



**SOUTHERN LEYTE
STATE UNIVERSITY**

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BIDDING DOCUMENTS

Construction of Powerhouse at SLSU-San Juan Campus

Contract No.: PB-2024-004

TABLE OF CONTENTS

Glossary of Terms, Abbreviations, and Acronyms.....	4
Section I. Invitation to Bid	7
Section II. Instructions to Bidders.....	9
1. Scope of Bid.....	9
2. Funding Information	9
3. Bidding Requirements.....	9
4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices	9
5. Eligible Bidders.....	10
6. Origin of Associated Goods	10
7. Subcontracts	10
8. Pre-Bid Conference.....	11
9. Clarification and Amendment of Bidding Documents.....	11
10. Documents Comprising the Bid: Eligibility and Technical Components.....	11
11. Documents Comprising the Bid: Financial Component	12
12. Alternative Bids	12
13. Bid Prices	12
14. Bid and Payment Currencies.....	12
15. Bid Security.....	13
16. Sealing and Marking of Bids.....	13
17. Deadline for Submission of Bids	13
18. Opening and Preliminary Examination of Bids	13
19. Detailed Evaluation and Comparison of Bids.....	13
20. Post Qualification.....	14
21. Signing of the Contract	14
Section III. Bid Data Sheet.....	15
Section IV. General Conditions of Contract	17
1. Scope of Contract.....	17
2. Sectional Completion of Works	17
3. Possession of Site.....	17
4. The Contractor’s Obligations.....	17
5. Performance Security	18
6. Site Investigation Reports	18

7.	Warranty.....	18
8.	Liability of the Contractor.....	18
9.	Termination for Other Causes.....	18
10.	Dayworks.....	19
11.	Program of Work.....	19
12.	Instructions, Inspections and Audits.....	19
13.	Advance Payment.....	19
14.	Progress Payments.....	19
15.	Operating and Maintenance Manuals.....	19
	Section V. Special Conditions of Contract.....	21
	Section VI. Specifications.....	22
	Section VII. Drawings.....	51
	Section VIII. Bill of Quantities.....	62
	Section IX. Checklist of Technical and Financial Documents.....	64

Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

Bid – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

Bidder – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

Bidding Documents – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

Consulting Services – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

Contract – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

Contractor – is a natural or juridical entity whose proposal was accepted by the Procuring Entity and to whom the Contract to execute the Work was awarded. Contractor as used in these Bidding Documents may likewise refer to a supplier, distributor, manufacturer, or consultant.

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

Foreign-funded Procurement or Foreign-Assisted Project – Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

GFI – Government Financial Institution.

GOCC – Government-owned and/or –controlled corporation.

Goods – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

GOP – Government of the Philippines.

Infrastructure Projects – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

Procurement Project – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

UN – United Nations.

Section I. Invitation to Bid



**SOUTHERN LEYTE
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INVITATION TO BID FOR THE CONSTRUCTION OF POWERHOUSE AT SLSU-SAN JUAN CAMPUS

1. The **Southern Leyte State University-San Juan Campus**, through the **2024 Internally Generated Fund** intends to apply the sum of **One Million, Three Hundred Three Thousand, Six Hundred Pesos [P1,303,600.00]** being the Approved Budget for the Contract (ABC) to payments under the contract for **Construction of Powerhouse at SLSU-San Juan Campus**. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The **Southern Leyte State University-San Juan Campus** now invites bids for the above Procurement Project. Completion of the Works is required by not more than **ninety [90] calendar days**. Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).
3. Bidding will be conducted through open competitive bidding procedures using non-discretionary “*pass/fail*” criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
4. Interested bidders may obtain further information from **Southern Leyte State University-San Juan Campus** and inspect the Bidding Documents at the address given below during **office hours from 8:00 AM to 12:00 Noon and from 1:00 PM to 5:00 PM Mondays through Fridays and/or through online by contacting us through the details below**.
5. A complete set of Bidding Documents may be acquired by interested bidders on **June 6, 2024** from given address and website/s below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **Five Thousand Pesos [P5,000.00]** to the SLSU-San Juan Campus Cash Office. The Procuring Entity shall allow the bidder to present its proof of payment for the fees in person.
6. The **Southern Leyte State University-San Juan Campus** will hold a Pre-Bid Conference on **June 14, 2024 at 2:00 in the afternoon at Campus Library, Administration Building, SLSU-San Juan Campus, San Juan, Southern Leyte** which shall be open to prospective bidders.

7. Bids must be duly received by the BAC Secretariat through manual submission at the office address as indicated below, **on or before 1:30 in the afternoon of June 26, 2024**. Late bids shall not be accepted.
8. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 16.
9. Bid opening shall be on **June 26, 2024 at 2:00 in the afternoon** at the **Campus Library, Administration Building, SLSU-San Juan Campus, San Juan, Southern Leyte**. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. The **Southern Leyte State University-San Juan Campus** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
11. For further information, please refer to:

MERALIE G. EBUÑA / MELCA D. EVALDEZ
Bids and Awards Committee Secretariat
Southern Leyte State University-San Juan Campus
San Juan, Southern Leyte
+63-961-0177-358
bac_sj@southernleytestateu.edu.ph

12. You may visit the following websites:

For downloading of Bidding Documents:

www.philgeps.gov.ph

or

<https://southernleytestateu.edu.ph/index.php/en/updates/procurement-activities/invitation-to-bid>

Date of Issue: June 5, 2024


SANTIAGO P ABREA, PhD
BAC Chair
SLSU-San Juan Campus
San Juan, Southern Leyte

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, **Southern Leyte State University-San Juan Campus** invites Bids for the **Construction of Powerhouse at SLSU-San Juan Campus**, with Project Identification Number **PB-2024-004**.

The Procurement Project (referred to herein as “Project”) is for the construction of Works, as described in Section VI (Specifications).

2. Funding Information

2.1. The GOP through the source of funding as indicated below for **2024** in the amount of **One Million, Three Hundred Three Thousand, Six Hundred Pesos [₱1,303,600.00]**.

2.2. The source of funding is:

Corporate Operating Budget.

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manual and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or invitation to bid by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have inspected the site, determined the general characteristics of the contracted Works and the conditions for this Project, such as the location and the nature of the work; (b) climatic conditions; (c) transportation facilities; (c) nature and condition of the terrain, geological conditions at the site communication facilities, requirements, location and availability of construction aggregates and other materials, labor, water, electric power and access roads; and (d) other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and

obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

- 5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.
- 5.2. The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the PSA’s CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.

A contract is considered to be “similar” to the contract to be bid if it has the major categories of work stated in the **BDS**.
- 5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

6. Origin of Associated Goods

There is no restriction on the origin of Goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN.

7. Subcontracts

- 7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than fifty percent (50%) of the Project.

The Procuring Entity has prescribed that:

- a. **Subcontracting is not allowed.**

- 7.1. *[If Procuring Entity has determined that subcontracting is allowed during the bidding , state:]* The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criterial stated in **ITB** Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.
- 7.2. *[If subcontracting is allowed during the contract implementation stage, state:]* The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary

requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.

- 7.3. Subcontracting of any portion of the Project does not relieve the Contractor of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Contractor's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and at its physical address as indicated in paragraph 6 of the **IB**.

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

10. Documents Comprising the Bid: Eligibility and Technical Components

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.
- 10.3. A valid special PCAB License in case of Joint Ventures, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.
- 10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.

- 10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

11. Documents Comprising the Bid: Financial Component

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Alternative Bids

Bidders shall submit offers that comply with the requirements of the Bidding Documents, including the basic technical design as indicated in the drawings and specifications. Unless there is a value engineering clause in the **BDS**, alternative Bids shall not be accepted.

13. Bid Prices

All bid prices for the given scope of work in the Project as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as determined by the NEDA and approved by the GPPB pursuant to the revised Guidelines for Contract Price Escalation guidelines.

14. Bid and Payment Currencies

- 14.1. Bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.
- 14.2. *Payment of the contract price shall be made in:*
 - a. Philippine Pesos.

15. Bid Security

- 15.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.
- 15.2. The Bid and bid security shall be valid until **October 23, 2024**. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

16. Sealing and Marking of Bids

Each Bidder shall submit one copy of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission to the given website or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

17. Deadline for Submission of Bids

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

18. Opening and Preliminary Examination of Bids

- 18.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

- 18.2. The preliminary examination of Bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.

- 19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 15 shall be submitted for each contract (lot) separately.
- 19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

20. Post Qualification

Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS), and other appropriate licenses and permits required by law and stated in the **BDS**.

21. Signing of the Contract

The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

Section III. Bid Data Sheet

Bid Data Sheet

ITB Clause																
5.2	For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be: Construction of Building, Supply and Installation of Electrical Supplies															
7.1	Subcontracting is not allowed.															
10.3	None.															
10.4	<p>The key personnel must meet the required minimum years of experience set below:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 60%;">Key Personnel</th> <th style="text-align: left; width: 40%;">Relevant Experience</th> </tr> </thead> <tbody> <tr> <td>Project Manager</td> <td>5 years</td> </tr> <tr> <td>Project Engineer</td> <td>5 years</td> </tr> <tr> <td>Resident Engineer</td> <td>5 years</td> </tr> <tr> <td>Electrical Engineer</td> <td>5 years</td> </tr> <tr> <td>Safety Officer</td> <td>5 Years</td> </tr> <tr> <td>Foreman</td> <td>5 Years</td> </tr> </tbody> </table> <p>The Contractor's key personnel must be professionals that are supported with corresponding licenses.</p> <p>Respective resumes and photocopy of valid Professional Regulation Commission (PRC) license shall be submitted within five (5) calendar days upon declaration of Lowest Calculated Bid.</p>	Key Personnel	Relevant Experience	Project Manager	5 years	Project Engineer	5 years	Resident Engineer	5 years	Electrical Engineer	5 years	Safety Officer	5 Years	Foreman	5 Years	
Key Personnel	Relevant Experience															
Project Manager	5 years															
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Foreman	5 Years															
10.5	<p>The minimum major equipment requirements are the following:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 30%;">Equipment</th> <th style="text-align: left; width: 40%;">Capacity Requirement</th> <th style="text-align: left; width: 30%;">Number of Units</th> </tr> </thead> <tbody> <tr> <td>Backhoe</td> <td>No Minimum Requirement</td> <td>1 unit</td> </tr> <tr> <td>Dump Truck</td> <td>No Minimum Requirement</td> <td>1 unit</td> </tr> <tr> <td>Bagger Mixer</td> <td>No Minimum Requirement</td> <td>1 unit</td> </tr> <tr> <td>Welding Machine</td> <td>No Minimum Requirement</td> <td>2 units</td> </tr> </tbody> </table>	Equipment	Capacity Requirement	Number of Units	Backhoe	No Minimum Requirement	1 unit	Dump Truck	No Minimum Requirement	1 unit	Bagger Mixer	No Minimum Requirement	1 unit	Welding Machine	No Minimum Requirement	2 units
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12	<i>[Insert Value Engineering clause if allowed.]</i>															
15.1	<p>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <p>a. The amount of not less than ₱26,072.00 if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</p>															

	b. The amount of not less than ₱65,180.00 if bid security is in Surety Bond.
19.2	Partial bids are not allowed.
20	None.
21	Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program approved by the DOLE, and other acceptable tools of project scheduling.

Section IV. General Conditions of Contract

1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

2. Sectional Completion of Works

If sectional completion is specified in the **Special Conditions of Contract (SCC)**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date shall apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

3. Possession of Site

3.1 The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the **SCC**, which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.

3.2 If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

4. The Contractor's Obligations

The Contractor shall employ the key personnel named in the Schedule of Key Personnel indicating their designation, in accordance with **ITB** Clause 10.3 and specified in the **BDS**, to carry out the supervision of the Works.

