



**DESIGN AND CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242**

ADDENDUM NO. 4 TO PROJECT NO. 44854

**CONSTRUCTION, HVAC WORK, PLUMBING WORK, ELECTRICAL WORK
PROVIDE CENTRAL SECURITY UNIT, BUILDING No. 51
HIGHLAND RESIDENTIAL CENTER
629 NORTH CHODIKEE LAKE ROAD
HIGHLAND, NY 12528**

February 12, 2016

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.

CONSTRUCTION SPECIFICATIONS

1. SECTION 323113 CHAIN LINK FENCE AND GATES; Discard the section bound in the Project Manual and substitute the accompanying Section (pages 323113-1 through 323113-16) noted 'Revised 02/12/2016'.

ELECTRICAL SPECIFICATIONS

2. SECTION 271524 OPTICAL FIBER CABLES; Replace Article 2.01, A with the following:

**“2.01 NONCONDUCTIVE OPTICAL FIBER CABLES - 8 MICRON/125 MICRON
(CORE/CLAD)**

- A. Type 6 SM; Heavy duty dual jacketed indoor/outdoor fiber optic cable, Chromatic Technologies, Inc., General Cables' series H1M or Remeo Products Corp.'s series 27, having:
 1. 6 optical fibers.
 - a. Each fiber in an individual gel filled loose tube.
 - b. Fiber diameter (core/clad): 8.3 micron/125 micron
 - c. Fiber type: Graded index multimode fiber.
 - d. Maximum Fiber Attenuation:
 - 1) .4 dB/km (@1310nm).
 - 2) .3 dB/km(@1550nm).
 - e. Minimum Fiber Bandwidth:
 - 1) 400 MHZ-km (@1310nm).
 - 2) 400 MHZ-km (@1550nm).
 2. Central strength member: Epoxy/fiber glass rod or equal.
 3. Inner Jacket: Flame and moisture resistant Polyvinyl chloride (PVC) or equal.

4. Outer strength member: Aramid yarn.
 5. Outer Jacket: Ultraviolet, flame and moisture resistant jacket, meeting National Electrical code for OFNR cable.
 6. Minimum Crush Resistance: 500 Lbsf/Inch (875 N/cm).
 7. Suitable for indoor /outdoor duct.
- B. Type 24 SM; Heavy duty dual jacketed indoor/outdoor fiber optic cable, Chromatic Technologies, Inc., General Cables' series HIM or Remeo Products Corp.'s series 27, having:
1. 24 optical fibers.
 - a. Each fiber in an individual gel filled loose tube.
 - b. Fiber diameter (core/clad): 8.3 micron/125 micron
 - c. Fiber type: Graded index multimode fiber.
 - d. Maximum Fiber Attenuation:
 - 1) .4 dB/km (@1310nm).
 - 2) .3 dB/km (@1550nm).
 - e. Minimum Fiber Bandwidth:
 - 1) 400 MHZ-km (@1310nm).
 - 2) 400 MHZ-km (@1550nm).
 2. Central strength member: Epoxy/fiber glass rod or equal.
 3. Inner Jacket: Flame and moisture resistant Polyvinyl chloride (PVC) or equal.
 4. Outer strength member: Aramid yarn.
 5. Outer Jacket: Ultraviolet, flame and moisture resistant jacket, meeting National Electrical code for OFNR cable.
 6. Minimum Crush Resistance: 500 Lbsf/Inch (875 N/cm).
 7. Suitable for indoor /outdoor duct.”

3. SECTION 281300 ACCESS CONTROL; Replace Article 2.07 with the following:

“2.07 GATE CONTROL CONSOLES

- A. Control Consoles: Desk type, constructed of 3/16 inch thick steel plate. Consoles shall have steel plate back, front and sides. All exposed corners and edges of console shall be rounded at not less than a one inch radius.
 1. Size: Width, depth and height as required to contain the control panel and related equipment, but within the limitations specified or shown. All switches and buttons shall be mounted within a distance that will make it unnecessary for the officer to move more than one step in either direction to reach them. Height of control panel shall be as shown on the Drawings, or if not shown, as directed.
- B. Control Panels:
 1. General: Fabricate panels of 11 gage stainless steel with holes to receive switches, circuit breakers, and indicator lights. Fabricate housings and fastening battens of 10 gage mild steel with hammer tone gray finish. Each gate controlled by panel shall have a control switch, circuit breaker, and two indicator lights mounted in a horizontal line. A green light shall go on only when the gate is locked close. A red light shall show all other conditions of the gate. Lights shall be accessible and replaceable. Identify each gate controlled from panel.
 2. Panels for Control Consoles: Panels shall form the top, be inclined down from back to front between 10 and 20 degrees from horizontal, and turn down at least one inch over front and sides. Panel shall have a continuous stainless steel hinge at the back to allow it to swing up for maintenance, and be secured at the front, sides, and battens. Reinforce

- for security fasteners. Provide a pair of interior prop rods with automatic cam action to prevent accidental closing and to hold the panel in an open position for maintenance.
3. The Wiring shall be connected in parallel to the creative technologies system to allow control form either. Refer to Sheet EY-503 for further details. Means and methods to be coordinated with TYCO IS and Creative technologies.
- C. Fasteners
1. Bolts and Nuts: ASTM A 307, Grade A.
 - a. Concealed Bolts: Standard common bolts with lock washers and nuts. For items requiring servicing or replacement, drill the bolts and equip them with cotter pins and flat washers.
 - b. Exposed Bolts: Countersunk flathead security head Torx center pin bolts, with lock washers and nuts, unless otherwise specified.
 2. Machine Screws: ANSI/ASME B18.6.3.
 - a. Concealed Machine Screws: Security head Torx center pin screws, unless otherwise specified.
 - b. Exposed Machine Screws: Countersunk flat head security head Torx center pin screws, unless otherwise specified.
 3. Carriage Bolts:
 - a. Exposed Bolts: Carriage bolts, with lock nuts and washers. (When mounting control console to counter top, install carriage bolt from the underside of counter top into the control console.)
Plain Washers: Round, ASME B18.22.1.
 - b. Lock Washers: Helical, spring type, ASME B18.21.1.
- D. Electrical components for electric operating and locking system and electric locking system
1. General:
 - a. Sliding gate components and their controls shall be suitable for connection to a 15 ampere, 120/208 volt, 3 phase, 60 Hz, dedicated circuit per each gate.
 - b. Pedestrian gate components and their controls shall be suitable for connection to a 20 ampere, 120 volt, single phase, 60 Hz, dedicated circuit per each gate.
 - c. Electrical components for which Underwriters' Laboratories, Inc. (UL) provides product listing service, shall be listed and bear the listing mark.
 - d. Electrical components shall be the standard product of the detention equipment manufacturer except for the qualifications, which follow.
 2. Circuit Breaker: Individually protect control switch and circuit for each gate with a circuit breaker mounted in the panel adjacent to the switch:
 - a. AIRPAX Series PR11-62-2 or 5, or Potter & Brumfield W28 series, 2 or 5 amp. Amperage as indicated on drawings.
 3. Indicator Lights: Industrial Devices Inc. 1091QM1-24VDC (RED), 1091QM5-24VDC (GREEN), SUPER-BRITE series LEDs, red or green as indicated on drawings.
 4. Three-Position Selector Switch: Allen-Bradley's 800T series, Cutler-Hammer's (Eaton) 10250T series, or Square D's (Schneider) 9001K series switch, having:

- a. Size: 30mm diameter for insertion in 31mm keyed panel opening.
 - b. Metal Legend Plate: "OPEN – STOP – CLOSE".
 - c. Operator Action: Spring return to Center (STOP) position from either left (OPEN) or right (CLOSE) positions.
 - d. Handle (Knob): Black Lever Handle (Gloved Hand Lever).
 - e. Contact Blocks: Configuration and number of contact blocks as required.
5. Momentary Contact Push-button Switch: Allen-Bradley's 800T series, Cutler-Hammer's (Eaton) 10250T series, or Square D's (Schneider) 9001K series switch, having:
- a. Size: 30mm diameter for insertion in 31mm keyed panel opening.
 - b. Push-button: Black flush head
 - c. Contact Blocks: Minimum of one contact block with 1 normally open (N.O.) contact and 1 normally closed (N.C.) contact. Provide additional contact blocks as required.
6. Key Operated Interlock Bypass Switch: Two Position Selector Switch: Allen-Bradley's 800T series, Cutler-Hammer's (Eaton) 10250T series, or Square D's (Schneider) 9001K series switch, having:
- a. Size: 30mm diameter for insertion in 31mm keyed panel opening.
 - b. Metal Legend Plate: "INTERLOCK BYPASS".
 - c. Operator Action: Maintained position for both positions. Key is non-removable when switch is in "Interlock Bypass" mode.
 - d. Handle (Knob): Keyed switch, furnish three keys for each switch.
 - 1) All interlock bypass switches shall be keyed alike, but unlike any other keyed switch on the board.
 - e. Contact Blocks: Minimum of one contact block with 1 normally open (N.O.) contact and 1 normally closed (N.C.) contact. Provide additional contact blocks as required.
7. Key Operated Control Panel Power Cut-off Switch (which activates a magnetic contactor): Two Position Selector Switch: Allen-Bradley's 800T series, Cutler-Hammer's (Eaton) 10250T series, or Square D's (Schneider) 9001K series switch, having:
- a. Size: 30mm diameter for insertion in 31mm keyed panel opening.
 - b. Metal Legend Plate: "ON - OFF".
 - c. Operator Action: Maintained position for both positions. Key is non-removable when switch is in "Power On" mode.
 - d. Handle (Knob): Keyed switch, furnish three keys for each switch.
 - 1) All Power Cut-off switches shall be keyed individually and unlike any other keyed switch.
 - e. Contact Blocks: Minimum of one contact block with 1 normally open (N.O.) contact and 1 normally closed (N.C.) contact. Provide additional contact blocks as required.
8. 24 Volt Power Supply: Silver Line Linear Power Supplies, Model SLS-24-012T or Sola Heviduty Model No. SDP-24-100, output rating (24volt/1.2 amps). Screw terminal connections, temp range 0 degrees C

to +50 degrees C, automatic current limiting, DC output adjustable 10 percent minimum.

