

Supplemental/Bid Bulletin

Addendum No. 1
February 15, 2022

ITB No. DSWD7-PB-2022-23

REPAIR AND IMPROVEMENT OF AVRC II WING II BUILDING – PHASE I

Issued pursuant to Section 22.5 of the IRR of Republic Act 9184 to clarify and/or amend certain provision on the Bidding Documents issued for this project, considering the issues raised and clarifications made by prospective bidders during the Prebid Conference held on **February 11, 2022**, and shall form an integral part thereof, viz:

Subject	Amendment/Agreement/Clarification
Section VI. Technical Specifications	✚ <i>Attached is the Technical Specifications in accordance to the changes made in Bill of Quantities (BOQ)</i>
Bill of Quantities	✚ Modifications were made in the BOQ with consideration of economic factors.

Attached herewith are the revised **Section VI. Technical Specifications and Bill of Quantities**.

For guidance and information of all concerned.



GRAEME FERDINAND D. ARMECIN
President / Chairperson, Bids and Awards Committee I

REVISED SECTION VI. TECHNICAL SPECIFICATIONS

ITEM 1: GENERAL REQUIREMENTS

RELATED SECTIONS

All applicable provisions of the different divisions of the Specifications for each work trade shall apply for all items cited in this Summary.

INFERRED ITEMS AND WORK

Materials and workmanship deemed necessary to complete the works but NOT specifically mentioned in the Specifications, Working Drawings, or in the other Contract Documents, shall be supplied and installed by the Contractor without extra cost to the Owner. Such materials shall be of the highest quality available, and installed or applied in a workmanlike manner at prescribed or appropriate locations.

SPECIFICS

Materials specifically mentioned in this Summary shall be installed following efficient and sound engineering and construction practice, and especially as per manufacturer's application for installation specifications which shall govern all works alluded to in these Specifications.

ON-SITE ITEMS

Materials and finishes for on-site improvements and facilities as listed below are part of the scope of work and shall be supplied and installed by the Contractor without extra cost to the Owner.

- A. Construction of:
 - 1. Walks, ramps, steps, posts, perimeter fence and miscellaneous slabs;
 - 2. Concrete catch basins, drainage pipes;
 - 3. Temporary facilities and below grade structures such as septic vaults, cisterns, manholes, open canals, check drains and trenches;
- B. Exterior utility lines, raceway system, fixtures, breakers, switches, buzzers, controls including fittings and accessories as required by the specialty trades under plumbing, mechanical and electrical works.

OFF-SITE ITEMS

Off-site improvements shall generally be under the responsibility of the Owner and not included in the Contract, with the exception of the following which shall be part of the Contractor's Work:

- A. Construction of drainage lines. This work shall neatly connect to the storm drainage system along the road.
- B. Permanent connections to the local utility lines for electrical, water, drainage, sewer and telephone lines including equipment, facilities, materials, fees, and/or work which utility companies or authorities may require of the applicant Owner, such as electrical transformers, etc.

WATER & ELECTRICITY CONNECTION

Temporary Water: The Contractor shall supply in sufficient quantity all necessary potable and other water for construction purposes for all trades at a point within a reasonable distance of the building being constructed. The Contractor shall make arrangements and pay charges for water service installation, maintenance, and removal thereof, and pay the costs of water for all trades.

B. Temporary Electricity: The Contractor shall make all necessary arrangements for a temporary electrical service, pay all expenses in connection with the installation, operation and removal thereof, and pay the costs of electricity consumed by all trades.

OWNER SUPPLIED ITEMS

Owner supplied finishing accessories, furnishing and fixtures such as wall clocks, picture frames, fixed furniture etc., shall be installed by the Contractor at no cost to the Owner.

QUALITY CONTROL

The Contractor shall be responsible for the quality control of all materials during the handling, blending, and mixing and placement operations. The Contractor shall furnish the Engineer a Quality Control Plan detailing his production control procedures and the type and frequency of sampling and testing to insure that the materials and work produces complies with the Specifications. The Engineer shall be provided free access to recent plant production records, and if requested, informational copies of mix design, materials certifications and sampling and testing reports.

The Contractor shall perform all sampling, testing and inspection necessary to assure quality control of the component materials.

ITEM B.5: PROJECT BILLBOARD/SIGNBOARD

Project Signage/COA signages shall be installed near the construction site or before the entrance gate and must be visible for the visitors. Signage must be printed in tarpaulin with wooden frame.

Signage sizes: Project Signage = 4ft. x 8ft.
COA Signage = 8ft. x 8ft.

ITEM B.7: OCUPATIONAL SAFETY AND HEALTH

Before the start of work, the contractor shall submit Health and Safety Plan with operational detail of his proposals to the engineer for his approval. The contractor must secure Construction Safety Certificate from DOLE and must implement safety measures during construction stage. The contractor shall provide safety signages within the construction vicinity.

ITEM B.20: TEMPORARY FENCE

The whole area affected for the project shall be fenced temporarily with necessary gates as directed by the Engineer. The site must be closed enough and must not be visible for the clients living in the center.

ITEM 2 : EARTHWORK

ITEM 801(1): REMOVAL OF STRUCTURES AND OBSTRUCTION

Existing structures shall be removed and cleared in preparation for new construction. The Contractor shall make arrangements with the Center Head/owner for the items needed and not needed for disposal. The Contractor shall be responsible for the disposal of the waste materials from the demolished structure.

ITEM 803 (1)a: STRUCTURE EXCAVATION

All excavation for foundation, catch basins and piping shall be made to grades indicated in the drawings; where excavation will rest on fill, excavation shall be carried deeper until the desired stratum is reached for safe bearing capacity of the soil.

