



STATE OF NEW YORK
OFFICE OF GENERAL SERVICES
DESIGN AND CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242



ADDENDUM NO. 2 TO PROJECT NO. 42534-E

**ELECTRICAL WORK
UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
GREAT MEADOW CORRECTIONAL FACILITY
ROUTE 22
COMSTOCK, NY 12821**

October 29, 2014

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

SPECIFICATION GROUP

1. SECTION 260513 PRIMARY WIRING - 15KV NOMINAL: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 260513 – 1 thru 260513 – 9) noted “Revised 10/27/2014”.
2. SECTION 261320 HIGH VOLTAGE SWITCH AND FUSE ASSEMBLY - PAD MOUNTED:
 - a. Page 261320 – 2, Change Subparagraph 2.02, A, 13 to read as follows:

“13. Steel compartmented base spacer to match enclosure, of height required to provide adequate space for cable terminations, required on all pad-mounted switches.”
 - b. Page 261320 – 3, Paragraph 2.02, A, Add the following Subparagraph:

“18. Provide all pad-locks required for pad-mounted switch.”
3. SECTION 262413 SWITCHBOARDS: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 262413 – 1 thru 262413 – 7) noted “Revised 10/27/2014”.
4. SECTION 262416 PANELBOARDS: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 262416 – 1 thru 262416 – 6) noted “Revised 10/27/2014”.
5. SECTION 262813 FUSES: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 262813 – 1 thru 262813 – 2) noted “Revised 10/27/2014”.

6. SECTION 323113 CHAIN LINK FENCE AND GATES:
- a. Page 323113 – 3, Article 2.06, Add the following Paragraph:
- “D. Padlocks: Provide padlocks for all fence latches; Yale/Scovill PD400 Series with hardened steel triple plated shackle and two No. 47 keys with each padlock.”

DRAWINGS

7. Addendum Drawing:
- a. Drawing No. SK-HVS, dated “10/27/14” accompanies this Addendum and forms part of the Contract Documents.
8. Revised Drawings:
- a. Drawing Nos. E-115, E-302, E-307, E-308, E-309, E-310, E-311, E-312, E-313, E-314, E-315, E-316, E-401B, E-504, E-513, E-514 and E-602, noted “10/27/14 ADDENDUM NO. 2” accompany this Addendum and supersede the same numbered originally issued drawings.
9. Drawing Nos. E-401B, E-402B, E-403B, E-404B, E-405B, E-407B, E-408B, E-409B, E-412B, E-413B, E-415B, E-418B, E-419B, E-420B, E-421B, E-422B, E-425B, E-431B, and E-433B:
- a. Drawing Notes: (Pad Detail): Add Note 8 to each drawing as follows:
- “8. Pad details shown for schematic purposes only. Coordinate equipment penetration locations with approved submittal layouts from the manufacturer.”
10. Drawing No. E-604:
- a. Transformer Schedule: Change Transformer T-15A Secondary Voltage “120/208V, 3 ϕ , 4W” to “240V, 3 ϕ , 3W”.
- b. Transformer Secondary Feeders schedule: Change second (duplicate) “S-024” designation to “S-025”.
11. Drawing No. E-606:
- a. Panelboard MDP-15 Schedule:
- 1) Circuit 7-9-11: Change the following for the circuit:
Conduit Size to “1½ inch”, Phase & Neutral Size to “#2”, EGC Size to “#8”, Load Description to “BLSG 920 MAIN”, C.B. Poles to “3”, C.B. Trip to “100”.
- 2) Circuit 13-15-17: Change the following for the circuit:
Conduit Size to “1½ inch”, Phase & Neutral Size to “#2”, EGC Size to “#8”, Load Description to “BLSG 921 MAIN”, C.B. Poles to “3”, C.B. Trip to “100”.

END OF ADDENDUM

Margaret F. Larkin
Executive Director
Design and Construction

SECTION 260513

PRIMARY WIRING - 15KV NOMINAL

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ICEA S-93-639/NEMA WC-74, 5-46KV Shielded Power Cables for Use in the Transmission and Distribution of Electric Energy.
- B. ANSI/ICEA S-97-682 Standard for Utility Shielded Power Cables Rated 5 through 46 kV.
- C. AEIC CS8-07 Specification for Extruded Dielectric, Shielded Power Cables Rated 5 through 46 kV.
- D. UL 1072 Medium-Voltage Power Cables.
- E. IEEE 1202 Standard for Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies.
- F. IEEE 48 Standard Test Procedures and Requirements for Alternating-Current Cable Terminations.
- G. IEEE 404-2012 - Standard for Extruded and Laminated Dielectric Shielded Cable Joints.
- H. IEEE 386-2006 - Standard for Separable Insulated Connector Systems for Power Distribution Systems Above 600 V.

1.02 SUBMITTALS

- A. Waiver of Submittals: The “Waiver of Certain Submittal Requirements” in Section 013300 does not apply to this Section.
- B. Submittals Package: Submit the data specified below for preliminary approval all at the same time as a package. After preliminary approval, submit the data and samples specified below for final approval all at the same time as a package.
 - 1. Assemble submittal package in chronological order as indicated in the specifications sections and subsections; e.g., (260513-1.02C through 260513-2.06 ACCESSORIES
 - 2. No cable shall be installed until final approval. Any cable installed without final approval will be at the contractors own risk.
- C. Submit the following for preliminary approval:
 - 1. Indicate Specification Section and Subsection at the top of each Catalog Sheet, Specifications and Installation Instructions.

2. Complete manufacturer's construction details and specifications for the cables, including physical and electrical characteristics of insulation, shields and jackets.
 3. Overall dimension and ampacity of cable.
 4. Manufacturers' published product data sheets that indicate compliance with the aforementioned Reference Standards.
 5. Splicing and termination data, including the following:
 - a. Bill of Materials.
 - 1) Indicate specification section and subsection next to each item listed on the Bill of Materials; e.g., (260513-1.02, C, 4, f Drawings of splicings).
 - b. Method of connecting conductors.
 - c. Details of cable preparation.
 - d. Method of applying materials (including quantities and recommended tools).
 - e. Precautionary measures.
 - f. Drawings showing method of splicing, complete with dimensions.
 - g. Written statement from cable manufacturer that the specific splices and terminations submitted are acceptable.
 - h. Written statement from splice/termination manufacturer that the specific splices and terminations submitted are suitable for the proposed application.
 6. Furnish cable manufacturer's certified copies of the AEIC qualification test for the cable being proposed.
- D. Final Approval: After preliminary approval, submit the following for final approval:
1. Cable manufacturer's certified test data from tests performed on the completed cable.
 2. Samples of splicing and termination materials if requested (complete kits will be returned and, if approved, may be used in the Work). Include:
 - a. Full roll of all tapes in original box or container, with the date of manufacture indicated thereon.
 - b. Other materials in sufficient quantity to construct a complete splice and labeled for identification.
 - c. Entire factory packaged kit if splice or termination is of the kit type.
 3. Written statement from cable manufacturer indicating recommended pulling compounds.
 4. Resume of each cable splicer's experience. Include:
 - a. Details of type of high voltage splicing and terminations performed.
 - b. Types of cables which were spliced.
 - c. Job locations.
 - d. Number of years performing splices and terminations. Minimum 5 years required.
 - e. Certificate of training from the splice/termination manufacturer.
 - f. National Cable Splicing Certification Board certification. The cable splicer/terminator must have a certification from the

National Cable Splicing Certification Board (NCSCB) in the field of splicing and terminating shielded medium voltage (5 kV to 35 kV) power cable using pre-manufactured kits (pre-molded, heat-shrink, cold shrink).

5. Catalog sheets, specifications and installation instructions for all products.
 6. Company Field Advisor Data:
 - a. Name, business address and telephone number of Company Field Advisor secured for the required services.
 - b. Certified statement from the Company, listing the qualifications of the Company Field Advisor.
 - c. Services and each product for which authorization is given by the Company, listed specifically for this project.
- E. Contract Closeout Submittals:
1. Test Report: (Test Record-Power Cable Proof Test) form (BDC-362).
 2. Certificates:
 - a. Affidavit, signed by the cable manufacturer's Company Field Advisor and notarized, certifying that the cable has been installed in accordance with the manufacturer's recommendations and is operating properly.
 - b. Affidavit, signed by the splice and termination manufacturer's Company Field Advisor and notarized, certifying that the splices and terminations were constructed in accordance with the manufacturer's recommendations and are operating properly.

1.03 QUALITY ASSURANCE

- A. If brand names other than those specified are proposed for use, furnish the AEIC core and thermo-mechanical qualification test reports. Include a list of 5 Completed Installations indicating name of facility contact person with phone number, voltage, size and length of EPR cable installed.
- B. Company Field Advisor: Secure the services of the cable manufacturer's Company Field Advisor for a minimum of 16 working hours for the following:
 1. Render advice regarding method of installing cable.
 2. Inspection of equipment for installing cable.
 3. Witness 15 percent of cable pulling.
 4. Witness construction of at least one splice and one termination by each cable splicer who will be doing the actual cable splicing.
 - a. If the splices or terminations are other than the cable manufacturer's, secure the services of the splice and termination manufacturer's Company Field Advisor to concurrently witness construction of the splices and terminations and also certify with an affidavit that the splices and terminations were constructed in accordance with the splice and termination manufacturer's recommendations.
 5. Witness high voltage after installation test.

- 6. Certify with an affidavit that the aforementioned particulars are satisfactory and the cable is installed in accordance with cable manufacturer's recommendations.

- C. Testing Company: Secure the services of a qualified InterNational Electrical Testing Association (NETA) accredited independent testing company to perform specified field quality assurance testing, for a high voltage after installation test: Test Record-Power Cable Proof Test form BDC-362).

1.04 DELIVERY, STORAGE AND HANDLING

- A. Cable Delivery:
 - 1. No insulated cable over one year old when delivered to the site will be acceptable.
 - 2. Keep ends of cables sealed at all times, except when making splices or terminations. Use heat shrinkable plastic end caps with sealant as produced by Raychem Corp., or Thomas & Betts Corp. (Elastimold), or other methods approved by cable manufacturer.
 - 3. Include the following data durably marked on each reel:
 - a. Facility name and address.
 - b. Contractor's name.
 - c. Project title and number.
 - d. Date of manufacture.
 - e. Cable size and voltage rating.
 - f. Manufacturer's name.
 - g. Linear feet of cable.
 - h. Location where cable is to be installed (Example: Between manholes Nos. _____ and _____).

- B. Cable Storage: Store where cable will be at optimum workability temperature recommended by cable manufacturer.

1.05 MAINTENANCE

- A. Special Tools: Furnish one set of special tools for the assembly of premolded splices (if used). Store them at the Site where directed.

PART 2 PRODUCTS

2.01 CABLES

- A. Scope: 15 kV, 133% insulation level, single conductor cable, UL listed Type MV-105 for general applications installed indoors or outdoors in duct, conduit, tray, aerially and direct burial. Cable shall be manufactured and tested in accordance with the ICEA, AEIC, and UL standards listed in Section 1.01 of this specification.

- B. Conductors: The conductor shall be annealed bare or coated copper, Class B, compressed or compact stranding in accordance with ASTM B8, B496. The insulation shall be free-stripping from the conductor.
- C. Conductor Shield: Extruded semi-conducting thermosetting compound with thickness and properties in accordance with ICEA S-97-682.
- D. Insulation: Ethylene Propylene rubber (EPR), 105C, colored to contrast with the shield layers. The nominal insulation thickness shall be 220 mils. Physical and electrical properties of the insulation shall be in accordance with ICEA S-97-682 for Class III insulation.
- E. Insulation Shield: Extruded thermoset semi-conducting polymeric layer, free stripping from the insulation. It shall be in intimate contact with the outer surface of the insulation and shall be free-stripping, leaving no conducting particles or other residue on the insulation surface. The layer shall be legibly identified as being semi-conducting. The thickness and properties of the layer shall be in accordance with ICEA S-97-682.
- F. Metallic Shield: 5 mil annealed copper tape shield with a nominal 25% overlap. The tape shall meet the requirements of ICEA S-97-682.
- G. Jacket: Polyvinyl Chloride (PVC), Thermoset Chlorinated Polyethylene (CPE), or Thermoplastic CPE overlaying jacket with physical properties and thicknesses in accordance with the requirements of UL 1072 and ICEA S-93-639,
- H. Cable shall be UL listed Type MV-105, marked "SUN RES FOR CT USE"
- I. Approved Manufacturers: General Cable (Spec 6355) or equivalent by Okonite Co., Prysmian Power Cables and Systems, or Southwire.

2.02 TERMINATIONS

- A. Materials: All materials required for a complete termination shall be an engineered kit from one manufacturer, designed specifically for the type of cable and conductor to be terminated.
- B. Ampere Rating: Not less than ampere rating of cable.
- C. Voltage Rating: Not less than voltage rating of cable.
- D. Manufacturer: Furnish terminations by one of the manufacturers listed below, if acceptable to the cable manufacturer.
 - 1. IEEE 48 Class 1 outdoor Terminations:
 - a. Elastimold's series PCT-1, 16THG, or 35MTG; G & W Electric Co.'s Easy-On II Terminator or Slip-On Terminator; 3M Cold-Shrink QT-III Terminations; or Raychem Corp.'s Heat-Shrinkable HVT. Or when required Capnut type pothead as manufactured by G & W Electric Co. Provide all sealing and grounding materials as recommended by the manufacturer.

Equip terminations with or without skirts as recommended by manufacturer.

2. IEEE 48 Class 3 indoor Terminations:
 - a. Elastimold's series PCT-1, 35MSC or 35MTGI; G & W Electric Co.'s Easy-On II Terminator or Slip-On Terminator; 3M Cold-Shrink QT-III Terminations; or Raychem Corp.'s Heat-Shrinkable HVT. Provide all grounding materials as recommended by the manufacturer. Equip terminations with or without skirts as recommended by manufacturer.

2.03 SPLICES

- A. Materials: All materials required for a complete splice shall be an engineered kit from one manufacturer, designed specifically for the type of cable and conductor to be spliced.
- B. Ampere Rating: Not less than ampere rating of cable.
- C. Voltage Rating: Not less than voltage rating of cable.
- D. Splices Installed in Vaults, Manholes (any wet locations): Waterproof and submersible.
- E. Manufacturer: Furnish splices by one of the manufacturer's listed below, if acceptable to the cable manufacturer. Provide all sealing and grounding materials.
 1. Elastimold's series PCJ; G&W Electric Co.'s Universal Splicing System; 3M's Cold Shrink Splice Kits; or Raychem Corp.'s Heat-Shrinkable HVS.

2.04 DEAD FRONT EQUIPMENT CONNECTIONS

- A. 200A Loadbreak: Elastimold's series 165LR or 166LR; Cooper Power LE215. All with test points when required.
- B. 200A Dead break: Elastimold's series 156LR; Cooper Power DE225. All with test points when required.
- C. 600A Dead break: Elastimold's series K655LR, Raychem Corp's ELB-15 series, or Cooper Power BOL-T class. All with test Point when required.

2.05 CABLE DEAD ENDS (FULL VOLTAGE)

- A. For Solid Dielectric Cable:
 1. Elastimold's Premolded Splice with Dead-End Plug, or Raychem Corp.'s Live End Seals HVES.

2.06 ACCESSORIES

- A. Pulling Compounds: As recommended by cable manufacturer.
 - 1. Polywater “A”, “G”, “J” or “WJ” lubricants, Plymouth/Bishop No. 45 Cable Pulling Lubricant, Aqua-Gel II (Ideal Industries, Inc.) or Aqua-Gel CW (Ideal Industries, Inc.).

- B. Arc Proofing Tapes:
 - 1. Arc Proofing Tape: Mac Products Inc.’s AP30-30 or AP, 3M’s 77, Plymouth Rubber Co.’s Plymouth Bishop 53 Plyarc, or Quelcor Inc.’s Quelpyre.
 - 2. Glass Cloth Tape: Mac Products Inc.’s TAPGLA 5066, 3M’s 69, or Plymouth Rubber Co.’s Plymouth Bishop 77 Plyglas.
 - 3. Glass-Fiber Cord: Mac Products Inc.’s MAC 0527, or Quelcor Inc.’s QTC-250.

- C. Tags: Precision engrave letters and numbers with uniform margins, character size minimum 3/16 inches high.
 - 1. Phenolic: Two color laminated engraver’s stock, 1/16 inch minimum thickness, machine engraved to expose inner core color (white).
 - 2. Aluminum: Standard aluminum alloy plate stock, minimum .032 inches thick, engraved areas enamel filled or background enameled with natural aluminum engraved characters.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Cables:
 - 1. Install cables in conduit after conduit system is completed.
 - 2. Keep ends of cables sealed watertight at all times, except when making splices or terminations.
 - 3. No grease, oil, lubricant other than approved pulling compound may be used to facilitate the pulling-in of cables.
 - 4. Use pulling eye attached to conductor(s) for pulling-in cables. Cable grip will not be allowed. Seal pulling eye attachment watertight.
 - 5. Pull all cables with a dynamometer or strain gage incorporated into the pulling equipment. Do not pull cables unless the Director’s Representative is present to observe readings on the dynamometer or strain gage during the time of actual pulling. Do not exceed 1590 pounds total strain on #2 AWG size cable for a 3 conductor pull (3 single conductor cables) and 5050 pounds total strain on #4/0 size cable for a 3 conductor pull (3 single conductor cables).

- B. Terminations and Splices:
 - 1. General: Splice and terminate cable in accordance with manufacturer’s approved installation instructions, employing specific tools recommended by the manufacturer.
 - 2. Use IEEE 48 Class 1 terminations to terminate cable in wet locations.

3. Use IEEE 48 Class 1 terminations to terminate cable inside of outdoor equipment which is not equipped with space heaters (pad mounted switches, pad mounted transformers, etc). Class 1 or Class 3 terminations may be used to terminate cable inside of outdoor switchgear cubicles which are equipped with space heaters (metal-clad switchgear, metal-enclosed interrupter switchgear, etc.).
 4. Use IEEE 48 Class 1 or Class 3 Terminations to terminate cable in dry locations.
 5. Ground shield at splices and terminations.
 6. Incorporate approved method to prevent moisture from entering splices through grounding conductor.
- C. Arc Proofing: Arc proof feeders installed in a common pullbox or manhole as follows:
1. Arc proof new feeders.
 2. Arc proof existing feeders that are spliced to new feeders.
 3. Arc proof each feeder as a unit with half-lapped layer of 55 mils thick arc proofing tape, random wrapped or laced with glass cloth tape or glass-fiber cord. For arc proofing tape less than 55 mils thick add layers to equivalent of 55 mils thick arc proofing tape.
- D. Identification of Feeders: Identify feeders in manholes, pullboxes and in equipment to which they connect:
1. Install tags on each insulated conductor indicating phase leg. Attach tags with non-ferrous metal wire. Install phase leg tags under arc proofing tapes.
 2. Install tags on each feeder indicating feeder number, date installed (month, year), type of cable, voltage rating, size, and manufacturer. Attach tags to feeders with non-ferrous metal wire or brass chain. Install tags so that they are easily read without moving adjacent feeders or require removal of arc proofing tapes.
- E. Phase Relationship: Connect feeders to maintain phase relationship through system. Phase legs of feeders shall match bus arrangements in equipment to which the feeders are connected.

3.02 FIELD QUALITY CONTROL

- A. High Voltage After Installation Test: (Test Record-Power Cable Proof Test) form (BDC-362).
1. Have the cable installation tested by the testing company.
 2. Perform test after cable has been installed complete with all splicing, bonding, etc., and prior to placing cable into service.
 3. Perform test with potential and duration specified by the State after approval of manufacturer's certified test data. Follow test procedure summarized on Test Record-Power Cable Proof Test form BDC-362 and applicable test methods in ICEA and AEIC Specifications. Do not make tests until test voltages and duration have been specified in writing by the State.

4. List results of the tests on form BDC-362 supplied by the Director's Representative.
5. Perform test in the presence of the Director's Representative and the Company Field Advisor.
6. Test is not required for transformer vault cables.
7. All separable connector interfaces must be plugged with appropriate mating product during proof testing. Consult with manufacturer's field representative for instruction.

3.03 CABLE SCHEDULE

- A. Use the following for primary wiring:
 1. Cable as outlined in Section 2.01 of this specification.
- B. For primary ground use XHHW-2 or THWN-2 insulated cable rated 600 volts.

END OF SECTION

SECTION 262413
SWITCHBOARDS

PART 1 GENERAL

1.01 REFERENCES

- A. NEMA, and UL 891.

1.02 DEFINITIONS

- A. ITIC (Information Technology Industry Council) Curve: Describes how much or how little voltage IT equipment can sustain without damage and over what length of time.

1.03 SUBMITTALS

- A. Waiver of Submittals: The "Waiver of Certain Submittal Requirements" in Section 013300 does not apply to this Section.
- B. Submittals Package: Submit the shop drawings, product data, and quality control submittals specified below at the same time as a package.
- C. Shop Drawings; include the following for each switchboard:
 - 1. Front and plan view with overall dimensions.
 - 2. Details showing type of construction and available conduit space.
 - 3. Voltage rating, and continuous current rating of the through bus and distribution sections.
 - 4. Short-circuit current rating. Fully rated equipment rating is required.
 - 5. Enumeration of each circuit breaker including frame size, ATE, number of poles, and interrupting capacity.
 - a. Indicate circuit breakers are suitable for the switchboards' fully rated equipment rating. Series rated combinations will not be considered.
 - 6. Wiring and schematic diagrams.
 - 7. A coordinated selective scheme between the main device and feeder devices so that under fault conditions the feeder device clears the fault while the main device remains closed. Submit time current characteristic curves for each overcurrent protective device contained within the switchboard on a single log-log graph.
 - 8. A statement for each switchboard indicating if it will, or will not, bear a UL label. If a section cannot bear a UL label, state the specific reasons why it is not qualified to bear the UL label.
 - 9. Cable terminal sizes.
 - 10. Power and Energy Meter.
- D. Product Data:
 - 1. Catalog sheets, specifications and installation instructions.

- a. For devices equipped with ground fault protection, include information sheets describing system testing instructions and test form which comply with UL 891 requirements.
 - 2. Bill of materials.
 - 3. Name, address and telephone number of nearest fully equipped service organization.
- E. Quality Control Submittals:
- 1. Company Field Advisor Data: Include:
 - a. Name, business address and telephone number of Company Field Advisor secured for the required services.
 - b. Certified statement from the Company listing the qualifications of the Company Field Advisor.
 - c. Services and each product for which authorization is given by the Company listed specifically for this project.
- F. Contract Closeout Submittals:
- 1. System acceptance test report.
 - 2. Certificate: Affidavit, signed by the Company Field Advisor and notarized, certifying that the system meets the contract requirements and is operating properly.
 - 3. Operation and Maintenance Data: Deliver 2 copies, covering the installed products, to the Director's Representative.

1.04 QUALITY ASSURANCE

- A. Equipment Qualifications For Products Other Than Those Specified:
- 1. At the time of submission provide written notice to the Director of the intent to propose an “or equal” for products other than those specified. Make the “or equal” submission in a timely manner to allow the Director sufficient time to review the proposed product, perform inspections and witness test demonstrations.
 - 2. If products other than those specified are proposed for use furnish the name, address, and telephone numbers of at least 5 comparable installations that can prove the proposed products have performed satisfactorily for 3 years. Certify in writing that the owners of the 5 comparable installations will allow inspection of their installation by the Director's Representative and the Company Field Advisor.
 - a. Make arrangements with the owners of 2 installations (selected by the Director) for inspection of the installations by the Director's Representative. Also obtain the services of the Company Field Advisor for the proposed products to be present. Notify the Director a minimum of 3 weeks prior to the availability of the installations for the inspection, and provide at least one alternative date for each inspection.
 - b. Only references from the actual owner or owner’s representative (e.g., Maintenance Supervisor, etc.) will be accepted. References from dealers, system installers or others, who are not the actual owners of the proposed products, are not acceptable.