9. Contactors and relays: ABB MDRC's Modular DIN Rail Components.
10. Wiring Conductors: Provide wiring in accordance with Section 260505.
11. Protect motors with automatic reset type thermal overload controls, and limit switches.
12. Interlocking components: Provide all accessories (relays, contactors, etc.) required to perform the interlocking requirements summarized in DESCRIPTION OF COMPLETED SYSTEM, and elsewhere in this section.
13. Accessories: Include all accessories required to perform the functions summarized in DESCRIPTION OF COMPLETED SYSTEM and as indicated on the drawings.
14. Markers:
 - a. Premarked self-adhesive; W. H. Brady Co.'s B940, Thomas and Betts Co.'s E-Z code WSL self-laminating, Ideal Industries' Mylar/Cloth wire markers, or Markwick Corp.'s permanent wire markers.
 - b. Flexible sleeve markers: Plastic Extruded Parts Inc.'s FS series.
 - c. Snap-on markers: Plastic Extruded Parts Inc.'s RS series.
 - d. Thermal transfer (non-smearing), Brady's ID PAL hand held labeling tool portable thermal transfer printer or equal.
 - e. Coordinate appropriate labeling with owner and civil contractor prior to ordering.
15. Key Control Seals: American Casting & Manufacturing Corporation Model 3001
 - a. Lightweight plastic pull-up seal adjusts to fit a variety of closure sizes.
 - b. Breaking Strength: 14 lbs (6.4 kg)"

ELECTRICAL DRAWINGS

4. DRAWING EY-100C; INTERSITE GATE FIBER ROUTING, KEYED NOTES THIS PAGE:
 - a. Replace note 3 with the following text; "PROVIDE FAS BOX AND ONE (1) 1" CONDUIT FROM EXISTING PULL BOX TO FAS BOX. REFER TO SHEET E-500 FOR CONDUIT INSTALLATION DETAILS. ALSO PROVIDE ONE (1) 1 1/4" CONDUIT AND THREE (3) #8 AWG WIRES IN CONDUIT TO EXISTING MANHOLE 10. CORE DRILL AND GROUT EXISTING MANHOLE TO CONNECT NEW CONDUIT. ROUTE WIRES IN EXISTING CONDUIT TO BUILDING 43 AND CONNECT TO SPARE 120V CIRCUIT IN EXISTING PANEL FOR POWER TO FAS BOX."
 - b. Replace note 4 with the following text: "PROVIDE ONE (1) 1" CONDUIT FROM FAS BOX TO PEDESTRIAN GATE. REFER TO SHEET E-501 FOR CONDUIT INSTALLATION DETAILS."
5. DRAWING EY-501; SECURITY DETAILS AND SCHEDULES, DETAIL 5 GATE SCHEDULE: Add the following to the schedule:

DOOR NUMBER	DOOR LOCATION	CONTROLLER LOCATION	DOOR STATUS	QTY	INTERCOM	QTY	ELECTRO-MECHANICAL LOCKSET	DOOR TYPE
S14	SALLYPORT 102	CSU 109	EXISTING	1	N/A	N/A	EXISTING	SINGLE
S15	SALLYPORT 102	CSU 109	EXISTING	1	N/A	N/A	EXISTING	SINGLE

6. DRAWING EY-504; SECURITY DETAILS AND SCHEDULES, DETAIL 1 NETWORK ONE-LINE DIAGRAM: Power supplies for exterior cameras shall be mounted in room SECURITY 105.
7. DRAWING E-100, KEYED NOTES:
 - a. Add keyed note 20 to read; "PROVIDE ONE (1) 2-INCH CONDUIT FOR LIGHTING CIRCUIT."
8. DRAWING E-100, Detail 1, SITE LIGHTING AND POWER PLAN:
 - a. Add keyed note 20 to branch circuit run, P1-36, from pole mounted fixture S-2 located north of Building 51.
9. DRAWING E-100, Detail 2, ONE LINE DIAGRAM:
 - a. Change keyed note between existing handhole and new panelboard M1 from "4" to "7".
10. DRAWING E-100, GENERAL NOTES:
 - a. Add general note "C. REFER TO DRAWING E-501 FOR UNDERGROUND CONDUIT DETAILS."
11. DRAWING E-101, Detail 1, FIRST FLOOR PLAN - LIGHTING:
 - a. Add branch circuit symbol from light switch to light fixtures in CSU T09."
 - b. Add junction box symbol with a home run at north wall of room SECURITY T05. Label junction box "FACP" and label homerun "S-1 17".
12. DRAWING E-601, Detail 2, MASTER LUMINAIRE SCHEDULE:
 - a. Add "GENERAL NOTE: A. REFER TO SPECIFICATIONS FOR LAMP WATTAGE OF FLUORESCENT LAMPS"
 - b. Add "GENERAL NOTE: B. DESIGN MAKE FOR TYPE G IS LITHONIA TWH LED-10C-1000-40K-T3M-120-PE-TP-DDBXD".
 - c. Add "GENERAL NOTE: C. DESIGN MAKE FOR TYPES S-1 AND S-1 IS MCGRAW EDISON GLEON-AE-04-LED-E1-T4W-BZ".
13. DRAWING E-601, Detail 3, PANEL M1 SCHEDULE:
 - a. Delete "400" Amps from Lugs.
 - b. Add "300" Amps to Main Breaker.
14. DRAWING E-601, Detail 5, PANEL P1-S SCHEDULE:
 - a. Change title from "P1-S" to "S-1".
 - b. Add "100" Amps to Main Breaker.
 - c. Add "FACP" to circuit number 17
15. Revised Drawings:
 - a. Drawing Nos. EY-100, EY-100B, EY-100D, and EY-503, noted "REVISED DRAWING 02/12/2016" accompany this Addendum and supersede the same numbered originally issued drawings.
16. Addendum Drawings:
 - a. Drawing Nos. SD-EY-01, and SD-EY-02 both dated 02/12/2016 accompany this Addendum and forms part of the Contract Documents.

END OF ADDENDUM

Margaret F. Larkin
Executive Director
Design and Construction

SECTION 323113

CHAIN LINK FENCE AND GATES

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Specification Section 03300 – Cast-In-Place Concrete (Concrete for Fence Foundations).
- B. Specification Section 323100, Ornamental Fence
- C. Specification Section 323115, Sliding Gate Operator System.

1.02 REFERENCES

- A. Comply with ASTM A53 for requirements of Schedule 40 piping.
- B. Welding Standards: “Structural Welding Code - Steel, AWS D1.1” or “Structural Welding Code - Sheet Steel, AWS D1.3”, as applicable, by the American Welding Society (AWS Codes).
- C. Materials and Finishes Standard: ANSI/BHMA A156.18-1993, “American National Standard for Materials and Finishes”.

1.03 DEFINITIONS

- A. Height of Fence: Distance measured from the top of concrete footing to the top of fabric. Fences with buried fabric measured from finished grade to the top of fabric.
- B. Company Field Advisor: An employee of the company which markets the security coils under their name and who is certified in writing by the Company to be technically qualified in design and installation of security coils or an employee of an organization certified by the foregoing company to be technically qualified in design and installation of security coils.

1.04 SUBMITTALS

- A. Shop Drawings: Complete detailed drawings for each height and style of fence and gate required. Include separate schedule for each listing all materials required and technical data such as size, weight, and finish, to ensure conformance to specifications.
- B. Product Data: Manufacturer’s catalog cuts, specifications, and installation instructions for each item specified.
- C. Samples:
 - 1. Fence Fabric: Minimum one square foot.
 - 2. Fence and Gate Posts: One foot long each.

3. Miscellaneous Materials and Accessories: One each.
 4. If directed, provide samples from materials delivered to the Site for installation.
- D. Re-Evaluation Fee: In accordance with Article 4.7 of the General Conditions, a re-evaluation processing fee will be levied against the Contractor for each re-evaluation of any Submittal Package submission that was returned for failure to comply with the submittal requirements relative to completeness, content or format. There will be a fee of \$250 levied against the Contractor for each re-evaluation of any Submittal Package submission that was returned for failure to comply with the submittal requirements relative to completeness, content or format.
- E. Quality Control Submittals:
1. Test Reports: Security coils test procedure report.
 2. Certificates: Letter required under Quality Assurance Article.

1.05 QUALITY ASSURANCE

- A. Comply with standards of the Chain Link Fence Manufacturer's Institute.
- B. Provide steel fence and related gates as a complete compatible system including necessary erection accessories, fittings, and fastenings.
- C. Posts and rails shall be continuous without splices.
- D. Security Coils Installation Certification: Letter by the Company Field Advisor stating that the fence company is certified in the installation of the security coils and meets the Contract requirements.
- E. Concrete batching plants shall be currently approved as concrete suppliers by the New York State Department of Transportation (Section 033000).

1.07 DELIVERY

- A. Coordinate delivery of anchors and other accessories to be built into other Work, to avoid delay. Furnish instructions and templates as required for accurate location.
- B. The manufacturer of the prison lock keys shall notify the Director's Representative and the Deputy Superintendent for Administration at Highland Residential Center minimum of two days in advance of shipping keys. Ship all prison lock keys direct from manufacturer, through the United States Postal Service, via Registered Mail, Restricted Delivery, Return Receipt Requested, to: (Coordinate with the Director's Representative for this information).