Where rock occurs and footings and walls are indicated to the rest on the same, the rock shall be leveled to a clean and even surface. Whenever water is encountered in the excavation process, it shall be removed by pumping, care being taken that the surrounding particles are not disturbed or removed.

EXCAVATION SUPPORT SYSTEM

Types of shoring and bracing systems include, but are not limited to, the following:

1. Timber Lagging
2. Steel Scaffolds

Provide sufficient shoring and soil retention protection options to prevent displacement and damage to existing adjacent structures, and cave-ins.

ITEM 804(1)b & 1601(1): EMBANKMENT, FILL AND BACKFILL

Coarse-grained fill materials, such as stone fragments, sand and gravel mix, fine sand, silty or clayey sand and gravel, shall be laboratory approved from off site source, passing a 75 mm (3") sieve. The fraction passing a 0.425 mm (no. 40) sieve shall have a liquid limit not to exceed 35% and plasticity index not exceeding 12%. Only coarse-grained fill materials shall be used inside buildings and under walkways.

Fine-grained fill material, such as silt, clay, silty clay or clayey silt shall be laboratory approved from off site source passing a 0.425 mm (no. 40) sieve and shall have a liquid limit not less than 40% and a plasticity index not less than 11%. Only fine grained fill material shall be used outside the limits of the buildings, for landscape purposes. Top soil stripped from the construction site may be stock piled and used for landscaping purposes as long as it is enriched to sustain landscape planting material.

Granular fill to form a capillary water barrier shall be clean, crushed, non-porous rock; crushed or uncrushed gravel uniformly graded and of a size which will pass a 1-inch mesh screen and be retained on a No. 4 mesh screen.

Excavated material approved for use as backfill shall be free of stones larger than 2 inches in longest dimension, roots and organic materials.

Batter boards: Second class, pest free lumber assembled and rendered secure for proper delineation of building lines and grades.

The Contractor shall compact the material placed in all embankment layers and the material scarified to the designated depth below subgrade in cut sections, until a uniform density of not less than 95 mass percent of the maximum dry density is attained. At least one group of three in-situ density tests shall be carried out for each 500 m of each layer of compacted fill. The layer shall be placed not exceeding 200 mm in loose measurement or based on the result of compacted trials.

ITEM 3 : PLAIN AND REINFORCED CONCRETE WORK

ITEM 900(1)c1: STRUCTURAL CONCRETE (CLASS A, 28 DAYS)

CEMENT – Use “CLASS A“ PORTLAND CEMENT or approved equivalent.

CONCRETE AGGREGATES

1. Gravel: Well graded, clean, hard particles of gravel or crushed rock conforming to the “STANDARD SPECIFICATIONS FOR CONCRETE AGGREGATES” (ASTM Designated C-33 latest revision). Use 25 mm (1”) maximum for slabs and 19 mm (3/4”) for columns and beams and retaining walls.
2. Sand: ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.
3. Maximum size of aggregates shall not be larger than 1/5 of the narrowest dimension between sides of the forms, not larger than 3/5 of the maximum clear spacing between reinforcing bars, and in no case larger than 33 mm (1-1/3”) in diameter.

WATER - Use only water that is clean and free from injurious amounts of oils, acids, alkali, organic materials or other deleterious substances. Potable/ fit for human consumption.

CONCRETE MIXES

1. Concrete compressive strength (fc) requirements:

I. Specified Compressive Strength			
Class/Type	28 days		Item
	psi	mPa	
A	3000	28	For footings, columns, beams, lintels beam and stiffener columns, slab on grade and for all reinforced work not otherwise indicated or specified
B	1,500	10.34	For all concrete without reinforcement like lean concrete

2. Slump requirements:

Structural Element	Slump for vibrated concrete	
	Minimum	Maximum
Slab on grade, stair landing and tread	75 mm	125 mm
Other components	50 mm	100 mm

CONCRETE ADDITIVES

1. Use "CLASS A" in the amounts as recommended by the manufacturer, with the approval of the Architect.
2. Plasticizer – Use "CLASS A"
3. Air-entraining admixtures – Use "CLASS A" or approved equal to improve workability or durability of concrete mixes.
4. Accelerators – Use "CLASS A" or approved equal.
5. Water Reducing Retarders – Use "CLASS A" or approved equal.
6. Integral Waterproofing Compound – Use "CLASS A" or approved equal for roof slabs, balcony, concrete gutters, cisterns and media aguas. Refer to Manufacturer's manual/instruction for proper application.
7. Calcium chloride is not allowed. Secure approval of the Engineer prior to using of any other additive.

NOTE: PLACEMENT DRAWINGS: Shop drawings of each reinforcing steel detail and placement drawings shall be submitted for approval in accordance with the requirements of the General Conditions. Any material fabricated before final approval of the shop drawings will be done at Contractor's risk, but no material shall be placed until shop drawings have final approval. Shop drawings shall be in accordance with the "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315).

ITEM 902(1)a: REINFORCING STEEL (Deformed, Grade 40)

Steel Bars – Use structural grade ASTM A615 Grade 40 for deformed bars 12mmØ and below. For 16mmØ and above, use structural grade ASTM 615 Grade 60. Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable.

Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.

Steel reinforcement shall be stored above the surface of the ground upon platforms, skids, or other supports and shall be protected as far as practicable from mechanical injury and surface deterioration caused by exposure to conditions producing rust. Distance from the forms shall be maintained by means of stays, blocks, ties, hangers, or other approved supports, so that it does not vary from the position indicated on the Plans. Reinforcement in any member shall be placed and then inspected and approved by the Engineer before the placing of concrete begins. Concrete placed in violation of this provision may be rejected and removal may be required.

