tapped or are found to be soft or otherwise defective after the plaster has dried, the defect shall be made good by cutting out and re-plastering at the Contractors own cost.

19.03 Method of Measurement: The work shall be measured in square meter (sq.m) of actual plastered surface.

19.04 Basis of Payment: Payment shall be made for the amount of completed and accepted work measured as provided above at the contract unit price per square meter (sq.m) of plaster which price shall constitute full compensation for furnishing all materials, mixing of mortar, plastering surfaces and corners, plaster after completion, provision, erection and removal of scaffolding as

well as incidentals necessary to complete the work according to the applicable Plans.

20.00 GEO TEXTILES ON ROOF TOP

20.01 **Description:** The work covered by this item shall consist of Supply and laying 2 mm thick Geo-textile on roof top as shown in the drawing, as specified in the schedule of items and bill of quantities and these specifications.

20.02 **Construction Requirements:** Geo textile shall be of approved best quality and origin/manufacturer as per manufacturer's instructions approved and accepted by the Engineer. Before commencing laying of Geo-textile, the Contractor must submit the method statement for carrying out this work including sample with evidence of origin and compliance certificate from independent testing laboratory for approval.

20.03 **Method of Measurement:** Measurement for payment shall be made in square meter (sqm) finished geo textile surface. No extra payment shall be made for wastage.

20.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per square meter (sqm) which payment shall constituted full compensation for furnishing all materials, equipment and labour, including storage, handling and transport of materials, cleaning, preparing and laying bed and cutting, fixing as well as all incidentals necessary to complete the work.

21.00 METAL NET GRATING

21.01 **Description:** The work covered under this item shall consist of manufacturing, supplying, fitting and fixing of metal grating fixed on floor drain manufacturing with galvanized M.S section in accordance with applicable drawings, design and these specifications.

21.02 **Construction Requirements:** Galvanized M.S sections meeting the requirements stated under mild steel item and size should be according to the drawings.
Metal grating shall be fabricated of materials indicated on the plans and fixed to accurate form and position.

21.03 **Method of Measurement:** Measurement shall be made in square metre (sqm) basis.

21.04 **Basis of Payment:** The amount of completed and accepted work, measured as provided, shall be paid at the contract unit price per square metre (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour including transport, storage and handling of materials, cutting, forming, fabricating, placing, fixing, finishing, painting, welding etc
.as well as all incidentals necessary to complete the work according to applicable plans

22.00 FILLING FRAVEL STONE

22.01 **Description:** The work covered by this item shall consist of supplying and filling gravel stone on roof top for plantation as stated in the schedule of items and bill of quantities and in accordance with these specifications.

22.02 **Construction Requirements:** Clean fine well graded gravel stone shall be filled. Gravel stone shall

be meeting the requirements of coarse aggregates as stated in the concrete item.

22.03 **Method of Measurement:** Measurement for payment shall be made cubic metre (Cum) basis.

22.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per cubic metre which payment shall constituted full compensation for furnishing all materials, equipment and labour, including storage, handling and transport of materials, cleaning, preparing and laying as well as all incidentals necessary to complete the work

23.00 **EARTH WORK**

23.01 **Description**

The work under this item shall consist of setting out of true lines for cutting surface in the footpath, performing the excavations in any kind of soil encountered up to the required depth as per drawings and instructions of the Engineer-in-Charge/Consultant.

The work includes, but is not necessarily limited to, the furnishing of all materials and equipment and performing all operations necessary for and properly incidental to accomplishing all excavating, removal of surplus materials away from site.

23.02 **Construction Requirements**

The Contractor shall notify the Engineer-in-Charge for a sufficient time to advance the beginning of excavation so that the elevations and measurements may be taken from the existing ground. Any materials removed or excavated before taking these measurements will not be paid for.

The trenches shall be excavated by regular stages according to the out-lines of the of the drawing as shown in the Plans and shall be of sufficient size to permit the placing of the full widths and lengths of the guide wall shown, with full horizontal beds. All loose and displaced material shall be removed at the Contractor's expenses, leaving a smooth solid bed to receive foundation. The depth of excavation as per drawing.

Where unstable soil is encountered at the bed level, it should be brought to the notice of Engineer-in-Charge/Consultant and all such unstable soil shall be removed as directed and replaced with suitable material to provide adequate support.

Any erroneous excavations made below the level shown on the plans or below the levels ordered by the Engineer-in-Charge/Consultant will not be paid for and shall be brought back to the specified levels with mass concrete at the Contractor's own expenses.

Excavation shall be sufficiently large to provide for necessary working space due to other temporary works required during construction.

The Contractor shall be solely responsible for the safety and stability of the excavations and shall provide protective supports, bracing, sheet piles, shoring etc. as required and maintain proper drainage. Shoring should be adequate enough to provide sufficient safety of all the adjacent structures and land.

If required de-watering of the excavated area has to be done by installing suitable pumping units.

Pumping from the interior of any trenches enclosure shall be done in such a manner as to preclude the possibility of any portion of the mass concrete material being carried away. No pumping will be permitted during placing of the mass concrete, or for a period of at least 24 hours thereafter unless it is done from a suitable sump separated from the concrete work by a watertight wall.

All spaces excavated for and not occupied by structure shall be refilled up to the "original ground line: which expression shall mean the surface of the ground before excavation was made for the structure.

23.03 **Excavation**

- 23.03.1 Excavation for, trenches, roadway pavements, parking areas and a footpath, and any other structures indicated as well as common excavation for grading purposes, shall be to the lines and levels required. The bottoms of all trenches shall be to grade, tamped firm, clean and free from all debris or foreign matter.
 - 23.03.2 Excavations shall be kept free from water at all times. Adequate equipment shall be maintained at the site.
 - 23.03.3 If material below and beyond the required dimensions has been removed or disturbed due to unauthorized over excavation or for any other reason, the space shall be placed, filled and compacted with select material, as directed by the Engineer's Representative, with no additional cost to the Employer.
 - 23.03.4 Abandoned sewers, piping, and other utilities encountered in the progress of excavating, shall be removed and the ends plugged with concrete or in any other manner which is acceptable to the Engineer's Representative.
 - 23.03.5 Active sewers, water and gas pipes, electric power, light or telephone poles, conduits, or wires, and any other active utility lines encountered, shall be immediately reported to the Engineer's Representative and authorities involved. The owner and proper authorities shall be allowed free access to take that measures they may deem necessary to repair, relocate, or remove the obstruction as determined by the owner's representative to the satisfaction of the Engineer's Representative.
 - 23.03.6 All debris and excess earth materials shall be removed from the site and disposed off as specified elsewhere this Specification.
 - 23.03.7 Open excavations, trenches, and the like shall be protected with fences, barricades, covers, and railings as required to maintain safe personnel and vehicular traffic passage. Freshly graded surfaces shall be protected from erosion until such time as permanent drainage and erosion control works have been installed
 - 23.04 **Method of Measurement:** All excavation shall be measured as dimension shown in the drawing and no allowance shall be made for the extra excavation for working space, etc. Any extra excavation beyond depth and dimension which is carried out throughout error and detrimental for the structure, must be compensated by the contractor at his own expenses by furnishing compacted sand fill of FM 2.50 or concrete as directed by the Engineer-in-Charge.
 - 23.05 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per cubic metre which payment shall constituted full compensation for furnishing all materials, equipment and labour, including dewatering, removing excavated earth from site as per instruction, cleaning, preparing and layout etc.
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as well as all incidentals necessary to complete the work.

24.00 EARTH BACK FILLING

24.01 **General:** The work under this item shall consist of filling excavated earth if approved by the Engineer-in-Charge/Consultant as stated in the schedule of items and bill of quantities and these specifications.

24.02 **Construction Requirement:** Excavated earth material which is suitable for compacted fill or backfill, as determined by the Engineer's Representative, shall be used as back filling by the contractor. Fill material shall not be placed, spread or rolled during unfavorable weather conditions. When the work is interrupted by rain, fill operations shall not be resumed until field test by the Engineer's Representative indicates that the moisture content and density of the fill area as specified in these specifications, or are in condition suitable enough, in the opinion of the Engineer's Representative, for resuming the work. No back fill shall be placed against any structure without prior permission of the Engineer-in-Charge in general, back filling around and over structures shall be deposited evenly on all sides in layer not exceeding 150 mm (6 inches). Each layer shall be compacted by hand or mechanical tampers to a density equal to or greater than that required for adjacent area.

The ratio, expressed as a percentage, of the dry density of the fill material as compacted in the field to the maximum dry density of the same material as determined by ASTM Test Designation D1557 above.

Tests for compaction will be made in accordance with test procedures outlined in ASTM D1557(C), as applicable. Field testing of soils or compacted fill in place shall conform to the applicable requirements of ASTM D1556.

24.03 **Method of Measurement:** Measurement shall be in cubic metre for compacted volume of sand filling. No extra measurement shall be taken for wastage.

24.04 **Basis of Payment:** Payment for Compacted earth back filling will be made at the contract unit price per cubic meter (cum) measured as provided above which price shall constitute full compensation for furnishing all materials, labor, equipment and tools as well as all incidentals necessary to complete the work according to the applicable plans.

25.00 SAND FILLING IN FOOTPATH TRENCHES

25.01 **Sand:** Sand for compacted sand fill or drainage fill shall be the clean and graded sand herein before specified in the schedule of items and bill of quantities.

25.02 **Select Material:** All material used for compacted fill shall be selected material. Sand will also meet the requirements for select material. No material shall be placed without the approval of the Engineer's Representative.

25.03 Placing and Compacting

- a. Sand and select material shall be spread uniformly in layers not to exceed 6 inch in depth before compaction. Material which does not contain sufficient moisture to compact properly shall be sprinkled with water; if it contains excess moisture it shall be aerated or permitted to dry to the proper water content. Sand and select material shall be
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uniformly mixed with any added water before being compacted. Each layer of spread sand and select material shall be compacted to at least 90 percent except as specified in (b) below:

- b. **Degree of compaction:** The upper 300 mm of sand fill under foundations, and slabs shall be compacted to 95 percent using modified proctor. The upper 300 mm of compacted fill under roadways, parking areas, aprons, and other brick paving where indicated shall also be compacted to 95 percent.
- 25.04 **Control of Fill:** Control of fill shall consist of field inspection and testing to determine that each layer has been compacted to the required density. Any layer or portion of layer that does not attain the compaction required shall be scarified and compacted until the required density is obtained.
- 25.05 **Method of Measurement:** Measurement shall be in cubic metre for compacted volume of sand filling. No extra measurement shall be taken for wastage.
- 25.06 **Basis of Payment:** Payment for Compacted sand filling will be made at the contract unit price per cubic metre (cum) measured as provided above which price shall constitute full compensation for furnishing all materials, labor, equipment and materials as well as all incidentals necessary to complete the work according to the applicable plans.

26.00 CEMENT CONCRETE WORKS 1:3:6

- 26.01 **Description:** The item shall consist of cement concrete work in foundation or below grade level slab as stated in the schedule of items and bill of quantities.
- 26.02 **Construction Requirements:** Concrete shall consist of a mixture of port land cement, fine aggregate, coarse aggregate and water. The proportions in which the various ingredients shall be used in the concrete mix for various work, shall be designed in accordance with the specified strength and suitable work ability.

Materials shall conform to the requirements specified below and in the relevant sections of Material Specifications.

- a. Cement shall be port land cement Type-I, ASTM C-150 only one brand, grade or kind of cement shall be used in a given structure, except upon the written permission of the Engineer-in-Charge.
- b. Fine Aggregate shall consist of well-graded clean natural sand free from injurious amount of organic impurities and deleterious substances and shall have a Fineness Modules of not less than 2.8.
- c. Water for use in concrete shall be palatable and subjected to the approval by the Engineer-in-Charge. It shall be clear, free from injurious quantities of oil, alkali, slats and organic substance, any solid particles, etc.
- d. Admixtures or cement containing additives shall be used only with approval or the Engineer-in-Charge.

When it is desired to reduce the amount of water and still maintain a plastic workable mix admixtures may be added to the concrete subject to approval of the Engineer-in-Charge. Suitability of an admixture should be established by trial mix and appropriate tests prior to its use.

Where water proofing properties are particularly required by the work, concrete shall be mixed with

Plasticizer admixture in approved quantity subject to the approval of the Engineer-in-Charge.

26.03 **Method of Measurement:** Actual volume of cement concrete work shall be measured in cubic meter basis (cum)

26.04 **Mode of Payment:** Payment shall be made at the contract unit price per cubic metre of completed & accepted work measured as above which price shall constitute full compensation for furnishing all materials, labour, tools, equipment, mixing, placing, form works in/c forms materials etc and curing of concrete etc. to complete the work according to the application plans.

27.00 **BRICK WORK (250 MM OR ABOVE THICK)**

27.01 **Description:** This item shall consist of constructing brick masonry work in 1:4 cement mortar in such thickness and at such heights as required by the drawings.

27.02 **Construction Requirements**

All materials shall mean the requirements of the relevant sections of Material specifications.

- a. Bricks shall be 1st Class brick unless otherwise required.
- b. Cement shall be Portland cement Type-1 ASTM C-1.5
- c. Sand shall be clean, well graded natural sand having a minimum FM of 1.5
- d. Water shall be same as required for concrete.

Mortar for brickwork unless otherwise required shall consists of 1 part of cement and 4 parts of sand.

Cement and sand shall be mixed dry in the specified proportions until the color of the mixture is uniform. Water shall then be added sparingly, only the minimum necessary being used to produce a workable mixture of normal consistency. The water cement ratio in no case shall exceed 0.50 by weight, or as directed by the Engineer-in-Charge.

The mixing shall be done on a clean hard platform within water-tight points to avoid leakage. At the close of each day's work, the mixing through and the pans shall be thoroughly cleaned and washed.

Mortar shall be mixed in quantities required for immediate use. Mortar, which has taken its initial set, shall, on no account be used on work, not shall be remixed with or without additional materials or re-tempered by other means.

27.03 **Workmanship:** No bricks shall be used until they have been thoroughly soaked in clear water for at least eight hours. Soaking shall be discontinued one hour before use. Care shall be taken that the bricks are clean and free from slime or dirt of any kind. If necessary, bricks shall be scrubbed clean. Brickwork shall be built plumb and shall be carried up regularly throughout the entire length of the structure. Unless otherwise specified bricks shall be laid in English Bond each brick being set with mortar in bed vertical joints. All Bricks shall be whole expected where necessary for closer and where expressly authorized. All horizontal joints shall be parallel and level. Vertical joints in alternate courses shall come directly over one another. Joints thickness shall be minimum 6 mm and shall in no case exceed 10 mm. The height of four courses including four bed joints as laid shall not exceed more than 40 mm the height of four bricks if put over one another. Exposed joints shall be raked and flush pointed unless otherwise specified and the face

of the work shall be kept clean as work proceeds. The height of day's work shall be limited to 1200 mm unless otherwise permitted. In exposed situations the day's work shall be protected against harmful effect of weather during and for a period immediately following construction until the mortar sufficiently hardened. All brickwork shall be thoroughly cured for a period of at least 7 days.

Fixture in masonry such as anchors, clamps, brackets, pipes etc. shall be built-in during construction at no additional cost to the contract.

27.04 **Method of Measurement:** This item shall be measured by cubic meter (cum) of brickwork built in place to the next lines of the structures shown on the drawings.

27.05 **Basis of Payment:** Payment shall be made at the Contract unit price per cubic meter (cum) of completed and accepted work measured as provided above which price shall constitute full compensation for furnishing, storing, transporting, preparing, laying and curing all materials and for all labour scaffolding, tools and equipment and for all incidentals necessary to complete the item.

28.00 BRICK EDGING WORKS

28.01 **Description:** The work under this item shall consist of Brick edging work as per drawings, schedule of items and bill of quantities, and instructions of the Engineer-in-Charge and this specification.

28.02 **Construction requirements:** All materials shall meet the requirements of the relevant sections of Material specifications.

- i. Bricks shall be 1st Class bricks of CONFORCE LTD or approved equivalent and shall be 242mmx 115mmx 70 mm sizes unless otherwise required.
- ii. Cement shall be Portland cement Type-1 ASTM C-1.5
- iii. Sand shall be clean, well graded natural sand having a minimum FM of 1.5
- iv. Water shall be same as required for concrete.

Mortar for brick paving work unless otherwise required shall consist of 1 part of cement and 3 parts of sand.

Cement and sand shall be mixed dry in the specified proportions until the color of the mixture is uniform. Water shall then be added sparingly, only the minimum necessary being used to produce a workable mixture of normal consistency. The water cement ratio in no case shall exceed 0.50 by weight, or as directed by the Engineer-in-Charge.

The mixing shall be done on a clean hard platform within water-tight points to avoid leakage. At the close of each day's work, the mixing through and the pans shall be thoroughly cleaned and washed.

Mortar shall be mixed in quantities required for immediate use. Mortar, which has taken its initial set, shall, no account be used on work, not shall be remixed with or without additional materials or re-tempered by other means

Brick edging work shall be face 242mmx70mm mm facing with handmade, machine mould & gas burn 242mmx 115mmx 70 mm size 1st class bricks of CONFORCE LIMITED (CFC) or approved equivalent quality.

Pointing work in cement mortar (1:2) (Proportion of white & Grey cement shall be 2:1) shall be

done after cleaning the facing surfaces.

Curing at least for 7 days shall be done properly. Sand shall be washing and screening before use Soaking bricks at least for 24 hours before use.

28.03 **Method of Measurement:** Measurement for payment shall be made in running meter (rm) of actual brick edging works.

28.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per running meter (rm) which payment shall constitute full compensation for furnishing all materials, equipment and labour including storage handling and transport of material, cleaning, preparing, cutting, laying, fixing, curing, pointing, sorting out 50% 1st class bricks, digging earth in/c filling etc. As well as all incidentals necessary to complete the work.

29.00 PRE-CAST CONCRETE CURVE STONE

29.01 **Description:** The work covered by this item shall consist of supplying fitting and fixing pre-cast concrete curve stone around Auditorium building in accordance with these specifications.

29.02 **Construction Requirements:** Pre-cast concrete curve stone shall be fixing including excavation of earth, cement mortar filling earth etc. Size of the curve stone shall be of 450mmx300mmx100mm in size.
Specification of concrete curve stone shall be same as on cement concrete items.

