



PROJECT NUMBER:

PROJECT TITLE:

PROPOSED CONSTRUCTION OF METER ROOM AND MOTORPOOL BUILDING

LOCATION

PUROK UDAGRE, BRGY. CONEL, GENERAL SANTOS CITY

OWNER

GENERAL SANTOS CITY WATER DISTRICT

TECHNICAL SPECIFICATIONS

1. Scope of Work

- a. The scope of work for this project consists of supply and delivery of necessary materials, appurtenances, labor, equipment, tools, power, water consumables and supervision for the completion of the proposed project as shown on plan and technical drawings specified in the scope of work herein.
- b. The **project duration is One Hundred Twenty (120) Calendar Days** and shall commence Five (5) Days after the receipt of Notice to proceed.

2. Bidders/Contractors Project Experience Requirements

- a. Similar Contract should be projects with civil, piping and structural steel works in any Government or Private Institutions duly supported by a satisfactory CPES rating and or/an owner's certificate of acceptance in Two (2) years from the date of submission and receipts of bids.
- b. Bidders under Small A and Small B category who do not have completed contracts are allowed to participate if the cost is not more than the ARCC under their PCAB registration.

3. Definitions

- a. OWNER
The word "Owner" refers to the General Santos City Water District.
- b. ENGINEER
The word "Engineer" refers to the individual or firm authorized by the Owner to oversee the execution of the Contract.
- c. CONTRACTOR
The word "Contractor" refers to the party entering into the contract for the performance of the work required.
- d. CONTRACT



The word "Contract" refers to the contract documents and shall include the basic contract entered into by the owner and the contractor for the performance of the work.

e. SPECIFICATION

The word "Specification" refers to the General Conditions, Special Provisions and Technical Specifications of the contract together with all addenda and change orders issued with respect thereto.

f. DRAWINGS

The word "Drawing" or "Contract Drawing" refers to those drawings accompanying the Specification and subsequent approved drawings, which show the location, nature, extent and form of the work together with applicable detail.

g. WORK

The word "Work" refers to the labor, material, equipment, transportation and all incidental costs necessary to complete the Contract.

h. SITE

The word "Site" refers to the lands and other places on, under, in or through which the work is to be executed or carried out and any other lands or places provided by the Owner for the purpose of the Contract.

i. APPROVAL

The word "Approval" refers to concurrence in writing, including subsequent written confirmation of the previous verbal approval.

j. WORKING / CALENDAR DAY

The term "Working Day" refers to working days in the government service.

The term "Calendar Day" refers to the days in a week including Saturdays, Sundays and Holidays.

Whenever the word "Day" is issued, it shall refer to calendar day.

4. SPECIFICATION, DRAWINGS AND DISCREPANCIES

The intent of the Specifications and Drawings is that the contractor shall furnish all the required plant, labor, materials, equipment and services, unless otherwise specified provided.

The Specifications and Drawings are complementary and what is called for in one shall be as binding as if called for in both.

Any discrepancies, errors or omission found in the Specifications or Drawings shall be reported in writing within three (3) days from the discovery to the Engineer who will issue the correction in writing within the same period. The contractor shall not take advantage of any such discrepancies, errors or omissions but shall comply with the corrective measures regarding the same as prescribed by the Engineer.

Whenever called for in these Specifications or on the Drawings, or where required by the Engineer, the Contractor shall furnish the Owner for review two (2) prints of each shop drawing.



The term "Shop Drawing" as used herein shall be understood to include detail design calculations, fabrications and installations, drawings, lists, graphs, operating instructions. Shop drawing shall be submitted to the Engineer for review and approval within fifteen (15) calendar days from receipt of the Notice of Award.

All shop drawings submittal shall be accompanied by transmittal form.

In case of conflict between the Specifications and the Drawings, the Specifications shall govern over the Drawings.

5. RESPONSIBILITIES

a. Engineer

The Engineer, acting as the authorized representative of the Owner, will decide such questions which may arise as to the quality and acceptability of materials and equipment furnished, work performed, rate of progress of work, interpretation of Specifications and Drawings, and those relating to the acceptability in fulfillment of the Contract by the Contractor.

b. Contractor's Employees

The employees of the Contractor are not employees of the Owner. Hence, the Owner shall not be liable or responsible for any personal injury or damage including death caused by any of the employees of the contractor during the lawful performances of their duties.

