

## TECHNICAL SPECIFICATIONS

### NUMBER

### TITLE

01010	Summary of Work
01300	Submittals
06300	Chemical Storage Building
15150	Chemical Mix Containment and Recovery System
15400	Plumbing
16400	Electrical

### PLANS

IN LETTER SIZE FORMAT

### NUMBER

### TITLE

1 of 3	Plan View Shennecossett Golf Course Chemical Building and Containment Tank Installation
2 of 3	South Elevation Shennecossett Golf Course Chemical Building and Containment Tank Installation
3 of 3	West Elevation Shennecossett Golf Course Chemical Building and Containment Tank Installation

**SECTION 01010**  
**SUMMARY OF WORK**

**PART 1 GENERAL**

1.01 PROJECT/WORK IDENTIFICATION

- A. The name of the Project is "CHEMICAL STORAGE EQUIPMENT, SHENNECOSSETT GOLF COURSE" and is located at 284 Plant Street, Groton, Connecticut.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. Briefly and without force and effect upon Contract Documents, the work of the Contract can be summarized as follows:
  - 1. Provision and installation of a prefabricated chemical storage building. Should funding allow, work also includes also the provision and installation of a chemical recovery and containment system (alternate).

1.03 WORK BY OWNER

- A. Work of the Project which will be executed during Work of this Contract, and which is specifically excluded from this Contract are as follows:
  - 1. None.

1.04 CONTRACTOR USE OF PREMISES, WORK SEQUENCE, AND OWNER OCCUPANCY

- A. Contractor shall only have use of the areas shown on the plans for Work, storage, and access. Under no conditions, shall other areas be used or blocked.
- B. Assume full responsibility for protection and safekeeping of products under this Contract.
- C. Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- D. Coordinate the Progress Schedule and operations with the Town and the Engineer.
- E. Cooperate with the Town and the Engineer in scheduling operations to minimize conflict and to facilitate Owner usage. Provide any and all temporary measures to ensure the safety of the Town and the Town's representatives.
- F. The Contractor shall not disrupt existing utility service, interfere with normal school bus, auto, and pedestrian traffic, or obstruct existing exits and life safety systems, including access to private driveways.

1.05 PERMITS

- A. Contractor shall obtain and pay for applicable permits for this work, including but not necessarily limited to the following:
1. Plumbing permit (City of Groton)
  2. Building permit (City of Groton)
  3. Electric permit (City of Groton)

END OF SECTION

**SECTION 01300**  
**SUBMITTALS**

**PART 1 GENERAL**

1.01 SUBMITTAL PROCEDURES

- A. Review submittals prior to submission. Verify field measurements, catalog numbers and other information critical to construction or installation. Coordinate each submittal with requirements of Work and of Contract Documents.
- B. Notify Engineer in writing at time of submission of deviations in submittals from requirements of Contract Documents. Responsibility for deviations from requirements of Contract Documents is not relieved by Engineer's review of submittals, except when given written acceptance of specific deviation.
- C. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- D. Engineer will review shop drawings, product data and return submittals

1.02 PROPOSED PRODUCT LIST

- A. Within 15 days after date of Notice to Proceed, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

1.03 PRODUCT DATA

- A. Product data includes standard printed information on materials, products and systems; not specially prepared for this project, other than the designation of selections from among available choices printed therein.
- B. Collect required data into one submittal for each unit of Work or system; and clearly mark each copy to show which choices and options are applicable to project. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, special coordination requirements, instructions for delivery, storage, assembly, installation, adjusting and finishing.
- C. Submit 2 copies of product data of which one will be retained by the Engineer.

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1.04 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification Sections, submit manufacturer's printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- B. Identify conflicts between manufacturer's instructions and Contract Documents.

1.05 ENGINEER REVIEW

- A. Engineer will endeavor to review shop drawings, product data, and samples, and to return submittals within 10 working days

END OF SECTION

**SECTION 06300**  
**CHEMICAL STORAGE BUILDING**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. The work under this section includes all labor, materials, tools, and equipment necessary for supplying, and the complete installation of a chemical storage building.

1.02 RELATED WORK

- A. Section 01300 – Submittals
- B. Section 16400 – Electrical

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300.

**PART 2 PRODUCTS**

2.01 CHEMICAL STORAGE BUILDING

- A. The chemical storage building shall be a 12' wide x 8' deep x 8' high prefabricated unit as manufactured by ESD Waste2Water, Inc., 495 Oak Road, Ocala, FL 34472, or approved equal.
- B. Materials of Construction
  - 1. Containment floor shall be constructed entirely of 6061-T6 Non Corrosive Tread Plate Aluminum.
  - 2. Shell shall be of 0.1875" thickness of 5052-H32 Non Corrosive Marine Grade Aluminum.
  - 3. Interior top and sides of building to be constructed with R-10 rated insulation.
  - 4. Interior walls and ceiling shall contain insulation and shall be constructed of 0.040" thickness of 3003-H14 Non Corrosive Marine Grade Aluminum.
- C. Size
  - 1. Building outside measurements shall be 12' -0" wide x 8' -0" deep x 8' -0" high.