Splices: Splices shall be staggered as far as possible and with a minimum separation of not less than 40 bar diameters. Lapped splices will not be permitted at locations where the concrete section is insufficient to provide minimum clear distance of one and one-third the maximum size of coarse aggregate between the splice and the nearest adjacent bar.

ITEM 903(2): FORMWORKS AND FALSEWORKS

1. Use Phenolic forms, plywood, metal or surfaced lumber forms, free from warp and gross deformities, sufficiently braced with solid lumber and applied with form release agent as its casting surface before each casting, where it will best give the most advantage in the specific concrete work involved.
2. For exposed reinforced concrete such as exposed beams and columns, use Phenolic forms or approved equivalent.
3. Provide 40mm-wide chamfers for all exposed corners of columns.
4. Do not use Coco lumber for formwork.
5. Use only good lumber or metal sections for forms.

ITEM 4 : CIVIL/FINISHING WORKS

ITEM 1000(1): SOIL POISONING

This section includes pouring of soil poisoning to earth laid with structure. All materials whether specifically mentioned or not, but necessary to complete this item of work shall be furnish and installed in the best workmanship practice.

ITEM 1001(6)b, 1001(9) & 1002(26): CATCH BASIN, STORM DRAIN, DOWNSPOUT & CISTERN

Downspouts: shall be polyvinyl chloride (PVC) pipe series 1000 II, Use “CLASS A” with the same brand/type of materials.

Fittings shall be solvent cement joint conforming to ASTM D2564. Fittings shall be of the same brand with the pipes used or connected to.

Catch Basins Drain Junction Box: 140 kg/cm RC with concrete grating cover In-site and pre-cast reinforced slabs and 10cm CHB walls, details as shown in the drawings. For drain terminals discharge, and generally at all intersecting points of pipes.

Storm Drain/Strainer: Use “CLASS A” Brass Dome Strainers. Submit sample for Engineer’s approval.

Joint Mortar: Joint mortar shall be composed of one part Portland Cement and two parts fine aggregate by volume to which hydrated lime has been added in an amount equal to 10 percent of the cement by weight. All materials for mortar shall meet the requirements of Item 405, Structural Concrete.

ITEM 1001(8): SEWER LINE WORKS

Trenches for underdrain outlets shall be excavated to the width and depth shown on the Plans or as otherwise directed. Pipes shall be laid in the trench with all ends firmly joined by the applicable methods and means. After inspection and approval of the pipe installation, the trench shall be backfilled in accordance with Item 103, Structure Excavation.

Trenches for blind drains shall be excavated to the width and depth shown on the Plans. The trench shall be filled with granular backfill material to the depth required by the Plans. Any remaining upper portion of trench shall be filled with either granular or impervious material in accordance with Item 103, Structure Excavation

After the pipe installation has been inspected and approved, granular backfill material shall be placed to a height of 300 mm above the top of pipe. Care shall be taken not to displace the pipe or the covering at open joints. The remainder of the granular backfill material shall then be placed and compacted in 150 mm maximum layers to the required height. Any remaining portion of trench above the granular backfill shall be filled with either granular or impervious material, as may be specified, and thoroughly compacted.

Clean-out Plugs: Cast brass ferrule with countersunk tap screw cover. For all drain and sewer lines requiring clean outs. N-240, ASA or equal.

Sanitary Pipes/Sewer Pipes/Fittings: shall be polyvinyl chloride (PVC) pipe series 1000, Use CLASS A with the same brand or approved equal. Fittings shall be solvent cement joint conforming to ASTM D2564.

Vent Pipes: shall be protected against siphonage and back pressure. Air circulation shall be assured throughout all parts of the excreta drainage system.

ITEM 1001(11): SEPTIC VAULT

1. Use Black Recycled PE Vertical Purifying Septic Tank, 1000 liters capacity. The tank must be embedded below the ground and must have reinforced concrete top slab as protection for the tank cover.
2. Pipes including fittings shall be Polyvinyl Chloride (PVC) Pipes, series 1000 Class A, 102mm dia. free from defects.

ITEM 1002(8) & 1002(27): PLUMBING WORKS AND FIXTURES

All plumbing works herein shall be executed according to the requirements of philippine national plumbing code and the rules and regulations of the existing local codes and ordinances or laws governing the implementation of the plumbing works.

Refer to all electrical, structural and architectural plans and specifications and investigate all possible interference and conditions affecting the plumbing works.

It is not intended that the drawing shall show every pipe fitting, valve and appliances. Furnish and install, if necessary, all such item specially mentioned or not, or indicated on the drawing, to complete the system in accordance to the best practice of the plumbing trade and satisfaction of the engineer/owner.

Perform all labor in a first-class, neat, workmanlike manner by specialist skilled in their trades, and such specialist and their work shall be satisfactory to the engineer.

BASIC MATERIALS:

1. Provide materials that are new and that conform with the standard of Underwriters laboratories. Inc.
2. For other miscellaneous required materials not specifically mentioned, Provide the best of the respective kind.
3. Submit samples of materials for approval as required by the engineer/owner

PLUMBING FIXTURES:

- a. Install all plumbing fixtures free and open in a manner to access for Cleaning. Furnish with brackets, cleats, plates, and anchors required to Support the fixtures rigidly in place.
- b. Keep away, at a sufficient distance but not less 1/2" (12.5 mm.) All service Pipes, valves, and fittings from surfaces and locations which may require Finish coats or covering.
- c. Extend the piping to all fixtures, outlets, and equipments from required Gate valves installed in each branch near risers.

