

# **TECHNICAL SPECIFICATIONS**

## **Pre-Engineered Storage Building 260 Butler Road**

(Rev. 10/17/18)

Saratoga County Water Authority is requesting bids for **The construction of a Pre-engineered Storage Building located at the existing Water Treatment Plant site at 260 Butler Road in Moreau, New York.** The scope of work for this project is outlined in this specification as follows:

### **I. RELATED DOCUMENTS**

The following are components of this project manual:

1. Notice to Bidders
2. Invitation to Bidders
3. Information to Bidders
4. Form of Bid
5. Proposal
6. Bid Bond
7. Non-collusive Bidding Certificate
8. Certification of Compliance with Iran Divestment Act
9. Contract
10. Prevailing Hourly Wage Rates and Supplements
11. Standard General Conditions of the Construction Contract
12. Technical Specifications and drawings

### **II. QUALIFICATIONS:**

#### **A. The contractor selected for this project will be required to meet the following qualification criteria:**

1. Have a minimum of five (5) years of experience performing work of similar type and size.
2. Provide a description of three (3) projects of similar size and scope completed within the last five (5) years. For each project include; the project name, client name, description of work performed, a client contact person and title, phone number and address.

### **III SCOPE OF WORK:**

#### **PART 1 – GENERAL**

##### **1.01 Description**

- A. Provide design and construction for a permanent pre-engineered building, weathertight (exclusive of the entranceway(s)), and suitable for the storage of equipment. The building design shall meet or exceed the performance and dimensional criteria and other requirements of this specification. The storage building is to include all labor, equipment and materials necessary for a complete finished product. The storage building will be constructed at the Saratoga County Water Authority main plant site at 260 Butler Road, Town of Moreau, NY.
- B. The Owner reserves the right to consider bids for structures varying in minor respects from any specific requirements specified herein, but judged to meet the intent of this specification.
- C. Definitions:
  - 1. The term "Owner" means Saratoga County Water Authority, New York.
  - 2. The term "Contractor" means the successful bidder awarded the Contract for the work.
  - 3. The term "floor" means the exposed portion of the asphalt concrete surface of the building site that lies within the inner building perimeter.
  - 4. N.Y.S. means New York State
- D. Related Work Specified in Part 2
  - 1. Permits
  - 2. Construction Services
  - 3. Plot Plan
  - 4. Earthwork and Foundation Excavation
  - 5. Installation and Erection
  - 6. Building Floor
  - 7. Final Grading and Restoration
  - 8. Electrical

##### **1.02 Quality Assurance**

The contractor (including their engineer) selected for this project will be required to meet the following qualification criteria:

- A. Contractor's Qualifications  
To be eligible for award of Bid, Contractor shall provide a description of three (3) projects of similar size and scope completed within the last five (5) years. This reference information is to be included on the attached Contractor Reference Sheet and is to be included with the bidding documents. In addition, all bidders are to include a completed Contractor Qualification Statement (attached) with their bid.
- B. Design Engineer  
The design engineer cannot be an employee of the contractor.

C. Materials

Contractor shall provide materials that have a proven track record, and shall be responsible for all products, components, accessories, and methods used in constructing the building.

The minimum printed code standard requirements of the following organizations for material quality, fabrication, and installation procedures shall be met or exceeded, for applicable methods employed in the building design:

American Institute of Steel Construction (AISC)  
American Concrete Institute (ACI)  
American Institute of Timber Construction (AITC)  
American Iron and Steel Institute (AISI)  
American Plywood Association (APA)  
American Softwood Lumber Standard: U. S. Department of Commerce PS-20.  
American Wood Preserver's Association (AWPA)  
American Society for Testing Materials (ASTM)  
Underwriters Laboratory (UL)

**1.03 Submittals**

Furnish the following information as proof of conformity to design and performance criteria requirements of this specification. The final design shall be stamped with the registration seal of an Architect or a Professional Engineer, licensed in New York State and bearing the authorized facsimile of the signature of such Architect or Professional Engineer.