Alignment for curve stone area shall take first. Adequate level for top and side shall be maintained properly. Curing work shall be done as concreting work.

29.03 **Method of Measurement:** Measurement for payment shall be made in each of finished pre-cast concrete curve stone. No extra measurement shall be taken for wastage.

29.04 **Basis of Payment:** The amount of completed and accepted work measured as provided above shall be made on the contract unit price per No which payment shall have constituted full compensation for furnishing all materials, equipment and labor, including storage, handling and transport of materials, cleaning, preparing and laying bed and cutting, fixing as well as all incidentals necessary to complete the work

30.00 R.C.C BOLLARDS

30.01 **Description:** The worked covered by this item shall consist of constructing and erecting of fair face R.C.C Bollards as per drawings, as specified in the schedule of items and bill of quantities and these specifications.

All materials shall meet the requirements of the relevant sections of Material specifications

30.02 **29.02 Construction requirements:** Pre-cast R.C.C Bollard in/c R.C.C work with 40% grey and 60% white cement, Coarse Sylhet sand of F.M 2.50 and 20mm down well graded crushed stone chips having minimum $f_c=30$ mpa minimum 28 days ultimate cylinder crushing strength in trial mix ratio, the trial mix strength is 40 Mpa including supplying and fabrication of reinforcement 1% unless otherwise specified. Painting different color with 3 coats of synthetic enamel paint with BERGER or equivalent. Bollards should be erected in position in/c earth cutting, filling and compaction etc.

30.03 **Method of Measurement:** R.C.C Bollards shall be measured in each of actually erected in position.

30.04 **Basis of Payment:** Payment shall be made at the contract unit price Each of completed and accepted work measured as provided above which price shall constitute full compensation for furnishing, storing, transporting, preparing, laying and curing all materials and for all labour, shuttering, tools and equipment and for all incidentals necessary to complete the item.

31.00 **METAL GUARD RAIL IN PARKING WAY**

31.01 **Description:** The work covered under this item shall consist of constructing metal railing fixed on solid galvanized M.S post for screwed to galvanized vertical plate, fitting and fixing galvanized tube horizontally, in accordance with applicable drawings, design and these specifications.

31.02 **Construction Requirements:** Galvanized M.S sections meeting the requirements stated under mild steel item and size should be according to the drawings.

Railing shall be fabricated of materials indicated on the plans and fixed to accurate form and position. Where the design provides for fixing baluster on floor, the fixing hole shall be cast in proper location and shall be square of 10mm larger than the square size of the baluster base plate and extend 125 mm deep into the floor concrete. The holes shall be caulked with molten lead after setting balusters base plate in position. Baluster base plate side mounted to stringer shall be secured by adequate anchors embedded in concrete. The contractor shall submit shop drawing respecting this job.

31.03 **Method of Measurement:** Measurement shall be made in square meter (sum) basis for exposed area of railing.

31.04 **Basis of Payment :** The amount of completed and accepted work, measured as provided, shall be paid at the contract unit price per square meter (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour including transport, storage and handling of materials, cutting, forming, fabricating, placing, fixing, finishing, galvanizing including brackets and cover plates, opening holes, restoring wall floor finishing as well as all incidentals necessary to complete the work according to applicable plans.

32.00 **TACK COAT**

32.01 **Description:** The work covered under this item shall consist of Providing tack coat on in the road top surfaces in accordance with applicable drawings, design and these specifications.

32.02 **Construction Requirements:** Tack coat shall be provided on the cleaned road top surfaces @ 7.32 kg of bitumen per 10 sqm including heating bitumen up to 1760c to 1880c and spreading etc. all complete (cost of bitumen included).

32.03 **Method of Measurement:** Measurement shall be made in square metre (sqm) basis.

32.04 **Basis of Payment:** The amount of completed and accepted work, measured as provided, shall be paid at the contract unit price per square metre (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour including transport, storage and handling of materials as well as all incidentals necessary to complete the work.

33.00 BITUMINOUS CARPETING

33.01 **Description:** The work covered under this item shall consist of 50 mm thick bituminous carpeting on in the road top surfaces in accordance with applicable drawings, design and these specifications.

33.02 **Construction Requirements:** 12 mm down well graded shingles @ 0.64 cum of shingles mixed with 42 kg of heated bitumen (bitumen content % by wt. of total is 5.2% to 5.80%) heating at 1350c to 1550c and spread uniformly over 10 sqm of surface. Rolled with 8-to-10-ton Roller compacted fully in proper grade and camber spreading 0.12 cum sand (F.M. 1.50) on 10 sqm etc. all complete as per drawing specification to complete 50 mm thick compacted premixed bituminous carpeting work.

33.03 **Method of Measurement:** Measurement shall be made in square metre (sqm) basis.

33.04 **Basis of Payment:** The amount of completed and accepted work, measured as provided, shall be paid at the contract unit price per square metre (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour including transport, storage and handling of materials as well as all incidentals necessary to complete the work.

34.00 SEAL COAT

34.01 **Description:** The work covered under this item shall consist of bituminous seal coat work on in the road top surfaces in accordance with applicable drawings, design and these specifications.

34.02 **Construction Requirements:** Premixed bituminous seal coat with 0.12 cum of pea gravels mixed with 80 kg of bitumen per cum of pea gravels and laid over 10 sqm, road surface including spreading with proper camber and grade and blinding with dry sand (F.M. 2.5) @ 0.09 cum for 10 sqm including cost of all materials rolling with 8-to-10-ton power driven roller etc. all complete as per drawing specification.

34.03 **Method of Measurement:** Measurement shall be made in square metre (sqm) basis.

34.04 **Basis of Payment:** The amount of completed and accepted work, measured as provided, shall be paid at the contract unit price per square metre (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour including transport, storage and handling of materials as well as all incidentals necessary to complete the work.

35.00 ROAD MARKING

35.01 **Description:** The work covered under this item shall consist of Road Marking work on in the road top surfaces in accordance with applicable drawings, design and these specifications.

35.02 **Construction Requirements:** Road marking work to be execute with thermoplastic materials. Apply with spary machine with approved best quality and colour of paint. Surface cleaning from dust, oil or dirt, smoothing, finishing necessary.

35.03 **Method of Measurement:** Measurement shall be made in square metre (sqm) basis.

35.04 **Basis of Payment:** The amount of completed and accepted work, measured as provided, shall be paid at the contract unit price per square metre (sqm) which payment shall constitute full compensation for furnishing all materials, equipment and labour including transport, storage

and handling of materials as well as all incidentals necessary to complete the work.

36.00 SUPPLYING AND PLANTING TREES PLANT

36.01 **Description:** The work under this item shall consist of supplying and planting trees as shown in the drawing, or as specified in the schedule of items and bill of quantities and this specification.

36.02 **Planting Requirements:** Planting trees as listed in the schedule of items and bill of quantities shall be arranged with agri - preparation for nursing in a separate place away from site, after nursing the plants to be shifted and re-planted. Sapling collection for actual nos. of trees shall be considered. The area shall be properly cleaned in/c uprooting grass, trees, jungles etc. before planting trees. Trees to be planted after digging holes up to 1.50 square metre area and depth up to 1 metre or any approved size including filling etc complete After planting trees the area shall be irrigated up to 2 (Two) months etc. Earth Fertilizer shall be provided during planting trees etc. Minimum 6 (six) months to be kept under maintenance.

36.03 **Method of Measurement:** Actual nos. of planted alive trees shall be counted as Each for payment.

36.04 **Basis of Payment:** Planting trees will be paid at the contract unit rate per each of the counted alive plants of approved and accepted work. which price shall constitute full compensation for plants, agri-preperation from outside of the site, shifting and re-plantation, digging earth, filling earth, providing fertilizer supplying earth, maintenance, irrigation, labour etc. all complete.

37.00 SUPPLYING AND PLANTING FLOWERING TREES

37.01 **Description:** The work under this item shall consist of supplying and planting flowering trees as shown in the drawing, or as specified in the schedule of items and bill of quantities and this specification.

37.02 **Construction Requirements:** Planting following trees as listed in the schedule of items and bill of quantities shall be arranged with agri - preparation for nursing in a separate place away from site, after nursing the flowering plants to be shifted and re-planted. Sapling collection for actual nos. of trees shall be considered. The area shall be properly cleaned in/c uprooting grass, trees, jungles etc. before planting trees. Trees to be planted after digging holes including filling etc complete After planting trees the area shall be irrigated up to 2 (Two) months etc. mixing @ 1 cft well decomposed cow dung with 20% loamy salty soil and 6 cft excavated soil. Earth Fertilizer shall be provided during planting trees etc. Minimum 6 (six) months to be kept under maintenance.

37.03 **Method of Measurement:** Actual nos. of planted alive flowering trees shall be counted as Each for payment.

37.04 **Basis of Payment:** Planting flowering trees will be paid at the contract unit rate per Each of the counted alive flowering plants of approved and accepted work. which price shall constitute full compensation for plants, agri-preparation from outside of the site, shifting and re-plantation, digging earth, filling earth, providing fertilizer supplying earth, maintenance, irrigation, labour etc. all complete.

38.00 PROVIDING BAMBOO TREE GUARD

38.01 **Description:** The work under this item consists of supplying, fitting and fixing bamboo tree guards as specified in the drawings and schedule of items and bill of quantities and these specifications.

38.02 **Construction Requirements :** Bamboo tree guard shall be 1200 mm long and 500 mm dia fixing with best quality multi bamboo split 2 mm in size having 75 mm x 75 mm square holes with 2 mm wide bamboo splits strengthened with 4 Nos. 2 mm wide bamboo split in both sides tightened with G.I wire fitted with 3 Nos. 63 mm dia borra bamboo post of 1800 mm long of which 600 mm will be driven into earth by digging hole followed by fill back including supply of tools and plants all complete as per direction of engineer-in-charge

38.03 **Method of Measurement:** Bamboo tree guards shall be measured in each.

38.04 **Basis of Payment:** Bamboo tree guards will be paid at the contract unit rate per Each of the approved and accepted installed work, which price shall constitute full compensation for supplying material, labour, fitting fixing etc. all to complete the works.

39.00 PREPARATION OF GROUND FOR PLANTING AREA

39.01 **Description:** The work under this item consists of preparation of ground for plantation as specified in the drawings and schedule of items and bill of quantities and this specification.

39.02 **Construction Requirements:** The plantation area shall be prepared by spading the ground. Spading depth shall be of minimum 150mm to 230mm. The area shall be scraped, breaking all kinds of earth clods to make powder by hammer. Rubbish to be picking up, picking and uprooting unwanted grass, removing surplus earth as per instruction by the Engineer. The lawn area shall be well dressed and proper gradient.

39.03 **Method of Measurement:** Preparation of ground for planting area will be measured in square metre (sqm) for payment.

39.04 **Basis of Payment:** Preparation of ground area will be paid at the contract unit rate per square metre (sqm) of the measured areas of approved and accepted work, which price shall constitute full compensation for material, labour, Tools and plants etc. all to complete the work.

40.00 SUPPLYING ALLUVIAL LOAMY SILT SOIL

40.01 **Description:** The work to be performed under this section shall consist of supplying and placing, filling alluvial loamy silt soil for planting works as per drawing and these specifications.

40.02 **Planting Requirements:** Approved best quality alluvial loamy silt soil shall be provided during planting works. The soil shall be free from any organic substances. Greatest care shall be exercised during placing so that no harm can be made in planter box or other places. After placing the surroundings shall be cleaned and washed.

40.03 **Method of Measurement:** Actual volume of filling shall be measured in Cubic Metre basis for payment.

40.04 **Basis of Payment:** Volume of alluvial silt soil will be paid at the contract unit rate per Cubic metre (cum) of the measured volume of approved and accepted work. which price shall constitute full compensation for plants, leveling and dressing, fertilizer, earth, labour, carriage cleaning etc. all to complete the work.

41.00 **PLANTING WEDELIA CALENDULCIA**

41.01 **Description:** The work to be performed under this section shall consist of supplying and planting wedelia calendulacia as per drawing and these specifications.

41.02 **Planting Requirements:** Approved best quality Wedelia calendulacia shall be planted. Greatest care shall be exercise during caring by truck or any other means. Plants shall be sorting out, size should be as specified. Plant shall be washed after shorting, dibbling at a distance apart as per instruction, Planting area shall be irrigated till grown at least for two months. Sometimes weeding the undesirable wedelia calendulacia, mowing with appropriate mower up to two months after plantation, applying urea fertilizer on the surface @ 1 kg per 9.29 sqm etc. all complete.

41.03 **Method of Measurement:** Actual area of planting area of wedelia calendulacia shall be measured in square metre (Sqm) for payment. No measurement shall be taken for wastage.

41.04 **Basis of Payment:** Area of wedelia calendulacia will be paid at the contract unit rate per square metre (sqm) of the measured areas of approved and accepted planting work. which price shall constitute full compensation for plants, leveling and dressing, fertilizer, earth labour, etc. all to complete the work.

42.00 **PLANTING BURN FELSIA**

42.01 **Description:** The work to be performed under this section shall consist of supplying and planting burn felsia as per drawing and these specifications.

42.02 **Planting Requirements:** Approved best quality burn felsia shall be planted. Greatest care shall be exercise during caring by truck or any other mean. Plants shall be sorting out; size should be as specified. Plant shall be washed after shorting, dibbling at a distance apart as per instruction, Planting area shall be irrigated till grown at least for two months. applying urea fertilizer on the surface @ 1 kg per 9.29 sqm including supply of tools and plants etc. all complete as per drawing. Sometimes weeding the undesirable burn felsia, mowing with appropriate mower up to two months after plantation, etc. all complete.

42.03 **Method of Measurement:** Actual planting area of burn felsia shall be measured in square metre (Sqm) for payment. No measurement shall be taken for wastage.

42.04 **Basis of Payment:** Area of burn felsia will be paid at the contract unit rate per square metre (sqm) of the measured areas of approved and accepted planting work. which price shall constitute full compensation for plants, leveling and dressing, fertilizer, earth labour, etc. all to complete the work.

43.00 PLANTING LOW FLOWERING SHURBS

43.01 **Description:** The work to be performed under this section shall consist of supplying and planting low flowering shrubs as per drawing and these specifications.

43.02 **Planting Requirements:** Similar to item no 42.02

43.03 **Method of Measurement:** Similar to item no 42.03.

43.04 **Basis of Payment:** Similar to item no. 42.04.

44.00 PLANTING CLIMBING SHARBS

44.01 **Description:** The work to be performed under this section shall consist of supplying and planting Climbing shrubs as per drawing and these specifications.

44.02 **Planting Requirements:** Sorting the plants to proper size, washing, dibbling at a distance apart as per instruction, weeding the undesirable climbing shrubs, mowing, applying urea fertilizer on the surface @ 1 kg per 9.29 sqm and stated in the schedule of items and Bill of quantities.

44.03 **Method of Measurement:** Climbing shrubs shall be measured in lineal metre for payment.

44.04 **Basis of Payment:** Planting of climbing shrubs will be paid at the contract unit rate per lineal metre of the measured length of approved and accepted planting work. which price shall constitute full compensation for plants, leveling and dressing, fertilizer, earth labour, carriage, irrigation, mowing, wedding etc. all to complete the work.

45.00 PLANTING GRASS ON ROOF TOP

45.01 **Description:** The work to be performed under this section shall consist of supplying and planting approved best quality grass on roof top, road side or anywhere is required as per drawing, as specified in the schedule of items and bill of quantities and these specifications.

45.02 **Planting Requirements:** Supplying and planting grass on roof top, road side or any where is required of approved quality in/c caring by truck or any other means, sorting, the grass to proper size, washing the grass, dibbling the grass at a distance apart as per instruction, irrigation of area till the grass grown at least for two months after plantation, weeding the undesirable grass, mowing the grass by lawn mower up to two months after plantation, applying urea fertilizer on the lawn surface @ 1 kg per 9.29 sqm including supply of tools and plants etc. all complete as per drawing and direction of the Engineer-in-Charge/Consultant.

45.03 **Method of Measurement:** Actual area of planting grass shall be measured in square metre (Sqm) for payment. No measurement shall be taken for wastage.

45.04 **Basis of Payment:** Area of grass on roof top will be paid at the contract unit rate per square metre (sqm) of the measured areas of approved and accepted planting work. which price shall constitute full compensation for plants, leveling and dressing, fertilizer, earth labour, **carriage**, maintenance, irrigation etc. all to complete the work.

46.00 PLANTING HEDGE

- 46.01 **Description:** The work to be performed under this section shall consist of supplying and planting approved best quality hedge on road side as per drawing, as specified in the schedule of items and bill of quantities and these specifications.
- 46.02 **Planting Requirements:** Before planting hedge the area minimum 600mm wide shall be digging out up to a depth of 300mm and removing excavated earth as per instruction. The trenches shall filled up with a mixture of cow dung, loamy silty soil, carted earth @ 1 cft cow dung carried by truck or any other means. Collected hedge to be shorting out, size should be as specified, dibbing hedge at a distance apart as per instruction. The hedge area shall be irrigated up to 2(two) months after plantation, weeding undesirable hedge and other plants. Mowing with appropriate mower, maintenance up to 6(six) months etc. complete.
- 46.03 **Method of Measurement:** Planting of Hedge shall be measured in lineal metre for payment. No measurement shall be taken for wastage.
- 46.04 **Basis of Payment:** Hedge planting will be paid at the contract unit rate per lineal metre of approved and accepted planting work which price shall constitute full compensation for plants, leveling and dressing, fertilizer, earth labour, carriage, maintenance, irrigation etc. all to complete the work.

47.00 PROVIDING BAMBOO JAFERY FENCING

- 47.01 **Description:** The work under this item consists of supplying, fitting and fixing bamboo jafery fencing as specified in the drawings and schedule of items and bill of quantities and these specifications.
- 47.02 **Construction Requirements:** Bamboo jafery fencing shall be made from well matured broak bamboo. Each split shall be 2mm in size having 75mmx 75 mm mesh. The mesh of fencing shall be diagonally and horizontally including 25mm framing a square shape in both ways and both sides tightened with G.I wire fitted with Borrak bamboo post of 100 mm dia and placed firmly in position at 1800 mm apart including supply of tools and plants, digging hole and filling back etc.
- 47.03 **Method of Measurement:** Bamboo jafery fence shall be measured in square metre basis for payment.
- 47.04 **Basis of Payment:** Bamboo jafery fence will be paid at the contract unit rate per square metre of the of approved and accepted installed work. Which price shall constitute full compensation for supplying material, labour, fitting fixing etc. all to complete the works.