SOIL, WASTE, DRAIN, AND VENT PIPINGS :

1. Install all piping works in conformity with all provisions of the latest Edition of the Philippine national plumbing code and applicable requirements Of the existing local codes.
2. Excavate to require depths and grades. All excavations required for the Installations of plumbing and drainage system when rock is encountered, Extend the excavation to a depth 150 mm. Below the pipe bottom of the pipe And rock surface with sand and approved material.
3. Lay water supply pipes and sewers in separate trenches.

TRAPS

1. Except for the presence of grease trap interceptor and other devices Where the trap is an integral part of the design. Equipped with a trap every Fixture and equipment requiring connections to the drainage system.
2. Set each trap as close as possible to the fixture served and render level with respect to their water seal.

PLUMBING PIPES AND FITTINGS

1. All materials to be used must be of high quality.

2. Air chamber to be provided for all water line outlets. All necessary fitting Shall be provided.
3. Teflon tape for all waterline connections applied to male threads only.
4. Make all joints air and water tight. For jointing pipes, use the following:
 - a. PVC& CPVC pipes: use appropriate couplers and glue at joints.
 - b. PPR pipes; when connecting with other pipe fittings, do not use, if possible, Male pipe fittings with conic thread and hemp as a sealing material to avoid Buckling stresses which act on female pipe fitting.

GUARANTEE AND WARRANTY

1. The contractor shall guarantee all materials supplied and the work to be Free from factory defects and workmanship for a period of one (1) year.
2. Any material found to be defective during the time of construction shall be replaced by the contractor free of charge.

SHUT - OFFS:

Provide the entire system with valve so located that the system or portion of it can be operated, replaced, and repaired, as well as affording complete Control of water supply to each group of fixtures. When required, provide also pressure reducing valve.

CLEAN OUTS

For clean outs stemming from pvc, provide with long sweep quarter bends or one or two eight bends, extended to an easily accessible place, and Generally where indicated in the drawings

OTHERS

1. Provide cleanouts every 15meters for horizontal piping of more than 15 meters Pipes shall be installed as indicated, any relocation required for proper Execution of other trades shall be prior approval of the engineer.
2. Proposed sanitary utilities shall conform to the actual location, depth, and Invert elevations.
3. All fixtures shall be vented, unless otherwise indicated.

Plumbing fixtures shall be of dense, durable, non-absorbent materials and must have smooth, impervious surfaces, free from unnecessary concealed fouling surfaces. All porcelain enamel surfaces on plumbing fixtures shall be acid resistant. No water supply system or potion thereof shall be covered or concealed until it has been first inspected, tested and approved. The piping system shall be air tested or water tested. The contractor shall notify the Engineer in-charge that said work is ready for inspection.

1. **Cold Water Lines:** Shall be Polypropylene Plastherm (PN-20) PPR Pipes and Fittings, Use CLASS A or approved equal conforming to ISO 4065 standard dimensions, using manufacturer specified method of installation and connection.
2. **Valves:** ASTM B-61 & 62, ASTM A 197, PRICE PFISTER (U.S.), KITZ or CRANE or approved equal. For gate valves and check valves, cast brass, sizes as required in the drawings. 150 psig working connection
3. **Hose Bibb:** Stainless steel faucet for all toilet cubicles and for garden hoses size 12mm male inlet and 12mm hose thread, and Use "CLASS A " lever type with bronze body as indicated in the plans.
4. **Floor Drains:** METMA, M-200-D, MAB or approved equal, 150mm x 150mm (6"x6"). For toilets, and where so indicated in drawings. METMA M-249-12 MAB, 100mm x 100mm (4" x 4") and 200mm x 200mm (8"x8"). Floor drains shall connect into a trap so constructed that it can be readily cleaned and of a size to serve efficiently the purpose for which it is intended.
5. **Water Closet-** shall be vitreous china, siphon vortex design, close coupled make, flush tank, elongated front and free from defects.
6. **Urinal-** shall be porcelain make, installed at not less than 600mm from the finish floor line to the top of the overflow rim. An approved type vacuum breaker shall protect every water supply to a urinal or other approved backflow prevention device.
7. **Lavatory-** shall be wall hung, ceramic, oval type and free from defects. It shall be rigidly supported by metal supporting members or chairs so that no bending or pullout strain is transmitted to the wall.
8. **Kitchen Sink and Laundry tray-** shall be stainless steel gauge 304 make, hairline finish.
9. **Water Meter-** shall be 32mm diameter, Heavy Duty, brand new and free from defects.

ITEM 1003(1)a1 & 1003(2)b1: CEILING & DOUBLE WALL

1. **Fiber Cement Board:** Use “CLASS A”, Install as per manufacturer’s instructions. 4.5 mm thick for all suspended ceilings. See drawing details for Suspended Ceiling.
2. **Suspended Ceiling System:** Use 25mm x 50mm x 0.6mm thk metal furring, 12mmØ suspension rod, suspension clips, eyelets, attached to roof framing. Submit sample and mock-up before installation.
3. Provide edgings, trims and moldings and others as indicated in the drawings.
4. **Hardware and FASTENERS:** Use metal nails, screws, bolts, plates, straps, miscellaneous fasteners or anchorage concealed or countersunk whenever called for, with size, shape and type to ensure a rigid connection for laminated items and at other framing joints.

SPCL 2: GRANITE COUNTERS

Use Quartz granite tiles for kitchen counters. Granite slabs shall be free from defects and in good quality. Granite Slabs shall be installed properly. No Stone shall be incorporated into the work without the sample and approval of the end users/Engineers.

ITEM 1008 -1009: WINDOWS

Sliding and Awning windows shall be 3/8” tempered Bronze Glass on aluminum frame. Refer to window schedule.

ITEM 1010(2)b: DOORS

DOOR, Solid Wood, Use “Class A”: Sound and thoroughly seasoned, warp free, treated with pressure impregnated “CLASS A” preservative or approved equal, smooth and level on one side or wherever in contact with paneling for nailers, and all wooden members hidden from viewer.

