

169 Main Street 700 Plaza Middlesex
Middletown, CT 06457
T: 860-343-8297 F: 860-343-9504
www.wright-pierce.com

DATE: 03/29/2018 **ADDENDUM CONSISTS OF 28 PAGES**
(Including this Cover Sheet)

PROJECT NAME: Torrington WPCF Comprehensive Upgrade Project

SUBJECT: Addendum No. 2 for BID # WPU-041-040318

FROM: Wright-Pierce

PROJECT NO.: 13164H

REQUIRED

Confirmation of receipt of this addendum is required.
Please sign below and e-MAIL to: brenda.strohm@wright-pierce.com
Thank You.

NAME: _____ **TITLE:** _____
(Please print)

SIGNATURE: _____ **COMPANY:** _____

ADDENDUM NO. 2

TO

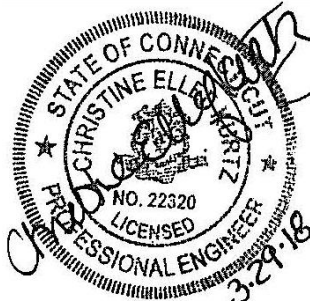
**CITY OF TORRINGTON, CONNECTICUT
WATER POLLUTION CONTROL FACILITY COMPREHENSIVE UPGRADE**

BIDDING AND CONTRACT REQUIREMENTS AND SPECIFICATIONS

FOR

BID # WPU-041-040318

March 29, 2018



PREPARED BY:

**WRIGHT-PIERCE ENGINEERS
169 Main Street, 700 Plaza Middlesex
Middletown, Connecticut 06457**

ADDENDUM NO. 2

CITY OF TORRINGTON, CONNECTICUT WATER POLLUTION CONTROL FACILITY COMPREHENSIVE UPGRADE

As a point of clarification, it should be understood that the Contract Documents govern all aspects of the project. Informal discussions held during the Pre-Bid Conference, or over the telephone are informational only. All official changes to the Contract Documents are made only by addenda. The following changes and additional information are hereby made a part of the Contract Documents:

CLARIFICATIONS

General:

1. In order to meet the contract requirements that Ballasted Flocculation Treatment System be operational and tested prior to the April 1, 2020, the Engineer would like to emphasize the importance that the General Contractor, the Ballasted Flocculation Preselected Manufacturer, and other Ancillary Equipment Manufacturers related to making the system complete and operational, coordinate all necessary contract work required at the immediate start of the project to ensure that manufacturers begin the shop drawings submittal process.

SPECIFICATIONS

1. Section 00100 – Instructions to Bidders: In Article 3, **DELETE** Item L in its entirety. **INSERT** the following after 3.01 Item K:
“L. Certification Non-Segregated Facilities’ (SC-40)
M. Labor Union Notice (SC-41)”
2. Section 00300 – Bid Form: In Article 7, **DELETE** Item ‘L’ in its entirety; Item ‘M’ becomes Item ‘L’. **INSERT** the following after 3.01 Item L:
“M. Certification Non-Segregated Facilities (SC-40)
N. Labor Union Notice (SC-41)”
3. Section 00310: In Article 5, in the description of Bid Item No. 1, **DELETE** “19” and **INSERT** “17” in lieu thereof.
4. Section 11000 - Equipment-General; Page 11000-7, paragraph 2.4.D., 8.; **INSERT** the following new paragraphs at the end of this paragraph:
“9. All motors operated on variable frequency drives shall be equipped with a maintenance free, conductive micro fiber, shaft grounding ring with a minimum of two rows of circumferential micro fibers to discharge electrical shaft currents within the motor and/or its bearings to ground.

- a. Motors between 25 HP and up to 100 HP shall be provided with a minimum of one shaft grounding ring installed either on the drive end or non-drive end.
 - b. Motors over 100 HP shall be provided with an insulated bearing on the non-drive end and a shaft grounding ring on the drive end of the motor. Grounding rings shall be provided and installed by the motor manufacturer or Contractor and shall be installed in accordance with the manufacturer's recommendations.
 - c. Motors shall be provided with grounding lug and braided, flat type bonding strap sized per NEC requirements. The motor/pump supplier shall provide a complete and installed bonding connection for this application.”
5. Section 11200 – Ballasted Flocculation Tertiary Treatment System:
- A. Paragraph-2.3.A.7: **DELETE** “0.50 rpm” and **INSERT** “0.25 rpm”
 - B. Paragraph 2.3.B.1.a: **DELETE** “10,000” and “20,000” and **INSERT** “6,000” and “10,000”.
 - C. Paragraph-2.7.A.b: **DELETE** Item b in its entirety and **INSERT** “b. Provisions in piping to accept one pressure gauge assembly per Hydrocyclone. Contractor to provide pressure gauge assemblies as indicated in Paragraph 2.15 of this Section.”
 - D. Paragraph 2.19.A.8: **DELETE** Item 8 in its entirety.
 - E. Paragraph 2.19.A.10: **DELETE** Item 10 in its entirety.
 - F. Paragraph 2.19.A.11: **DELETE** Item 11 in its entirety.
 - G. Paragraph-3.6.C: **INSERT** “Payment of the onetime O&M Performance Penalty shall satisfy the manufacturers requirements for not meeting the guaranteed usages identified in the Bid Form”
 - H. Paragraph 3.1.H: **DELETE** this paragraph in its entirety.
 - I. Paragraph 3.6.B: In Note 3 under the table, condition **DELETE** “0.01” and **INSERT** “0.1” in lieu thereof.
 - J. Paragraph 3.7.B: **INSERT** the following at the end of the paragraph: “Contractor to coordinate with manufacturer and provide necessary equipment for spiking influent TP needed for testing conditions.”
6. Section 11220: Paragraph-1.1.C.1: **DELETE** “BFM-6172” and **INSERT** “BFM-6169”.
7. Section 11232: Paragraph-1.1.B.2: **DELETE** “0.11 to 1.1 GPH” and **INSERT** “0.23 to 2.3 GPH”.
8. Section 11310: Paragraph 2.2.D.3 **DELETE** – “Number of Units: Five (RSLP-701, RSLP-702, RSLP-703, RSLP-704).” And **INSERT** “Number of Units: Four (RSLP-701, RSLP-702, RSLP-703, RSLP-704).”
9. Section 11351: Paragraph 2.17.A, **DELETE** “All materials shall be coated with the preparation and installation as specified in Sections 09900, 09905 and 11000. Surface preparation and shop coatings in accordance with Specification Section 09905.” and **INSERT**
- “A. All steel materials (except for clarifier drive mechanism) shall be hot dipped galvanized, as outlined in Specification Sections 05120 and 05500.
 - B. Surface Preparation and Shop coatings shall be in accordance with Section 09905.

C. Field coats in accordance with Section 09900.”

10. Section 11353: Paragraph 2.4.J **DELETE** – “Beams shall extend across the diameter of the tank and be supported by the concrete tank walls.” And **INSERT** “Beams shall extend across the radius of the tank and be supported by the concrete tank wall and the center column.”
11. Section 11353: Paragraph 2.4.J **DELETE** – “Provide steps on bridge to match threshold of entry door. Contractor to coordinate existing field conditions with miscellaneous metals fabricator for dimensional data.” in its entirety.
12. Section 11353: Paragraph 2.4.H **DELETE** – “FRP flights and spacers are also to be provided for the intermediate baffles to be constructed at the 1/3 and 2/3 lengths of each of the primary sedimentation basins. Refer to the Structural Drawings for construction details of the intermediate baffles. Flight lengths and spacers shall be provided as required.” in its entirety.
13. Section 11361A: Paragraph 2.4.J, **DELETE**, “15-ft” and **INSERT**, “10-ft”
14. Section 11361A: Paragraph 2.15,C, **INSERT** “stainless” between heavy duty and steel plate.
15. Section 11361A: Paragraph 2.17.B **DELETE** – “13081” And **INSERT** “ASCE/SEI-7”
16. Section 13120, 1.3 **INSERT** “Note F” after “Note E” as listed below:
 - F. Height of the Precast buildings: 10 feet (Inside Dimensions).
17. Section 13440 – Instrumentation and Process Control: **INSERT** the following paragraph immediately after 2.3.C.26:
 27. “Pressure Switch: PS, PSL, PSH, PDSH
 - a. Provide a pressure switch, per Instrumentation Schedule, with the following requirements
 - b. Pressure Switch:
 - i. Type: Single point or differential electro mechanical pressure switch with diaphragm sealed piston actuator
 - ii. Application: Liquid Primary and Secondary Sludge
 - iii. Materials:
Housing: Cast Aluminum
Diaphragm: Stainless Steel
 - iv. Switch Contacts:
SPDT
10 amps at 120 VAC
 - v. Setpoint Adjustment: Mechanical adjustment screw
 - vi. Operating Temperature: 0 to 160 oF
 - vii. Enclosure Rating: NEMA 4X
 - viii. Electrical Connections: ½" NPT
 - ix. Process Connection: ¼" NPT
 - x. Operating Range: Per Instrumentation Schedule