The contractor shall, at all times, stand solely liable and/or responsible for the enforcement of and compliance with all existing laws, rules and regulations applicable, and the contractor hereby agrees and binds itself to save and hold the Owner free and harmless from any or all liabilities in respect thereto and/or arising there from.

c. Contractor's Superintendence

A qualified superintendent shall be present in the work and shall provide competent supervision of the work, until its completion. The superintendent shall have full authority to act in behalf of the contractor, and all directions given by the Owner or authorize representative to the superintendent shall be considered given to the contractor.

6. SUSPENSION OF WORK

The Engineer, acting on behalf of the Owner may, by written notice to the Contractor, suspend the work in whole or in part for such period or periods as he may deem necessary, owing to such factors as delay in delivery of Owner furnished equipment or materials, or such other conditions as are considered unfavorable for prosecuting the work, or failure on the part of the Contractor to carry out the provisions of the Contract or to provide materials or workmanship meeting the requirements of the Specification.

7. PROJECT MONITORING

a. Monthly Progress Report



The Contractor is required to submit to the Owner Two (2) copies of Monthly Progress Report which shall include the following;

- 1) Items of work accomplished for the month;
- 2) Cumulative summary of work accomplished to date;
- 3) Items of work scheduled for the following month.
- 4) Project photos for the month.

The first Monthly Progress Report will cover the time from the date when the Notice to Proceed is issued until the end of the following month. Subsequently, monthly reports shall be submitted monthly thereafter until provisional acceptance of the project.

If the Contractor fails to submit Monthly Progress Report, the Owner may withhold approval of progress payment until the reports are received.

b. Monthly Coordination Meeting

There will be a regular coordination meeting be conducted twice a month to discuss issues and concerns of the project.

The signatory to the Omnibus Sworn Statement who is the duly authorized representative of the winning bidder shall be required to attend the monthly coordination meeting; otherwise, the attendee/representative present during the meeting shall be acknowledged only upon presentation of a duly notarized Special Power of Attorney.

8. LAWS, LICENSES, SAFETY AND OTHER REQUIREMENTS

a. Permit and Licenses

The procurement and payment of all necessary permits such as Zoning, Building, Electrical, Mechanical, Plumbing, Sanitary, etc., in the project implementation shall be the responsibility of the Owner.

b. Inspection of Project Site

The Contractor shall inspect the site of the work in order to satisfy themselves by personal examination and/or by such other means as they may prefer, of the location of the proposed work and the actual visualization of the work to be done. He should be aware of the conditions which might affect the execution of this contract and has made provisions therefore in his bid.

The Contractor must submit **Certificate of Site Inspection** upon submission of bid proposal.

c. Public Safety and Health Regulations

The Contractor shall comply with safe work practices and all health and safety regulations of the state and the locality. Furnish protective and lifesaving equipment for persons working at the site and provide a **Contractor's All Risk Insurance** for all his workers.

The Contractor shall provide and maintain such sanitary accommodation for the use of its employees as may be necessary to comply with all applicable national and local laws and ordinances, regulations, customs and practices.



Whenever necessary, it shall furnish, erect and maintain fences, barricades, lights, signs and other devices as are necessary to prevent accidents and avoid damage or injury to the public.

The Contractor shall be liable to all claims and/or liabilities arising during the public implementation.

Should the Contractor fail to faithfully observe the Safety Provisions herein specified, the Owner may exercise remedial rights as stipulated under this Contract.

d. Laws and Regulations

The Contractor shall observe and comply National, Provincial and Local laws, ordinances, and regulations, which on the manner affect those engaged or employed on the work, the material used in the work, or in the conduct of the work.

The Contractor shall indemnify and save harmless the Owner against all claims or liabilities arising from violation of any such laws, ordinance, order, or regulation, whether by itself or by its employees.

e. Third Party Liability

The Owner shall in no case be held civilly or criminally liable due to the act or omission of the Contractor during the contract period or during the implementation of the required work thereof. Any liability that may arise to the third party shall be the sole responsibility of the contractor.

9. GENERAL SPECIFICATIONS

a. Site Preparation

The location of the building where is to be erected shall be staked out and grade established as shown on drawings and in accordance with the Local Building Code. Contractor shall provide instrument for purposes of establishing, checking, and monitoring of the elevation and plumbness.

b. Earthworks

Excavation shall include the removal of materials of whatever nature encountered that would interfere with the proper execution and completion of the work. All excavations shall be carried to the grade of the bottom of the footing or slab or as indicated on technical drawings. After the required excavation has been completed, the exposed surface shall, be scarified to a depth of 150mm (6in) brought to optimum moisture content and rolled with heavy compaction equipment to ninety five percent (95%) of maximum density. Test for compliance may be made at the expense of the contractor, using the test procedure specified in Methods of Test for moisture-Density Relation in soils using a 10-lb. hammer and 18-in. drop. (ASTM) modified to use three (3) layers. All field density test shall be performed in accordance with the test procedure specified in "Methods of test for density of soil in Place by the Sand Cone Method" (ASTM D1556). The materials excavated shall be place as backfill on the footing, etc. and above shall be compacted as described. Excess will be hauled to a place designated by the Owner.

c. Concrete Works

Cement shall conform to the "Standard specifications for Portland Cement "(ASTM C-150-Latest Revision) and shall be type I. The cement shall be in accordance with DPWH standards e.g. "Holcim or Hex cement" and shall not be more than three (3) months from date of manufacture.