Bill of Quantities

**Landscaping works for Construction of Three Storied with a Semi-Basement
Academic Building for Asian University
for Women, Pahartoli, Chattogram.**

SL NO.	DESCRIPTION	AMOUNT IN TAKA
1	2	3
BILL NO. 1	GENERAL WORKS	
BILL NO. 2	HARD LANDSCAPING	
A	COURT YARD	
B	ROOF	
C	INFORMAL COLABORATION	
D	FOOT PATH & BUILDING SORROUNDINGS	
E	ROAD	
	TOTAL FOR BILL NO. 2	
BILL NO. 3	SOFT LANDSCAPING	
A	TREES	
B	GROUND COVER TRESS	
C	WATER PROOFING WORKS	
	TOTAL FOR BILL NO 3	
BILL NO. 4	MEP WORKS	
	TOTAL FOR BILL NO 4	
	GRAND TOTAL FOR (BILL NO 1,2 3 & 4) TK=	

(In Word: Taka only)

Schedule of Items & Bill of Quantities (BOQ)_Civil & Others

Landscaping works for Construction of Three Storied with a Semi-Basement Academic Building for Asian University for Women, Pahartoli, Chattogram.

BILL NO.:1: GENERAL WORKS:

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
1	<p>Erection and maintenance of site office and removal of the same after completion of work in accordance with the conditions of contract. In addition to the office required for his own use, the contractor shall provide and maintain furnished field office for the use of the Engineer-in-charge and his staff. The field office is to have a concrete floor, adequate foundation, brick walls, false ceiling of hard board with seasoned Garjan wood frame and painted, and all windows are to be glazed and provided with steel grill. Outside and inside wall surface are to be painted on plaster acceptable to the Engineer in-charge. The field office shall be maintained in a secure and watertight condition by the contractor until the completion of the contract and shall be provided with electricity, running water and sewerage. All doors shall be fitted with approved locks and windows shall be provided with screen/blinds. Before construction the contractor shall submit plans and drawings showing</p> <p>proposed details and location for the field office, including foundations, access roads, shades, layout of electrical and water supply and hard standings thereto for the approval of the Engineer-in-charge.</p>				

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
	<p>The Engineer-in-charge may require revision of the plans prior to giving approval for construction. The contractor shall also submit details proposed furniture, fittings and other items of equipment and plant to the Engineer-in-charge for approval. The office, complete with furnishings, fittings, access roads and hard standings shall be ready for occupation by the Engineer-in-charge</p> <p>(This is a time related item; proportionate payment for this item shall be made distributing in each bill on the basis of percentage progress of the whole works under contract)</p>				
1.1	Engineer's site office of minimum 10 sqm plinth area with providing necessary facilities including office furniture, consumables, stationeries etc.	1.00	Job		
2	Providing necessary facilities in construction site for maintaining site safety including safety helmet, safety belt , apron, gumboot, goggles etc.	1.00	Set		
3	Supplying and providing of first aid box with necessary materials/medicine (hygienic gown, thermometer, adhesive dressings, antiseptic solutions, bandages, cotton balls or swaps, emergency blanket, gloves, hand sanitizer, ice pack, saline etc). All complete as per direction of Engineer-in -charge.	1.00	Each		

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
4	<p>Providing 3 sets as-built drawings subject to Engineer's approval produced in AutoCAD software in 584.5 mm x 413.5 mm (A-2 size) standard drawing paper, and operating and maintenance manual of the equipment and plant incorporated in the works, if any, in original by the date stated in the particular conditions of contract (PCC). If the contractor does not supply the as-built drawings and operating & maintenance manuals by the date stated in the particular conditions of contract (PCC), or they do not receive the Engineer-in-charge's approval, the Engineer-in-charge shall withhold the amount stated in the PCC from the payments due to the contractor. The as-built drawings must show the permanent works as actually constructed and reflect the revision of drawings supplied to the contractor during the Contract as well as revisions of drawings supplied to the contractor during the contract. (One set of as-built drawings shall be considered for measurement and payment)</p>	1.00	Per Tender		
5	<p>Mobilization and cleaning site before commencing actual physical work and during contract period and demobilization after completion of the Works under contract accepted by Engineer-in-Charge/Consultant. This work shall also covers clayey cleaning and clearing, and in the ground to the project can be executed an extent that all the events of works of smoothly in a working environment with a particular attention on safety and security in all respects, agreed by the Engineer / Consultant, where payments are to be based on ground area determined by the Engineer-in-Charge / Consultant. and be proportionate to the percentage progress of work under contract as a whole in all respects and approved by the Engineer-in-Charge / Consultant.</p>	1.00	LS		
TOTAL COST BILL NO:1 TK.					

Schedule of

(BoQ)

Items & Bill of Quantities

Landscapping works for Construction of Three Storied with a Semi-Basement Academic Building for Asian University for Women, Pahartoli, Chattogram.

BILL NO: 1:-HARD LANDSCAPING

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
A	COURT YARD				
1.1	<p>Brick paving work in court yard with 242mmx70mm mm facing with hand made machine mould 50% sorted out 242mmx 115mmx 70 mm size 1st class bricks of CONFORCE LIMITED (CFC) or approved equivalent quality in cement sand with 6 mm thick cement mortar (1:3) joints, sand (F.M. 1.5) including raking out joints, cutting the bricks to required size with grinding machine or any other means if needed, soaking the same 24 hours before use including high class flush pointing in cement mortar (1:2) (proportion of cement shall be of 2:1 white : grey cement), providing necessary tools during work to keep each joint true to uniform and level, washing and screening of sand, curing at least for 7 days including cost of water, electricity and other charges etc. all complete as per drawing and direction of the Engineer-in-Charge/Consultant. (242mmx70mm face should be placed for facing).</p> <p>(Contractor shall construct a sample at his own cost of Brick Paving work as per instruction for approval be the Engineer-in-Charge / Consultant before start the work.)</p>	690.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
1.2	<p>Fair Face brick veneered with 242mmx70mm facing in Pool wall, court yard wall , Tie wall near lake or any where is required with machine mould hand made 50% sorted out bricks of 242mmx 115mmx 70 mm size 1st class bricks of CONFORCE LIMITED (CFC) or approved equivalent quality in 6 mm thick cement sand (F.M. 1.5) mortar joint (1:3), including racking out joints, cutting the bricks to required size with grinding machine or any other means if required, providing necessary tools or any other else during work to keep each joint true to uniform and level including high class flush pointing in cement mortar (1:2) (proportion of cement shall be of 2:1 white : grey cement), cleaning and soaking the bricks at least for 24 hours before use and washing and screening of sand, appropriate metal scaffolding, curing at least for 7 days including cost of water, electricity and other charges etc. all complete as per</p> <p>drawing and direction of the Engineer-in-Charge / Consultant. (242mm x70mm face should be placed for facing). (Contractor shall construct a sample at his own cost of Brick Paving work as per instruction for approval be the Engineer-in-Charge / Consultant before start the work.)</p>	376.00	Sqm		
1.3	<p>Brick cladding work in court yard, pond or any where is required with 242mmx70mm mm facing with machine mould hand made 50% sorted out bricks of 242mmx 115mmx 70 mm size 1st class bricks of CONFORCE LIMITED (CFC) or approved equivalent quality in 6 mm thick cement mortar joint (1:3) sand (F.M. 1.5) including raking out joints, cutting the bricks to required size with grinding machine or any other means if needed, soaking the bricks 24 hours before use including high class flush</p>	108.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
	pointing in cement mortar (1:2) (proportion of cement shall be of 2:1 white : grey cement), cleaning, curing at least for 7 days etc. including washing and screening of sand, cost of electricity and other charges complete in all respect as per drawing, specification and direction of the Engineer in Charge / Consultant. (242mmx70mm face should be placed for facing).(Contractor shall construct a sample at his own cost of Fair Face Brick Veneered work as per instruction for approval be the Engineer-in-Charge/Consultant before start the work.).				
1.4	Supplying fitting & fixing any size 18 mm thick flame finish still grey granite (Greens or approved equivalent) in the pool stair over 25 mm thick cement sand (F.M. 1.5) mortar base (1:2) including placing cement slurry below the stone, cutting the stone to desired size, grinding and finishing the edges, setting in position in proper level, supplying and applying COTTO sealers FILA MP/90 @ 1 litre for 40 square metre including supplying all necessary equipments materials and finishing the top and necessary auxiliary materials and water, electricity and other charges etc. complete in all respect as per drawing and direction of the Engineer-in-Charge/Consultant. (Contractor shall construct a sample at his own cost for approval be the Engineer-in-Charge/Consultant before start the work.)	141.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
1.5	Supplying fitting fixing any size 50 mm thick matt polish granite (Greens or approved equivalent) as shown in the drawing over 25 mm or any thick cement sand (F.M. 1.5) mortar (1:5) including placing cement slurry below the stone, cutting the granite to desired size, grinding and finishing the edges, setting in position in proper level ,supplying and applying COTTO sealers FILA MP/90 @ 1 litre for 40 square metre including supplying all necessary equipments / materials and finishing the top by pumice stone and necessary auxiliary materials and water, electricity and other charges complete in all respect as per drawing, specification and direction of Engineer-in-Charge / Consultant. (Contractor shall construct a sample at his own cost for approval be the Engineer-in-Charge/Consultant before start the work.)	41.00	Sqm		
1.6	Supplying fitting fixing any approved size 18 mm thick matt polish still grey granite (Greens or approved equivalent) as shown in the drawing over 25 mm thick cement sand (F.M. 1.5) mortar (1:2) including, placing cement slurry below the stone, cutting the stone to desired size, grinding and finishing the edges, setting in position in proper level ,supplying and applying COTTO sealers FILA MP/90 @1 litre for 40 square metre including supplying all necessary equipments / materials and finishing the top and necessary auxiliary materials and water, electricity and other charges etc. complete in all respect as per drawing and direction of the Engineer-in-Charge /Consultant. (Contractor shall construct a sample at his own cost for approval be the Engineer-in-Charge / Consultant before start the work.)	48.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
1.7	<p>Supplying, fitting and fixing approved best quality 300mm x 300mm size or any approved size country made non-slip unglazed Matt finish floor tiles complying BDS ISO 13006: 2015, water absorption $\leq 0.5\%$, modulus of rupture (MOR) ≥ 27 N/mm², (TL2) as shown in the drawing placed edge to edge with a 1mm wide narrow joint with 20mm or above thick cement sand (F.M. 1.2) mortar (1:4) base and raking out the joints, filling the narrow joints with white cement and colouring pigments matching with the tiles supplying and applying approved best quality COTTO or approved equivalent Hygienic grout (anti-bacteria, anti-fungi, anti-algae, anti-crack, acid resistance) Modified ASTM-D5590 & ASTM-D5589, JIS Z-2801, ANSI A118.6 including cutting and laying the tiles in proper way and finishing with care etc. all complete in all respect as per finish schedule, drawing, specification and direction of Engineer-in-Charge / Consultant.</p> <p>(Contractor shall prepare a sample at his own cost for approval before execution of the work)</p>	127.00	Sqm		
1.8	<p>Supplying, fitting and fixing approved best quality country made complying BDS ISO 13006: 2015, 150mm x75mm x 6mm or any approved size Matt finish Tiles (TL1) in wall as shown in the drawing with staggered bond or any approved system placed edge to edge with a 1mm wide narrow joint on cement sand (F.M. 1.2) mortar (1:3) base and raking out the joints, filling the narrow joint with white cement and colour pigment. supplying and applying approved best quality Hygienic grout (anti-bacteria, anti-fungi, anti-algae, anti-crack, acid resistance) Modified ASTM-D5590 & ASTM-D5589, JIS Z-2801, ANSI A118.6 including cutting, laying and</p>	83.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
	hire charge of machine and finishing with care etc. including cost of water, electricity and other charges complete in all respect as per drawing, finish schedule and direction of the Engineer-in-Charge/Consultant. (Contractor shall prepare a sample at his own cost for approval before execution of the work)				
1.9	<p>Fair face Pre cast R.C.C work for courtyard & below canopy Benches with 40% grey cement (Scan or approved equivalent brand) and 60% white cement (Elephant or approved equivalent brand), Coarse Sylhet sand of F.M 2.50 and 20 mm down well graded stone chips conforming to ASTM C-33, with minimum cement content having minimum $f'c = 30$ Mpa, which is to be confirmed after trial mix, trial mix strength 40 MPa Cement conforming to BDS EN-197 1-CEM-II, casting in forms on Linonix film/Marine ply wood/Formica or approved equivalent form work on metal framing maintaining true to plumb, placing 1% reinforcement in position; concrete mixing, placing, compacting and curing at least for 28 days, The benches top floor width 600mm and thickness is 220mm, leg width 600mm and thickness is 220mm, height 350mm and 35mm thick granite Stone in all exposed surface in/c placing in position and supplying all kinds of materials and labour etc. complete in all respect as per drawing and direction of Engineer in Charge/Consultant.</p>				
1.9.1	a. Size: 3.000 M x 0.600 M	6.00	Each		
1.9.2	b. Size: 2.500 M x 0.600 M	4.00	Each		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
1.10	Fair face Pre-cast R.C.C works for planters coping with 40% grey cement (Scan or approved equivalent brand) and 60% white cement (Elephant or approved equivalent brand), Coarse Sylhet sand of F.M 2.50 and 20 mm down well graded stone chips conforming to ASTM C-33, with minimum cement content having minimum $f_c = 30$ Mpa, which is to be confirmed after trial mix, trial mix strength 40 MPa Cement conforming to BDS EN-197-1-CEM-II, placing 1% reinforcement and forms work with ply wood on metal frame and Formica pasted on plywood, placing in position in/c supplying 6 mm & 18 mm size gravel stone for planters, required quantity of earth for planters, fertilizer, water proofing work with VANDEX super/super white all complete as per drawing, specification and direction of the Engineer in Charge / Consultant.	383.00	Sqm		
1.11	Manufacturing, supplying, fitting and fixing Metal grating on pool drain and roof drain of any design with galvanized M.S section etc. all complete in all respect as per drawing, specification and direction of the Engineer-in-Charge/Consultant.	42.00	Sqm		
1.12	Supplying fitting and fixing 100 mm dia galvanized metal trap with stainless steel grating on mouth etc. complete as per drawing specification and direction of the Engineer in Charge / Consultant.	6.00	Each		
		TOTAL COST FOR COURT YARD (A) TK			



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
B	ROOF				
	WATER PROOFING WORKS				
2.1	Supplying and applying water proofing Chemical Crystal Seal compound in courtyard and on the roof top of approved brand / origin / manufacturer from an authorized local agent or manufacturer and conforming to ASTM standards laying under the strict accordance with the manufacturer recommendations and instructions providing all safety provisions, mixing with cleaned water. Surface must be clean, free from oil and paint. Any surface water must be removed properly and apply by brush or spray etc complete in all respect as per manufacturer's specifications and direction of the Engineer-in-Charge / Consultant.	4,557.00	Sqm		
2.2	Supplying, carrying and placing of any approved color, 1200mmx600mm size and thick pre-cast cement concrete tiles CONCORD/NIRMAN on roof top or anywhere is required over 12 mm thick sand cement mortar (1:4) and filling the joints with cement sand mortar (1:4) including water proofing admixture and cutting the tiles to required sizes wherever necessary, cleaning and washing of sand, curing for minimum 3(three) days on mortar joints by jute /brush in wet, followed by impervious /wet covering for another 4 (four) days etc. all complete at any level in all respect as per drawing and direction of the Engineer-in-Charge/Consultant.	36.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
2.3	Supplying, carrying and placing of any approved color, 600mmx600mm size and thick pre-cast cement concrete tiles CONCORD/NIRMAN on roof top or any where is required over 12 mm thick sand cement mortar (1:4) and filling the joints with cement sand mortar (1:4) including water proofing admixture and cutting the tiles to required sizes wherever necessary , cleaning and washing of sand, curing for minimum 3 (three) days on mortar joints by jute /brush in wet, followed by impervious /wet covering for another 4 (four) days etc. all complete at any level in all respect as per drawing and direction of the Engineer-in-Charge/Consultant.	886.00	Sqm		
2.4	Supplying ,fitting and fixing Concrete Hollow block in roof top or any where is required having compressive strength of 13-18N/mm ² of any size compliance with ASTM C90, thickness of individual Block shell should not be less then 25 mm, water absorption not more than 7%, laying with mortar (with admixture) of cement, lime and sand in ratio 1:1:6 (sand not less than 1.2 F.M), filling the interstices with mortar and making bond with connecting walls including necessary scaffolding and curing for minimum 3 (three) days on mortar joints by jute /brush in wet, followed by impervious /wet covering for another 4 (four) days etc all complete at roof top at any levels etc. complete in all respect as per drawing, specification and direction of the Engineer -in-Charge / Consultant.	922.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
2.5	38 mm thick screeding on expose roof top finishing with (1:1.5:3) concrete with cement, best quality coarse sand (50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.5 and 50% best local sand of FM 1.5) and 12 mm down well graded stone chips, compacting and finishing the top with neat cement finishing and curing at least 7 days including cost of water, electricity and other charges etc. in any levels of roof all complete as per drawing and direction of Engineer-in-Charge/Consultant.	1,088.00	Sqm		
2.6	Supplying and laying of Single layer polythene sheet weighing one kilogram per 6.5 square meter in roof top below screeding work as shown in the drawing or any where below cement concrete etc. complete in all respect at any level as per drawing and direction of the Engineer-in-Charge/ Consultant.	2,058.00	sqm		
2.7	Double layer screeding work @ 38mm thick each layer on roof top as shown in the drawing with minimum 50 mm thick screeding finishing with (1:1.5:3) concrete with cement, best quality coarse sand (50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.5 and 50% best local sand of FM 1.2) as first layer , applying primer @ 0.01 litre per square metre , application of first body coat @ 0.60 litre per square metre and then application of second body coat @ 0.60 litre per square metre .After completion as above second layer of minimum 38mm thick screeding work with (1:1.5:3) concrete with cement, best quality coarse sand (50% quantity of Sylhet sand or coarse sand of equivalent F.M. 2.5 and 50% best local sand of FM 1.5) with 12 mm down well graded stone chips, compacting and finishing the top with neat cement and	1,457.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
	curing at least 7 days including providing fiber glass reinforcement at edges and 75mmx75mm fillet work with 1:1.50:3 concrete, cost of water, electricity and other charges etc. in any levels of roof all complete as per drawing and direction of Engineer-in-Charge / Consultant.				
2.8	75/125 mm thick brick work on roof top near gutter side wall as shown in the drawing with 1st class bricks in cement sand (F.M. 1.2) mortar (1:4) and making bond with connected walls in/c raking out joints, cleaning and soaking the bricks for at least 24 hours before use and washing of sand, curing at least for 7 days including cost of water, electricity & other charges all complete as per drawing and direction of the Engineer-in-Charge/Consultant.	450.00	Sqm		
2.9	Minimum 12mm thick cement sand (F.M. 1.2) plaster with neat cement finishing to masonry surfaces and any where is required or as indicated in the drawing (1:4) with cement (conforming to BDS 232) in/c washing of sand, finishing the edges and corners and curing at least for 7 days, cost of water, electricity & other charges etc. all complete in all respect as per drawing and direction of the Engineer-in-charge/Consultant.	849.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
2.10	Supply and laying 2 mm thick Geo-textile on roof top as shown in the drawing of approved quality and origin/ manufacturer as per manufacturer's instructions approved and accepted by the Engineer. Before commencing laying of Geo-textile, the Contractor must submit the method statement for carrying out this work including sample with evidence of origin and compliance certificate from independent testing laboratory for approval etc complete in all respect at any level as per drawing, specification and direction of the Engineer-in-Charge/Consultant.	1,457.00	Sqm		
2.11	Supplying fitting and fixing galvanized metal net grating on pipe mouth on the roof made with M.S section etc complete in all respect as per drawing and direction of the Engineer in Charge / Consultant.	21.00	Each		
2.12	Supplying and filling gravel stone on roof top in/c all kinds of carriage etc complete as per drawing, specification and direction of the Engineer-in-Charge/Consultant.	265.00	Cum		
2.13	Supplying, best quality of Sarnafil G476 or approved equivalent self adhesive water proofing membrane of approved brand /origin / manufacturer from an authorized local agent which meet properties all conforming to ASTM standards and laying, placing, fixing on made up firm and dry surfaces free from hollows, sharp protrusions, contaminates etc. ensuring good initial bond with the surfaces all complete under the strict accordance with the manufacturer recommendations and instructions providing all safety provisions in all respects as per drawing, specifications and direction of the Engineer in Charge / Consultant.	1,296.00	Sqm		
				TOTAL COST FOR ROOF (B) TK	