The Procuring Entity will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or better than those of the personnel listed in the Schedule.

5. Performance Security

5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.

5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

6. Site Investigation Reports

The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the SCC supplemented by any information obtained by the Contractor.

7. Warranty

7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.

7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the SCC.

8. Liability of the Contractor

Subject to additional provisions, if any, set forth in the SCC, the Contractor's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Contractor is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

9. Termination for Other Causes

Contract termination shall be initiated in case it is determined *prima facie* by the Procuring Entity that the Contractor has engaged, before, or during the implementation of the contract, in unlawful deeds and behaviors relative to contract acquisition and implementation, such as, but not limited to corrupt, fraudulent, collusive, coercive, and obstructive practices as stated in **ITB** Clause 4.

10. Dayworks

Subject to the guidelines on Variation Order in Annex “E” of the 2016 revised IRR of RA No. 9184, and if applicable as indicated in the **SCC**, the Dayworks rates in the Contractor’s Bid shall be used for small additional amounts of work only when the Procuring Entity’s Representative has given written instructions in advance for additional work to be paid for in that way.

11. Program of Work

11.1. The Contractor shall submit to the Procuring Entity’s Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the **SCC**.

11.2. The Contractor shall submit to the Procuring Entity’s Representative for approval an updated Program of Work at intervals no longer than the period stated in the **SCC**. If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity’s Representative may withhold the amount stated in the **SCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

12. Instructions, Inspections and Audits

The Contractor shall permit the GOP or the Procuring Entity to inspect the Contractor’s accounts and records relating to the performance of the Contractor and to have them audited by auditors of the GOP or the Procuring Entity, as may be required.

13. Advance Payment

The Procuring Entity shall, upon a written request of the Contractor which shall be submitted as a Contract document, make an advance payment to the Contractor in an amount not exceeding fifteen percent (15%) of the total contract price, to be made in lump sum, or at the most two installments according to a schedule specified in the **SCC**, subject to the requirements in Annex “E” of the 2016 revised IRR of RA No. 9184.

14. Progress Payments

The Contractor may submit a request for payment for Work accomplished. Such requests for payment shall be verified and certified by the Procuring Entity’s Representative/Project Engineer. Except as otherwise stipulated in the **SCC**, materials and equipment delivered on the site but not completely put in place shall not be included for payment.

15. Operating and Maintenance Manuals

15.1. If required, the Contractor will provide “as built” Drawings and/or operating and maintenance manuals as specified in the **SCC**.

- 15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity's Representative's approval, the Procuring Entity's Representative may withhold the amount stated in the **SCC** from payments due to the Contractor.

Section V. Special Conditions of Contract

Special Conditions of Contract

GCC Clause	
2	<i>[If different dates are specified for completion of the Works by section, i.e. “sectional completion,” these dates should be listed here.]</i>
4.1	<i>[Specify the schedule of delivery of the possession of the site to the Contractor, whether full or in part.]</i>
6	The site investigation reports are: <i>[list here the required site investigation reports.]</i>
7.2	<i>[In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures:] Fifteen (15) years.</i>
10	a. Dayworks are applicable at the rate shown in the Contractor’s original Bid.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity’s Representative within 7 days of delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is <i>[insert amount]</i> .
13	The amount of the advance payment shall not exceed 15% of the total contract price and schedule of payment.
14	Materials and equipment delivered on the site but not completely put in place shall not be included for payment.
15.1	The date by which operating and maintenance manuals are required is <i>[date]</i> . The date by which “as built” drawings are required is <i>[date]</i> .
15.2	The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required is <i>[amount in local currency]</i> .

Section VI. Specifications

A. GENERAL REQUIREMENTS

TS-1 General

1.1 Provision

The Contractor shall perform all the required scope of works for the SLSU- San Juan in compliance with this Technical Specifications.

1.2 Drawings and Specifications

Drawings and specification are intended to complement each other, so that if anything is shown on the drawings, but not mentioned in the specifications, or vice versa, it is to be furnished and built as though specifically set forth in both. If any discrepancies occur in the drawings or specifications, the same shall be referred to the Engineers assigned in the project before proceeding with the work. The Engineer's decision on such discrepancies shall be final provided that the said discrepancies will not incur any additional cost and will not sacrifice the structural integrity of any building.

1.3 Large scale drawings shall have preference over smaller scale drawings and figured dimensions shall have preference over scaled dimensions.

1.4 The Engineer may, during the progress of the work furnish additional drawings specifications and instructions for new items of work as may be necessary, for the proper and adequate implementation of the work. The Contractor shall implement the additional work in accordance with drawings, specifications and instruction. Such additional drawings, specifications and instruction shall be deemed part of the Contract Documents.

1.5. Minor Change

The Contractor shall submit to the Engineer a construction methodology to implement the works. The methodology shall include the provision of adequate water supply for the building.

1.6 Applicable Standards and Codes

The following terms listed or referred herein or indicated in the drawings are to be used for reference and latest edition of the publication to the date of these specifications shall apply.

ASTM	-	American Society for Testing and Materials
ACI	-	American Concrete Institute
AISC	-	American Institute of Steel Construction
ANSI	-	American National Standard Institute
CRSI	-	Concrete Reinforcing Steel Institute
AWS	-	American Welding Society
ASSHTO	-	American Association of State Highway and Transportation Office

- 1.7 The Contractor may use local standards and codes equivalent to those referred in this Technical Specifications.

PS	-	Philippine Standard
NBC	-	National Building Code of the Philippines
NSC	-	National Structural Code of the Philippines
PCP	-	Plumbing Code of the Philippines
PEC	-	Philippine Electrical Code

TS-2 Construction Schedule and Execution Plan

The Contractor shall submit a construction schedule in the form of PERT/CPM or Bar chart, including equipment and manpower utilization schedule for approval by the Engineer.

TS-3 Permit

Prior to the execution of the work, the contractor shall secure the necessary building permit and post the permit number to the construction site visible to the public.

TS-4 As-Built Drawings and Construction Log Book

The Contractor shall submit an as-built plan of the project including the records of construction activities during implementation as a requirement for final payment.

TS-5 Construction Photograph

The Contractor shall submit progress photographs as supporting documents for every progress payment.

B. SITEWORKS

TS-6 Earthworks

6.1 Materials

- a. The Contractor shall supply all labor, plant, materials equipment and other facilities required to complete all earthworks in an acceptable manner as shown on the drawings and as specified herein. This work shall include clearing, staking, excavation, sub-base, preparation, backfilling, compaction and trimming for final grades where the building shall be erected. It also includes utility service connection for sewer, water supply, and all appurtenances in accordance with the contract and/or as maybe directed by the Engineer if applicable.
- b. All filling materials, whether native to the site or imported, shall be free of debris, roots, vegetation or other deleterious materials, sand and gravel shall be free of any clods of stones larger than 50 mm in their dimension.
- c. Excavated materials that can be compacted to the required density and acceptable to the Engineer may be used for backfilling.
- d. Bedding materials shall be in accordance with the specification as accepted by the Engineer. The material shall be hard and durable stone, with a maximum size of 24mm (1") graded by weight as follows:

Sieve Size (square opening)	Percent by weight
24 mm (1 inch)	90 – 100
19 mm (3/4 inch)	10 – 50
12 mm (1/2 inch)	0 – 20

- e. Coarse sand shall consist of clean, inert, hard, durable material free from loam or clay, surface coating and deleterious materials. The Contractor shall submit samples for testing with the supervision of the Engineer and shall pass the required specification prior to installation.
- f. Selected fill material shall be graded mixture of fine coarse grained material with less than 35% passing the number 200 sieve. The Contractor shall submit samples of the materials he proposes to use, showing that it can be compacted to the required density.

6.2 Scope of work

- a. The area at least two (2) meters around the building shall be cleared of rubbish, loams, refuse, grass, roots and other perishable or objectionable matter.
- b. All unsuitable materials that lie within the operational area shall be removed and disposed from the site, to a dump designated by the Engineer or spread in locations and manner approved by the Engineer. Clearing may be undertaken by any method, which is not detrimental to the work, nor wasteful for earth materials.
- c. The building shall be staked out and all lines and grades as shown on the plans shall be established accurately before the start of excavation. Basic batter boards and reference marks shall be erected before the construction of the foundation.
- d. Trenching and drilling for water, sewer or storm drainage, if applicable, shall be done according to line and depths as shown in the drawings. Any trenches shall be sufficient width to accommodate the proper laying, installation and joining of pipes. Lines and depths not indicated on the drawings shall be determined by the Engineer before laying of pipelines is done. All trenches shall be fully backfilled upon approval by the Engineer in accordance with the elevations as indicated on the plans. If the Contractor did not attain the required elevation at the end of the day, the Engineer shall require the contractor to place warning signs at the periphery of the excavated area.

- e. Where trenches for water, sewer and storm drainage pipelines require the removal of road pavements, the contractor shall obtain written permit from the Municipal Engineering Office. The Contractor shall restore such pavements to their original or better condition without any additional cost to the Owner.
- f. The excavation lines shown on the drawings are solely for the purpose of computing quantities for pavement purposes. The Owner specifically does not warrant the actual sides can be made to the excavation lines shown.
- g. The Contractor shall design, furnish, install, and maintain such sheeting and bracing as may be required to support the side of excavation if scouring arises. Care shall be taken to prevent voids outside the sheeting. Prior to installation of any sheeting and bracing, the Contractor's proposed method of installation shall be approved by the Engineer.
- h. All sheeting and bracing, upon completion of the works, shall be carefully removed without endangering the new installations and the existing utilities or adjoining property as well.
- i. All voids caused by withdrawal of sheeting shall be immediately refilled with sand and compacted by ramming with suitable tools, watering or any method directed by the Engineer.
- j. Wood sheeting shall not be withdrawn if driven below the bottom of any drain, and under no circumstances shall any wood sheeting be cut off at a level lower than 0.30m above the top of the drain.
- k. The contractor shall leave in place to be embedded in the backfill, all sheeting, bracing, etc. which the Engineer may direct him in writing to leave in place at any time during the progress of the work for the purpose of preventing injury to structures, utilities, or property, whether public or private.
- l. Excavation shall include the removal of all materials of whatever nature encountered including all obstructions of any nature that would interfere with the proper execution and completion of the work. The removal of these materials shall conform to the lines and grades shown on drawings as ordered by the Engineer. If scouring arises the Contractor shall immediately furnish and install sheeting to secure the sides of the excavation and notify the Engineer for verification and approval. The Contractor may submit other method of excavation for any unstable ground encountered, whether by shoring or by sloping excavation. The Engineer shall immediately notify the Contractor the acceptable method to avoid and avoid damages to the adjoining property or utilities.

- m. Excavation to a depth greater than that shown on the drawings may be required without any additional costs. The depth and extent of over excavation shall be to the approval of the Engineer.
- n. The materials to be used for backfilling maybe either selected material, gravel, or other materials that is acceptable. The material used shall be placed in layers, brought to optimum moisture content and compacted to ninety (90%) percent of the modified AASHTO Standard.
- o. Bedding material shall be sand or crushed rock as previously specified. Bedding material shall be placed in layer to a minimum depth of 100mm and compacted to 95% of modified AASHTO compaction, prior to installation of pipes or concreting of structure.
- p. Initial backfill to a depth of 150mm above the pipe shall be carried out using coarse sand. The backfill shall be carried out in layers not exceeding 150 mm compacted thicknesses of 95% compaction.
- q. Te remainder of the backfill shall be from excavated material subject to the approval of the Engineer.
- r. Filling shall be carried up in layers not exceeding 150 mm compacted thicknesses. Compaction shall be carried out using, vibratory compactors or other equipment suitable to achieve a reliable and uniform compaction to the specified standard. Manual compaction methods will be acceptable upon approval of the Engineer.
- s. The Contractor shall give special attention to the effect of his operations. He shall take special care to maintain, trim, and level the surrounding area around the building during construction period.

