



2. Steel required for this structure should conform to ASTM A-36 for structural grade unless otherwise noted in plans or in the specifications

3. Shop Painting:

A. Paint shall be delivered to the shop and job in original sealed containers, which shall be clearly marked with the manufacturer's name and the identifying brand number or name. The paint to be used as prepared by the manufacturers shall be without thinning or another admixture.

B. All paintings shall be done on dry surfaces, free from rust, scale, and grease. Steel shall be flame-cleaned in the shop to remove mill scale. Surfaces in contact shall be cleaned by effective means but painted, except that the contact surfaces of exposed exterior steel, such as tank supports, shall be painted.

C. All steel, except where it is to be encased in concrete shall receive one coat of shop paint. (Surfaces that are to be field welded shall not receive a shop coat.) The shop coat shall be two (2) coats of epoxy-based primer with two (2) coats of topcoat. Primer color shall be different color tone from the topcoat in order to distinguished level of application.

D. All rivets, bolts, field welds and serious abrasions to the shop coat shall be spot-painted with the material for the primer coat.

E. Steel encased in concrete shall not be painted. However, steel with only furring (plaster on exposed metal) shall be painted.

DIVISION 04— THERMAL AND MOISTURE PROTECTION

1.0 SCOPE

a) Furnish materials and equipment and perform labor required to complete waterproofing.

See drawings and details for location and extent of requirements.

2.0 MATERIALS

a) WATERPROOFING

1. Shall be performed 3-ply, 2mm thick, elastic self-sealing polyester reinforced rubberized bituminous based waterproofing membrane strengthened with 0.075mm thick polyethylene sheet which is sandwiched between 2 layers of 1mm thick membranes. (approved or equal waterproofing materials unless otherwise indicated or specified and shall be approved by the Architect)

DIVISION 05— DOORS

1.0 SCOPE OF WORK

Furnish materials and equipment and perform labor required to complete:

1. Supply and Installation of Doors with lockset, hinges and door knob
2. Replacement of Existing Door knob & Hinges
3. Repair of Door Leaf



2.0 DOORS

- D-1 Single Leaf Steel Door w/Side Window
- D-2 Aluminum Sliding Door Pocket w/Louver (800 x 2100mm)
- D-3 Double Leaf Steel Door w/Side Window & Kick Plate (1600 x 2100mm)
- Replacement of Existing Door knob & Hinges
- Repair of Door Leaf

Note: See plans for verification of size, quantity and location.

DIVISION 06– FINISHES

This Division applies to all specifications of the Finishes for the Proposed Project.

SEC. 06100 FLOORING

Furnish materials and equipment and perform labor required to complete all types of tile work and stone works.

See drawings and details for location and extent of work required.

1. 60 cm x 60 cm Ceramic Tiles
Color: White and / or submit for Architect's Approval
2. 30 cm x 30 cm Ceramic tiles (Stair tile repair / replacement)

SEC. 06200 CEILING

Furnish materials and equipment and perform labor required to complete all types of ceiling works.

- a. Repair of Ceiling
- b. Repainting of Ceiling

SEC. 06300 WALL FINISHES

1. 1/4" thk. Fiber Cement Board w/Metal Frame for Faculty Room Partitions
Color: subject for Architect's Approval
2. Outdoor signages
 - a. INTERIM BUILDING
 - b. COLLEGE OF MEDICINE

Color: subject for Architect's Approval

SEC. 06400 PAINTS AND COATINGS

1. For Interior and Exterior Masonry Wall:

- a. Use Concrete Neutralizer
 - b. First Coat: Flat Latex, 10% Acrylic, water-based Masonry Putty
 - c. Second and Final coat: Semi-gloss Latex Paint
- Paint colors: Subject for Architect's Approval for wall paint color and base board paint color



2. For Fiber Cement board:

- a. First Coat: Flat Latex, 10% Acrylic, water-based Putty
 - b. Second and Final coat: Semi-gloss Latex Paint
- Paint colors: Subject for Architect's Approval

3. For Metal Surface and wood surface:

- a. Use Epoxy Primer Gray, finish with two (2) coats Quick Drying Enamel (QDE) Paint colors: Subject for Architect's Approval

Note: All exposed finish hard wares, plumbing fixtures and accessories, lighting fixtures and accessories, glasses and the like shall be adequately protected that these are not stained with paint and other painting materials prior to painting works. All other surfaces which would be endangered by stains and paint marks should be taped and covered with draft paper or equal. Protect the work and adjacent work and materials at all times by a suitable covering or by other methods. Upon completion of the work, remove paint and varnish spots from floors, glass and finish hardware.