- 1) Verify the accuracy of all references submitted prior to submission and certify in writing that the accuracy of the information has been confirmed.
 3. The product manufacturer shall have test facilities available that can demonstrate that the proposed products meet the contract requirements.
 - a. Make arrangements with the test facility for the Director's Representative to witness test demonstrations. Also obtain the services of the Company Field Advisor for the proposed product to be present at the test facility. Notify the Director a minimum of 3 weeks prior to the availability of the test facility, and provide at least one alternative date for the testing.
 4. Provide written certification from the manufacturer that the proposed products are compatible for use with all other equipment proposed for use for this system and meet all contract requirements.
- B. Company Field Advisor: Secure the services of a Company Field Advisor for a minimum of 8 working hours for the following:
1. Render advice regarding switchboard installation, and final adjustment of the switchboard devices.
 2. Witness final system test and then certify with an affidavit that the switchboard is installed in accordance with the contract documents and is operating properly.
 3. Train facility personnel on the operation and maintenance of the switchboard devices (minimum of two 1 hour sessions).
 4. Explain available service programs to facility supervisory personnel for their consideration.
- C. Service Availability: A fully equipped service organization shall be available to service the completed Work.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Protection: Provide supplemental heating devices, such as incandescent lamps or low wattage heaters within the enclosure or under a protective cover to control dampness. Maintain this protection from the time equipment is delivered to the site until it is energized.

PART 2 PRODUCTS

2.01 SWITCHBOARD

- A. The listing of specific manufacturers does not imply acceptance of their products that do not meet the specified ratings, features and functions. Manufacturers listed are not relieved from meeting these specifications in their entirety.
- B. Eaton Corp.'s Pow-R-Line C, Square D Co.'s QED-2, General Electric Co.'s Spectra Line, Siemens Sentron Series, having:
1. Ratings as indicated on drawings.
 2. UL label "SUITABLE FOR USE AS SERVICE EQUIPMENT".
 3. Front accessibility.

4. Sections flush at rear (rear alignment).
5. Main device: Stationary circuit breaker (see circuit breaker paragraph).
6. Fully rated copper bus bars.
 - a. Ampere rating of through bus not less than frame size of main device.
7. Full length copper ground bus.
8. Full capacity copper neutral bus.
9. Sections that are designated "space" or "provision for future breaker" equipped with all accessories required to accept a future circuit breaker.
10. Space heaters with thermostatic control.
11. Circuit Breakers:
 - a. Mounting: Group mounted, or individually mounted as necessary to accommodate the circuit breaker style and switchboard construction.
 - b. Style: Molded case, or power circuit breakers, as required to accommodate the circuit breaker components.
 - c. Trip Device: Programmable solid state.
 - d. Interrupting Capacity: Equal to, or greater than, the short circuit rating required for the switchboard.
 - e. Component Description: See switchboard schedule for specific components required for each circuit breaker. In addition to the specific components, equip each circuit breaker with additional components as required to achieve a coordinated selective scheme between the main device and the feeder devices.

2.02 SURGE PROTECTIVE DEVICES

- A. General: Where indicated on the drawings, the switchboards shall be provided with factory installed directly to bus, internal modular Surge Protective Device (SPD) equipment having:
 1. ANSI/UL 1449 3rd Edition compliant – Listed Category C, Type 2 with protected modes for 3 phase, 4 wire Wye configured system: L-G, L-N, L-L and N-G.
 2. Rating (ANSI / IEEE C62.41 location Category C): The minimum surge current capacity the device is capable of withstanding shall be 250 kA per phase, 125 kA per mode minimum.

2.03 MICROPROCESSOR BASED MULTIFUNCTION POWER AND ENERGY METERS

- A. Where indicated on the drawings, provide a factory installed Panel Mounted Power and Energy Meter on switchboards with main bus bars rated 2500 amperes or above with the following parameters:
 1. Same manufacturer as the switchboard.
 2. Single piece design: Transducer with graphic display module.
 3. 120 VAC control power.
 4. True RMS voltage and current measurement.
 5. Metered parameters:
 - a. Instantaneous, average, minimum, and maximum: Phase current, neutral current, ground current, line voltage, phase voltage, frequency, power factor per phase and three phase total, real

- power per phase and total, reactive power per phase and total, apparent power per phase and total.
 - b. Real energy per phase and total, reactive energy per phase and total, apparent energy per phase and total.
 - c. Phasors.
 - d. User configured sliding window for real, reactive and apparent power peak demand with date and time stamp.
 - e. Phase voltage percent total harmonic distortion.
 - f. Phase current percent total harmonic distortion.
 - 6. Accuracy:
 - a. Energy, and demand power: 0.2% in accordance with ANSI C12.20.
 - 7. Instrument current transformers shall be factory wired to shorting blocks or other approved method to prevent open-circuiting the current transformers. The meter shall also be user programmable for current to any CT ratio.
 - 8. Capable of metering up to 600 volts without external potential transformers. The meter shall also be user programmable for voltage range to any PT ratio.
 - 9. Embedded web server that includes real time circuit information in both numeric and graphical visual formats.
 - 10. Communications: Ethernet TCP/IP, 10/100 Base T, RJ-45 connection.
 - 11. The meter shall have a real-time clock with the added capability to synchronize with a network time server to maintain time accuracy.
 - 12. Out of limit event triggers and logging.
 - 13. Sampling Rate: The meter shall provide sampling at a minimum of 512 samples per cycle per channel.
 - 14. The embedded web server shall provide a graphic plot of specific events against an ITIC curve.
 - 15. Sag, swell and waveform recording: Recorded at 512 samples per cycle, contain pre and post event data, and shall include the ability to zoom and to scroll horizontally. The meter shall store waveform data on the meter ftp server in COMTRADE format and be accessible via a web browser.
 - 16. Historical Trending: Historical trend logging for graphical viewing from an embedded WEB server and the graphic display module. The graphical views of historical data shall support both pan and zoom functions.
 - 17. Memory: 10 MB minimum.
 - 18. The meter shall have I/O expandability provisions through an optional card slot on the back.
- B. Where indicated on the drawings, provide a factory installed Panel Mounted Power and Energy Meter on switchboards with main bus bars rated below 2500 amperes with the following parameters:
- 1. Same manufacturer as the switchboard.
 - 2. LCD or LED display.
 - 3. 120 VAC control power.
 - 4. True RMS voltage and current measurement.
 - 5. Metered parameters:
 - a. Instantaneous, minimum, and maximum: Phase current, neutral current, line voltage, phase voltage, frequency, power factor per

- phase and three phase total, real power per phase and total, reactive power per phase and total, apparent power per phase and total.
- b. Total real energy, reactive energy, apparent energy.
- c. User configured sliding window for real, reactive and apparent power peak demand with date and time stamp.
- d. Phase voltage percent total harmonic distortion.
- e. Phase current percent total harmonic distortion.
- 6. Accuracy:
 - a. Energy, and demand power: 0.2% in accordance with ANSI C12.20.
- 7. Instrument current transformers shall be factory wired to shorting blocks or other approved method to prevent open-circuiting the current transformers under energized conditions. The meter shall also be user programmable for current to any CT ratio.
- 8. Capable of metering up to 600 volts without external potential transformers. The meter shall also be user programmable for voltage range to any PT ratio.
- 9. Embedded web server that includes real time circuit information in both numeric and graphical visual formats.
- 10. Communications: Ethernet TCP/IP, 10/100 Base T, RJ-45 connection.
- 11. The meter shall have a real-time clock with the added capability to synchronize with a network time server to maintain time accuracy.
- 12. Out of limit event triggers and logging.
- 13. Historical Trending: Historical trend logging for graphical viewing from an embedded WEB server. The graphical views of historical data shall support both pan and zoom functions.
- 14. The meter shall have I/O expandability provisions through an optional card slot on the back.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install switchboards in accordance with NEMA Publication No. PB2.1 "Instructions for Proper Handling, Installation, Operation and Maintenance of Deadfront Distribution Switchboards".
 - 1. Set and program the switchboard devices in accordance with the approved coordinated selective scheme.
- B. Install foundation channels for anchoring and leveling of each switchboard.
- C. Identification:
 - 1. Install on the front of each circuit breaker, a phenolic nameplate indicating load served by circuit breaker.
 - 2. Stencil on front of each switchboard with white paint in 1/2 inch lettering "SB-1, etc." corresponding to switchboard designations on the drawings, and electrical parameters (phase, wire, voltage).

3.02 FIELD QUALITY CONTROL

- A. Preliminary System Test:
 - 1. Preparation: Have the Company Field Advisor adjust the completed switchboard devices and then operate them long enough to assure that they are performing properly.
 - 2. Run a preliminary test for the purpose of:
 - a. Determining whether the switchboard is in a suitable condition to conduct an acceptance test.
 - b. Checking instruments and equipment.
 - c. Training facility personnel.

- B. System Acceptance Test:
 - 1. Preparation: Notify the Director's Representative at least 3 working days prior to the test so arrangements can be made prior to the test to have a Facility Representative witness the test.
 - 2. Make the following tests:
 - a. Test devices which have ground fault protection in accordance with the approved information sheets and test form.
 - b. Test programmable solid state trip devices in accordance with the manufacturer's recommendations.
 - 3. Supply all equipment necessary for system adjustment and testing.
 - 4. Submit written report of test results signed by the Company Field Advisor and the Director's Representative. Mount a copy of the final report in a plexiglass enclosed frame assembly in a conspicuous location on the switchboard.

END OF SECTION

SECTION 262416

PANELBOARDS

PART 1 GENERAL

1.01 REFERENCES

- A. The latest edition of: NEMA PB-1, UL-50, UL-67, ANSI C37.81.

1.02 SUBMITTALS

- A. Waiver of Submittals: The “Waiver of Certain Submittal Requirements” in Section 013300 does not apply to this Section.
- B. Submittal Packages: Submit the shop drawings, product data, and the quality control submittals specified below at the same time as a package.
- C. Shop Drawings; include the following for each panelboard:
 - 1. Cabinet and gutter size.
 - 2. Voltage and current rating.
 - 3. Panelboard short circuit rating: Fully rated equipment is required.
 - 4. Circuit breaker enumeration (frame, ATE, poles, I.C.).
 - a. Indicate circuit breakers are suitable for the panelboards’ fully rated equipment rating. Series rated combinations will not be considered.
 - 5. When indicated on the drawings, a coordinated selective scheme between the main circuit breaker and branch/feeder circuit breakers so that under fault conditions the branch/feeder circuit breaker clears the fault while the main circuit breaker remains closed.
 - 6. Submit time current characteristic curves for each overcurrent protective device contained within each panelboard on a single log-log graph.
 - 7. Cable terminal sizes
 - 8. Power and Energy Meter.
 - 9. Locks.
 - 10. Accessories.
- D. Product Data:
 - 1. Catalog sheets, specifications and installation instructions.
 - 2. Bill of materials.
- E. Quality Control Submittals:
 - 1. List of Completed Installations: If brand names other than those specified are proposed for use, furnish the name, address, and telephone number of at least 5 comparable installations that can prove the proposed products have operated satisfactorily for one year.
 - 2. Company Field Advisor Data: Include:
 - a. Name, business address and telephone number of Company Field Advisor secured for the required services.

- b. Certified statement from the Company listing the qualifications of the Company Field Advisor.
 - c. Services and each product for which authorization is given by the Company listed specifically for this project.
- F. Contract Closeout Submittals:
- 1. System acceptance test report.
 - 2. Certificate: Affidavit, signed by the Company Field Advisor and notarized, certifying that the system meets the contract requirements and is operating properly.
 - 3. Operation and Maintenance Data: Deliver 2 copies, covering the installed products, to the Director's Representative.

PART 2 PRODUCTS

2.01 PANELBOARDS

- A. The listing of specific manufacturers does not imply acceptance of their products that do not meet the specified ratings, features and functions. Manufacturers listed are not relieved from meeting these specifications in their entirety.
- B. As produced by Cutler-Hammer/Eaton Corp. with LT Trim (Eaton EZ Trim shall not be considered), General Electric Co., Siemens or Square D Co., having:
 - 1. Flush or surface type cabinets as indicated on the drawings.
 - 2. Increased gutter space for gutter taps, sub-feed wiring, through-feed wiring, oversize lugs.
 - 3. **SUITABLE FOR USE AS SERVICE EQUIPMENT** where used as service equipment.
 - 4. Door and one piece trim. Door fastened to trim with butt or piano hinges. Trim fastened to cabinet with devices having provision for trim adjustment.
 - 5. Yale No. 511S locks with brass cylinder rosette, blind fastened from inside of door. 2 No. 47 keys with each lock (Exception: Not more than 7 keys, total).
 - 6. Solid copper bus bars. Ampere rating of bus bars not less than frame size of main circuit breaker.
 - 7. Ratings as indicated on the drawings.
 - 8. Full capacity copper neutral bus where neutrals are required..
 - 9. Copper equipment grounding bus.
 - 10. Sections designated "space" or "provision for future breaker" equipped to accept future circuit breakers.
 - 11. Lock on devices for exit light, fire alarm, stair well circuits.
 - 12. Provisions for padlocking circuit breaker handle in OFF position where indicated.
 - 13. Directory.
 - 14. Short circuit rating not less than indicated on panelboard schedule. Furnish fully rated equipment (the short circuit rating of the panelboard is equal to the lowest interrupting rating of any device installed in the panelboard).
 - 15. Thermal magnetic, molded case, bolt-on circuit breakers:
 - a. Mounting: Individually mounted main circuit breaker (when

MCB is required), and group mounted branch/feeder circuit breakers to accommodate the circuit breaker style and panelboard construction.

- b. Components: See panelboard schedule for specific components required for each circuit breaker. In addition to the specific components, equip each circuit breaker with additional components as required to achieve a coordinated selective scheme between the main circuit breaker and the branch/feeder circuit breakers.
- c. Single pole 15 ATE and 20 ATE circuit breakers marked SWD where used as switches.
- d. Single pole and two pole 15, 20, and 30 ATE circuit breakers rated for high intensity discharge lighting loads when applicable.

2.02 SURGE PROTECTIVE DEVICES

- A. General: Where indicated on the drawings, the panelboards shall be provided with factory installed directly to bus, internal modular Surge Protective Device (SPD) equipment having:
 - 1. ANSI/UL 1449 3rd Edition compliant – Listed Category C, Type 2 with protected modes for 208/120 volt, 3 phase, 4 wire Wye configured system: L-G, L-N, L-L and N-G.
 - 2. Rating (ANSI / IEEE C62.41 location Category C): The minimum surge current capacity the device is capable of withstanding shall be 250 kA per phase, 125 kA per mode minimum.

2.03 MICROPROCESSOR BASED MULTIFUNCTION POWER AND ENERGY METERS

- A. Where indicated on the drawings, provide a factory installed Panel Mounted Power and Energy Meter on panelboards with main bus bars rated 800 amperes and above with the following parameters:
 - 1. Same manufacturer as the panelboard.
 - 2. LCD or LED display.
 - 3. 120 VAC control power.
 - 3. True RMS voltage and current measurement.
 - 4. Metered parameters:
 - a. Instantaneous, minimum, and maximum: Phase current, neutral current, line voltage, phase voltage, frequency, power factor per phase and three phase total, real power per phase and total, reactive power per phase and total, apparent power per phase and total.
 - b. Total real energy, reactive energy, apparent energy.
 - c. User configured sliding window for real, reactive and apparent power peak demand with date and time stamp.
 - d. Phase voltage percent total harmonic distortion.
 - e. Phase current percent total harmonic distortion.
 - 5. Accuracy:

- a. Energy, and demand power: 0.2% in accordance with ANSI C12.20.
 6. Instrument current transformers shall be factory wired to shorting blocks or other approved method to prevent open-circuiting the current transformers under energized conditions. The meter shall also be user programmable for current to any CT ratio.
 7. Capable of metering up to 600 volts without external potential transformers. The meter shall also be user programmable for voltage range to any PT ratio.
 8. Embedded web server that includes real time circuit information in both numeric and graphical visual formats.
 9. Communications: Ethernet TCP/IP, 10/100 Base T, RJ-45 connection.
 10. The meter shall have a real-time clock with the added capability to synchronize with a network time server to maintain time accuracy.
 11. Out of limit event triggers and logging.
 12. Historical Trending: Historical trend logging for graphical viewing from an embedded WEB server. The graphical views of historical data shall support both pan and zoom functions.
 13. The meter shall have I/O expandability provisions through an optional card slot on the back.
- B. Where indicated on the drawings, provide a factory installed Panel Mounted Power and Energy Meter on panelboards with main bus bars rated below 800 amperes with the following parameters:
1. Same manufacturer as the panelboard. DIN rail mounted.
 2. LCD or LED display.
 3. 120 VAC control power.
 4. True RMS voltage and current measurement.
 5. Metered parameters: Phase current, line voltage, phase voltage, frequency, power factor per phase and three phase total, real power per phase and total, reactive power per phase and total, apparent power per phase and total, total real energy, total reactive energy, total apparent energy, user configured sliding window for real, reactive and apparent power peak demand.
 6. Accuracy:
 - a. Energy, and demand power: 0.5% in accordance with ANSI C12.20.
 7. Instrument current transformers shall be factory wired to shorting blocks or other approved method to prevent open-circuiting the current transformers under energized conditions. The meter shall also be user programmable for current to any CT ratio.
 8. Capable of metering up to 480 volts without external potential transformers. The meter shall also be user programmable for voltage range to any PT ratio.
 9. Communications: Modbus RTU.

2.04 NAMEPLATES

- A. General: Precision engrave letters and numbers with uniform margins, character size minimum 3/16 inch high.
 - 1. Phenolic: Two color laminated engravers stock, 1/16 inch minimum thickness, machine engraved to expose inner core color (white).
 - 2. Aluminum: Standard aluminum alloy plate stock, minimum .032 inches thick, engraved areas enamel filled or background enameled with natural aluminum engraved characters.
 - 3. Materials for Outdoor Applications: As recommended by nameplate manufacturer to suit environmental conditions.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install panelboards in accordance with NEMA Publication No. PB1.1 "General Instructions for Proper Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less".
- B. Flush Cabinets: Set flush cabinets so that edges will be flush with the finished wall line. Where space will not permit flush type cabinets to be set entirely in the wall, set cabinet as nearly flush as possible, and cover the protruding sides with the trim extending over the exposed sides of the cabinet and back to the finished wall line.
- C. Directory: Indicate on typewritten directory the equipment controlled by each circuit breaker, and size of feeder servicing panelboard. For power panelboards also include ATE rating and feeder size for each breaker.
- D. Remove the neutral to ground main/system bonding jumper unless the panelboard is used for a service entrance or if the panel is fed by a separately derived system. Turn the bonding jumper over to the Director's Representative.
- E. Identification:
 - 1. Use nameplates, or stencil on front of each panelboard with white paint, "LP-1, PP-1, etc." in 1/2 inch lettering corresponding to panelboard designations on the drawings, and electrical parameters (phase, wire, voltage).
 - 2. Install a nameplate on each panelboard that explains the means of identifying each ungrounded system conductor by phase and system. Examples of nameplate statements:
 - a. Identification of 120/240 Volt Circuit Conductors:
 - 2 wire circuit - white*, black.
 - 3 wire circuit - white*, black, red.
 - 4 wire circuit - white*, black, red, blue.
 - *White is used only as neutral. Where neutral is not required, black, red, or black, red, blue is used for phase to phase circuits.
 - b. Identification of 277/480 Volt Circuit Conductors:

2 wire circuit - natural gray**, brown.

3 wire circuit - natural gray**, brown, yellow.

4 wire circuit - natural gray**, brown, yellow, orange.

**Natural gray is used only as neutral. Where neutral is not required, brown, yellow, or brown, yellow, orange is used for phase to phase circuits.

END OF SECTION

SECTION 262813

FUSES

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Catalog sheets, specifications and installation instructions.

1.02 MAINTENANCE

- A. Spare Parts:
 - 1. Six spare fuses of each size and category, including any accessories required for a complete installation.
 - 2. Special tools if required for installation or removal of fuses.

PART 2 PRODUCTS

2.01 FUSEHOLDERS

- A. Equipment provided shall be furnished with fuseholders to accommodate the fuses specified.

2.02 FUSES RATED 600V OR LESS

- A. Fuses for Safety Switches (Motor, Lighting and Heating Circuits) and Service Disconnects:
 - 1. Cartridge Type (250 Volts, 600 Amperes or Less): Dual element time-delay, UL Class RK-1, 200,000 amperes R.M.S. symmetrical interrupting capacity:
 - a. Mersen Inc.'s Type A2D-R.
 - b. Cooper Industries Inc.'s/Bussman Div. Type LPN-RK-SP.
 - c. Littlefuse Inc.'s Type LLNRK.
 - 2. Cartridge Type (600 Volts, 600 Amperes or Less): Dual element time-delay, UL Class RK-1, 200,000 amperes R.M.S. symmetrical interrupting capacity:
 - a. Mersen Inc.'s Type A6D-R.
 - b. Cooper Industries Inc.'s/Bussmann Div. Type LPS-RK-SPI.
 - c. Littlefuse Inc.'s Type LLSRK-ID.
 - 3. Cartridge Type (600 Volts or Less - Above 600 Amperes): Current limiting, UL Class L, 200,000 amperes R.M.S. symmetrical interrupting capacity:
 - a. Mersen Inc.'s Type A4BQ.
 - b. Cooper Industries Inc.'s/Bussmann Div. Type KRP-C.
 - c. Littlefuse Inc.'s Type KLPC.

2.03 FUSES RATED OVER 600V

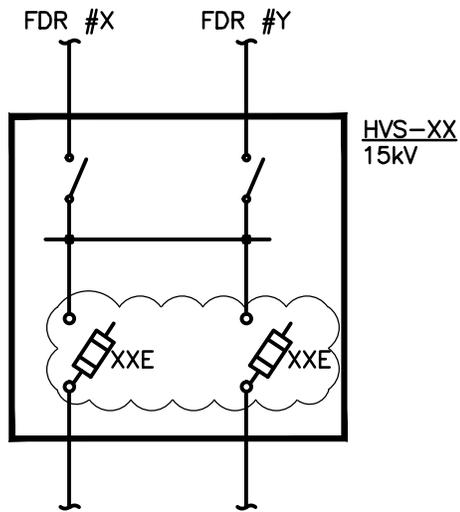
- A. Fuses for Pad Mounted High Voltage Switch and Fuse Assembly: Mersen 9F60 or 9F62, or S & C Electric Co.'s Type SML.
- B. Fuses for Primary Cutouts:
 - 1. Cutouts Rated 14.4KV: EEI-NEMA standard Type K (fast) distribution fuse links: As manufactured by Cooper Bussmann or S & C Electric Co.

PART 3 EXECUTION

3.01 INSTALLATION

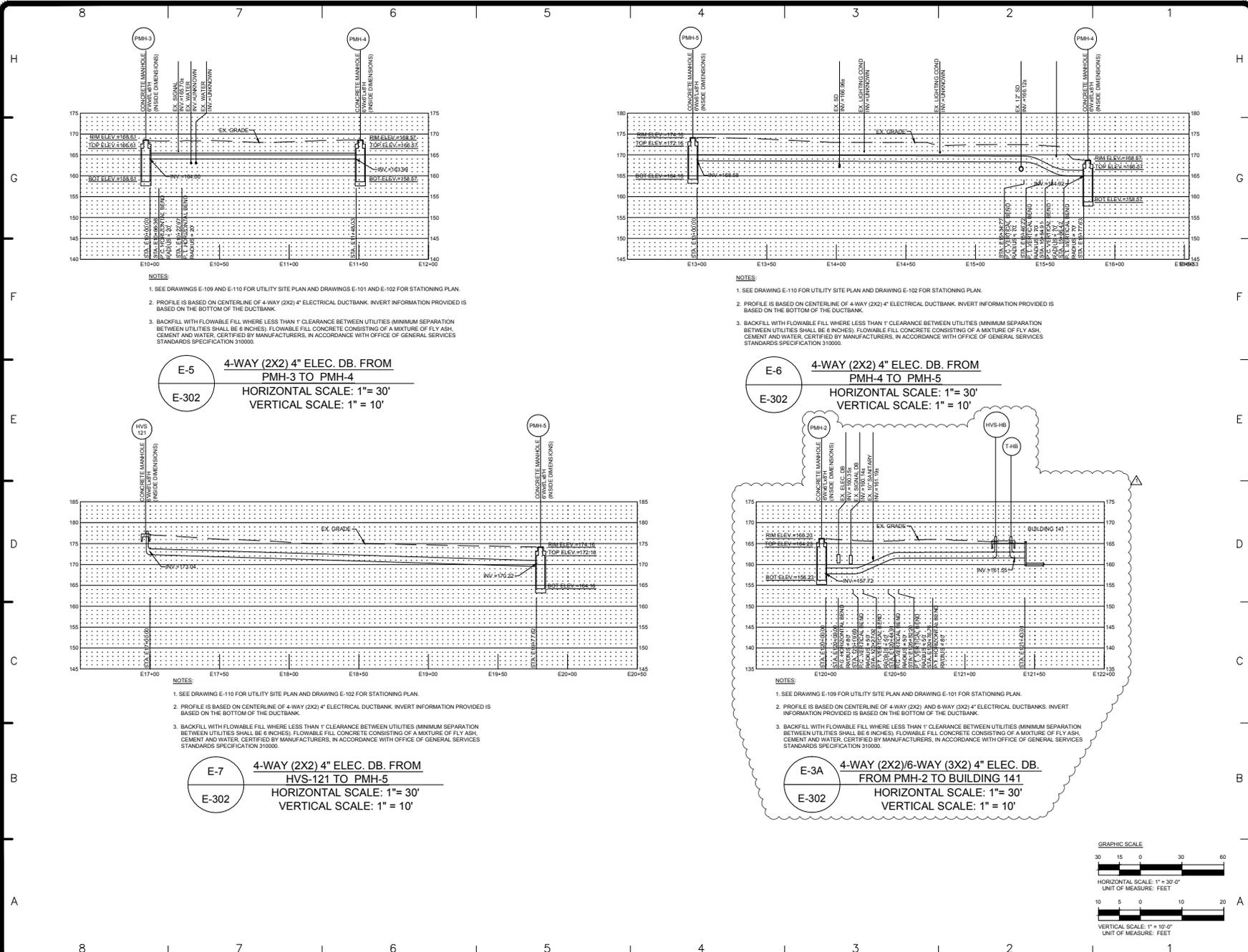
- A. Install fuses in respective equipment.