Flush Doors, Refer to Door Schedule.

Viewing Panel: Should be 6mm thick tempered glass. Use Class A and install as per manufacturers instruction.

Use “CLASS A” for all door hardware, and closet hardware except where indicated otherwise. Provide Master Key for the entire house, for all cylindrical locksets and deadbolt locking devices.

All door lock must be lever type, class A. Refer to Door Schedule.

Jambs:

Use 150mm x 50mm kiln-dried, treated S4S, sound, hard and free from lumber. Use one color or shade for assembly framing which are exposed. Provide with wood trim for all wooden doors.

Use “Class A”: Sound and thoroughly seasoned, warp free, treated with pressure impregnated “CLASS A” preservative or approved equal, smooth and level on one side or wherever in contact with paneling for nailers, and all wooden members hidden from viewer.

Hardware and Fasteners: Use metal nails, screws, bolts, plates, straps, miscellaneous fasteners or anchorage concealed or countersunk whenever called for, with size, shape and type to ensure a rigid connection for laminated items and at other framing joints.

ITEM 1018(1) & 1018(2): TILES

Use glazed tile for walls and unglazed tile for floors. Tiles must be soak to water for atleast 3 hours before installation. Refer to schedule of tiles.

1. **Mortar :** Use Portland Cement or any approved equivalent.
2. **Sand:** ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.
3. **Water:** Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances.

4. **Adhesive Mortar:** Use “CLASS A” for laying vitrified ceramic tiled.
5. **Grout:** Use “Class A” pre-mixed dry wall filler for floor and wall tile either glazed or semi-glazed tiles. Masonry concrete grout compressive strength (fc’) = 13.8 Mpa (2000 psi).
6. **Plaster Bond:** Use “Class A” or approved equal. Apply on all wall areas, as required, prior to plastering. Suppliers shall furnish product description prior to purchase and delivery.

ITEM 1027(1): CEMENT PLASTER FINISH

PLAIN CEMENT PLASTER FINISH: Consisting of the scratch and finish coats. Use “CLASS A” for the base/scratch coat, and “CLASS A” for the finish coat. Refer to Manufacturer’s technical data for proper application. Shall apply for all beams and columns if fine finish cannot be achieved from off form finish and for all interior and exterior walls, and where plastering is essential to complete the work. Use Portland Cement or any approved equivalent.

Sand: ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water or lahar is not allowed.

Water: Fit for drinking, free from injurious amount of oil, acids, alkali, organic materials and other deleterious substances

ITEM 1032(1)a, 1032(1)b, 1032(1)c: PAINTINGS (CEMENT, WOOD AND METAL)

All paint and paint materials called for under this section shall be as manufactured by known manufacturer or owner approved equivalent and must be LEAD-FREE Paint. Use CLASS A only (one brand all throughout). All exposed finish hardware, lighting fixtures and accessories, plumbing fixtures and accessories, glasses and the like shall be adequately protected that these areas are not stained with paint and other painting materials prior to painting works. All other surfaces which would be endangered by stains or paint marks should be taped and covered with craft paper or equal.

Exterior: Use “CLASS A” paint PLAIN FINISH for all exterior finishes and as shown in the drawings and for all exposed and/or visible concrete and masonry surfaces, as well as for exterior HARDIFLEX surfaces unless otherwise specified.

Surface Preparation: Concrete and masonry surfaces must be fully cured for at least 14 days.

1st coat: Use Class A Concrete Primer And Sealer (as manufacturer instruction)

2nd coat: Use Class A Putty

3rd and 4th coats: Use Class A Concrete Primer and Sealer

Interior: USE “CLASS A”SKIM COAT PLAIN FINISH for minor interior walls indicated in the drawings and for all interior concrete and masonry surfaces unless otherwise specified.

Surface Preparation: Concrete and masonry surfaces must be fully cured for at least 14 days.

Metal Surfaces: Use “CLASS A” Liquid Tile. For ferrous surfaces such as steel and roof framing and other exposed steel surfaces unless otherwise specified.

Surface Preparation: Must be free from rust.

1st coat Use CLASS A Primer Red Oxide

2nd and 3rd coats: Use CLASS A Aqua Gloss-It

Use only approved brand of epoxy zinc chromate paint and linseed oil for all base coat painting for structural steel. For finish painting, use enamel paint or approved equal.

ITEM 1046(1)a2: CONCRETE HOLLOW BLOCKS (CHB)

Exterior Walls - Use 6” thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well defined edges, conforming to PNS16 Type 1, Class A, with a minimum

compressive strength of 4.82 Mpa (700 psi) for exterior walls and all walls with embedded sanitary and drain pipes.

Interior Walls - Use 4" thk Load Bearing Concrete Hollow Block Units of standard manufacture, machine vibrated with even texture and well defined edges, conforming to PNS16 Type 1, Class A, with a minimum compressive strength of 4.82 Mpa (700 psi)

Steel Bars – Use structural grade ASTM A615 Grade 40 deformed bars 12mmØ and below. Deformed bars shall be new and free from rust, oil, grease, defects or kinks. Upgrade to next bigger size if specified standard sizes are unavailable. Use Ga.16 Galvanized Iron (G.I.) tie wires at joints or laps of placed reinforcements.

Provide reinforced concrete lintel beams and jambs on all masonry openings.

