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St. Tammany Parish Communications District 9-1-1 Dispatch Center
BID NO.: NF-2016-06-16 **ADDENDUM NO. 2**
GLA Project No. 14109

BID NO.: NF-2016-06-16
***New* 9-1-1 Communications Facility**

Date: 28 July 2016

The following clarifications, changes, additions or deletions for this project shall be made to the Contract Documents; all other conditions and work shall remain unchanged. The Addendum supersedes current conditions shown in the Contract Documents. **Acknowledge the receipt of these Addenda by inserting its number and date in your bid**. The following revisions to the Specifications and/or Drawings for the project shall become a part of the above numbered Contract Documents.

1.0 General

1.1 With reference to Division 00B, Specifications Volume, Section 06, Item 24.07, the following information is provided from the Owner regarding insurance requirements for the Project:
- Item 4 Business Automobile Liability insurance: Not required for this Project.
- Item 6: OCP Insurance: Shall be limited to $1 Million. The District shall be listed as additional insured on the contractor's general liability policy in addition thereto.
- Maximum deductible for wind/storm shall be no more than 2% of the insured amount. (Disregard the Specification limit of $5000).
- Item 7: If Builders Risk policy includes machinery and equipment installation coverage, then a separate Installation Floater policy is not necessary.

1.2 With reference to the term "Subgrade" in Division 01 Bid Documents, Specification Section 02, Instructions to Bidders, Item No. 23; it is not expected that the contractor do any physical work on the site to determine subgrade conditions. The contractor is to be familiar with the Contract Documents and the Geotechnical Report from Stratum Engineering provided in the Bid Document Set.

1.3 The Pre-Bid Conference meeting notes issued in Addenda 1 contained reference to a 10% bid bond requirement. The bid bond is **5%** as delineated in the Volume 1 Specification Documents, Section 02: Instructions to Bidders, No. 15.

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2.0 Project Specifications and Contract Documents

2.1 Replace specification section S001 entitled WSB TREATMENT SYSTEM FOR THE 911 CALL CENTER in its entirety with replacement specification section S001 entitled WSB TREATMENT SYSTEM (1,300 GPD).

2.2 See attached Civil Sketch CSK 01 with layout revision to the Wastewater Treatment Plant.

2.3 Sand in the BR Level 4 wall is not specific to product source but must meet ASTM C144 (Reference Detail 01/751). The fine aggregates must fully fill the wall cavity. The distribution of the fine aggregates within the wall cavity must be free from voids.

2.4 Termite Treatment Specification 31 31 00 attached herein.

2.5 Specification 07 13 13 is to be deleted from the project. Provide sub grade Bituminous Damproofing per Specification 07 11 13 (Ref. 35/a550).

2.6 Specification 12 21 26: No black out shades are included in the Project scope.

2.7 Delete Specification 02 83 00 from the Project. No chain link fencing is required.

3.0 Substitution Requests

3.1 The following Substitution Requests submitted to date are acceptable to the Architect PROVIDED the material/equipment meets the design document scope and intent, and all Specification and Detail Requirements. **Further review will occur during the submittal process.** All Contract Document requirements apply.

1. Keyton Mills, PSiSC/Columbia Lockers.
2. Miller-Clapperton System 1500 Rainscreen.
3. Alcoa Architectural Products Reynobond Dry Seal system and Conroy Enterprises Rainscreen Kynar finish panel system.
4. Scranton Lockers Tufftec Product.
5. Access Flooring: ASM Modular Floors FS200 Panels.
6. Chicago Bullet Proof Systems, Inc. Hollow metal doors BR Level 4.

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7. Building Automation Controls: Siemens

8. Building Automation Controls: TRANE

9. Nailor Air Devices, Twin City Fans, Arrow Louvers, Van Packer Gen. Exhaust ducts (provided all options are included per the contract documents).