A. Design Services

1. Furnish a complete set of design drawings, indicating in detail all features of the proposed building. In the case of prefabricated buildings and proprietary design, submit descriptive material depicting the proposed building.
2. Provide complete design services by a professional engineer(s) licensed in the State of New York for a complete pre-engineered storage building, as described in the Construction Services (Part 2, 2.02) of this specification and as required for a New York State Building Permit and a final Certificate of Occupancy. This includes all elements of the building design including but not necessarily limited to the site, foundation, structure and roof assemblies.
3. The design is not to include electrical or lighting.

4. Services are to include pre-design and design meetings with Saratoga County Water Authority and New York State Codes as may be required. Services are also to include periodic construction site inspections as may be required in order to insure that the construction conforms to the design, to the requirements of the N.Y.S. Department of State, Division of Code Enforcement & Administration as well as any other agencies having jurisdiction.
5. The design services are also to include completion and submission of all documents required to obtain a New York State Building Permit and final Certificate of Occupancy.

B. Post-bidding submittal by the successful bidder will furnish the following information within two (2) weeks of notification by Owner:

1. Complete design calculations for building and foundation work. The design data shown on the drawings shall include all data required for the foundation design which is to be completed by the successful bidder. This includes but may not necessarily be limited to all design loads transmitted by structure to the foundation.
2. For prefabricated structures: original working drawings, or copies of complete fabrication and erection drawings, material lists, and detailed erection instructions.
3. Foundation work: detailed drawings for preparation and construction.

#### **1.04 Roofing Guarantee**

The Contractor shall guarantee the installation of the roof for a minimum period of five (5) years after the building is turned over to the Owner.

#### **1.05 Code Compliance**

The structure shall be built in conformance with all applicable codes. The design engineer is responsible to submit the design for any required review prior to commencement of construction. The Contractor is responsible to execute the construction of the building so as to achieve compliance.

### **PART 2 – RELATED WORK**

This section identifies which portions of the following related work are to be done by the Owner, and which by the Contractor.

#### **2.01 Permits**

- A. By submission of the proposal, bidders agree to complete the design and submit a completed building permit application to N.Y.S. including all required construction documents within thirty (30) days of receiving a fully executed contract from Saratoga County Water Authority.

- B. The successful bidder is responsible for completing the Plan Review Summary forms and application required to obtain the necessary N.Y.S. Building Permit from the N.Y.S Department of State Division of Code Enforcement and Administration. Saratoga County will pay fees related to the building permit.

## **2.02 Construction Services**

Contractor shall provide construction services including all labor, equipment and materials necessary for the complete construction of a pre-engineered storage building that complies with the approved design and which will result in the issuance of a Certificate of Occupancy. The successful bidder is responsible for fully completing the project up to and including issuance of a Certificate of Occupancy.

## **2.03 Plot Plan**

The Owner will furnish to all bidders a plot plan showing the proposed location of the storage building, including distances from lot lines and encumbrances on the site such as existing buildings. All bidders are encouraged to make arrangements to inspect the site at Saratoga County Water Authority, 260 Butler Road, Town of Moreau New York 12831. Contact Mr. Ed Hernandez to schedule a date for such site visit.

## **2.04 Earthwork and Foundation Excavation**

- A. The Owner shall prepare the site for the building so that the grade within the building area is level to within plus or minus 2", and so that the grade of the surrounding area slopes away from the building in all directions sufficiently to insure proper drainage. Initial site work by county shall be completed within fifteen (15) working days after award of the Contract.
- B. The Contractor shall excavate and backfill to final grade for the foundation footings.
- C. Stakeout of structure, to include footings is to be performed by contractor.
- D. At completion of structure the contractor will ensure there is positive drainage away from structure using suitable material recommended by design engineer.

## **2.05 Installation and Erection**

- A. Install required foundations and substructures or supports at the required elevations on properly prepared sub grade, as required for the erection of the complete storage structure.
- B. Erect the rectangular storage structure and required appurtenances on prepared foundations, complete and ready for the storage of salt.
- C. Install roofing, and accessories in accordance with the roof manufacturers printed instructions, except as otherwise specified or shown.