SEC. 06500 ACCOUSTICAL TREATMENT

-MOVABLE WALL PARTITIONS AT SMALL DISCUSSION ROOM.

Note: Subject for Architect's Approval

DIVISION 7– MECHANICAL

This Division applies to all specifications of the Air Conditioning System and Fire Fighting System for the Proposed Project.

SEC. 10100 AIR-CONDITION

1. Use of Inverter Type Unit

SEC. 10200 GAS LINE and Ducting WORK

- a. Supply and Installation of GAS lines connected to the Laboratory table
- b. Fume hood Duct Installations and accessories
- c. Termination point
- d. Testing and commissioning

DIVISION 8– ELECTRICAL

a. Supply and Installation of Electrical Materials

1. The bidders shall prepare for the electrical system of the building in accordance with the Philippine Electrical Code latest edition, Fire Code of the Philippines, National Building Code of the Philippines and Local Electrical Utility requirements.

1.1. Power supply (Secondary Voltage) from the Calculated Transformer size (with adequate spare capacity) shall be 3Phase, 230V DELTA connection 60 Hz System, with equipment grounding

1.2. Bidder shall include the Power, LED Interior & External Lighting system, Emergency Lighting system, Exit & Directional Sign Lighting/Power Panel board and control, wiring & cabling, Protection & Metering system.



DIVISION 9– PLUMBING

PLUMBING SYSTEMS PART I - GENERAL

1.01 DESCRIPTION

1.01.1 Applicable provisions of “General Conditions” govern work under this section.

1.01.2 All fittings, connections and piping embedded in concrete shall be subject to inspection by the Architect/Engineer and/or his representative before covering and/or completion.

1.01.3 The Contractor shall provide all items, articles, materials, operation or methods listed, mentioned or scheduled on the Drawings and/or herein, including all labor, materials, equipment and incidentals necessary and required for their completion.

1.01.4 The contract Drawings and Specifications are complementary to each other, and any labor or materials called for by either, whether or not called for by both, if necessary, for the successful operation of any of the particular type of equipment furnished and installed will be without additional cost to the owner. All dimensional locations of fixtures, drains, riser and pipe chase shall be verified on the architectural drawings and manufacturers’ catalogue. All cases where there are conflicts between the Drawings and the Specifications, the contractor shall within three (3) days, inform the Engineer of such conflicts.

1.02 SCOPE OF WORK

Works included under this section of the Specifications consists in furnishing all labor, tools and equipment, appliances and materials necessary for complete installation, testing and operation of the plumbing system in accordance with the contract.

1.02.1 Rehabilitation of Plumbing System.

1.02.2 Supply and Installation of Sanitary and water line of Laboratory Table.

Note: Verify on site the existing plumbing system to be repair and rehabilitate.

PART 2 – PRODUCTS

2.01 DESCRIPTION OF MATERIALS

All materials to be used shall conform to the standards specified. All classes listed are not necessarily required for this project. Of classes listed, only those specifically called for under sections of this Division or shown shall be provided. Use of materials shall further be governed but other requirements imposed on other sections of this Specifications. Materials shall be subject to test necessary to ascertain their fitness if the Engineer so requires.

2.02 TRAPS

2.02.1 Traps installed on threaded pipe shall be recessed drainage pattern.

2.02.2 No trap which depends for its seal on the movable parts shall be used, full S-traps, bell traps and crown vented traps are prohibited.



2.02.3 Trap Clean outs: Each fixture trap except those cast integrals or in combination with fixtures in which the trap seal is readily accessible or if the trap is removable shall have an accessible brass trap screw of ample size.

2.02.4 Underground traps except P-traps on floor drains shall be provided with removable clean outs.

2.03 CLEAN OUT AND CLEANOUT ACCESS COVERS

2.03.1 CLEAN OUTS

a. Clean out shall be of the same size as the pipe, but clean out larger than four inches will not be required, except as shown in the drawings.

b. Clean outs shall be provided in all soil, storm or waste lines at every change in direction greater than 45 degrees.

c. Clean outs shall not be more than 50 feet apart in horizontal drainage lines of 4 inches nominal diameter or less.