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D. Heating

1. The building shall contain a 120 volt, thermostatically controlled heater.
  - a. The heater shall contain an open coil element design for quick dissipation of heat.
  - b. The heater shall also contain an impeller fan for efficient heat distribution.
  - c. The heater and fan will draw no more than 15 amps at the highest setting.

E. Lighting

1. Minimum of 2 moisture proof incandescent lighting fixtures.
2. Lighting fixtures shall be enclosed for shatter protection.
3. Moisture proof light switch.
4. Rigid conduit and connectors.

F. Ventilation

1. Full time ventilation with a minimum of 10 air exchanges per hour. Ventilation controls will facilitate a "winter" setting that will turn off ventilation when the outside air temperature is below 35 degrees F.

G. Containment

1. 4-inch minimum containment well constructed entirely of 6061-T6 Non Corrosive Tread Plate Aluminum.
2. Containment basin shall be constructed as to enhance the easy removal and cleanup of spilled product without the removal of a grated sub floor.
3. Minimum of 419 gallons of containment capacity.

H. Shelving

1. Solid shelves shall be constructed entirely of 6061-T6 Non Corrosive Tread Plate Aluminum.
2. Minimum shelf depth shall be 24 inches deep and shelving shall not total less than 128 square feet.

I. Door Opening

1. Double doors opening of 75 3/8" wide by 78" high.
2. Keyed lever lock minimum ANSIA 156.2, 1996, Series 4000 Grade 2. U.L. Listed for all functions up to 3-hour doors.

2.02 ELECTRICAL

- A. All products shall be U.L. Listed.

**PART 3 EXECUTION**

3.01 UNLOADING AND INSTALLATION

- A. The Contractor shall supply all rigging and equipment necessary to unload the building from the delivery truck and place it in the location shown on the plan.
- B. The location is on an existing concrete pad under an existing canopy structure.
- C. Contractor shall coordinate all delivery, unloading and installation activities with the golf course maintenance staff.
- D. Contractor shall provide anchoring to concrete slab using stainless steel anchors as may be required by code or manufacturer's instructions.

3.02 ELECTRICAL

- A. Provide all conduits, wiring, and accessories needed to connect the chemical storage building to the existing electrical wiring under the canopy.

END OF SECTION

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**SECTION 15150**  
**ALTERNATE 1**  
**CHEMICAL MIX, CONTAINMENT &**  
**RECOVERY SYSTEM**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. The work under this section includes all labor, materials, tools, and equipment necessary for supplying and the complete installation of chemical mix, containment and recovery system. Note that the chemical containment sump has already been installed.

1.02 RELATED WORK

- A. Section 01300 – Submittals
- B. Section 15400 – Plumbing

**PART 2 PRODUCTS**

2.01 CHEMICAL MIX, CONTAINMENT AND RECOVERY SYSTEM

- A. The chemical mix, containment and recovery system shall be as manufactured by ESD Waste2Water, Inc., 495 Oak Road, Ocala, FL 34472, or approved equal.
- B. General Description, Chemical Mix Containment & Recovery System
  - 1. Chemical Recovery Tank:  
148 gallon Chemical Recovery Tank for storage. A valve shall be able to direct the solution to a hose in the front of the tank and to pump into a spray rig or spray tank.
  - 2. Air-Actuated Pump:  
Pump shall be activated by manually turning on the air control valve. The pump must draw the solution from the Chemical Containment Sump to the chemical recovery tank. The pump shall be constructed of polypropylene with a Viton diaphragm for maximum chemical resistance and longevity.
  - 3. Filter:  
The air pump shall suction the liquid through a reusable 100 micron poly bag filter to remove fine particulates from the waste stream.

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- C. Chemical Recovery Tank
  - 1. Shell shall be of 0.1875" thickness of 5052-H32 Non Corrosive Marine Grade Aluminum.
  - 2. Tank Capacity 148 gallons.
  
- D. Pumping System
  - 1. Self-priming ¾" suction port.
  - 2. Spherical check valve design.
  - 3. ¼" air inlet.
  - 4. ¾" muffled air exhaust.
  - 5. 100-micron cartridge filter with a maximum flow rate 1 GPM per square foot of area with a 5052-H32 Non Corrosive Marine Grade Aluminum cartridge filter housing.
  - 6. Pneumatic double diaphragm pump.
  - 7. Manual controls.
  - 8. Maximum discharge volume 21 gallons per minute.
  - 9. Maximum air consumption 28.2 SCFM.
  - 10. Operating temperature 32°-158°F.
  - 11. Maximum noise level 94dB.
  - 12. Minimum 25 feet ¾" discharge hose.
  - 13. Three way selector valve for discharge.