Aggregates shall be well-graded, clean, hard particles of gravel or crushed rock. The maximum size shall not be larger than one-fifth (1/5) of the narrowest dimension between forms and not larger than three-fourths (3/4) of the minimum clear spacing between individual reinforcing bars and in no case larger than 38 mm. (1-1/2 in.) in diameter except that the larger diameter may be allowed in massive concreting with the written permission from the Owner.

All reinforcing steel bars used shall be of deformed type, new, free from rust, oil, defects, greases or kinks. They shall conform to the latest edition of National Structural Code for Buildings with a minimum grade equal to **275 Mpa (Grade 40)** unless otherwise shown on the plans. Test of this materials, to determine its suitability shall be in accordance with the standards of the American Society for Testing and Materials (ASTM).

An admixture may be added to the concrete to control the set, effect water reduction, and increase workability. The quantity of admixture used and the method of mixing shall be in accordance with the manufacturer's instructions.

The Contractor shall submit design mixes and test results of samples made in accordance with "Standard Method of Making and Curing Concrete Compression and flexure test Specimen in the Laboratory" (ASTM C-192-Latest Revision)

Concrete strength shall be **3,000 psi (20.68Mpa) at 28 days** to be use for concrete floor, zocalo, columns, beams and foundations. No hand mixing shall be allowed during concreting operations.

Reinforcement shall be accurately placed and adequately secured by using annealed iron wire ties at intersection and shall be supported by concrete or metal supports, spacers or metal hangers. In slabs, beams and girders, splices or reinforcement at point of maximum stress shall be generally avoided. Splices in adjacent bars shall be generally staggered. Lapping of reinforcement bars shall be 40 bar dia. or a max. of 60 bar dia. Hooks and bends shall conform to the Standard Engineering practice.

Concrete forms should be water tight, strong enough and rigid to sustain the weight of concrete. Forms should be oiled to make the wood water proof. Oiling of forms should not be done after the steel bars reinforcements have been set to its position.

Pipes, conduits, dowels, and other items required to be imbedded in the concrete construction shall be so positioned and supported prior to placement of concrete. As concrete is placed, it shall be thoroughly settled and compacted through-out the entire depth of the layer. The Concrete shall be carefully worked by tamping, rodding and vibrating to make sure that all air and rock pockets have been eliminated. All concrete shall be cured for not less than fourteen (14) days after placing in accordance with standards. The Owner may require a reasonable number of tests on the concrete to be made during the progress of the work. Four cylindrical specimens shall be made for each test of which at least two shall be reserved for 28-day test. Strength test shall be made in accordance with the "Standard Method of Test for Compressive Strength of Cylindrical Concrete Specimens (ASTM C-39-latest revision).

Should the test fail to give the required strength, the Owner shall have the right to order a change in the proportions or in the procedures of curing of the concrete for the rest of structure.



d. Formworks and Scaffolding

Formwork for concrete shall be of wood or steel, properly designed easy to remove and clean and shall give smooth and even surface after removal thereof. It shall be sufficiently tight to prevent loss of cement slurry from the concrete.

e. Masonry Works

The work includes, furnishing labor, equipment and materials performing all operations required to complete the masonry work as shown and specified.

The 4" and 6" Concrete Hollow Blocks shall be machine made and shall conform to ASTM standards and shall have standard dimensions. Mortar shall be workable cement-sand mixture and attaining a 28 days compressive strength of 3.44 mPa (500 psi). No hand mixing shall be allowed during concreting operations.

The minimum size of reinforcement shall be 10 mm in diameter. Vertical reinforcement and horizontal reinforcement shall be as indicated in the plans. Vertical and horizontal reinforcement bars shall be continuous, lapped or spliced. All horizontal and vertical bars as the case maybe, shall be anchored 20 bars diameters into the concrete footings, columns and beams. All horizontal reinforcement shall be tied to the vertical reinforcement at every intersection with No. 16 GI Wire.

f. Steel Works

The Contractor shall furnish, fabricate and install metal works as specified herein and as shown in the plans. Miscellaneous metal works is defined as all items required to be fabricated from structural steel shapes, plates, bars and their products. The Contractor shall accomplish the work in a complete and finished manner and ensure the highest quality of workmanship in accordance with the plan and specification.

