



ADDENDUM NO. 2  
TO THE CONTRACT DOCUMENTS  
for the construction of

Date: August 29, 2014  
Project No.: 486753

CHEMICAL SYSTEMS AND ACTUATOR IMPROVEMENTS BID # 913  
FAYETTE COUNTY WATER SYSTEM  
FAYETTE COUNTY, GEORGIA

**To All Planholders and/or Prospective Bidders:**

The following changes, additions, and/or deletions are hereby made a part of the Contract Documents for the construction of Chemical Systems and Actuator Improvements Bid # 913 dated August 2014 as fully and completely as if the same were fully set forth therein:

**PART 3—SPECIFICATIONS**

1. **Section 03 63 00, Concrete Doweling**

ADD Section 03 63 00, Concrete Doweling, attached.

**DRAWINGS**

1. Drawing 10-E-01, Conduit routing between CP-680 and second floor control room, DELETE conduit call out “[1” C, Cat5e]” and REPLACE with “[2” C, FIBER OPTIC CABLE]”
2. DELETE Drawing 10-C-02 and REPLACE with revised attached.
3. DELETE Drawing 10-C-04 and REPLACE with revised attached.
4. DELETE Drawing 10-SME-02 in its entirety and REPLACE with revised attached.

486753A.GN1

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 2 in the Bid Form or by submitting the Addendum with the bid package. Bid Forms submitted without acknowledgment or without this Addendum will be considered in nonconformance.

CH2M HILL

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Project Manager

Stuart Blakely Jeffcoat, P.E.

Appended hereto and part of Addendum No. 2:  
Section 03 63 00, Concrete Doweling, attached.

Drawing 10-C-02, attached.

Drawing 10-C-04, attached.

Drawing 10-SME-02, attached.

**END OF ADDENDUM**

**SECTION 03 63 00 (ADD NO. 2)**  
**CONCRETE DOWELING**

**PART 1 GENERAL**

1.01 REFERENCES

- A. The following is a list of standards that may be referenced in this section:
1. American National Standards Institute (ANSI).
  2. ASTM International (ASTM):
    - a. C881/C881M, Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete.
    - b. E488, Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements.
  3. International Code Council (ICC):
    - a. 2012 International Building Code (IBC).
    - b. Evaluation Services Reports.

1.02 DEFINITIONS

- A. ICC Evaluation Services Report: Published by ICC for products provided by concrete adhesive anchor manufacturers.
- B. Special Inspection: As defined in the ICC IBC.

1.03 SUBMITTALS

- A. Action Submittals:
1. Product Data: Manufacturer's catalog information.
- B. Informational Submittals:
1. Manufacturer's qualifications; include client name, address, contact person, phone number, project location, and description of work.
  2. Manufacturer's instructions for preparation, placement, drilling of holes, installation of anchors and adhesive, and handling of cartridges, nozzles, and equipment.
  3. Manufacturer's written letter of certification identifying installer's qualifications to install products.
  4. ICC Evaluation Services Report: Specific to proposed doweling system manufacturer.

1.04 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer: At least three similar projects with same products within last 3 years.
2. Installer: Trained and certified by manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Container Markings: Include manufacturer's name, product name, batch number, product expiration date, ANSI hazard classification, and appropriate ANSI handling precautions.
- B. Store adhesive components in accordance with manufacturer's written instructions.
- C. Dispose of when:
1. Shelf life has expired.
  2. Stored other than per manufacturer's instructions.

**PART 2 PRODUCTS**

2.01 MATERIALS

A. Adhesive:

1. Approved by an ICC Evaluation Services Report for conformance to 2012 IBC requirements for doweling of steel reinforcing bars in cracked concrete.
2. Suitable for long-term loads as well as for wind and seismic loads.
3. Meet requirements of ASTM C881/C881M.
4. Two-component, insensitive to moisture, designed to be used in adverse freeze/thaw environments.
5. Disposable, Self-Contained Cartridge System:
  - a. Capable of dispensing both components in proper mixing ratio.
  - b. Fit into manually or pneumatically operated caulking gun.
6. Mixed Adhesive: Nonsag, light paste consistency with ability to remain in a 1-inch diameter overhead drilled hole without runoff.
7. Cure Temperature, Pot Life, and Workability: Compatible for intended use and anticipated environmental conditions.
8. Manufacturers and Products:
  - a. Hilti, Inc., Tulsa, OK; HIT-RE 500-SD or HIT-HY 150 MAX-SD Adhesive Anchors.
  - b. Powers Fasteners, Brewster, NY; Power PE1000+ Epoxy Adhesive Anchor System (1/2-inch to 7/8-inch diameter anchors).