## **2.06 Building Floor**

The Owner shall bid the concrete floor as an alternate to the base bid. Should the owner award the alternate bid to the contractor, the contractor shall install the concrete floor and coordinate the work so as not to delay the project.

## **2.07 Final Grading and Restoration**

The Owner shall provide for all final grading and site restoration.

## **2.08 Electrical**

The Owner shall provide power to the building and shall furnish and install all lighting, wiring, and other electrical equipment. Contractor is responsible for installing conduit for owner's future electrical installation.

# **PART 3 -- DESIGN CRITERIA & PRODUCTS**

## **3.01 Storage Building Design and Performance Criteria**

### **A. Dimensional Requirements for Rectangular Building**

Width:	40'
Length:	88'
Bottom Chord Truss Height:	16' above finished floor
Overall Height:	Not to exceed 30' above finished grade

### **B. Building Structural Requirements**

1. Provide a rigid, self-supporting structure comprised of standard building framing components, or an approved building system of integrated structural components, complete with necessary foundations which are designed to securely and permanently support roof and wall construction.

2. The Storage Building package is to be complete and must be designed in compliance with all applicable New York State Building Codes and Regulations including all dead and live loads (e.g. wind, snow, etc.) to which it will be subjected to in Ballston Spa, New York.

### **C. Building Products:** the following minimum required standards shall be met for the products listed.

#### **1. Concrete**

Concrete shall, if used in the building design, have a minimum compressive strength of 3,000 psi at 28 days, and be supplied by a state-approved concrete plant.

#### **2. Preservative Treated Wood**

a. General: Treated lumber as herein specified. Comply with applicable American Wood Preserver's Association (AWPA) requirements.

All timbers to be dressed timbers.

All lumber to be kiln dried to a maximum moisture content of 19% before treatment.

- b. All above-ground lumber exposed to weather, or directly in contact with salt, shall be treated with water-borne preservatives in accordance with AWPA Standard U1 to the requirements of Use Category UC4A (CCA 0.40).
- c. Load-bearing wood members placed in the ground, or encased in concrete, are to be treated with water-borne preservatives in accordance with AWPA Standard U1 to the requirements of Use Category UC4B (CCA 0.60).
- d. Any wood components with a nominal thickness of 2" or less shall have a moisture content not to exceed 19% when installed.

### 3. Metal Plates and Fasteners

- a. Metal plates and fasteners used in the building (shear plates, truss gusset plates, joist hangers, nails, bolts, nuts, washers, screws, etc.) which are in direct contact with salt, or which are exposed to an atmosphere containing salt, shall be designed to resist corrosion due to such contact or exposure.
- b. All metal exposed on the interior, including truss bearing plates, nails, screws, lag bolts, anchor bolts, bolts and washers etc. in contact with preservative treated wood, shall be Type 304 or 316 stainless steel or hot dipped galvanized meeting ASTM A 153/A 153M.
- c. Items listed below (if used in the building) shall meet the following specific requirements:
  - Truss gusset plates: to be galvanized steel, and epoxy coated in the field.
  - Joist hangers: to be triple-zinc coated and epoxy coated in the field.
  - Nails applied to CCA or CDX lumber shall be ring-shank, double hot dipped, galvanized coated steel.

### D. Interior Space

Provide the entire interior floor area free of columns or roof supports of any type.

Minimum Center Clearance: Provide a minimum 16-ft. clear height throughout the full length and width of the structure.

### E. Exterior Wall Construction

1. Provide exterior wall system or components of pressure treated wood to provide a durable weather-resistant barrier, which may be maintained easily by Owner with non-proprietary products readily available for such purpose.

#### F. Entranceway

Provide six (6) unobstructed rectangular entrances opening, nominal dimensions to be 14' high by 12' wide. Six (6) commercial sectional garage doors are to be equally spaced along the length of the building and one (1) commercial sectional garage metal door is to be located at the gable end. Gable end entrance location is to be determined by the Owner.

#### G. Passage Doors

Passage Door: Furnish Two (2) 3'-6" x 6'-8" exterior flush hollow metal steel door, pre-hung in a wood frame including all hardware, threshold and weather stripping. Door and frame shall be compatible with the building framing.