**PART 3 EXECUTION**

**3.01 INSTALLATION**

- A. Set unit in location shown on plan or as directed.
- B. Secure to the existing concrete pad with stainless steel concrete anchor bolts.
- C. Install in accordance with all manufacturer's instructions.
- D. Install new tap, ball valve, and 1/2" diameter copper compressed air line from existing compressed air piping on south west corner of canopy and supply adapter for ¼" air inlet.
- E. Connect unit to new compressed air line.
- F. Provide adaptor and connect unit to existing sump piping.

END OF SECTION

15150/2-2

**SECTION 15400**  
**PLUMBING**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the furnishing of all labor, materials, tools, and equipment necessary for the complete installation of all compressed air, water supply, waste and vent piping, fixtures and accessories as required by this section of the specifications and as shown on the Contract drawings.

1.02 RELATED SECTIONS

- A. Section 15150 – Chemical Recovery Equipment

1.03 CODES AND STANDARDS

- A. The work shall be installed to comply with the latest applicable codes, regulations, and requirements of all municipal and other public and private authorities which have jurisdiction.
- B. The work shall conform to the Connecticut Basic Building Code.
- C. All materials shall bear an Underwriters Laboratories label in all cases where a standard has been established for the particular material.
- D. In every case where reference is made to a code or standard, standards of a manufacturer's association or a standard material specification such as ASTM, the latest revision and supplement shall be effective and complied with.
- E. It is the intent of the specification that the materials, workmanship and procedures shall be equal to or exceed the minimum requirements covered by these codes and standards. Where specifications or drawing requirements covered are in excess of the minimum code requirements, and are permitted, the specification of drawing requirements shall govern.
- F. The work shall conform to the requirements of the Occupational Safety and Health Administration (OSHA).

## 1.04 PERMITS

- A. Obtain and pay for all permits and certificates of compliance required for the work. Submit copy of final inspection and approval to the Engineer.

## 1.05 MEASUREMENTS

- A. All measurements shall be taken at the site with the actual measurements to take precedence over scale dimensions. The Contractor shall make necessary field measurements to determine space requirements.

## 1.06 ACCESSIBILITY

- A. All unions, valves, clean-outs, and items requiring maintenance, adjustment or repair shall be located in accessible locations.

## 1.07 DRAWINGS

- A. The drawings and specifications are complementary. What is shown on one is not necessarily repeated in the other. The drawings show general arrangement, pipe and duct sizes and connections, but they do not show every offset and fittings or duct transformation required, or every interference that may be encountered during the installation.
- B. All items not specifically mentioned in these specifications or noted on the drawings, but which are obviously necessary to make a complete working installation, shall be included.
- C. Provide, without an increase in Contract amount, such material as may be necessary to properly complete the work where required on account of interference's or to avoid the work of other trades, all in accordance with the intent of the specifications and as approved by the Engineer.
- D. Should conflict occur in Drawings or in Specifications, the higher or more expensive grade of material, apparatus, equipment or method of installing the work shall be held to take precedence, any provisions in the Contract Documents to the contrary notwithstanding. If the Engineer should elect to permit the use of the less expensive item, the Contractor shall give an adequate credit as approved by the Engineer for the calculated difference in cost.

## 1.08 GUARANTEE

- A. All equipment shall be covered by the manufacturer's guarantee against defects in materials or workmanship developing under normal use for a period of one (1) year after acceptance by the Town.
- B. All manufacturer's written guarantees and service guarantees on equipment shall be turned over to and shall become the property of the Town.

- C. The work shall be guaranteed that it is in accord with the specifications and drawings and upon written notice, the Contractor shall correct, without charge to the town, all defects developing in the work under normal use and care within a period of one (1) year after acceptance by the Town. Note particularly the Guarantee Requirements of the General Conditions.

1.09 SUBSTITUTIONS

- A. Manufacturer's names and catalog numbers are used to indicate type and quality required. Other makes may be used if approved by the Town Engineer. Alternate to be considered shall be standard equipment from a reputable manufacturer regularly engaged in production of the specified type of equipment and shall be of the same quality, capacity and type as that specified.
- B. The important dimensions shall be such that the equipment will fit into the space allotted and provide sufficient space for servicing and maintenance. If there is a question as to whether the proposed substitution will fit into the allotted space, the Contractor shall, if requested, submit for approval, a sketch showing the proposed arrangement of the equipment. The substitution shall be provided at no increase in the Contract amount and without any additional cost to other trades involved in the installation.