END OF SECTION



BLDG NO. XX - XX -
SINGLE LINE DIAGRAM - NEW WORK
 NO SCALE

<small>DESCRIPTION:</small> SINGLE LINE DIAGRAM – HVS REVISION	 <small>STATE OF NEW YORK</small> <small>Office of General Services</small> <small>ANDREW M. CLARKE</small> <small>COMMISSIONER</small> <small>DIAMANTE DESTITO</small> <small>Commissioner</small>	 RMF Engineering Reliability. Efficiency. Integrity.	<small>PROJECT NO.:</small> 112335.A0	<small>SCALE:</small> AS SHOWN
<small>PROJECT:</small> ADDENDUM NO. 2 TO PROJECT NO. 42534-E GREAT MEADOW CORRECTIONAL FACILITY COMSTOCK, NY			<small>DATE:</small> 10/27/14	<small>DWELLING:</small> SK-HVS





O&S
1725 Orangeburg Avenue
Serving New York

ANDREW M. CUOMO
Governor
ROANN M. DESTITO
Commissioner

CONSULTANT



RMF ENGINEERING, INC.
120 DEFREEST DRIVE, SUITE 1
TROY, NY 12180

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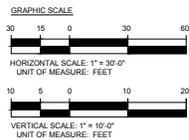
CONTRACT: ELECTRICAL

TITLE: UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE

LOCATION: GREAT MEADOW CORRECTIONAL FACILITY
ROUTE 22
COMSTOCK, NY, 12821

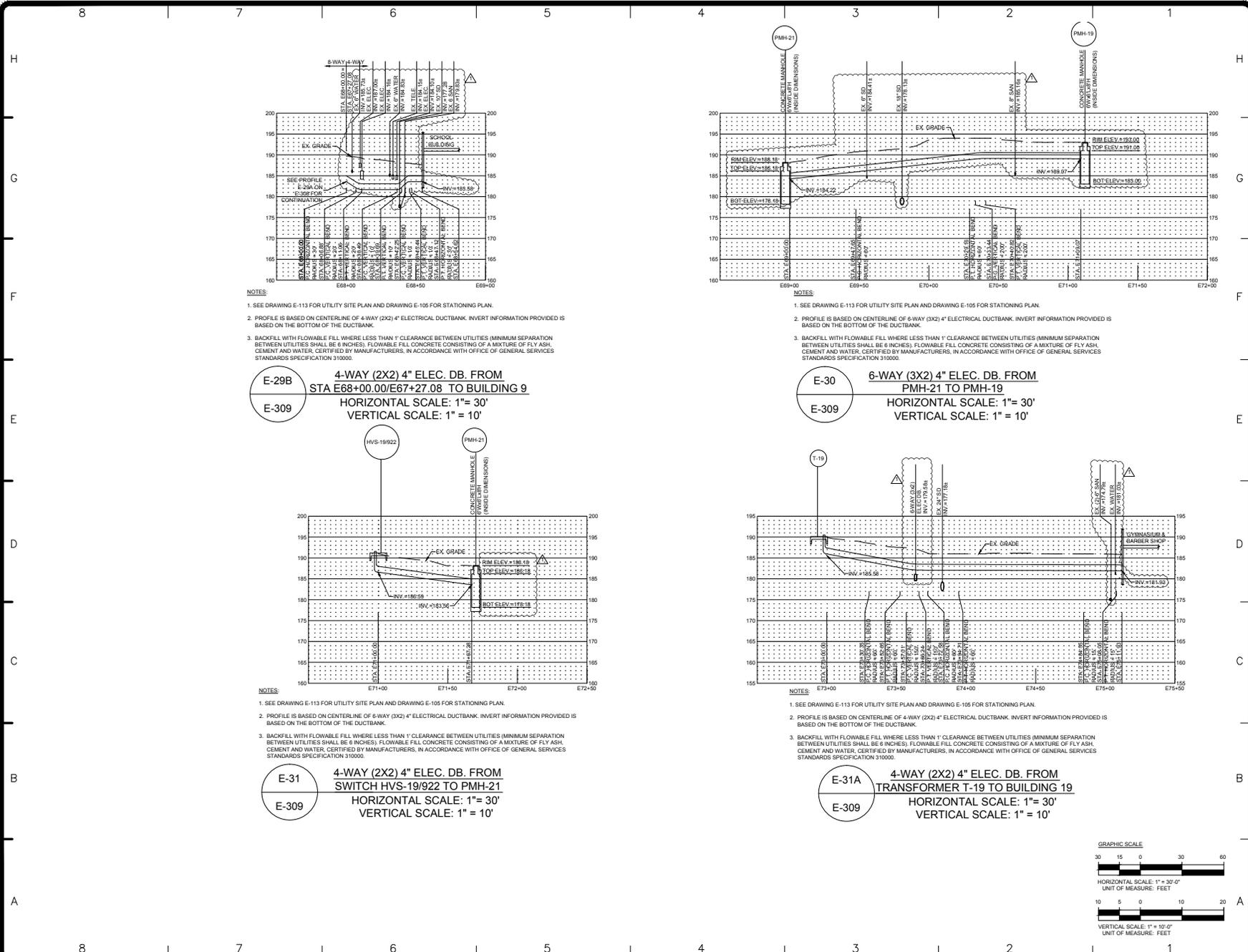
CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

MARK	DATE	DESCRIPTION
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	12/27/13	BD DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	DMMH	
DRAWN BY:	DMMH	
FIELD CHECK:	DMMH	
APPROVED:	AHT	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-302	



HORIZONTAL SCALE: 1" = 30'-0"
UNIT OF MEASURE: FEET

VERTICAL SCALE: 1" = 10'-0"
UNIT OF MEASURE: FEET



O&S
 1225 CHATEAU-DE-VALLE DRIVE
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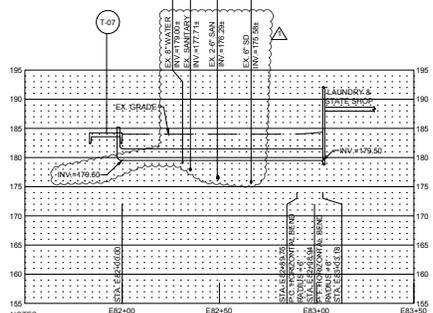
STATE OF NEW YORK
 OFFICE OF THE
 ENGINEER AND SURVEYOR
 LICENSE NO. 10828
 ROANN M. DESTITO

CONTRACT: ELECTRICAL
 TITLE: UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
 LOCATION: GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821
 CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

MARK	DATE	DESCRIPTION
△	10-27-14	Addendum No. 2
	12/27/13	BD DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	GSMH	
DRAWN BY:	GSMH	
FIELD CHECK:	GSMH	
APPROVED:	AHT	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-309	

GRAPHIC SCALE
 30 15 0 30 60
 HORIZONTAL SCALE: 1" = 30'-0"
 UNIT OF MEASURE: FEET
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 VERTICAL SCALE: 1" = 10'-0"
 UNIT OF MEASURE: FEET

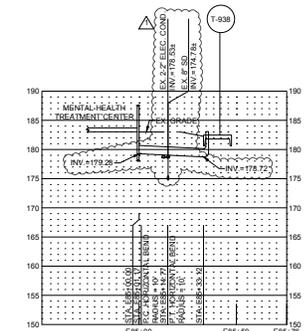
SHEET 050 OF 145



NOTES:

- SEE DRAWING E-111 FOR UTILITY SITE PLAN AND DRAWING E-103 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 12-WAY (4X3) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

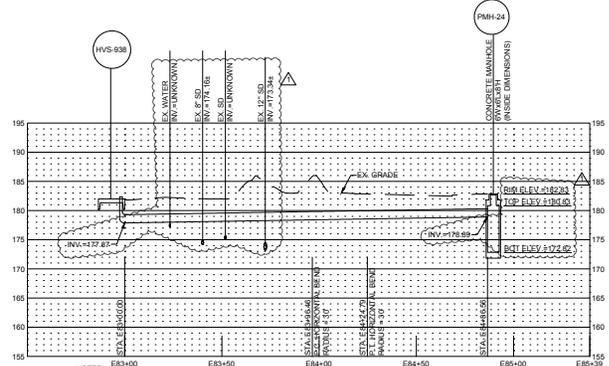
E-34A 12-WAY (4X3) 4" ELEC. DB. FROM
E-311 TRANSFORMER T-07 TO BUILDING 7
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



NOTES:

- SEE DRAWING E-111 FOR UTILITY SITE PLAN AND DRAWING E-103 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 6-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

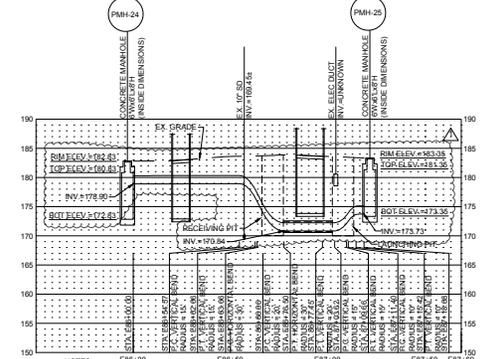
E-35A 4-WAY (2X2) 4" ELEC. DB. FROM
E-311 BUILDING 938 TO TRANSFORMER T-938
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



NOTES:

- SEE DRAWING E-111 FOR UTILITY SITE PLAN AND DRAWING E-103 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

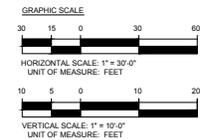
E-35 4-WAY (2X2) 4" ELEC. DB. FROM
E-311 SWITCH HVS-938 TO PMH-24
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



NOTES:

- SEE DRAWING E-111 AND E-312 FOR UTILITY SITE PLAN AND DRAWING E-103 AND E-104 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-36 4-WAY (2X2) 4" ELEC. DB. FROM
E-311 PMH-24 TO PMH-25
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



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CONTRACT: ELECTRICAL
 TITLE: UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
 LOCATION: GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821
 CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

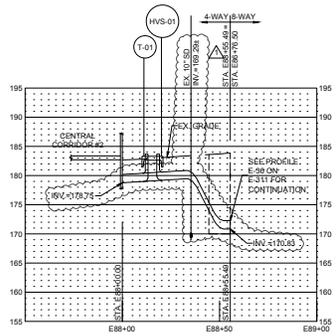
PROJECT NUMBER:	10-27-14	ADDENDUM NO. 2
MARK:	12/27/13	BD DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	GPHH	
DRAWN BY:	GPHH	
FIELD CHECK:	GPHH	
APPROVED:	AHT	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-311	
SHEET 052	OF 145	

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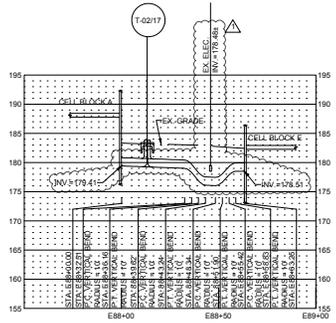
CONTRACT: ELECTRICAL
TITLE: UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
LOCATION: GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821
CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

PROJECT NUMBER:	10-27-14	ADDENDUM NO. 2
MARK:	12/27/13	80 DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	GSMH	
DRAWN BY:	GSMH	
FIELD CHECK:	GSMH	
APPROVED:	AHT	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-312	
SHEET 063	OF 145	



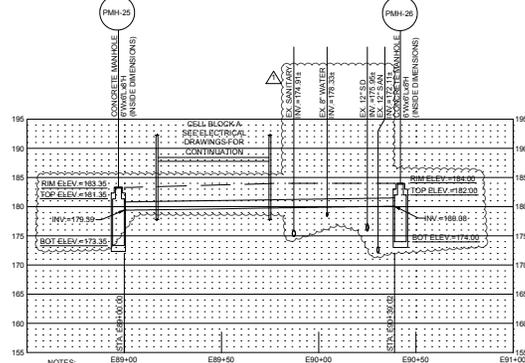
NOTES:
 1. SEE DRAWING E-111 FOR UTILITY SITE PLAN AND DRAWING E-103 FOR STATIONING PLAN.
 2. PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 3. BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 31000.

E-36A 4-WAY (2X2) 4" ELEC. DB. FROM BUILDING 901 TO STA. E88+55.9/E86+76.50
E-312 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



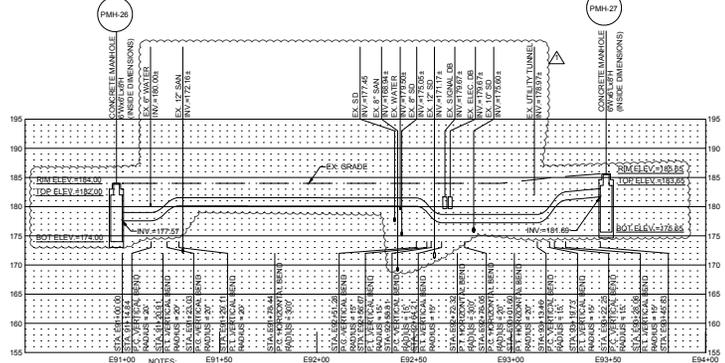
NOTES:
 1. SEE DRAWING E-112 FOR UTILITY SITE PLAN AND DRAWING E-104 FOR STATIONING PLAN.
 2. PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 3. BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 31000.

E-37 4-WAY (2X2) 4" ELEC. DB. FROM BUILDING 2 TO BUILDING 17
E-312 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



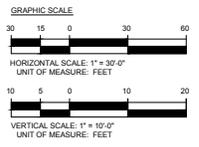
NOTES:
 1. SEE DRAWING E-112 FOR UTILITY SITE PLAN AND DRAWING E-104 FOR STATIONING PLAN.
 2. PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 3. BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 31000.

E-38 4-WAY (2X2) 4" ELEC. DB. FROM PMH-25 TO PMH-26
E-312 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



NOTES:
 1. SEE DRAWING E-112 FOR UTILITY SITE PLAN AND DRAWING E-104 FOR STATIONING PLAN.
 2. PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 3. BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 31000.

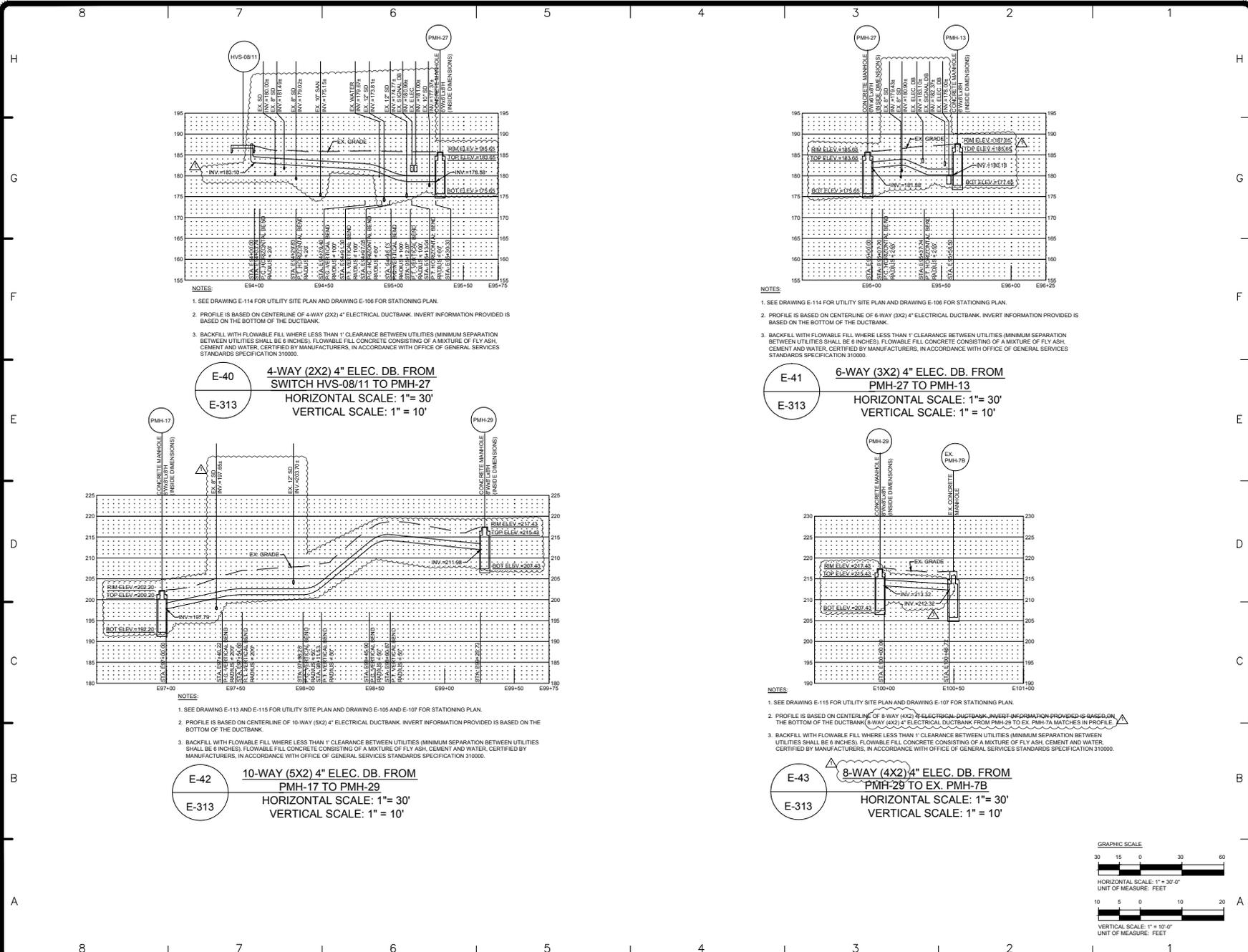
E-39 4-WAY (2X2) 4" ELEC. DB. FROM PMH-26 TO PMH-27
E-312 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



H
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F
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D
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B
A

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1





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TROY, NY 12180

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CONTRACT: **ELECTRICAL**

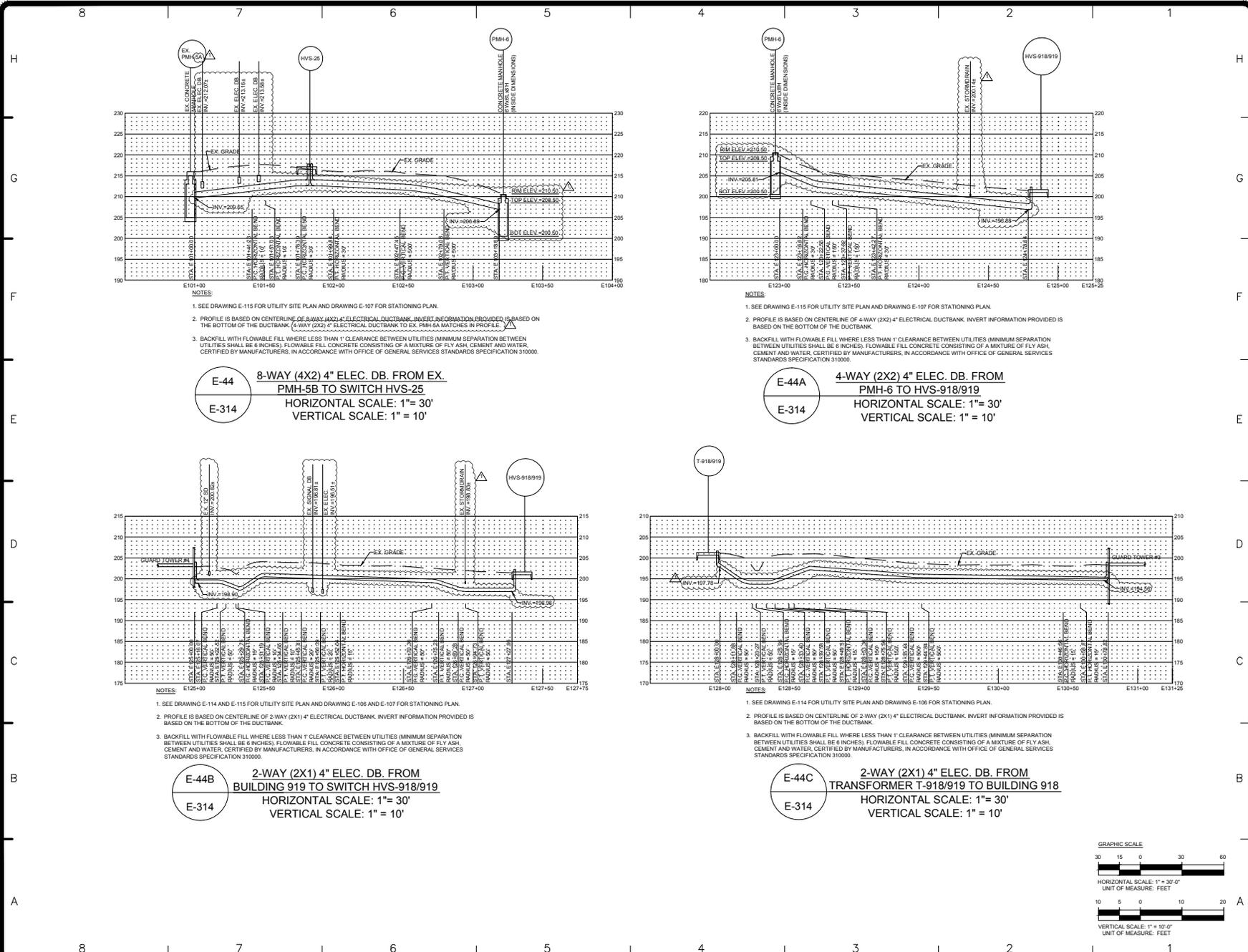
TITLE: **UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE**

LOCATION: **GREAT MEADOW CORRECTIONAL FACILITY
ROUTE 22
COMSTOCK, NY, 12821**

CLIENT: **DEPARTMENT OF
CORRECTIONS AND COMMUNITY
SUPERVISION**

MARK	DATE	DESCRIPTION
▲	10-27-14	Addendum No. 2
	12/27/13	BD DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	GSMH	
DRAWN BY:	GSMH	
FIELD CHECK:	GSMH	
APPROVED:	AHT	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-313	