C. CONCRETE

TS-7 General

This section includes all operations necessary for the supply and delivery of all materials, labor, equipment and all associated activities necessary to complete the work conforming to the following standards:

ASTM C-31	Method of Making and Curing Concrete Test Specimens in the Field
ASTM C-33	Specification for Concrete Aggregates
ASTM C-39	Method of Test for Compressive Strength of Molded Cylindrical Concrete Specimens
ASTM C-94	Specification for Ready-Mixed Concrete
ASTM C-143	Test for Slump of Portland Cement Concrete
ASTM C-150	Specification for Portland Cement
ASTM A-615	Specification for Deformed and Plain Billet Steel Bars for Concrete Reinforcement

TS-8 Materials

8.1 All cement shall be Portland cement and shall be Type 1, conforming to ASTM C-150.

8.2 Fine and coarse aggregates shall be obtained from the approved source as conforming to DPWH standard specifications and shall conform to ASTM C-33.

8.3 Water shall be potable and free from deleterious amounts of acids, alkalis, oils or organic matter.

8.4 Admixtures shall only be used with the prior written consent of the Engineer. Admixtures shall not contain calcium chloride. The use of an admixture shall not change the required quantities of cement specified and the quantity of admixture used and method of mixing shall be in accordance with the manufacturer's instruction as the case may be.

8.5 Reinforcement steel shall be deformed steel bars conforming to Structural Grade (Phil. Standard) grade 40. Shapes and dimensions shall be as indicated on the drawings.

TS-9 Quality of concrete

9.1 The quality of concrete shall comply with the "National Structural Code of the Philippines, Volume 1" and with the specific requirements outlined in the various sections of this specification.

9.2 Testing of samples from concrete pours shall be as required by the "National Structural Code of the Philippines, Volume 1".

9.3 Tests of specimens shall be deemed acceptable provided they meet the requirements of the "National Structural Code of the Philippines, Volume 1".

9.4 Should further testing of the finished concrete be necessary but test specimens are not available, it shall be carried out in accordance with the approved procedures laid down in “National Structural Code of the Philippines, Volume 1”.

9.5 Hardened concrete that is deemed not to comply with this specification, but which the Engineer permits for testing, shall be subject for compressive strength.

9.6 Any concrete will be rejected under this specification if the results fail to meet the requirements of “National Structural Code of the Philippines, Volume 1”.

9.7 Hardened concrete may also be rejected and the Engineer has the option to let the Contractor to demolish the rejected portion for any one of the following conditions:

- a. It is porous, segregated or honeycombed.
- b. Its placing has been so interrupted that there is a construction or similar joint not in accordance with the National Structural Code of the Philippines, Volume 1.
- c. The reinforcing steel it incorporates has been displaced.
- d. Construction tolerances have not been met.
- e. The required surfaced finish has not been met.
- f. The concrete can be shown to be otherwise defective.

TS-10 Scope of Works and Methods of Construction

10.1 Concrete shall not be placed until all formworks, installation of reinforcement, and the preparation of surfaces have been approved by the Engineer. Prior to concreting the Contractor shall submit a proposed pouring schedule for the various stages of the work for approval by the Engineer. No concrete shall be poured without the Engineer’s approval presence. Subsequently, the Contractor shall give the

Engineer twenty four (24) hours notice of his intention to proceed with the next stages of the work.

10.2 All batches of mortar or concrete shall be adjusted to the capacity of the mixer. If hand mixing shall be allowed, the batch shall be so proportioned as to use only full bag batches. In case ready mixed concrete shall be used, it must comply with ASTM C-94 and all the requirements therein.

10.3 All mortar and concrete shall be used while fresh and when there is no evidence of initial setting. No tampering of mortar or concrete will be allowed.

10.4 Ready mixed concrete (i.e., off-site transit mixer concrete) shall comply with ASTM C-94 and the requirements herein. Batch deliveries shall not exceed the rated capacity specified for the mixer by its manufacturer. The Contractor shall submit affidavits, for the approval of the Engineer, certifying that the proposed mix to be supplied shall satisfy the requirements of these specifications.

10.5 The accuracy of weighing equipment and the accuracy of batching shall comply with the applicable requirements of ASTM C-94 and its reference standards. The materials shall be so measured as to give the required mix proportions. Cement and aggregates shall be measured by weight or any other method approved by the Engineer.

10.6 The device employed to measure and discharge the amount of water for the mixture shall be capable of adjustment and checking.

10.7 Water carried by the aggregate, in excess of that giving a saturated surface-dry condition shall be considered as part of the required mixing water.

10.8 Concrete shall be mixed until the materials are uniformly distributed. The time of mixing shall not be less than one and one half (1 ½) minutes after all ingredients are in the mixer.

10.9 No concrete shall be placed until the required bedding had been laid and compacted, the necessary reinforcement, forms, and false work had been installed, had attained the required elevation, inspected and approved by the engineer. Before depositing concrete, all debris, foreign matter, dirt and water shall be removed from the forms, and the surface of any concrete previously placed shall be cleaned and brushed with cement paste.

10.10 No concrete shall be placed on filled ground until it has attained the required compaction and approved by the Engineer.

10.11 All concrete shall be placed in daylight or under such lighting condition that may be approved by the Engineer as the case may be.

10.12 The method and manner of placing concrete shall be such as to avoid the possibility of segregation of the concrete or the displacement of the reinforcement. Where troughs or chutes are used in placing concrete, the angle of inclination with respect to the horizontal shall not exceed thirty (30) degrees.

10.13 Concrete shall not be allowed to drop into place from a height exceeding one (1) meter.

10.14 The placing of concrete shall be evenly regulated to avoid the depositing of a large quantity at any one point. Concrete in horizontal layers shall be deposited as near as practicable to its final position in the forms.

10.15 Concrete shall be deposited in a continuous operation as far as it is practicable to avoid initial setting starting in any part of the work before another fresh concrete shall be placed against it.

10.16 Compaction of concrete shall be by immersion type of vibrator. Vibration shall be limited to the time necessary to produce thorough compaction of the concrete without segregation. Under no circumstances, vibrator shall be used to move concrete laterally, nor shall it be allowed to penetrate concrete in the previous batch.

10.17 During placing and until curing, all new concrete shall be protected against the harmful effects of exposure to the elements and to running water.

10.18 When concrete hardens sufficiently, it must be covered with damp, closed-woven burlap or similar material, or clean sand, which shall be kept thoroughly saturated over a period of fourteen (14) days. Where wood forms are used, they shall be kept wet for the same period to prevent openings at the joints and drying out of the concrete.

10.19 If the temperature of the surrounding air is higher than 32 degree Celsius prior the pouring of concrete, the following shall procedures must be applied by the Contractor:

- a. The formwork shall be continually sprayed with cold water in advance of the concreting and excess water shall be removed from the inside of the forms immediately prior to the placement of concrete.
- b. The reinforcement of the formwork, if metal forms are used, shall be protected from the effects of hot winds and direct sunlight.
- c. Suitable barriers shall be provided to protect the freshly placed concrete from wind, shall be covered and allow the concrete to harden sufficiently.
- d. The concrete shall be held to a temperature of 32 degree Celsius during pouring.
- e. The concrete shall be mixed, transported, placed and compacted as rapidly as possible and shall be then covered with an impervious membrane and shall kept wet for curing.

TS-11 Finishing of Concrete

11.1 Allowable deviations from plumb or level and from the alignment, profile grades and dimensions shown on the drawings are defined as “tolerances” and are to be distinguished from irregularities in finish. Surface irregularities are classified as abrupt or gradual. Off sets caused by displaced or misplaced from sheeting, form lining, form section, loose knot or knots or otherwise defective form timber will be considered as abrupt irregularities and will tested by either a straight edge or its equivalent for curved surfaces.

11.2 Immediately after removal of forms, all pins and loose material shall be removed. "Honey-combed" aggregate pockets, voids and holes shall be cut back to solid concrete. All repairs of imperfections in concrete shall be completed within twenty four (24) hours after removal of forms.

TS-12 Formworks

12.1 The contractor shall be responsible for the design, erection and adjustment of all formwork and false work in accordance with the National Structural Code of the Philippines, Volume 1.

12.2 All materials used in the construction and support of formwork shall be of timber or any alternative materials upon approval of the Engineer. For beams and slabs, use not less than 12 mm (1/2") thick plywood forms for exposed concrete while 20 mm (3/4") thick T & G or plyboards for covered concrete.

12.3 It shall be the Contractor's responsibility to ensure that the forms are placed to the shape, lines and dimensions as indicated on the drawings, and they shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete. The Contractor shall ensure that the forms are maintained rigidly in position and be sufficiently tight to prevent excessive leakage of mortar.

12.4 All debris particularly chipping, shaving and sawdust, shall be removed from the interior of the forms before the concrete is placed.

12.5 Before any pouring of concrete, the Engineer shall inspect the formwork and reject any materials of forms that do not conform to this specification.

12.6 The deflection of forms between joints and/or studs shall no exceed one five-hundredth (1/500) of the joints or stud spacing.

TS-13 Grouting

The Contractor, prior the pouring of another batch of concrete on hardened concrete surface grouting shall be made. Before any grouting operation, all surfaces to be grouted shall be cleared of extraneous materials.

TS-14 Rebar

14.1 All steel bars to be used during construction should be in accordance with the guidelines of "National Structural Code of the Philippines, Volume 1"

14.2 The tolerances on cutting and bending of reinforcement shall be in accordance with the provisions stipulated in the constructions notes of the approved plans and specifications.

14.3 Lap splicing or welding of reinforcement, if approved by the Engineer, of reinforcement shall comply with the National Structural Code of the Philippines,

Volume 1. It shall not be carried out within 75mm of a bend having an internal diameter less than 12 bar diameter.

D. MASONRY

The scope of the work covers the furnishing of all labor, equipment and materials for the erection of walls made of non load bearing, 100mm and/or 150mm thick concrete hollow blocks. For exterior walls use 150mm thick CHB, and for interior walls use 100mm thick CHB.

TS-15 Materials

15.1 All materials supplied under the Contract shall conform to the requirements of the Philippine Standard Association and the National Structural Code of the Philippines, Volume 1.

15.2 Recommended strength of CHB for both exterior & interior walls of the building shall not be less than 450 psi.

15.3 Portland cement mortar for laying concrete hollow blocks shall consist of one (1) part Portland cement, and three (3) parts sand.

15.4 Mortar materials shall be accurately measured by volume and thoroughly mixed until evenly distributed throughout the batch. Unless otherwise approved by the Engineer, mixing by batch shall be by mechanical mixer of not less than two (2) minutes per batch.

15.5 Masonry materials shall be handled with care to prevent chipping and breakage.

Masonry units with crack shall not be installed and shall be replaced immediately. Material for concrete masonry units shall be stacked on platform and covered or stored in any other approved manner that will protect these materials from contact with the soil and exposure to the weather. Cement shall be stored off the ground under water tight cover and away from sweating walls and other damp surfaces until ready for use. Damage or deteriorated materials shall be removed from the premises.

15.6 All steel reinforcement for masonry works shall be in accordance with the approved plan and details as shown on the drawings.

TS-16 Methods of Construction

16.1 All masonry units shall be laid plumb, leveled and accurately spaced. Wall intersection shall be toothed alternately. End of walls shall be in vertical line.

16.2 All masonry units shall be wetted before laying. The blocks shall be laid in mortar bedding in such a way that no cracks are formed between the blocks and the mortar at the time the masonry units are placed.