Deputy Superintendent for Administration
Highland Residential Center
629 North Chodikee Lake Road
Highland, NY 12528

1.08 UNIFORMITY OF DETENTION HARDWARE

- A. Provide detention hardware specified in this section from the same manufacturer.
- B. The existing equipment at Highland Residential Facility is Folger Adam. Provide Folger Adam detention hardware specified in this section from Southern Folger Detention Equipment Company.

PART 2 PRODUCTS

2.01 COMPANIES

- A. Allied Tube & Conduit Corp., 16100 S. Lathrop Ave., Harvey, IL 60426, (800) 882-5543.
- B. Hearne Steel Company, Inc. P.O. Box 1239 Hearne Texas 77859, www.hearnesteel.com.
- C. Anchor Fence, 6500 Eastern Ave., Baltimore, MD, (410) 633-6500.
- D. Southern Folger Detention Equipment Company, P.O. Box 2021, 4634 South Presa St., San Antonio, TX 78223, (210) 533-1231, www.southernfolger.com.
- E. RhinoTube LLC, North American Steelworks, 17 Wood St., West Haven, CT 06516, (800) 466-8600
- F. Tymetal Corporation, Inc., 2549 State Route 40, Greenwich, NY 12834, (518) 692-9930, www.tymetal.com
- G. Wheatland Tube Company, One Council Ave., Wheatland, PA 16161, (724) 342-6851

2.02 MATERIALS

- A. Class B Steel Tubing (Option):
 - 1. SS-40 Fence Pipe by Allied Tube & Conduit Corp.
 - 2. RhinoShield R-40 Tubing by RhinoTube LLC.
 - 3. WT-40 Fence Pipe by Wheatland Tube Company.
- B. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

2.03 STEEL FRAMEWORK (FOR FENCES 10'-1" - 16' HIGH)

- A. End Posts, Corner Posts and Pull Posts:
 - 1. Pipe: 4 inches OD, 9.11 pounds per linear foot (Schedule 40).
 - 2. Class B Steel Tubing: 4 inches OD, 6.56 pounds per linear foot.
- B. Line Posts:
 - 1. Pipe: 2.875 inches OD, 5.79 pounds per linear foot (Schedule 40).
 - 2. Class B Steel Tubing: 2.875 inches OD, 4.64 pounds per linear foot.

- C. Light Posts:
 - 1. Pipe: 4 inches OD, 9.11 pounds per linear foot (Schedule 40).
 - 2. Class B Steel Tubing: 4 inches OD, 6.56 pounds per linear foot.

2.03 STEEL FABRIC

- A. One-piece widths for fence heights up to 12'-0".
- B. Chain link, 2 inch mesh, No. 9 gauge; 3/8 inch mesh, No. 11 gauge.
- C. Selvages: Top edge and bottom edge twisted and barbed.

2.04 SWING GATE POSTS

- A. Single width of gate up to 6'-0" wide and less than 10'-0" high:
 - 1. Pipe: 2.875 inches OD, 5.79 pounds per linear foot (Schedule 40).
 - 2. Class B Steel Tubing: 2.875 inches OD, 4.64 pounds per linear foot.
 - 3. Square Tubing: 2.50 inches OD, 5.70 pounds per linear foot.

2.05 TYPE 'A' GATE SYSTEM

- A. Materials:
 - 1. Steel Tubing: Hot-formed, welded or seamless, structural tubing; ASTM A 501.
 - 2. Miscellaneous Steel Shapes and Bars: ASTM A 36, unless otherwise specified or shown.
 - 3. Steel Sheet:
 - a. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A 569 and ASTM A 568.
 - b. Cold-Rolled Steel Sheets: Commercial quality carbon steel, complying with ASTM A 366 and ASTM A 568.
 - 4. Steel Rods:
 - a. Steel Rods Not To Be Galvanized: 3/8 inch diameter, oil tempered steel rods, with a hardness on the Rockwell C Scale between 38 and 42.
 - b. Steel Rods To Be Galvanized: 3/8 inch diameter, mild steel, low carbon rod.
- B. General Hardware Notes:
 - 1. Deadlocks to have bolt keepers with dust box.
 - 2. Locate centerline of mechanical deadbolt 3'-2" above finished grade.
 - 3. Locate centerline of Door Pull 4'-0" above finished grade.
 - 4. Weld hinges unless specified otherwise.
 - 5. Single Wing Escutcheons: Use on electric jamb locks.
 - 6. Template door closers for maximum gate swing allowed
- C. Hardware for Type "A" Gate:
 - 1. Hinges: 3 ea Stanley BBK852, MSPK855, Brookfield I-8510 series, x rust inhibitor coating x weld 3 sides. Provide fittings for forced lubrication.

2. Electric Prison Lock: 1 ea Folger Adam No. 56ELLNN, bolt remains retracted only while switch is depressed, x dust box x galvanized case. Lock shall automatically deadlock when gate is closed. Provide weather tight fitting at wire penetrations and rubber gasket between frame and cover plate.
 3. Cylinder Shields: 2 ea Folger Adam No. 2CS
 4. Door Pulls: 2 ea Folger Adam No. 2
 5. Door Position Indicator Switch: 1 ea Southern Steel No. 220A-5 series x standard case x galvanized. Provide Type 1 sealant at cover to provide weather protection.
 6. Door Closers:
 - a. 1 ea LCN 4216 x case and internal parts steel and cast iron x constant viscosity fluid from 120 degrees F to -30 degrees F x SRI rust inhibitor paint x Torx screws x AL. Mount on push side of gate.
 - b. Adjust closer for ease of operation.
 7. Molex Plugs: Provide Molex connector for electric lock.
- D. Fabrication and Manufacture:
1. Frames: Tubular steel members 3/16 inches thick. Miter and weld tubular members at corners.
 - a. Stops: 3/4" x 1-1/4" steel, 3 sides. Secure to gate frame with countersunk Torx center pin security machine screws at 8" oc.
 2. Gates: Stiles and rails shall be tubular in cross-section and shall conceal the rod mesh attachment.
 - a. Formed Tubular members: 10 gage sheet steel. Fabricate using a formed channel shape, with welded cover plate.
 - b. Reinforcement for Full Surface Hinge Application:
 - 1) Provide 1-1/2" x 2-1/2" x 3/16" x 6" long steel tubes to reinforce gate stiles at hinge locations.
 - 2) Weld steel tube reinforcement to stiles with two 1/2 inch dia. plug welds.
 - c. Miter and weld tubular members at the corners, and notch to accommodate the rod mesh.
 - d. Bevel lock edge.
 3. Woven Rod Mesh: Two-inch square opening, arch/intermediate/lock crimped. Extend each rod end at least 1/2 inch into the frame and weld.
 4. Lock Box:
 - a. Lock Box: Frame pocket with channels or flat bars to suit lock specified. Close box with 3/16 inch thick steel cover plate held in place with Torx center pin security head machine screws.
 - b. Locate removable cover plate on the STOP side of all Type "A" Gates.
 5. Finishes: Galvanize entire assembly.
 - a. Galvanizing process shall conform to:

- 1) ASTM A 123 for plain and fabricated material and assembled products.
 - 2) ASTM A 153 for iron and steel hardware.
- b. Stamp galvanized items with name of galvanizer, weight of coating, and applicable ASTM number.
- E. Accessories: Include all accessories required to perform the functions summarized in DESCRIPTION OF COMPLETED SYSTEM and as indicated on the drawings.
- F. Gate Identification: Provide at each gate a stainless steel identification plate(s), sized 2" x 4", with individual gate numbers (G-1, G-7, etc.) laser cut from the plate stock. Height of letters/numbers shall be 1" min. Prior to applying plates, paint the area immediately behind the plate with black paint to provide contrast between the plate and incised numbers/letters. Coordinate gate number with electrical contractor and owner prior to ordering. Attach plate with 4 Torx screws. Unless shown or directed otherwise, locate plates as follows:
1. Type "A" Gates: Attach to the frame above the lock, on both sides of each gate.
 2. Sliding Gates: Attach to the cover of the motor cabinet or emergency release column.

2.06 SLIDING GATE:

- A. Provide automated vehicular gates that comply with ASTM F 2200.
1. Classification: Type II Cantilever Slide, with roller assemblies.
 - a. Gate Frame Width and Height: Width as indicated on Drawings for Specified gate. Fabric Height = 144 inches.
- B. Pipe and Tubing:
1. Zinc-Coated Steel: Protective coating and finish to match fence framing.
 2. Gate Posts: Comply with ASTM F 1184. Provide round tubular steel posts.
 3. Gate Frames and Bracing: Round tubular steel.
- C. Frame Corner Construction: Welded.
- D. Extended Gate Posts and Frame Members: Extend gate posts and frame end members above top of chain-link fabric at both ends of gate frame 12 inches to attach barbed wire assemblies.
- E. Hardware:
1. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate. Construction Contractor to provide padlock and keys for slide gate until the gate operating system is functional.
- F. Gate Operator for Sliding Gate – Provide a Slide Gate Operator that meets the requirements below, as well as those found in Specification Section 323115:

Gate, Equipment base/pad mounted and as follows:

1. 14' Mechanical Slide Gate Operators:
 - a. Duty: Medium duty, commercial/industrial.
 - b. Gate Speed: 11" per second
 - c. Maximum Gate Weight: 1000lb.
 - d. Frequency of Use: Continuous duty
 - e. Operating Type: Roller chain
 - f. Drive Type: V-belt and chain-and-sprocket reducers, roller-chain drive.
 - g. Basis of Design: Tymetal Corp., Model No. TYM 1000 Security Gate System.
 - h. Comply with NFPA 70 and UL Standard UL 325.