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
C	INFORMAL COLLABORATION				
3.1	<p>Brick paving work in informal collaboration with 242mm x 70mm mm facing with hand made machine mould 50% sorted out 242mm x 115mm x 70 mm size 1st class bricks of CONFORCE LIMITED (CFC) or approved equivalent quality in cement sand with 6 mm thick cement mortar (1:3) joints, sand (F.M. 1.2) including raking out joints, cutting the bricks to required size with grinding machine or any other means if needed, soaking the same 24 hours before use including high class flush pointing in cement mortar (1:2) (proportion of cement shall be of 2:1 white : grey cement), providing necessary tools during work to keep each joint true to uniform and level, washing and screening of sand, curing at least for 7 days including cost of water, electricity and other charges etc. all complete as per drawing and direction of the Engineer-in-Charge/ Consultant . (242mmx70mm face should be placed for facing).</p> <p>(Contractor shall construct a sample at his own cost of Brick Paving work as per instruction for approval be the Engineer-in-Charge/Consultant before start the work.)</p>	63.00	Sqm		
		TOTAL COST FOR INFORMAL COLABORATION (C) TK			



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
D FOOT PATH & BUILDING SURROUNDINGS					
4.1	Earth work in excavation in all kinds of soil for trenches in foot path including, layout, providing center lines, local benchmark pillars, leveling, ramming and preparing the base, fixing bamboo spikes and marking layout with chalk powder, providing necessary tools and plants, protecting and maintaining the trench dry etc., stacking, cleaning the excavated earth at a safe distance as per instruction etc. all complete in all respect as per drawing and direction of the Engineer in Charge/Consultant.	557.00	Cum		
4.2	Earth filling in foundation trenches and plinth in 150 mm layer with earth available within 90 m of the building site to achieve minimum dry density of 95% with optimum moisture content (Modified proctor test) including carrying watering, leveling, dressing and compacting to a specified percentage each layer up to finished level etc. all complete as per direction of Engineer in-Charge/Consultant.	525.00	Cum		
4.3	Sand filling in footpath trenches with sand having F.M. 0.8 in 150mm layers including leveling, watering and compaction to achieve minimum dry density of 90% with optimum moisture content (Modified proctor test) by ramming each layer up to finished level as per design, specification and direction of the Engineer in Charge / Consultant.	284.00	Cum		
4.4	Supplying and laying of Single layer polythene sheet weighing one kilogram per 6.5 square meter in roof top below screeding work as shown in the drawing or anywhere below cement concrete etc. complete in all respect at any level as per drawing and direction of the Engineer-in-Charge /Consultant.	1,617.00	sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
4.5	Mass concrete (1:3:6) in footpath with best quality cement, coarse sand or sylhet sand of F.M 2.50, 20 mm down graded stone chips including breaking stone, screening, mixing, laying, compacting to levels and curing for at least 7 days including the supply of water, electricity and other charges and supply of steel shutter materials (if any) and costs of tools and plant, labor etc. all complete as per drawing and direction of the Engineer-in-Charge/Consultant.	110.00	Cum		
4.6	Brick works with first class bricks with cement sand (F.M. 1.2) mortar (1:6) in foundation and plinth , filling the joints/interstices fully with mortar, racking out the joints, cleaning and soaking the bricks at least for 24 hours before use and curing at least for 7 days etc. all complete including cost of water, electricity and other charges and accepted by the Engineer-in-charge. (Cement: CEM-II/B-M)	11.00	Cum		
4.7	Brick paving work with HBB bond or any approved design in footpath with 242mmx70mm mm facing with handmade machine mould 50% sorted out 242mmx 115mmx 70 mm size 1st class bricks of CONFORCE LIMITED (CFC) or approved equivalent quality in cement sand with 6 mm thick cement mortar (1:3) joints, sand (F.M. 1.5) including raking out joints, cutting the bricks to required size with grinding machine if needed, soaking the same 24 hours before use including high class flush pointing in cement mortar (1:2) (proportion of cement shall be of 2:1 white : grey cement), providing necessary tools during work to keep each joint true to uniform and level, washing and screening of sand, curing at least for 7 days including cost of	1,370.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
	water, electricity and other charges etc. all complete as per drawing and direction of the Engineer-in-Charge / Consultant. (242mm x70mm face should be placed for facing).(Contractor shall construct a sample at his own cost of Brick Paving work as per instruction for approval be the Engineer-in-Charge / Consultant before start the work.)				
4.8	<p>Brick edging work in footpath with 242mmx70mm mm facing with handmade machine mould 50% sorted out 242mmx 115mmx 70 mm size 1st class bricks of CONFORCE LIMITED (CFC) or approved equivalent quality in cement sand with 6 mm thick cement mortar (1:3) joints, sand (F.M. 1.5) including raking out joints, cutting the bricks to required size with grinding machine if needed, soaking the same 24 hours before use including high class flush pointing in cement mortar (1:2) (proportion of cement shall be of 2:1 white : grey cement), providing necessary tools during work to keep each joint true to uniform and level, washing and screening of sand, curing at least for 7 days including cost of water, electricity and other charges etc. all complete as per drawing and direction of the Engineer-in-Charge / Consultant. (242mm x70mm face should be placed for facing).</p> <p>(Contractor shall construct a sample at his own cost of Brick Edging work as per instruction for approval be the Engineer-in-Charge / Consultant before start the work.)</p>	105.00	rm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
4.9	Supplying fitting & fixing 500 x 350 x 100 mm size pre-cast concrete kerb Stone having minimum compressive strength 15 MPa on road side and made with (1:2:4) cement concrete with Portland cement, coarse sand F.M 2.5 and 12 mm down graded stone chips etc complete as per drawing and direction of the Engineer in Charge / Consultant. (All sides of Curb stone shall be fair face finished).	13,501.00	Each		
4.10	Supplying fitting and fixing fair face pre-cast R.C.C Bollard in/c R.C.C work 40% grey cement (Scan or approved equivalent brand) and 60% white cement (Elephant or approved equivalent brand), Coarse Sylhet sand of F.M 2.50 and 20 mm down well graded stone chips conforming to ASTM C-33, with minimum cement content having minimum $f'c = 30$ Mpa, which is to be confirmed after trial mix, trial mix strength 40 MPa Cement conforming to BDS EN-197-1-CEM-II , placing 1.50% reinforcement and forms work with plywood on metal frame and Formica pasted on plywood/PVC pipe can be used for form work, placing in position in/c painting different color with 3 coats of synthetic enamel paint etc complete in all respect as per drawing, specification and direction of the Engineer - in-Charge / Consultant. (All surface of bollard to be fair face finished and smooth and no plastering will be permitted thereon) (The rate is inclusive the cost of fair face R.C.C work , form work, cost of reinforcement, labor, painting fitting and fixing, carriage, accessories etc.)	210.00	Each		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
4.11	Manufacturing, supplying, fitting and fixing any height and any design and shape Galvanized Metal railing made with M.S section in parking area in/c supplying all kinds of materials, labor, tools etc. Placing complete in all respect as per drawing, specification and direction of the Engineer-in-Charge / Consultant. (exposed area of railing will be considered for measurement)	210.00	Sqm		
4.12	Supplying and placing of Grey or any approved engraved cement concrete tiles any size having minimum thickness 24 mm over 12 mm sand cement mortar (4:1) each at a distance of 6 mm apart and filling the joints with cement sand mortar (1:4) including raking out joints and cutting the tiles to required sizes wherever necessary with high class recessed pointing, cleaning and washing of sand, curing for min 3 (three) days on mortar joints by jute /brush in wet, followed by impervious /wet covering for another 4 (four) days etc. all complete as per drawing and direction of the Engineer-in-Charge / Consultant.	1,058.00	Sqm		
TOTAL COST FOR FOOTPATH & BUILDING SORROUNDINGS (D) TK					



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
E ROAD					
5.1	Providing tack coat @ 7.50 kg of bitumen (60/70 penetration grade) per 10 sqm including heating bitumen up to 175°C to 185°C etc. all complete (cost of bitumen included) and accepted by the Engineer-in-charge.	8,197.00	Sqm		
5.2	50 mm thick compacted pre-mixed bituminous carpeting with 20 mm down graded stone-chips (having LAA value <= 30%, water absorption not greater than 2%, flakiness index not greater than 35) of gradation as specified @ 0.68 cum of stonechips mixed with 46 kg of heated bitumen of 60/70 penetration grade heated straight run bitumen satisfying the requirements of ASTM/AASHTO. Bitumen content % by wt. of total is 4.5% to 5.50% or as determined by job mix design. The bitumen and stone-chips shall be separately heated to a temperature of 140°C - 155°C and 150°C - 170°C respectively before mixing. The mixing shall be done at temperature between 140°C - 160°C at a separate place away from the fire. The bitumen and stone-chips mixture shall be laid uniformly over 10 sqm of surface in proper camber, grade and super-elevation only on the prepared and accepted base or surface in a single appropriate layer to give the	8,197.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
	specified compacted thickness. The mixture should be rolled with appropriate steel drum roller (3-5 tons) & pneumatic multiple tire roller (8-10 tons) to full compaction. The rolling temperature shall be maintained not below 90°C including supplying of all materials, their carriage, labourers, tools and equipment etc. all complete as per direction of the Engineer-in-charge. (In order to achieve the specified grading a blending of nominal maximum size of 20 mm, 12 mm crushed stone chips and stone dust is suggested and proportion will have to be determined by the laboratory analysis).				
5.3	Premixed bituminous seal coat with 0.12 cum of pea gravels mixed with 80 kg of bitumen (60/70 penetration grade) per cum of pea gravels and laid over 10 sqm road surface, spreading with proper camber, grade, surface blinding with dry sand (F.M. 1.2) @ 0.09 cum per 10 sqm, rolling at a temperature not below 90°C with appropriate steel drum roller (3-5 ton) and pneumatic multiple tire roller (8-10 tons) to the desired compaction etc. all complete and accepted by the Engineer-in-charge.	8,197.00	Sqm		
5.4	Providing painting top of the road surface as road marking in two coats with approved best quality and colour of Thermo-plastic paint, approved quality of paint from authorized local agent of the manufacturer in a sealed container having highly water resistant, high bondability, flexible, using specific brand thinner applied by brass/ roller or others over a coat of priming elapsing time for drying including surface cleaning from dust, oil or dirt, smoothening, finishing necessary tools etc. all complete in approved and accepted by the Engineer-in-charge.	450.00	Sqm		



ASIAN UNIVERSITY
FOR WOMEN

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
BILL NO:2:-SOFT LANDSCAPING					
A	TREES				
1.1	<p>Supplying and planting 1200mm to 1800mm height following listed trees plant of approved quality , sorting the plants to proper size, washing , dibbling at a distance apart as per instruction or in the drawing ,digging earth and filling, Preparation of ground to make ready for plantation by Leveling and dressing of the area to proper slope and grade by spading by spade, breaking earth clods to powder by hammers, picking up all sorts of rubbish, unwanted grasses by suitable tools, carrying and spreading the surplus earth into low lying area, Supplying of best and approved quality and adequate quantity of alluvial loamy silty soil ,decomposed cow dung, pesticides etc., irrigation of the area till the grown at least for two months after plantation, weeding the undesirable plants, mowing with appropriate mower up to two months after plantation, applying urea fertilizer on the surface @ 1 kg per 9.29 sqm including supply all tools and plants, labour, carriage, loading and unloading</p> <p>etc. all complete as per drawing specification and direction of the Engineer-in-Charge /Consultant.</p> <p>a) Gagon sherish or approved equivalent tree - 26 Nos.</p> <p>b)Sonalu (Cassia fistula)or approved equivalent tree -10 Nos.</p> <p>c) Khat Golap(Plumeria)or approved equivalent tree -18Nos.</p> <p>e)Kadom (Anthocephalus Chinensis) or approved equivalent tree -12 Nos.</p> <p>f) Swarana chapa(Michelia Campaca) or approved equivalent tree -9 Nos.</p> <p>g) Palash (Butea Monosperma)or approved equivalent tree -14 Nos.</p>	162.00	Each		



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Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
	<p>i) Dulichapa (Magnolia Pterocarpa) or approved equivalent tree -9 Nos.</p> <p>j) Jakarananda(Jakaranda Mimosifolia)or approved equivalent tree - 28 Nos.</p> <p>l) Raj ashok(Amherstia) or approved equivalent tree -4 Nos.</p> <p>m) LaL sonail(Cassaia Nodasa) or approved equivalent tree - 6 Nos.</p> <p>n) Nageshoweri (Mesua Ferrea) or approved equivalent tree - 21 Nos.</p> <p>o) Chatim(Alostonia Nobilis)or approved equivalent tree - 5 Nos.</p>				
1.2	<p>Supplying and planting approved size and height following listed flowering trees plant of approved quality , sorting the plants to proper size, dibbling at a distance apart as per instruction and in the drawing ,digging earth and filling, picking up all sorts of rubbish, unwanted grasses by suitable tools,carrying and spreading the surplus earth into low lying area , Supplying of best and approved quality and adequate quantity of alluvial loamy silty soil ,decomposed cow dung, pesticides etc., irrigation of the area till the grown at least for two months after plantation, weeding the undesirable plants, mowing with appropriate mower up to two months after plantation, including supply all tools and plants, labour, carriage, loading and unloading etc. all complete as per drawing, specification and direction of the Engineer-in-Charge /Consultant.</p> <p>a) Bakol (Mimusops) or approved equivalent tree -14 Nos.</p> <p>b) Nagbolly or approved equivalent tree -6 Nos.</p> <p>c) Dolon chapa or approved equivalent -10 Nos.</p> <p>d) Kamini or approved equivalent- 6 Nos.</p>	62.00	Each		



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Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
	e) Rokto kanchan (Bauhinia Variegata) or approved equivalent tree -5 Nos. k) White kanini or approved equivalent - 18 Nos.				
1.3	Supplying and providing, fitting, fixing multi bamboo tree guard 1200 mm long and 500 mm dia fixing with best quality multi bamboo split 2 mm in size having 75 mm x 75 mm square holes with 2 mm wide bamboo splits strengthen with 4 Nos. 2 mm wide bamboo split in both sides tightened with G.I wire fitted with 3 Nos. 63 mm dia borak bamboo post of 1800 mm long of which 600 mm will be driven into earth by digging hole followed by fill back including supply of tools and plants all complete as per direction of Engineer-in-charge/Consultant.	232.00	Each		
			TOTAL COST FOR TREES (A) TK		



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Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
B	GROUND COVER TREES & SHRUBS				
2.1	Preparation of ground to make ready for plantation by Leveling and dressing of lawn area to proper slope and grade by spading the same up to 150 mm to 230 mm beyond 38 mm thick scrapped ground by spade, breaking earth clods to powder by hammers, picking up all sorts of rubbish, unwanted grasses by suitable tools, carrying and spreading the surplus earth into low lying area including supply of tools and plants etc. all complete in all respect as per drawing and direction of the Engineer-in-Charge / Consultant.	6,967.00	Sqm		
2.2	Supplying of best and approved quality alluvial loamy silty soil including loading, unloading at both ends, properly stacking a site and spreading including supply of tools and plants etc. all complete as per specification and direction of the Engineer-in-Charge / Consultant.	1,260.00	Cum		
2.3	Supplying and planting Wedelia calendulacia of approved quality in/c caring by truck or any other means, sorting, the plants to proper size, washing, dibbling at a distance apart as per instruction, irrigation of the area till the grown at least for two months after plantation, weeding the undesirable wedelia calendulacia, mowing with appropriate mower up to two months after plantation, applying urea fertilizer on the surface @ 1 kg per 9.29 sqm including supply of tools and plants etc. all complete as per direction of the Engineer-in-Charge / Consultant.	3,150.00	Sqm		