16.3 The concrete blocks shall be adjusted to its final position while mortar is still soft and plastic to insure a good bond.

16.4 The position of the concrete block shall not be shifted after the mortar has stiffened.

16.5 All horizontal and vertical joints must be filled solid with 3/8-inch (9.5mm) thick mortar unless otherwise specified or detailed on the drawings. Any patching necessary to fill the joints should be completed.

16.6 All vertical masonry wall reinforcement shall be anchored to concrete wall footings and roof beam. Likewise horizontal reinforcements should be anchored to column bars and shall be tied to every vertical masonry wall reinforcements.

16.7 Filling of CHB cells shall be carried out in stages not exceeding 3 courses at a time and the concrete properly compacted without disturbing the newly laid concrete blocks.

16.8 The filler concrete shall be stopped at a level about thirty six (36) mm. (1 ½ in.) below the top of the blocks laid, when filling of concrete shall be stopped for more than one (1) hour.

16.9 At the completion of the work, all excess mortar on masonry surfaces and mortar spilled on floor slabs shall be removed.

F. WOOD WORKS

TS-17 General

17.1 The works consists of furnishing all materials, plant, labor, equipment, and all other items specified in the drawings and in the specifications. It also includes all operations necessary for the completion of all carpentry works.

17.2 Lumber shall be of approved quality, of the respective kinds required for the work, well-seasoned, thoroughly dry, straight and free from large, loose or unsound knots, saps, shakes, or other imperfections which may affect its strength, durability and appearance

17.3 Framing lumber (if applicable) including trusses, rafters, purlins, and girts shall be of the rough dimension shown on the drawings). Any planed lumber supplied shall have a finish size not less than the rough dimensions specified on the drawings.

17.4 All cutting, framing, fitting and other rough lumbers necessary for the completion of the work shall be provided.

TS-18 Protection and Storage

18.1 Lumber shall be protected and kept under cover both in transit and at the job site, and shall be carefully piled off the ground and insure of proper ventilation, and protection from the weather.

18.2 All surface wood framework and other wood members in contact with or embedded in concrete shall be painted with two (2) coat of asphalt applied hot or coal tar.

18.3 The Contractor shall protect all finish woodwork from injury after it has been set in place until the completion and final acceptance of work.

TS-19 Substitution of Lumber

Any lumber intended to be used maybe substituted if the substitute belongs to the same group of the kinds specified. However, a deduction may be considered if the unit cost of the substitute is lower than that of the unit cost as stated in the contract. Any substitution must be subject to the approval of the Engineer.

TS-20 Materials

20.1 When the type and kind of lumber to be used for woodwork is not specified in the drawings and details, the following shall be used:

- a. Guijo or Lauan – for all door jambs, window jambs, headers and transom bars; wood plates, stair handrail, and all other wood works coming in contact with concrete or masonry.
- b. Tanguile or Red Lauan – for all ceiling framing, studding and partitions if any.

- c. Plywood – shall be 6 mm (1/4 inch) thick marine plywood for interior ceiling, and marine type for eaves. If applicable, 19 mm (3/4 inch) thick shall be used for cabinet and its door, counters and shelves.
- d. Fiber Cement Board – shall be 12 mm (1/2 inch) thick for use on fascia boards, the preferred sizes are shown on the drawings.

TS-21 Methods of Construction

21.1 All framing and other rough carpentry shall be fitted closely and carefully to the required lines and levels, and shall be secured in place in a rigid substantial manner.

21.2 Door jambs indicated on the drawings, in contact with concrete shall be anchored using 4-inch common wire nails spaced not more than 200 mm apart, all around the contact surface.

21.3 Fastenings, except where bolts are shown on the drawings shall be common wire nails.

21.4 Nails shall be of the proper size, and care shall be taken so as not split the wood members.

21.5 All dimensions shall be verified on the site before fabricating joinery items. All joints shall be accurately and cleanly formed to conform to the required details. All items of work shown on the drawings shall be done by the Contractor with good workmanship practice and in accordance with the best reasonable interpretation of the

plans and related specification. Use weldwood or other approved water-resistant glue for assembly of materials and other joinery.

G. THERMAL AND MOISTURE PROTECTION

TS-22 General

This section include the supply all labor, plant, materials, equipments, and other facilities required to complete all roofing work as shown on the drawings and specified herein. Work shall be done by trained and experienced workmen who are completely familiar with the materials involved and the recommended methods of installation.

TS-23 Materials

23.1 GA. 26, corrugated, manufacturer pre-painted long span G.I. Roofing shall be used and all bended accessories such as ridge rolls, end flashings, side flashings and corner flashings shall be GA. 24, preformed, pre-painted G.I. materials and delivered to site free from any damages or defects.

23.2 Cement from concreting works, chemical solutions, paint, welding sparks, nails and iron tools should not be allowed to drop on, extend to or rust away at the roof since removal or scraping of materials later could damage the roof's coating, roof traffic should be minimized. When crossing the roof area, walking should be conducted along roof frame locations, along overlaps or on wooden planks laid over the roof panels.

TS-24 Methods of Construction

24.1 Installation of corrugated G.I. sheets with end laps shall start at the lower part of the roof and proceed towards the direction of monsoon wind providing side laps of 2-1/2 corrugations. Roofing sheets can be fastened by means of stove bolt with aluminum rubber washers or tekscrew with rubber washer. Manufacturer's specification shall maybe acceptable or as directed by the Engineer.

24.2 Roof mounting strip/connector or tight frame shall be FB2.3 x 30 galvanized steel sheet and shall be fastened to the purlins by full weld or water head tekscrew or as directed by the Engineer. Ridge rolls and other flashings shall be attached to the roofing sheets by means of rivets or screws.

I. FINISHES

TS-29 Plastering

29.1 General

The work includes the furnishing of materials, equipment, methods and the labor necessary to complete all plastering in accordance with the drawings and specified herein.

29.2 Materials

All materials specified herein shall be subject to the specification of manufacturers and to the approval of the Engineer.

- a. Portland Cement shall conform to ASTM C-150), Type 1.
- b. Sand shall be hard, well washed, clean and free from deleterious materials conforming to ASTM C-40.
- c. Lime Shall be hydrated lime with the requirement that calcium oxide (CaO) and the magnesium oxide (MgO) shall not exceed eight (8) percent by weight calculated
- d. Water shall be potable, clean and free form organic matter, acids and alkalis.

29.3 Delivery and Storage

Manufactured materials shall be delivered in the original unbroken packages and containers bearing the name and brand of the manufacturer. Cement materials shall be kept away from the sweating walls and damp surfaces until ready for use. Damage or deteriorated materials shall be removed from the premises.

29.4 Mixture

Plaster shall be the thoroughly mixed with the proper amount of water until uniform in color consistency. Tampering shall not be permitted and all plaster that has begun to stiffen shall be discarded. Cement mortar shall be of three (3) coat application. Each coat shall be proportional as follows: one (1) part Portland Cement, three (3) parts sand and one fifth part lime putty.

29.5 Methods of Construction

- a. Surfaces to receive plaster shall be cleaned of all loose particles, dust, cracks and other foreign matter. Before the plastering work is started, masonry surfaces shall be wetted thoroughly with a fog, spray of clean water to produce a uniformly moist condition. Corner beads, screeds and other accessories shall be checked carefully for alignment before work is started.
- b. The coat shall be applied with sufficient pressure to fill the grooves in hollow blocks or concrete surface to prevent air pockets and secure a good bond. The coat shall be lightly scratched and broomed. Each coat of cement plaster shall be kept moist for four (4) hours after application and then allowed to dry.
- c. Finish and final coat shall not be applied until the first coat has seasoned for 7 days. Before the application of the finish coat, the concrete surface shall be evenly moistened with a fog coat; the first shall be floated first to a true and even surface then troweled in a manner that will force the sand particles down into the plaster. Plastered surfaces shall be smooth and free from rough areas, troweled marks, checks and blemishes. Thickness of plaster shall be 9mm (3/8") on vertical concrete and on masonry.
- d. On wall finishing, exterior and interior finishes shall be plain cement plaster finish or whatever is specified on the drawing.
- e. Toilet wall finishes shall be vitrified glazed ceramic tiles wainscoting. (Refer to ceramic tile work for detailed information).
- f. Plastering work shall be finished level, square and true within a tolerance of 5 millimeter in 4.8 meters without cracks, wakes, blisters, pits, projections and other imperfections. Plaster work shall be formed carefully around corners, contours and well-up to screeds. Care shall be taken to prevent sagging and drooping of applications. There shall be no visible junction marks, in the finish coat where one day's work adjoins the other.
- g. Upon completion of the building and when directed, all loose, cracked, damaged, or defective plastering shall be cut out and re-plastered in a satisfactory and approved manner. All pointing and patching of plastered surfaces, and plaster work abutting or adjoining any other finish work, shall be done in neat and acceptable manner. Plaster droppings shall be removed from all surfaces. Exposed plastered surfaces shall be left in a clean unblemished condition ready to receive paint or other finish. Protective covering shall be removed from floors and other surfaces, and all rubbish and debris shall be removed from the building.

TS-31 Painting

31.1 General

The work under this section shall include the furnishing of all materials, labor, tools and other facilities necessary to complete all painting of all of all surfaces throughout the interior and exterior of the building except as otherwise specified.

Before paint application, the contractor shall inspect all surfaces to be painted and all defects shall be remedied. For concrete surfaces all dirty matter shall be removed by scrubbing affected surfaces with a solution of muriatic acid and water (add a half to pint of acid to a gallon of water), and rinse with a clear water to allow to dry thoroughly. All nail holes, cracks or open joints shall be puttied, caulked, or grouted.

31.2 Materials

- a. All paint materials shall be delivered to the jobsite in original containers with seals unbroken and labels intact. Materials that are damaged during delivery shall be replaced by the contractor at his own expense. With the exception of ready-mixed materials in original containers, all mixing shall be done at the jobsite.
- b. All paints shall be applied in accordance with the manufacturer's printed instructions.
- c. All materials called for under this section of specifications shall be as manufactured by "Boysen" or approved equal.

31.3 Color and Samples

- a. Color coordinates and samples shall be submitted by the Contractor to the Engineer for review and approval. No painting shall be done without first securing prior approval of submitted color samples, schedule and coordinates.
- b. Tinting or matching of colors shall be done under the supervision of the Engineer. If required, each color and finish shall be prepared in advance, with the materials specified for the approval of the Engineer. "Off color selected" shall be understood of all colors specified therein.

31.4 Paint Application and Methods

- a. All concrete and masonry and other surfaces shall be in a condition necessary to receive satisfactory paint finish. All nail holes, cracks or open joints shall be puttied, caulked, or grouted. Putty, where necessary shall be applied with a knife after a prime coats have been applied.
- b. Scrape off loose mortar surface contaminants, then steel brush to removed chalk, dust, dirt, and surface deposits.
- c. All concrete masonry surface must be thoroughly neutralized either by brush or spray with a solution four (4) pounds of zinc sulphate to each gallon of water. Treated surfaces shall be treated with litmus paper to ascertain that alkalinity is removed, otherwise a second washing with the solution shall be applied. After drying, all crystals on the neutralized surface must be brushed off before applying the priming coat.
- d. All mill work and other wood works where painting is required shall be sandpapered to brush, to remove dust, before application of the primer. Resulting voids mails holes, cracks shall be filled with approved putty. Touch up all knots, pitch streaks and sappy spots with approved sealer.
- e. Scrape off rust from the surface with steel brush and sweep to remove dust, dirt and all surface contaminants. Oil and Grease adhering to the surface may be removed by washing affected surface with soap and water. Holes shall be patched-up with soldiering lead.
- f. No exterior painting shall be done in rainy, damp weather or until surfaces are thoroughly dry. No interior painting or finishing shall be permitted until building has been thoroughly dried-out.