- G. Remote Controls: Refer to Electronic control specification for control panel details. Operator shall work with a dry contact closure to open, close, and stop. Unit shall also provide a contact closure to show the status of the gate (i.e. open, closed).

- H. Obstruction Detection Devices: Provide each motorized gate with automatic safety sensor(s). Activation of sensor(s) causes operator to immediately function as follows:
 1. Action: Reverse gate in both opening and closing cycles and hold until clear of obstruction.
 2. Internal Sensor: Built-in torque or current monitor senses gate is obstructed.
 3. Photoelectric/Infrared Sensor System: Designed to detect an obstruction in gate's path when infrared beam in the zone pattern is interrupted. Shall be mounted at standard 1'-0" and 5'-6" heights above finish grade, as approved by the Owner.

- I. Limit Switches: Adjustable switches, interlocked with motor controls and set to automatically stop gate at fully retracted and fully extended positions.
 1. Type: Integral fail-safe release, allowing gate to be pushed open without mechanical devices, keys, cranks, or special knowledge.
 2. Vehicle Presence Detector: System including automatic closing timer with adjustable time delay before closing, and presence detector designed hold gate open until traffic clears. Provide retroreflective (for 25 ft gate) and emitter/receiver for gates larger than 25 ft) detectors with adjustable detection zone pattern and sensitivity, designed to detect the presence or transit of a vehicle in gate pathway when infrared beam in zone pattern is interrupted, and to emit a signal activating the gate operator.

- J. Limit Switches: Adjustable switches, interlocked with motor controls and set to automatically stop gate at fully retracted and fully extended positions.
 1. Type: Integral fail-safe release, allowing gate to be pushed open without mechanical devices, keys, cranks, or special knowledge.

- K. Operating Features:

1. Digital Microprocessor Control: Electronic programmable means for setting, changing, and adjusting control features with capability for monitoring and auditing gate activity. Provide unit that is isolated from voltage spikes and surges.
 2. Master/Slave Capability: Control stations designed and wired for gate pair operation.
- L. Concrete Foundation:
1. Refer to Division 03 Section "Cast-in-Place Concrete" (Section 033000) for information regarding concrete foundations.
 2. Equipment Bases/Pads: Cast-in-place concrete, dimensioned and reinforced according to gate-operator component manufacturer's written instructions and as indicated on Drawings.

2.07 FABRICATION AND MANUFACTURE

- A. Personnel Gates, Single Swing Gates: As per the Project Plan Details (A1 / Dwg C-506).
- B. Electric Lock for Single Swing Gates: Basis of design is Folger Adams Electric Locks, Series 51E Deadlatch. Refer to Part 1.08B of this Specification Section.
- C. Thoroughly clean all steel prior to sending it to the galvanizer the entire assembly. Remove oil, grease, and similar contaminants in accordance with SSPC SP-1 "Solvent Cleaning". Remove steel mill stamp, loose mill scale, loose rust, weld slag and spatter, and other detrimental material in accordance with SSPC SP-2 "Hand Tool Cleaning", SSPC SP-3 "Power Tool Cleaning", SSPC SP-6 "Commercial Blast Clean" or SSPC SP-7 "Brush-Off Blast Cleaning".
 1. Do not ship the entire assembly from the fabricating shop to the galvanizer prior to QA inspection and approval by the State or designated inspection laboratory that the assembly is in conformance with the Contract Documents.

2.08 KEYING

- A. Key locks as specified and incorporate a keying schedule into the hardware schedule for approval.
 1. Key changes shall be different from changes previously used at this Facility, except as noted.
 2. Record key changes, to avoid future unintended duplication.
 3. Furnish seven keys for each change, except as noted.
 4. Furnish extended shank keys when required.
 5. Key locks as specific to each swing gate.
 6. Key locks to coordinate with the Electric Prison Lock (Folger Adam 51E Deadlatch). Construction Contractor to coordinate manual locking and keying of the gates prior to installation of gate controls.

2.09 MISCELLANEOUS MATERIALS AND ACCESSORIES

- A. Rails and Post Braces:
 1. Pipe: 1.660 inches OD, 2.27 pounds per linear foot (Schedule 40).

2. Class B Steel Tubing: 1.660 inches OD, 1.84 pounds per linear foot.
- B. Fittings and Post Tops: Steel, wrought iron, or malleable iron.
 1. Fasteners: Tamper-resistant cadmium plated steel screws.
- C. Stretcher Bars: One piece equal to full height of fabric, minimum cross-section 3/16 inch by 3/4 inch.
- D. Metal Bands (for securing stretcher bars): Steel, wrought iron, or malleable iron.
- E. Wire Ties: Conform to American Steel Wire gauges.
 1. For tying fabric to line posts, rails and braces: 9 gauge (.1483 inch) steel wire.
 2. For tying tension wire to fabric: 11 gauge (.1205 inch) steel hog rings.
 3. For tying security coils to fence fabric, barbed wire, or adjacent coils: 16 gauge (.0625 inch) 300 Series stainless steel wire.
 4. For splicing adjoining sections of security coils: 16 gauge (.0625 inch) 300 Series stainless steel wire, or 11 gauge (.1205 inch) 300 Series stainless steel hog rings.
 5. For splicing overlapped fabric at bottom rail: 11 gauge (.1205 inch) steel hog rings.
- F. Truss Rods: 3/8-inch diameter.
- G. Concrete: Portland Cement concrete having a minimum compressive strength of 4000 psi at 28 days.
- H. Spiral Paper Tubes:
 1. Sonotube by Sonoco Products Co., North Second St., Hartsville, SC 29550, (800) 377-2692.
 2. Sleenk/tubes by Jefferson Smurfit Corp., P.O. Box 66820, St. Louis, MO 63166, (314) 746-1100.
- I. Cold Galvanizing Compound: Single component compound giving 93 percent pure zinc in the dried film, and meeting the requirements of DOD-P-21035A (NAVY).
- J. Tension Wire: 7 gauge coiled spring steel wire.
- K. Angle Beams, I Beams, and Steel Shapes: ASTM A 36.
- L. Bolts and Nuts: ASTM A 307, Grade A.
- M. Expansion Anchors: 3/4 inch diameter with a minimum 4-3/4" embedment depth, Stainless Steel KWIK Bolt 3 (KB3) by Hilti, Inc. www.us.hilti.com; 1-800-879-8000.
- N. Shrink-Resistant Grout (Ferrous): Factory-packaged, non-catalyzed, ferrous aggregate mortar grouting compound (ASTM C 1107) selected from the following:

1. Embeco 636 by Master Builders, 23700 Chagrin Blvd., Cleveland, OH 44122, (800) 227-3350.
 2. Ferrolith G-NC by Sonneborn, Chemrex, Inc., 57-46 Flushing Ave., Maspeth, NY 11378, (800) 433-9517.
 3. Ferro-Grout by L&M Construction Chemicals, 14851 Calhoun Rd., Omaha, NE 68152, (800) 362-3331.
 4. Vibra-Foil by A.C. Horn, Inc., Tamm Industries, 7405 Production Dr., Mentor, OH 44060, (800) 862-2667.
- O. Aluminum Slats:
1. Size: 1-7/8 inches wide and 1-3/4 inches wide by .009 inch to .0105 inch thick.
 2. Aluminum Alloy: 5052 H19 or 6011 T81.
 3. Finish: Baked enamel, color as indicated or directed.
- P. Crushed Stone, All Gradations: Crushed stone only. Comply with all material, physical, and gradation requirements of NYS DOT Standard Specifications Materials Section 703-02.

2.10 THIRTY INCH DIAMETER SECURITY COILS (OPTION, EITHER A. OR B. BELOW)

- A. One hundred and one coil loops of a single helical coil of spring quality austenitic stainless steel conforming to U.S. Army MERADCOM drawing 13220E0889 and 13220E2744 except that the outside diameter shall be 30 inches (plus or minus 2 inches) with 24 (plus or minus 1) barb clusters per revolution.
1. Adjacent coil loops shall be alternately spot welded at 5 points of equal spacing about the perimeter. Spot welding shall survive a minimum 200-pound force per weld loaded uniformly about the periphery of the coil, as specified in the barbed tape test procedure.
 2. One jacketed stainless steel wire rope, 7 by 7 strand 3/64 inch by 5/64 inch minimum diameter, per MIL-W-83420, Type II composition B, shall be attached, along the length of the obstacle to each coil loop to preset the maximum barbed tape opening and the 50 foot (plus or minus 2 feet) length.
 3. The wire rope shall be attached with clips as required and the wire rope with clips shall be capable of satisfying the 50-pound pull test Paragraph 4. 5. 2. 1. 1., Specification MIL-B-52775B.
- B. Concertina Type: Minimum 51 coil loops fabricated by wrapping a barbed tape made of AISI 430 stainless steel, whose hardness is optional, around a 300 series austenitic stainless steel core wire. Diameter of the core wire shall be 0.098 inch plus or minus 0.002 inch, and the tensile strength shall be a minimum of 140,000 psi. The barbs shall be offset from the plane of the core wire. Outside diameter of the coil loops shall be 30 inches (plus or minus 2 inches). Each loop shall consist of 24 (plus or minus one) clusters of four needle sharp barbs on four-inch centers, each barb measuring a minimum of 1.2 inches in length.
1. Adjacent coil loops shall be attached alternately at 5 points of equal spacing about the circumference with stainless steel flat metal band type clips approximately 0.375 inch wide and 0.065 inch thick. These clips

shall prevent the coil loops from being pulled apart at each point of attachment when a minimum 200-pound load is applied, as specified in the barbed tape test procedure. Wrapping of barbed tape about the line wire shall be accomplished within the tolerances specified in MIL-B-52489E, except that the tape shall be wrapped a minimum of 230 degrees and shall satisfy the push test specified therein.