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Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
2.4	Supplying and planting Burn Felsia (shrubs) of approved quality in/c caring by truck or any other means, sorting, the plants to proper size, washing, dibbling at a distance apart as per instruction, irrigation of area till after plantation, weeding the undesirable burn felsia, mowing with appropriate mower up to two months after plantation, applying urea fertilizer on the surface @ 1 kg per 9.29 sqm including supply of tools and plants etc. all complete as per drawing and direction of the Engineer in-Charge/Consultant.	383.00	Sqm		
2.5	Supplying and planting low flowering shurbs of approved quality in/c caring by truck or any other means, sorting, the plants to proper size, washing, dibbling at a distance apart as per instruction, irrigation of area till the grown at least for two months after plantation, weeding the undesirable flowering shurbs, mowing with appropriate mower up to two months after plantation, applying urea fertilizer on the surface @ 1 kg per 9.29 sqm including supply of tools and plants etc. all complete as per drawing and direction of the Engineer in-Charge / Consultant.	1,575.00	Sqm		
2.6	Supplying and planting climbing shurbs of approved quality in/c caring by truck or any other means, sorting, the plants to proper size, washing, dibbling at a distance apart as per instruction, irrigation of area till the grown at least for two months after plantation, weeding the undesirable climbing shurbs, mowing with appropriate mower up to two months after plantation, applying urea fertilizer on the surface @ 1 kg per 9.29 sqm including supply of tools and plants etc. all complete as per drawing and direction of the Engineer-in-Charge / Consultant.	263.00	rm		



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Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
2.7	Supplying and planting grass on roof top and on rood side or any where is required of approved quality in/c caring by truck or any other means, sorting, the grass to proper size, washing the grass, dibbling the grass at a distance apart as per instruction, irrigation of area till the grass grown at least for two months after plantation, weeding the undesirable grass, mowing the grass by lawn mower up to two months after plantation, applying urea fertilizer on the lawn surface @ 1 kg per 9.29 sqm including supply of tools and plants etc. all complete as per drawing and direction of the Engineer-in-Charge / Consultant.	3,150.00	Sqm		
2.8	Supplying and planting Hedge on rood side of approved quality by excavating earth 600mm wide and depth up to 300 mm filling up the bed by a mixture of cow dung, loamy silty soil, cutted earth @ 1 cft cow dung manure per 6 cft of cutted earth and 20% loamy silty soil including supply of tools and plant etc. in/c caring by truck or any other means, sorting, the hedge to proper size, dibbling the hedge at a distance apart as per instruction of Engineer, irrigation of planted area till the hedge grown and at least for two months after plantation, weeding the undesirable hedge, mowing the by appropriate mower up to two months after plantation, etc. complete in all respect as per drawing and direction of the Engineer-in Charge/Consultant.	559.00	Rm		



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Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
2.9	Supplying and providing, fitting, fixing bamboo jafry fencing by best quality multi bamboo split 2 mm in size having 75 mm x 75 mm mesh placed horizontally and diagonally doing 25 mm framing a square shape in both ways and both sides tightened with G.I wire fitted with Borrak bamboo post of 100 mm dia and placed firmly in position at 1800 mm apart including supply of tools and plants, digging hole and filling back etc. complete in all respect as per drawing and direction of the Engineer-in-Charge /Consultant.	173.00	Sqm		
		TOTAL COST FOR GROUND COVER TREES & SHRUBS (B) TK			
C WATER PROOFING WORKS					
3.1	Supplying, best quality of Sarnafil G476 or approved equivalent self-adhesive water proofing membrane of approved brand / origin / manufacturer from an authorized local agent which meet properties all conforming to ASTM standards and laying, placing, fixing on made up firm and dry surfaces free from hollows, sharp protrusions, contaminates etc. ensuring good initial bond with the surfaces all complete under the strict accordance with the manufacturer recommendations and instructions providing all safety provisions in all respects as per drawing, specifications and direction of the Engineer in Charge / Consultant.	1,296.00	Sqm		
		TOTAL COST FOR WATER PROOFING (C) TK			
		GRAND TOTAL FOR BILL NO. 1 & 2 TK			



Schedule of Items & Bill of Quantities (BOQ)_MEP

Landscaping MEP works for Construction of Three Storied with a Semi-Basement Academic Building for Asian University for Women, Pahartoli, Chattogram.

Sl. No.	Description of Items	Quantity	Unit	Quoted rate in Tk. (Both in fig. & words)	Amount in Taka
4	MEP Works				
A	Electrical System				
1.00	Cable Works:				
	Supply & installation of PVC insulated single core cable/PVC insulated & PVC sheathed single/multi core cables of Eastern/BBS /BRB/Supersign Cable having ISO9001 certificate of the following sizes in pre laid conduits /trench/tray and making good all damages and termination of connection at both ends as per drawing, specification and instruction of the Engineer-in-charge. The rate should be quoted inclusive of locally available best/approved quality PIB insulating tape (U.K./Japan), cable sockets, solderless connector, cutting/cleaning the pre laid PVC pipe, connection etc. This is an average rate and all material of this item will be of approved quality.				
i.	3C-2.5mm ² NYY FRLS	1960	Mtr.		
ii.	3C-4.0mm ² NYY FRLS	300	Mtr.		
iii.	4C-16.0mm ² NYY FRLS	200	Mtr.		



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iv.	4C-25.0mm2 NYY FRLS	300	Mtr.		
2.0	Switch Board				
	Supply and installation of imported gang switches and wall boxes of approved model from M.K(UK)/Legrand (France) /Schneider (France) complete with all other necessary accessories & connections everything complete as per drawing, specification and instruction of the Engineer-in-charge. The wall boxes may be locally made of 16SWG galvanized steel sheet including earthing block.				
i.	2 gang	05	Nos		
ii.	3 gang	10	Nos		
iii.	20 A DP Switch	25	Nos		
	Socket Outlet				
	Supply and installation of outdoor IP 65 grade 13A, 3-pin, 250V, universal type combined single gang covered socket suitable for 3 pin plug of approved model from M.K(UK)/Schneider(France) /Legrand (France) including the box, cover plate with necessary galvanized machine screws, earthing block complete with necessary connections as per drawings, specifications and direction of the Engineer-in-charge. The box may be locally made of 16SWG galvanized steel sheet conforming to BS4662.				
iv.	Power Socket Outlet	08	Nos		



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3.00	Distribution Board	01	Set		
	<p>Supply, installation, testing & commissioning of totally insulated distribution boards/Type tested imported type sheet steel board with insulated cover conforming to IEC439-1 from reputed manufacturers like Eaton / Siemens/ ABB having ISO9001 certificate housing the following rated MCB/ ELCB/ MCCB /MPCB, ON-OFF disconnecting switches, contactors, rotary & busbars and all other accessories as per technical specification & drawings. The distribution board shall be of suitable dimensions so as to accommodate the circuit breakers and busbars with insulated shroud with sufficient spacing including internal connection cables in the board and other materials, shall have hinged type door locks, circuit directory shall be suitable for concealed /surface mounted type having PVC cable glands/grommets of appropriate sizes, shall have knockout for conduits entry & exist, a suitable size copper plate earthing block, indicating lamp must be provided inside the box.</p>				
	<p>MDB : (For Land Scape) Incoming: 1X100A TP MCCB C-type surge protective device (25KA) Outgoing: 08X16A DP MCB 2X16A TP MCB 1X25 A TP MCB 04X16A SP MCB 6X10A SP MCB 10X16 A DP MCB 1X20A SP MCB FSS type Impulse Relay 160A TP+N+85 A E copper Busbar</p>				



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4.0	uPVC Pipe (For Electrical Cable Laying) Supply, fitting and fixing of Extra heavy uPVC pipe shall be made uPVC as per BS4514/ISO4422/				
	SS213 standard. Pipe shall be bell end socket type. Approved type of solvent sealant shall be used to install pipe and jointing the pipe with pipefittings. Joint shall be watertight. In brick wall pipe shall be surrounded by concrete in 1: 3.5: 5.5 and shall be clamped to wall properly at an interval of not more than 1200 mm. Pipe laying shall have the following gradient unless otherwise specified. Nominal dia of pipe with thickness shall be as follows. Product shall be of GINDE/L&S, China/National Polymer Ltd. Bangladesh or equivalent. This product shall be approved by Consultant.				
i.	50 mm dia, 2.5 mm thick	380	Mtr.		
ii.	32 mm dia, 2.2 mm thick.	230	Mtr.		
iii.	Accessories (Bend, Socket, Silicon, Y Joint, etc.)	01	Job		
5.00	Light Fittings				
	Design, Supply & installation of following Luminaries with all accessories as stated. The bidder shall submit the catalogue with the tender.				
	Proposed: IP 65 Grade LED Garden Light Wattage: 15-18W, 3000lm Reflector is easily adjustable from symmetric to asymmetric distribution CRI: 80 CCT: 4000k, 20000 Life Hours, Brand: Unilamp, Thailand or approved equivalent brand.	130	Set		

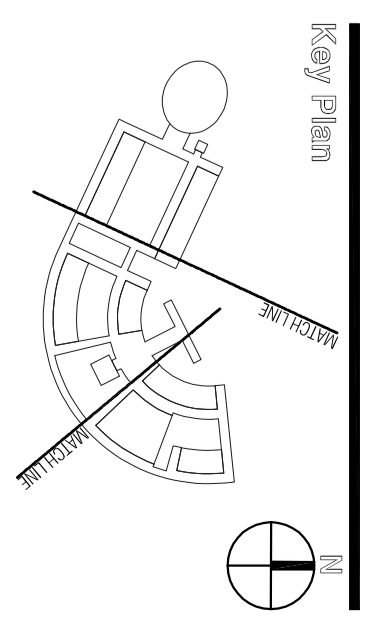


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B.	Plumbing System				
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	Design, supply, installation, testing, and commissioning of a storm water drainage system (including pits, related pumps, pipe accessories, valves, etc.) covering both internal and external landscape areas of the building. If the existing system is found to be inadequate, the Contractor shall incorporate additional drainage provisions within the proposed storm water network. Note: The Contractor shall assess the existing drainage condition of the building and the drainage facilities available within the landscape areas.	01	Job		
C	ICT System				
i.	Supply and installation of a 50 mm diameter HDPE duct with sand bedding for a 48-core armored single-mode optical fiber cable, including all necessary accessories for cable laying.	1000	Mtr.		
ii.	Earth excavation and filling for a 500 m trench (2 ft depth × 1 ft width).	500	Mtr.		
iii.	Inspection pit (450 × 450 × 450 mm) with finished cover including water proofing for maintenance of 48-core armored single-mode optical fiber cable.	05	Set		
D.	Fire System				
i.	Earth excavation and installation of MS 40 SCH pipe to establish connectivity for the pillar hydrant.	300	Mtr.		
E.	Others for Miscellaneous	01	Job		
				TOTAL COST FOR MEP (4)	
				TK	