- g. Finish shall be applied only over the preceding coats which are hard and dry. Finish shall be evenly and smoothly applied in thin but covering coats, and shall be free from runs, sags or crawling.
- h. The use of heavy brush is required. Paints shall be thoroughly stirred so as to have the pigment evenly in suspension while paint is being applied. Except where other is noted or specified, all paints shall be applied in three (3) coats. Wood Surfaces:
 - i. Painted doors, jambs, cabinets, shelves (gloss finish)
 - 1st coat – Flatwall enamel
 - 2nd coat – Gloss enamel
 - 3rd coat – Gloss enamel
 - ii. Plain painted surfaces such as walls, partitions and ceilings
 - 1st coat – Acrylic Flat Latex Paint, White.
 - 2nd and 3rd coat – Acrylic Gloss Latex Paint
- i. Exterior concrete wall and cement plaster – all exterior concrete shall be painted except as otherwise specified on the drawings.
 - i. 1st coat – Boysen Acrytex Primer; or approved equal.
 - ii. 2nd and 3rd coat – Boysen Acrytex topcoat, or approved equal.

31.5 Cleaning

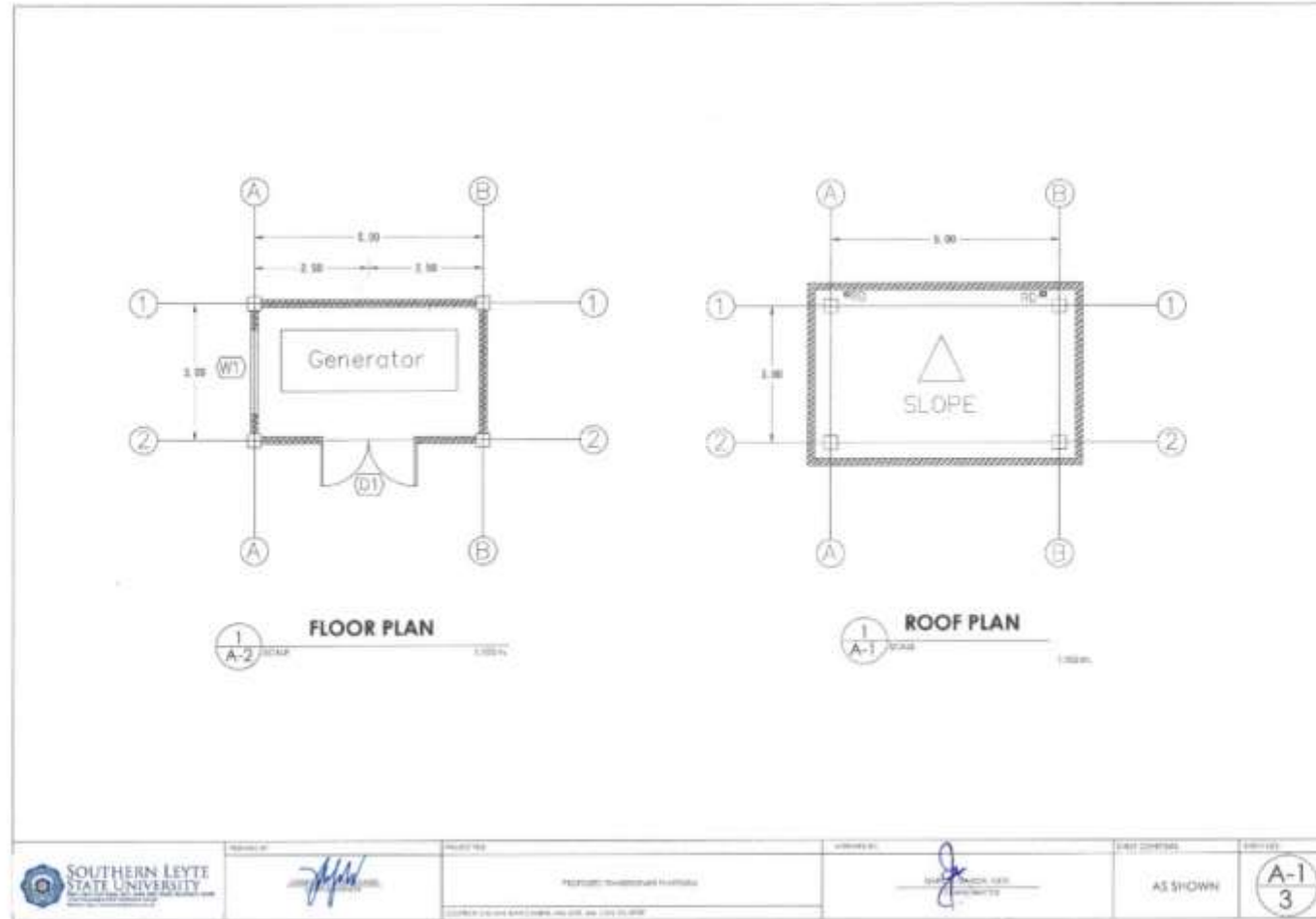
Upon completion of the work the Contractor shall remove from the building all used materials, debris, all paint spots on the floor, washing of window glass, hardware

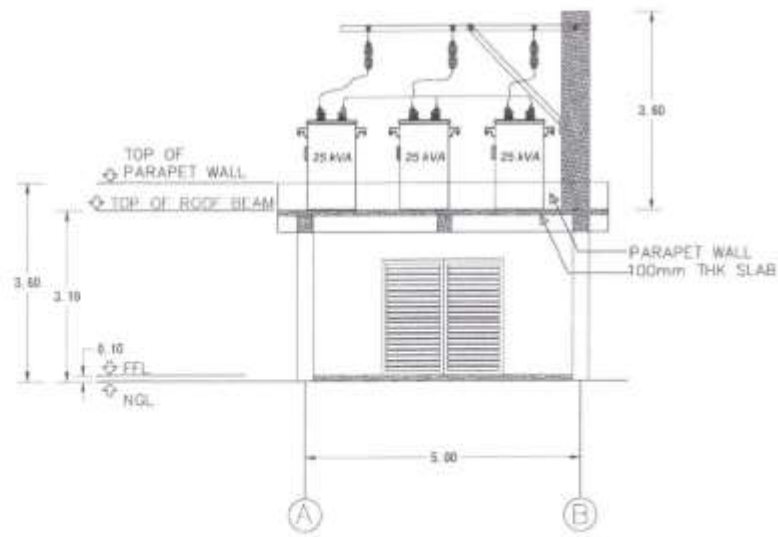
fixture, etc. All work performed under this Section shall be left clean and acceptable to the Engineer.

31.6 Guarantee

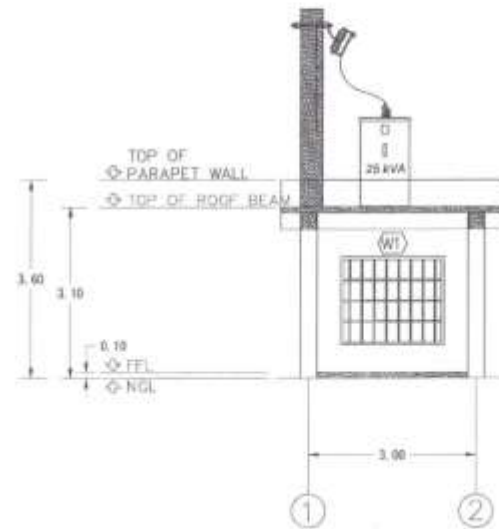
The Contractor shall guarantee his work for a period of one (1) year, when using the materials specified by the Engineer. The Contractor shall repair all defects due to faulty material or workmanship caused by him without any additional compensation for the period specified.

Section VII. Drawings



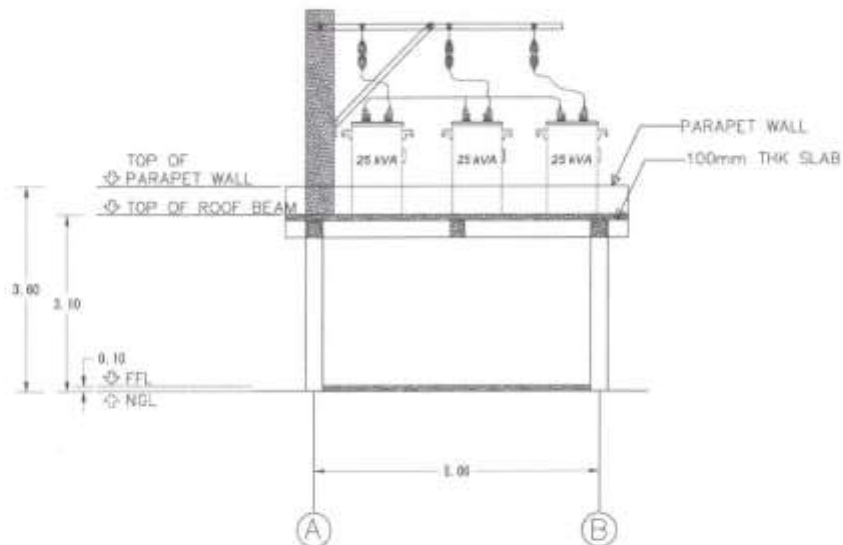


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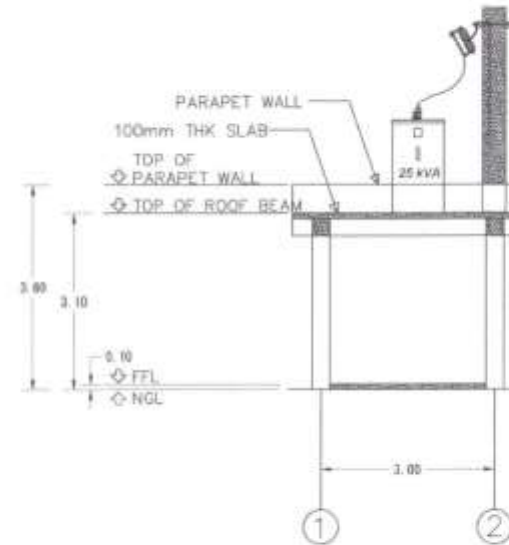
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A-2 SCALE 1:100 m

<p>SOUTHERN LEYTE STATE UNIVERSITY</p>	<p>DESIGNED BY: <i>[Signature]</i></p>	<p>PROJECT TITLE: TRANSFORMER STATION</p>	<p>APPROVED BY: <i>[Signature]</i></p>	<p>SHEET COMMENTS: AS SHOWN</p>	<p>SHEET NO. A-2 3</p>
	<p>UNIVERSITY OF SOUTHERN LEYTE</p>		<p>DATE: 01/01/2024</p>		



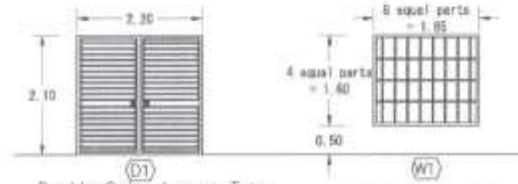
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A-2 SCALE 1:100