2.04 DRAINS

a. Floor Drains at toilets Pipe Size 2"

b. Shower Drain Pipe Size 3" & 4"

c. Balcony and Ledge Drains Pipe Size 2" & 3"

2.05 FLOOR, WALLS AND CEILING PLATES

2.05.1 Where uncovered exposed pipes pass through floor, finished walls or ceilings, they shall be fitted with chromium plated cast brass plates or chromium plated pipe or steel plates on ferrous pipes.

2.05.2 Plates shall be large enough to completely close the hole around the pipes and shall be octagonal or round with the least dimension not less than one and one-half inches larger than the diameter of the pipe. Plates shall be well secured.

DIVISION 10– INTERIOR FURNITURES & FIXTURES

Furnish materials and equipment and perform labor required to complete:

a. See plans for verification of size, quantity and location.

b. Colors and Quality of Furniture's and fixtures as per Architect / Engineers Approval.

SECTION 4: DESIGN CONSIDERATIONS

1. Safety
2. Security
3. Functional
4. Aesthetic
5. Energy Efficient Building

SECTION 5: PROJECT COST ESTIMATES

The bidders shall submit the quantities and cost of the different types of works to be carried out in accordance with DPWH Department Order No. 72 series of 2012 dated October 5, 2012. In particular, the quantities and cost of each work item shall be calculated and a bill of quantities shall be prepared. The bidders shall draw up a unit price



analysis for each of the main pay work items. The unit price of each of the main work pay items shall include:

A. Cost of the Preliminary and Detailed Architectural and Engineering Design – Should be in accordance with NEDA guidelines.

B. Construction Cost of the Project;

1. The Direct Cost are the following:

a. Cost of Materials to be used in doing the work item called for, which shall include the following:

a.1. Cost of source, including processing, crushing, stockpiling, loading, local taxes, construction and/or maintenance of haul roads, etc.

a.2. Expenses for hauling to project site.

a.3. Handling expenses

a.4. Storage

a.5. Allowance for waste and/or losses, not to exceed 5% of materials requirement.

b. Cost of Labor:

b.1. Salaries and wages as authorized by the Department of Labor and Employment

c. Equipment Expenses:

c.1. Rental of equipment which shall be based on the prevailing "Associated Construction Equipment Lessors, Inc." (ACEL) rental rates approved for use by the DPWH (Presently it is the 2009 ACEL Rates). Rental rates of equipment not indicated in the ACEL booklet shall be taken from the rental rates prepared by the DPWH Bureau of Equipment. For simplicity in computation, the operated rental rates are preferred over the bare rental rates as the former includes operator's wages, fringe benefits, fuel, oil, lubricants and equipment maintenance. The make, model and capacity of the equipment should be indicated in the detailed unit cost analysis.

c.2. Mobilization and demobilization, shall be treated as a separate pay item. It shall be computed based on the equipment requirements of the project stipulated in the proposal and contract booklet. In no case shall mobilization and demobilization exceed 1% of the Estimated Direct Cost (EDC) of the civil works items.

2. The Indirect Cost shall consist of the following:

a. Overhead Expenses - ranges from 5 - 8% of the EDC, which includes the following:

a.1. Engineering and Administrative Supervision.

a.2. Transportation allowances.

a.3. Office Expenses, e.g., for office equipment and supplies, power and water consumption, communication and maintenance.

a.4. Premium on Contractor's All Risk Insurance (CARI).

a.5. Financing Cost. • Premium on Bid Security • Premium on Performance Security • Premium on Surety for Advance Payment • Premium on Warranty Bond (one year)

b. Contingencies - ranges from 0.5 - 3% of the EDC.

These include expenses for meetings, coordination with other stakeholders, billboards (excluding Project Billboard which is a pay item under the General requirements), stages during ground breaking & inauguration ceremonies and other unforeseen events.



c. Miscellaneous Expenses - ranges from 0.5 - 1% of the EDC. These include laboratory tests for quality control and plan preparation.

d. Contractor's Profit Margin – shall be 8% of EDC: for projects above Php5 Million and 10% for projects Php5 Million and below e. VAT Component - shall be 7% of the sum of the EDC, OCM and Profit. The following items shall not be subjected to OCM and Profit mark-up:

e.1. Mobilization and demobilization

e.2. Provision of Service Vehicle

f. The following non-civil works items shall not be subjected to OCM mark-up:

f.1. Field/Laboratory Office & Living Quarters (Rental Basis)

f.2. Furnishing, Laboratory Equipment, Survey Equipment and Consumables

f.3. Assistance to the Engineers

f.4. Photographs B.7.5 Health and Safety B.7.6 Traffic Management

f.5. Environmental Compliance

f.6. Communication Equipment, etc.