SHEET 004 OF 145



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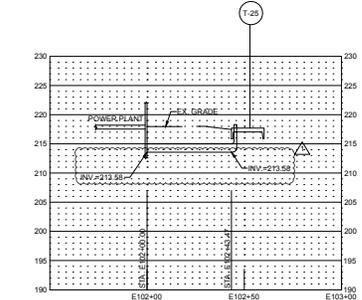
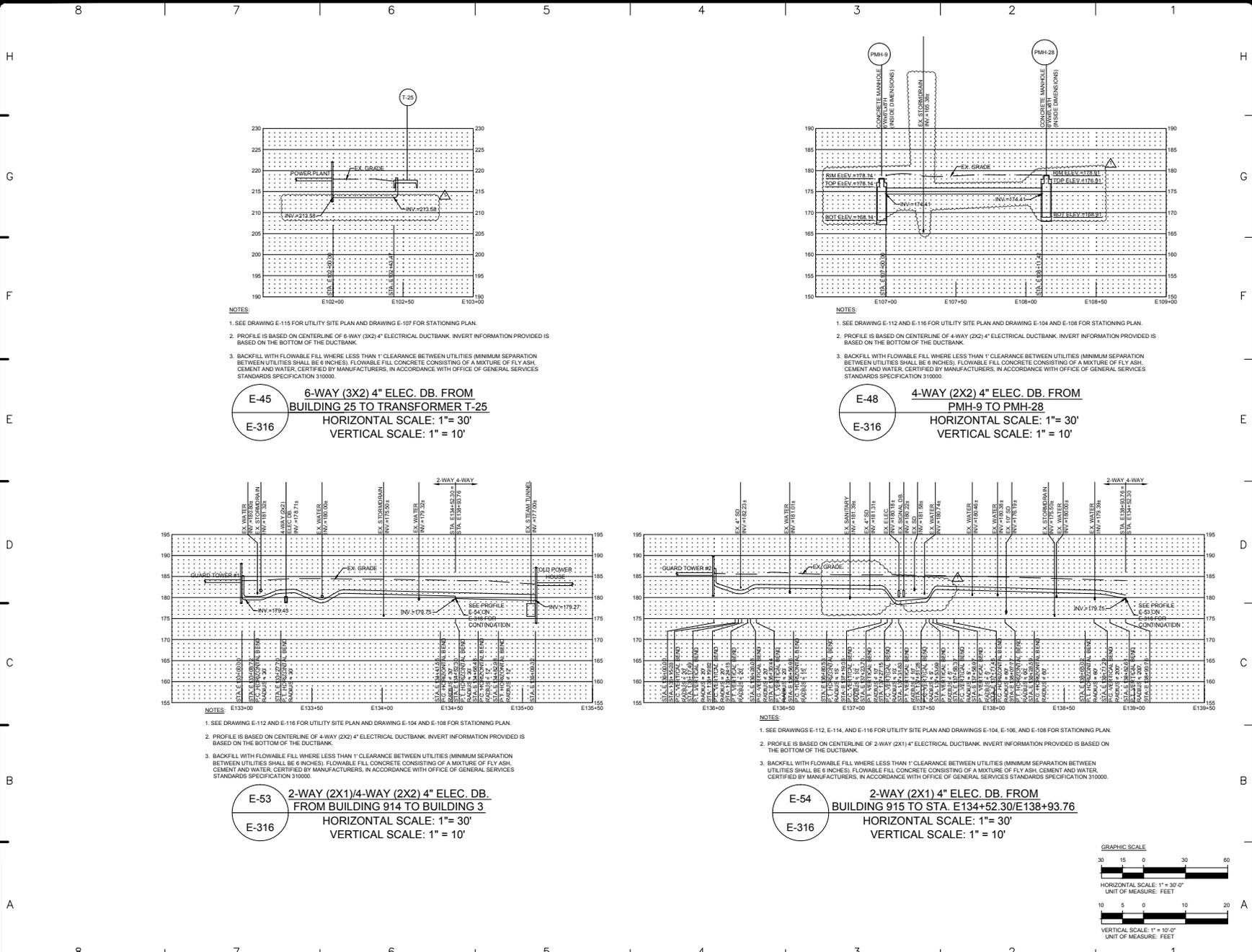
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STATE OF NEW YORK
 COUNTY OF ALBANY
 ROANN M. DESTITO
 LICENSED PROFESSIONAL ENGINEER

CONTRACT: ELECTRICAL
 TITLE: UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
 LOCATION: GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821
 CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

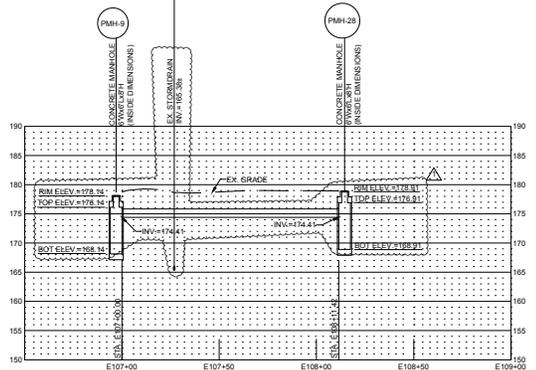
MARK	DATE	DESCRIPTION
△	10-27-14	Addendum No. 2
	12/27/13	BD DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	GSMH	
DRAWN BY:	GSMH	
FIELD CHECK:	GSMH	
APPROVED:	AHT	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-314	

SHEET 055 OF 145



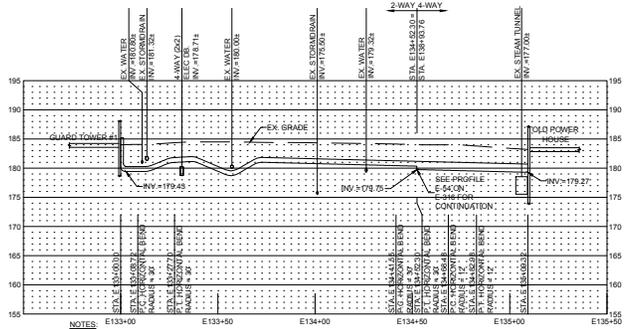
- NOTES:**
- SEE DRAWING E-115 FOR UTILITY SITE PLAN AND DRAWING E-107 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 6-WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 31000.

E-45
E-316
6-WAY (3X2) 4" ELEC. DB. FROM BUILDING 25 TO TRANSFORMER T-25
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



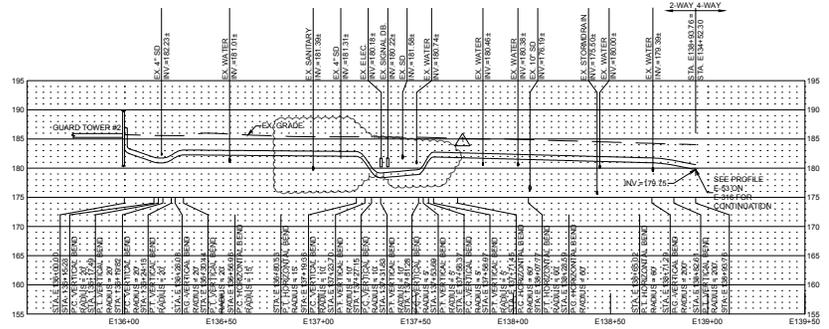
- NOTES:**
- SEE DRAWING E-112 AND E-116 FOR UTILITY SITE PLAN AND DRAWING E-104 AND E-108 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 31000.

E-48
E-316
4-WAY (2X2) 4" ELEC. DB. FROM PMH-9 TO PMH-28
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



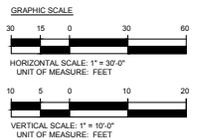
- NOTES:**
- SEE DRAWING E-112 AND E-116 FOR UTILITY SITE PLAN AND DRAWING E-104 AND E-108 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 31000.

E-53
E-316
2-WAY (2X1) 4-WAY (2X2) 4" ELEC. DB. FROM BUILDING 914 TO BUILDING 3
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



- NOTES:**
- SEE DRAWINGS E-112, E-114, AND E-116 FOR UTILITY SITE PLAN AND DRAWINGS E-104, E-106, AND E-108 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 2-WAY (2X1) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 31000.

E-54
E-316
2-WAY (2X1) 4" ELEC. DB. FROM BUILDING 915 TO STA. E134+52.30/E138+93.76
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'





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STATE OF NEW YORK
OFFICE OF GENERAL SERVICES
LICENSED PROFESSIONAL ENGINEER

CONTRACT: ELECTRICAL

TITLE: UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE

LOCATION: GREAT MEADOW CORRECTIONAL FACILITY
ROUTE 22
COMSTOCK, NY, 12821

CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

MARK	DATE	DESCRIPTION
△	10-27-14	Addendum No. 2
	12/27/13	BD DOCUMENTS

PROJECT NUMBER: 42534-E

DESIGNED BY: csmh

DRAWN BY: csmh

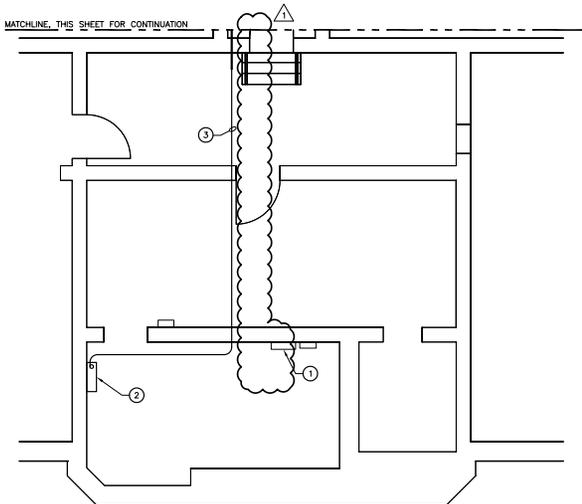
FIELD CHECK: csmh

APPROVED: AHT

SHEET TITLE: ELECTRICAL DISTRIBUTION PROFILES

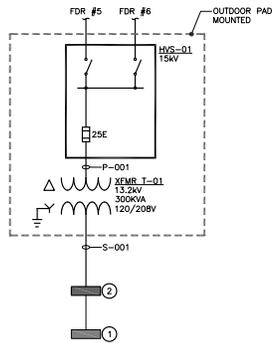
DRAWING NUMBER: E-316

SHEET 057 OF 145



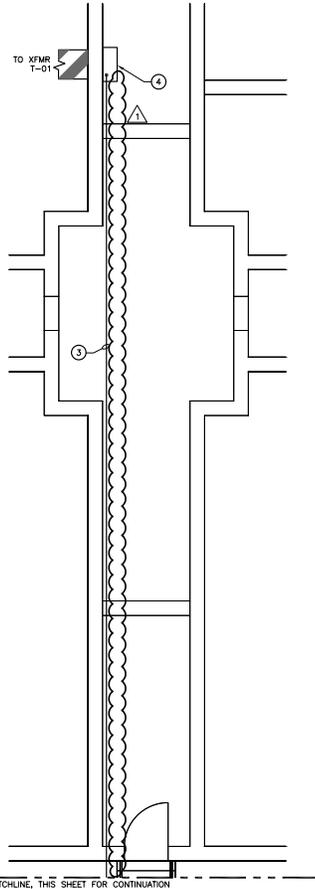
**PART PLAN - BLDG NO. 1 -
ADMINISTRATION - NEW WORK**

SCALE: 1/4" = 1'-0"



**BLDG NO. 1 - ADMINISTRATION -
SINGLE LINE DIAGRAM - NEW WORK**

NO SCALE



**PART PLAN - BLDG NO. 1 -
ADMINISTRATION TUNNEL - NEW WORK**

SCALE: 1/4" = 1'-0"

GENERAL NOTES:

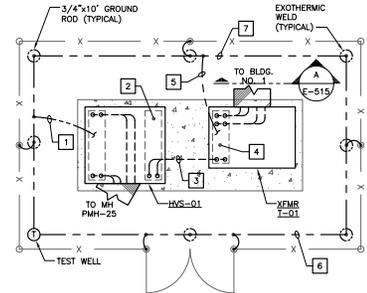
1. INSTALL NEW EQUIPMENT TO THE EXTENT POSSIBLE BEFORE REMOVING EXISTING EQUIPMENT.
2. ALL INDOOR CONDUIT SHALL BE ROUTED AS CLOSE AS POSSIBLE TO THE ELECTRICAL ROOM CEILING AND MUST BE COORDINATED WITH EXISTING CONDITIONS.
3. ALL WALL/ FLOOR/ CEILING PENETRATIONS SHALL BE FIRE STOPPED TO MATCH FIRE RATINGS OF PENETRATED SURFACE.
4. REFER TO E-600 SERIES DRAWINGS FOR PANELBOARD, SWITCHBOARD, AND FEEDER SCHEDULES.
5. TRANSITION OF EXISTING AND NEW BUILDING ELECTRICAL EQUIPMENT TO THE NEW DISTRIBUTION SYSTEM SHALL BE DONE IN ACCORDANCE WITH THE WORK SEQUENCE OUTLINED IN THE CONTRACT DOCUMENTS.
6. SEE DRAWINGS E-109 TO E-116 FOR SITE PLAN LAYOUT, BUILDING AND EQUIPMENT PAD LOCATIONS.
7. PAD EQUIPMENT DETAIL INCLUDES SPARE CONDUITS. REFER TO DRAWING E-604 FOR TRANSFORMER FEEDER SCHEDULE.
8. PROVIDE TEMPORARY GENERATOR AND ASSOCIATED CABLE, CONDUIT, AND FUEL, AS REQUIRED IN THE WORK SEQUENCE ON DRAWING E-604. COORDINATE LOCATION WITH THE FACILITY.

DRAWING NOTES:

- 1 EXISTING PANELBOARD MDP-2 120/208V, 400A, 3ø, 4W.
- 2 MDP-01 120/208V, 800A, 3ø, 4W. PROVIDE SYSTEM BONDING JUMPER AND GROUNDING ELECTRODE CONDUCTOR CONNECTION TO NEAREST BUILDING STEEL OR GROUNDED WATER PIPE SIZED PER THE TABLE ON E-604.
- 3 FEEDER S-001 CONDUIT AND WIRING TO MDP-01. CONDUIT AND WIRING IS SHOWN SCHEMATICALLY AND SHALL BE FIELD ROUTED BY THE CONTRACTOR.
- 4 NEMA 1 GALVANIZED STEEL PULL BOX 28"x28"x12".

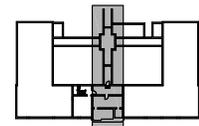
DRAWING NOTES: (PAD DETAIL)

- 1 PROVIDE #4/0 GROUND CONNECTION TO SWITCH ENCLOSURE GROUND LUG.
- 2 BOND ALL LINE AND LOAD EQUIPMENT GROUNDING CONDUCTORS TO INTERNAL SWITCH GROUNDING CONNECTORS.
- 3 ALL PVC CONDUIT BETWEEN THE SWITCH AND TRANSFORMER SHALL BE ENCASED IN CONCRETE. DRAWING INCLUDES ONE OPEN SPARE CONDUIT TO BE RUN BETWEEN THE SWITCH AND TRANSFORMER.
- 4 CONNECT PRIMARY SIDE EQUIPMENT GROUNDING CONDUCTOR TO THE TRANSFORMER GROUND BUS. PROVIDE SUPPLY SIDE BONDING JUMPER BETWEEN TRANSFORMER GROUND BUS AND SERVICE ENTRANCE EQUIPMENT GROUND BUS SIZED PER THE TABLE ON DRAWING E-604.
- 5 PROVIDE #4/0 GROUND CONNECTION TO TRANSFORMER GROUND BUS.
- 6 #4/0 BARE STRANDED COPPER GROUND CONDUCTOR. (BURY 30" BELOW GRADE. (TYPICAL))
- 7 GROUND RING SHALL BE AT LEAST 3' AWAY AT ALL POINTS FROM THE PAD.

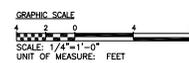


**BLDG NO. 1 - ADMINISTRATION -
PAD DETAIL - NEW WORK**

SCALE: 1/4" = 1'-0"



KEY PLAN



ANDREW M. CUOMO
Governor
ROSAWMAR DEITTO
Commissioner

CONSULTANT

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TROY, NY 12180

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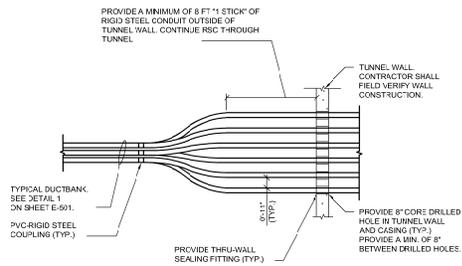
CONTRACT:
ELECTRICAL

TITLE:
UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE

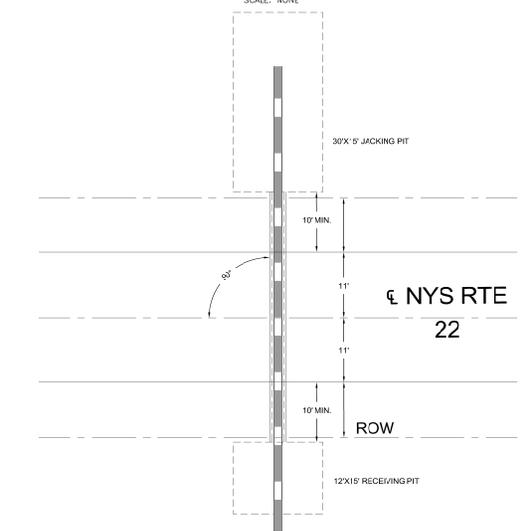
LOCATION:
GREAT MEADOW CORRECTIONAL FACILITY
ROUTE 22
COMSTOCK, NY, 12821

CLIENT:
DEPARTMENT OF
CORRECTIONS AND COMMUNITY
SUPERVISION

MARK	DATE	DESCRIPTION
△	10/27/14	ADDENDUM NO. 2
	12/27/15	BID DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	JTM	
DRAWN BY:	TNC	
FIELD CHECK:	JTM	
APPROVED:	AJH	
SHEET TITLE:	GREAT MEADOW C.F. BLDG. NO. 1 - ADMINISTRATION - NEW WORK	
DRAWING NUMBER:	E-401B	
SHEET 059	OF 145	

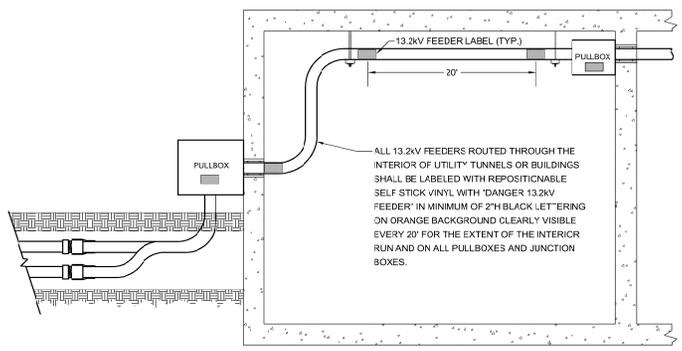


12
E-504
TYPICAL TUNNEL WALL PENETRATION PARTIAL PLAN
SCALE: NONE

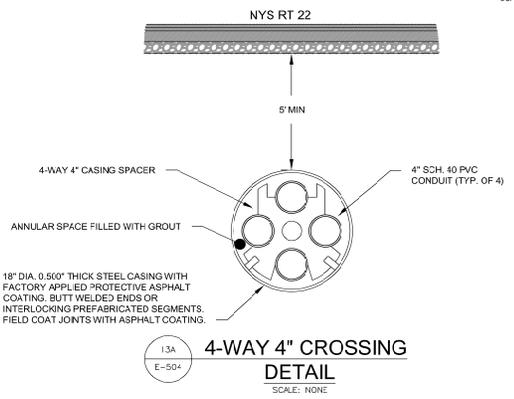


13
E-504
TYPICAL NYS RTE 22 CROSSING
SCALE: NONE

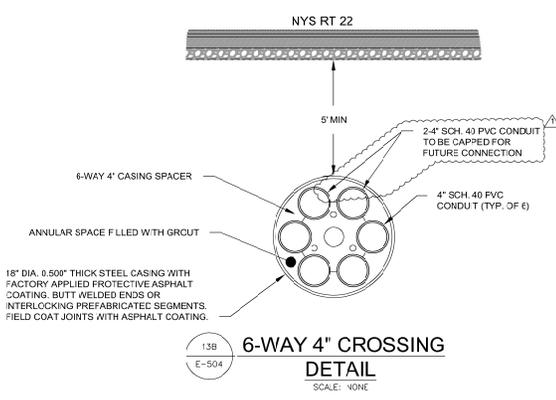
- WHEN SUBMITTING THESE DRAWINGS TO THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION FOR A HIGHWAY WORK PERMIT:
- CONTRACTOR SHALL PROVIDE SHEETING AND SHORING SHOP DRAWINGS FOR THE LAUNCHING AND RECEIVING PITS, DESIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK.
 - CONTRACTOR SHALL PROVIDE PROPOSED TUNNELING METHOD, INCLUDING EQUIPMENT SPECIFICATIONS, DESCRIBING THE SIZE, CUTTER, TYPE, AND BRACING/ANCHORAGE DETAILS, AND METHOD FOR MONITORING AND FOLLOWING DESIGN LINE AND GRADE.
 - CONTRACTOR SHALL PROVIDE THE PROPOSED GROUTING METHOD, INCLUDING GROUT TUBE SIZE AND TYPE, GROUT HOLE LOCATION AND METHOD OF PLACEMENT/INSERTION, MAXIMUM PRESSURE CAPABILITY AND MAXIMUM (DESIGN) OPERATION PRESSURE.
 - CONTRACTOR SHALL LOCATE AND IDENTIFY THE NEAREST HIGHWAY MILE MARKER AND INDICATE ON THE DRAWINGS THE DISTANCE TO SAID MARKER.
 - CONTRACTOR SHALL IDENTIFY ANY ABANDONED UTILITIES.
 - SEE DETAILS 13A AND 13B ON THIS DRAWING.



INTERIOR MEDIUM VOLTAGE FEEDER IDENTIFICATION DETAIL
SCALE: NONE



13A
E-504
4-WAY 4\"/>



13B
E-504
6-WAY 4\"/>

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Governor
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Commissioner

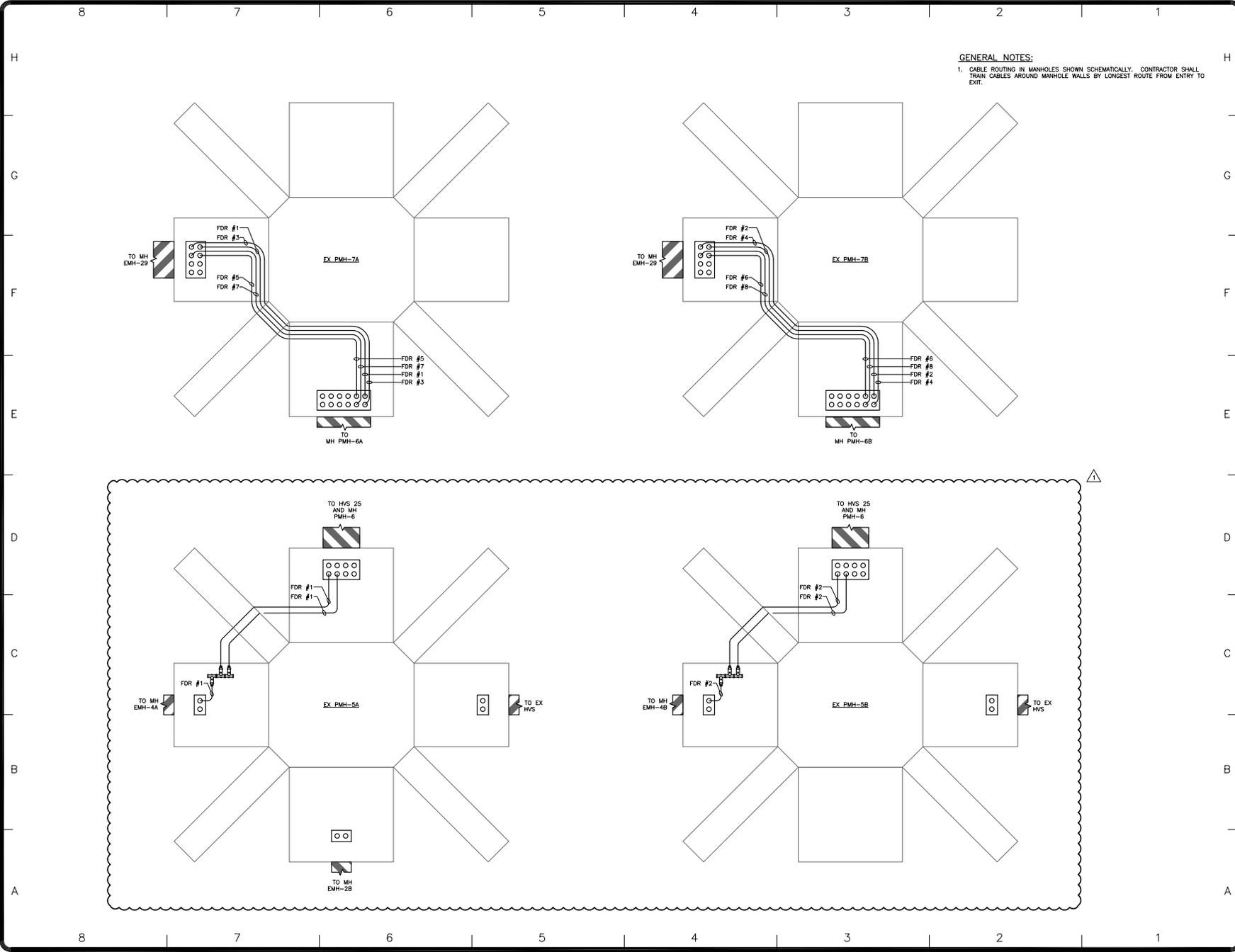
CONSULTANT
rmf
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TROY, NY 12180

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CONTRACT: **ELECTRICAL**
TITLE: UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
LOCATION: GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 CONSTOCK, NY, 12821
CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

MARK	DATE	DESCRIPTION
△	10/27/14	ADDENDUM NO. 2
	12/27/15	BID DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	RDH	
DRAWN BY:	RDH	
FIELD CHECK:	RDH	
APPROVED:	AJH	
SHEET TITLE:	UTILITY DETAILS	
DRAWING NUMBER:	E-504	



GENERAL NOTES:
 1. CABLE ROUTING IN MANHOLES SHOWN SCHEMATICALLY. CONTRACTOR SHALL TRAIN CABLES AROUND MANHOLE WALLS BY LONGEST ROUTE FROM ENTRY TO EXIT.