REAR ELEVATION



2
A-2 SCALE 1:100

RIGHT ELEVATION



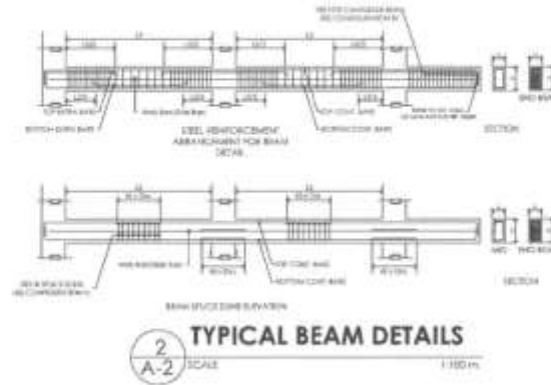
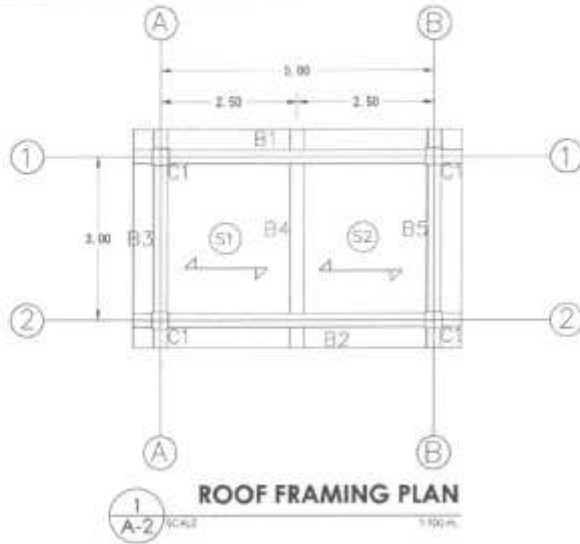
(D1)
Double Swing Louver Type
Steel Door
on 50mm x 150mm thick door
jamb
1 set

(W1)
Steel Window (12mm Square
Bar)
1 set

1
A-2 SCALE 1:100

SCHEDULE OF DOORS AND WINDOWS

<p>SOUTHERN LEYTE STATE UNIVERSITY</p>	<p>PREPARED BY: <i>[Signature]</i></p>	<p>PROJECT TITLE: PROPOSED TRANSFORMER PLATFORM</p>	<p>APPROVED BY: <i>[Signature]</i></p>	<p>SHEET CONTENTS: AS SHOWN</p>	<p>SHEET NO.: A-3 3</p>
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SCHEDULE OF REINFORCED CONCRETE COLUMNS

Concrete Cover = 40mm
Class A Mixture: Grade 40 rebar for Main Bar, Grade 33 rebar for Stings

BEAM NUMBER	SIZE		BOTTOM REINFORCEMENT				TOP REINFORCEMENT			SHEAR STIRRUPS	SPR
	B	D	STRAIGHT	CURTAILED	EXTRA LEFT	EXTRA RIGHT	STRAIGHT	EXTRA LEFT SUPP	EXTRA RIGHT SUPP		
B1, B2	300	400	4#12	2#12			4#12	2#12	2#12	4#12 @ 140mm C/C	4#10@
B3, B4, B5	250	400	3#12		1#12	2#12	3#12	2#12	2#12	3#12 @ 140mm C/C	
B6	250	400	2#12	1#12			2#12			3#12 @ 140mm C/C	

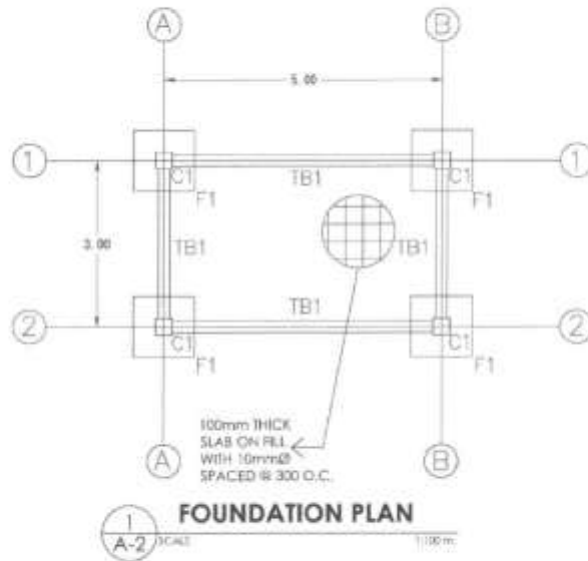
Class A Mixture: Grade 40 rebar

SLAB MARKED	SLAB THICKNESS	BOTTOM REINFORCEMENT								DISTRIBUTION
		ALONG SHORT SPAN		ALONG LONG SPAN		OVER LONG SUPPORT		OVER SHORT SUPPORT		
		FULL LENGTH	CURTAILED	FULL LENGTH	CURTAILED	CONTINUOUS SUPPORT	END SUPPORT	CONTINUOUS SUPPORT	END SUPPORT	
B1, B2	100	4#12 @ 140mm C/C		4#12 @ 140mm C/C		4#12 @ 140mm C/C		4#12 @ 140mm C/C		4#12 @ 140mm C/C

Concrete Cover = 40mm
Class A Mixture: Grade 40 rebar for Main Bar

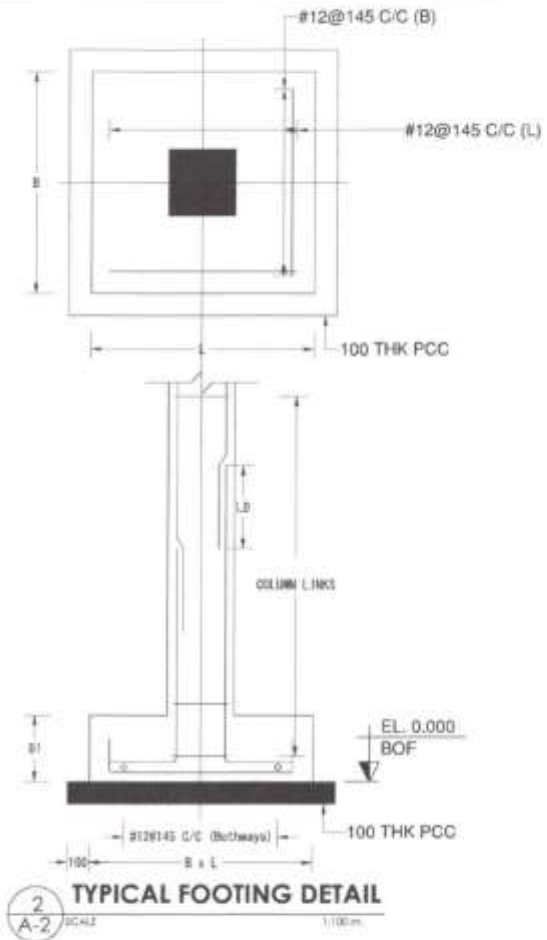
LEVEL	SECTION	REINFORCEMENT
GROUND FLOOR TO ROOF BEAM	SECTION	
	SIZE	300mm x 300mm
	CORNER BAR	4 - 12mm @
	MIDDLE BAR	4 - 12mm @
	TIES / SPIRAL (Grade 33 rebar)	10mm @ 75mm - 2 sets 10mm @ 100mm - 2 sets 10mm @ 150mm @ top
FOUNDATION TO GROUND FLOOR	SECTION	
	SIZE	300mm x 300mm
	CORNER BAR	4 - 12mm @
	MIDDLE BAR	4 - 12mm @
	TIES / SPIRAL (Grade 33 rebar)	10mm @ 75mm - 2 sets 10mm @ 100mm @ top

<p>SOUTHERN LEYTE STATE UNIVERSITY Office of the Registrar Lapu-Lapu City, Cebu</p>	<p>DESIGNED BY: </p>	<p>CHECKED BY: </p>	<p>DATE: 2024-08-20</p>	<p>PROJECT: FORGED TRANSFORMER PLATFORM</p>	<p>SCALE: AS SHOWN</p>	<p>Sheet No: S-1 4</p>
	<p>Copyright © 2024 by Southern Leyte State University. All rights reserved.</p>					



Concrete Cover = 75mm
Class A Mixture: Grade 40 Rebar

FOOTING NUMBERS	COLUMN NUMBERS	FOOTING TYPE	FOOTING DIMENSION			FOOTING REINFORCEMENT	
			L	B	D1	BOTTOM	
						ALONG B	ALONG L
F1	C1	Pad	1000	1000	300	#12@145 C/C	#12@145 C/C



<p>SOUTHERN LEYTE STATE UNIVERSITY OFFICE OF THE DEAN OF ARCHITECTURE</p>	<p>PREPARED BY: </p>	<p>PROJECT TITLE: PROPOSED TRANSFORMER PLATFORM</p>	<p>APPROVED BY: </p> <p>CARYL S. S. S.S. ARCHITECT</p>	<p>SHEET CONTENTS: AS SHOWN</p>	<p>SHEET NO.: S-2 4</p>
<p>LOOKING SOUTH EASTWARD FROM THE EAST SIDE OF THE SITE</p>					

GENERAL CONSTRUCTION NOTES

GENERAL NOTES

1.0 STANDARDS AND REFERENCES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.
2. ALL MATERIALS AND METHODS SHALL BE APPROVED BY THE ARCHITECT.

2.0 DESIGN AND CONSTRUCTION

1. THE ARCHITECT HAS REVIEWED THE DESIGN AND CONSTRUCTION DOCUMENTS AND HAS APPROVED THEM FOR CONSTRUCTION PURPOSES.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.

4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.

NOTES ON CONCRETE MIXTURE & PLACING

1. ALL CONCRETE SHALL BE PLACED AND COMPACTED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.
2. ALL CONCRETE SHALL BE PLACED AND COMPACTED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.
3. ALL CONCRETE SHALL BE PLACED AND COMPACTED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.

CONCRETE MIXTURE	MINIMUM STRENGTH	MAXIMUM WATER-CEMENT RATIO	MINIMUM AIR CONTENT
Normal Weight Concrete	3000 psi	0.50	5%
High Strength Concrete	4000 psi	0.40	5%
Mass Concrete	3000 psi	0.50	5%
Specialty Concrete	As Specified	As Specified	As Specified

4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.

7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.
8. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.
9. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.

THE CONTRACTOR SHALL VERIFY AND VERIFY AGAIN BEFORE THE COMMENCEMENT OF CONSTRUCTION THAT ALL MATERIALS AND METHODS ARE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.

NOTES ON FORMWORK

1. ALL FORMWORK SHALL BE DESIGNED TO WITHSTAND ALL LOADS INCLUDING WIND, VIBRATION, AND IMPACT.
2. ALL FORMWORK SHALL BE DESIGNED TO WITHSTAND ALL LOADS INCLUDING WIND, VIBRATION, AND IMPACT.
3. ALL FORMWORK SHALL BE DESIGNED TO WITHSTAND ALL LOADS INCLUDING WIND, VIBRATION, AND IMPACT.

NOTES ON REINFORCEMENT

1. ALL REINFORCEMENT SHALL BE PLACED AND TIED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.
2. ALL REINFORCEMENT SHALL BE PLACED AND TIED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.
3. ALL REINFORCEMENT SHALL BE PLACED AND TIED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.

NOTES ON CONCRETE CURING

1. ALL CONCRETE SHALL BE CURIED PROPERLY TO AVOID CRACKING AND DISINTEGRATION.
2. ALL CONCRETE SHALL BE CURIED PROPERLY TO AVOID CRACKING AND DISINTEGRATION.
3. ALL CONCRETE SHALL BE CURIED PROPERLY TO AVOID CRACKING AND DISINTEGRATION.

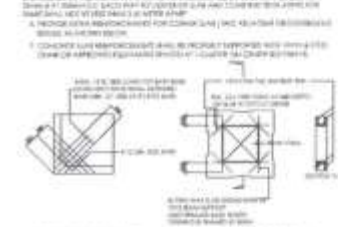
TYPICAL REINFORCING DETAILS FOR SLABS



REINFORCING DEVELOPMENT LENGTHS

REINFORCEMENT TYPE	DEVELOPMENT LENGTH (L _d)
Top Bars	1.25d
Bottom Bars	1.25d
Bars in Tension	1.25d
Bars in Compression	1.25d

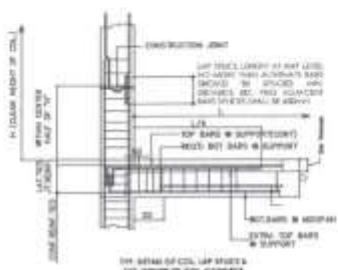
NOTES ON COLUMN REINFORCEMENT



TYPICAL COLUMN REINFORCING DETAILS

1. ALL COLUMN REINFORCEMENT SHALL BE PLACED AND TIED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.
2. ALL COLUMN REINFORCEMENT SHALL BE PLACED AND TIED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.
3. ALL COLUMN REINFORCEMENT SHALL BE PLACED AND TIED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.