- c. Accessories and Spare Parts:
 - i. Process Isolator: Provide diaphragm seal to isolate the pressure switch from the process fluids. The pressure shall be transferred from the process fluid to a reservoir filled with silicon oil by a stainless steel diaphragm.
 - (1) Diaphragm assembly shall be cleanout type, which will allow cleaning of the lower diaphragm assembly without breaking the seal or refilling.
 - (2) The diaphragm shall be 316 stainless steel with a 316 stainless steel housing (process and instrument flanges) and shall be fitted with a bleed screw on the instrument flange, and flushing connection on the process flange. Connecting bolts and nuts shall be 316 SS.
 - (3) The diaphragm shall be rated for pressure element operating pressure range. Provide a locking plate or lock-wire to prevent turning of the assembly and to maintain the factory calibration.
 - (4) The pressure element and diaphragm seal shall be factory assembled. Filling the oil reservoir in the field will not be acceptable.
 - ii. Mounting: Direct mounted with ½" NPT connection including ½" snubber valve, block valve, tee connection with a bleed valve, and 3" indicator. The tee and bleed valve shall be located on the isolated side of the block valve so that transmitter can be isolated from the process water and a reference pressure can be applied to the bleed valve for instrument calibration.
- d. Pressure switches mounted in Class I, Div. 1/2 shall be explosion proof and carry the required Factory Mutual approval. Refer to Instrumentation Schedule for hazardous area requirements.
 - i. Equivalent to:
 - ii. Pressure Switch Equivalent to:
 - iii. United Electric Control Series 100
 - iv. Ashcroft B Series
 - v. Dwyer
 - vi. Or Equal"

18. Section 13440 – Instrumentation and Process Control: INSERT the following items to the end of the Instrumentation Schedule:

PSL-6071	--	Tertiary Sludge Recirculation Pump No.1 Low Pressure Switch and Isolator		-30 to 15	in-Hg psi	NEMA 4X	--	I-16	13440 2.1.C.27
PSH-6071	--	Tertiary Sludge Recirculation Pump No.1 High Pressure Switch and Isolator	Building No.06	0-60	psi	NEMA 4X	--	I-16	13440 2.1.C.27
PSL-6072	--	Tertiary Sludge Recirculation Pump No.2 Low Pressure Switch and Isolator	Building No.06	-30 to 15	in-Hg psi	NEMA 4X	--	I-16	13440 2.1.C.27
PSH-6072	--	Tertiary Sludge Recirculation Pump No.2 High Pressure Switch and Isolator	Building No.06	0-60	psi	NEMA 4X	--	I-16	13440 2.1.C.27

19. Section 13444 – Control Panels: **INSERT** the following paragraphs immediately after 1.1.A.40
1. “LCP-6071: Coagulation Tank No.1 TSS Analyzer LCP (NEMA 4X)
 2. LCP-6072: Coagulation Tank No.2 TSS Analyzer LCP (NEMA 4X)
 3. LCP-6178: Settling Tank Scraper No.1 Turbidity & pH LCP (NEMA 4X)
 4. LCP-6179: Settling Tank Scraper No.2 Turbidity & pH LCP (NEMA 4X)”
20. Section 15606-Insulated Secondary Containment Fuel Storage Tank and Equipment: In paragraph 2.2.A, **INSERT** the following after Item 16:
- “17. Fuel storage tank shall have integral stairs / ladder and railing for access to top of tank. Access stair/rail to be constructed of same materials as tank.”
21. Specification 15480: In Paragraph 1.1.A **INSERT** the following equipment at the end of the sentence:
1. AC-1: Located in the new maintenance garage near WHM1 (Contract Drawing P-12)
 2. AC-2: Located in the Tertiary Pump Room near the Phosphate Sample Pump (Contract Drawing PR-44).
22. Specification 15480: In Paragraph 2.1.C **INSERT** the following as Note 2:
2. Extent of Piping provided by Contractor are as follows.
 - a. Maintenance Garage: 100 feet with needed (5) 90-degree fittings, (2) ball valves and (2) quick disconnects
 - b. Tertiary Building: 400 feet with needed (10) 90-degree fittings, (8) ball valves and (8) quick disconnects
23. Section 16010 - Electrical-General; Page 16010-3, paragraph 1.1, G., 2., K., **DELETE** this paragraph in its entirety and **ADD** the following new paragraphs:
- “K. The contractor is responsible to furnish and supply all temporary power requirements and equipment necessary for construction site power requirements throughout the project. All installations and requirements are the responsibility of the contractor during the entire construction of the project. All equipment and installations shall be protected, safe and identified throughout the entire construction area of the project site.”
24. Section 16010 - Electrical-General; Page 16010-7, paragraph 1.1, N., **REVISE** the reference to Drawing E-1 to read “Drawing E-3”. The reference in the specifications in all Division 16 and other Division specification standards denotes Drawing E-1. Due to the overall size of the contract drawing set the NEMA classification for Electrical Equipment and Enclosures has been referenced and shown on Drawing E-3. Therefore, this reference is to be changed throughout the contract documents both specifications and drawings, for this project.
25. Section 16010 - Electrical-General; Page 16010-17, paragraph 1.13 A. 1., **REVISE** the wording as follows: **REVISE** “Temporary Overhead Primary Electrical Service” to read “Temporary Underground Primary Electrical Service”. **ADD** the following to the end of this same paragraph: “This underground temporary primary electrical service shall be routed and protected such that it does not interfere with any construction of the project and that it is safe and identified during the entire construction of the project”.

26. Section 16010 - Electrical-General; Page 16010-18, paragraph 1. 13, E., **ADD** the following new paragraphs at the end of this paragraph:

“F. There shall be utility and service company related work which will include cost associated by each of the respective utility and/or service companies. These costs have yet to be determined and therefor a utility/services allowance has been established as part of the Bid Form to be carried for these services. Refer to this requirement as noted.”

27. Section 16010 - Electrical-General; Page 16010-18, paragraphs 1.14, C., 1. through 4. **ADD** the following new paragraphs:

“C. Temporary Construction Power

1. The contractor is responsible for temporary power and equipment for construction site power as previously noted. This temporary power service is for the contractor to extend temporary power for use during the construction of the project.
2. The temporary power for construction use shall be a completely separate requirement from the process temporary power requirements necessary to maintain the existing facility operational during the sequencing of the construction of the project. The contractor is also responsible to provide all labor, material and equipment to perform this additional required work.”

28. Section 16010 - Electrical-General; Page 16010-19, paragraph 1.16, A., **ADD** the following new paragraphs after this paragraph:

“1.17 EXISTING UNDERGROUND SYSTEMS

- A. Refer to Section 16050-Basic Materials and Methods for specific requirements for the existing underground systems.”

29. Section 16050 - Basic Materials and Methods;

- a. Pages 16050-12 and 16050-13, paragraphs J., K, and L. for safety switches, fusible disconnect switches and enclosed circuit breakers, all side mounted handle operators shall be pad-lockable in both the on and off position. **ADD** this requirement to all of these paragraphs and equipment.
- b. Page 16050-14, paragraph O., 5., Metal Framing Channel; **ADD** the new paragraphs after this paragraph:
 - “6. All plastic end caps shall be the insert type that are inserted into the ends of the uni-strut and are flush around the outside. Plastic end caps that go around the outside of the uni-strut are not acceptable.
 7. All mounting hardware throughout the project installation shall be stainless steel. Uni-strut shall only be allowed as horizontal supports for mounting structures. All vertical supports shall be 4-inch “C” channel. Refer to the drawings for additional requirements.”

30. Page 16050-15, paragraph U., 1., Duct Seal; **ADD** the following new paragraph after this paragraph;

“2. All conduits installed outdoors at equipment being fed from indoor locations or outdoor heated enclosures or control panels, manholes etc. shall be sealed with duct seal local to equipment or back at the closest location to avoid moisture and condensation entry to this

equipment. Provide drip loops in connections and avoid top entry and path for water to follow and enter into the equipment.”

Page 16050-15, paragraph V., **ADD** the following new paragraphs at the end of this paragraph;

“W. Telephone Terminal Cabinets and Telephone Communication Terminal Cabinet

1. The enclosure shall meet NEMA rating listed on Drawing E-3 which shall include a fully hinged door with a L shape, key lockable handle with no mechanical side clips around the edges or front face of the enclosure. In no case shall enclosure be sized smaller than specified herein or as required by the National Electrical Code for Conduit and Conductor sizes installed. The contractor shall submit the larger of the requirements noted.
2. Provide a lamacoid nameplate at the top center of the cabinet.
3. The enclosure shall be provided with numbered terminal strips for both incoming and outgoing cables and wiring. All terminal strips shall be numbered on both sides and numbering shall not be repeated within the same enclosure. Provide tags to indicate destination of cable on either side of terminal connections.
4. Provide an internal backboard for all enclosures with grounding lug and bonding jumper for grounding system. Provide complete grounding terminal connection point for grounding connections.
5. Provide separate and identified and labeled terminal strips for power, control, and signal wiring. Also provide separation between all terminal strips. In addition, separation and separate terminal strips shall be provided for 120V and 24V control wiring. Terminals shall be properly sized for the cable and wiring gage diameter and type of cable for a complete and acceptable termination and installation.
6. All enclosures shall be UL Listed and Labeled as a complete termination assembly for the use intended and described herein.
7. Telephone Communication Terminal Cabinet: Provide a free-standing, 36” wide x 20” deep x 90” high enclosure for termination and connections of a City wide, telephone interface and communication cabinet. This is to be installed within the IT Room. There is limited space in this location. Therefore, the final sizing of this enclosure shall be coordinated with the engineer prior to final approval.
8. Telephone Terminal Cabinets: Provide wall-mounted, 30” wide x 10” deep x 36” high enclosure for termination and connections of a City wide, telephone interface at different locations shown and noted on the contract drawings.