2. Extended length shall be 25 feet (plus or minus 2 feet), with a maximum spacing between loops of 12 inches.

2.11 SOURCE QUALITY CONTROL

- A. Test Procedure - Barbed Tape Security Coils: The company producing the security coils shall have test facilities available which can demonstrate that the security coils meets the following requirements.
 1. Sampling; before delivery to job site: Samples for quality conformance inspections shall be selected in accordance with MIL-STD-105, sampling level S-1, AQL 2.5. A unit of product for sampling shall be one complete unit no less than ten feet in length.
 2. Test Equipment: The test equipment for applying and measuring force shall be capable of measuring a minimum force of 200 pounds and shall be calibrated prior to each test with standards traceable to the National Bureau of Standards.
 3. Test Specimen: The test specimen shall consist of 2 segments of barbed tape, taken from adjacent coil loops, each at least one-foot-long, containing and centered upon a point of attachment. This attachment shall be prepared in the normal course of production.
 4. Test Preparation: A pair of one inch, plus or minus 0.1 inch, cubic back-up blocks shall be centered on each side of the attachment point, in as close as possible contact with the major surfaces of the barbed tape. Barbs adjacent to the attachment point may be removed to simplify the testing process. Each leg of each barbed tape segment shall be bent at a 90-degree angle so that each segment has a major surface in contact with 3 adjoining faces of a back-up cube and so that ends of each segment are parallel to each other and to the axis of the attachment. Each back-up cube shall then be restrained in place by spot welding a straining strap to each leg of a segment so that the strap is in continuous contact with the cube face opposite the point attaching the 2 segments.
 5. Test: Two ends of one of the test segments, prepared per above, shall be joined and rigidly attached to a structure so that the retaining structure, with said attachment, will survive a minimum tensile load of 200 pounds without deflection or slippage. The 2 ends of the opposite segment shall be joined and attached to the test apparatus so that said attachment will survive a minimum tensile load of 200 pounds, without any slippage. The test equipment above shall then be used to apply up to a 200-pound minimum force (through the adjacent coil loop segment attachment point) away from the rigid retaining structure. After reaching a minimum 200 pound force, as measured by the test equipment, this force shall be maintained continuously for a least 30 seconds.
 6. Test Results: At the completion of the 30-second pull test, the test specimen shall be removed from the attachments to the rigid retaining structure and to the test equipment. The back-up blocks shall be

removed from the test specimen and each segment of the barbed tape shall be examined for breaks, cracks, or separation around their mutual attachment point. The test specimen shall have failed this test if any of the above have occurred or a 200-pound minimum pull cannot be applied continuously for 30 seconds.

2.12 FINISHES

- A. Steel Framework:
 - 1. Pipe: Galvanized in accordance with ASTM A 53, 1.8 ounces zinc per square foot.
 - 2. Square Tubing: Galvanized in accordance with ASTM A 123, 2.0 ounces zinc per square foot.
 - 3. Class B Steel Tubing: Exterior; 1.0 ounces zinc per square foot plus chromate conversion coating and clear polyurethane. Interior; zinc rich organic coating.

- B. Fabric; one of the following:
 - 1. Galvanized Finish: ASTM A 392 class II zinc coated after weaving, with 2.0 ounces per square foot.
 - 2. Aluminized Finish: ASTM A 491 aluminum coated with 0.40 ounces per square foot.

- C. Fence and Gate Hardware, Miscellaneous Materials, Accessories:
 - 1. Wire Ties and Hog Rings: Galvanized Finish, ASTM A 90 1.6 ounces zinc per square foot, or aluminized finish, ASTM A 809 0.40 ounces per square foot.
 - 2. Hardware and Miscellaneous Items: Galvanized Finish, ASTM A 153 (Table 1).
 - 3. Angle Beams, I Beams, and Steel Shapes: Galvanized in accordance with ASTM A 123, 2.0 ounces zinc per square foot.
 - 4. PVC coated, per manufacturer's standards.

PART 3 EXECUTION

3.01 PREPARATION

- A. Do not begin installation of any fencing until finished grading has been completed.

- B. Clear and grub along fence line as required to eliminate growth interfering with alignment. Remove debris from State property.

3.02 INSTALLATION

- A. Space posts equidistant in the fence line with a maximum of 10 feet on center. For fences 16 feet and higher space posts a maximum of 8 feet on center.

- B. Setting Posts in Earth: Drill holes for post footings Set posts in center of hole and fill hole with concrete. Plumb and align posts. Vibrate or tamp concrete for

consolidation. Finish concrete in a dome shape above finish grade elevation to shed water. Do not attach fabric to posts until concrete has cured a minimum of 7 days.

- C. Setting Posts in Rock: Drill holes into solid rock one inch wider than post diameter, 18 inches deep for end, pull, corner, and gate posts, and 12 inches deep for line posts. Set posts into holes and fill annular space with shrink-resistant grout.
- D. Brace assembled sections until permanently secured in place to prevent displacement or distortion of the members. Do not utilize metal bracing to support post when plumbing or securing posts.
- E. If post tops or extension arms will not be installed prior to impending rain, provide temporary covers over tops of posts to prevent posts from filling with water.
- F. Locate corner posts at corners and at changes in direction. Use pull posts at all abrupt changes in grade and at intervals no greater than 500 feet. On runs over 500 feet, space pull posts evenly between corner or end posts. On long curves, space pull posts so that the strain of the fence will not bend the line posts.
- G. Install top rail continuously through post tops or extension arms, bending to radius for curved runs. Install expansion couplings as recommended by fencing manufacturers.
- H. Install bottom and intermediate rails in one piece between posts and flush with post on fabric side using special offset fittings where necessary.
- I. Brace corner posts, pull posts, end posts, and gate posts to adjacent line posts with horizontal rails.
- J. Diagonally brace corner posts, pull posts, end posts, and gate posts to adjacent line posts with truss rods and truss rod tighteners.
- K. Attach fabric to security side of fence. Maintain a 2-inch clearance above finished grade except when indicated otherwise. Thread stretcher bars through fabric using one bar for each gate and end post and 2 for each corner and pull post. Pull fabric tight so that the maximum deflection of fabric is 2 inches when a 30-pound pull is exerted perpendicular to the center of a panel. Maintain tension by securing stretcher bars to posts with metal bands spaced 15 inches oc. Fasten fabric to steel framework with wire ties spaced 12 inches oc for line posts and 24 inches oc for rails and braces. Bend back wire ends to prevent injury. Tighten stretcher bar bands, wire ties, and other fasteners securely.
 - 1. When fabric height exceeds 12 feet, overlap horizontal splices a minimum of 6 inches at the intermediate rail, and secure each layer of fabric to the rail with wire ties spaced 24 inches oc. Offset ties so maximum distance between any tie does not exceed 12 inches.
 - 2. When fabric is indicated to be buried, the buried portion of fabric shall be separate from the main fence fabric. Overlap fence fabric and buried fabric a minimum of 6 inches at the bottom rail. Secure fence fabric to

bottom rail with wire ties spaced 24 inches oc. Secure buried fabric to fence fabric, above the bottom rail, with hog rings spaced 12 inches oc. The buried fabric shall not be secured directly to the bottom rail.

Note: To prevent settlement of the buried fabric during backfill operations, the buried fabric may be temporarily attached to the bottom rail. Remove all such temporary ties after backfilling is complete. Should any fence components become distorted as a result of installation or settlement of buried fabric, untie all fabric, re-align fence members, and re-tie fabric.

3. If approved pre-formed ties are used to secure the fence fabric, the “pigtail” for all ties at the 8 foot high level and below shall be bent down parallel with the fence posts and/or rails.

- L. Position bolts for securing metal bands and hardware so nuts are located opposite the fabric side of fence. Tighten nuts and cut off excess threads so no more than 1/8 inch is exposed. Peen ends of all bolts below a height of 10 feet to prevent loosening or removal of nuts.
 1. Secure post tops and extension arms with tamper-resistant screws.

- M. Install gates plumb and level and adjust for full opening without interference. Install ground-set items in concrete for anchorage, as recommended by fence manufacturer. Adjust hardware for smooth operation and lubricate where necessary.

- N. Tension Wire: Where tension wire is indicated or required, weave tension wire through fabric or fasten with hog rings spaced 24 inches oc. Tie tension wire to posts with 9 gauge wire ties.

- O. Security Coils (except Concertina Type):
 1. Stretch to full preset length, determined by applying a tensile load of not more than 50 pounds at each end of the spacer wire. Attach successive units to each other to form one continuous obstacle. After the first unit is installed, orient the beginning of the second unit so that (spot weld) attachments of the second unit approximately match those at the end of the first unit. Attach the last coil loop of the first unit to the first coil loop of the second unit, with stainless steel twistable wire ties (para. 3.7. MIL-B-52775B) at the locations where the coils would have been spot welded if one continuous unit had been fabricated. Where security coils are placed on the ground, anchor each coil to the ground at 5-foot intervals using anchors formed from galvanized No. 3 reinforcement bars. Each reinforcement bar anchor shall have a 2-inch hook formed at the top and shall be driven a minimum of 30 inches into the ground.
 2. Secure coils to the side of the fence by erecting the material as described for ground installation. Attach each coil loop (or pair of coil loops where adjacent coils are spot welded) to the fence fabric with stainless steel twistable wire ties. The point of attachment shall be made where the security coils are tangent to (intersects) the fence, after it has been expanded to its full length, without tangles and free of distortion. (The location of the point of attachment to the fence will vary as the security coil rotates slightly about its longitudinal axis as it is extended to its full length.)