1.10 CLEANING

- A. The Contractor shall at all times keep the premises free from surplus material and rubbish and he shall not have undue surplus material for which there is no immediate use which may delay and hinder other contractors employed on the work.
- B. At the completion of the work, the Contractor shall remove equipment and shall remove all rubbish, waste, and surplus materials. He shall leave the premises broom clean.
- C. Equipment during the course of the work shall be tightly covered and protected against dirt, water, and chemical or mechanical injury and theft. At the completion of the work, fixtures, equipment and materials shall be cleaned and polished thoroughly and turned over to the Town. Damage or defects developing before acceptance of the work shall be made good without cost to the Town.

1.11 MEASUREMENT AND PAYMENT

- A. All work in this section shall be included for payment under the lump sum bid for this Contract.

**PART 2 PRODUCTS**

2.01 TESTING

- A. Upon completion of installation, all pipelines shall be tested by the Contractor in the presence of the Engineer or the Building Inspector, and in accordance with the requirements of local or applicable plumbing or building codes. Portions of piping, which will be concealed before completion, shall be tested separately in the same manner as described below for the entire pipeline.
- B. All materials, equipment, tools and labor for testing shall be furnished by the Contractor.
- C. Piping, which carries water or air under pressure, shall be filled with water and be subjected to a pressure of 150 psi or 1-1/2 times the normal working pressure, whichever is greater, for the period of two hours or longer as may be necessary to examine the piping for leaks.
- D. Should leaks be found, faulty joints shall be repaired, even to the extent of disassembling and remaking the joint. Caulking of threads or the use of chemical compounds to correct leaks will not be permitted. Defective pipe or fittings shall be replaced by the Contractor, and the tests shall be repeated until the test requirements are met to the satisfaction of the Engineer.

2.02 MATERIALS

- A. Piping Materials and Construction
  - 1. Piping, tubing and fittings shall conform to the design, type and materials as indicated. Each length of pipe shall be marked to show the name or brand of manufacturer and STM number. Fittings shall be marked in accordance with trade practice to indicate size and material.
- B. Water/Compressed Air Piping
  - 1. In Building: Type L copper water tubing, wrought copper solder joint fittings containing not less than 85% copper.
- C. Drain Piping
  - 1. Above Ground: Polyvinyl chloride (PVC) plastic pipe (Type DWV) conforming to ASTM D2665.

D. Soldered Joints

1. All joint surfaces shall be cleaned. An approved flux shall be applied. The joint shall be soldered with a solder conforming to ASTM B32. The solder and flux shall be lead free.

E. Solvent Cemented Joints

1. Joint surfaces shall be clean and free of moisture. A purple primer conforming to ASTM F656 shall be applied. Solvent cement not purple in color and conforming to ASTM D2564 shall be applied to all joint surfaces. The joint shall be made while the cement is wet, and in accordance with ASTM D2855. Solvent cement shall be handled in accordance with ASTM F402.

F. Ball Valves

1. Threaded End: Bronze body and ball, teflon seat and seals, lever handle, 1250 psi SWP. Nibco T-590Y; Jenkins 32A; Hammond BV-711-T.

**PART 3 EXECUTION**

3.01 SUPERVISION

- A. The permits shall be taken out by a Connecticut licensed P-1 Plumber. This P-1 shall personally supervise the work from beginning to completion and final acceptance without notice from anyone. The P-1 shall, as far as possible, attend all job meetings when the Engineer is present. They shall keep the same foremen on the job from beginning to final completion as long as the foremen remain in their employment. The P-1 shall be held personally responsible for seeing that all plumbing work is in compliance with the Connecticut Basic Building Code.

3.02 GENERAL REQUIREMENTS

- A. Provide all hangers, supports, anchors, pipe stands, extra bolts, inserts, rackets, supplemental structural steel and accessories required for proper support, mounting or suspension of the piping, ductwork and equipment. Piping and ductwork shall be adequately supported or suspended so that they will not sag or vibrate and create noise. Provide for expansion, contraction, slope and anchorage of the piping as shown and as required.
- B. Hangers should preferably be located at concentrated loads such as valves and near change of directions. Risers shall be supported independently of the horizontal runs.

- C. Supports on vertical piping less than one (1) inch diameter shall be not more than 6 feet apart and piping one inch in diameter or more shall be not more than 10 feet apart. Vertical riser and stacks two inch and over shall be supported at each floor level with riser clamps.
- D. After satisfactory tests on compressed air lines, all valves on fixtures shall be operated until water is eliminated and pipes are dry and clear of debris.
- E. All piping shall be installed in a neat, workmanlike manner. Piping shall be installed to accurate lines and grades, and shall be supported by hangers of the type and spacing hereinafter specified. Suitable provision shall be made for expansion where necessary.
- F. All piping shall pitch toward low points, and provision shall be made for draining these low points. Sanitary piping shall be pitched  $\frac{1}{4}$ " per foot wherever possible, but under no circumstances less than  $\frac{1}{8}$ " per foot.
- G. Locate piping so as to avoid contact with electrical cables, conduit, or equipment. Do not run piping over electrical equipment.
- H. All connections to risers or fixtures shall be from the top of mains and all piping shall be pitched so that it can be drained at low points. Drain valves shall be installed at low points. Piping shall be pitched up toward risers and fixtures for proper air relief.
- I. Valves shall not be installed with the valve stem below the horizontal.
- J. Dielectric insulating connections such as couplings, fittings, or unions shall be installed where pipes or dissimilar metals are joined.