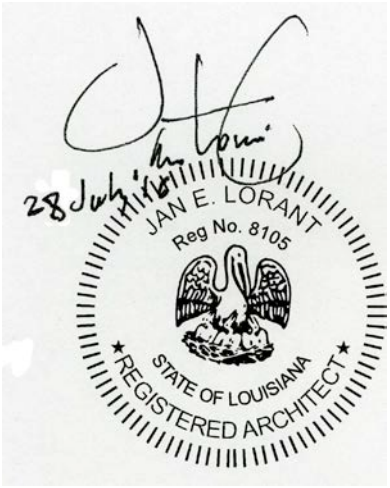
10. Plumbing: Delta Flush Valves 81T201 and 81T231 (provided valves are factory set to the GPF per contract documents. Not field adjustable). Delta Shower Valve T13H302-25/52667, R10700-UNWS.

11. Ansul Clean Agent System (NOVEC). Austin Fire Systems.

12. Bullet Resistant Windows: Total Security Solutions (TSS) Armor. (Glass color to match glazing requirement in Specification 08 80 00).

13. Door Hardware: Alternate manufacturers are acceptable provided they meet the standards and product criteria in the Specifications. Please note Bullet resistant door hardware requirements.

14. Precision Ladders, Inc. J.L. Roberts & Associates, Inc.



END OF ADDENDUM NO. 2

SECTION S001

WSB TREATMENT SYSTEM (1,300 GPD)

PART 1 - GENERAL

1.1 SUMMARY

A. The Contractor shall furnish and install one complete biological treatment plant sized to treat the equalized daily design flow of 1,300 gpd as specified.

B. The design shall be based on a BOD5 concentration of 306 mg/L which produces a design loading of 3.3 lb BOD5/d. Effluent specifications are 5 mg/L CBOD5, 5 mg/L TSS, and 2 mg/L total ammonia nitrogen on a monthly average basis. Peak hourly design flow with equalization shall be assumed to be the maximum daily flow of 83.3 gal/h (1.39 gpm average).

1.2 SUBMITTALS

A. Installer Qualifications: Submit evidence of current valid installer license.

B. Product Data: Submit Manufacturer's specifications and installation instructions.

C. Shop Drawings: Submit detailed drawings showing layout space requirements, piping, wiring, and rough-in locations for power and controls. Provide data sheets for all system-related equipment.

D. Operating and Maintenance: Submit 2 copies of Manufacturer's instructions for operating and maintaining equipment.

E. Testing and Operation: Provide a pre-operational test plan, 10-day operational test report, and 30-day reliability test report.

F. Certification of Construction: Provide copy of “Certification of Construction” to be filed with permitting office

1.3 QUALITY ASSURANCE

A. Regulatory Requirements:
   1. Louisiana State Sanitary Codes
   2. Department of Health and Hospitals (DHH) requirements
   3. Louisiana Department of Environmental Quality (DEQ) requirements

1.4 DELIVERY, STORAGE AND HANDLING

A. Packing and Shipping: Deliver equipment to site in Manufacturer's original shipping containers/pallets and unopened packaging with labels intact.

B. Storage: Adequately protect against damage while stored at the site.

C. Handling: Comply with Manufacturer's instructions.

1.5 WARRANTY

A. The manufacture shall warrant the equipment being supplied to the owner against defects in workmanship and materials for a period of one year under normal use and service.

The warranty shall not cover any item which has been subjected to external damage, disassembled and/or repaired by unauthorized persons, flooded or otherwise mistreated. The manufacturer shall not be held liable for any consequential damages or contingent liabilities which are directly or indirectly a result of any failures in materials or equipment, or from delivery or installation delays. Items normally consumed in service such as grease, oil, v-belts, fuses, filters, seals, etc., shall not be warranted.

PART 2 - PRODUCTS

2.1 SYSTEM

A. Acceptable manufacturer or equal: WSB® clean system of RH2O North American, Inc., Breslau, Ontario, Canada.

B. System Description: The process shall comprise seven process stages as follows:

1. Flow Equalization: Wastewater shall travel from the collection system and enter a flow equalization tank complete with pumps that shall dose the wastewater at the daily design flow rate (continuously or metered in equal increments on15-minute minimum cycles) over a 24 hour period into the sludge storage tank. The equalization sizing is minimum 520 gal based on expected influent flow profile (peak and average conditions).