X. Telephone/Intercommunication System Outlets

1. Provide 4" x 2" outlet box with Hubbell PJ216 telephone plate.
2. Provide outlet box with telephone RJ11 and data RJ45 for single and combination telephone / data outlet, as required. Single telephone RJ11 outlets only shall be provided as indicated on the drawings as well as single data RJ45 jacks.
3. Telephone/intercommunication system outlets shall be Hubbell, Crouse-Hinds, Seymour or equal.”

31. Page 16050-16, paragraph B., 1. through 9.; **CLARIFICATION** shall be noted that the Conduit Installation Schedule on Drawing E-3 takes priority of conduit types for NEMA Classifications and areas. The use of rigid galvanized conduit noted for use must be approved by the Engineer as the or material noted. Paragraph 5. noting transition to PVC above 8-feet is to be deleted and all conduit in this area shall be PVC coated rigid steel conduit.

32. Page 16050-25, paragraph X., **ADD** the following new paragraphs after this paragraph:

“Y. EXISTING UNDERGROUND ELECTRICAL DUCT BANK SYSTEM AND ELECTRICAL MANHOLES

1. The existing underground electrical duct bank system and electrical manholes shall remain in service until the new underground duct bank system, electrical manholes, cables, etc. are installed, tested and accepted.
2. Upon completion of the new underground electrical duct bank system and electrical manholes the existing underground duct bank and electrical manholes shall be demolished in place except as noted on the drawings. In addition, the following work shall be performed to the existing underground system:
 - a. Drain down and clean inside of all electrical manholes.
 - b. Swab all conduits in duct banks.
 - c. Clean and re-install all manhole covers.
 - d. Seal all existing manhole conduits with conduit plugs both inside each electrical manhole and at each respective building.”
3. Where existing duct banks are to be compromised due to installation of underground large piping and maintaining the existing duct bank is not possible then the contractor shall be responsible to grout and seal all duct bank conduits at both ends of the cut through and at each end of the electrical manholes and buildings in order to complete seal these sections of duct banks and avoid the possible entry of water.

Z. CONDUIT TAG NUMBERING AND REFERENCES

1. All exposed conduits shall be provided with conduit tag numbers and permanent applied tags which depict the conduit number along with a to and from schedule with the number and type of wire installed. The contractor shall keep a typed schedule which is to be turned over to the owner upon completion of the project.”

33. Section 16760 - Telephone Communications System;

c. Page 16760-1, paragraph 1.1, A., **DELETE** this paragraph in its entirety and **ADD** the following new paragraph:

“A. Provide a conduit, wiring and telephone equipment network and devices to provide the City with a City network telephone, paging and intercom communication system. The contractor shall coordinate and provide a complete system interface as shown on the drawings and shall coordinate with the City and the Engineer to finalize all requirements and layout for the system.”

34. Section 16620, on page 9, **REVISE** Step 21 to include “(3) 125 HP” blowers.

DRAWINGS

1. Drawing A-11, **ADD** to the sheet NOTE: PROVIDE SMOOTH FACED BLOCK AT ALL ITEMS MOUNTED ON THE BLOCK VENEER.
2. Drawing C-10: **INSERT** the following at the end of Note 10:

“Fuel oil supply and return piping from the storage tank to the building shall be flexible dual containment pipe with a minimum spacing of 4” between pipes. All piping and connections shall be installed in accordance with CT DEEP, and local fire department requirements. Flexible dual containment piping shall be UL listed and meet UL 971A, outline of metallic underground fuel pipe. For continuation of fuel oil supply and return piping lines see mechanical drawings.”

3. Drawing C-32: Reference the “Typical 4-FT Manhole” and INSERT “6-FT Diameter Manhole (Similar)” under the title of the Detail. INSERT “ or 6-FT as indicated on Drawings” to the note for the diameter.
4. Drawing C-35: **INSERT** table below Flag Pole Base Detail:

18” Sono Tube	5’ Below Grade
Above Ground Height	35’
Pole Weight	115 lbs.
Butt/Top Diameter	7” / 3”
Flash Collar	16”
Top of Flag Pole	6” Gold Anodized Aluminum Ball
Cleat	8.5” Nylon
Snaps	Brass Swivel
Flag Size	5X8

5. Drawing S-19: **DELETE** reference to section 13A / S-25.
6. Drawing S-25: **INSERT** Figure S-1 to include detail for Section 13 on the sheet.
7. Drawing S-46: **INSERT** the following new note to the Notes portion of the drawing:

“7. Refer to Drawing P-4 for location of sump. Sump shall be 3-feet square and 24-inches deep. With the exception of sump cover material, refer to Detail 8A on Drawing S-53 for construction details. Cover shall be 1 ½” aluminum grating.”

8. The following modifications are recommended for the UV weirs and gates.
 - **REVISE** Bottom of UV weir to change to 525.25’. Top of UV weir to remain at

527.50'

- **REVISE** Elevation of SLD-6056B from REVISE from 4.00' to 2.50'.
 - **REVISE** wall opening on S-47 from "4'-0" SQ to 4'-0"W by 2'-6"H ", Invert to remain 522.42'
9. Drawing S-71: At north side of electrical room addition shift the west-most foundation wall for the platform 2'-0" west such that the dimension from the northwest corner of the building foundation shown as 8'-4", is 6'-4" instead.
 10. Drawing S-72: At north side of electrical room addition increase the length of the exterior grating platform, including railings, 2'-0" to the west - such that the dimension shown as 7'-9", is 9'-9" instead.
 11. Drawing S-65: In Note 9, **DELETE** "See Note 9" and **INSERT** "See Note 10".
 12. Drawing S-65: For Length of Precast Concrete Electrical Building, **DELETE** "14 feet" and **INSERT** "15 feet". (This note applies to all associated details and sections associated with the precast building.)
 13. Drawing S-88: At west side of GROUND FLOOR PLAN, increase the length of the exterior grating platform, including railings, 2'-0" to the south, and change the spacing between the support brackets shown as 7'-6", to 8'-6" instead.
 14. Drawing S-88: For Length of Precast Building, **DELETE** "32 feet" and **INSERT** "34 feet". (This note applies to all associated details and sections associated with the precast building.)
 15. Drawing PR-3: in Note 2, **DELETE** "Contractor to provide blind flange connections for both 6-inch and 8-inch pipe stubs" and **INSERT** "Contractor to provide blind flange connections to the 8-inch pipe stub"
 16. Drawing PR-15: In Effluent Water and Foam Spray Schematic: Change all valves on Effluent Water (EW) piping to be gate valves within the Tertiary Pump Room. Except for valve directly downstream of FE-6210, identified as CV-6210 which shall be a butterfly valve and the 12" plug valve upstream of the Dual Basket Strainer which shall remain a plug valve.
 17. Drawing PR-22 and PR-24: **INSERT** a 4" Plug Valve and a 4" Check Valve on the discharge of the scum pump.
 18. Drawing PR-22: In Section, **REVISE** Hi-Hi Alarm El. to be 515.50.
 19. Drawing PR-22: In Section, **REVISE** Hi-Hi Alarm El. to be 515.50.

20. Drawing PR-22: Tank 2, Bay 2, REVISE 16-inch rotating pipe to 12-inch rotating pipe.
21. Drawing PR-42: In Section 1, **INSERT** “Pump On El. 506.0” below the “Hi El 506.84”. **INSERT** the following note to Section 1: “Note: Pump operational levels similar for SCP-741.”
22. Drawing PR-43: In Section 2, **INSERT** “Pump On El. 506.0” below the “Hi El 506.84”.
23. Drawing PR-44: Move discharge point of ½” COAG from Influent Channel to above BFM-6169 in Rapid Mix Tank.
24. Drawing PR44: Change all valves on Effluent Water (EW) piping to be gate valves within the Tertiary Pump Room. Except for valve directly downstream of FE-6210, identified as CV-6210 which shall be a butterfly valve and the 12” plug valve upstream of the Dual Basket Strainer which shall remain a plug valve.
25. Drawing PR-46: At Rapid Mix Tank **DELETE** “BFM-6172” and **INSERT** “BFM-6169”.
26. Drawing PR-47: In Section 1 and Section 2: Change all valves on Effluent Water (EW) piping to be gate valves within the Tertiary Pump Room. Except for valve directly downstream of FE-6210, identified as CV-6210 which shall be a butterfly valve and the 12” plug valve upstream of the Dual Basket Strainer which shall remain a plug valve.
27. Drawing PR-48: In Section 5: Change all valves on Effluent Water (EW) piping to be gate valves within the Tertiary Pump Room. Except for valve directly downstream of FE-6210, identified as CV-6210 which shall be a butterfly valve and the 12” plug valve upstream of the Dual Basket Strainer which shall remain a plug valve.
28. Drawing PR-49: In Section 6: Change all valves on Effluent Water (EW) piping to be gate valves within the Tertiary Pump Room. Except for valve directly downstream of FE-6210, identified as CV-6210 which shall be a butterfly valve and the 12” plug valve upstream of the Dual Basket Strainer which shall remain a plug valve.
29. Drawing I-16 - **REVISE** loop 6071 and 6072 PSL and PSH to no longer indicate manufacturer supplied. **REVISE** loop 6170, 6171, 6178, and 6179 to no longer indicate the LCP’s as Div.11 supplied.
30. Drawing I-15: **REVISE** loop 69 to show the two-ventilation proof of flow switches to pass through an Automatic Temperature Control Unit. Add a third “Emergency Fan Swap Over” discrete input contact from the ATC to CP-6A.
31. Drawing I-24: **REVISE** loop 1119 to show an additional “Emergency Exhaust” discrete input contact from the Automatic Temperature Control Unit to CP11A.
32. Drawing E-1, **ADD** the following new not to the General Notes:

- “32. For all indoor and outdoor electrical equipment, process equipment, instrumentation equipment, control valves, and all related equipment, the contractor shall use conduit installation means and methods necessary to mitigate moisture and condensation per NEC and installation methods listed in the specifications. Mitigation methods include drip loops, avoiding top entry of conduits to equipment, use of breathers, drains and to seal all conduits with duct seal as required.”
33. Drawing E-3, NEMA CLASSIFICATIONS FOR ELECTRICAL EQUIPMENT AND ENCLOSURES;
- A. **ADD** the following:
“(See Note 6) to the following location classifications:
1) Septage Receiving Station
2) Fog Pump Room”
- B. **Notes, ADD** the following to the end of Note 6;
“All devices that are sealed devices and non-arcing such as control stations shall also be rated NEMA 4X stainless steel in this rated space.”
34. Drawing E-4, Existing Electrical Site Plan - Demolition, **DELETE** in their entirety duct banks and electrical manholes as follows rather than demolishing in place:
- a. South side of the Aeration Tank 1, 2 and Chlorine Contact Tank No. 2 and between Final Settling Tanks No. 1, No. 2 and No. 3.
- b. All duct banks West of Chlorine Contact Tank No. 2 and to Chlorine Contact Tank No. 1 and to the outfall manhole include the electrical manhole.
- c. The reason for removal is that this area will contain a high traffic demolition which makes it necessary for removal.”
35. Drawing E-135, **ADD** and **REVISE** the following clouded items shown on attached Figure E1:
- A. **ADD** grounding of both stairwells and platform at this location.
- B. **REVISE** location and mounting of Camlock Connection Box CCB-2.
36. Drawing E-91, **ADD** and **REVISE** the following clouded items shown on attached Figure E2:
- A. **ADD** grounding of stairwell and platform at this location.
- B. **REVISE** location and mounting of Camlock Connection Box CCB-1.
37. Drawing E-91, **ADD** the following clouded items shown on attached Figure E3:
- A. **ADD** grounding of stairwell and platform at this location.
38. Drawing E-104 **ADD** the following clouded items shown on attached Figure E4:
- A. **ADD** grounding of stairwell and platform at this location.
39. Drawing E-115, **ADD** the following clouded items shown on attached Figure E5:
- A. **ADD** grounding of stairwell and platform at this location.
40. Drawing E-89, **CLARIFY** the following clouded items shown on attached Figure E6:

- A. **CLARIFY** conduit run to show P282 as this was overwritten on the existing drawing.
41. Drawing E-167, **ADD** the following clouded items shown on attached Figure E7:
A. **ADD** conduit and wiring shown to the respective dewatering Control Panels CP-1B and CP-1C.
42. Drawing E-191, **ADD** seal water solenoid valve and CRX interlock similar to the return sludge pumps shown on drawing E-192 for the effluent water pumps.
43. Drawing E-113, **ADD** seal water Solenoid Valves SV-6201, SV-6202, and SV-6203 next to the respective effluent water pump.
44. Drawing E-190, **ADD** auxiliary contact CR5 for high high torque alarm to PLC input.

QUESTIONS AND ANSWERS

Methuen Construction Co. RFI-02 dated 3/23/18 via Email

1. Bid form in the Unit Price Schedule under Item No. 1 on page 3, it references 19 bid items, but I only see 17.

Response: There are a total of 17 bid items, Refer to SPECIFICATIONS subsection above for revisions on this change.

2. Pump Schedule on drawing P-1 includes SP-T1 that is to be installed in the Coagulant room of the Tertiary Building. Drawings P-4, P-5, and P-6 do not show the location of SP-T1 or plumbing associated with it. A review of the process and mechanical drawings also do not appear to show the pump location. Please clarify.

Response: SP-T1 is shown on P-4 in the Coagulant Room, next to the ES/EWU.

3. Drawing PR-3 Note 2 directs Contractor to install 6" & 8" blind flanges on pipe stubs as shown on PR-18 (including EW connections). PR-18 shows an 8" connection to the future Septage Receiving Station, however no 6" "future" connection is shown. PR-18 shows the new 4" septage receiving piping running past the future rock trap and transitioning to 6" before it goes through the slab. PR-3 shows a tee off the new 4" septage receiving piping to the future rock trap. Is it the intent to have a tee on this 4" line for the future rock trap with a blind flange? If not, please clarify the location of the 6" blind flange.

Response: Eliminate work associated with installation of a 4-inch blind flange.

4. Specification 15480 describes the requirements for a compressed air system. A review of the plans resulted in compressed air (CA) being used only in the Operations Building serving SP-161 and SP-162 as shown on drawing PR-10. Please provide the following clarifications:
- a. Spec 15480 in paragraph 2.1.F. requires desiccant dryers for AC-1 and AC-2 only. The

only air compressors that could be found on the plans were AC-161 and AC-162. Are there other air compressors included in the scope of work? If not, are the desiccant dryers required for AC-161 and AC-162?

Response: *Four compressed air systems are required for the project as listed below:*

- *AC-1: Shall be located in the new maintenance garage near WHM1 (Contract Drawing P-12)*
- *AC-2: Shall be located in the Tertiary Pump Room near the Phosphate Sample Pump (Contract Drawing PR-44).*
- *AC-161 & 162: Shall be located in the Dewatering Room for New Screw Press Equipment.*

AC-161 and 162 are specified in specification 11365C. AC-1 and 2 are specified in specification section 15480. Desiccant dryers are not required for the screw press compressors.

- b. The process flow diagram for the CA system on PR-10 shows valves, solenoids, pressure switches, fittings, etc. However, spec 15480 requires regulators, pressure indicators, strainers, dryers, and coalescing filters not shown on the flow diagram. Are these items to be furnished for each air compressor skid, i.e. one item each for a total quantity of two?

Response: *PR-10 Drawings refer to the air compressors specified in specification 11365C.*

5. Specification 15600 refers to specification 13081 in paragraph 1.3 for Seismic Control. Specification 13081 was not included in the bid package. Please provide.

Response: *Refer to ASCE/SEI-7 for Seismic Requirements*

6. Drawing S-19 has two sections labeled 13 and 13A with a leader to drawing S-25. The details associated with these sections are not shown on S-25 or the other Aeration Tank #1 structural drawings. Please provide these details.

Response: *Delete Section 13A from S-19. See Figure S-1 for Section 13.*

7. Please provide a window specification.

Response: *Windows are specified in Section 08130 – Aluminum Entranced and Storefront and the glazing in Section 08800 – Glazing.*

Morganti Group, RFI-01 dated 3/26/18 and Clarified 3/27/18 via Email

8. Instruction to bidder (Page 14-Vol-1 spec) & Bid form (Page 14-Vol-1 spec) have same bid requirement.
BUT, in Pre-bid Conference Agenda- Item 8 / k & l (Page 3) are New and not found in specs.

Response: The forms SC-40 and SC-41 listed in the Pre-Bid meeting agenda as Items ‘k’ and ‘l’ are included in the Contract Documents. Note that SC-40 is titled “Certification of Non-Segregated Facilities”. These will be included in the listed items required in Article 3 of Instructions to Bidders and Article 7 of the Bid Form.

9. Also Specs bid requirement Item L- “Signed Certificate of Contractor’s Insurance Company Forms (Section 00413)”. However, section 00413 does not exist in specs.

Response: This specification will be removed from the Table of Contents.

AMWELL/Aqua Solutions RFI-01 dated 3/26/18 and 3/27/18 via Email

Section 11351 – Circular Clarifier Sludge Collection Equipment

10. Paragraph 2.3 F.2. - The limit switches should be rated for this explosion proof environment. Currently they are NEMA 4X.

Response: Limit switched supplied shall meet the requirements of the Contract Specification 11351.

11. Paragraph 2.8 A.5 - EDI is shown to be fabricated out of 3/16” steel and the influent well in 2.9. A.5. is shown to be made out of 1/4” steel. We would recommend 3/16” for both.

Response: EDI and Influent well supplied shall meet the requirements of the Contract Specification 11351.

12. Paragraph 2.9 A.5 - The influent well is shown to be made out of 1/4” steel EDI in 2.8.A.5. is shown to be fabricated out of 3/16” steel. We would recommend 3/16” for both.

Response: EDI and Influent well supplied shall meet the requirements of the Contract Specification 11351.

13. Paragraph 2.17 - Please note: This specification requires all steel to be sandblasted and prime painted whereas the steel for the gravity thickeners in Section 11353 are to be HDG. Please correct this as required.

Response: Clarifier equipment provided as part of this specification shall be hot dip galvanized.