- c. Simpson Strong-Tie Co., Inc., Pleasanton, CA; SET-XP Epoxy Adhesive Anchors.
- B. Mixing Nozzles: Disposable, manufactured in several sizes to accommodate size of reinforcing dowels.
- C. Reinforcing Dowels: As specified in Section 03 21 00, Reinforcing Steel.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. Drilling Equipment:
  - 1. Drilling Hammers for Dowel Holes:
    - a. Electric or pneumatic rotary type with medium or light impact.
    - b. Hollow drills with flushing air systems are preferred.
  - 2. Where edge distances are less than 2 inches, use lighter impact equipment to prevent microcracking and concrete spalling during drilling process.
- B. Hole Diameter: Use drill bit diameter meeting ICC Evaluation Services Report requirements and as recommended by manufacturer.
- C. Obstructions in Drill Path: When existing reinforcing steel is encountered during drilling, obtain Engineer approval for proposed fix.
- D. Doweling:
  - 1. Install per details shown on Drawings and in accordance with adhesive manufacturer's instructions.
  - 2. When using epoxy anchors, dowels may be prebent prior to installation to 15 degrees to align with other bars. Do not heat dowels to bend.
  - 3. Bent Bar Dowels: Where edge distances are critical, and intersection with reinforcing steel is likely, drill hole at 10-degree angle or less and use prebent reinforcing bars.
  - 4. If bars have fused epoxy coating and coating is damaged, recoat damaged area with epoxy.
- E. Adhesive:
  - 1. Install in accordance with manufacturer's instructions.
  - 2. Dispense components through specially designed static mixing nozzle that thoroughly mixes components and places mixed adhesive at base of predrilled hole.

3.02 FIELD QUALITY CONTROL

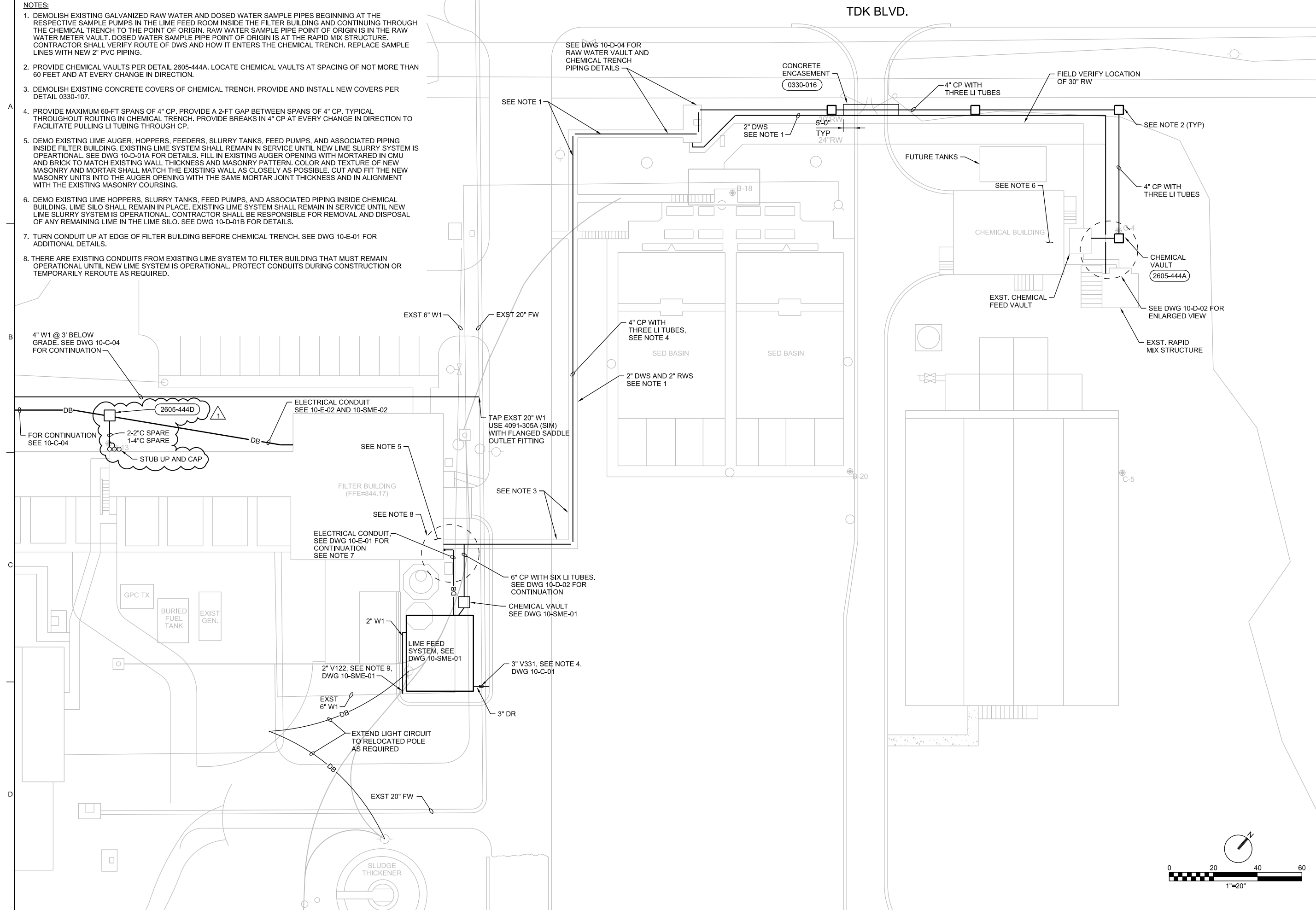
A. Special Inspection:

1. Special inspection will be performed by the Special Inspector in accordance with ICC ESR requirements and as specified in Section 01 45 33, Special Inspection, Observation, and Testing.
2. Continuous inspection required where noted on Drawings and where concrete dowels are installed in overhead applications.
3. Periodic inspection required where continuous inspection is not specified.

**END OF SECTION**

**NOTES:**

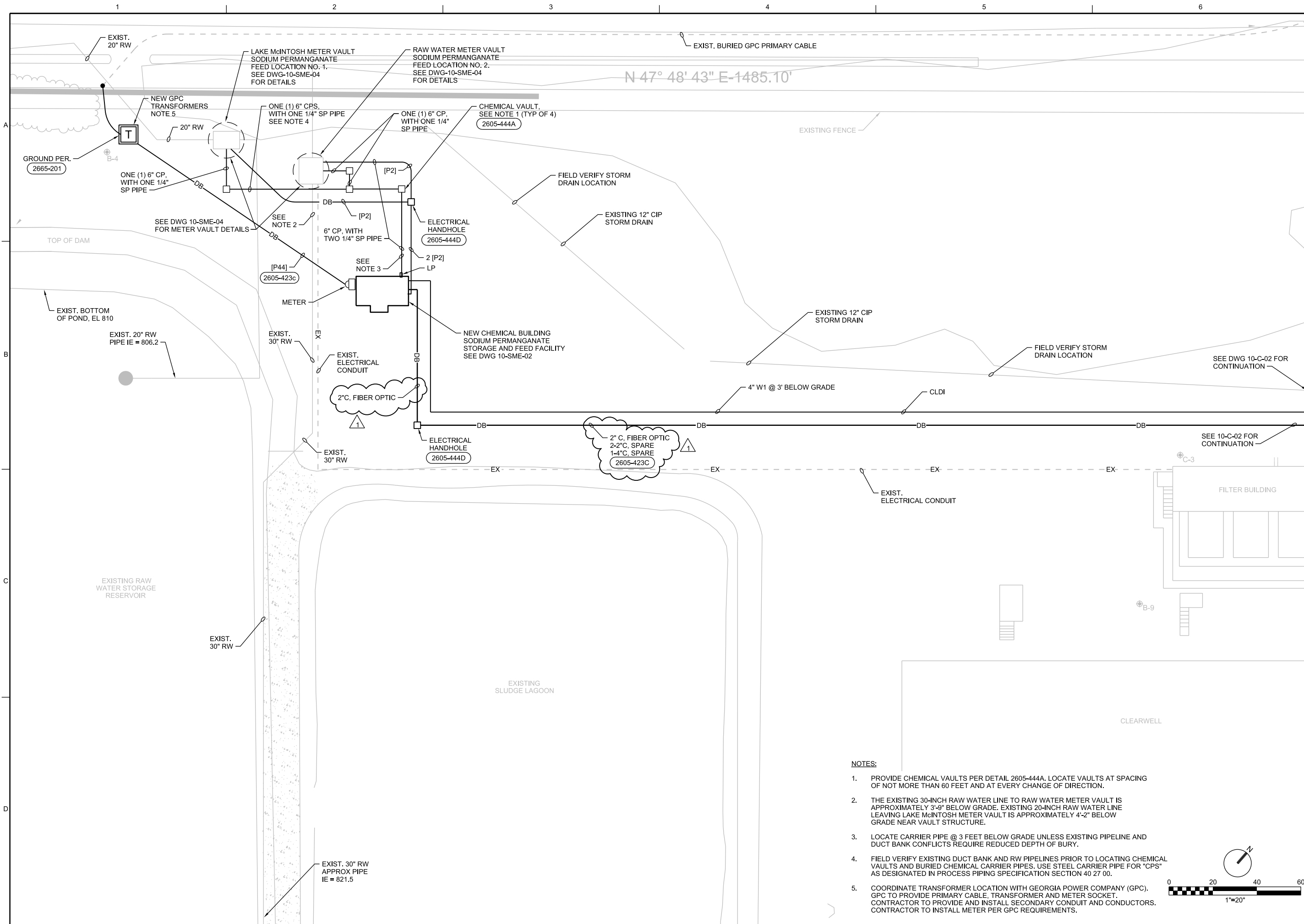
1. DEMOLISH EXISTING GALVANIZED RAW WATER AND DOSED WATER SAMPLE PIPES BEGINNING AT THE RESPECTIVE SAMPLE PUMPS IN THE LIME FEED ROOM INSIDE THE FILTER BUILDING AND CONTINUING THROUGH THE CHEMICAL TRENCH TO THE POINT OF ORIGIN. RAW WATER SAMPLE PIPE POINT OF ORIGIN IS IN THE RAW WATER METER VAULT. DOSED WATER SAMPLE PIPE POINT OF ORIGIN IS AT THE RAPID MIX STRUCTURE. CONTRACTOR SHALL VERIFY ROUTE OF DWS AND HOW IT ENTERS THE CHEMICAL TRENCH. REPLACE SAMPLE LINES WITH NEW 2" PVC PIPING.
2. PROVIDE CHEMICAL VAULTS PER DETAIL 2605-444A. LOCATE CHEMICAL VAULTS AT SPACING OF NOT MORE THAN 60 FEET AND AT EVERY CHANGE IN DIRECTION.
3. DEMOLISH EXISTING CONCRETE COVERS OF CHEMICAL TRENCH. PROVIDE AND INSTALL NEW COVERS PER DETAIL 0330-107.
4. PROVIDE MAXIMUM 60-FT SPANS OF 4" CP. PROVIDE A 2-FT GAP BETWEEN SPANS OF 4" CP. TYPICAL THROUGHOUT ROUTING IN CHEMICAL TRENCH. PROVIDE BREAKS IN 4" CP AT EVERY CHANGE IN DIRECTION TO FACILITATE PULLING LI TUBING THROUGH CP.