2. Sludge Storage: Wastewater shall be pumped from the flow equalization tank to the sludge storage tank. The sludge storage stage shall be arranged to allow coarse particles to settle and be stored along with return sludge from the final clarifier.

Sludge storage design is based on a manufacturer recommended sizing of approximately 200 gal/lb BOD5/d to achieve > 100 days sludge storage; therefore, the minimum requirement = 200 gal/lb x 3.3 lb/d = 660 gal. The configuration shall provide 1,000 gal. The total working volume of the sludge storage shall be designed to provide > 2 hours of retention time at peak flow. The retention time shall be calculated by taking the volume for sludge storage and dividing it by the maximum hourly design flow inclusive of recirculation (HRT = 1,000 gal / 83.3 gal/h = 12 h). Sludge depth inspection shall determine when pump outs are required and shall be referenced in the owner’s manual.

3. Primary Clarification: The primary clarification or pretreatment stage shall provide additional settling and conditioning of the wastewater. Primary clarification (pre-treatment) design shall be based on a requirement of 2 hours of retention time. The hydraulic retention time of primary clarification shall be calculated by taking the volume of

the pre-treatment and dividing it by the maximum design flow inclusive of recirculation (350 gal / 83.3 gal/h = 4.2 h). The combination of sludge storage and primary settling volume shall result in raw influent BOD5 reduction of at least 33% (1/3) into the biological stage (LBOD = 3.3 lb/d x 0.67 = 2.2 lb/d or 205 mg/L BOD5 concentration). From here the wastewater shall flow by gravity into the biological stage.

4. Bioreactor No. 1: Biological treatment shall be accomplished using a WSB® clean system that uses a fluidized floating-bed biofilm process. The biological stage shall consist of two reactor stages each containing manufacturer-approved plastic carrier media. Such plastic carrier media shall enable microorganisms to settle on the media and consume the organic material in the wastewater. Oxygen needed for the treatment process shall be supplied by a compressor and distributed in the biological stage by fine bubble diffusers. The above-described process differs from suspended growth processes (such as extended aeration) in that the system shall be capable of establishing an overall biomass equivalent on the order of 6,000 - 10,000 mg/L. The system shall be configured to retain the biomass predominantly in the reactor on the media, to produce extended sludge age and an efficient, high viability biomass. BOD5 loadings of 19 – 32.5 lb/1000 ft3 of aerobic bioreactor volume (accounting for 33% BOD5 reduction in primary treatment) is optimal, but shall be varied to account for minimum hydraulic retention of 3 hours. Return of sludge to the process vessel to maintain the bacterial culture is not required. Actual specific sludge production for the fluidized floating bed biofilm process is typically much less than conventional or extended air processes at 0.02 – 0.15 lb/lb COD removed vs. 0.15 – 0.38 lb/lb COD removed.

   The biological process shall be accomplished in two stages, each using a fluidized floating bed biofilm process (also known as moving bed biofilm reactors [MBBR] developed by Kaldnes of Norway). The first stage shall perform carbon removal while the second stage shall provide nitrification and further carbon removal. BOD5 removal in each stage shall be at least 90 - 95%. The basis of this process shall be the addition to the reactor tanks of freefloating, neutral-buoyancy polyethylene media designed to maximize surface area for submerged biofilm growth, while allowing for flow-through and self-cleaning by the mixed liquor. The carrier media shall be Kaldnes® K3 or equivalent having a specific surface area of 500 m2/m3 (152 ft2/ft3).

   Based on the preconditioning of the wastewater, the BOD value shall be reduced by one third (to 2.2 lb/d or 1,000 g/d) entering the first biological stage. The Kaldnes® K1 media shall be configured to handle a loading rate of up to 4 to 6 g/m2*d. Installer shall verify an average operational loading rate not exceeding 2 g/m2*d. The fluidized biofilm process requires a filling degree of media between 30 and 60% with a typical target of approximately 40% filling degree in each bioreactor. Actual media volume is specified at 42.5 ft3 (6,460 ft2) or 1.2 m3 (600 m2), which results in a specific loading of 1.67 g/m2*d and a filling degree of 32.4% on the total reactor volume of 475 gal + 490 gal = 965 gal (3.7 m3). Total hydraulic retention in both bioreactors at peak flow inclusive of recirculation = 965 gal / 83.3 gal/h = 11.6 h. Additional safety factors shall be provided by the installer through increased aeration times in the bioreactors or addition of media should any problems arise from increased organic loading after initial testing and during the first two years of operation.