1. **Cement** – Use “CLASS A“ PORTLAND CEMENT or approved equivalent.
2. **Aggregates**
 - a. Aggregates shall be well-graded, clean, hard particles or gravel or crushed rock conforming to the STANDARD SPECIFICATION FOR CONCRETE AGGREGATES (ASTM Designation C-33: latest revision).
 - b. Sand – ASTM C 35 – 67, clean, washed river sand, strong, free from organic and other deleterious materials. Sand from salt water is not allowed.
3. **Water** – Shall be clean and free from injurious amounts of oils, acids, alkali, organic materials or other deleterious substances.

ITEM 5: ELECTRICAL

WIRES AND CABLES: Use “CLASS A” or approved equal.

1. All wires shall be copper, soft-drawn and annealed, shall be of 99% conductivity, shall be smooth and true and of a cylindrical form and shall be within 1% of the actual size called for.
2. All wires and cables shall comply with the requirements of the Underwriter’s Laboratories, the A.S.T.M. and the I.P.C.E.A. EIA/TIA as they apply in the particulars.
3. Wire and cables for lighting power and auxiliary systems shall be plastic insulated for 600 volts working pressure, type THHN unless otherwise noted on plans.
4. For lighting and power system, no wire smaller than 2.0mm dia. shall be used.
5. All wires and cables shall be color-coded and as manufactured by cable manufacturers. Colors coding of wires are as follows:

Line A – Blue	Ground – Green
Line B – Red	
Line C – Yellow	Control wires – other color
6. No conductor shall be less than 3.5 mm² in size unless otherwise specified. 600-volts wires and cables should meet the requirements of NFPA 70 and UL for the type of insulation, jacket and conductor specified or indicated in all power and lighting wires shall be 600-volt, type THW or THHN.

CONDUITS: Use “CLASS A” Schedule 40 PVC for conduits embedded in concrete and inside ceiling. Use “CLASS A” or Rigid Steel Conduit (RSC) for main service entrance exposed to weather.

1. Metallic conduits for interior and exterior systems shall be a standard weight, mild steel, hot-dip galvanized with an interior coating. Non metallic conduits shall be PVC electrical grade.
2. No conduits shall be used in any system smaller than 15mm dia. electrical trade size, nor shall have more than four 90-degree bends in any one run and when necessary, pull boxes shall be provided as directed. Location and sizes of pull boxes shall be cleared to the engineer prior to fabrication and installation.

3. No wires shall be pulled into any conduit unless the conduit system is complete in all details. In the case of concealed work, until all rough plastering or masonry has been completed and in the case of exposed work, until the conduit has been completed in every detail.
4. The ends of all conduits shall be tightly plugged to exclude plaster, dust and moisture while the building is in the process of construction.
5. All conduit and fittings on exposed work shall be secured by means of Kindoff channels and clamps. Conduit lay outing, in all cases shall run perfectly straight and true, satisfactory to the architect and to the engineer.

OUTLET, BOXES, AND FITTINGS

1. Convenience Outlets: Use "CLASS A", white color, 220V, 16 amperes or as required. For general building interior use.
2. Weatherproofed Outlets: Use "CLASS A", double device plate with cover receptacle, heavy duty as indicated on drawings.
3. Boxes: Use "CLASS A" metal utility boxes, sizes and shapes as required.
4. All outlets of whatever kind, for all systems, these shall be provided with suitable fittings, which shall be either a box or other devices especially designed to receive the type of fittings to be mounted thereon.
5. The contractor shall consult with the architect and the engineers as to the nature of the various fittings to be used before installing the outlet fittings and shall conform strictly in the use of such fittings, to the nature of the appliance to be mounted on them, so that the work, when finished will be a completed design.
6. In the case of fixtures, the outlet fittings shall be provided with suitable fixture supports of a size and kind required by the fixture to be hung. Fixture studs in general shall be 9.375mm
7. At all outlets on concealed conduit work, provide galvanized deep-type pressed-steel, outlet boxes of standard make. These boxes shall be especially designed for apparatus required and in all cases where such boxes are not available on the market; special boxes shall be made by the contractor at his own expense. Outlet boxes shall be deep type gage # 16.

JUNCTION, and PULL BOXES

Junction and pull boxes per code gage steel, shall only be subject to the permission of the engineer and be provided as indicated or as required for facilitating the pulling of wires and cables. Pull boxes in finished places shall be located and installed only with the permission of and to the satisfaction of the architect and engineer.

SWITCHES, AND OUTLETS

1. Switches Use "CLASS A", white color, flush type rate 220 volts to 16 amperes. Suited to location and intended purpose. Certain combinations shall be furnished with pilot lights as required where indicated on the drawings.
2. Switches shall be made of quick-connect terminal operated. The type of switch shall be tumbler operation. Samples shall be submitted prior to the purchase of wall switches and wall plates.
3. Receptacle, outlets shall be for flush mounting, duplex rated at 16 ampere, 250 volts, grounding type 3-wire, color: white. Samples of outlets and plates shall be submitted prior to purchase of devices.
4. Circuit Breakers: Use "CLASS A" or equivalent, bolt-on type, pre-painted, surface mounted, with latch lock.
5. Magnetic Starter: with NEMA-3 casing approved equal, surface mounted with latch lock.
6. METAL ENCLOSURES AND CABINETS Use "CLASS A" OR APPROVED EQUAL.

PANELS AND CABINETS

Panel Boards: All Panel Boards shall comply with NEMA Standards. All Panel Boards shall be of dead-front construction, furnished with trims for flush or surface mounting, as required.

Cabinets shall be code gauge steel with gutters at least 150mm and wider, if necessary. The trim for all panels shall be finished in GRAY enamel over a rust inhibitor. Front doors shall be provided with concealed hinges.