5. DEMO EXISTING LIME AUGER, HOPPERS, FEEDERS, SLURRY TANKS, FEED PUMPS, AND ASSOCIATED PIPING INSIDE FILTER BUILDING. EXISTING LIME SYSTEM SHALL REMAIN IN SERVICE UNTIL NEW LIME SLURRY SYSTEM IS OPERATIONAL. SEE DWG 10-D-01A FOR DETAILS. FILL IN EXISTING AUGER OPENING WITH MORTARED IN CMU AND BRICK TO MATCH EXISTING WALL THICKNESS AND MASONRY PATTERN. COLOR AND TEXTURE OF NEW MASONRY AND MORTAR SHALL MATCH THE EXISTING WALL AS CLOSELY AS POSSIBLE. CUT AND FIT THE NEW MASONRY UNITS INTO THE AUGER OPENING WITH THE SAME MORTAR JOINT THICKNESS AND IN ALIGNMENT WITH THE EXISTING MASONRY COURSING.
6. DEMO EXISTING LIME HOPPERS, SLURRY TANKS, FEED PUMPS, AND ASSOCIATED PIPING INSIDE CHEMICAL BUILDING. LIME SILO SHALL REMAIN IN PLACE. EXISTING LIME SYSTEM SHALL REMAIN IN SERVICE UNTIL NEW LIME SLURRY SYSTEM IS OPERATIONAL. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ANY REMAINING LIME IN THE LIME SILO. SEE DWG 10-D-01B FOR DETAILS.
7. TURN CONDUIT UP AT EDGE OF FILTER BUILDING BEFORE CHEMICAL TRENCH. SEE DWG 10-E-01 FOR ADDITIONAL DETAILS.
8. THERE ARE EXISTING CONDUITS FROM EXISTING LIME SYSTEM TO FILTER BUILDING THAT MUST REMAIN OPERATIONAL UNTIL NEW LIME SYSTEM IS OPERATIONAL. PROTECT CONDUITS DURING CONSTRUCTION OR TEMPORARILY REROUTE AS REQUIRED.