Section 11353 – Gravity Thickener Mechanism

14. Paragraph 2.3 I.b. - Specification calls out for TEFC motor but paragraph 2.3 I.k. describes a Class 1 Division 2 environment. We suggest using a TEXP motor for this application if this is indeed a hazardous environment.

Response: Motors supplied shall be TEFC rated.

15. Paragraph 2.4 A. – Last sentence should be changes to read: “Beams shall extend across the radius of the tank and be supported by the concrete tank wall and the center column.”

Response: Beams for the walkway shall extend across the radius and not the diameter of the tank.

16. Paragraph 2.4 J – “Provide steps on bridge...” does not seem to apply to this contract.

Response: This requirement has been removed from the Specification.

17. Paragraph 2.6 A – Change “FRP” to “aluminum” to match the rest of the weirs on the clarifiers as noted in addendum #1

Response: As indicated on Addendum 1, the shall be constructed of aluminum per the Contract Drawings.

Section 11361A – Rectangular Type Sludge Collection Equipment

18. Paragraph 2.1 G. – This contradicts 2.8 F which says 15 feet. 10 feet is the most common spacing which is what we would recommend.

Response: Flights spacing shall be 10 feet maximum.

19. Paragraph 2.8 H. - This paragraph seems to suggest that intermediate baffles are to be provided per the structural drawings but there are no structural drawings that we can locate that show any details of these baffles. Please advise what structural (or other) drawings that these baffles are located on or clarify what is wanted, if indeed these intermediate baffles are required at all.

Response: No new intermediate baffles are needed as part of the project.

20. Paragraph 2.15 C - We would suggest the word “stainless” be inserted after heavy-duty so these baseplates are the same material as specified for the main sludge collectors (see 2.14.D.)

Response: Refer to subsection above for revision on this.

21. Paragraph 2.15 F. - We would suggest the use of a “Snap Idle” chain tensioner for this application in lieu of this Bradford style which is not used or specified as much these days.) <https://www.snapidle.com/products/chain-tensioners.html>)

Response: As indicated in Addendum 1, “Please note that as defined in Section 00100 – Instructions to Bidders, Article 11, Paragraph 11.01, the Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items. Where the Contract allows for substitute or “or-equal” items of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.–As stated in Paragraph 11.03, If an award is made, Contractor shall be allowed to submit proposed substitutes and “or-equals” in accordance with the General Conditions.”

22. Paragraph 2.17 L - Paragraph 2.16 E says use 316 SS whereas this paragraph says use 304 SS. Please clarify which stainless steel alloy is required.

Response: Section 2.16 E is related to cross collector screws and shall be provided with 316SS as indicated. Section 2.17 is related to skimming devices and shall be provided with 304SS as indicated.

23. Paragraph 2.17 B. – This sentence indicates that all existing pipe skimmer diameters are 12” but drawing PR-22 labels some of them 12” dia., some 16” dia. and some not at all. Please clarify what is the correct diameter of these scum pipes.

Response: The scum pipe is 12” in diameter.

WESCOR ASSOCIATES RFI-02 dated March 27, 2018 via Email

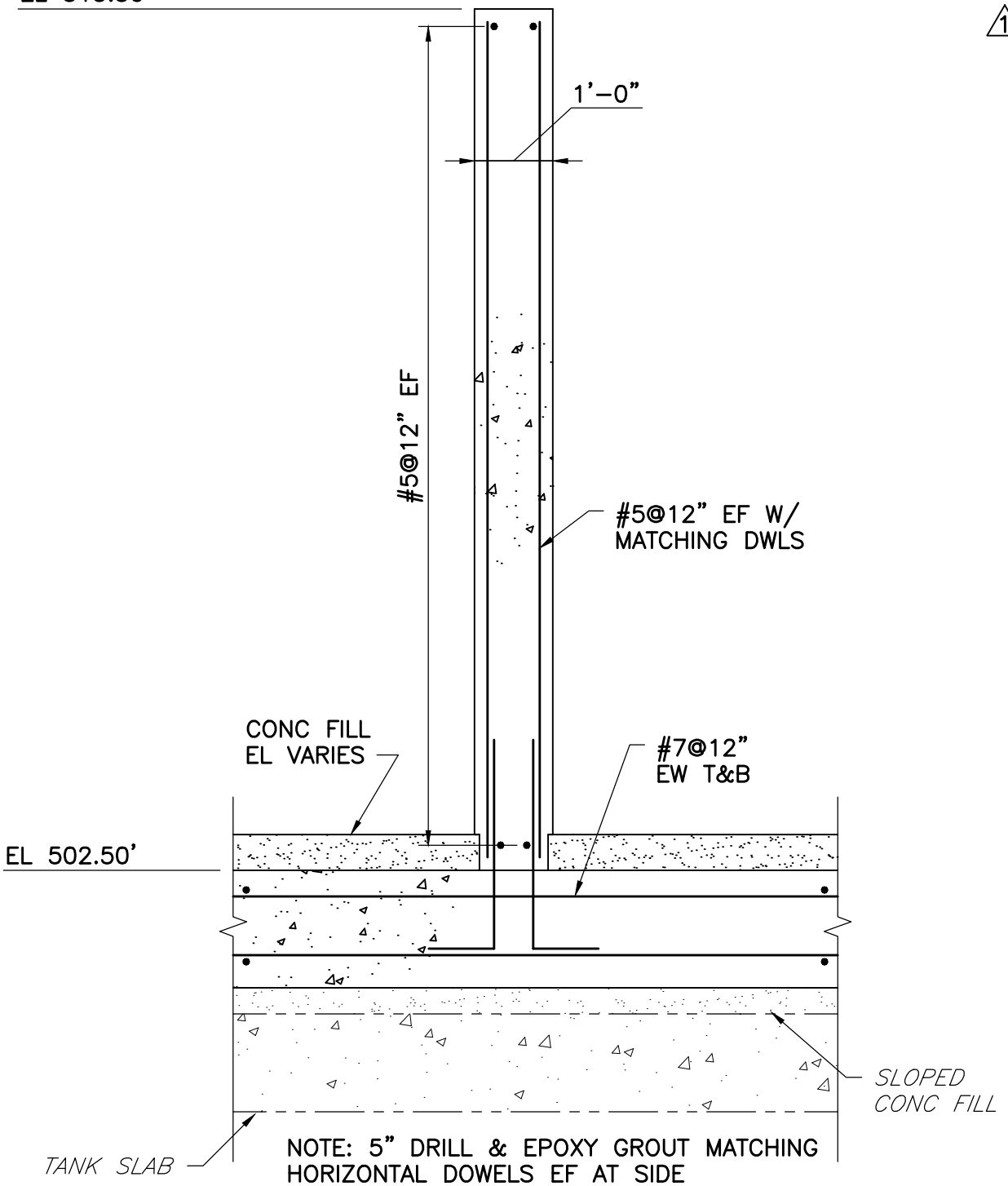
24. Section 11310- Pump schedule calls for (5) pumps, drawings show (4). Please clarify.

Response: Four Return Sludge Pumps are required as part of the project.

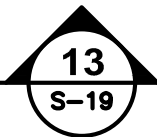
Attachments to follow: Figures S1 & E1-E7

Attachments
Figures S1 & E1-E7

EL 513.50'

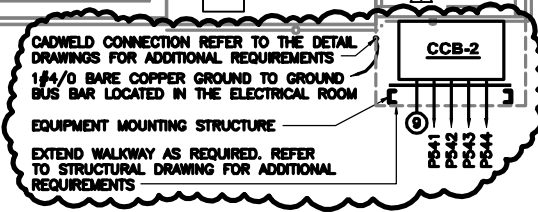
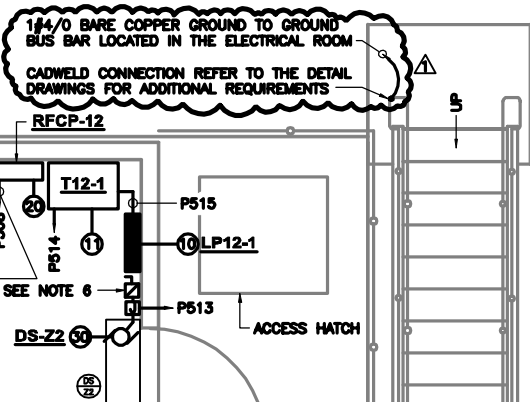
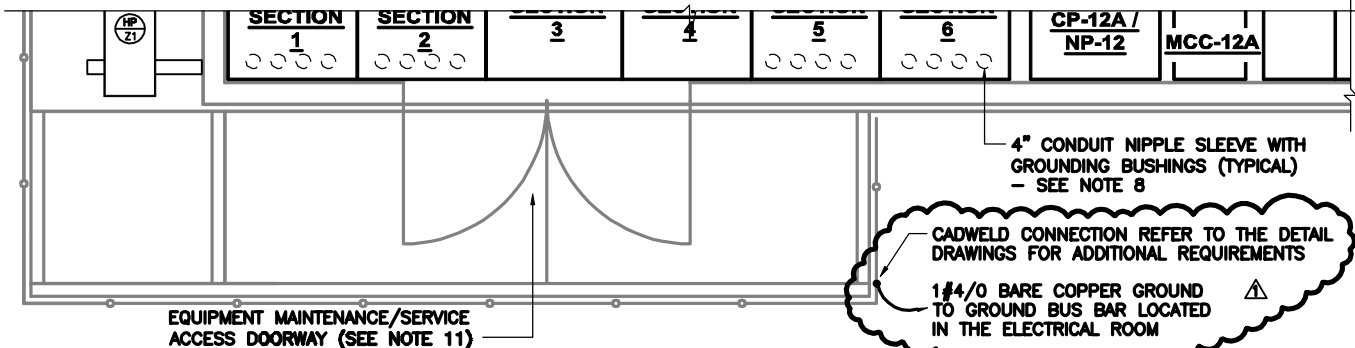
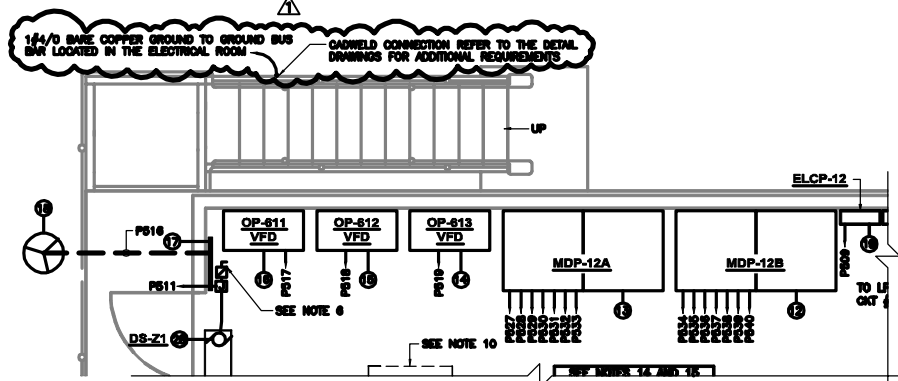