Lighting panels shall be equipped with two-pole circuit breaker in the branch circuits and three-pole in the main unless noted otherwise on the plans. As indicated on plans, the panels shall be assembled in two or more sections when over 40 one-pole circuits. Ground bus terminals shall be a standard feature to the panel

Panel Boards Buses: Provide Copper bus. Support the bus bars on bases independent of the circuit breaker. Main buses and back pans shall be designed so those breakers may change without machining, drilling or tapping. Provide a separate ground bus marked with green stripe along its front and bonded the steel cabinet for type of conductor

Circuit Breakers: Circuit breaker shall be ambient compensated thermal magnetic type with interrupting capacity as indicated. Breaker terminals shall be UL listed as suited for type of conductor provided. Use Square-D or equivalent.

INDIVIDUAL BREAKERS, and SWITCHES

Provide individual circuit breakers, and disconnect switches when indicated on the plans. Voltage rating shall be suitable in each case of service application.

Enclosure for indoor application shall be NEMA-1 and for outdoor application shall be NEMA-4X unless otherwise indicated in the plans.

All protective devices shall meet NEMA and Underwriter's Laboratories, Inc. specifications.

1. Circuit breakers shall consist of a quick-make, quick-break type entirely trip-free operating mechanism contacts with arc interrupter and thermal-magnetic trip used for each pole and enclosed in a molded phenolic case. The thermal-magnetic trip unit shall provide time delay overload protection and instantaneous short circuit protection and shall operate internal common-trip bar which will open all poles in case of overload or short circuit current in any one-pole. Circuit breaker shall be trip indicating with the tripped position of breaker midway between "ON" and "OFF" positions.
2. Only one single brand of circuit breakers shall be used on the entire project requirement. Acceptable brands are General Electric, Fuji Electric, Square D and Terasaki Electric. Submit brochures for approval.
3. Minimum interrupting capacities of each circuit breaker are indicated on the load schedule, application of circuit breakers shall be approved for the intended load per panel board schedule.
4. Safety and disconnect switches shall be non-fusible and of sizes indicated on plans and shall be normal duty type, except as noted otherwise. Enclosures shall be NEMA 1 for indoor use and NEMA 4X for outdoor use.

DISCONNECTING MEANS

Disconnecting means shall be provided as indicated on the drawings and at each motor and appliance location. The disconnect may be omitted if the same are incorporated in motor controls supplied in other divisions. Unless otherwise noted on drawings, the disconnecting device shall be a momentary push button station that can be locked in the open position. This push-button shall be furnished, installed and connected by the Electrical Contractor.

Circuit breakers shall be used for current protection purposes and shall be enclosed in suitable metal housing of type required by location.

Un-fused safety switches shall be used where disconnecting means only are required and where the current supply to the same is protected by a circuit breaker at the panel boards. Provide disconnect switch at each motor locations where the same is not within sight of respective control starter, unless indicated otherwise on the drawings. All disconnecting switches shall be enclosed and fabricated from Gage # 16 fully protected against corrosion.

LOCATION OF WIRING AND OUTLETS

The contractor shall coordinate his work with all trades involved so that exact locations may be obtained for all outlets, apparatus, appliances and equipment. The circuit numbers indicated as numbers 1, 2, 3, may not correspond to actual panel circuit connection numbers but must be balanced for better load distribution.

The location of outlets shown on diagrammatic wiring plans shall be considered as approximate and it shall be incumbent upon the Contractor, before installation of outlet boxes, to study all pertinent drawings and obtain precise information from the architectural schedules, scale drawings, large scale and full size details of finished rooms and the approved shop drawings of other trades or from the architect. In centering the outlets, due allowance shall be

made for window and door trims, variations in thickness of pouring, plastering, etc., as erected, regardless of conditions which may be otherwise shown on small scale drawings. Outlets incorrectly located shall be properly relocated at the contractor's expense. Local switches shown near the doors shall be verified with the architect's drawings before installation.

SERVICES

Power supply shall be three - phase

POWER AND LIGHTING DISTRIBUTION

Furnish and install the lighting panels as indicated on plans and panel board's schedule. From the main breaker, install feeders to the various outlying panels, motors or equipment as shown on plans. Feeders shall be inside the ceiling with hangers, channel and clamps

LIGHTING SYSTEMS

The lighting shall be complete in every respect, all as indicated on the plans or specified. All wiring's shall be installed in electrical non-metallic tubing using compression type fittings and connectors or as indicated in the plan and in general shall be concealed in the structure. Mounting heights of devices shall be as detailed on the plans or as follows:

Local switches – 1370mm from center of device to finished floor Line
Receptacles – 300mm above floor or 150mm above counter or As
shown on architectural details.

GROUNDING WORKS

Ground wires shall be bare copper, stranded, with sized as shown in the drawings and shall be of cylindrical form and variation shall be within 1% of the actual size called for. Grounding connectors shall be "CADWELD" type exothermic process. Contractor to test the grounding system to assure continuity and resistance to ground is not excessive. Submit written results of each test to the Engineer for approval. Ground resistance should be 25 ohms or less and 5 ohms or less for earth ground resistance.

ELECTRICAL DISTRIBUTION SYSTEM

Fluorescent Lighting Fixtures: UL 1570, except lighting fixtures for damp and wet locations shall conform to UL 57.

Fluorescent lighting fixtures shall be T5 with Troffer Diffuser (90-95%) power factor and spring-loaded lamp holder.

Fluorescent lamps: Provide the number, type and voltage as indicated on the drawings. All fluorescent lamps shall be provided with retainer for safety or using the spring type fluorescent holder.

- A. LIGHTING FIXTURES AND ACCESSORIES: - Refer to plans.
 - 1. Lighting Fixtures – Refer to plans
- B. LOW-VOLTAGE DISTRIBUTION EQUIPMENT
 - 1. Door Chimes: provide brands subject to approval by Engineer.