Drawings



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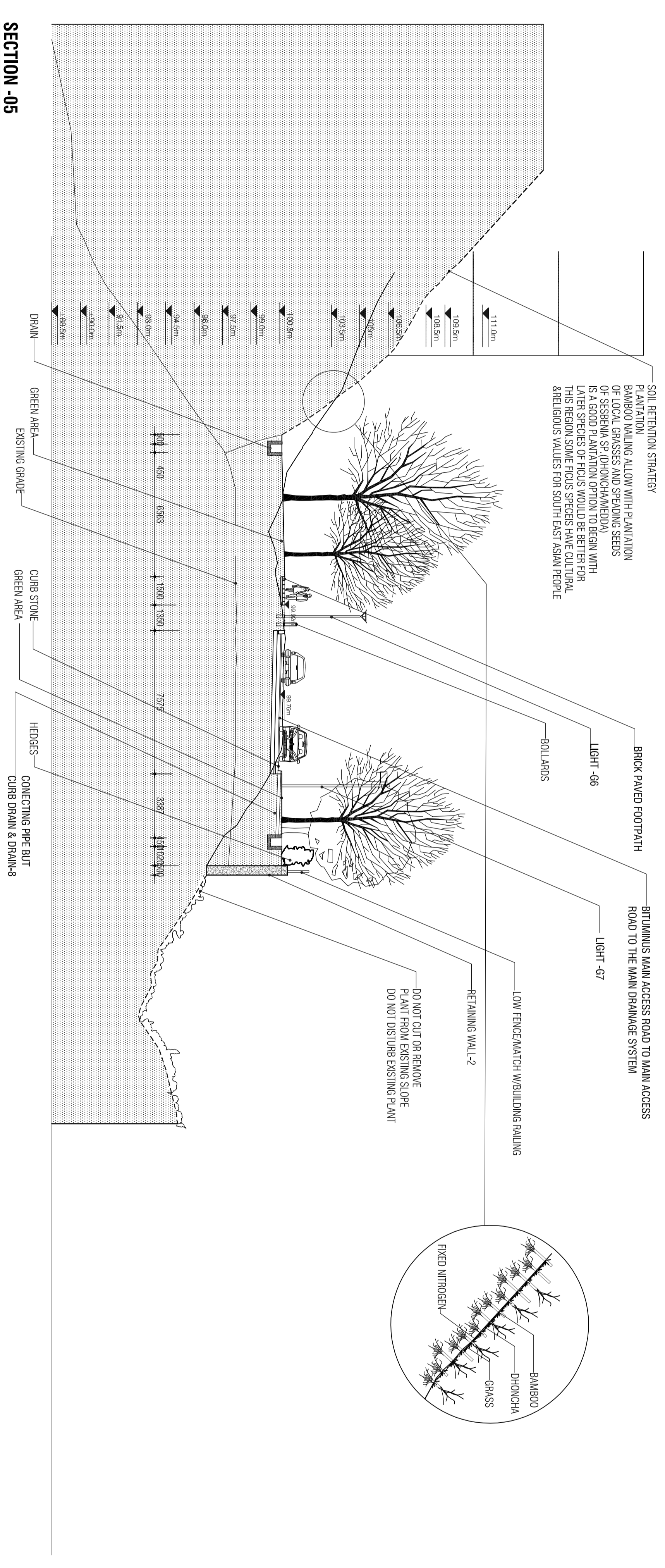
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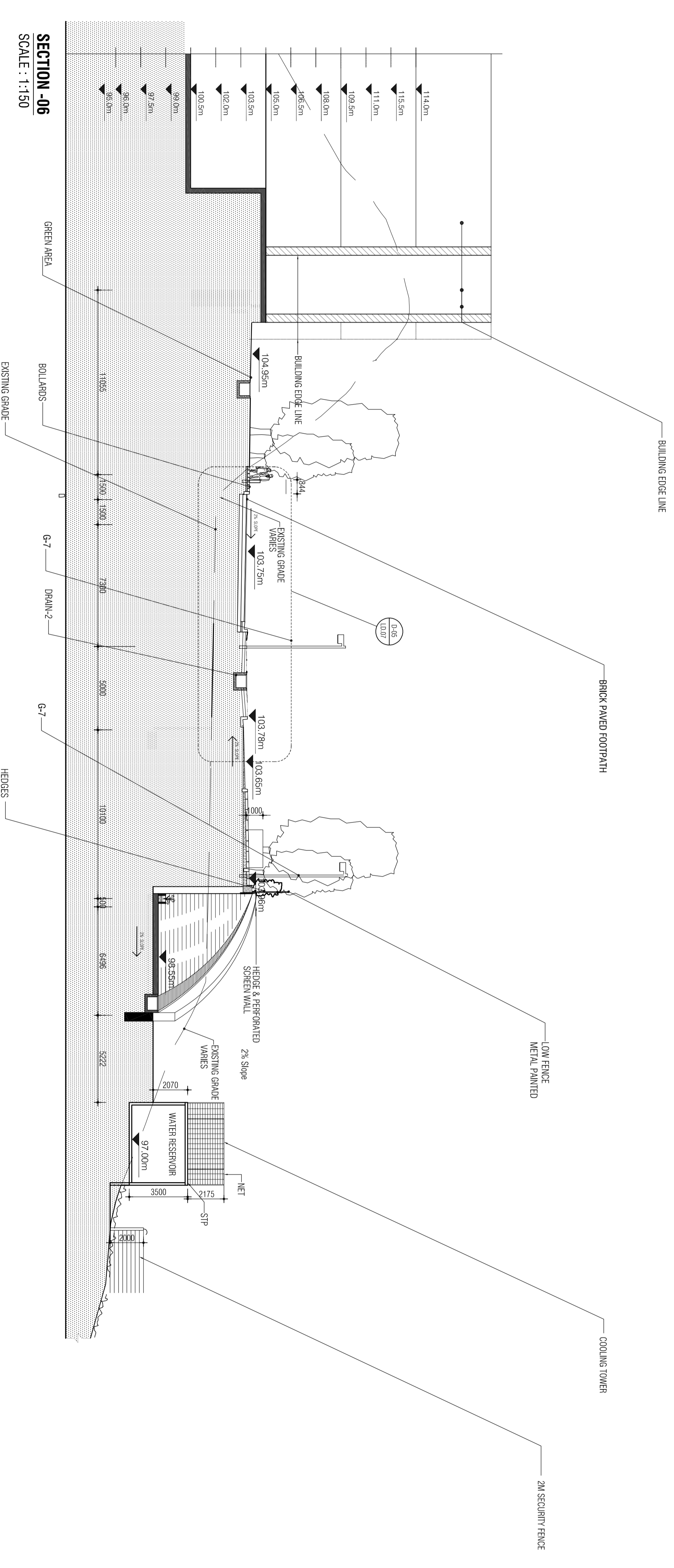
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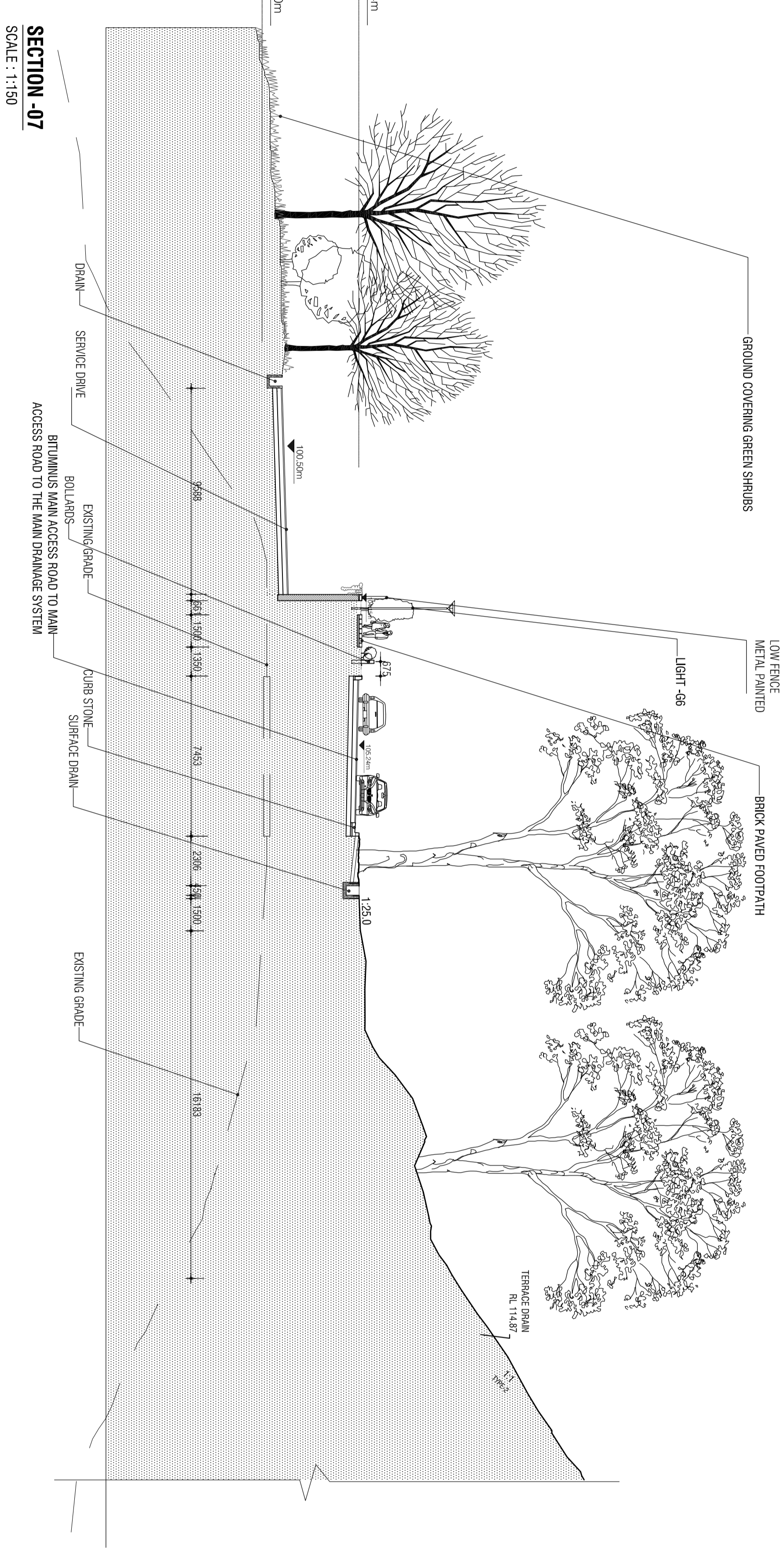
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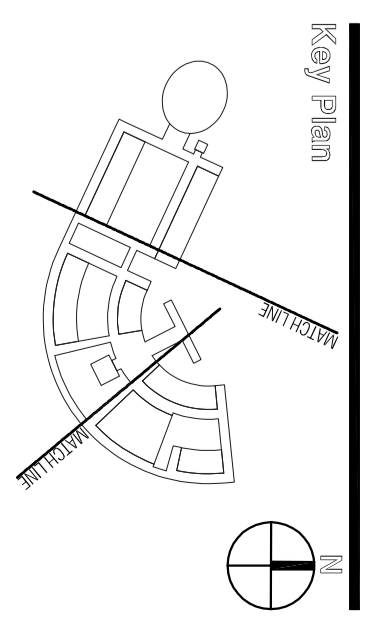
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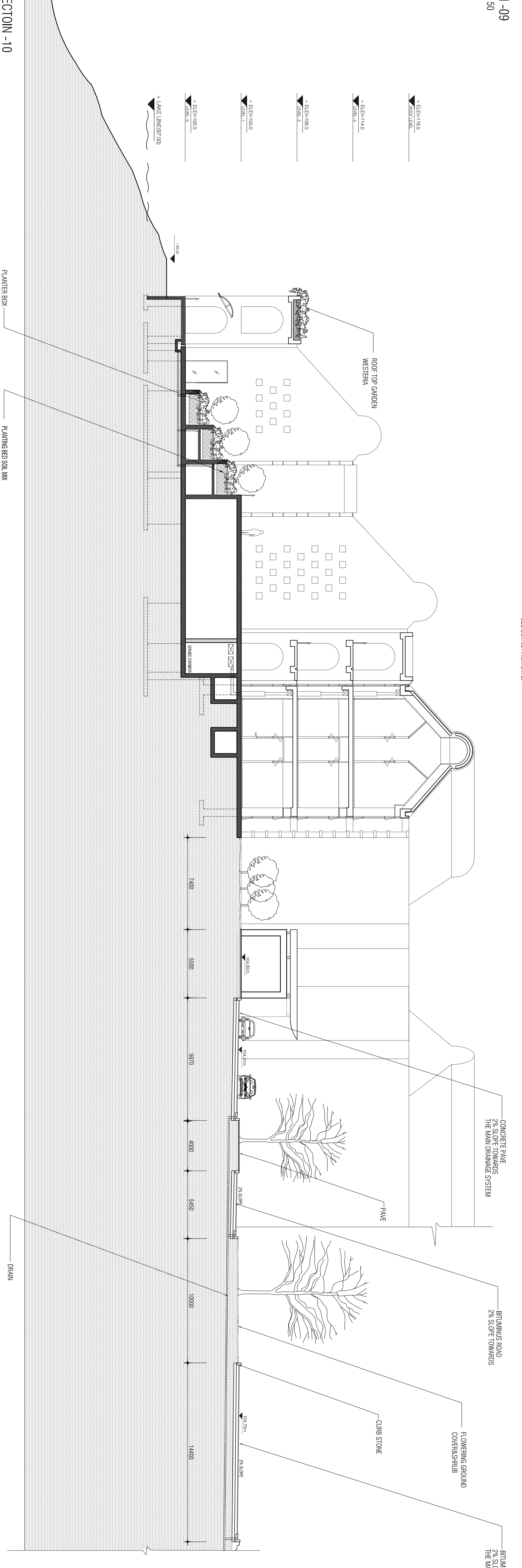
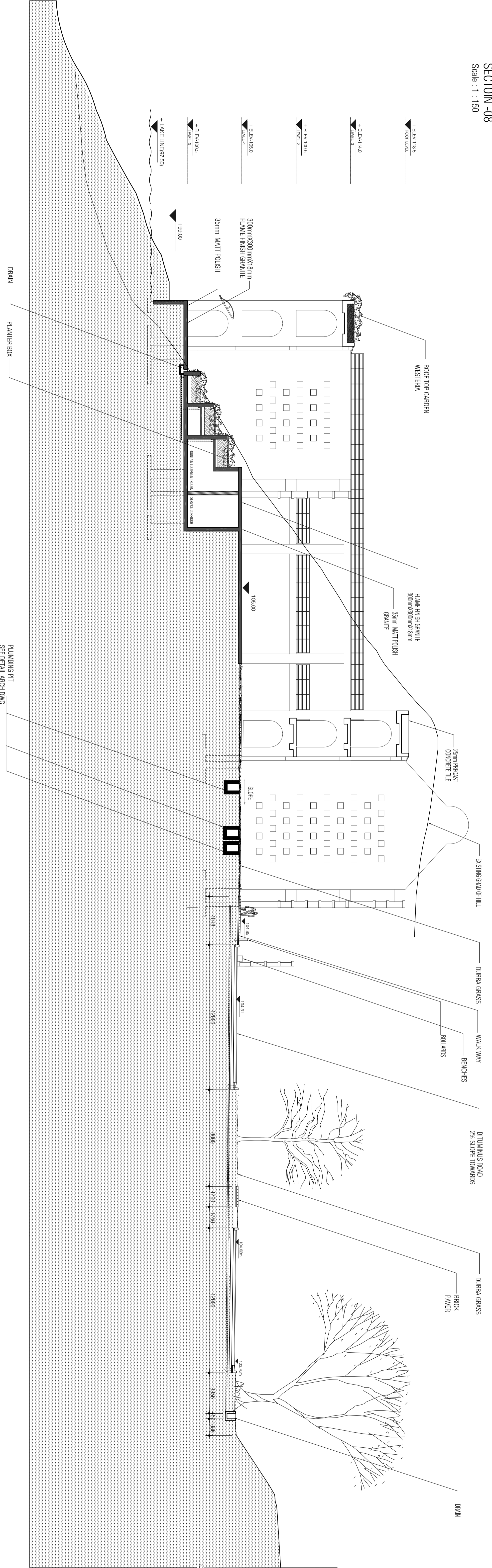
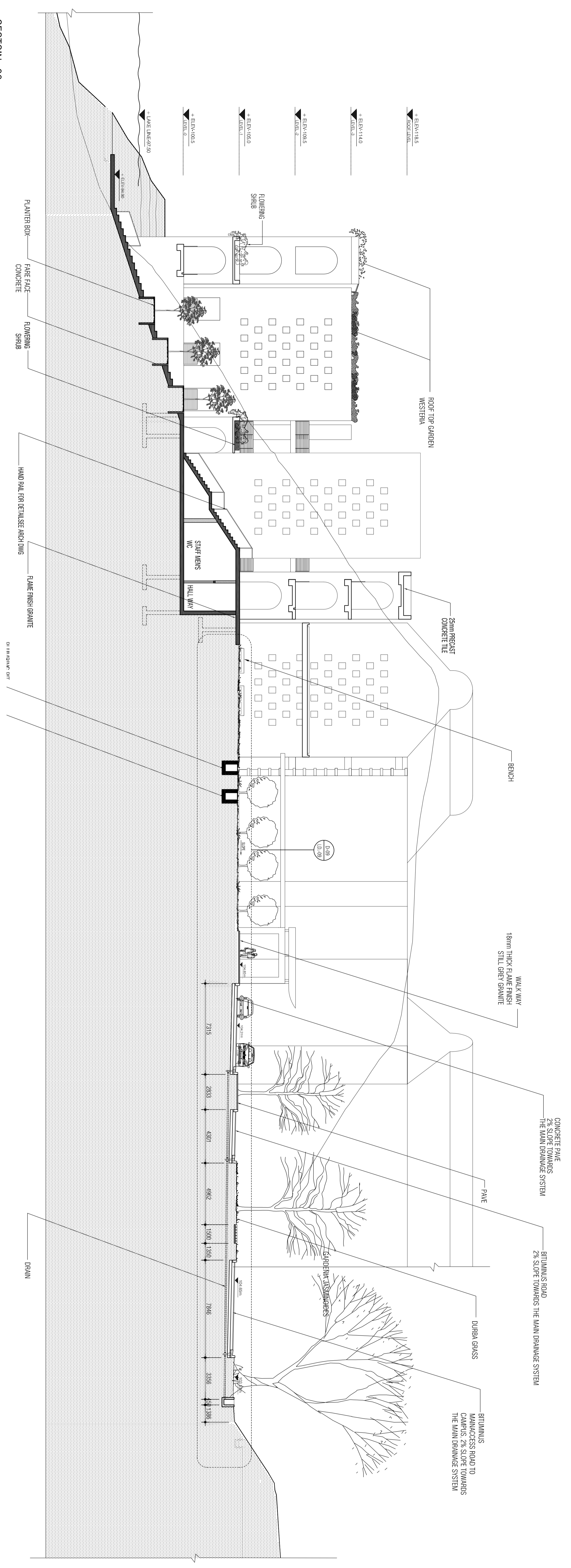
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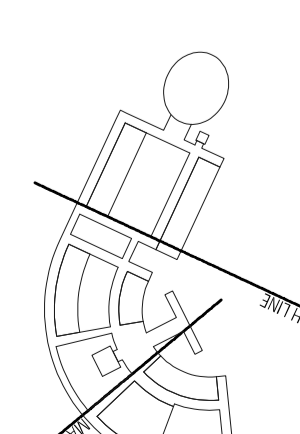
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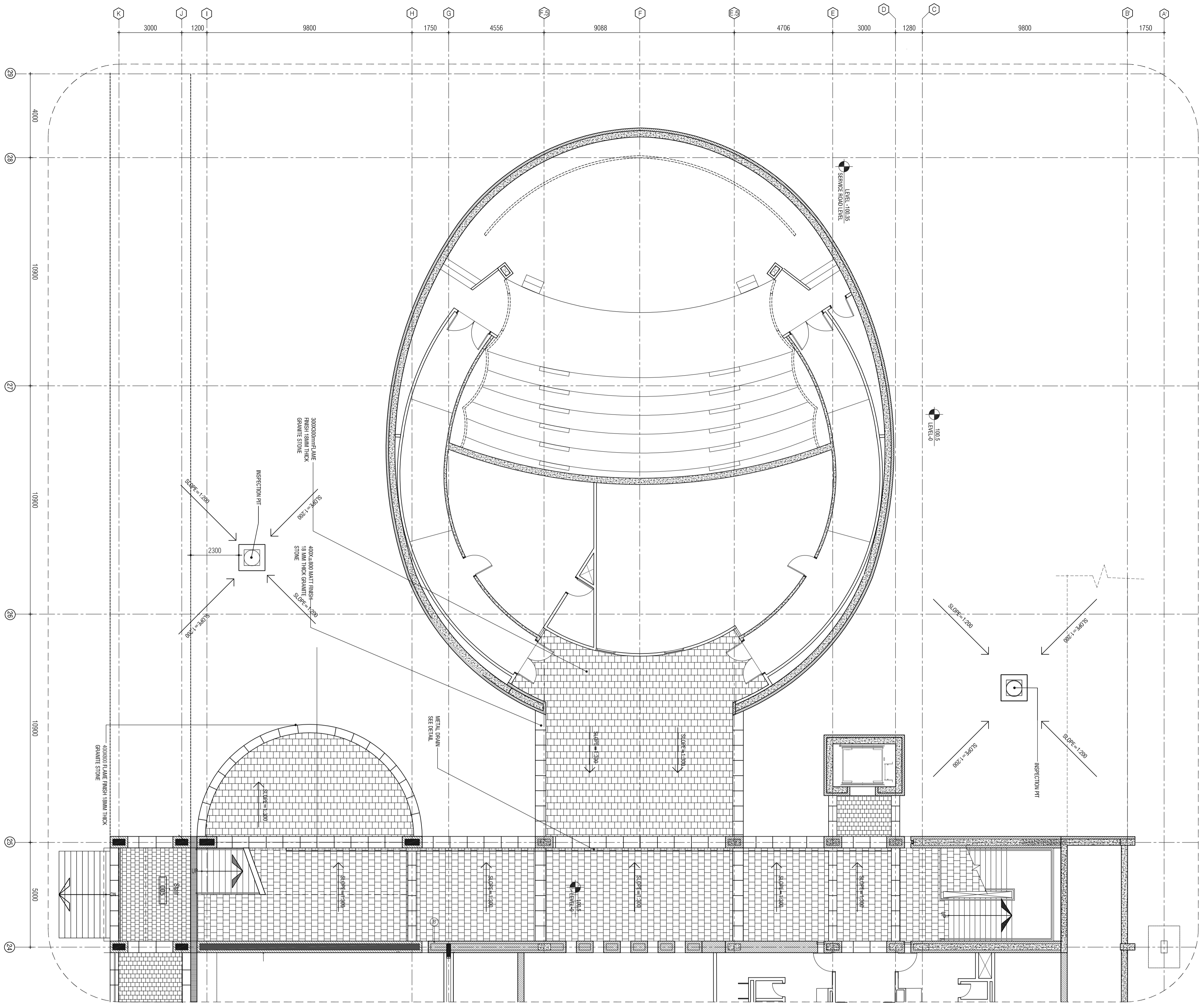
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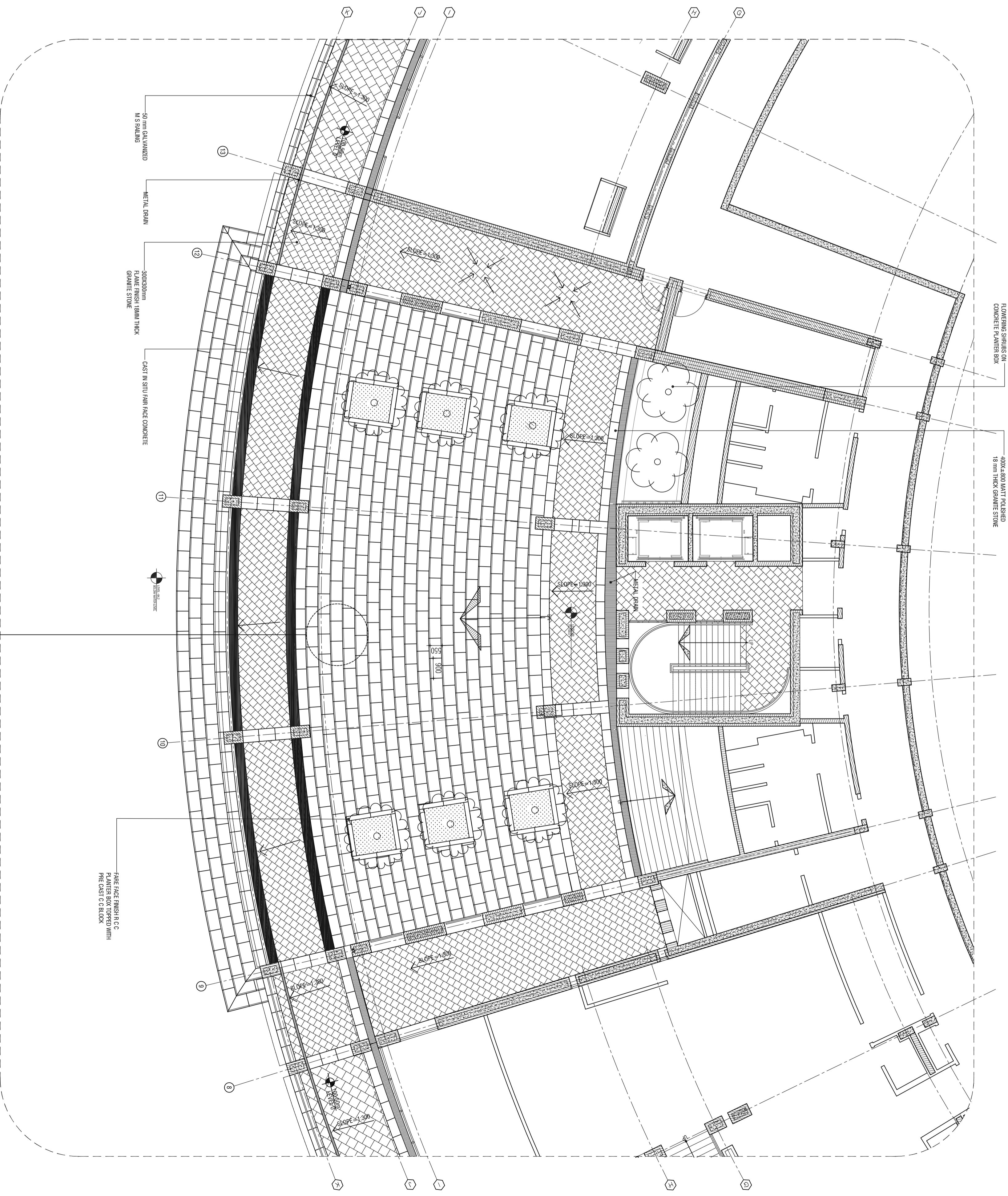
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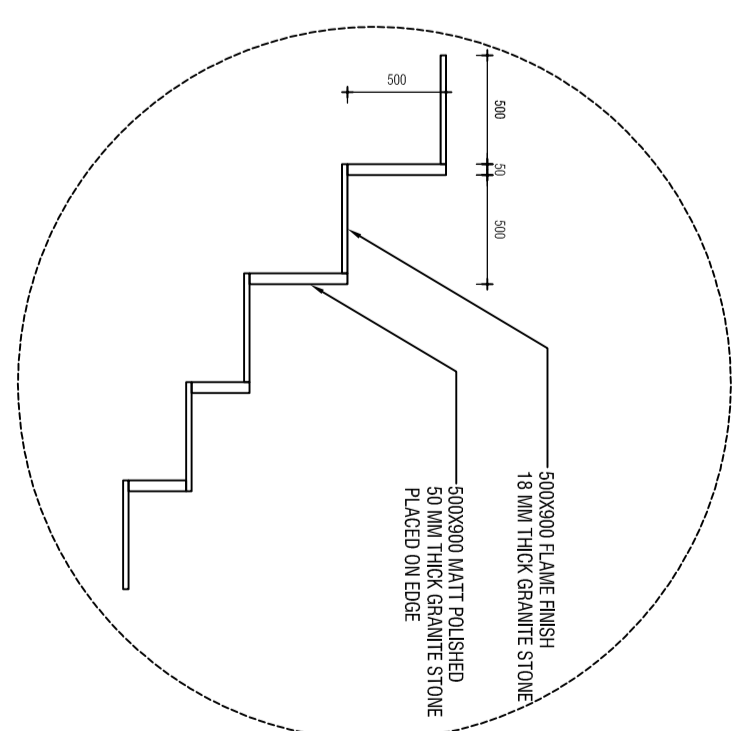
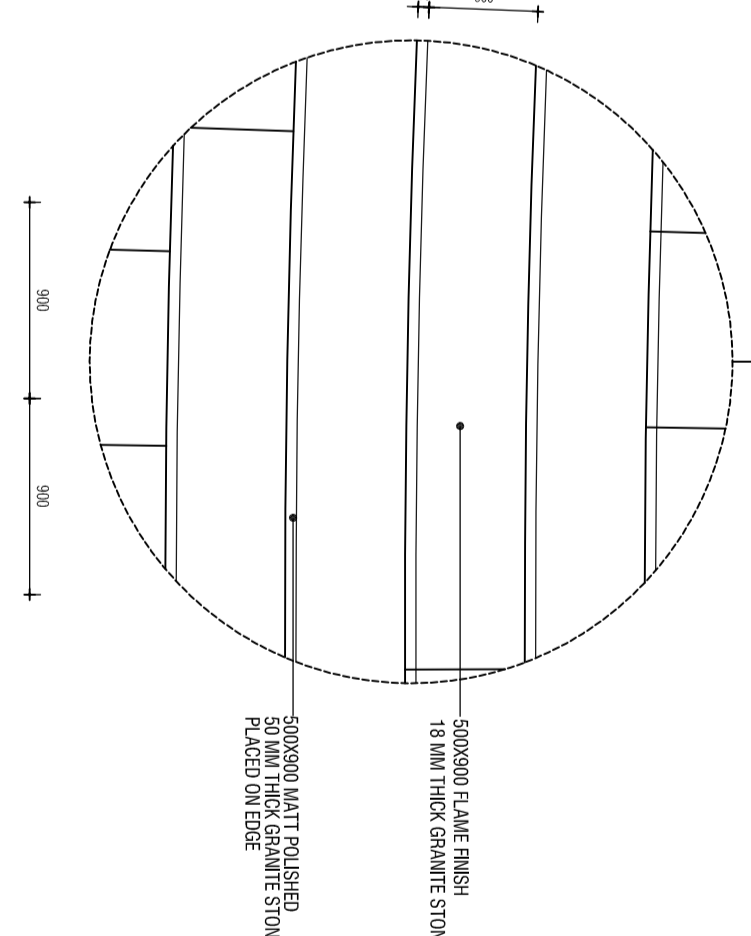