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 ANDREW M. CUOMO
 Governor
 ROSANN M. DESITTO
 Commissioner

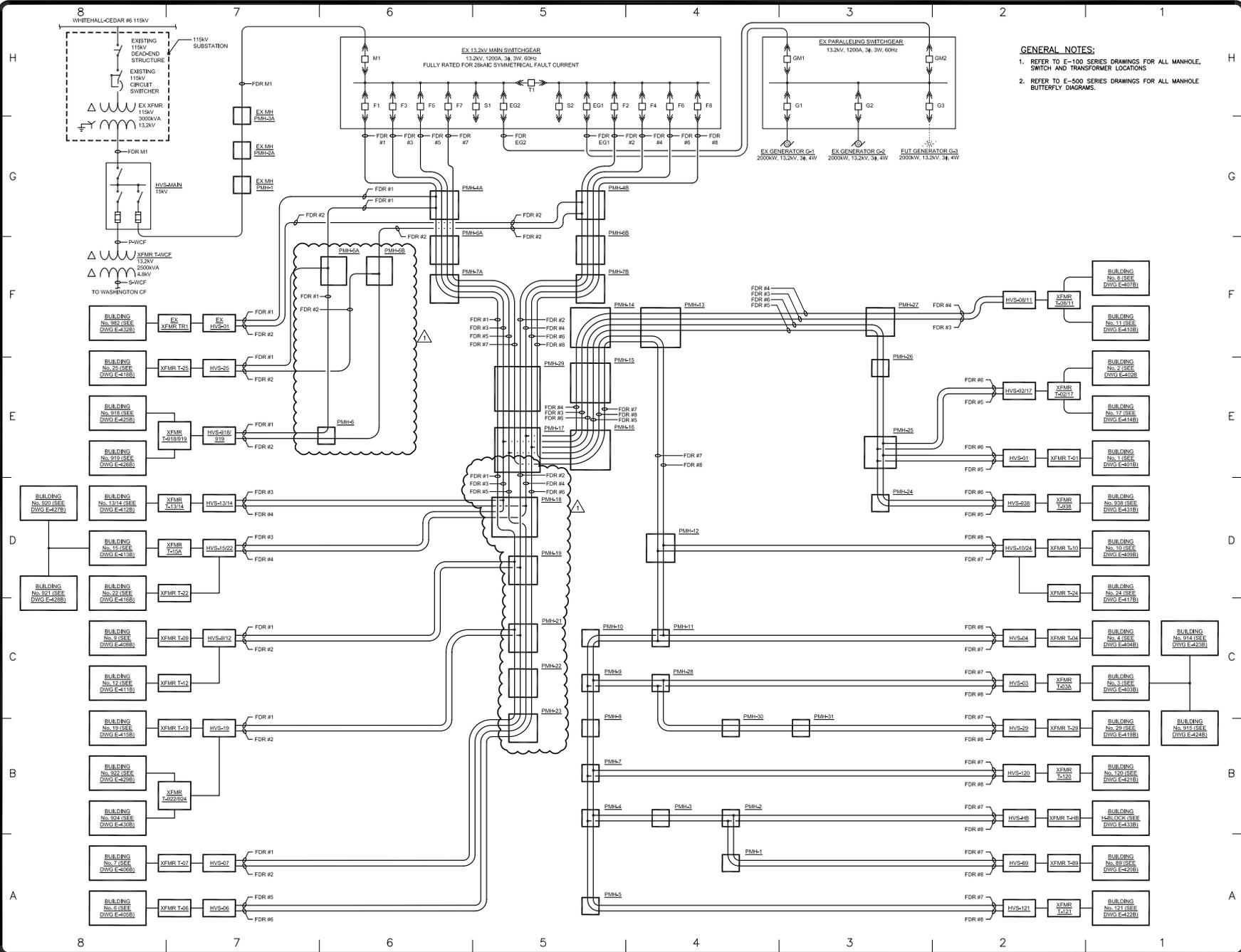
CONSULTANT
rnf
 RMF ENGINEERING, INC.
 120 DEEREST DRIVE, SUITE 1
 TROY, NY 12180

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 LOCATION: **GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821**
 CLIENT: **DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION**

10/27/14	ADDENDUM NO. 2	
12/27/13	BID DOCUMENTS	
MARK	DATE	DESCRIPTION
PROJECT NUMBER:	42534-E	
DESIGNED BY:	JTM	
DRAWN BY:	TNC	
FIELD CHECK:	JTM	
APPROVED:	AJH	
SHEET TITLE		
MANHOLE DIAGRAMS		
DRAWING NUMBER: E-514		
SHEET 137 OF 145		



GENERAL NOTES:
 1. REFER TO E-100 SERIES DRAWINGS FOR ALL MANHOLE, SWITCH AND TRANSFORMER LOCATIONS.
 2. REFER TO E-500 SERIES DRAWINGS FOR ALL MANHOLE BUTTERFLY DIAGRAMS.

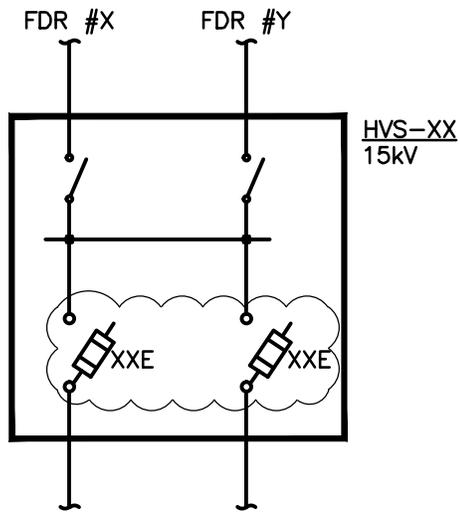


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MARK	DATE	DESCRIPTION
	10/27/14	ADDENDUM NO. 2
	12/27/13	BD DOCUMENTS
PROJECT NUMBER:		42534-E
DESIGNED BY:		JTM
DRAWN BY:		KFK
FIELD CHECK:		JTM
APPROVED:		AH
SHEET TITLE:		OVERALL SINGLE LINE - NEW WORK
DRAWING NUMBER:		E-602



BLDG NO. XX - XX -
SINGLE LINE DIAGRAM - NEW WORK
 NO SCALE

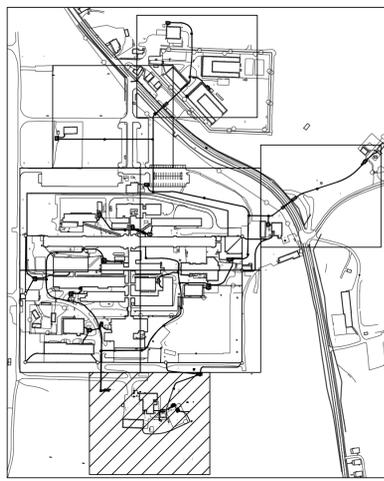
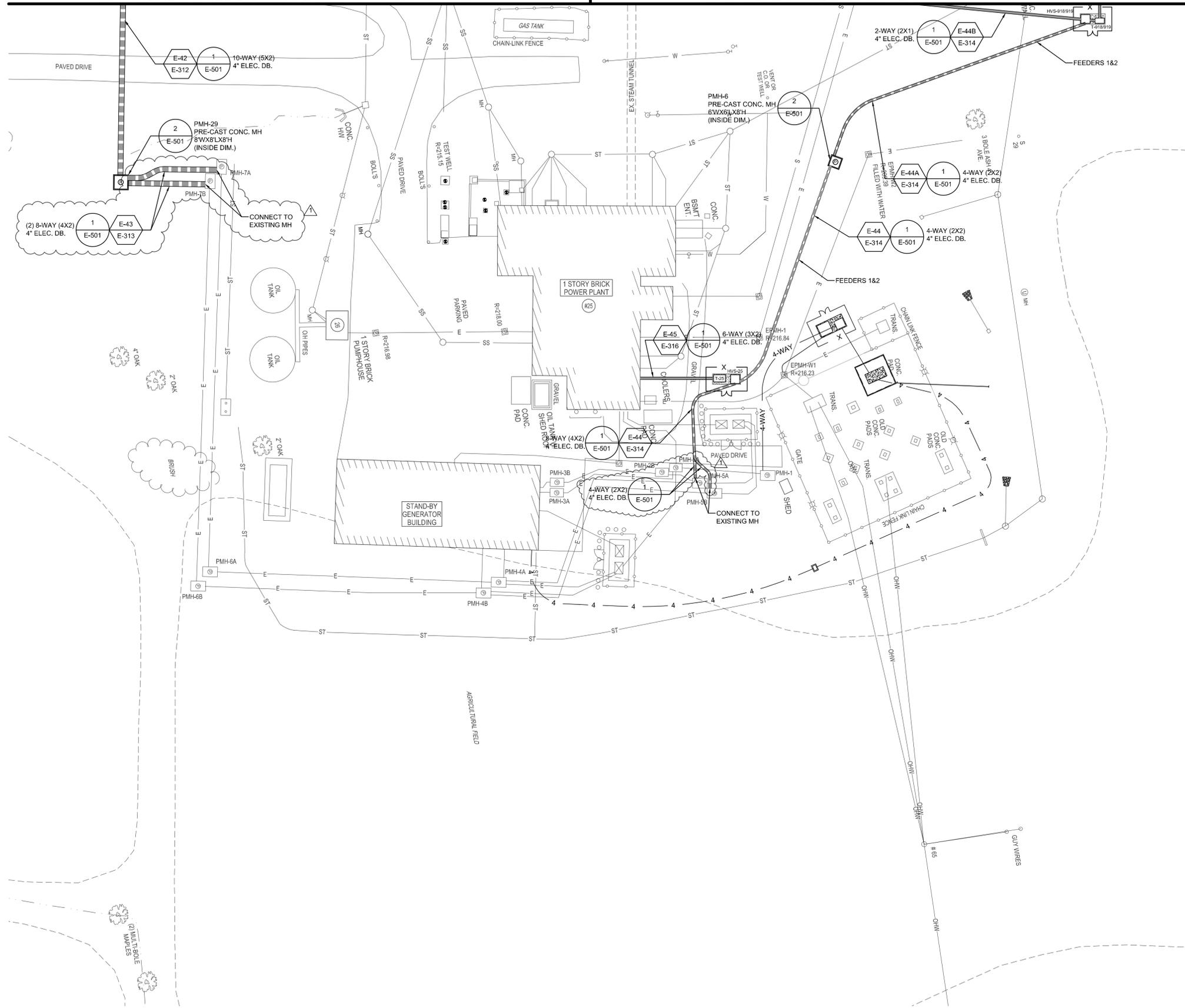
<small>DESCRIPTION:</small> SINGLE LINE DIAGRAM – HVS REVISION	 <small>STATE OF NEW YORK</small> <small>Office of General Services</small> <small>ANDREW M. CUOMO</small> <small>Governor</small> <small>DOMENICO DESTITO</small> <small>Commissioner</small>	 RMF Engineering Reliability. Efficiency. Integrity.	<small>PROJECT NO.:</small> 112335.A0	<small>SCALE:</small> AS SHOWN
<small>PROJECT:</small> ADDENDUM NO. 2 TO PROJECT NO. 42534-E GREAT MEADOW CORRECTIONAL FACILITY COMSTOCK, NY			<small>DATE:</small> 10/27/14	<small>DWELLING:</small> SK-HVS

MATCHLINE H-H SEE DRAWING E-113 FOR CONTINUATION

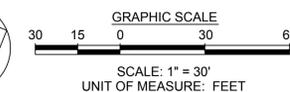
MATCHLINE I-I SEE DRAWING E-114 FOR CONTINUATION

NOTES:

- FOR CONTINUATION OF WORK INSIDE BUILDINGS, MANHOLES, AND ELECTRICAL EQUIPMENT YARDS, SEE E-4 SERIES DRAWINGS.
- SEE DETAIL 9 ON DRAWING E-502 FOR UNDERGROUND CONDUITS ENTERING EXISTING BUILDING.



KEYPLAN
SCALE: 1" = 500'



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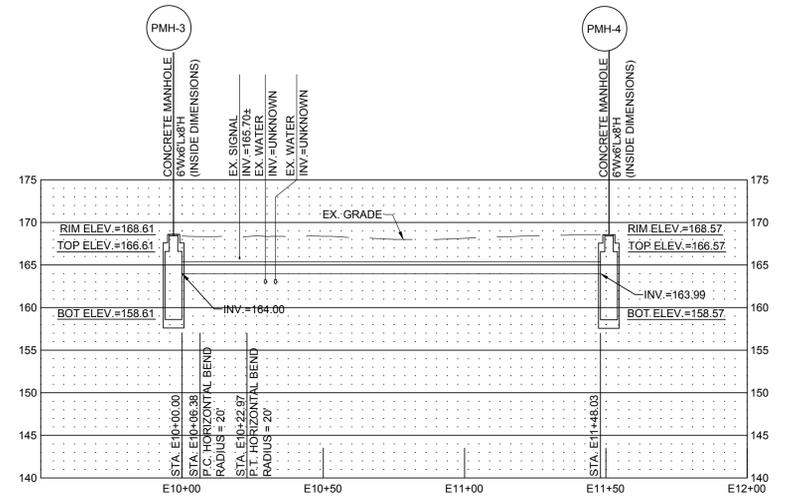
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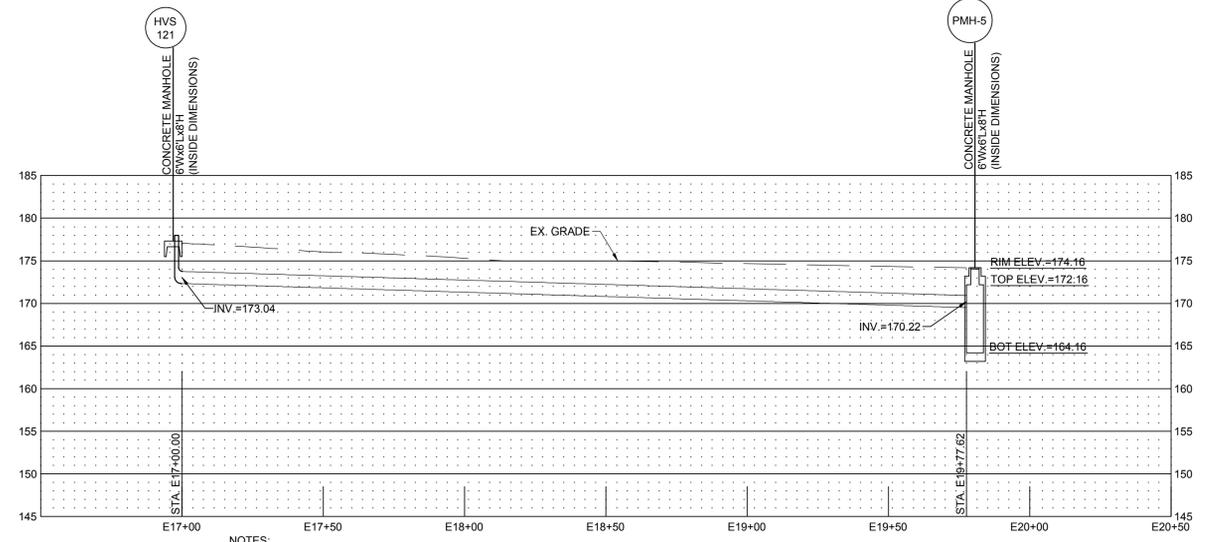
MARK	DATE	DESCRIPTION
△	10-27-14	Addendum No. 2
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PROJECT NUMBER:	42534-E	
DESIGNED BY:	DOFH	
DRAWN BY:	DOFH	
FIELD CHECK:	DOFH	
APPROVED:	AJH	

SHEET TITLE:
ELECTRICAL DISTRIBUTION
SITE PLAN - AREA 7
DRAWING NUMBER:
E-115



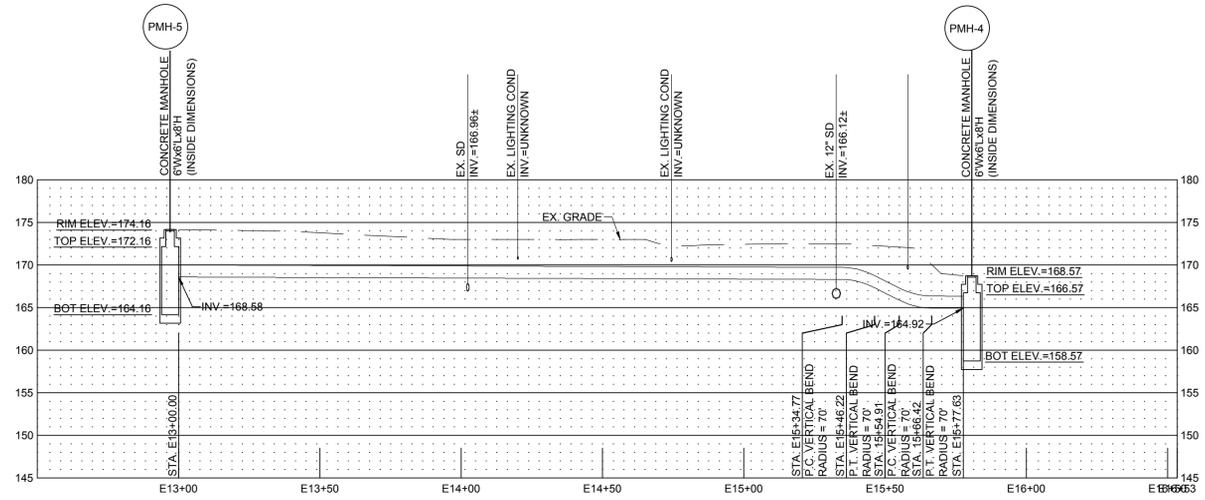
- NOTES:**
- SEE DRAWINGS E-109 AND E-110 FOR UTILITY SITE PLAN AND DRAWINGS E-101 AND E-102 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-5
4-WAY (2X2) 4" ELEC. DB. FROM
PMH-3 TO PMH-4
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



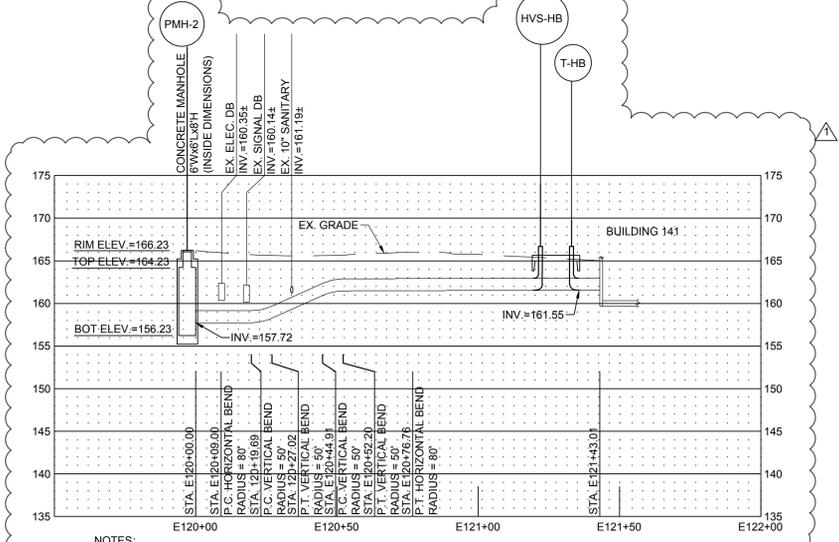
- NOTES:**
- SEE DRAWING E-110 FOR UTILITY SITE PLAN AND DRAWING E-102 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-7
4-WAY (2X2) 4" ELEC. DB. FROM
HVS-121 TO PMH-5
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



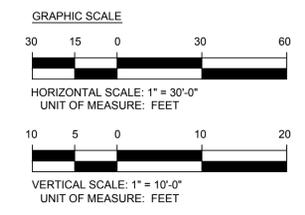
- NOTES:**
- SEE DRAWING E-110 FOR UTILITY SITE PLAN AND DRAWING E-102 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-6
4-WAY (2X2) 4" ELEC. DB. FROM
PMH-4 TO PMH-5
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



- NOTES:**
- SEE DRAWING E-109 FOR UTILITY SITE PLAN AND DRAWING E-101 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) AND 6-WAY (3X2) 4" ELECTRICAL DUCTBANKS. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-3A
4-WAY (2X2)/6-WAY (3X2) 4" ELEC. DB.
FROM PMH-2 TO BUILDING 141
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



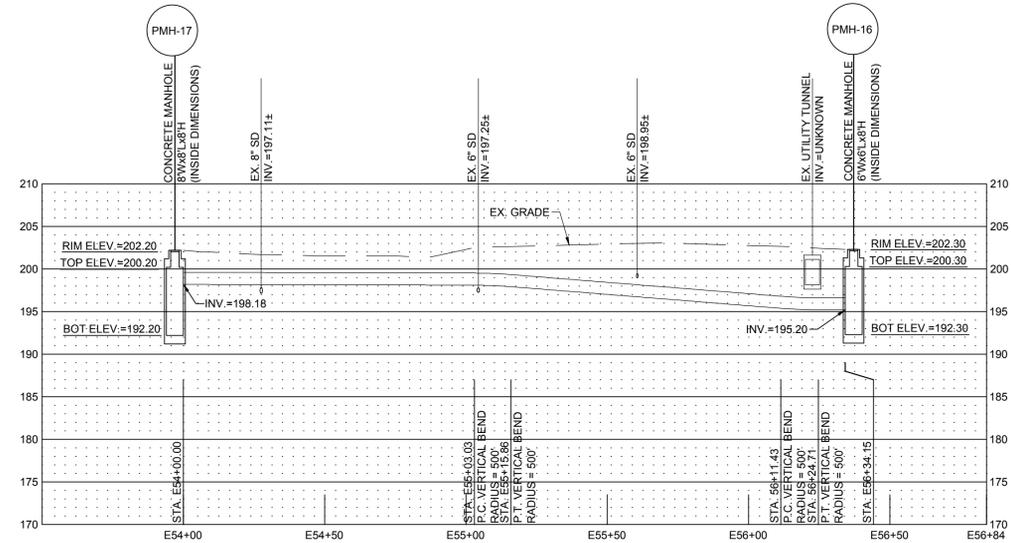
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TITLE: **UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE**
LOCATION: **GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821**
CLIENT: **DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION**

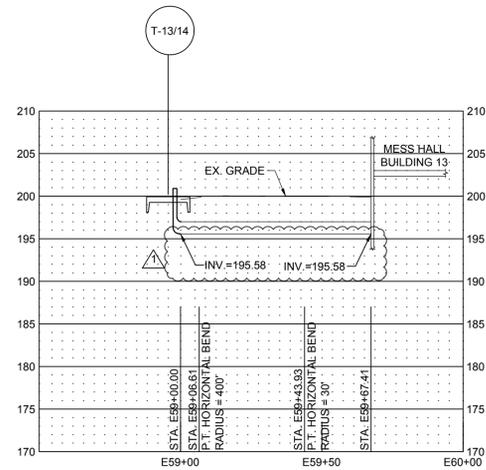
MARK	DATE	DESCRIPTION
	10-27-14	Addendum No. 2
	12/27/13	BID DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	DOFH	
DRAWN BY:	DOFH	
FIELD CHECK:	DOFH	
APPROVED:	AJH	
SHEET TITLE: ELECTRICAL DISTRIBUTION PROFILES		
DRAWING NUMBER: E-302		
SHEET 043 OF 145		