SECTION 6: CONSTRUCTION PHASE CONSIDERATIONS

1. Permits and Clearance

The bidders shall defray and all expenses necessary and incidental for the Project be able to secure the Environmental Clearance Certificate (ECC), including the corresponding Tree Cutting Permit (if any tree needs to be cut from the concerned government agencies, if necessary). The contractor shall, upon authorization of the Municipal Government, make representations with the government agencies concerned to expedite the release of the same. Obtain and pay the corresponding fees for all necessary approvals, permits and certificates such as the following:

2. All other permits as may be required for the construction.

2. Temporary Structures & Facilities

The contractor shall provide and maintain the following:

1. Temporary office and/or quarters for the contractor's project team personnel with water, light, telephone and toilet facilities.

2. Temporary bunkhouse/quarters for the contractor's workforce complete with toilet and bath facilities.

3. Mobilization

The contractor shall mobilize all the required project team personnel, equipment, tools and manpower with the required skills and insufficient number as may be necessary for his efficient undertaking of the project.

4. Construction Proper



The contractor shall prosecute all the works under the contract in strict accord with standard engineering methodology and procedures and shall be responsible for maintaining cleanliness and orderliness in the project area throughout the duration of the contract. The Contractor shall deploy qualified workers with necessary certification.

5. Electrification

The contractor shall pay to the local power utility the cost of providing the additional electrical distribution facilities for the project.

6. Material Testing

All material testing shall be conducted by the accredited testing laboratories.

7. Subcontracts

Subcontracting is allowed. The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the BDS, which shall not exceed fifty percent (50%) of the contracted Works. Subcontracts were not allowed in Structural, Civil and Architectural Works.

8. Key Personnel

The key personnel must meet the required minimum years of experience set below:

Key Personnel	General Experience	Relevant Experience
1 – Project Engineer/ Manager	5 years	3 years
1 – Foreman	10 years	5 years
Master Plumber	4 years	2 years
Electrician	5 years	3 years
Painter	5 years	3 years
Skilled	5 years	3 years
Labor	1 year	1 year

9. Equipment

The minimum major equipment requirements are the following:

Equipment	Capacity	Number of Units
Dump truck	-	1
Utility Vehicles	-	1
Scaffoldings and framings	-	1

SECTION 7: CONTRACT IMPLEMENTATION

(Of the 2016 Revised IRR of RA 9184 “ANNEX G”)

1. No works shall commence unless the contractor has submitted the required documentary requirements and the procuring entity has given written approval. Work execution shall be in accordance with reviewed and approved documents.



2. The contractor shall be responsible for obtaining all necessary information as to risks, contingencies and other circumstances which may affect the works and shall prepare and submit all necessary documents specified by the procuring entity to meet all regulatory approvals as specified in the contract documents.

3. The Contractor shall submit a detailed program of work within fourteen (14) calendar days after the issuance of the Notice to proceed for approval by the procuring entity that shall include, among others:

- i. The order in which it intends to carry out the work including anticipated timing for each stage of design/detailed engineering and construction;
- ii. Periods for review of specific outputs and any other submissions and approvals;
- iii. Sequence of timing for inspections and tests as specified in the contract documents;
- iv. General description of the design and construction methods to be adopted; v. Number and names of personnel to be assigned for each stage of the work;
- vi. List of equipment required on site for each major stage of the work; and
- vii. Description of the quality control system to be utilized for the project.

4. Any errors, omissions, inconsistencies, inadequacies or failure submitted by the contractor that do not comply with the requirements shall be rectified, resubmitted and reviewed at the contractor's cost. If the Contractor wishes to modify any design or document which has been previously submitted, reviewed and approved, the contractor shall notify the procuring entity within a reasonable period of time and shall shoulder the cost of such changes.

5. As a rule, changes in design and construction requirements shall be limited only to those that have not been anticipated in the contract documents prior to contract signing and approval. The following guidelines shall govern approval for change or variation orders:

- i. Change Orders resulting from design errors, omissions or nonconformance with the performance specifications and parameters and the contract documents by the contractor shall be implemented by the contractor at no additional cost to the procuring entity.
- ii. Provided that the contractor suffers delay and/or incurs costs due to changes or errors in the procuring entity's performance specifications and parameters, he shall be entitled to either one of the following:
 - a. an extension of time for any such delays under Section 10 of Annex E; or
 - b. payment for such costs as specified in the contract documents, provided, that the cumulative amount of the variation order does not exceed ten percent (10%) of the original contract price.