TYPICAL COLUMN REINFORCING DETAILS



TYPICAL COLUMN REINFORCING DETAILS

1. ALL COLUMN REINFORCEMENT SHALL BE PLACED AND TIED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.
2. ALL COLUMN REINFORCEMENT SHALL BE PLACED AND TIED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.
3. ALL COLUMN REINFORCEMENT SHALL BE PLACED AND TIED PROPERLY TO AVOID SEGREGATION AND AIR ENTRAINMENT.

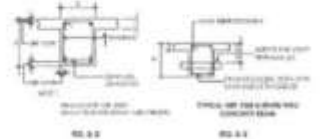
TYPICAL COLUMN REINFORCING DETAILS

REINFORCEMENT TYPE	DEVELOPMENT LENGTH (L _d)
Top Bars	1.25d
Bottom Bars	1.25d
Bars in Tension	1.25d
Bars in Compression	1.25d

THE CONTRACTOR SHALL VERIFY AND VERIFY AGAIN BEFORE THE COMMENCEMENT OF CONSTRUCTION THAT ALL MATERIALS AND METHODS ARE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.

<p>SOUTHERN LEYTE STATE UNIVERSITY Department of Civil Engineering College of Engineering and Architecture</p>	<p>DESIGNED BY: [Signature]</p>	<p>PROJECT NO.: 2024-001</p> <p>PROJECT TITLE: REINFORCED CONCRETE PLATFORM</p> <p>DATE: 2024-09-20</p>	<p>APPROVED BY: [Signature]</p>	<p>SHEET CONTENTS: AS SHOWN</p>	<p>SHEET NO.: S-3 4</p>
	<p>FOR INFORMATION OF THE CONTRACTOR, ALL MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CONSTRUCTION CODE OF ALABAMA.</p>				

GENERAL CONSTRUCTION NOTES



1. MASONRY WALL CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

2. REINFORCEMENT SHALL BE PROVIDED AT CORNER WALL CONNECTIONS AND AT INTERSECTION WALL CONNECTIONS.

3. REINFORCEMENT SHALL BE PROVIDED AT CORNER WALL CONNECTIONS AND AT INTERSECTION WALL CONNECTIONS.

4. REINFORCEMENT SHALL BE PROVIDED AT CORNER WALL CONNECTIONS AND AT INTERSECTION WALL CONNECTIONS.

NOTES ON CONCRETE REINFORCING BARS

1. UNLESS OTHERWISE SPECIFIED, ALL CONCRETE REINFORCING BARS SHALL BE PROVIDED AS PER THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

2. REINFORCING BARS SHALL BE PROVIDED AS PER THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

SCHEDULE OF CONCRETE REINFORCING BARS & DIMENSIONS

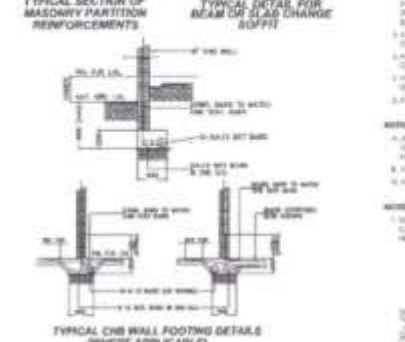
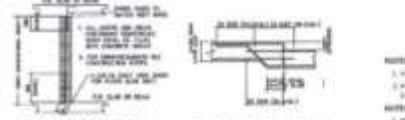
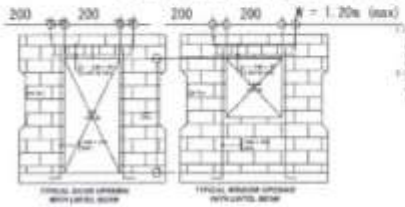
NO.	DESCRIPTION	REMARKS
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SCHEDULE OF CONCRETE REINFORCING BARS & DIMENSIONS

NO.	DESCRIPTION	REMARKS
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10



TYPICAL CONNECTION DETAIL OF MASONRY WALL



SCHEDULE OF CONCRETE REINFORCING BARS & DIMENSIONS

NO.	DESCRIPTION	REMARKS
1
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5
6
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1. ALL WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

2. REINFORCEMENT SHALL BE PROVIDED AS PER THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

1. REINFORCEMENT SHALL BE PROVIDED AS PER THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

2. REINFORCEMENT SHALL BE PROVIDED AS PER THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

3. REINFORCEMENT SHALL BE PROVIDED AS PER THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.



NOTES ON WALLS

1. ALL WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

2. REINFORCEMENT SHALL BE PROVIDED AS PER THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

NOTES ON CONCRETE WALLS

1. ALL CONCRETE WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

2. REINFORCEMENT SHALL BE PROVIDED AS PER THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

NOTES ON CONCRETE PILES

1. ALL CONCRETE PILES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

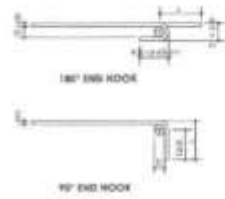
2. REINFORCEMENT SHALL BE PROVIDED AS PER THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.



NOTES ON JOINTS

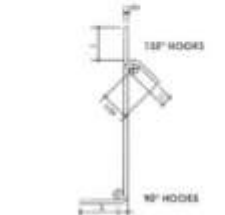
1. ALL JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.

2. REINFORCEMENT SHALL BE PROVIDED AS PER THE RELEVANT STANDARDS AND SPECIFICATIONS OF THE RELEVANT AUTHORITY.



SCHEDULE OF CONCRETE REINFORCING BARS & DIMENSIONS

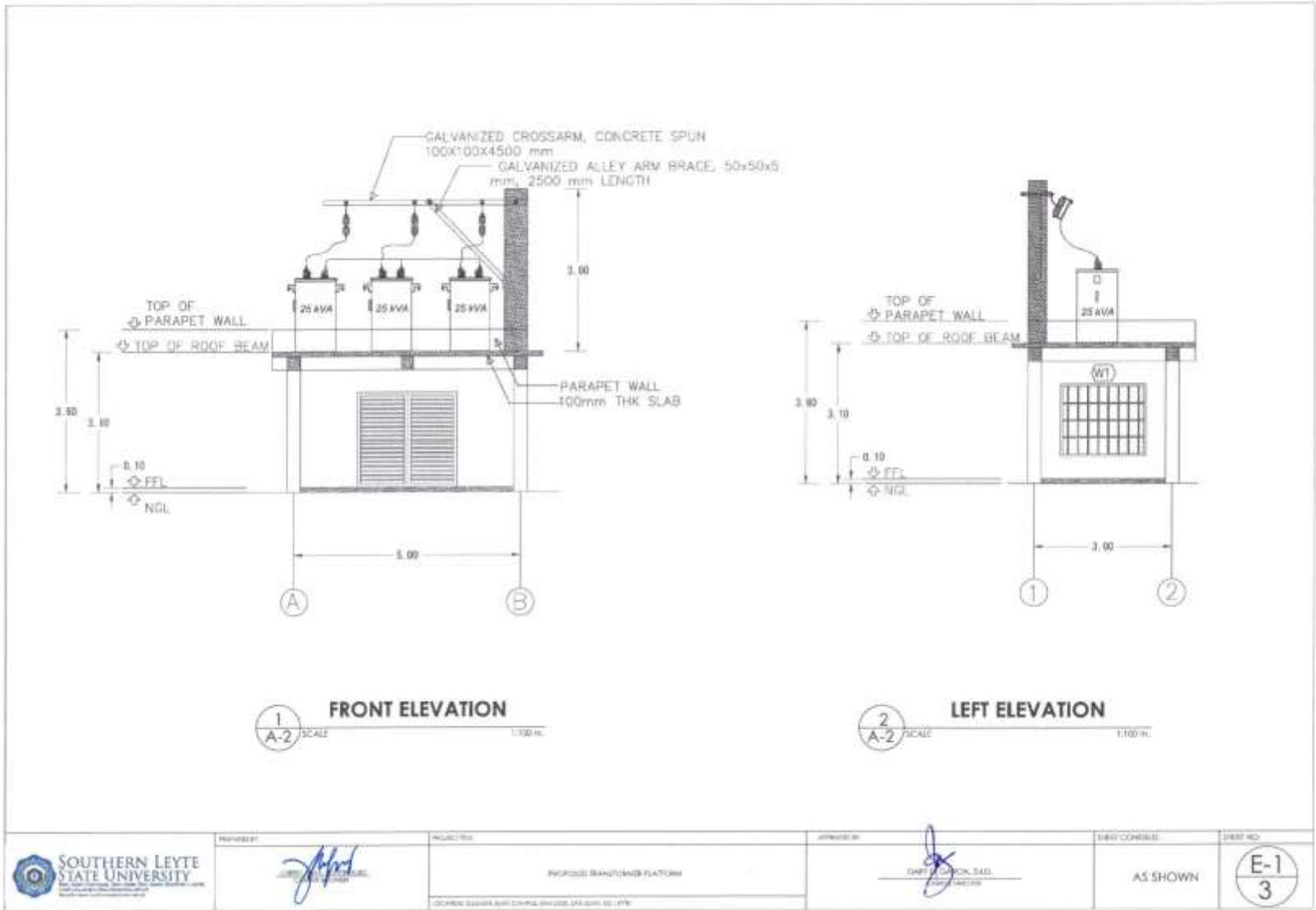
NO.	DESCRIPTION	REMARKS
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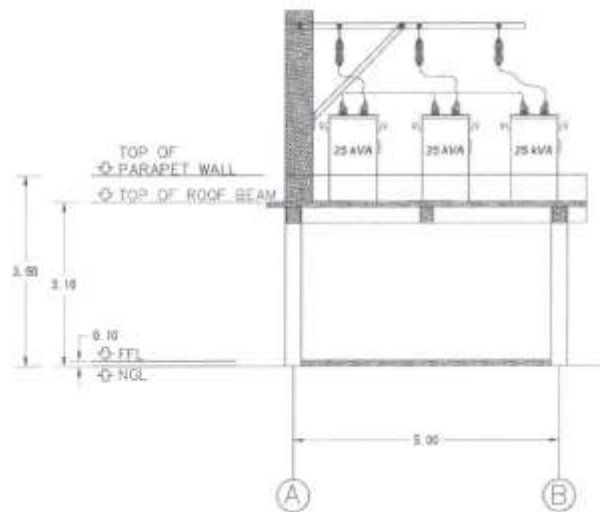


SCHEDULE OF CONCRETE REINFORCING BARS & DIMENSIONS

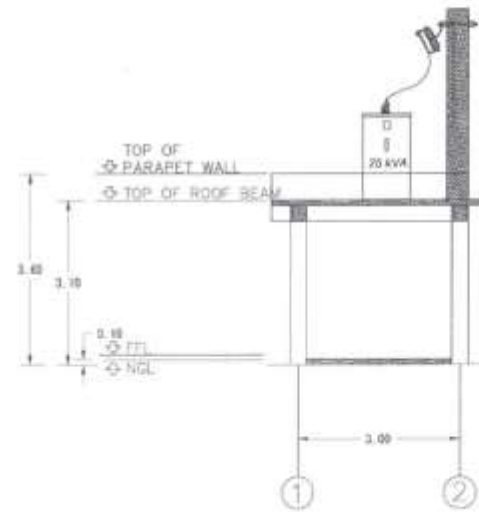
NO.	DESCRIPTION	REMARKS
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<p>SOUTHERN LEYTE STATE UNIVERSITY</p>	<p>DESIGNED BY</p>	<p>PROJECT TITLE</p> <p>REINFORCEMENT PLATFORM</p>	<p>APPROVED BY</p>	<p>DATE</p> <p>AS SHOWN</p>	<p>SHEET NO.</p> <p>S-4</p> <p>4</p>
	<p>SCALE: 1:100</p>				