   Side channel air compressors shall be used to provide air for the bioreactors and shall be protected from the elements in an approved enclosure. One air compressor is required for each bioreactor (minimum two total). Typical aeration time is < 12 hours/day. Maximum aeration rate is specified at 15.3 scfm for 14.9 hours/d. The aeration rate shall provide adequate mixing (rollover of the media), as well as maintain dissolved oxygen

between 4 and 6 mg/L. The blowers shall be Hiblow model HP200 (0.5 HP, 120 VAC/1-phase), each rated at 8 scfm at 2.4 psi. Control of the blowers shall be set via control panel timer, recommended 9 min on, 6 min off schedule. Air distribution and mixing in the bioreactors shall be provided by fine bubble diffusers. A screen shall be installed in each bioreactor to ensure media cannot transfer into other chambers.

5. Intermediate Clarifier: The first bioreactor stage shall be followed by an intermediate clarifier tank having sloped wall hoppers. The system shall be arranged to allow fine particles to settle to the bottom of the hoppers and be returned backed into the sludge storage. A surface skimmer shall be used in each clarifier tank to remove any floating sludge. The intermediate clarifier shall have a retention time of over 2.5 hours and a surface flow rate < 19.6 gal/ft2*h. The retention time shall be calculated by taking volume in the clarifier (minus volume of hopper) and dividing it by the hourly flow rate inclusive of recirculation (310 gal / 83.3 gal/h = 3.7 h). Surface overflow rate shall be calculated by taking the hourly flow rate and dividing by the surface area of the clarifier (83.3 gal/h / 16.5 ft2 = 5 gal/ft2*h). Settled sludge shall be returned to the sludge storage chamber using a solids pump installed at the bottom of each hopper in the clarifier. Sludge return rate shall be set based on field testing and operational experience at the site to maintain sludge depth less than approximately 12". Initial estimated settings are 7.5 gal/h or 0.27 min/h on time at 27 gpm for intermediate clarification as set on the control panel timer. The specified sludge return pump shall be a Goulds model LSP0311F rated for 27 gpm at 12' TDH. Floating sludge shall be returned to the sludge storage chamber using a floating sludge (skimmer) pump installed at the bottom of each hopper in the clarifier and having a skimming nozzle at the liquid surface. Initial settings are estimated at 7.5 gal/h or 0.5 min/2 h on time at 30 gpm for intermediate clarification as set on the control panel timer. The specified skimmer pump shall be an Ebara model Optima 3MS1 rated for 30 gpm at 12' TDH.

6. Bioreactor NO. 2**:** From the intermediate clarifier, the wastewater shall travel by gravity into the second bioreactor stage. The design parameters for the second bioreactor stage are defined above for both stages, with each stage being designed as equivalent; however blower on-time settings shall be verified and adjusted to optimize treatment.

7. Final Clarifier: The second biological stage shall be followed by a final clarifier tank having sloped wall hoppers. The system shall be configured to allow fine particles to settle to the bottom of the hoppers and be returned backed into the sludge storage. A surface skimmer shall be used in the clarifier tank to remove any floating sludge. From this stage, the treated wastewater is ready to be discharged to the environment following any other required processes (e.g., final disinfection, pumping, etc.).

Disinfection of treatment plant effluent shall be done by a Norweco Mode **LF2000 2-** Tube chlorinator and a chlorine contact chamber. The chlorine contact chamber will have the volume of **50** gallons with the retention time of 15 minutes at peak hourly flow. The chamber shall be constructed of the same specified concrete material as the main plant and shall have galvanized grated opening(s) on top for maintenance and operation.