- P. Concertina Type Security Coils: Install in accordance with the manufacturer's printed instructions and meeting the following minimum requirements:
1. Install security coils with coil loops (apertures) equally spaced 12 inches oc (plus or minus 2 inches).
 2. Secure coils to the top of the fence by attaching each coil loop where it intersects the barbed wire and the top of the fabric with twistable stainless steel wire ties.
 3. Secure coils to the side of the fence by attaching each coil loop where it intersects the fence fabric, and any adjacent coils, with twistable stainless steel wire ties. Attach adjacent coils to each other where every other loop intersects or at 36 inches oc maximum.
 4. Where security coils are placed on the ground, anchor each coil to the ground at 5-foot intervals using anchors formed from galvanized No. 3 reinforcement bars. Each reinforcement bar anchor shall have a 2-inch hook formed at the top and shall be driven a minimum of 30 inches into the ground.
 5. Splices: Splice successive units to adjacent coil loops by overlapping end loops a minimum of two barbed clusters to form one continuous obstacle.
 - a. Permanently attach barb roots together with twistable stainless steel wire ties or stainless steel hog rings.
 - b. Cross-tie barb roots with 2 stainless steel twistable wire ties or 2 stainless steel hog rings on both barbs of a 2-barb splice or the center barb of a 3-barb splice, and at all points of the splice where factory clips are installed on adjoining sections of continuous coil.

Q. Aluminum Slats: Install where indicated aluminum slats in every diagonal run of links in both directions for the full height of the fence. Crimp and staple with monel staples at the top and bottom of fabric. Overlap and staple spliced slats.

R. Wire brush and repair welded and abraded areas of galvanized surfaces with one coat of cold galvanizing compound.

S. Restore disturbed ground areas to original condition. Topsoil and seed to match adjacent areas.

T. Gate Installation:

Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

U. Gate Operator Installation

General: Install gate operators according to manufacturer's written instructions, aligned and true to fence line and grade.

Excavation for Support Posts, Equipment Bases/Pads: Excavate holes for bases/pads, in firm, undisturbed soil to dimensions and depths and at locations as required by gate-operator component manufacturer's written instructions and as indicated.

Comply with NFPA 70 and manufacturer's written instructions for grounding of electric-powered motors, controls, and other devices.

3.03 ADJUSTING

A. Adjust operative units and equipment to work freely and easily, ready for use. Field lubricate operating and locking systems in accordance with the manufacturer's maintenance instructions. Adjust equipment when the temperature is approximately 70 degrees F.

B. Gates:

Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

Automatic Gate Operator: Energize circuits to electrical equipment and devices. Adjust operators, controls, safety devices, alarms, and limit switches.

Hydraulic Operator: Purge operating system, adjust pressure and fluid levels, and check for leaks.

Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.

Test and adjust controls, alarms, and safeties. Replace damaged and malfunctioning controls and equipment.

Lubricate hardware, gate operator, and other moving parts.

C. Demonstration of Gate Systems:

Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain chain-link fences and gates.

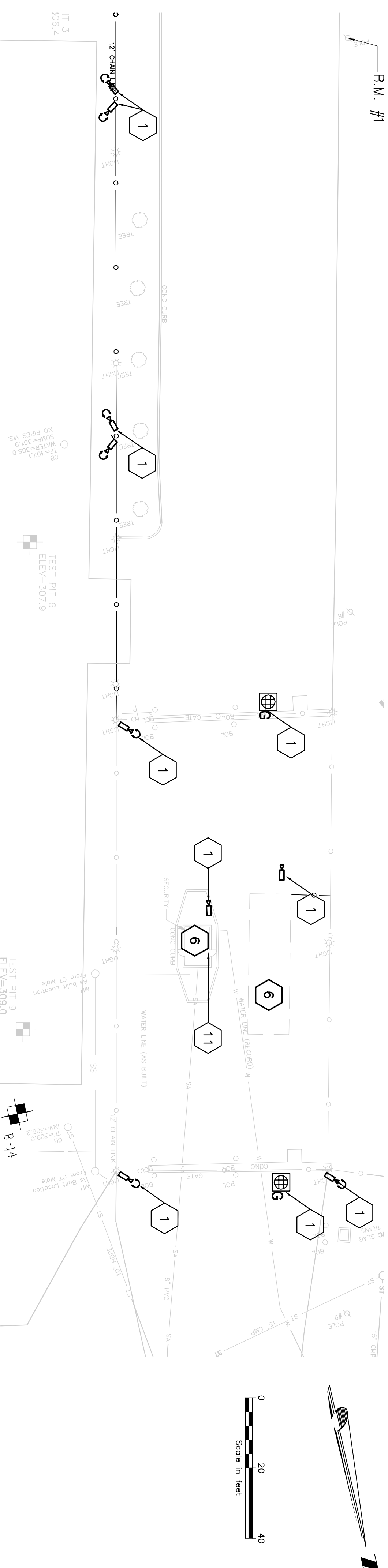
END OF SECTION

GENERAL NOTES THIS PAGE:

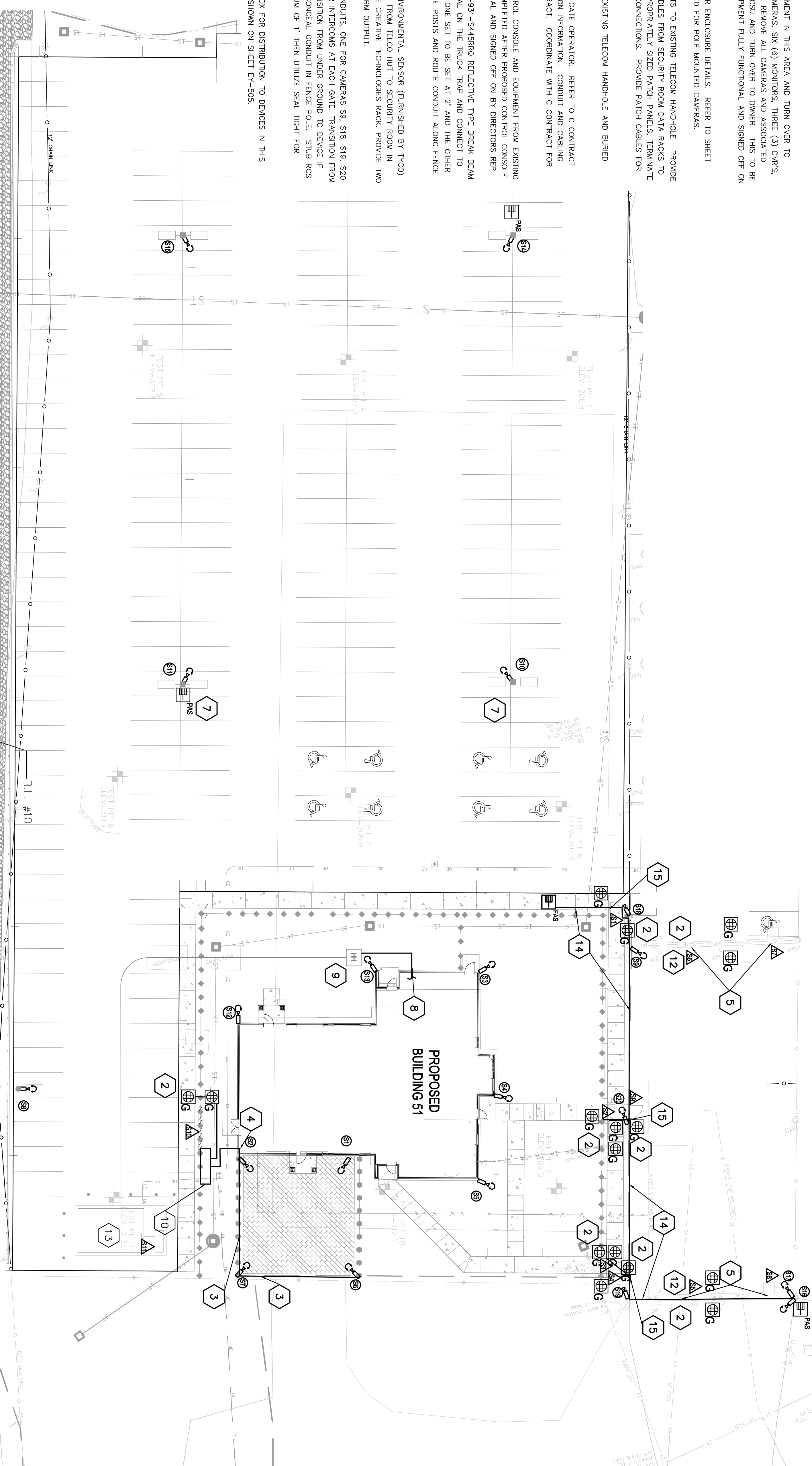
1. REFER TO SHEET E-100 FOR CONDUIT ROUTING AND QUANTITY UNLESS OTHERWISE NOTED ON THIS PLAN.
2. ALL BUILDING MOUNTED CAMERAS SHALL BE MOUNTED SUCH THAT ALL CABLING PENETRATIONS SHALL BE CONCEALED ABOVE THE CEILING.
3. ALL CAT6 CABLING FOR OUTDOOR CAMERAS SHALL BE OUTDOOR RATED.
4. REFER TO SHEET E-501 FOR CONDUIT INSTALLATION DETAILS.