SECTION



SCALE: 1/2"=1'-0"

CITY OF TORRINGTON, CT WATER POLLUTION CONTROL FACILITY COMPREHENSIVE UPGRADE	NO.	REVISIONS	DRAWN BY	APP'D
	1	ADDED SECTION 13 TO DWG S-25	RAO	MWC
	2			
PROJ NO: 13164 DATE: MARCH 2018	3			
WRIGHT-PIERCE Engineering a Better Environment	RFI #2 REFERENCE: DWG S-25			FIGURE: S1



**SECONDARY ELECTRICAL BUILDING
(BUILDING NO. 12)
POWER PLAN
NTS**

**CITY OF TORRINGTON, CONNECTICUT
WATER POLLUTION CONTROL FACILITY
COMPREHENSIVE UPGRADE**

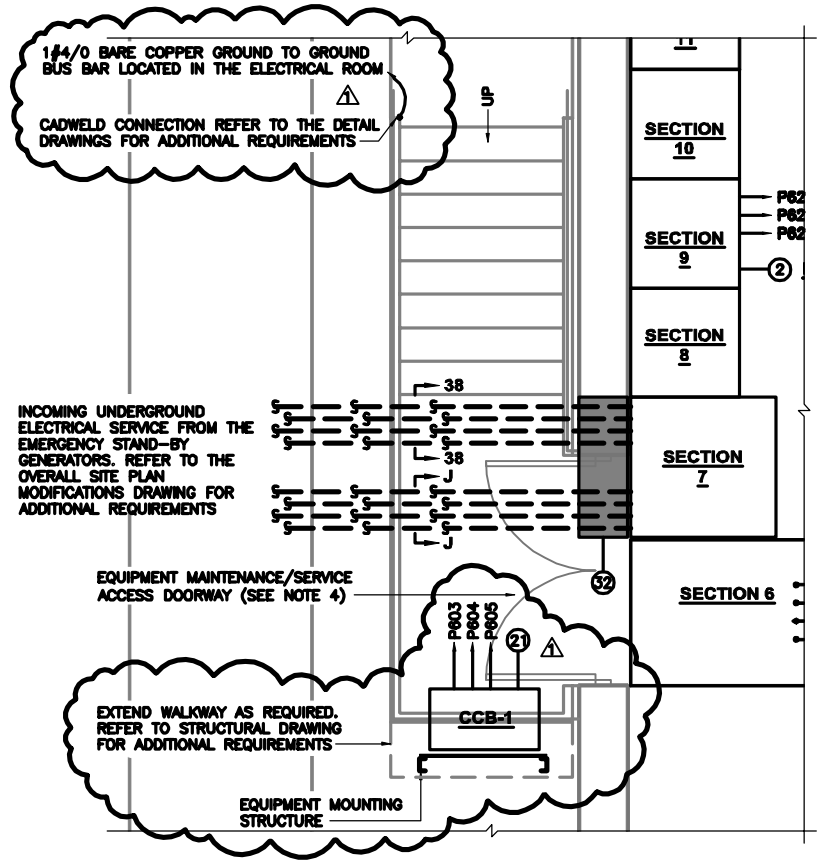
PROJ NO: 13164 DATE: MARCH 2018



NO.	REVISIONS	DRAWN BY	APP'D
1	ADDED STAIR GROUNDING		---
2			
3			

ADDENDUM NO. 2
REFERENCE: DWG E-135

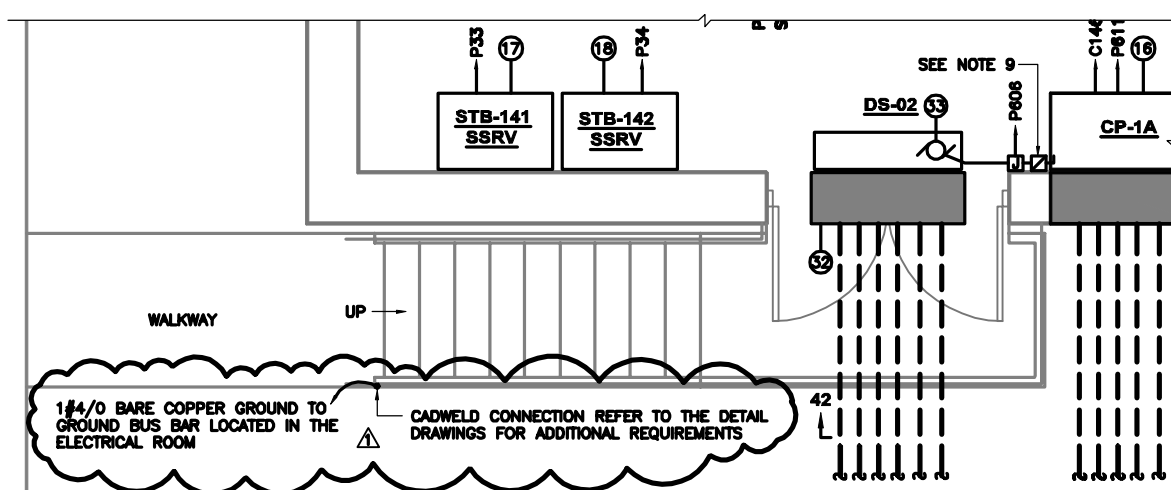
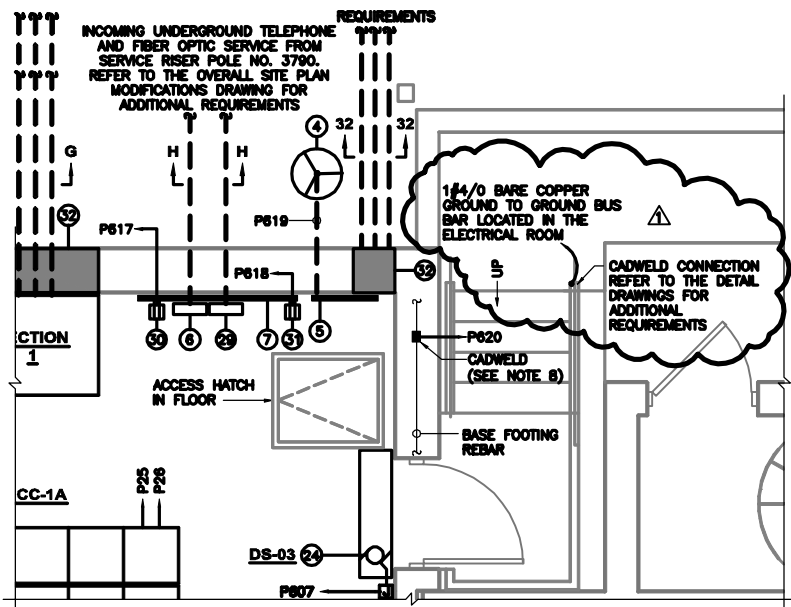
FIGURE:
E1



**PARTIAL OPERATIONS BUILDING
(BUILDING NO. 1)
ELECTRICAL ROOM - POWER PLAN**

N15

CITY OF TORRINGTON, CONNECTICUT WATER POLLUTION CONTROL FACILITY COMPREHENSIVE UPGRADE	NO.	REVISIONS	DRAWN BY	APP'D
	1	ADDED STAIR GROUNDING. MOVED CCB-1		---
	2			
PROJ NO: 13164 DATE: MARCH 2018	3			
WRIGHT-PIERCE Engineering a Better Environment			ADDENDUM NO. 2 REFERENCE: DWG E-91	
			FIGURE: E2	