The final clarifier shall have a retention time of over 3 hours and a surface flow rate < 19.6 gal/ft2*h. The retention time shall be calculated by taking volume in the clarifier (minus volume of hopper) and dividing it by the hourly flow rate (320 gal / 83.3 gal/h = 3.8 h). Surface overflow rate shall be calculated by taking the hourly flow rate and dividing by the surface area of the clarifier (83.3 gal/h / 16.5 ft2 = 5.0 gal/ft2*h). Settled sludge shall be returned to the sludge storage chamber using a solids pump installed at the bottom of each hopper in the clarifier. Sludge return rate shall be set based on field testing and

operational experience at the site to maintain sludge depth less than approximately 12". Initial estimated settings are 3.8 gal/h or 0.27 min/2 h on time at 27 gpm for intermediate clarification as set on the control panel timer and shall be verified by the installer. The specified sludge return pump shall be a Goulds model LSP0311F rated for 27 gpm at 12' TDH. Floating sludge shall be returned to the sludge storage chamber using a floating sludge (skimmer) pump installed at the bottom of each hopper in the clarifier and having a skimming nozzle at the liquid surface. Initial estimated settings are 1.9 gal/h or 0.5 min/4 h on time at 30 gpm for intermediate clarification as set on the control panel timer. The specified skimmer pump shall be an Ebara model Optima 3MS1 rated for 30 gpm at 12' TDH.

8. Remote control and monitoring: Miscellaneous controls, sensors and transmitters, control panels for pumps, pump status transmitter, pump flow sensors and transmitters.

   Click + Clean® remote management and control system including: flow sensor and transmitters, real-time error and event notification from the system, time-and location-independent adjustment of operating parameters (settings), data logging for operating parameters, event messages and measured values (runtimes, sensors, etc.), system visualization of display modules, input/output status, measured values, "live" function for direct system operation, remote diagnosis for all electrical functions (amp draw, digital and analog sensors, etc.), battery backup for alarm notification in case of power failure. BAS system graphics shall display pump status, blower status, and tank levels

   The Click + Clean® remote management and control system shall be configured to interface with the Building Automation System (BAS) system (see Specification Section 23 09 00). The Click + Clean® remote management and control system shall be configured to provide monitoring and control of the waste water treatment plant via the BAS interface.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of Conditions: Examine site to receive Work and report detrimental conditions in writing to Architect. Commencement of Work will be construed as acceptance of project conditions.

B. Coordination: Coordinate with other work which affects or connects this Work.

3.2 INSTALLATION

A. General: Comply with manufacturer's written instructions.

B. Install in accordance with State and Local requirements.

C. Verify that clearances are adequate to properly install and operate system equipment.

D. Utilities: Refer to Divisions 22 and 26 for plumbing and electrical requirements

E. Contractor shall provide initial startup of system in accordance with Manufacturer's instructions and State and Local requirements.

3.3 FIELD QUALITY CONTROL

A. Test system for proper operation.

B. Provide 10-day operational test report and 30-day reliability test report.

C. Provide lab test report demonstrating treatment plant compliance with DEQ and Health Department offsite discharge requirements as required by AHJ followed by 30-day, 60-day and 90-day test reports. Provide copies of test reports to site facility manager.