#### H. Preformed Metal Roofing/Siding System (General)

Provide materials and surface finishes conforming to the guarantee specified in Part 1, 1.04, requiring minimum maintenance and conforming to, or exceeding, the Underwriters' Laboratories, Inc. Class C rating requirements (labels are not required). Unprotected aluminum or bare steel surfaces are not acceptable.

1. Type: prefabricated or site-built, complete with all necessary accessories, fastening devices, trim, and flashings.
2. Drainage: Positive slope; no standing water.
3. Strength: Comply with structural criteria specified in Part 3, 3.01,D.
4. Wind Resistance: Comply with structure criteria specified in Part 3, 3.01, D.
5. Compatibility: All materials to be physically and chemically compatible with each other and with adjacent building components.
6. Products:
  - a. Pre-painted metal roofing/siding/trim shall consist of 26 gauge galvalume coated steel panels, with color matched fasteners. The weather side of the panel shall receive a nominal two (2) tenths mil. Polyurethane primer and a nominal eight (8) tenths mil. Topcoat to achieve a total nominal paint film thickness of one (1) mil. The non-weather side paint system shall consist of a two coat finish with a total nominal thickness of one-half (1/2) mil. A 35 year limited paint warranty shall be available. Color to be selected by Owner.



- b. To control condensation and infiltration of rain and snow, the roofing base shall be 30 lb. Titanium underlayment or equal. Siding shall have moisture (Tyvek) barrier.
- c. Roofing panels are to have three (3) courses of snow slides installed the entire length of both front and backside of roof.
- d. Sheathing shall be APA rated, 5/8" thick nominal, CDX plywood roof sheathing. In no case shall metal roofing be applied directly to trusses.
- e. Overhead Commercial Sectional Steel doors shall be insulated and have a minimum exterior steel thickness of 24 ga., to include track, all mounting hardware, locks along with lift handles. The doors are to have a baked-on, polyester paint finish with flexible PVC bottom weather seal. The door is to be compatible with the building framing. Doors must be capable of being insulated at a later date. Color to be selected by Owner
- f. Exterior Passage door: to be hollow metal steel and to include all mounting hardware and locks. The doors are to have a baked-on, polyester paint finish with flexible PVC bottom weather seal. The door is to be compatible with the building framing. Color to be selected by Owner.

#### I. Ventilation

Provide suitable openings located at or near the highest point of the roof to provide a minimum ratio of 1 sq. in. of free air area for each 55 sq. ft. of building floor area.

### **PART 4 – ADDER ALTERNATE**

#### 4.01 Adder Alternate No. 1

Provide a lump sum adder price as follows:

1. Provide materials and labor to install a 5” thick 3,500 psi concrete reinforced slab throughout the interior of the building. Contractor shall properly seal the gap between the slab and the building without damage to building structure.

#### 4.02 Adder Alternate No. 2

Provide a lump sum adder price as follows:

1. Provide materials and labor to install a 12'x30'x12' pre-engineered building frame and roof over the existing generator located at the SCWA's raw water pumping station on Potter Road. The building shall be an open structure with no sides, gable ends or ceiling. Foundation and structure shall meet the same specifications and requirements as the Base Bid Structure. Contractor will be responsible for all applicable building permits and shall comply with all local, state and federal rules and regulations. The support structure shall be designed so that it does not interfere with the use of the existing doors on the generator. A site visit is highly recommended prior to bidding.

## **PART 5 – MISCELLANEOUS ITEMS**

1. The intent of this specification is to outline a “turnkey” project. Bids are to include all labor, equipment and materials necessary for complete installation as described. Items which may have been unintentionally omitted but which are required for a complete project are the responsibility of the contractor.
2. A Geotechnical Report for the site is will be provided if required for foundation design purposes.
3. The successful bidder is to include in their bid, the cost to provide progress plans as required and two (2) complete sets of hard copy record plans and specifications and one (1) record set of plans and specifications in digital format (.pdf). The plans must be complete and include all details necessary both for construction and for obtaining a N.Y.S. Building Permit. A detailed material and construction specification shall be provided. The plans are to include but not necessarily be limited to:
  - Cover sheet
  - Foundation plan and details
  - Main floor plan and details
  - Roof framing plan and details
  - Roof truss bracing plan and details
  - Wall sections, details including required bracing
  - Exterior elevations
  - Detailed building section(s)
  - Other details as may be required
5. Successful bidder is to coordinate any and all necessary progress inspections with N.Y.S. Building Codes Division.
6. The successful bidder will be selected based upon an evaluation of the bid price, alternate and compliance with specifications and qualifications.