NOTES:

- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 8-WAY (4X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

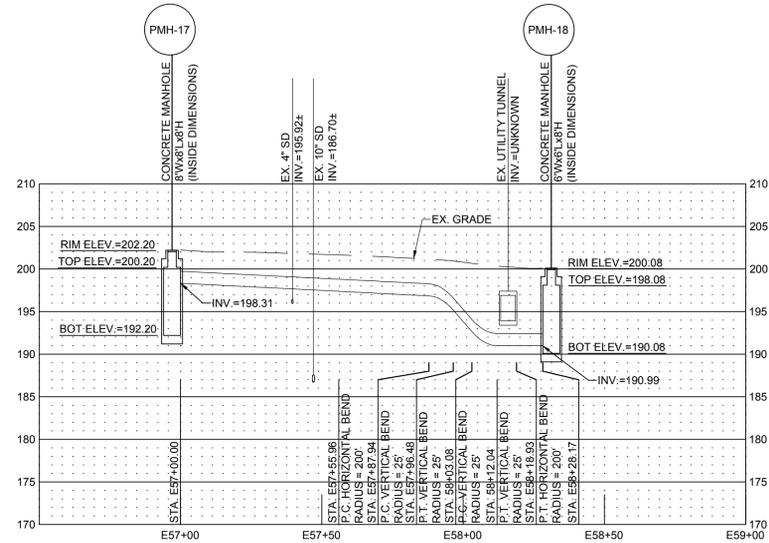
E-23
E-307
 8-WAY (4X2) 4" ELEC. DB. FROM
 PMH-17 TO PMH-16
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



NOTES:

- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 6-WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

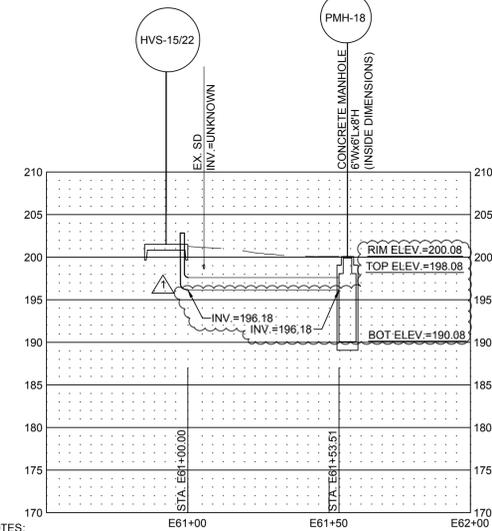
E-25
E-307
 6-WAY (3X2) 4" ELEC. DB. FROM
 T-13/14 TO BUILDING 13
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



NOTES:

- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

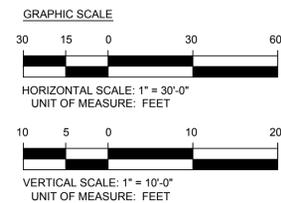
E-24
E-307
 4-WAY (2X2) 4" ELEC. DB. FROM
 PMH-17 TO PMH-18
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



NOTES:

- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-26
E-307
 4-WAY (2X2) 4" ELEC. DB. FROM
 HVS-15/22 TO PMH-18
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



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CONTRACT: **ELECTRICAL**

TITLE:
UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE

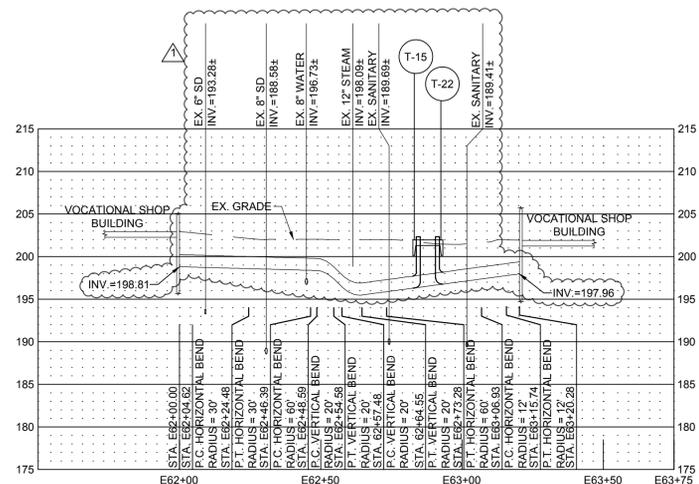
LOCATION:
**GREAT MEADOW CORRECTIONAL FACILITY
 ROUTE 22
 COMSTOCK, NY, 12821**

CLIENT:
**DEPARTMENT OF
 CORRECTIONS AND COMMUNITY
 SUPERVISION**

MARK	DATE	DESCRIPTION
	10-27-14	Addendum No. 2
	12/27/13	BID DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	DOFH	
DRAWN BY:	DOFH	
FIELD CHECK:	DOFH	
APPROVED:	AJH	
SHEET TITLE:		

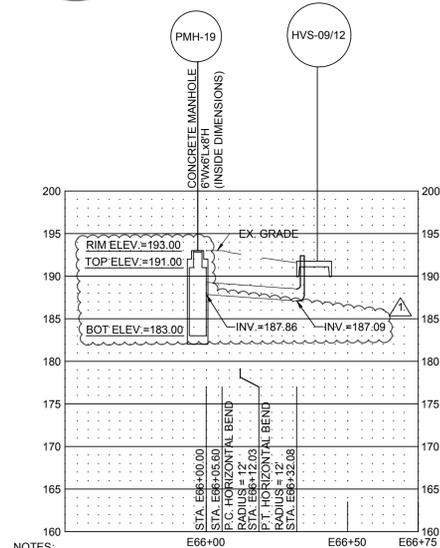
ELECTRICAL DISTRIBUTION PROFILES

DRAWING NUMBER:
E-307



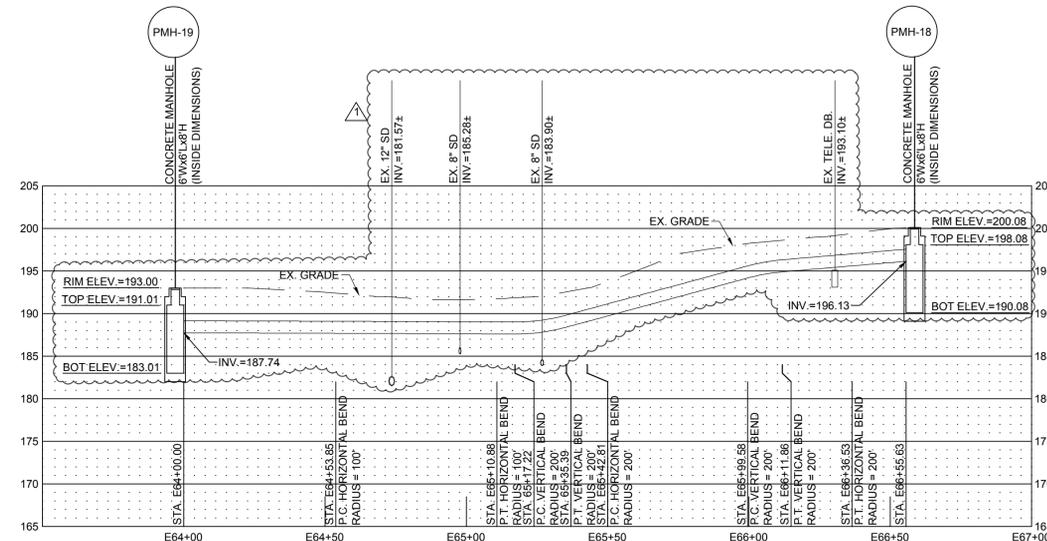
- NOTES:
- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-27
E-308
4-WAY (2X2) 4" ELEC. DB. FROM BUILDING 15 TO BUILDING 22
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



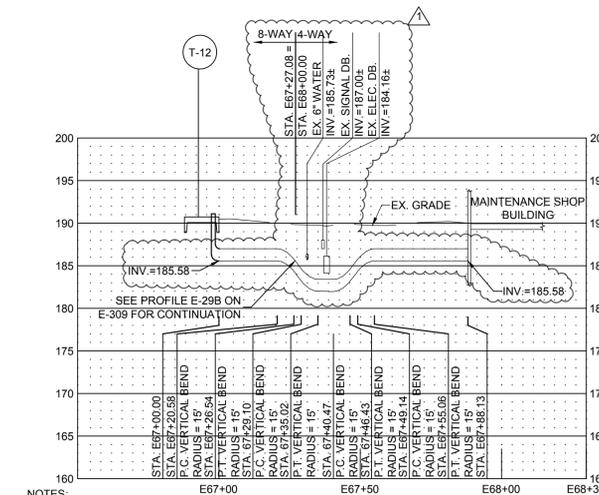
- NOTES:
- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
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E-29
E-308
4-WAY (2X2) 4" ELEC. DB. FROM PMH-19 TO SWITCH HVS-09/12
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



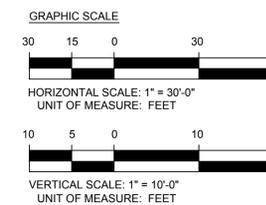
- NOTES:
- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 6WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-28
E-308
6-WAY (3X2) 4" ELEC. DB. FROM PMH-19 TO PMH-18
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



- NOTES:
- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
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E-29A
E-308
8-WAY (4X2)/4-WAY (2X2) 4" ELEC. DB. FROM TRANSFORMER T-12 TO BUILDING 12
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



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CONSULTANT



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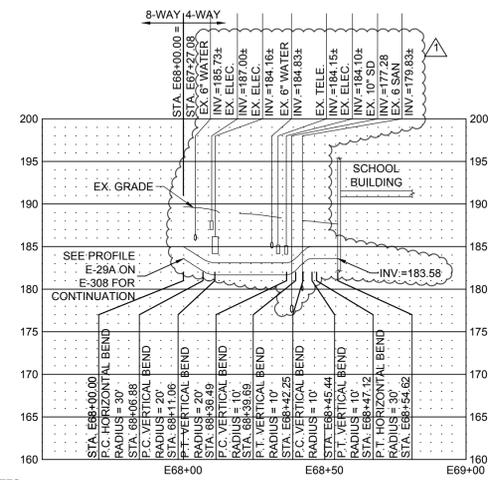
LOCATION: GREAT MEADOW CORRECTIONAL FACILITY
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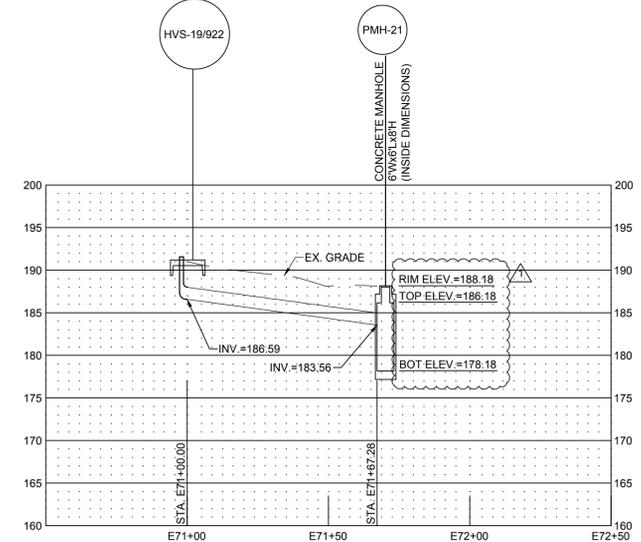
ELECTRICAL DISTRIBUTION PROFILES

DRAWING NUMBER: E-308



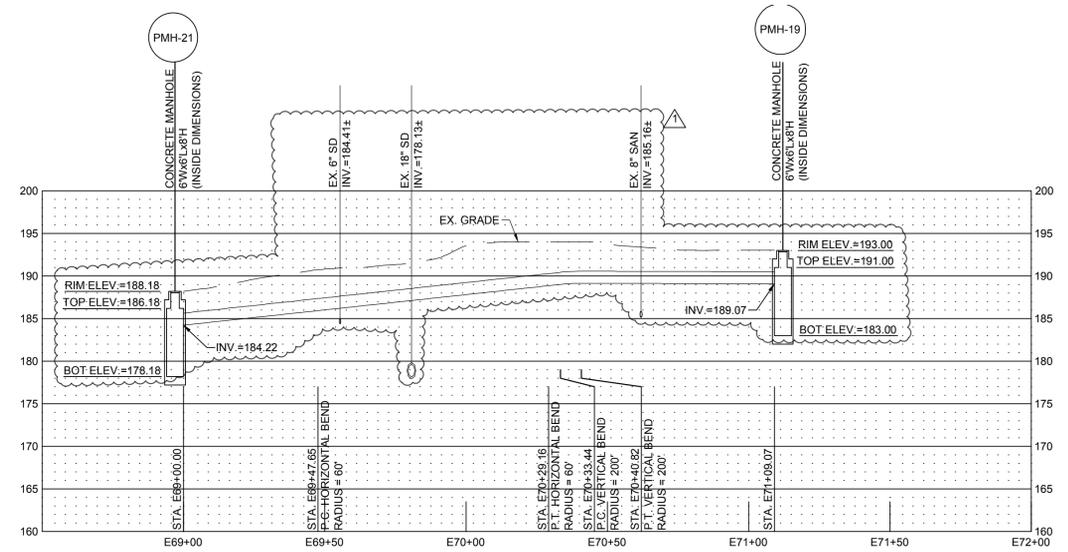
- NOTES:
- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-29B 4-WAY (2X2) 4" ELEC. DB. FROM
E-309 STA E68+00.00/E67+27.08 TO BUILDING 9
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



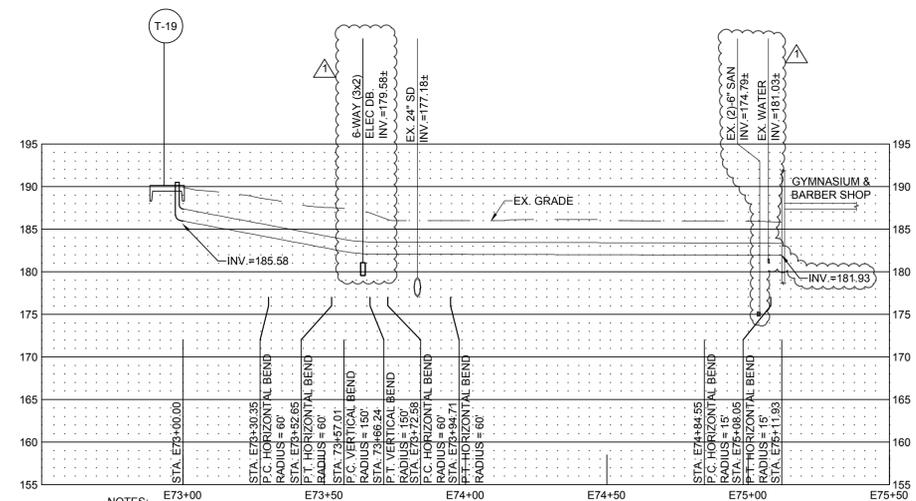
- NOTES:
- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-31 4-WAY (2X2) 4" ELEC. DB. FROM
E-309 SWITCH HVS-19/922 TO PMH-21
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



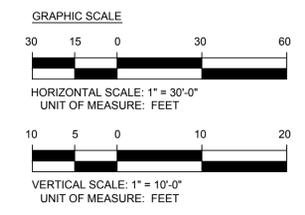
- NOTES:
- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 6-WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-30 6-WAY (3X2) 4" ELEC. DB. FROM
E-309 PMH-21 TO PMH-19
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



- NOTES:
- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-31A 4-WAY (2X2) 4" ELEC. DB. FROM
E-309 TRANSFORMER T-19 TO BUILDING 19
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



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CONTRACT:	ELECTRICAL
TITLE:	UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
LOCATION:	GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821
CLIENT:	DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

PROJECT NUMBER:	42534-E
DESIGNED BY:	DOFH
DRAWN BY:	DOFH
FIELD CHECK:	DOFH
APPROVED:	AJH
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES
DRAWING NUMBER:	E-309
SHEET 050	OF 145

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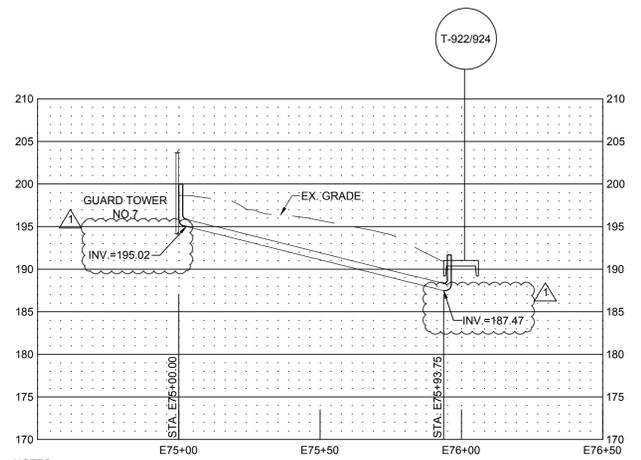
ELECTRICAL

TITLE:
UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE

LOCATION:
GREAT MEADOW CORRECTIONAL FACILITY
ROUTE 22
COMSTOCK, NY, 12821

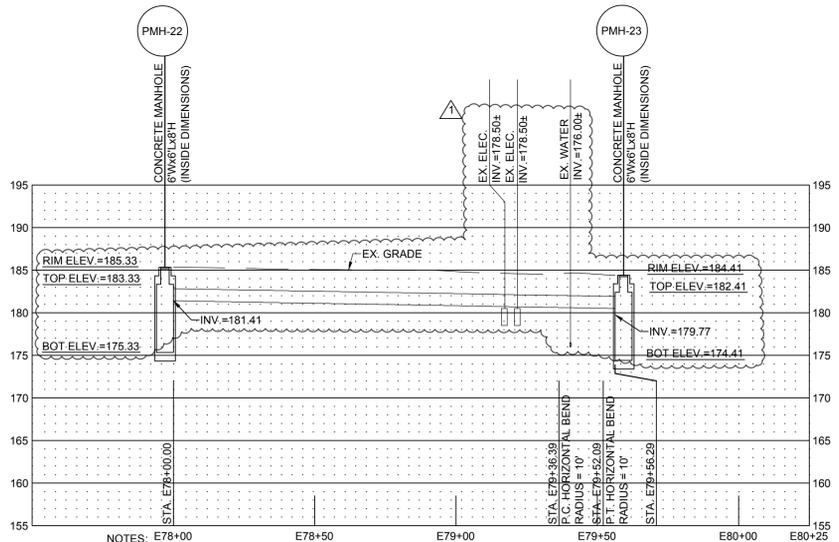
CLIENT:
DEPARTMENT OF
CORRECTIONS AND COMMUNITY
SUPERVISION

MARK	DATE	DESCRIPTION
	10-27-14	Addendum No. 2
	12/27/13	BID DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	DOFH	
DRAWN BY:	DOFH	
FIELD CHECK:	DOFH	
APPROVED:	AJH	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-310	



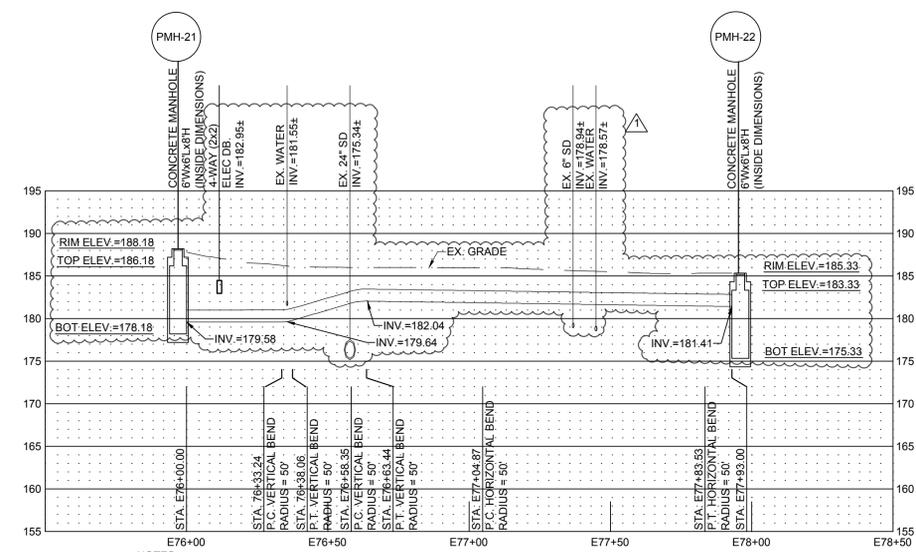
- NOTES:
- SEE DRAWING E-113 FOR UTILITY SITE PLAN AND DRAWING E-105 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 2-WAY (2X1) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-310 2-WAY (2X1) 4" ELEC. DB. FROM BUILDING 922 TO TRANSFORMER T-922/924
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



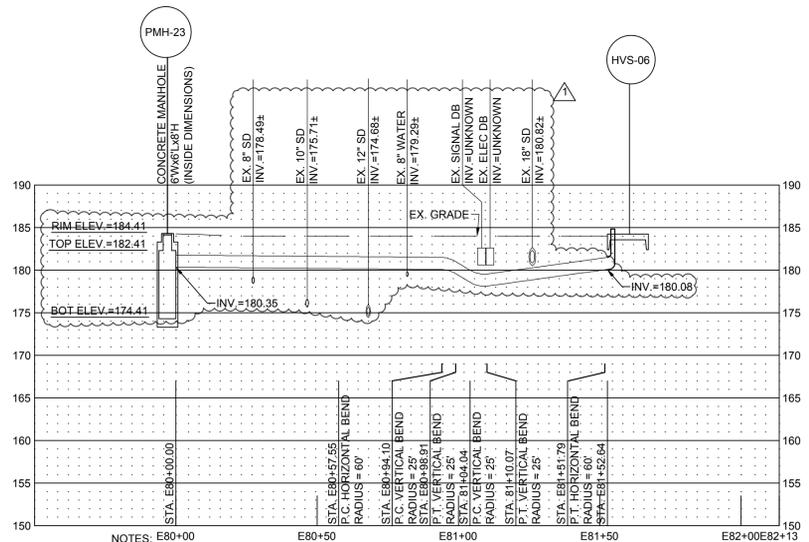
- NOTES:
- SEE DRAWING E-111 FOR UTILITY SITE PLAN AND DRAWING E-103 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 6-WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-310 6-WAY (3X2) 4" ELEC. DB. FROM PMH-22 TO PMH-23
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



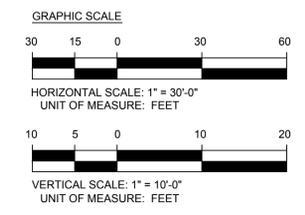
- NOTES:
- SEE DRAWING E-111 & E-113 FOR UTILITY SITE PLAN AND DRAWING E-103 & E-105 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 6-WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-310 6-WAY (3X2) 4" ELEC. DB. FROM PMH-21 TO PMH-22
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



- NOTES:
- SEE DRAWING E-111 FOR UTILITY SITE PLAN AND DRAWING E-103 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 6-WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

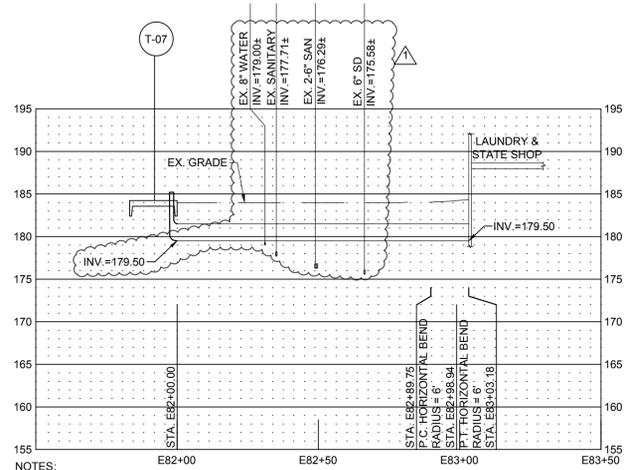
E-310 6-WAY (3X2) 4" ELEC. DB. FROM PMH-23 TO SWITCH HVS-06
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