KEYED NOTES THIS PAGE:

1. ALL COMPONENTS SHALL BE REMOVED BACK TO SOURCE. PACKAGE AND TURN OVER ALL CAMERAS TO OWNER. INTERCOMS TO BE RELOCATED TO LOCATION SHOWN ON DETAIL 2 SHEET EY-100.
2. INTERCOMS TO BE WIRED IN PARALLEL TO THE MASTER STATION LOCATED IN THE CSU. THEY SHALL BE WIRED SUCH THAT THE INTERIOR AND EXTERIOR INTERCOM FOR A DOOR ACTIVATES THE SAME CHANNEL ON THE MASTER STATION. REFER TO SHEET EY-502 FOR DETAILS.
3. PROVIDE ONE (1) 1" BURIED CONDUIT WITH TWO (2) CAT6 CABLES TO CONNECT TO PTZ CAMERAS IN THE COURTYARD. CAMERAS SHALL BE MOUNTED AS HIGH AS POSSIBLE ON THE FENCE POSTS IN THE CORNERS AS SHOWN. ROUTE CONDUIT THROUGH POLE FOR ROUTING OF CABLE. PROVIDE ALL APPROPRIATE SEALS AND CAULKING TO ENSURE NO WATER PENETRATION.
4. ROUTE CABLING FROM OUTDOOR CAMERAS TO SECURITY ROOM. REFER TO SHEET EY-101 FOR ROUTING DETAILS. CONDUIT SHALL BE CONCEALED IN THE BUILDING WHERE POSSIBLE.
5. REFER TO SHEET EY-501 FOR CONDUIT ROUTING DETAILS FOR EXISTING TRUCK TRAP AREA.
6. REMOVE ALL SECURITY EQUIPMENT IN THIS AREA AND TURN OVER TO OWNER. ASSUME SIX (6) CAMERAS, SIX (6) MONITORS, THREE (3) DVR'S, AND SUPPORTING EQUIPMENT. REMOVE ALL CAMERAS AND ASSOCIATED EQUIPMENT IN THE EXISTING CSU AND TURN OVER TO OWNER. THIS TO BE DONE AFTER PROPOSED EQUIPMENT FULLY FUNCTIONAL AND SIGNED OFF ON BY DIRECTORS REP.
7. REFER TO SHEET EY-502 FOR ENCLOSURE DETAILS. REFER TO SHEET E-100 FOR CONDUIT REQUIRED FOR POLE MOUNTED CAMERAS.
8. PROVIDE TWO (2) 4" CONDUITS TO EXISTING TELECOM HANDHOLE. PROVIDE THREE (3) 24 SW FIBER BUNDLES FROM SECURITY ROOM DATA RACKS TO TELECOM HUT. PROVIDE APPROPRIATELY SIZED PATCH PANELS, TERMINATE ON BOTH ENDS, AND MAKE CONNECTIONS. PROVIDE PATCH CABLES FOR ALL CABLING.
9. APPROXIMATE LOCATION OF EXISTING TELECOM HANDHOLE AND BURIED CONDUIT TO TELECOM HUT.
10. APPROXIMATE LOCATION FOR GATE OPERATOR. REFER TO C CONTRACT SHEET C-506 FOR FOUNDATION INFORMATION. CONDUIT AND CABLING PROVIDED UNDER THIS CONTRACT. COORDINATE WITH C CONTRACT FOR EXACT REQUIREMENTS.
11. REMOVE EXISTING GATE CONTROL CONSOLE AND EQUIPMENT FROM EXISTING CSU. THIS WORK TO BE COMPLETED AFTER PROPOSED CONTROL CONSOLE INSTALLED. FULLY OPERATIONAL AND SIGNED OFF BY DIRECTORS REP.
12. PROVIDE TWO SECO-LARM E-931-5445R90 REFLECTIVE TYPE BREAK BEAM SENSORS OR APPROVED EQUAL ON THE TRUCK TRAP AND CONNECT TO OPERATOR SAFETY CIRCUIT. ONE SET TO BE SET AT 2' AND THE OTHER AT 6'. MOUNT TO THE FENCE POSTS AND ROUTE CONDUIT ALONG FENCE TO GATE OPERATOR.
13. PROVIDE WINSTEAD EA400 ENVIRONMENTAL SENSOR (FURNISHED BY TYCO) WITH ALARM OUTPUTS. WIRE FROM TELCO HUT TO SECURITY ROOM IN CONDUIT. TERMINATE TO THE CREATIVE TECHNOLOGIES RACK. PROVIDE TWO (2) #18 AWG WIRES PER ALARM OUTPUT.
14. PROVIDE TWO (2) 2" PVC CONDUITS, ONE FOR CAMERAS SA, S18, S19, S20 AND PAS BOX, AND ONE FOR INTERCOMS AT EACH GATE. TRANSITION FROM PVC TO RGS 1' BEFORE TRANSITION FROM UNDER GROUND TO DEVICE IF EXPOSED. FROM CAMERAS CONCEAL CONDUIT IN FENCE POLE. STUB RGS CONDUIT INTO POLE A MINIMUM OF 1' THEN UTILIZE SEAL TIGHT FOR CONNECTION TO CAMERA.
15. PROVIDE 1' X 2' JUNCTION BOX FOR DISTRIBUTION TO DEVICES IN THIS AREA. MOUNT TO FENCE AS SHOWN ON SHEET EY-505.



1 SITE SECURITY REMOVALS PLAN
 SCALE 1"=20'



2 SECURITY SITE PLAN
 SCALE 1"=20'

REVISED DRAWING 02/12/2016



CGS COMPANIES
 C&S Engineers, Inc.
 489 Col. Eileen Collins Blvd.
 Syracuse, New York 13212

JOSEPH C. ROBLEE ARCHITECTS
 53 BURGOYNE AVENUE
 FORT EDWARD, NEW YORK

WARNING:
 THE ATTENTION OF THE USER, IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPETENT PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.

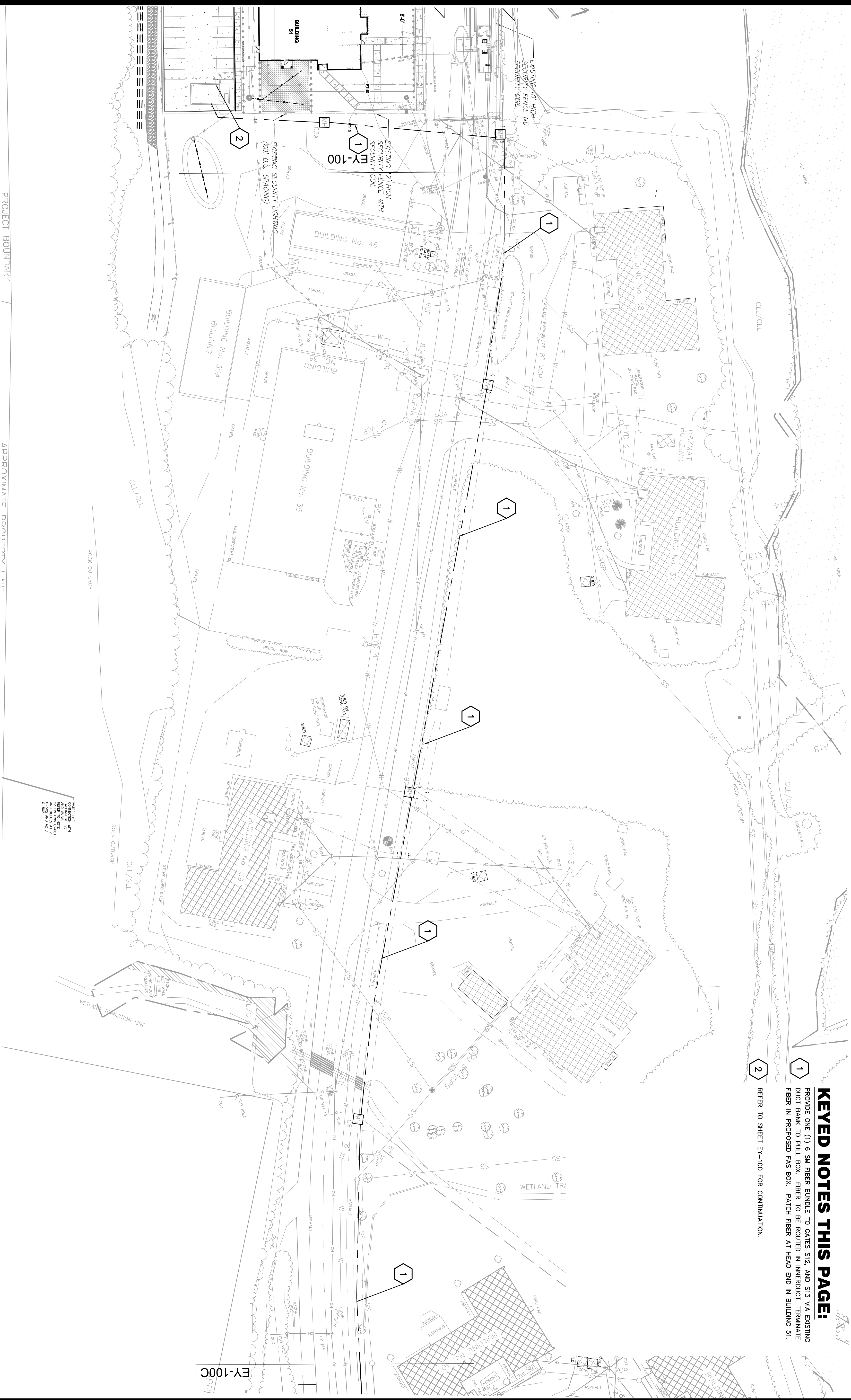


CONTRACT:
ELECTRICAL
TITLE:
 PROVIDE CENTRAL SECURITY BUILDING NO. 51
LOCATION:
 HIGHLAND RESIDENTIAL CENTER
 629 NORTH CHODICEE LAKE ROAD
 HIGHLAND, NEW YORK 12528
CLIENT:
 NYS OFFICE OF CHILDREN AND FAMILY SERVICES

3	2/12/2016	REVISED DRAWING
DATE	12/07/2015	BID DOCUMENTS
MARK	44854	- E
PROJECT NUMBER	MAAMRO	
DESIGNED BY	D.W. BARLEY	
DRAWN BY	M.AAMRO	
FIELD CHECK	S.H. SHOVA	
APPROVED:		
SHEET TITLE:	SECURITY SITE LAYOUT PLAN	

DRAWING NUMBER:
 EY-100
SHEET NUMBER:
 57 of 66

REVISED DRAWING 02/12/2016



KEYED NOTES THIS PAGE:
 1 PROVIDE ONE (1) 6 SW FIBER BUNDLE TO GATES S12, AND S13 VIA EXISTING DUCT BANK TO PULL BOX. FIBER TO BE ROUTED IN INNERDUCT. TERMINATE FIBER IN PROPOSED FAS BOX. PATCH FIBER AT HEAD END IN BUILDING 51.
 2 REFER TO SHEET EY-100 FOR CONTINUATION.