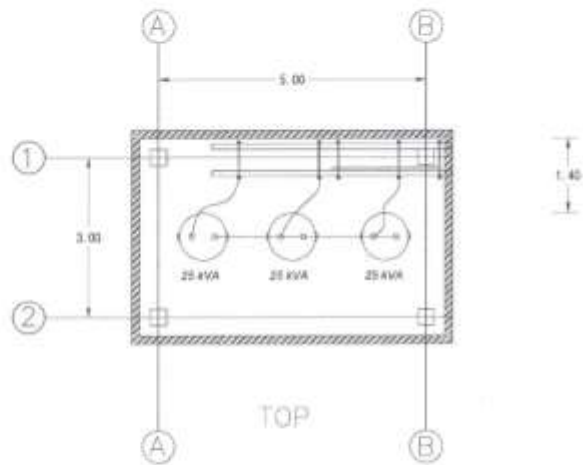


1
A-2 SCALE 1:100 PL.

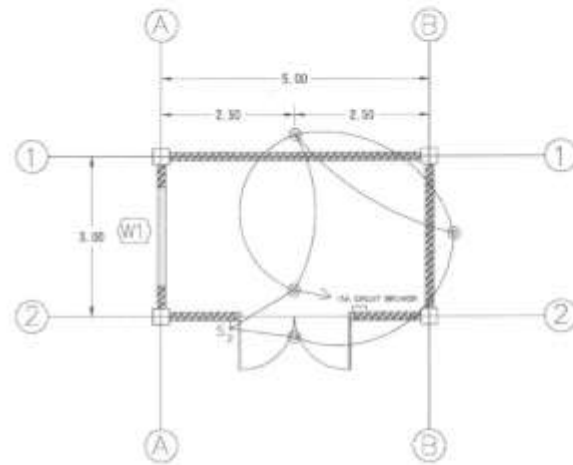


2
A-2 SCALE 1:100 PL.

<p>SOUTHERN LEYTE STATE UNIVERSITY</p>	DESIGNED BY 	PROJECT NO. INCORPORATED TRANSFORMER PLATFORM	APPROVED BY 	SHEET CONTENTS AS SHOWN	SHEET NO. E-2 3
	SOUTHERN LEYTE STATE UNIVERSITY, COLLEGE OF ENGINEERING, CIVIL ENGINEERING DEPARTMENT				

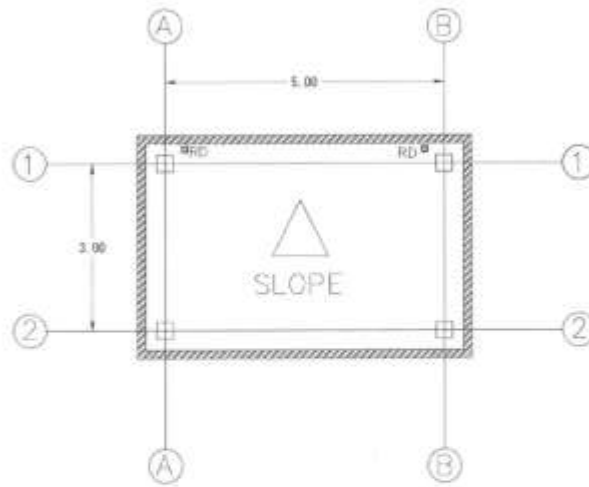


1
A-2 SCALE 1:100 FT
TOP VIEW



2
A-2 SCALE 1:100 FT
LIGHTING LAYOUT

<p>SOUTHERN LEYTE STATE UNIVERSITY</p>		<p>PROJECT NO.</p>		<p>DATE</p>	<p>DATE</p>	<p>DATE</p>
	<p>PROPOSED MANHOLES & PLATINGS</p>	<p>CHARGE</p>	<p>AS SHOWN</p>	<p>E-3 3</p>		



ROOF PLAN
 1
 A-A SCALE

 <p>SOUTHERN LEYTE STATE UNIVERSITY <small>Office of the Vice-Chancellor for Academic Affairs</small></p>	<p>DESIGNED BY </p>	<p>PROJECT TITLE PROPOSED BANQUET HALL PLATFORM</p>	<p>APPROVED BY </p>	<p>SHEET CONTENTS AS SHOWN</p>	<p>SHEET NO. </p>
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Section VIII. Bill of Quantities



Excellence | Service | Leadership and Good Governance | Innovation | Social Responsibility | Integrity | Professionalism | Spirituality

Project: CONSTRUCTION OF POWERHOUSE AT SLSU-SAN JUAN CAMPUS
Location: SLSU-SAN JUAN CAMPUS, SAN JUAN, SOUTHERN LEYTE
Owner: SOUTHERN LEYTE STATE UNIVERSITY-SAN JUAN CAMPUS

ITEM #	DESCRIPTION/MATERIALS	QTY	UNIT	UNIT COST	SUB-TOTAL
1.00	GENERAL REQUIREMENTS				
	Building Permit Fee	1	lot		
	Mobilization/Demobilization and Site Clearing	1	lot		
	Project billboard (4'x8')	1	set		
2.00	EARTH WORKS				
	Excavation	6	cu.m.		
	Backfilling/filling materials	4	cu.m.		
3.00	CONCRETE WORKS				
	Slab (Roof Deck)				
	Slab (On Fill)				
	Column				
	Tie Beam				
	Roof Beam				
	Footing				
	Portland Cement,40 kg. (Type 1)	93	bags		
	Washed sand	6	cu.m.		
	Gravel,3/4	12	cu.m.		
	12 mmØ Steel Bars Structural Grade 40	127	pcs.		
	10 mmØ Steel Bars Structural Grade 33	91	pcs.		
	#16 Tie Wire	28	kgs		
4.00	FORM WORKS/ SCAFFOLDINGS				
	Column				
	Roof Beam				
	Tie Beam				
	Slab Roof Deck				
	1/4" x4'x8' Ordinary Plywood				
	2"x3"x12' Coco Lumber				
	2"x2"x12' Coco Lumber				
	Common wire nails # 1 ½				
	Common wire nails # 3				
	Common wire nails # 4				
5.00	MASONRY WORKS INCLUDING WALL FOOTING				
	Wall (Including Parapet)				
	CHB 4"	705	pcs.		
	Portland Cement,40 kg. (Type 1)	51	bags		
	Washed sand	4	cu.m.		
	10 mmØ Steel Bars Structural Grade 33	40	pcs.		
	#16 Tie Wire	2	kgs		
6.00	DOORS AND WINDOWS (materials and installation)				
6.1	Doors				
	Double Swing Panel Door-11 (2.0m. x 2.10m./w/ door jamb, Stainless steel grab handle and plate both side	1	set		
6.2	Windows				
	Hidden Frame Fixed Steel Window (See Detail)	1	set		
7.00	ELECTRICAL (material and installation)				
7.1	Panel Board and Breaker				
	Distribution Panel board, 350 AT,3P, 6 holes (bolt-on type Center Main)	1	units		
	Panel board, 100 AT,3P,12 holes (bolt-on type Center Main)	1	units		
	Panel board, 100 AT,3P,10 holes (bolt-on type Center Main)	1	units		
	Circuit breaker, 350 AT, 3P (bolt-on type Main breaker)	1	units		

	Circuit breaker, 125 AT, 3P (bolt-on type Main breaker)	2	units		
	Circuit breaker, 100 AT, 3P (bolt-on type Main breaker)	2	units		
	Circuit breaker, 20 AT, 2P (bolt-on type)	13	units		
	Circuit breaker, 30 AT, 2P (bolt-on type)	7	units		
	Safety breaker, 20 AT, 2P	4	units		
	Copperclad Ground rod 20mm ϕ x 3m.	1	pcs		
	Ground Rod Clamp	3	pcs		
7.2	<i>Lighting Fixtures</i>				
	20 watts Compact Fluorescent Lamp (daylight)	4	sets		
7.3	<i>Wires & Cables</i>				
	100 mm ² , THHN Wire (Stranded)	15	meters		
	14 mm ² , THHN Wire (Stranded)	3	boxes		
	5.5 mm ² , THHN Wire (Stranded)	4	boxes		
	2.0 mm ² , THHN Wire (Stranded)	4	boxes		
7.4	<i>Conduit Pipes and Fittings</i>				
	PVC Conduit pipe, 2 in. dia.	1	length		
	PVC Conduit pipe, 1 in. dia.	10	pcs.		
	PVC Conduit pipe, 3/4 in. dia.	30	length		
	PVC short elbow, 1 in. dia.	10	pcs.		
	PVC adaptor, 1 in. dia. (MALE)	20	pcs.		
	PVC adaptor, 1 in. dia. (FEMALE)	20	pcs.		
	PVC Junction box /cover, 4"x4"	30	pcs.		
	PVC Utility box, 2"x4"	30	pcs.		
	PVC solvent	1	pcs.		
	Rubber Tape	1	pcs.		
	Electrical Tape (big)	5	rolls		
	Meter Box	1	unit		
	Current Transformer box	1	unit		
7.5	<i>Wiring Devices</i>				
	Switch, Flush Type, 2-Gang "Wide series"	1	sets		
	Duplex Universal Outlet with ground	36	sets		
	ACU Outlet, Flush Type, 1-Gang "Wide series"	4	sets		
7.6	<i>Transformers and Accessories</i>				
	25 kVA Transformer	3	pcs.		
	Cut - out and Arrester Combination	2	set		
	Secondary Current transformer 150:5 A	2	unit		
	Electronic Energy Meter	1	pcs.		
	Galvanized Crossarm, Concrete Spun (100x100x5500 mm)	1	pcs.		
TOTAL MATERIAL COST					
<p>A. DIRECT COST</p> <ol style="list-style-type: none"> 1 Material Cost 2 Labor Cost 3 General Requirements 4 Earth Works (Excavation, Backfilling) 5 Professional Fee <p>B. INDIRECT COST</p> <ol style="list-style-type: none"> 1 Contingency Allow. (5% of A.1) 2 VAT, Taxes, Misc. (7% of A.1-4 + B.1) 3 Contractor's Profit (10% of A.1-4) 					
TOTAL PROJECT COST					

Section IX. Checklist of Technical and Financial Documents

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class “A” Documents

Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;

Technical Documents

- (b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- (c) Statement of the bidder’s Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; **and**
- (d) Special PCAB License in case of Joint Ventures **and** registration for the type and cost of the contract to be bid; **and**
- (e) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission **or** original copy of Notarized Bid Securing Declaration; **and**
- (f) Project Requirements, which shall include the following:
- a. Organizational chart for the contract to be bid;
 - b. List of contractor’s key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
 - c. List of contractor’s major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**
- (g) Original duly signed Omnibus Sworn Statement (OSS) **and** if applicable, Original Notarized Secretary’s Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

- (h) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

Class "B" Documents

- (i) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence **or** duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

- (j) Original of duly signed and accomplished Financial Bid Form; **and**

Other documentary requirements under RA No. 9184

- (k) Original of duly signed Bid Prices in the Bill of Quantities; **and**
- (l) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; **and**
- (m) Cash Flow by Quarter.