D. Provide field adjustment to optimize system performance following 30-day, 60-day, and 90-day tests.

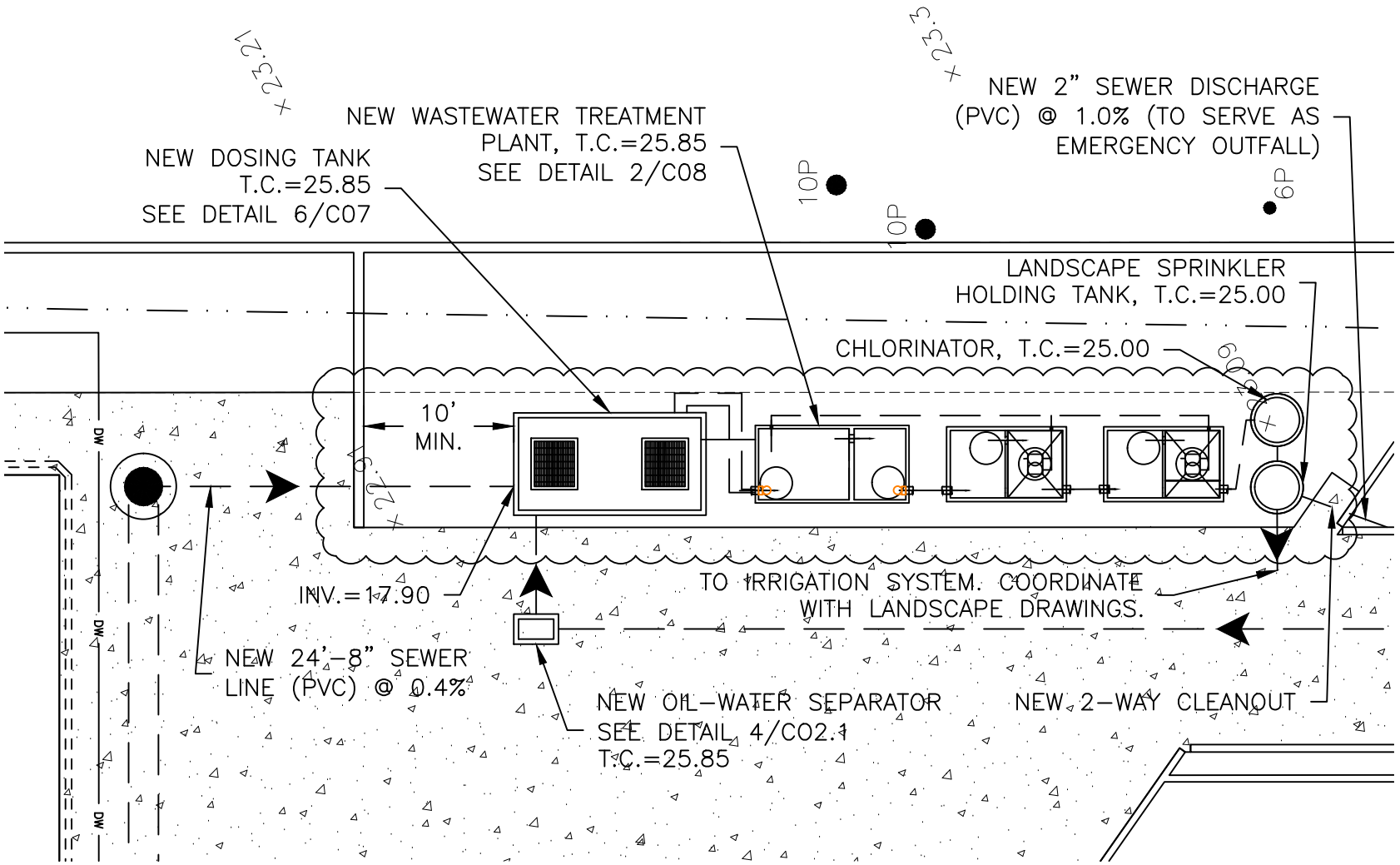
3.4 TRAINING

A. Provide onsite operational training of facility personnel.

END OF SECTION

DOSING TANK NOTES

1. CONTRACTOR SHALL PROVIDE SOLID ALUMINUM ACCESS HATCH (HS–20 LOADING) FOR DOSING TANK.
2. CONTRACTOR SHALL PROVIDE A 3" VENT (J–PIPE) WITH INSECT SCREEN.



NORTH 3/32"=1'–0"

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7/12/2016

STPCD 9-1-1 DISPATCH CENTER

gla No.:
14109

Issue Date:
12 JUL 2016

Addendum
CSK 01
AD 02

SECTION 31 31 00

SOIL TREATMEANT

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Pretreatment to provide chemical barrier to protect buildings and contents against attack by subterranean termites.

1.2 SUBMITTALS

A. Product Data: Submit label indicating Manufacturer's chemical analysis of treatment materials prior to application. Submit evidence of EPA approval and state registration.

B. Test Reports: Submit reports of field for termite treatment.

1.3 QUALITY ASSURANCE

A. Applicator Qualifications: Registered applicator with 5 years' experience and licensed by the applicable agency in the state where the project is located.