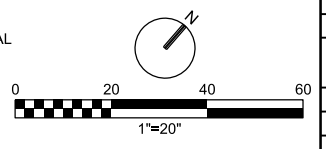
<p>6600 PEACHTREE DUNWOODY ROAD 400 EMBASSY ROW, SUITE 600 ATLANTA, GA, 30328 PH: 770-604-9095</p>		<p>CHEMICAL SYSTEMS AND ACTUATOR IMPROVEMENTS FAYETTE COUNTY WATER SYSTEM FAYETTE COUNTY, GEORGIA</p>	
<p><b>CH2MHILL®</b></p>		<p>CIVIL <b>CROSSTOWN WTP UTILITIES PLAN</b></p>	
<p>VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 0 20 40 60 1"=20'</p>			
DATE	AUGUST 2014	PROJ	486753
DWG	10-C-02	SHEET	of
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- NOTES:**
1. PROVIDE CHEMICAL VAULTS PER DETAIL 2605-444A. LOCATE VAULTS AT SPACING OF NOT MORE THAN 60 FEET AND AT EVERY CHANGE OF DIRECTION.
  2. THE EXISTING 30-INCH RAW WATER LINE TO RAW WATER METER VAULT IS APPROXIMATELY 3'-9" BELOW GRADE. EXISTING 20-INCH RAW WATER LINE LEAVING LAKE McINTOSH METER VAULT IS APPROXIMATELY 4'-2" BELOW GRADE NEAR VAULT STRUCTURE.
  3. LOCATE CARRIER PIPE @ 3 FEET BELOW GRADE UNLESS EXISTING PIPELINE AND DUCT BANK CONFLICTS REQUIRE REDUCED DEPTH OF BURY.
  4. FIELD VERIFY EXISTING DUCT BANK AND RW PIPELINES PRIOR TO LOCATING CHEMICAL VAULTS AND BURIED CHEMICAL CARRIER PIPES. USE STEEL CARRIER PIPE FOR "CPS" AS DESIGNATED IN PROCESS PIPING SPECIFICATION SECTION 40 27 00.
  5. COORDINATE TRANSFORMER LOCATION WITH GEORGIA POWER COMPANY (GPC). GPC TO PROVIDE PRIMARY CABLE, TRANSFORMER AND METER SOCKET. CONTRACTOR TO PROVIDE AND INSTALL SECONDARY CONDUIT AND CONDUCTORS. CONTRACTOR TO INSTALL METER PER GPC REQUIREMENTS.