END OF SECTION

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**SECTION 16400**  
**ELECTRICAL**

**PART 1 - GENERAL**

1.01 WORK INCLUDED

- A. Provide complete electrical installation where shown on the Drawings, as specified herein, and as needed for a complete and proper installation including, but not necessarily limited to:
  - 1. Branch circuit wiring, in conduit, for lighting, receptacles, and junction boxes.
  - 2. Hangers, anchors, sleeves, chases, supports for fixtures, and other electrical materials and equipment in association therewith.
  - 3. Other items and services required to complete the systems.

1.02 RELATED SECTIONS

- A. Section 15400 – Chemical Storage Building

1.03 REFERENCES

- A. National Electrical Code/2011 (NEC)
- B. 2013 Connecticut Building Code Supplement – effective March 2014

**PART 2 - PRODUCTS**

2.01 GENERAL

- A. Provide only materials that are new, of the type and quality specified. Where Underwriters' Laboratories, Inc. have established standards for such materials, provide only materials bearing the UL label.
- B. Raceways:
  - 1. Provide rigid galvanized or sherardized steel conduit, or electrical metallic tubing, with compression or tap-on type fittings, for all conduit concealed in the walls, above the ceilings, or exposed in work areas.
    - a. Indenter fittings are not acceptable.

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2. Where electrical metallic tubing is used, comply with pertinent requirements of the National Electrical Code.
3. PVC conduit may not be used.
4. Outlets, junction boxes, and switch boxes:
  - a. Provide standard one-piece units, galvanized or sherardized, of shape and size best suited to that particular location, of sufficient size to contain enclosed wires and connectors without crowding, per code.
  - b. Provide deep boxes with 1" and larger conduit.

C. Conductors:

1. For line voltages, provide 600 V insulated copper wire and cable, NEC standard, of types specified below for different applications, with UL label, and color coded as required by the authorities having jurisdiction.
2. With conductors No. 4 and larger, provide insulating bushings or insulating sleeves.
3. For wire and cable No. 1 and larger, provide RHW or THW.
  - a. Wires smaller than No. 1 may be TW.
  - b. Identify feeder neutrals with white tape or white paint.
4. For wire No. 8 and smaller, provide solid wire; for wire larger than No. 8, provide stranded wire.
5. Use only copper wires and cables.

2.02 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

**PART 3 - EXECUTION**

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### 3.01 INSTALLATION OF RACEWAYS AND FITTINGS

- A. Where conduit is installed concealed in walls or above the ceiling, or exposed in work areas, provide rigid galvanized conduit or electrical metallic tubing with compression-type fittings.
  - 1. Paint or wrap elbows.
  - 2. Seal joints to prevent entrance of water.
  - 3. Provide ground wire of proper size.
  - 4. Use nylon (rather than steel) fish tape.
- B. Use flexible conduit only where subject to vibration.
- C. Provide necessary sleeves and chases where conduits pass through floors and walls, and provide other necessary openings and spaces, arranging to prevent unnecessary cutting in connection with the Work. Perform cutting and patching in accordance with the provisions for the original Work.
- D. Where conduit is exposed, run parallel to or at right angle with lines of the building.
  - 1. Make bends with standard conduit elbows or conduit bent to not less than the same radius.
  - 2. Make bends free from dents and flattening.
- E. Securely and rigidly support conduits per NEC throughout the Work.

### 3.02 INSTALLATION OF CONDUCTORS

- A. Unless otherwise shown on the Drawings, use No. 12 type THWN conductors for all branch circuits, protected by 20 amp circuit breakers. Where so indicated on the Drawings, use larger wires to limit voltage drops.
- B. The number of wires in a conduit run is indicated on the Drawings by cross lines on the conduit runs.
  - 1. Where wire size is not shown, install No. 12 conductors.
  - 2. Where conduit size is not shown, install 1/2" conduit.
  - 3. Provide code-sized conduit for number and size wires shown or required, unless a larger size conduit is shown on the Drawings.
- C. Use identified (white) neutrals and color-coded phase wires for all branch circuit wiring.
  - 1. Make splices electrically and mechanically secure with pressure-type connectors, or by soldering.