8 7 6 5 4 3 2 1

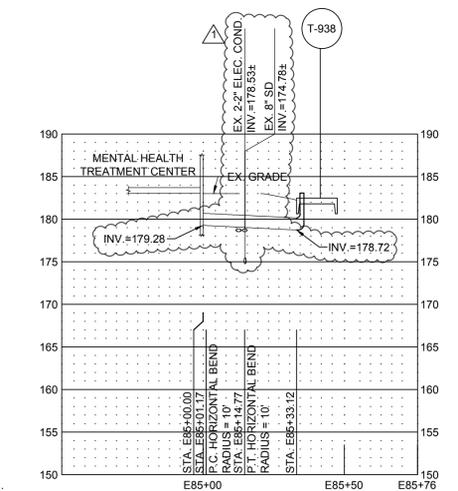
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8 7 6 5 4 3 2 1



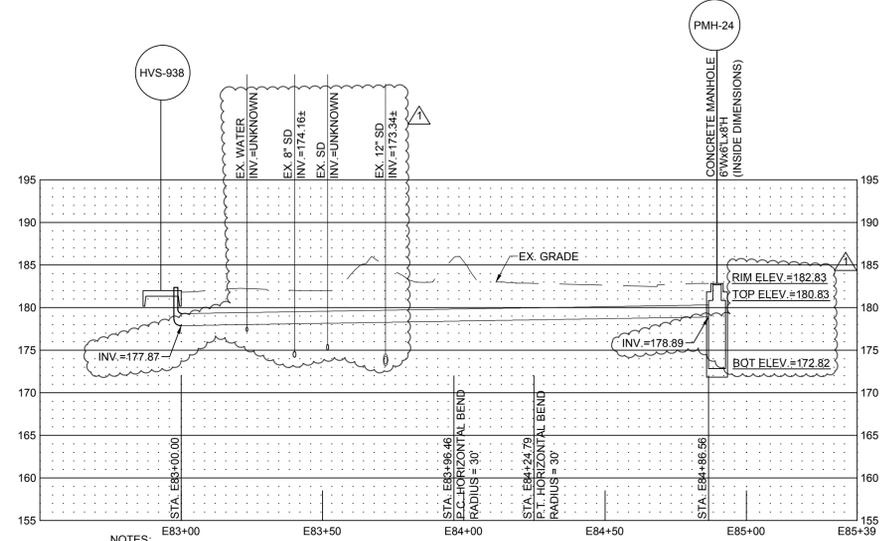
- NOTES:
- SEE DRAWING E-111 FOR UTILITY SITE PLAN AND DRAWING E-103 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 12-WAY (4X3) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-34A 12-WAY (4X3) 4" ELEC. DB. FROM TRANSFORMER T-07 TO BUILDING 7
E-311 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



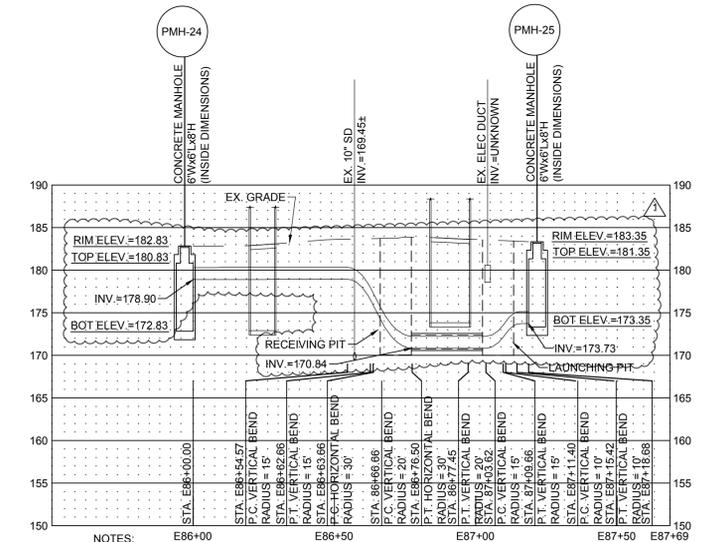
- NOTES:
- SEE DRAWING E-111 FOR UTILITY SITE PLAN AND DRAWING E-103 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 6-WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-35A 4-WAY (2X2) 4" ELEC. DB. FROM BUILDING 938 TO TRANSFORMER T-938
E-311 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



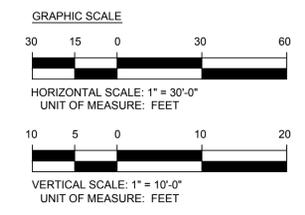
- NOTES:
- SEE DRAWING E-111 FOR UTILITY SITE PLAN AND DRAWING E-103 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-35 4-WAY (2X2) 4" ELEC. DB. FROM SWITCH HVS-938 TO PMH-24
E-311 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



- NOTES:
- SEE DRAWING E-111 AND E-312 FOR UTILITY SITE PLAN AND DRAWING E-103 AND E-104 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 6-WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-36 4-WAY (2X2) 4" ELEC. DB. FROM PMH-24 TO PMH-25
E-311 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



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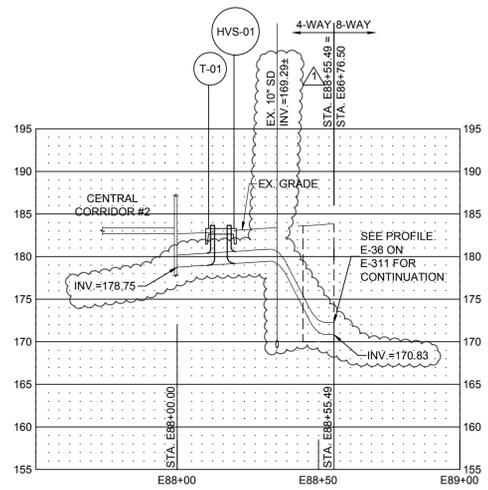
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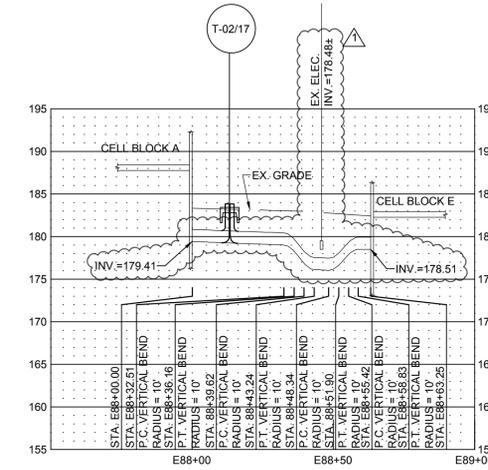
CONTRACT: ELECTRICAL
 TITLE: UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
 LOCATION: GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821
 CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

PROJECT NUMBER:	42534-E	
DESIGNED BY:	DOFH	
DRAWN BY:	DOFH	
FIELD CHECK:	DOFH	
APPROVED:	AJH	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-311	
SHEET 052	OF 145	



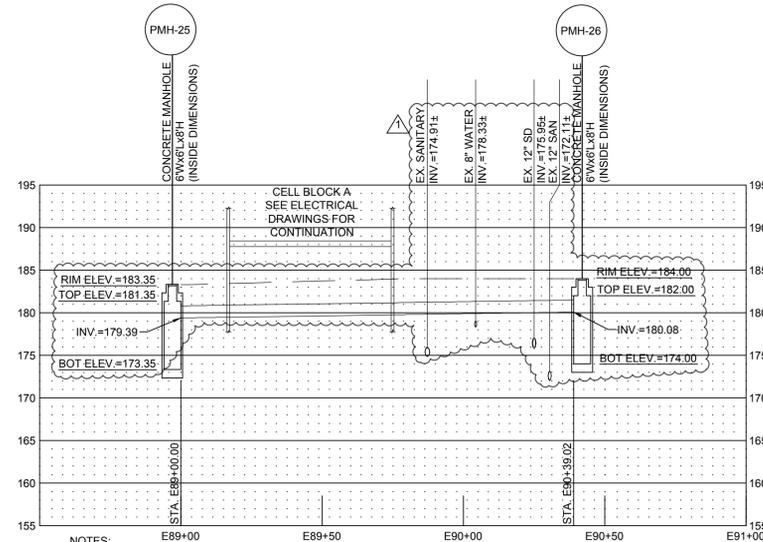
- NOTES:
- SEE DRAWING E-111 FOR UTILITY SITE PLAN AND DRAWING E-103 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-36A 4-WAY (2X2) 4" ELEC. DB. FROM BUILDING 901 TO STA. E88+55.49/E86+76.50
E-312 HORIZONTAL SCALE: 1"= 30'
 VERTICAL SCALE: 1" = 10'



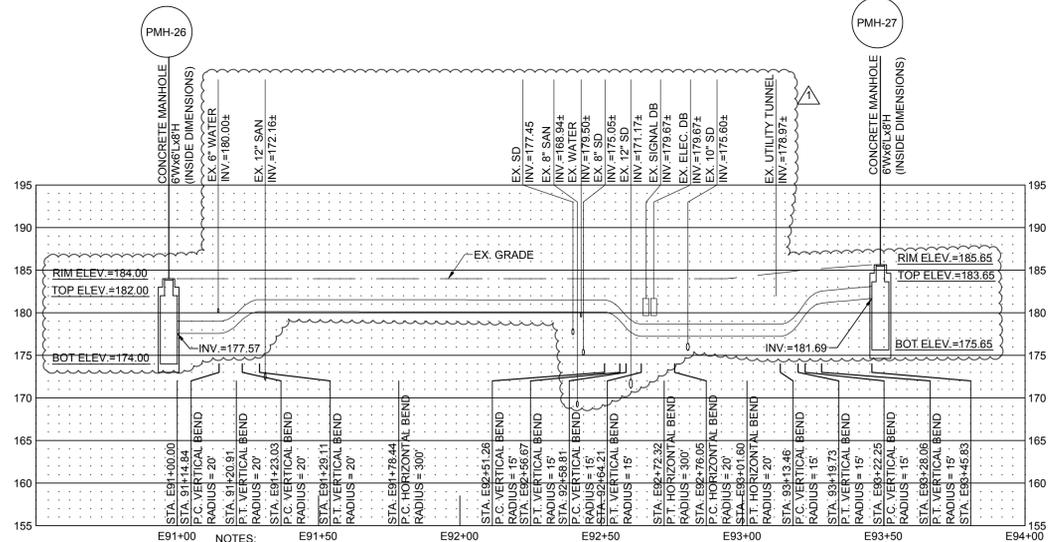
- NOTES:
- SEE DRAWING E-112 FOR UTILITY SITE PLAN AND DRAWING E-104 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-37 4-WAY (2X2) 4" ELEC. DB. FROM BUILDING 2 TO BUILDING 17
E-312 HORIZONTAL SCALE: 1"= 30'
 VERTICAL SCALE: 1" = 10'



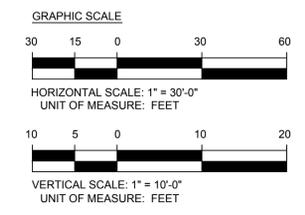
- NOTES:
- SEE DRAWING E-112 FOR UTILITY SITE PLAN AND DRAWING E-104 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-38 4-WAY (2X2) 4" ELEC. DB. FROM PMH-25 TO PMH-26
E-312 HORIZONTAL SCALE: 1"= 30'
 VERTICAL SCALE: 1" = 10'



- NOTES:
- SEE DRAWING E-112 FOR UTILITY SITE PLAN AND DRAWING E-104 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-39 4-WAY (2X2) 4" ELEC. DB. FROM PMH-26 TO PMH-27
E-312 HORIZONTAL SCALE: 1"= 30'
 VERTICAL SCALE: 1" = 10'



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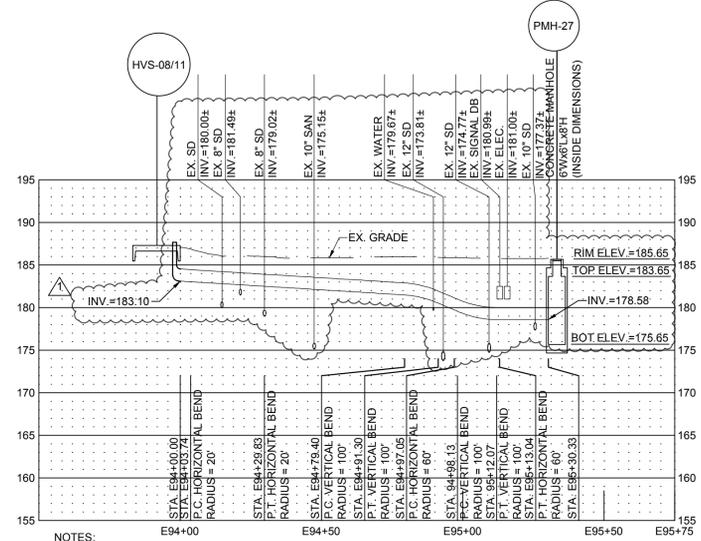
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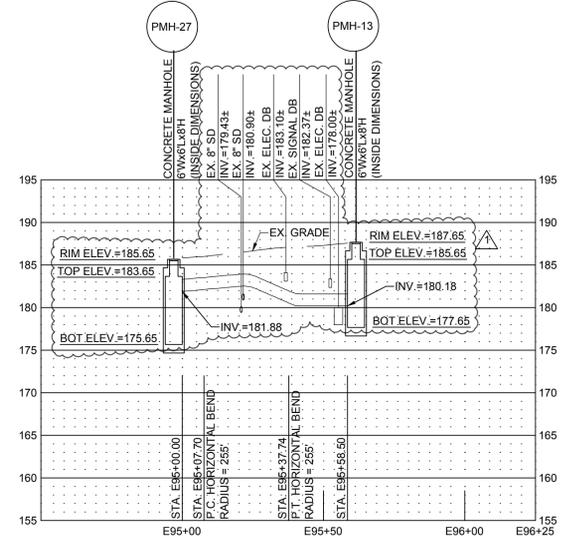
CONTRACT:	ELECTRICAL
TITLE:	UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
LOCATION:	GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821
CLIENT:	DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

PROJECT NUMBER:	42534-E	
DESIGNED BY:	DOFH	
DRAWN BY:	DOFH	
FIELD CHECK:	DOFH	
APPROVED:	AJH	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-312	
SHEET 053	OF 145	



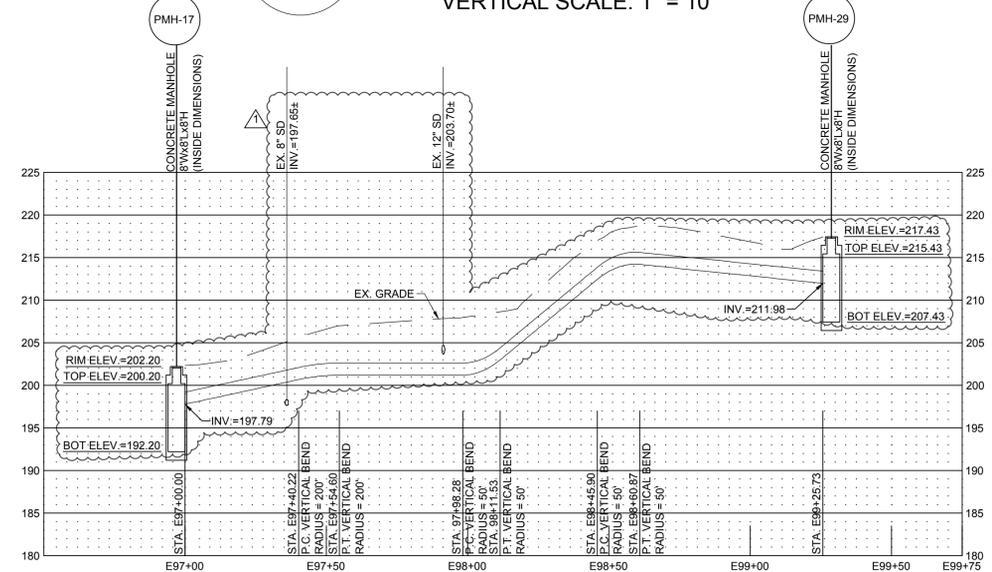
- NOTES:
- SEE DRAWING E-114 FOR UTILITY SITE PLAN AND DRAWING E-106 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-40
E-313
 4-WAY (2X2) 4" ELEC. DB. FROM SWITCH HVS-08/11 TO PMH-27
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



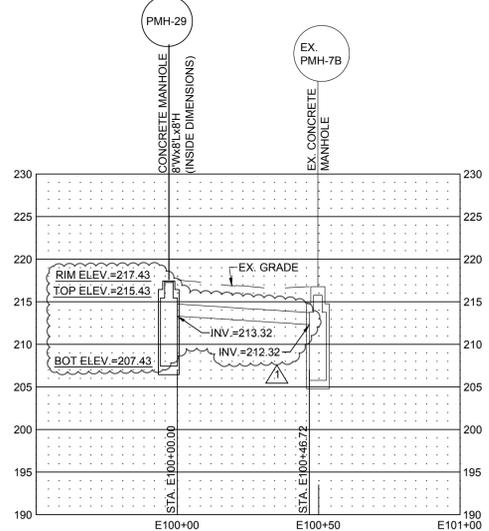
- NOTES:
- SEE DRAWING E-114 FOR UTILITY SITE PLAN AND DRAWING E-106 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 6-WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-41
E-313
 6-WAY (3X2) 4" ELEC. DB. FROM PMH-27 TO PMH-13
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



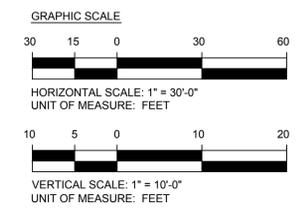
- NOTES:
- SEE DRAWING E-113 AND E-115 FOR UTILITY SITE PLAN AND DRAWING E-105 AND E-107 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 10-WAY (5X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-42
E-313
 10-WAY (5X2) 4" ELEC. DB. FROM PMH-17 TO PMH-29
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



- NOTES:
- SEE DRAWING E-115 FOR UTILITY SITE PLAN AND DRAWING E-107 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 8-WAY (4X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK (8-WAY (4X2) 4" ELECTRICAL DUCTBANK FROM PMH-29 TO EX. PMH-7A MATCHES IN PROFILE).
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-43
E-313
 8-WAY (4X2) 4" ELEC. DB. FROM PMH-29 TO EX. PMH-7B
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



CONSULTANT

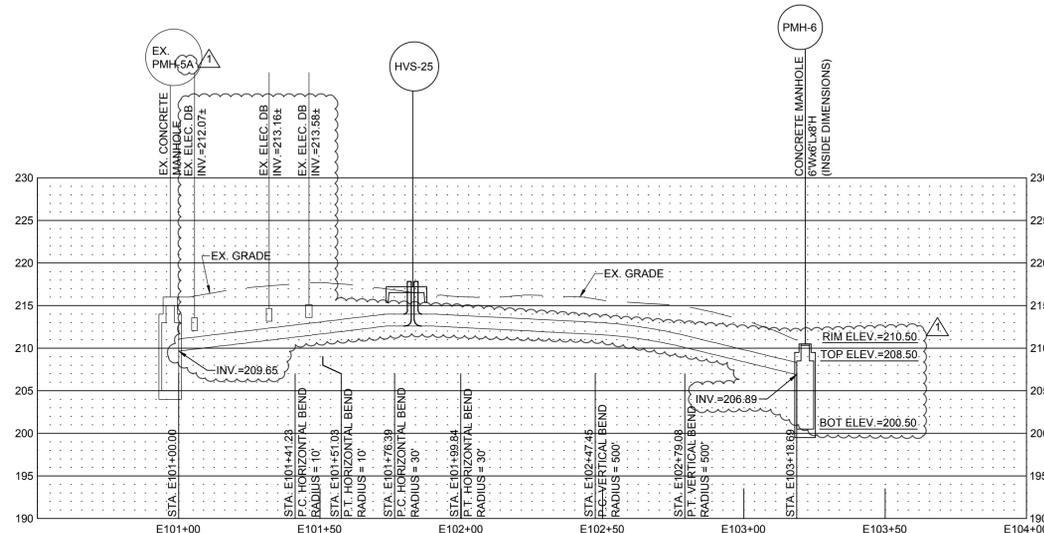
 RMF ENGINEERING, INC.
 120 DEFREEST DRIVE, SUITE 1
 TROY, NY 12180

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CONTRACT: ELECTRICAL
 TITLE: UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
 LOCATION: GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821
 CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

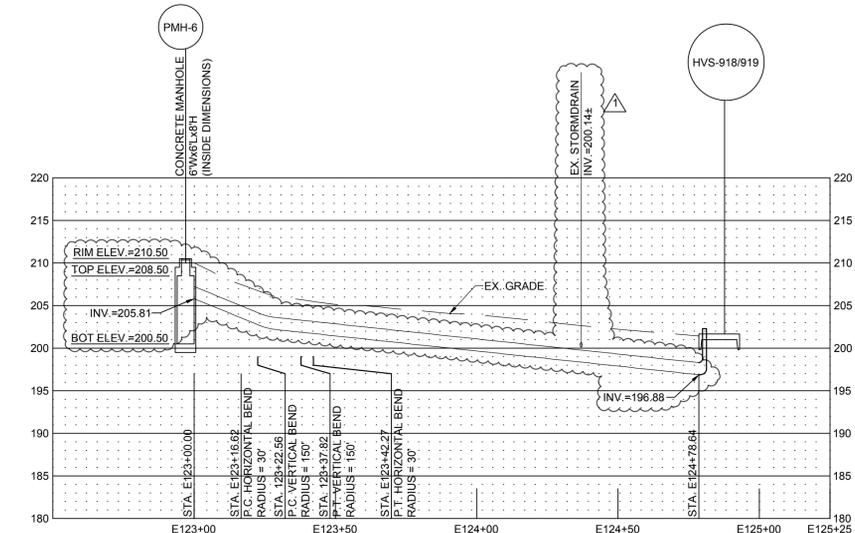
MARK	DATE	DESCRIPTION
△	10-27-14	Addendum No. 2
	12/27/13	BID DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	DOFH	
DRAWN BY:	DOFH	
FIELD CHECK:	DOFH	
APPROVED:	AJH	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-313	



NOTES:

- SEE DRAWING E-115 FOR UTILITY SITE PLAN AND DRAWING E-107 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 8-WAY (4X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK (4-WAY (2X2) 4" ELECTRICAL DUCTBANK TO EX. PMH-5A MATCHES IN PROFILE).
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

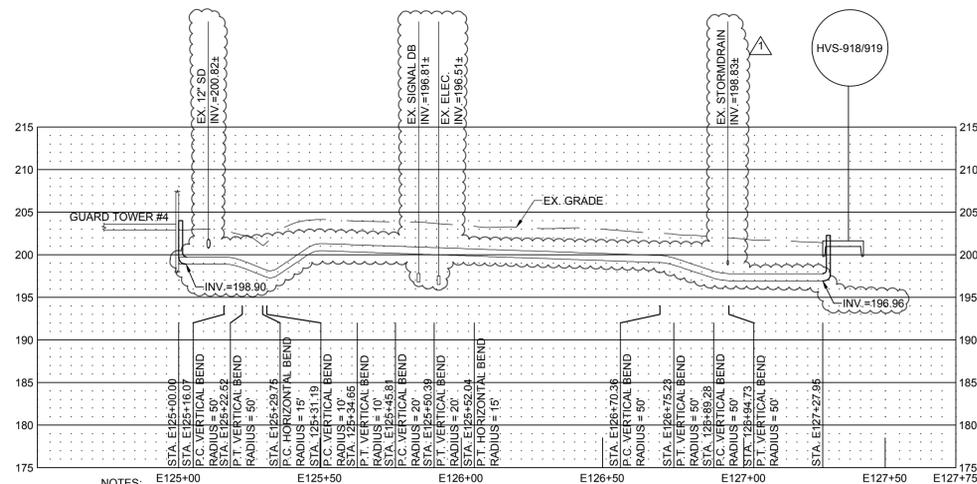
E-44 8-WAY (4X2) 4" ELEC. DB. FROM EX. PMH-5B TO SWITCH HVS-25
E-314 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



NOTES:

- SEE DRAWING E-115 FOR UTILITY SITE PLAN AND DRAWING E-107 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

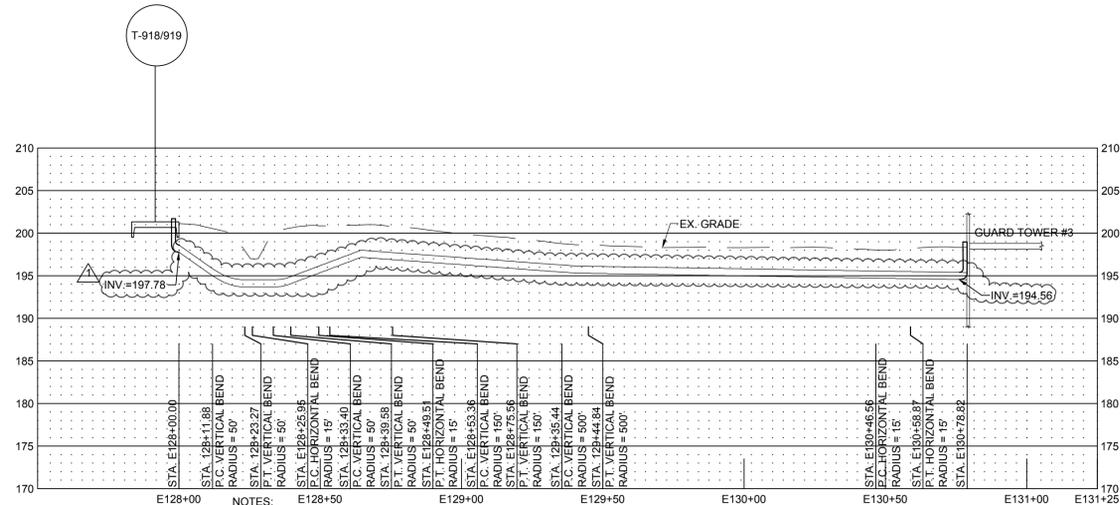
E-44A 4-WAY (2X2) 4" ELEC. DB. FROM PMH-6 TO HVS-918/919
E-314 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



NOTES:

- SEE DRAWING E-114 AND E-115 FOR UTILITY SITE PLAN AND DRAWING E-106 AND E-107 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 2-WAY (2X1) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

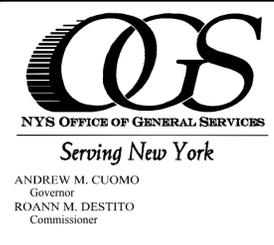
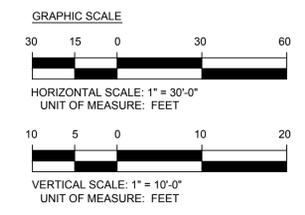
E-44B 2-WAY (2X1) 4" ELEC. DB. FROM BUILDING 919 TO SWITCH HVS-918/919
E-314 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



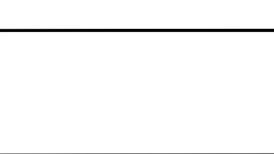
NOTES:

- SEE DRAWING E-114 FOR UTILITY SITE PLAN AND DRAWING E-106 FOR STATIONING PLAN.
- PROFILE IS BASED ON CENTERLINE OF 2-WAY (2X1) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
- BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1" CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-44C 2-WAY (2X1) 4" ELEC. DB. FROM TRANSFORMER T-918/919 TO BUILDING 918
E-314 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



Serving New York
 ANDREW M. CUOMO
 Governor
 ROANN M. DESTITO
 Commissioner

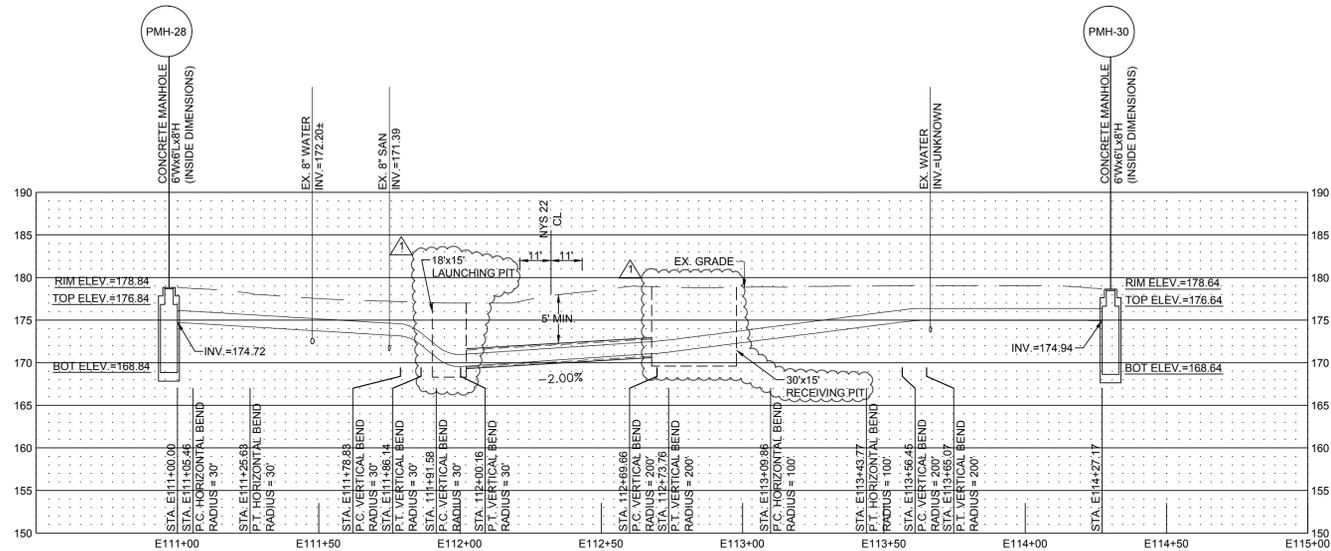


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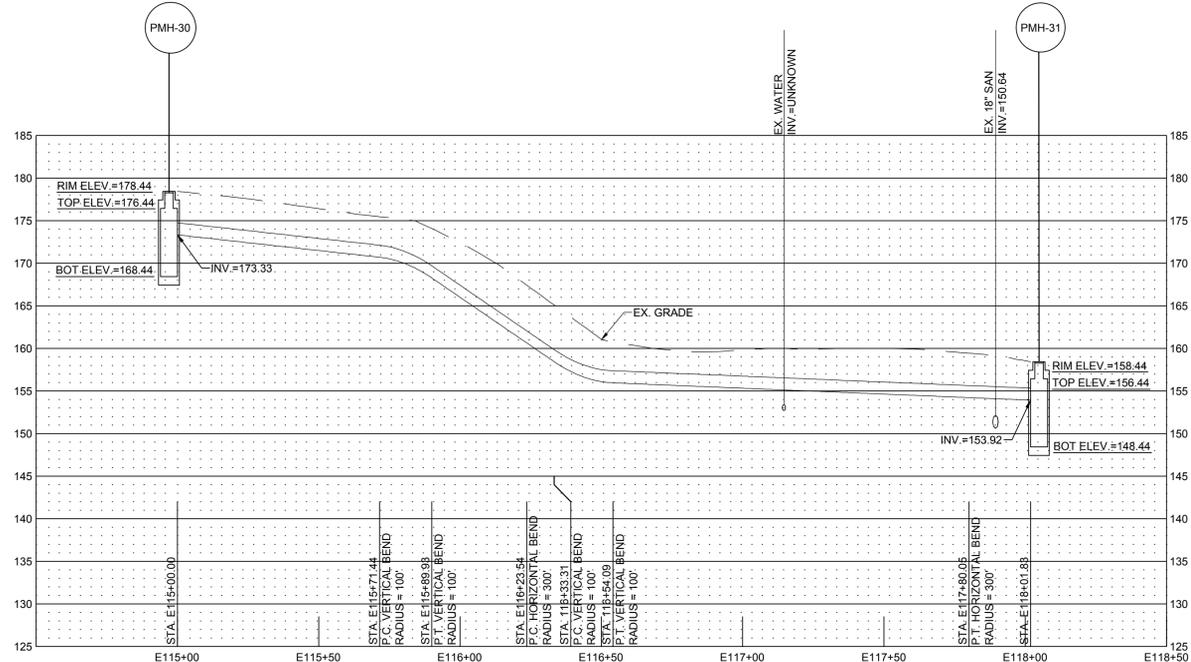
CONTRACT:	ELECTRICAL
TITLE:	UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
LOCATION:	GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821
CLIENT:	DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

PROJECT NUMBER:	42534-E	
DESIGNED BY:	DOFH	
DRAWN BY:	DOFH	
FIELD CHECK:	DOFH	
APPROVED:	AJH	
SHEET TITLE:	ELECTRICAL DISTRIBUTION PROFILES	
DRAWING NUMBER:	E-314	



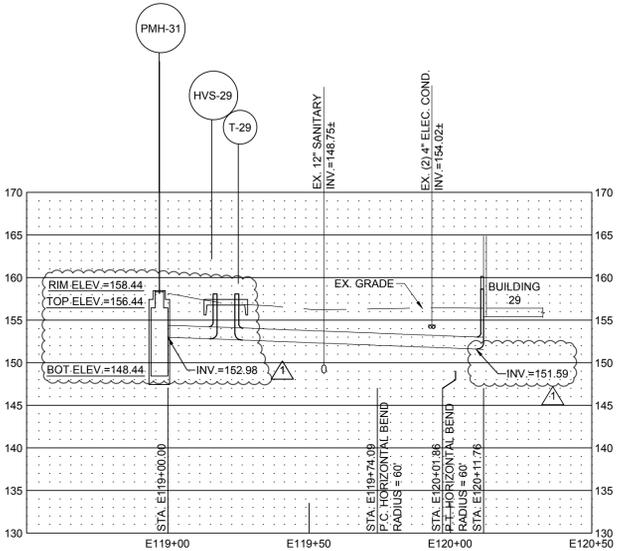
- NOTES:**
- SEE DRAWING E-116 FOR UTILITY SITE PLAN AND DRAWING E-108 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-49 4-WAY (2X2) 4" ELEC. DB. FROM
PMH-2 TO PMH-3
E-315 HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



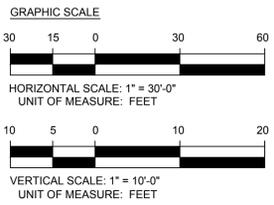
- NOTES:**
- SEE DRAWING E-116 FOR UTILITY SITE PLAN AND DRAWING E-108 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-50 4-WAY (2X2) 4" ELEC. DB. FROM
PMH-2 TO PMH-3
E-315 HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



- NOTES:**
- SEE DRAWING E-116 FOR UTILITY SITE PLAN AND DRAWING E-108 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-52 4-WAY (2X2) 4" ELEC. DB. FROM
PMH-31 TO BUILDING 29
E-315 HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



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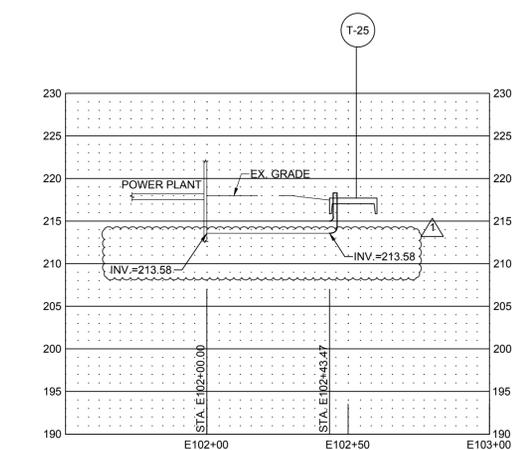


CONTRACT:	ELECTRICAL
TITLE:	UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE
LOCATION:	GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821
CLIENT:	DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

MARK	DATE	DESCRIPTION
△	10-27-14	Addendum No. 2
	12/27/13	BID DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	DOFH	
DRAWN BY:	DOFH	
FIELD CHECK:	DOFH	
APPROVED:	AJH	

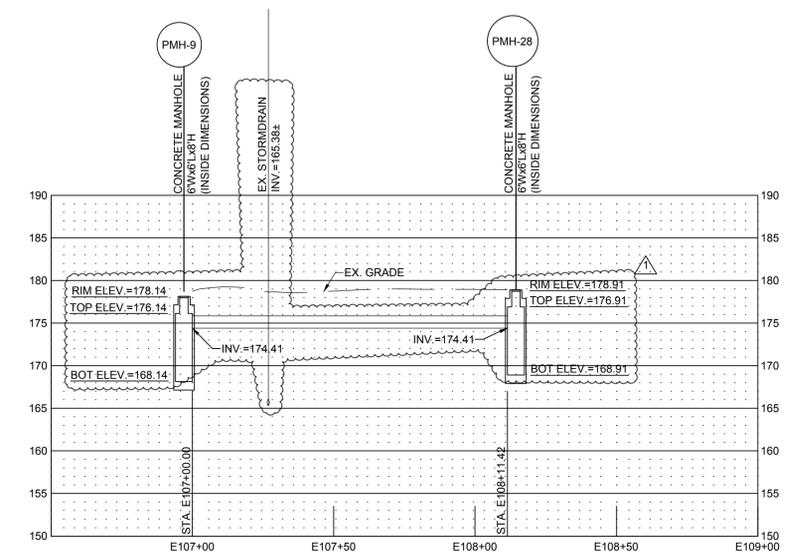
ELECTRICAL DISTRIBUTION PROFILES

DRAWING NUMBER:
E-315



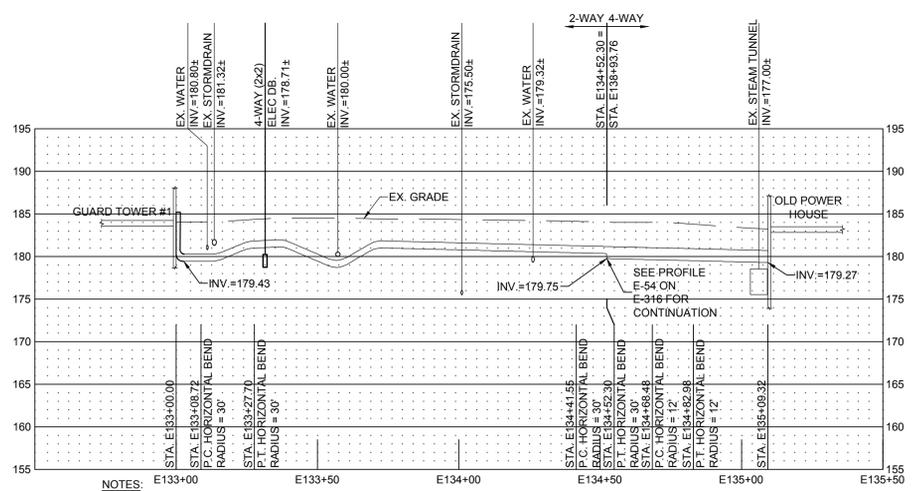
- NOTES:**
- SEE DRAWING E-115 FOR UTILITY SITE PLAN AND DRAWING E-107 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 6-WAY (3X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-45
E-316
6-WAY (3X2) 4" ELEC. DB. FROM BUILDING 25 TO TRANSFORMER T-25
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



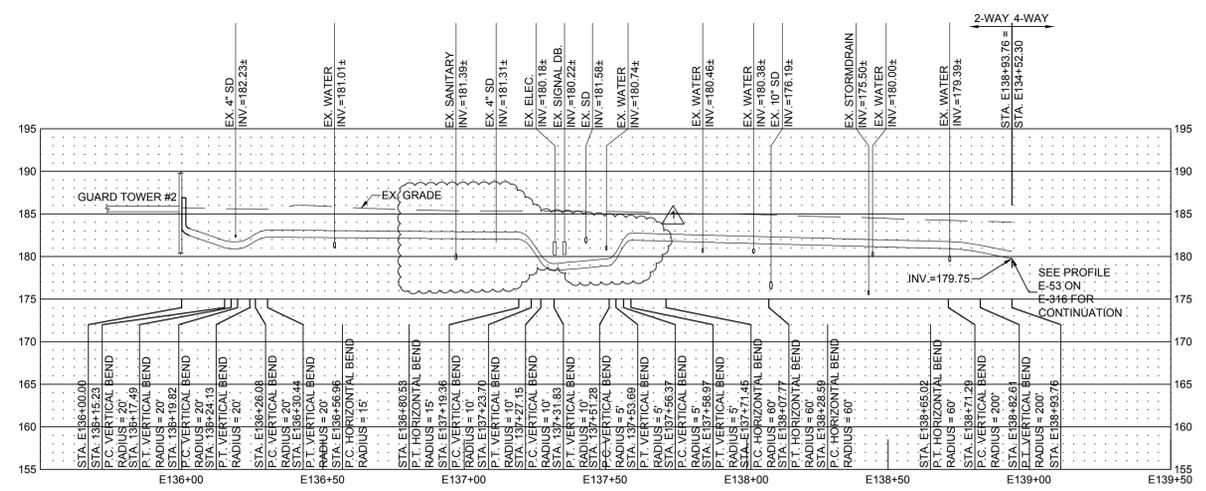
- NOTES:**
- SEE DRAWING E-112 AND E-116 FOR UTILITY SITE PLAN AND DRAWING E-104 AND E-108 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-48
E-316
4-WAY (2X2) 4" ELEC. DB. FROM PMH-9 TO PMH-28
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



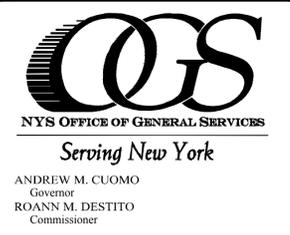
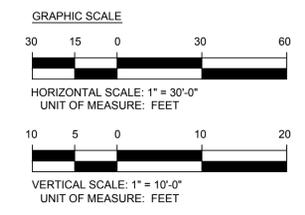
- NOTES:**
- SEE DRAWING E-112 AND E-116 FOR UTILITY SITE PLAN AND DRAWING E-104 AND E-108 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 4-WAY (2X2) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-53
E-316
2-WAY (2X1)/4-WAY (2X2) 4" ELEC. DB. FROM BUILDING 914 TO BUILDING 3
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



- NOTES:**
- SEE DRAWINGS E-112, E-114, AND E-116 FOR UTILITY SITE PLAN AND DRAWINGS E-104, E-106, AND E-108 FOR STATIONING PLAN.
 - PROFILE IS BASED ON CENTERLINE OF 2-WAY (2X1) 4" ELECTRICAL DUCTBANK. INVERT INFORMATION PROVIDED IS BASED ON THE BOTTOM OF THE DUCTBANK.
 - BACKFILL WITH FLOWABLE FILL WHERE LESS THAN 1' CLEARANCE BETWEEN UTILITIES (MINIMUM SEPARATION BETWEEN UTILITIES SHALL BE 6 INCHES). FLOWABLE FILL CONCRETE CONSISTING OF A MIXTURE OF FLY ASH, CEMENT AND WATER, CERTIFIED BY MANUFACTURERS, IN ACCORDANCE WITH OFFICE OF GENERAL SERVICES STANDARDS SPECIFICATION 310000.

E-54
E-316
2-WAY (2X1) 4" ELEC. DB. FROM BUILDING 915 TO STA. E134+52.30/E138+93.76
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'

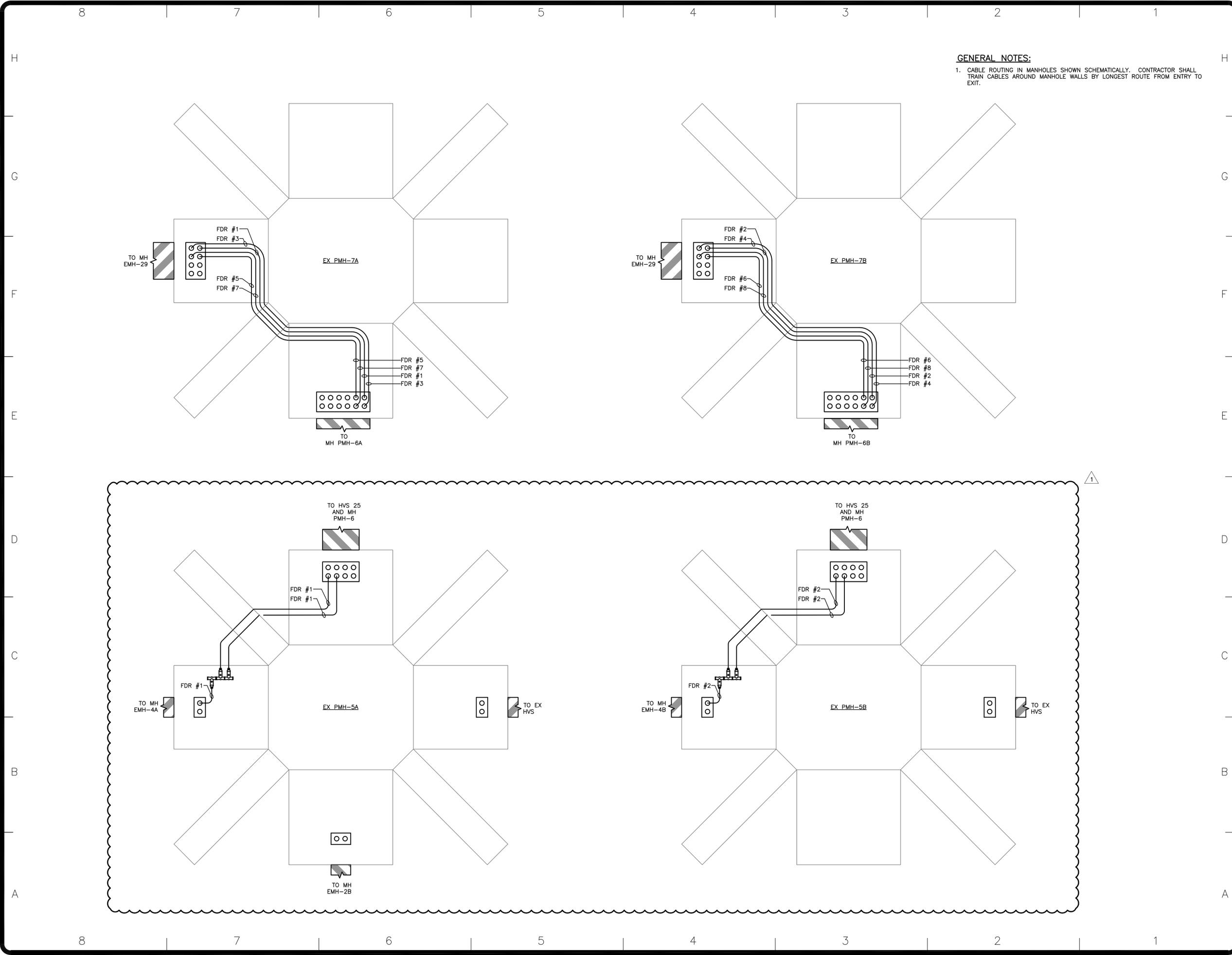


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CONTRACT: ELECTRICAL	
TITLE: UPGRADE ELECTRIC DISTRIBUTION SYSTEM, SITEWIDE	
LOCATION: GREAT MEADOW CORRECTIONAL FACILITY ROUTE 22 COMSTOCK, NY, 12821	
CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION	

MARK	DATE	DESCRIPTION
	10-27-14	Addendum No. 2
	12/27/13	BID DOCUMENTS
PROJECT NUMBER:	42534-E	
DESIGNED BY:	DOFH	
DRAWN BY:	DOFH	
FIELD CHECK:	DOFH	
APPROVED:	AJH	
SHEET TITLE: ELECTRICAL DISTRIBUTION PROFILES		
DRAWING NUMBER: E-316		



GENERAL NOTES:
 1. CABLE ROUTING IN MANHOLES SHOWN SCHEMATICALLY. CONTRACTOR SHALL TRAIN CABLES AROUND MANHOLE WALLS BY LONGEST ROUTE FROM ENTRY TO EXIT.

OGS
 NYS OFFICE OF GENERAL SERVICES
Serving New York
 ANDREW M. CUOMO
 Governor
 ROANN M. DESTITO
 Commissioner

CONSULTANT
rmf
 RMF ENGINEERING, INC.
 120 DEFREEST DRIVE, SUITE 1
 TROY, NY 12180

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CONTRACT: **ELECTRICAL**
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 LOCATION: **GREAT MEADOW CORRECTIONAL FACILITY
 ROUTE 22
 COMSTOCK, NY, 12821**
 CLIENT: **DEPARTMENT OF
 CORRECTIONS AND COMMUNITY
 SUPERVISION**

MARK	DATE	DESCRIPTION
△	10/27/14	ADDENDUM NO. 2
	12/27/13	BID DOCUMENTS
PROJECT NUMBER: 42534-E		
DESIGNED BY:	JTM	
DRAWN BY:	TNC	
FIELD CHECK:	JTM	
APPROVED:	AJH	
SHEET TITLE: MANHOLE DIAGRAMS		

DRAWING NUMBER:
E-514
 SHEET 137 OF 145