NO.	DATE	REVISION	BY	APVD
1	08/20/14	ADDENDUM 2	GM	KBH
				BY
				APVD
				K HORTON
				K YANOSSEK

6600 PEACHTREE DUNWOODY ROAD  
 400 EMBASSY ROW, SUITE 600  
 ATLANTA, GA, 30328 PH: 770-604-9095

CHEMICAL SYSTEMS AND  
 ACTUATOR IMPROVEMENTS  
 FAYETTE COUNTY WATER SYSTEM  
 FAYETTE COUNTY, GEORGIA

**CH2MHILL®**

CIVIL  
**CROSSTOWN WTP  
 UTILITIES PLAN  
 SODIUM PERMANGANATE**

VERIFY SCALE	DATE	AUGUST 2014
BAR IS ONE INCH ON ORIGINAL DRAWING.	PROJ	486753
	DWG	10-C-04
	SHEET	of

BID DOCUMENTS

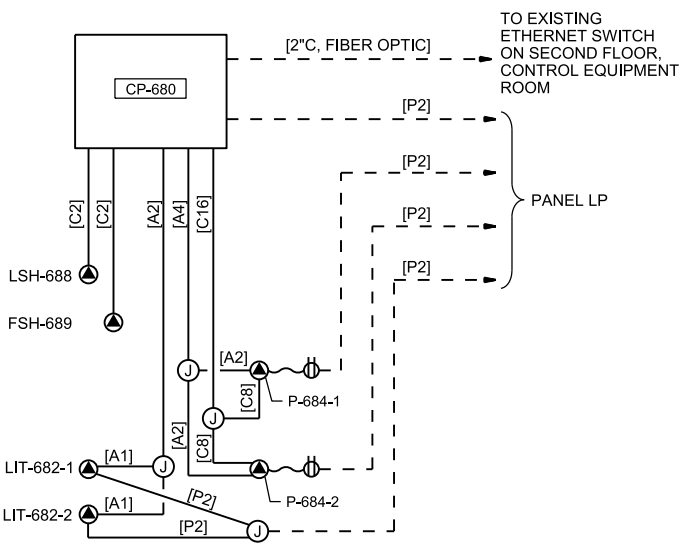
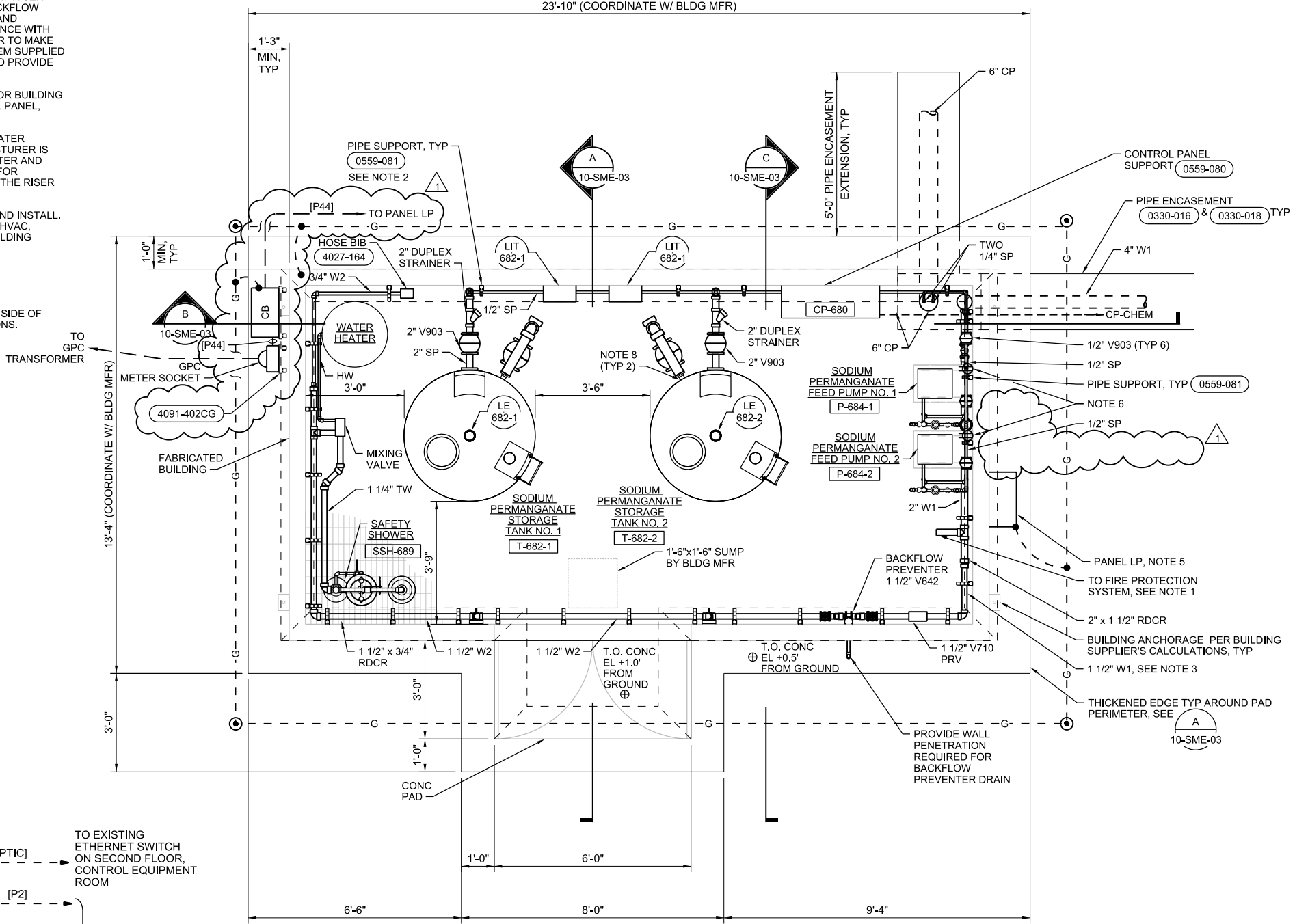
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**NOTES:**