- a. For wires size 6 AWG and smaller, provide "Scotch-lock" connectors.
  - b. For wire size 4 AWG and larger, provide Burndy "Versitaps" and heavy-duty connectors, or T & b "Lock Tite" connectors.
2. Insulate splices with a minimum of two half-lapped layers of Scotch Branch No. 33 vinyl-plastic electrical tape where insulation is required.
- D. Tape all joints with rubber tape 1-1/2 times the thickness of the conductor insulation, then cover with the friction tape or the vinyl-plastic electrical tape specified above.
- E. The Drawings indicate the general direction of home runs. Continue all such home runs to the panel as though the routes were shown completely.

### 3.03 TESTING AND INSPECTION

- A. Provide personnel and equipment, make required tests, and secure required approvals from the Engineer and authorities having jurisdiction.
- B. When material and/or workmanship is found to not comply with the specified requirements, within three (3) days after receipt of notice of such non-compliance remove the non-complying items from the job site and replace them with items complying with the specified requirements, all at no additional cost to the Owner.
- C. In the Engineer's presence: Test all parts of the electrical system and prove that all such items provided under this Section function electrically in the required manner.

### 3.04 PROJECT COMPLETION

- A. Upon completion of the work of this Section, thoroughly clean all exposed portions of the electrical installation, removing all traces of soil, labels, grease, oil, and other foreign material, and using only the type cleaner recommended by the manufacturer of the item being cleaned.

END OF SECTION

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CONNECT NEW CHEMICAL BUILDING ELECTRIC POWER CABLE TO EXISTING CIRCUIT.

PLACE CHEMICAL STORAGE BUILDING ON SLAB; BACK OF BUILDING SHOULD BE 6" FROM OUTSIDE FACE OF REAR CURB

NEW CHEMICAL STORAGE BUILDING

DOORS

(ALTERNATE 1) AFTER BUILDING IS PLACED, LOCATE CHEMICAL CONTAINMENT AND RECOVERY UNIT EVEN WITH BACK OF CURB AND AS CLOSE TO BUILDING AS POSSIBLE WHILE MAINTAINING DOOR SWING CLEARANCE

(ALTERNATE 1) INSTALL NEW 1/2" DIA. COPPER COMPRESSED AIR PIPE AND BALL VALVES AT TAP AND AT PUMP CONNECTION. TAP INTO EXISTING LINE AND EXTEND UP COLUMN, ACROSS BEAM, DOWN COLUMN AND CONNECT TO CHEMICAL COMPRESSED AIR PUMP.

CANOPY SUPPORT, TYPICAL

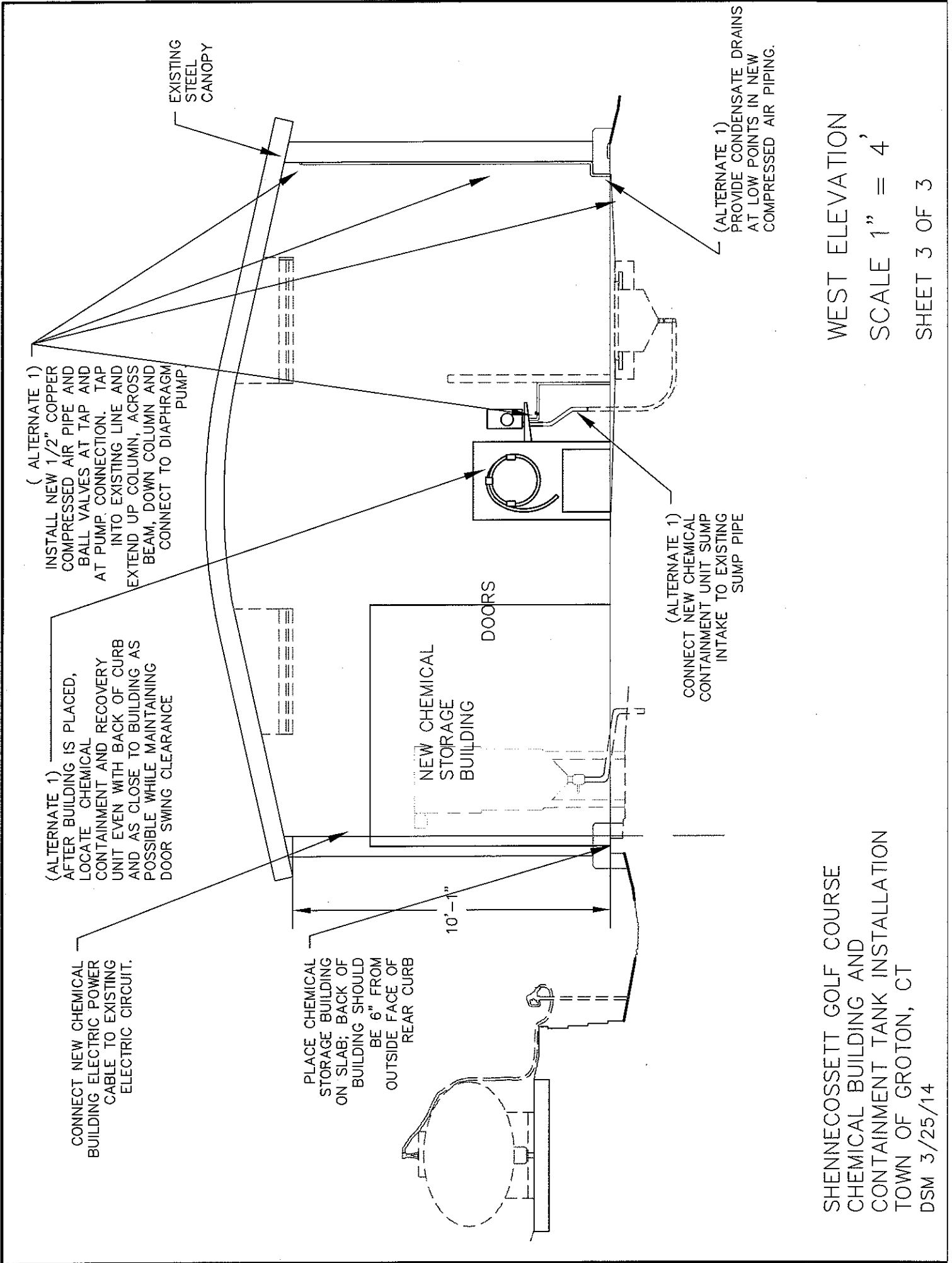
(ALTERNATE 1) CONNECT NEW CHEMICAL CONTAINMENT UNIT SUMP INTAKE TO EXISTING SUMP PIPE