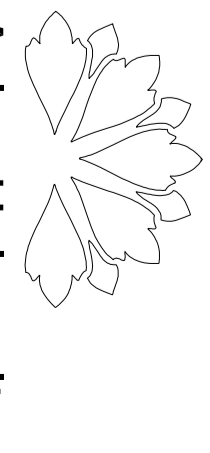
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DP-02
DETAIL PLAN
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BLOWUP





Asian University
For Women

Chittagong, Bangladesh
www.asu.edu.bd

Phase One, Building 1a

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Associate Architects
VITTI-SHS Consortium
2, Shargstad Avenue, 3rd
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Manjupurara, Dhaka 1215,
Bangladesh

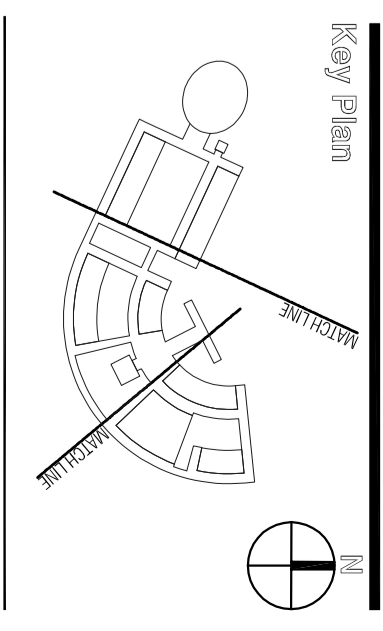
ASSOCIATE CONSULTANTS-

STRUCTURAL & CIVIL :
DESIGN PLANNING AND
MANAGEMENT CONSULTANT
LTD. (DP/M) (2nd floor), Road
no-4
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Phone : 861 0116-7.

BRITC
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Engineering & Technology,
BUET, P.O. Box, Dhaka-1000,
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Phone : 861 4640,
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CONSULTANT LTD.
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Lalmata, Dhaka-1205,
Bangladesh
Phone : 861 0116-7.

ELECTRICAL:
TECHNO CONSULTANTS
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Key Plan

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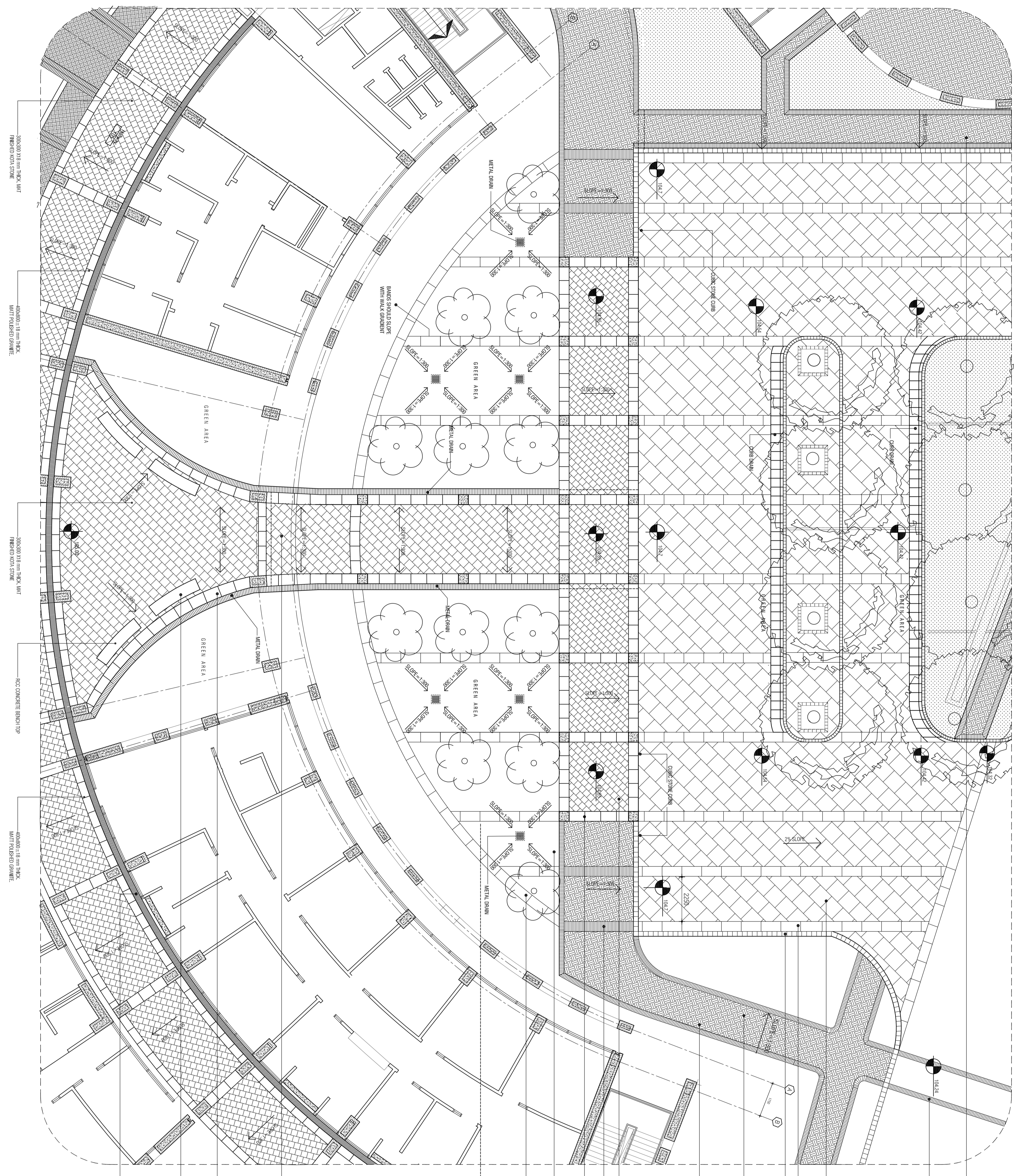
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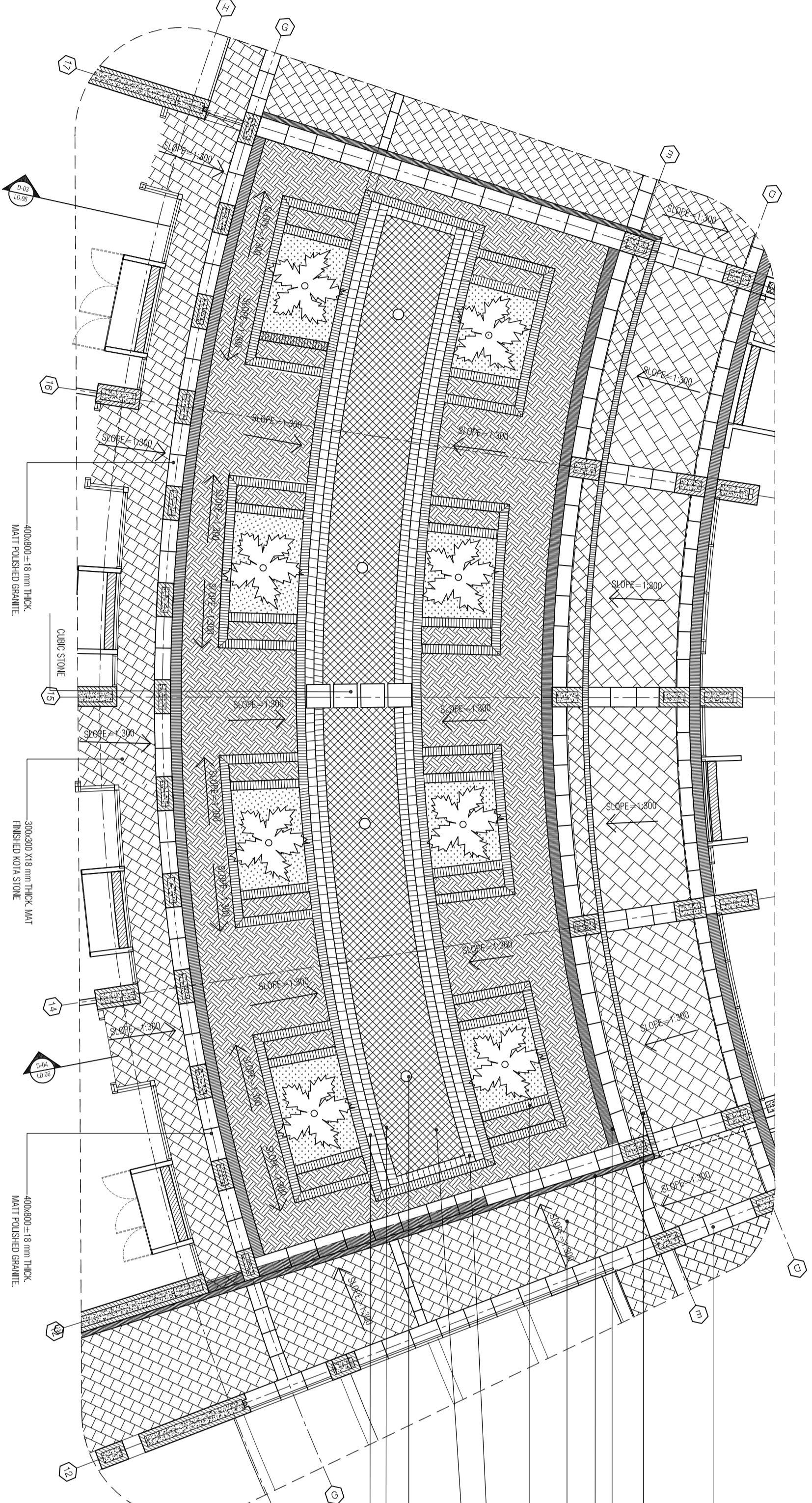
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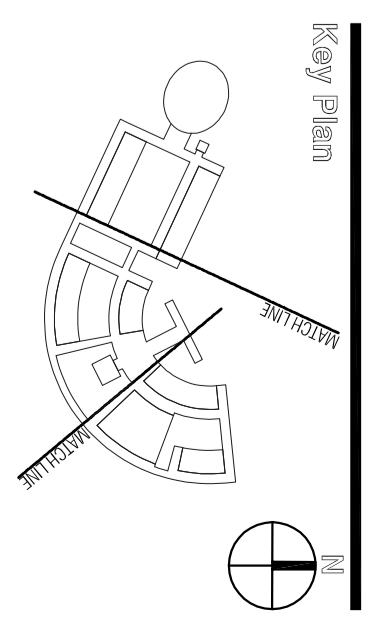
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DP-05
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ISSUE - A

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CD 100%	11/20/2012	FOR CONSTRUCTION

Seal of Approval :