7. All work must be coordinated with Saratoga County Water Authority in advance. The final schedule for the work will be discussed and coordinated at a pre-construction meeting which will be scheduled by the owner prior to beginning the work. Construction progress meetings will also be held on an as-needed basis order to evaluate the work completed and to plan on-going work.
8. The successful bidder will be required to execute a Saratoga County Water Authority Contract including Saratoga County Water Authority General Conditions, Document A201.
9. Monthly progress payments will be made in accordance with Saratoga County Water Authority General Conditions Document A201.
10. Normal business hours of operation at the Authority Facility are Monday through Friday 7:00 a.m. – 3:30 p.m. Work may be performed outside of these hours and on weekends with prior authorization from Saratoga County Water Authority.
11. The work being performed must not interrupt or compromise the facility operations or security at any time during the course of the project.
12. Bids are to include a minimum one (1) year 100% warranty for all labor and materials on the general structure. See Part 1, 1.04 for roof installation warranty.
13. The contractor and the engineer will be required to provide proof of insurance coverage as required by Saratoga County Water Authority.
14. Bids are to include, where indicated, the estimated amount of time, in weeks, to complete the entire project once the physical work begins.
15. Bids are to include a list of all assumptions or deviations from these specifications, if any. These are to be noted on the Form of Bid where indicated.
16. Safety is of primary importance. All applicable safety regulations must be complied with during the course of this project. Protection of pedestrians, personnel, building occupants, vehicle traffic, parking areas, parked vehicles, the building structure, and adjacent buildings is required.
17. All work is to be performed in accordance with all codes, regulations and standards applicable to this type of work.
18. Unloading/loading of all equipment and materials is to be included in your proposal.
19. Storage costs, if any are to be included in your proposal. Proper protection of any stored material or equipment is also to be included in your proposal.
20. The contractor will be completely responsible for the proper disposal of all waste

material and debris related to this project.

21. The contractor is responsible for any and all sanitary facilities (i.e. portable toilets) required of its employees throughout the duration of the project. All facilities must be kept in a clean and sanitary condition with regularly scheduled cleanings.
22. The project site is to be kept clean and free from hazards at all times.
23. Smoking inside any Authority building is strictly prohibited.
24. This project must be completed in a timely manner. Once the physical work is begun, it is to be properly manned and continued without interruption until all work is completed to the satisfaction of the Authority.
25. If required, the owner will designate a staging area(s) at the preconstruction meeting for location of equipment, materials and a dumpster.
26. All required equipment and rigging is to be included in your proposal.
27. The contractor is to perform all work described in the contract documents including any work that is not specifically outlined but required for a complete installation.
28. The contractor must coordinate all work and consult with Saratoga County Water Authority onsite as required throughout the duration of the project.
29. All materials and equipment that are installed as a part of this project are to be new, quality commercial grade products that are suitable for their application.
30. Protection of the existing building and grounds as well as any adjacent structures and/or systems is the responsibility of the contractor. Any damages caused by the contractor as a result of performing the work described by this specification are the responsibility of the contractor. Any areas disturbed by the work related to this project are to be restored by the contractor.
31. The contractor is responsible for all labor, equipment and materials related to replacing or restoring any and all disturbed areas including all building finishes.
32. A Lump sum of ten thousand (\$10,000) dollars will be withheld from the Contractor by the Owner till issuance of Certificate of Occupancy by New York State Division of Building Standards and Codes.
33. It is the responsibility of the contractor to familiarize themselves with the conditions of the facility and project prior to submitting a bid.