**PARTIAL OPERATIONS BUILDING
(BUILDING NO. 1)
ELECTRICAL ROOM - POWER PLAN**

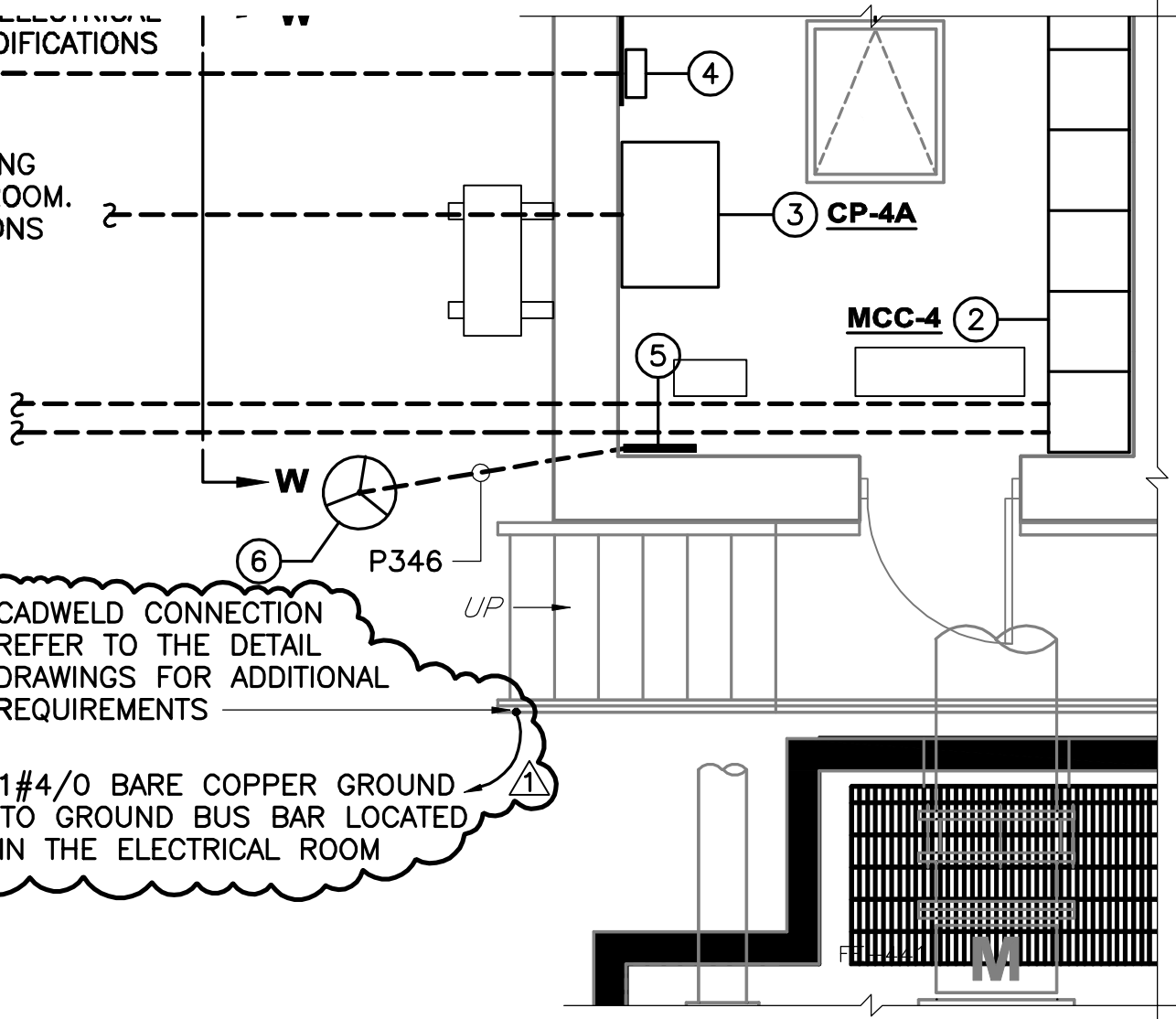
NTS

CITY OF TORRINGTON, CONNECTICUT WATER POLLUTION CONTROL FACILITY COMPREHENSIVE UPGRADE	NO.	REVISIONS	DRAWN BY	APP'D
	1	ADDED STAIR GROUNDING. MOVED CCB-1		---
	2			
PROJ NO: 13164 DATE: MARCH 2018	3			
WRIGHT-PIERCE Engineering a Better Environment	ADDENDUM NO. 2 REFERENCE: DWG E-91			FIGURE: E3