(ALTERNATE 1) PROVIDE CONDENSATE DRAINS AT LOW POINTS IN NEW COMPRESSED AIR PIPING.

PLAN VIEW  
SCALE 1" = 4'

SHENNECOSSETT GOLF COURSE  
CHEMICAL BUILDING AND  
CONTAINMENT TANK INSTALLATION  
TOWN OF GROTON, CT  
DSM 3/25/14

SHEET 1 OF 3



( ALTERNATE 1 )  
 INSTALL NEW 1/2" COPPER  
 COMPRESSED AIR PIPE AND  
 BALL VALVES AT TAP AND  
 AT PUMP CONNECTION. TAP  
 INTO EXISTING LINE AND  
 EXTEND UP COLUMN, ACROSS  
 BEAM, DOWN COLUMN AND  
 CONNECT TO DIAPHRAGM  
 PUMP

(ALTERNATE 1)  
 AFTER BUILDING IS PLACED,  
 LOCATE CHEMICAL  
 CONTAINMENT AND RECOVERY  
 UNIT EVEN WITH BACK OF CURB  
 AND AS CLOSE TO BUILDING AS  
 POSSIBLE WHILE MAINTAINING  
 DOOR SWING CLEARANCE

CONNECT NEW CHEMICAL  
 BUILDING ELECTRIC POWER  
 CABLE TO EXISTING  
 ELECTRIC CIRCUIT.

PLACE CHEMICAL  
 STORAGE BUILDING  
 ON SLAB; BACK OF  
 BUILDING SHOULD  
 BE 6" FROM  
 OUTSIDE FACE OF  
 REAR CURB

10'-1"

NEW CHEMICAL  
 STORAGE  
 BUILDING

DOORS

(ALTERNATE 1)  
 CONNECT NEW CHEMICAL  
 CONTAINMENT UNIT SUMP  
 INTAKE TO EXISTING  
 SUMP PIPE

(ALTERNATE 1)  
 PROVIDE CONDENSATE DRAINS  
 AT LOW POINTS IN NEW  
 COMPRESSED AIR PIPING.