Structural steel shall conform to the "Standard Specifications for Structural Steel" (ASTM Designation A 36). All materials to be provided and used by the contractor shall be new, previously unused, and in first class condition.

g. Roofing Works

Roofing shall be 0.400 mm thick (base metal) rib-type, pre-painted, long span galvanized iron (G.I.) sheet with effective width of 1.05m.

Laying of roofing sheets should start from the end opposite the direction of the prevailing wind, overlap the next sheet to the first sheet and fix according to fastening procedures.

Where roofing is to rest on steel purlins, use Tekscrew at every rib. In between washer and roof sheet, provide neoprene washer as water seal.

h. Ceiling Works

Ceiling shall be 3.5mm thick fiber cement board and paint finish.

All other specifications shall be referred to the approved plan.

i. Tile Works



Before laying tiles sub-surfaces shall be thoroughly cleaned and washed of all loose materials, dirt, laitance and then well wetted without forming water pools on the surface.

j. Doors & Windows

Doors and windows shall be factory fabricated units of the types and sizes specified in the technical drawing and shall be of the quality and workmanship acceptable by the Owner.

Door and window clear glass shall frame with white color powder coated aluminum casement. Glass shall be tempered, low-e, weather resistance, corrosion resistance, sound proof, heat resistance and high durable performance.

k. Outdoor Cladding Installation & Stainless Steel Signages

The aluminum composite panel shall be non-combustible, impact resistance, scratch resistance, weather resistance, fire resistance, light weight, high strength, moisture proof and natural environmental protection.

l. Ramp Railings

All handrails shall be stainless steel to prevent rust and corrosion.

All other specifications shall be referred to the approved plan.

m. Plumbing Works

Plumbing layout shall be in accordance with the plans as approved by the Local Authority and shall conform in every respect to the National Plumbing Code, and to the Sanitary Code of the Locality.

The Contractor shall furnish and install all plumbing fixtures and its accessories as shown on the technical drawings.

n. Hardware

Rough and finishing hardware shall be provided for the completion of the works. All hardware which are necessary to leave the work complete shall be provided, though same is not herein specifically mentioned.

Locksets shall be of good quality e.g. kwikset to all doors or as specified by the owner. Provide barrel bolts to every door.

All other specifications shall be referred to the approved plan.

o. Electrical Works

All electrical installations shall be in accordance with the latest edition of the Philippine Electrical Code and shall comply with all laws and regulations applicable to the authorities. All wires shall be concealed and all electrical devices shall be of good kind and quality.

Electrical switches, outlets, convenient outlets shall be placed as indicated on the plans and necessary.

Electrical fixtures are of highest standard quality.

p. Electronic Works

Electronic equipment such as 1 set 24" LCD Monitor, 1 set IP CCTV DVR – 16 Channel/8 IP Cameras/4TB HDD, 1 set Router/Switch 8 pcs. - Smoke Detector, 4 pcs - Manual Call Point, 4 pcs - Sounder/Strobe and Accessories and provisions for necessary rough-ins materials such as conduits shall be provided by the contractor.



q. Painting

The metal surfaces shall be clean, dry, and free from mill scale, rust, grease, oil, or any other substance that could affect the quality of the painting and it shall be well puttied and sand papered.

All surfaces to be painted and, before beginning any work, shall be ensure that work of other trade has been left or installed in workmanlike condition to receive paint.

Each coat of paint shall be applied at proper consistency and brushed/rolled evenly, free of brush marks, sags, runs, and with no evidence of poor workmanship. No painting shall be done under conditions of weather, moisture, or temperature unsuited to good work, nor until previous coat is hard and dry.

r. Architectural and Fenestration

All architectural and fenestration works and specification shall be referred to the Owner.

10. SPECIAL CONDITIONS

a. Laboratory Testing Fee

All laboratory testing fee and transportation shall be shouldered by the contractor.

b. Project Turnover

During project's turn-over, Contractor is required to submit as-built plan. The contractor's deliverables are 100 percent accomplished either on each part and the site restored as is prior to construction.

c. Logbook and Weather Chart

A logbook and weather chart shall be maintained by the Contractor at all times in the project site reflecting the daily work activity, weather condition, manpower, equipment, visitors and circumstances affecting the program of work to be signed by both the Engineer and Contractor.

d. Project / COA Signboard

The Contractor shall furnish, erect and maintain one (1) project signboard and one (1) COA signboard in accordance with the Standard Drawings.