6. The contract documents shall include the manner and schedule of payment specifying the estimated contract amount and installments in which the contract price will be paid.

7. The contractor shall be entitled to advance payment subject to the provisions of Section 4 of Annex E.



8. The procuring entity shall define the quality control procedures for the design and construction in accordance with agency guidelines and shall issue the proper certificates of acceptance for sections of the works or the whole of the works as provided for in the contract documents.

9. The contractor shall provide all necessary equipment, personnel, instruments, documents and others to carry out specified tests.

10. All design and build projects shall have a minimum Defects Liability Period of one (1) year after contract completion or as provided for in the contract documents. This is without prejudice, however, to the liabilities imposed upon the engineer/architect who drew up the plans and specification for a building sanctioned under Section 1723 of the New Civil Code of the Philippines.

11. The contractor shall be held liable for design and structural defects and/or failure of the completed project within the warranty periods specified in Section 62.2.2 of the IRR.H

- END OF SECTION -



SECTION 8: SUBMITTALS

I. BIDDING REQUIREMENTS:

A. Documents Comprising the Bid:

Eligibility and Technical Components 4 Copies (1 original copy and 3 duplicate copies) of bid documents

a. The first envelope shall contain the eligibility and technical documents of the Bid as specified in Section IX. Checklist of Technical and Financial Documents.

b. 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.

c. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, 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.

d. 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.

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. B. Documents Comprising the Bid: Financial Component 4 Copies (1 original copy and 3 duplicate copies) of bid documents a. The second bid envelope shall contain the financial documents for the Bid as specified in Section IX. Checklist of Technical and Financial Documents. b. Any bid exceeding the ABC indicated in paragraph 1 of the IB shall not be accepted. c. 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. C. Additional Technical Documents 4 Copies (1 original copy and 3 duplicate copies) of bid documents

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.

B. Documents Comprising the Bid: Financial Component

4 Copies (1 original copy and 3 duplicate copies) of bid documents



a. The second bid envelope shall contain the financial documents for the Bid as specified in Section IX. Checklist of Technical and Financial Documents.

b. Any bid exceeding the ABC indicated in paragraph 1 of the IB shall not be accepted.

c. 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.

C. Additional Technical Documents 4 Copies (1 original copy and 3 duplicate copies) of bid documents.

1. Architectural

– 4 copies of Architectural Plans in A3 size given by the BPSU OPPE Technical Working Group for Infrastructure

2. Electrical

- 5 Copies in A3 size duly signed and sealed by a licensed Professional Electrical Engineer for the design of the electrical system of the building in accordance with the Philippine Electrical Code latest edition, Fire Code of the Philippines, National Building Code of the Philippines and Local Electrical Utility requirements which consists of the following:

1. Site development
2. Lighting layout
3. Power layout
4. Schedule of Loads
5. One line / Riser diagram
6. General Notes
7. Legends and Electrical Design Analysis of the following:
 - a. Short circuit calculation
 - b. Voltage drop calculation

3. Plumbing

- 4 Copies in A3 size signed and sealed for the detailed design for the water supply, drainage and sewer system of the building in accordance with the applicable laws, rules and regulations governing health safety and sanitation which consists of the following:

1. Site development
2. General Notes and Legends
3. Water Line Layout Plan
4. Sewer Line Layout and Drainage Layout Plan
5. Blow-up Details
6. Isometric Diagram

4. Mechanical

- 4 Copies in A3 size signed and sealed for the design for the mechanical drawings that include the ACCU LAYOUT AND APPROPRIATE FIRE FIGHTING SYSTEM of the building in accordance with the Fire Code of the Philippines and the National Building Code of the Philippines which consists of the following:

1. ACCU Layout
2. Gas line Layout
3. Fume Hood Duct Layout

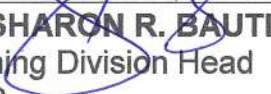


4. General Notes and Legends

5. Ancillary Works – The bidders shall provide the ancillary works such as street, parking, and property boundary lights, pavement markings, traffic signs, landscaping, etc.

- END OF SECTION -


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