EXISTING  
 STEEL  
 CANOPY

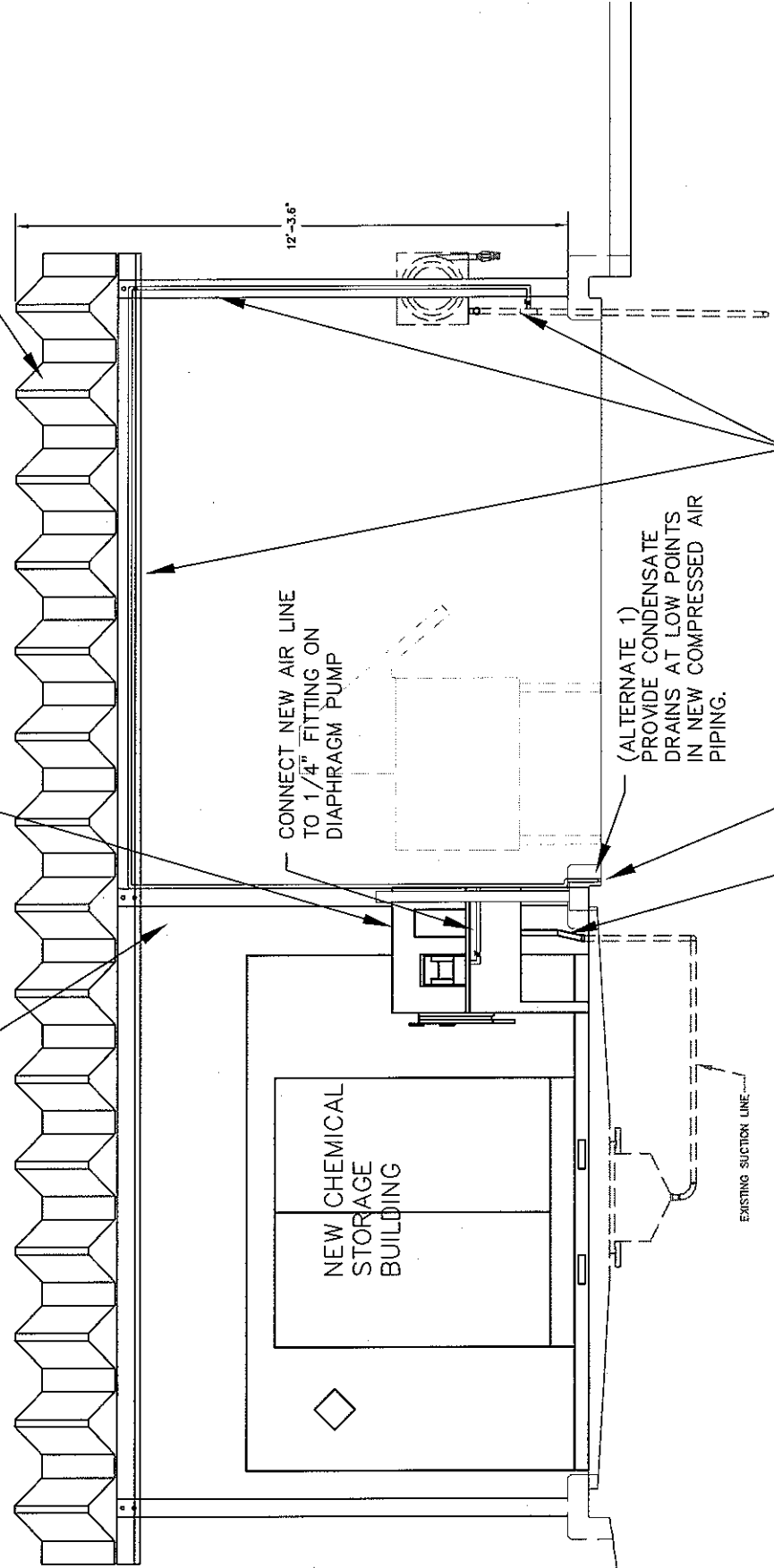
SHENNECOSSETT GOLF COURSE  
 CHEMICAL BUILDING AND  
 CONTAINMENT TANK INSTALLATION  
 TOWN OF GROTON, CT  
 DSM 3/25/14

WEST ELEVATION  
 SCALE 1" = 4'  
 SHEET 3 OF 3

CONNECT NEW CHEMICAL BUILDING ELECTRIC POWER CABLE TO EXISTING ELECTRIC CIRCUIT.

(ALTERNATE 1) AFTER BUILDING IS PLACED, LOCATE CHEMICAL CONTAINMENT AND RECOVERY UNIT EVEN WITH BACK OF CURB AND AS CLOSE TO BUILDING AS POSSIBLE WHILE MAINTAINING DOOR SWING CLEARANCE

EXISTING CANOPY



CONNECT NEW AIR LINE TO 1/4" FITTING ON DIAPHRAGM PUMP

(ALTERNATE 1) PROVIDE CONDENSATE DRAINS AT LOW POINTS IN NEW COMPRESSED AIR PIPING.

(ALTERNATE 1) INSTALL NEW 1/2" COPPER COMPRESSED AIR PIPE AND BALL VALVES AT TAP AND AT PUMP CONNECTION. TAP INTO EXISTING LINE AND EXTEND UP COLUMN, ACROSS BEAM, DOWN COLUMN AND CONNECT TO CHEMICAL COMPRESSED AIR PUMP.

(ALTERNATE 1) CONNECT NEW CHEMICAL CONTAINMENT UNIT SUMP INTAKE TO EXISTING SUMP PIPE

EXISTING SUCTION LINE

SHENNECOSSETT GOLF COURSE  
CHEMICAL BUILDING AND  
CONTAINMENT TANK INSTALLATION  
TOWN OF GROTON, CT  
DSM 3/25/14

SOUTH ELEVATION  
SCALE 1" = 4'  
SHEET 2 OF 3