ELECTRICAL
MODIFICATIONS

ENGINEERING ROOM
ELECTRICAL

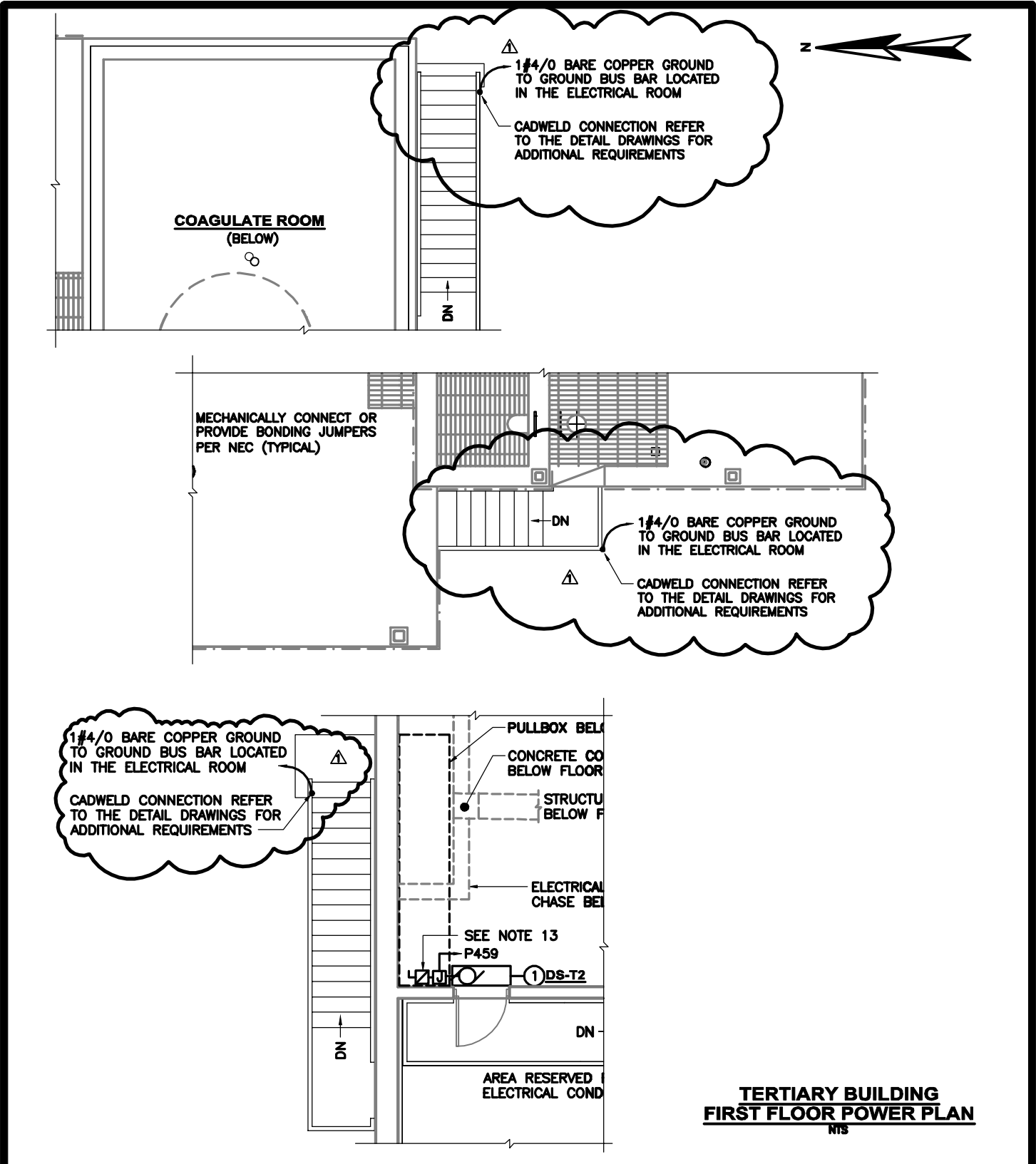


CADWELD CONNECTION
REFER TO THE DETAIL
DRAWINGS FOR ADDITIONAL
REQUIREMENTS

1#4/0 BARE COPPER GROUND
TO GROUND BUS BAR LOCATED
IN THE ELECTRICAL ROOM

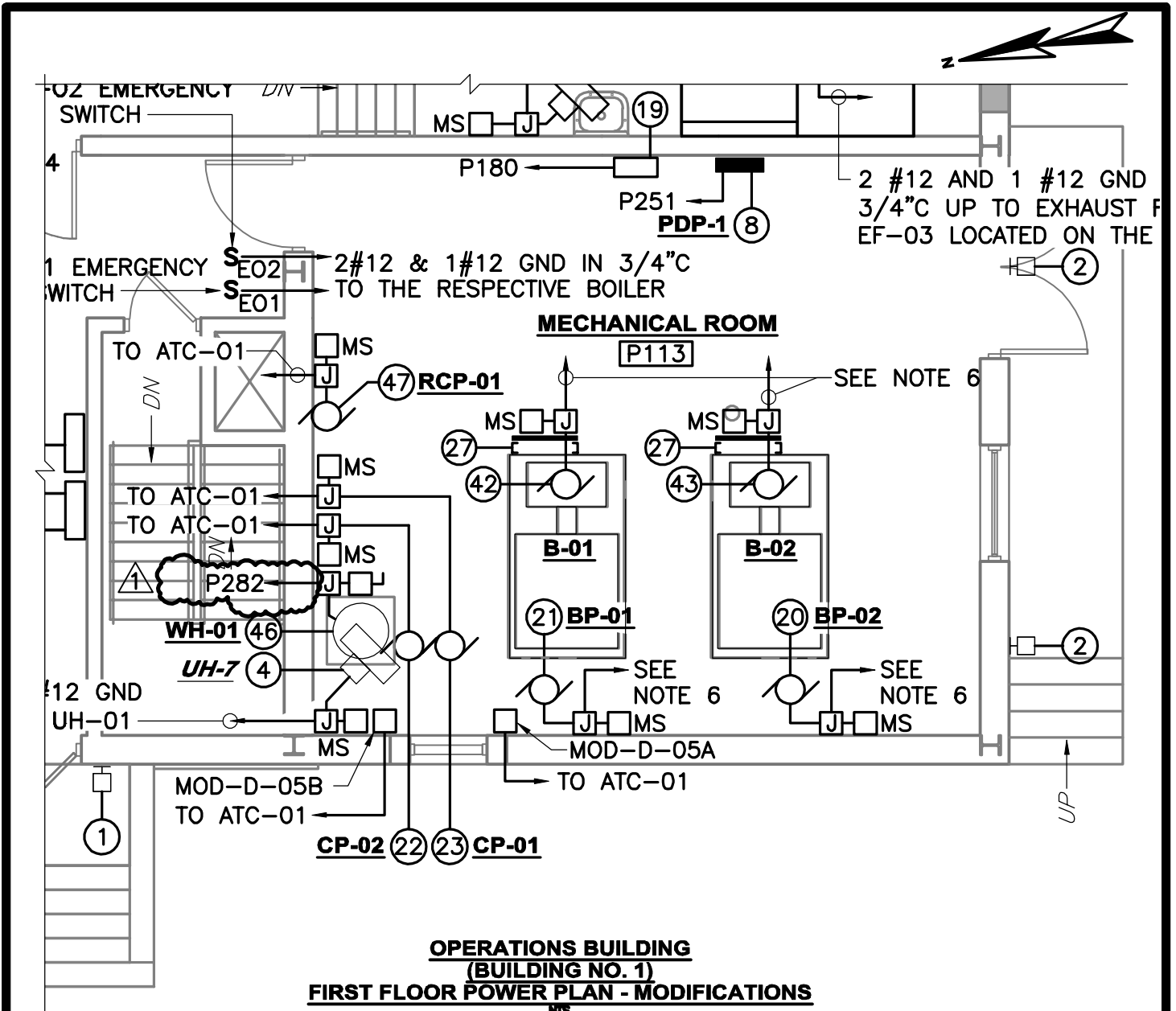
**PRIMARY PUMP GALLERY AND PRIMARY SETTLING TANKS NO. 1, NO. 2 AND NO. 3
(BUILDING NO. 4)
PARTIAL ELECTRICAL POWER PLAN - MODIFICATIONS**

CITY OF TORRINGTON, CONNECTICUT WATER POLLUTION CONTROL FACILITY COMPREHENSIVE UPGRADE	NO.	REVISIONS	DRAWN BY	APP'D
	1	ADDED STAIR GROUNDING		---
	2			
PROJ NO: 13164 DATE: MARCH 2018	3			
WRIGHT-PIERCE Engineering a Better Environment	ADDENDUM NO. 2 REFERENCE: DWG E-104			FIGURE: E4




**TERTIARY BUILDING
FIRST FLOOR POWER PLAN**
NTS

CITY OF TORRINGTON, CONNECTICUT WATER POLLUTION CONTROL FACILITY COMPREHENSIVE UPGRADE	NO.	REVISIONS	DRAWN BY	APP'D
	①	ADDED STAIR GROUNDING		---
	②			
PROJ NO: 13164 DATE: MARCH 2018	③			
WRIGHT-PIERCE Engineering a Better Environment	ADDENDUM NO. 2 REFERENCE: DWG E-115			FIGURE: E5



CITY OF TORRINGTON, CONNECTICUT
 WATER POLLUTION CONTROL FACILITY
 COMPREHENSIVE UPGRADE

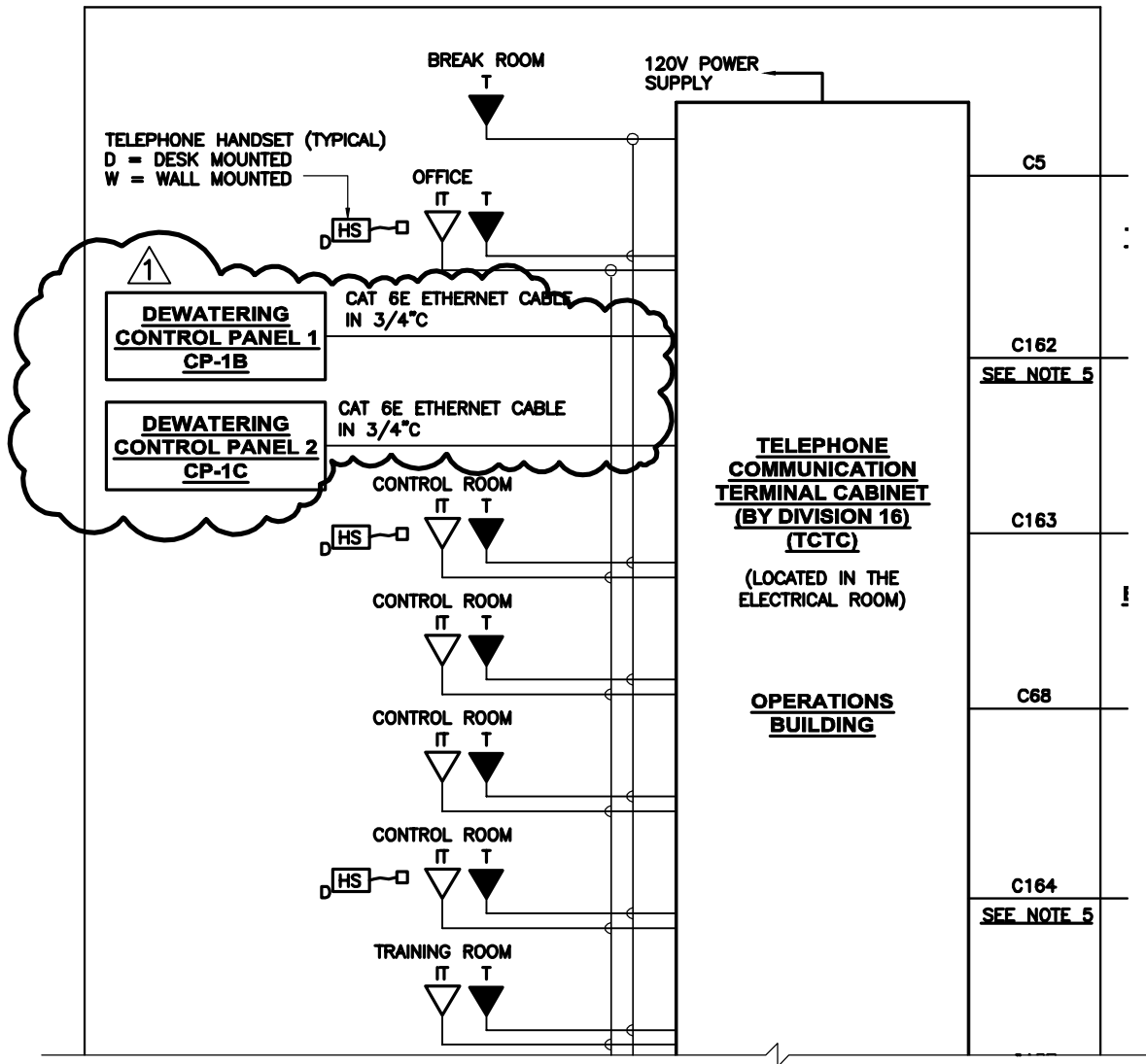
PROJ NO: 13164 DATE: MARCH 2018

WRIGHT-PIERCE 
 Engineering a Better Environment

NO.	REVISIONS	DRAWN BY	APP'D
1	FIXED TEXT IN MECHANICAL ROOM		---
2			
3			

ADDENDUM NO. 2
 REFERENCE: DWG E-89

FIGURE:
E6



IT NETWORK RISER DIAGRAM
 NTS

CITY OF TORRINGTON, CONNECTICUT WATER POLLUTION CONTROL FACILITY COMPREHENSIVE UPGRADE	NO.	REVISIONS	DRAWN BY	APP'D
	1	ADDED DEWATERING CONTROL PANELS		---
	2			
PROJ NO: 13164 DATE: MARCH 2018	3			
WRIGHT-PIERCE Engineering a Better Environment			ADDENDUM NO. 2 REFERENCE: DWG E-167	
			FIGURE: E7	