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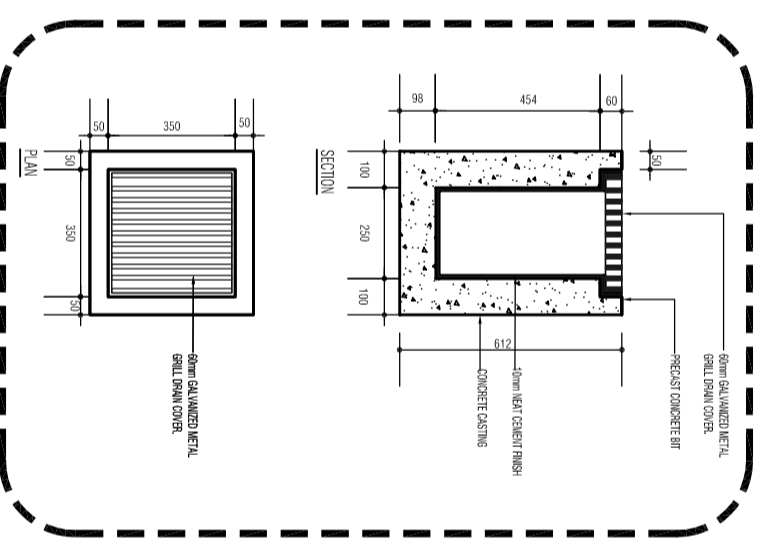
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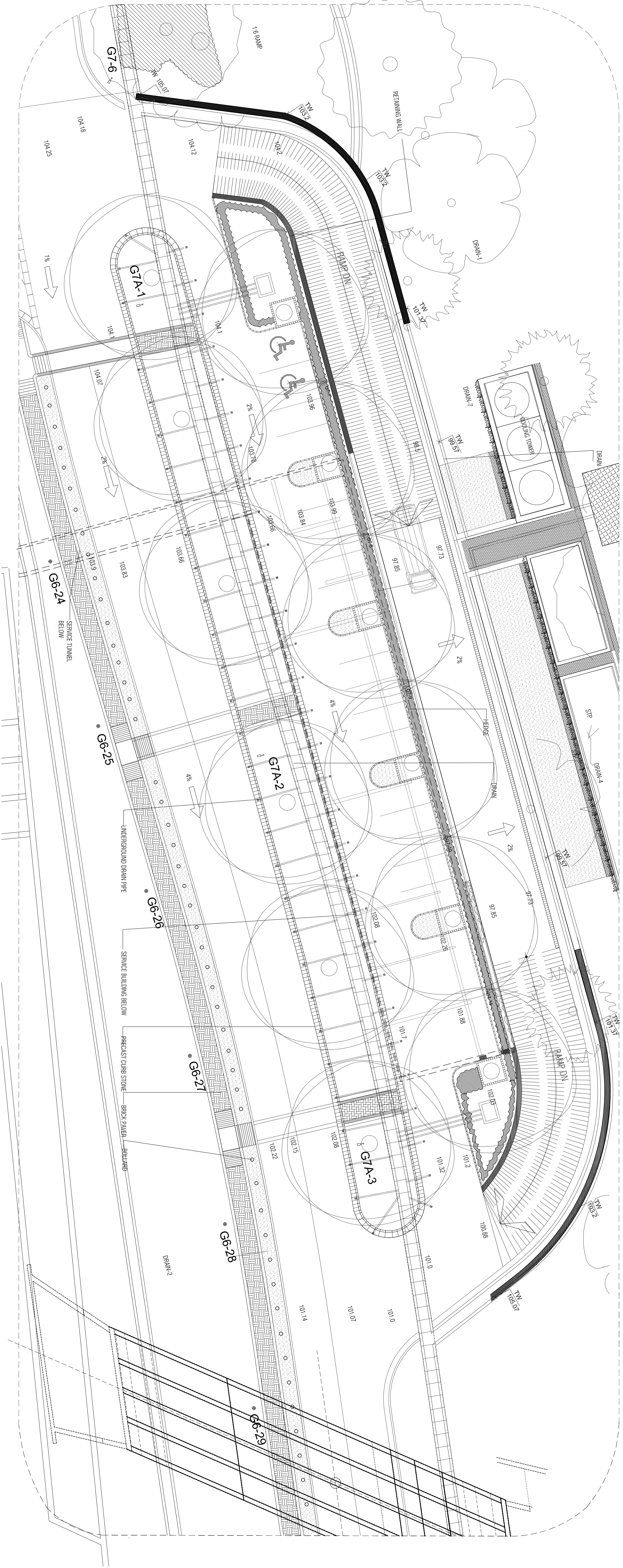
LD-04



DP-06
L-3007
DETAIL PLAN (COURTYARD-3 WITH WATER FEATURE)
SCALE: 1:100

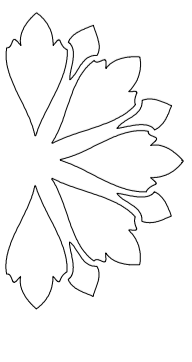


LD-03
SCALE: 1:20
BLOWUP



DP-06
L-3007
DETAIL PLAN (COURTYARD-3 WITH WATER FEATURE)
SCALE: 1:100

DP-07
L-3010
DETAIL PLAN
SCALE: 1:150



**Asian University
For Women**
Chattogram, Bangladesh
Phase One, Building 1a

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Cambridge MA 02138 USA

Architect
**Moshe Safdie and
Associates**
100 Propriet Way
Somerville MA 02143, USA

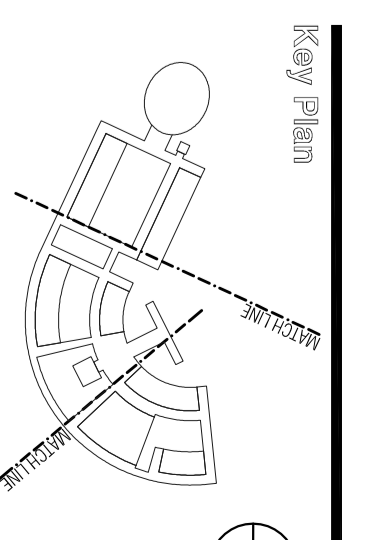
Associate Architects
WTTI-SHS Consortium
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Level,
Manjuria, Dhaka 1215,
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Phone : 8610116-7.

PRTC
Bangladesh University of
Engineering & Technology,
BULET, Pashai, Dhaka-1000,
Bangladesh
Phone : 6614640,
9669601740X.

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House no:86(1st floor), Road
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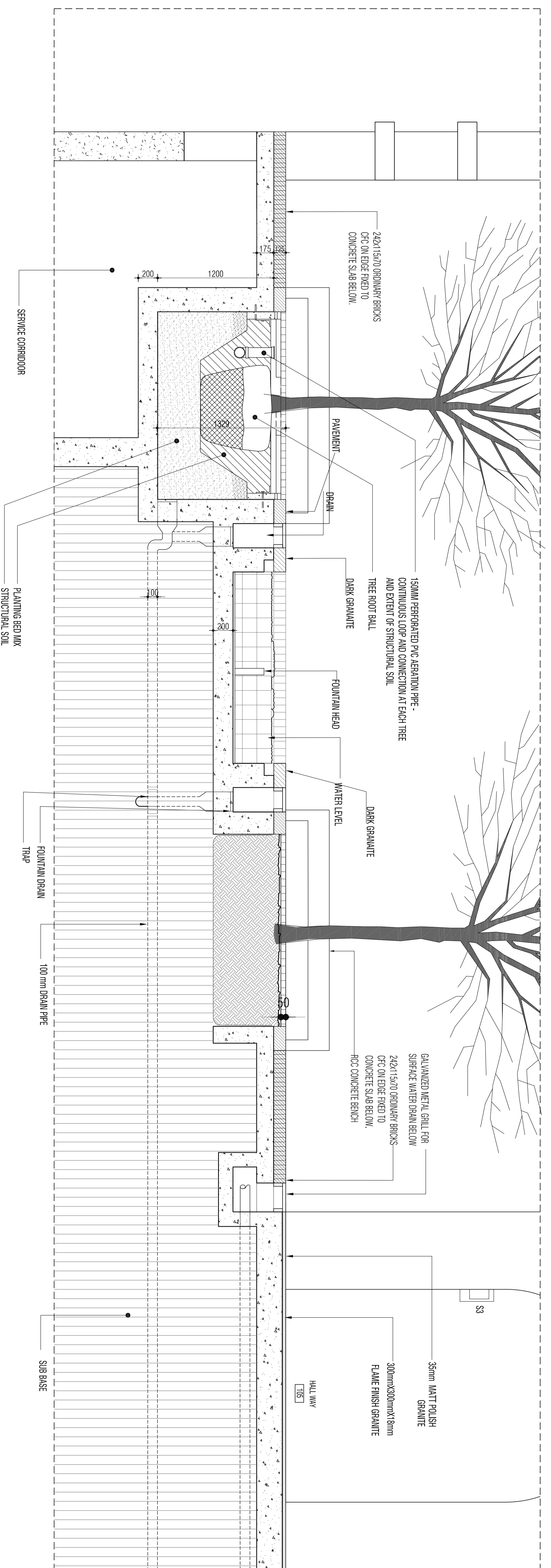
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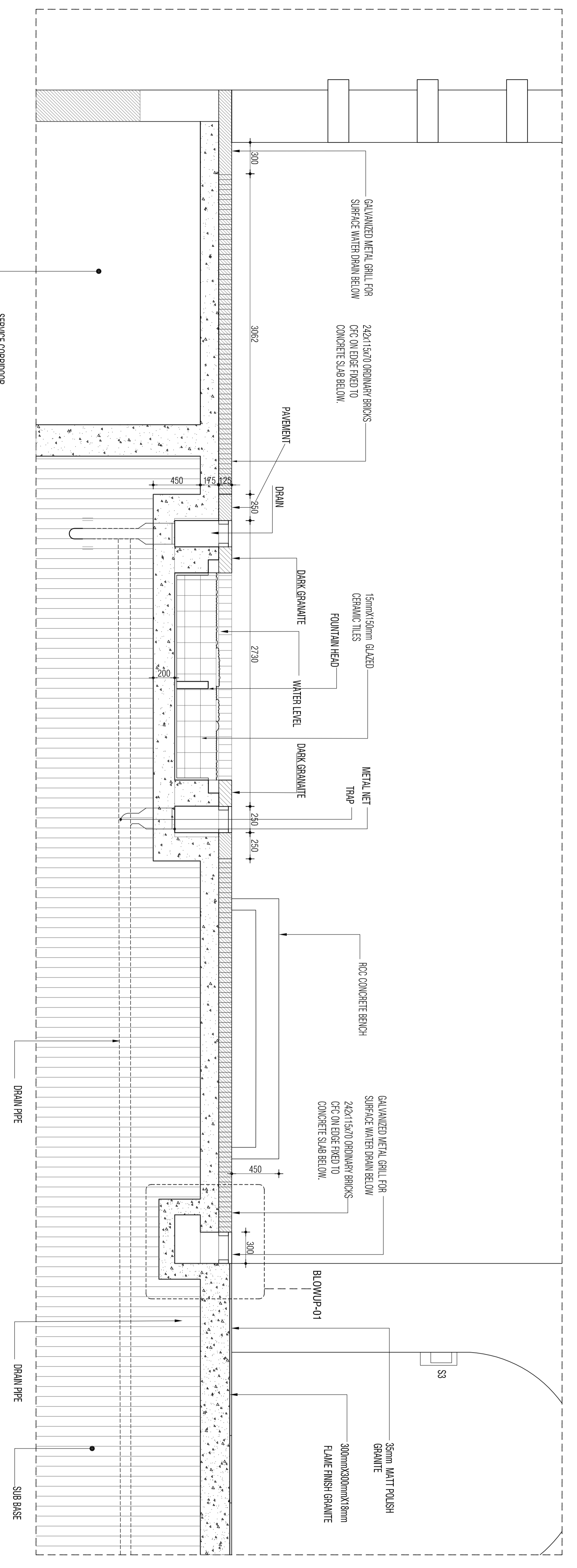
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D-03 DETAIL
L-40.02 SCALE: 1:20



D-04 DETAIL
LD-03 SCALE: 1:20



Asian University For Women

Chittagong, Bangladesh
Phase One, Building 1a

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2 Shangshad Avenue, 3rd
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Munipurpara, Dhaka 1215,
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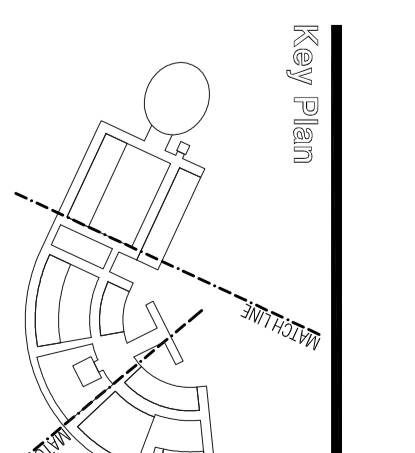
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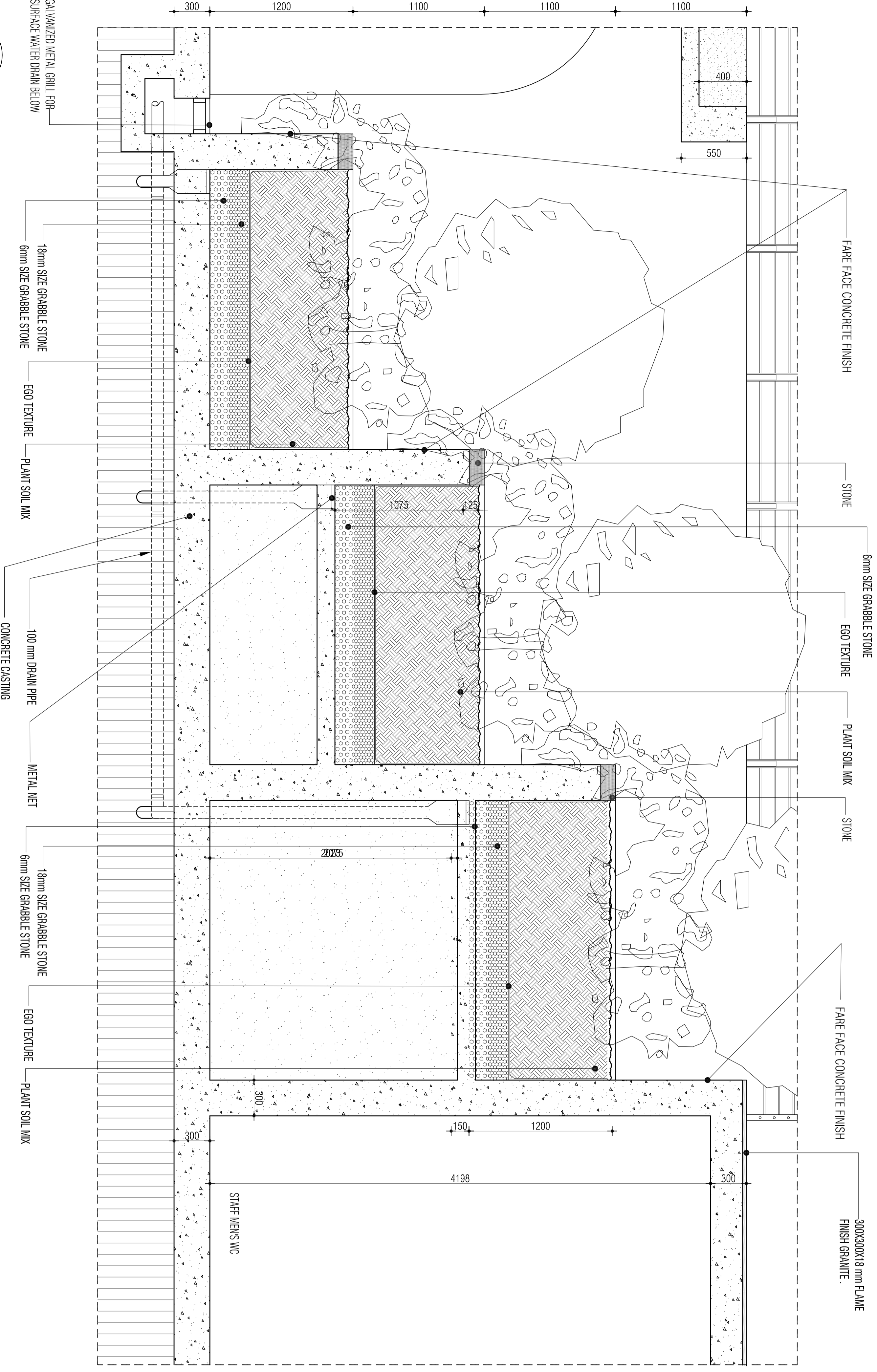
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Construction Document Phase
(ARCHITECTURAL DRAWINGS)

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03	11/02/2012	FOR REVIEW
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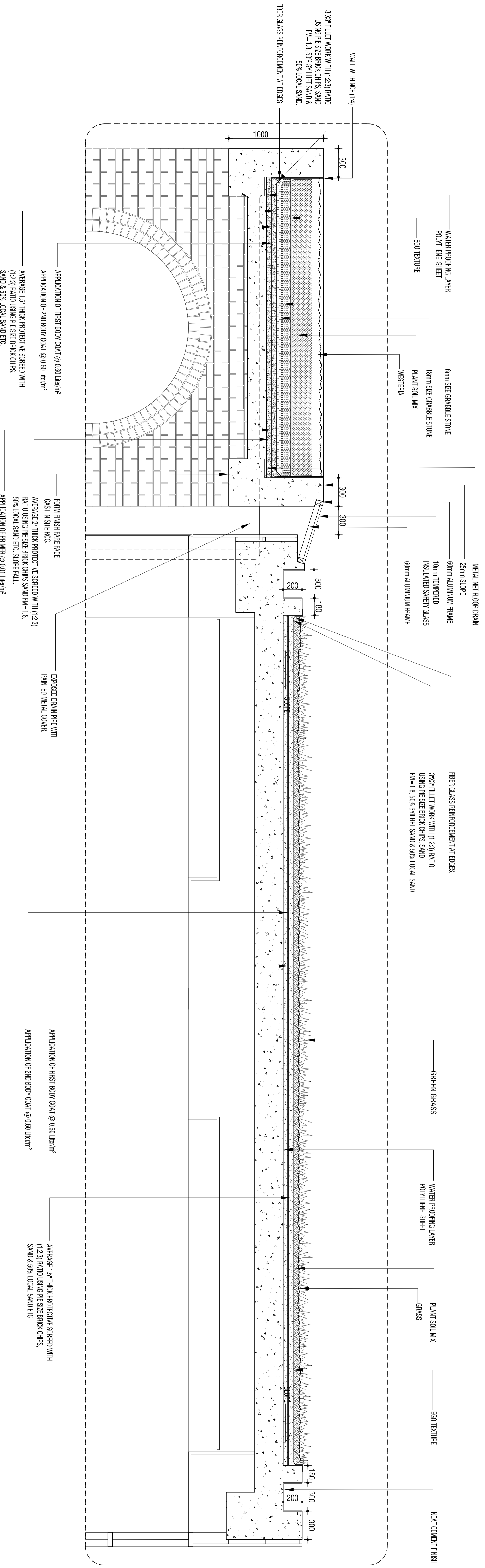
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DETAIL
LD-08



D-06 DETAIL
L-40/02 SCALE: 1:20



D-08 DETAIL
L-40/02 SCALE: 1:16