The location for the erection of these signs by the Contractor shall be as directed by the Engineer.

e. Equipment

Contractor shall provide the following minimum equipment but not limited to:

Quantity	Description
1	Engine Driven Welding Machine or Transformer Type
1	Bar Cutter
1	One (1) Bagger Mixer
1	Concrete Vibrator
1	Tamping Rammer or Plate Compactor
1	Oxy-Acetylene cutting outfit
1	Power Brush/Grinder



6	Concrete Sample Cylinder

The Contractor shall be required to include the list of their equipment in the technical documents and specify whether the same is leased or owned. If leased, the Contractor shall provide a Memorandum of Agreement.

During **post-qualification**, GSCWD shall conduct inspection to verify the availability of the listed equipment. Absence of any one of the required equipment is **ground for disqualification**.

f. Minimum List of Manpower

Quantity	Description
1	Project Engineer
1	Safety Officer
1	Foreman
6	Skilled Worker
6	Unskilled/Laborer

g. Organizational Structure

The bidder shall submit its organizational structure for the project including **unexpired licenses** of professionals to be assigned and stipulate specific functions wherein One (1) professional can hold only up to Two (2) key positions. Welders shall also submit **unexpired** corresponding National Competency (NC) certificate from TESDA.

h. On-Site Inspection and Testing

All materials furnished and all work performed under the contract shall be subject to inspection by the Owner. The contractor shall be held strictly to the true intent of the Specifications and Drawing in regard to quality of materials, workmanship and diligent execution of the Contract.

Work done in the absence of prescribed inspection may be required to be removed and replaced under the proper inspection; and the entire cost of removal and replacement, including the cost of all materials which may be used in the work shall be borne by the Contractor. The cost of carrying out the normal inspection and test of material should be at the Contractor's Expense.

11. SPECIAL PROVISION

a. Liquidated Damages (LD)

The Contractor shall pay liquidated damages to the Owner if he fails to complete the work within the time agreed upon. It is understood that said payment is not a penalty but a fixed sum representing the liquidated damages for each calendar day of delay.



Computation of the said liquidated damages shall conform to the provision of RA 9184.

b. Time Extension

The Contractor may be entitled to an extension of Contract time;

- a. If the work has been suspended by the Owner in whole or in part.
- b. Under force majeure (i.e. flood, blockade, earthquake, civil disorder, etc.) provided, in either case, the Contractor be not at fault and is not negligent under the terms of the contract.

The extension of time allowed shall be determined by the Owner. Extension of Contract shall be granted for rainy/unworkable days considered unfavorable for the prosecution of the works at the site or based on the actual conditions obtained at the site.

No extension of Contract time whatsoever shall be granted to the Contractor due to non-availability of equipment or materials to be furnished by the Contractor, labor problems and such other cause for which the Government is not directly responsible, or when the affected activities do not fall within the critical path of the network.

To receive consideration, a request for time extension must be made in writing to the Owner through the Engineer stating therein the reason for said request and must be received by the Owner at least **Thirty (30) days prior to the expiration of the Contract time**. Failure to observe this reglementary period shall be a ground for outright denial of the request for time extension.

c. Variation in Quantities

Bidders are reminded that the quantities are estimated and are for the purpose of comparing bids. The successful bidder shall complete all work items at the unit prices quoted in his bid, regardless of the variation between bid quantities and actual quantities required for completion of the work.

Payment will be based on actual quantities furnished, installed or constructed.

12. PLANS AND SPECIFICATIONS

All works, that may be called for in the specifications and not shown in the plans or vice versa, shall be executed and finished as if described in both. Should any work required which is not denoted on either plans and specifications either directly or indirectly, it is understood that same shall be implied and required and shall be performed and furnished such materials and layout as fully as if it has been so described.

The plans and specifications shall be considered complementary and any details mentioned in one but not in the other, or vice versa, shall be interpreted to be applicable in both.


If no numerical label of the dimension(s) of any part of details appeared on the plan, the drawings shall be carefully followed in accordance to the scale thus indicated, otherwise all numerical data of dimensions of details when so provided must be followed and not the scale of the drawing

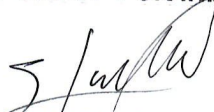


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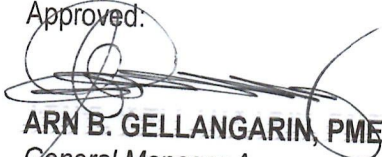

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