CLEANING-UP

The contractor shall at all times keep the construction area, including storage areas used by him, free from accumulations of waste materials or rubbish and prior to completion of work. Remove any rubbish from and about the premises and all tools, scaffolding, equipment and materials not the property of the owner.

Upon the completion of the construction, the contractor shall leave the work and premises in a condition satisfactory to the owner and the engineer.

PROJECT CLOSE-OUT

Upon completion of the project, the following procedure shall be implemented:

1. Walk-thru inspection by the owner, engineer and contractor. Any discrepancy noted shall be fixed before the project is closed.
2. Compile a complete equipment maintenance manual for all equipment. Submit copy of "As-built" drawings to the owner and engineer.
3. Construction Logbook with complete data (template will be provided by DSWD) must be submitted to the owner/engineer.

******END OF SPECIFICATIONS******

Revised Section VIII. Bill of Quantities

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
I. GENERAL REQUIREMENTS					
1	Project Billboard/Signboard	1.00	each		
2	Mobilization and Demobilization	1.00	L.S.		
3	Temporary Fence and storage rooms	1.00	L.S.		
Sub-Total					-
II. EARTHWORK					
1	Removal and Disposal of Structures and Obstruction	1.00	L.S.		
2	Structure Excavation (Common Soil)	5.00	cu.m.		
3	Embankment & Compaction	150.00	cu.m.		
4	Fill and Backfill (from borrow)	1.00	cu.m.		
Sub-Total					-
III. PLAIN AND REINFORCED CONCRETE WORKS					
1	Structural Concrete (Class A, 28 days)	34.00	cu.m.		
2	Reinforcing Steel (Deformed, Grade 40)	820.00	kg.		
3	Formworks and Falseworks / Scaffoldings	15.00	sq.m.		
Sub-Total					-

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
IV. TILEWORKS					
1	Soil Poisoning	20.00	Lit		
2	Sewer Line Works	1.00	L.S.		
3	Storm Drain and Downspout	1.00	L.S.		
4	Septic Vault, PVC, 1.0 cu.m. vertical	1.00	L.S.		
5	Plumbing Fixtures, Pipings, Fittings & Accessories Water Closet – 1 set; Lavatory – 1 set Kitchen Sink, double basin w/ drain –1 set Bath Tub – 1 set; and Faucet (stainless 304) – 7 sets	1.00	L.S.		
6	Ceiling, 6mm Fiber Cement Board (double wall) with metal frame spaced at 0.4m x 0.4m O.C.	360.00	sq.m.		
7	Wall, 6mm Fiber Cement Board (double wall) with metal frame spaced at 0.4m x 0.4m O.C.	75.00	sq.m.		
8	Granite Slab (Kitchen Counter)	3.00	slab		
9	Reinstallation of Existing Jalousie widows with new 2" x 6" Jambs in paint finish 1.8m x 1.2m = 6 sets 2.4m x 1.2m = 4 sets 1.2m x 1.2m = 2 sets 1.2m x 0.3m = 1 set	28.0	sq.m.		
10	Doors, Solid Panel Door with Jambs, hinges and in stain paint finish (5-sets, 1m x 2.1m)	10.50	sq.m.		
11	Reinstallation of Existing Doors with New Jamb and Paint (7 sets, 1m x 2.1m)	10.50	sq.m.		
12	Tileworks	330.00	sq.m.		
13	Cement Plaster Finish	136.00	sq.m.		
14	Painting Works	721.00	sq.m.		
15	CHB (including Reinforcing Steel) 150 mm	68.00	sq.m.		
16	Metal Structures Accessories (grab bars and other metal accessories)	1.00	L.S.		
Sub-Total					-

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
VI. ELECTRICAL AND MECHANICAL WORKS					
1	Conduits, Boxes and Fittings	1.00	L.S.		
2	Wires and Wiring Devices	1.00	L.S.		
3	Panel board with main and branch breakers	1.00	L.S.		
4	Lightning Fixtures and Lamps	1.00	L.S.		
Sub-Total					-
TOTAL CONTRACT COST					-

Section IX. Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
and
- (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;
and
- (c) Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
Or
*****Official Receipt for renewal in the absence of Valid Mayor's Permit for CY 2022 with attached Mayor's Permit for CY 2021.**
and
- (e) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

- (f) 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**
- (g) 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**

NOTE: This statement shall be supported with:

- i) Either of **Contract, Purchase Order, Notice of Award or Notice to Proceed**; and
 - ii) Either of **Certificate of Completion, Certificate of Acceptance, Inspection and Acceptance, Official Receipt/Collection Receipt or Sales Invoice**.
- (h) Philippine Contractors Accreditation Board (PCAB) License;
or
Special PCAB License in case of Joint Ventures;

- and** registration for the type and cost of the contract to be bid; **and**
- (i) 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**
- (j) 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, Safety Officer 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;
 - d. **Certificate of Site Inspection signed by the Head of the Procuring Entity (HoPE) or its authorized representative;**
Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as:
 - e. *construction schedule and S-curve,*
 - f. *manpower schedule,*
 - g. *construction methods,*
 - h. *equipment utilization schedule,*
 - i. *construction safety and health program signed by the contractor, **and***
- (k) 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

- (l) The prospective bidder's audited financial statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission (**CY 2020 and CY 2019**); **and**
- (m) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC); **or**
A committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation.

(n) Supplier must have an existing Landbank of the Philippines (LBP) Account in compliance to DBM Circular Letter No. 2013-16. This shall be verified during the conduct of post-qualification.

Class "B" Documents

(o) 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

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

Other documentary requirements under RA No. 9184

(q) Original duly signed Bid Prices in the Bill of Quantities; **and**

(r) 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**

(s) **Monthly Cash Flow**