- CONTRACTOR TO PROVIDE RISER FOR FIRE PROTECTION SYSTEM. RISER INCLUDES (UPSTREAM TO DOWNSTREAM) ISOLATION VALVE, BACKFLOW PREVENTER ASSEMBLY, AND FLOW SWITCH. ALL COMPONENTS AND MATERIALS OF CONSTRUCTION MUST BE UL LISTED IN ACCORDANCE WITH NFPA 13 FOR USE IN FIRE SUPPRESSION SYSTEMS. CONTRACTOR TO MAKE CONNECTIONS BETWEEN WATER SUPPLY AND SPRINKLER SYSTEM SUPPLIED WITH PREFABRICATED BUILDING. BUILDING SYSTEM SUPPLIER TO PROVIDE TEE FITTING FOR RISER.
- BUILDING MANUFACTURER TO SUPPLY UNISTRUT ON ALL INTERIOR BUILDING WALLS AS REQUIRED FOR MOUNTING PIPE SUPPORTS, CONTROL PANEL, AND PUMP SUPPORTS.
- BUILDING MANUFACTURER TO SUPPLY SAFETY SHOWER, HOT WATER HEATER WITH MIXING VALVE, AND HOSE BIB. BUILDING MANUFACTURER IS RESPONSIBLE FOR ALL VALVES (INCLUDING BACKFLOW PREVENTER AND PRESSURE REDUCING VALVES) AND INTERCONNECTING PIPING FOR POTABLE WATER LINES (W1, W2, H2, TW) NOT ASSOCIATED WITH THE RISER FOR THE FIRE SUPPRESSION SYSTEM.
- CONDUIT AND WIRE SHOWN IS FOR CONTRACTOR TO PROVIDE AND INSTALL. CONDUIT AND WIRE BETWEEN BUILDING COMPONENTS (LIGHTS, HVAC, WATER HEATER AND BUILDING RECEPTACLES) PROVIDED BY BUILDING SYSTEM SUPPLIER.
- LOAD CENTER PANEL LP PROVIDED WITH BUILDING SYSTEM.
- MOUNT 20A RECEPTACLE ABOVE PUMP.
- CONTRACTOR TO USE EXISTING GROUND ELEVATION ON SOUTH SIDE OF NEW CHEMICAL BUILDING AS A BENCHMARK FOR SLAB ELEVATIONS.
- OVERFLOW/DRAIN NOZZLE.



**SODIUM PERMANGANATE WIRING DIAGRAM**  
NOTE 4

<p><b>CH2MHILL</b> STRUCTURAL/MECHANICAL/ELECTRICAL</p>		<p>6600 PEACHTREE DUNWOODY ROAD 400 EMBASSY ROW, SUITE 600 ATLANTA, GA, 30328 PH: 770-604-9095</p>	
<p>CROSS TOWN WTP SODIUM PERMANGANATE FACILITY PLAN</p>		<p>CHEMICAL SYSTEMS AND ACTUATOR IMPROVEMENTS FAYETTE COUNTY WATER SYSTEM FAYETTE COUNTY, GEORGIA</p>	
<p>NO. 1</p>	<p>DATE 08/20/14</p>	<p>REVISION</p>	<p>BY AP/VD K. HORTON D. REISSLER K. YANOSSEK</p>
<p>DR</p>	<p>CHK</p>	<p>DESIGN</p>	<p>ADDENDUM 2</p>
<p>M HALES</p>	<p>K YANOSSEK</p>	<p>M DIAZ</p>	<p>AP/VD M DIAZ</p>
<p>VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING.</p>			
<p>DATE</p>	<p>AUGUST 2014</p>	<p>PROJ</p>	<p>486753</p>
<p>DWG</p>	<p>10-SME-02</p>	<p>SHEET</p>	<p>of</p>