B. Regulatory Requirements: Chemicals shall be approved for use and registered by Environmental Protection Agency (EPA)

1.4 DELIVERY, STORAGE AND HANDLING

A. Confirm to Manufacturer's instructions and Governmental Agencies requirements.

B. Deliver materials to Project in original sealed and labeled containers of Manufacturers.

1.5 SITE CONDITIONS

A. Do not apply chemicals in inclement weather or when there is a possibility of rain.

1.6 WARRANTY

A. Upon completion of soil treatment, and as a condition of final acceptance, provide Owner with written unlimited warranty providing:
   1. Application was made at concentration, rate, and method in compliance with Specifications contained herein.
   2. Warrants effectiveness of the soil treatment against subterranean termite infestation for period of not less than 5 years from acceptance and completion date of Project.

B. Upon evidence of subterranean termite activity within warranty period, re-treat area to stop infestation of affected areas and repair termite caused damage to building at no cost to Owner.
   1. Re-treatment under warranty sufficient to prevent termites from attacking building or its contents during remainder of initial warranty period, plus one additional year for each time re-treatment under warranty is required.
   2. Complete re-treatment of the building shall be as specified herein and shall be rendered upon the third recurrence of subterranean termites in the same structure within 5-year period from the date of project acceptance.
   3. Damage caused by infestations and by re-treatment shall be repaired at no cost to the Owner.

C. Draft warranty in favor of Owner, successors or assigns.
   1. Pre-printed FHA or VA guarantee forms shall not be acceptable.
   2. The Owner and the applicator reserve the option to renew termite protection on an annual basis after the expiration of the warranty.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Termite Treatment: Apply one of the following chemicals as a water emulsion (no oil solutions permitted):
   1. Dragnet FSR (Permethrin), FMC Corporation www.fmc.com
   2. Torpedo (Permethrin); ICI Americas, Inc.
   3. Biflex TC (3rd generation synthetic pyrethroid), FMC Corporation www.fmc.com
   4. Prelude (Permethrin); Zeneca Professional Products, Wilmington www.zenecaproducts.com
   5. Prevail FT (Cypermethrin); FMC Corporation www.fmc.com
   6. Talstar (Bifenthrin), FMC Corporation. www.fmc.com
   7. Premise (Imidacloprid)
   8. Demon TC (Cypermethrin)
   9. Termidor (Fipronil), Termidor Termite Control - www.termidorhome.com.

B. Mix solutions in accordance with Manufacturer’s directions to highest concentration allowable by label.

PART 3 - EXECUTION

3.1 APPLICATION- TERMITE CONTROL

A. Time of Application:
   1. Notify Architect to be present during application, at least 24 hours prior to application of materials.
   2. Apply chemical treatment during normal working hours in order to be subject to observation.
   3. Do not treat soil and fill areas that are excessively wet or after heavy rains to avoid surface flow of toxicant’s

B. Application: In accordance with Manufacturer's recommendations, and local codes and regulations.
   1. Provide applicator trucks with approved measuring flow meters.

2. Apply chemicals on soils and compacted ABC fill materials under entire subsurfaces of concrete floor slabs and slabs abutting building walls in quantities and locations stated on label.

C. Do not disturb aggregate base course and treated soil between application of poison and pouring of concrete.
   1. Re-treat soil or compacted fill which has been disturbed after soil poisoning, due to plumbing and electrical changes or omissions.
   2. Should rainy weather occur prior to pouring concrete slab over treated ABC, retreat the complete area at the discretion of Architect, and at no additional cost to Owner.

3.2 FIELD QUALITY CONTROL

A. Tests: Chemical analysis tests shall be made of materials used on the basis of one test for each 10,000 square feet of treated area. Samples and test may be taken of both concentrates and the dilute materials as being applied. See Section 01 45 00 for provisions covering payment for testing.

3.3 PROTECTION

A. Adjacent property, trees, and plants shall be protected from injury and damage as result of operations in this Section.

B. Construction Waste: In accordance with Section 01 74 19.

END OF SECTION