NOTED: LINE WORK AND DIMENSIONS TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ADJACENT PROPERTIES AND PUBLIC AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AREAS TO ORIGINAL OR BETTER CONDITION AFTER COMPLETION OF WORK.

PROJECT BOUNDARY

APPROXIMATE PROPERTY LINE

0 SCALE 200
 Scale in feet



DESIGN & CONSTRUCTION



C&S Engineers, Inc.
 489 Col. Eileen Collins Blvd.
 Syracuse, New York 13212



JOSEPH C. ROBLEE
 ARCHITECTS
 53 BURGONYE AVENUE
 FORT EDWARD, NEW YORK

WARNING:
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TITLE:
 PROVIDE CENTRAL SECURITY
 BUILDING NO. 51

LOCATION:
 HIGHLAND RESIDENTIAL CENTER
 629 NORTH CHODKIE LAKE ROAD
 HIGHLAND, NEW YORK 12528

CLIENT:
 NYS OFFICE OF CHILDREN
 AND FAMILY SERVICES

MARK	DATE	DESCRIPTION
3	2/10/2016	UPDATED CONDUIT ROUTE

PROJECT NUMBER: 44854 - E
DESIGNED BY: MAAMARO
DRAWN BY: D.H.WEHER
FIELD CHECK: MAAMARO
APPROVED: S.H.SHOVA

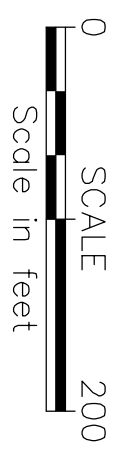
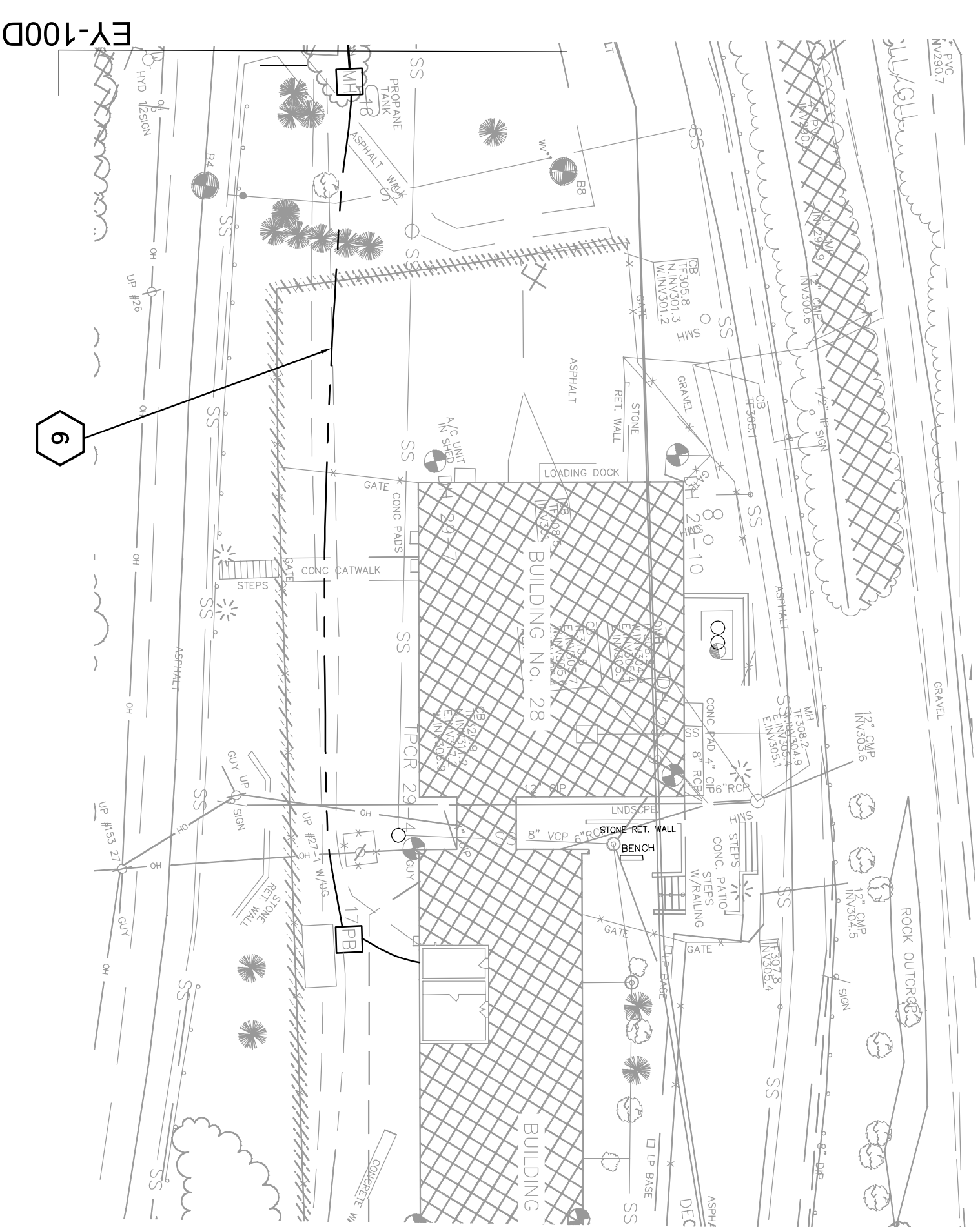
SHEET TITLE:
 INTERSITE GATE
 FIBER ROUTING

DRAWING NUMBER: EY-100B
SHEET 58 OF 65

REVISED DRAWING 02/12/2016

KEYED NOTES THIS PAGE:

- 1 PROVIDE ONE (1) 6 SM FIBER BUNDLE TO GATES S12, AND S13 VIA EXISTING DUCT BANK TO PULL BOX. FIBER TO BE ROUTED IN INNERDUCT. TERMINATE FIBER IN PROPOSED FAS BOX. PATCH FIBER AT HEAD END IN BUILDING 51.
- 2 PROVIDE ONE (1) 6 SM FIBER BUNDLE TO GATES S14, AND S15 VIA EXISTING DUCT BANK TO PULL BOX. FIBER TO BE ROUTED IN INNERDUCT. TERMINATE FIBER IN PROPOSED FAS BOX. FIBER TO BE PATCHED AT GATE S12 FAS BOX AND AT THE HEAD END IN BUILDING 51.
- 3 PROVIDE FAS BOX AND ONE (1) 1" CONDUIT FROM EXISTING PULL BOX TO FAS BOX UNDER GROUND TRENCH AND BACKFILL AS REQUIRED. REFER TO SHEET E-501 FOR CONDUIT INSTALLATION DETAILS. ALSO PROVIDE ONE (1) 1/4" CONDUIT AND THREE (3) #8 AWG WIRES IN CONDUIT TO EXISTING MANHOLE 10. CORE DRILL AND GROUT EXISTING MANHOLE TO CONNECT NEW CONDUIT. ROUTE WIRES IN EXISTING CONDUIT TO BUILDING 29 AND CONNECT TO SPARE 120V CIRCUIT IN EXISTING PANEL FOR POWER TO FAS BOX. CONDUIT TO BE ROUTED UNDERGROUND, TRENCH AND BACKFILL AS REQUIRED.
- 4 PROVIDE ONE (1) 1" CONDUIT FROM FAS BOX TO PEDESTRIAN GATE REFER TO SHEET E-501 FOR CONDUIT INSTALLATION DETAILS.
- 5 PROVIDE ONE (1) 1" CONDUIT TO VEHICLE GATE CONTROLLER. REFER TO SHEET E-500 FOR CONDUIT INSTALLATION DETAILS. ROUTE CONTROL WIRING FROM PROPOSED CONNET FDC8 IN FAS BOX TO GATES. REMIRE BOTH GATES AS NEEDED. REFER TO SHEET EY-503 FOR DETAILS.
- 6 APPROXIMATE ROUTE TO BUILDING 29.

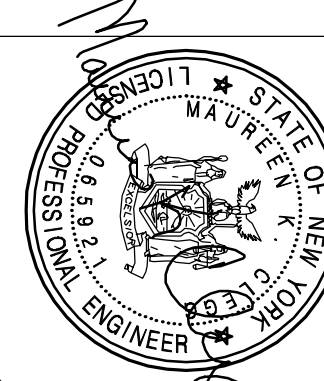


DESIGN & CONSTRUCTION



JOSEPH C. ROBLEE
 ARCHITECTS
 53 BURGOYNE AVENUE
 FORT EDWARD, NEW YORK

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TITLE: PROVIDE CENTRAL SECURITY BUILDING NO. 51

LOCATION: HIGHLAND RESIDENTIAL CENTER
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CLIENT: NYS OFFICE OF CHILDREN AND FAMILY SERVICES

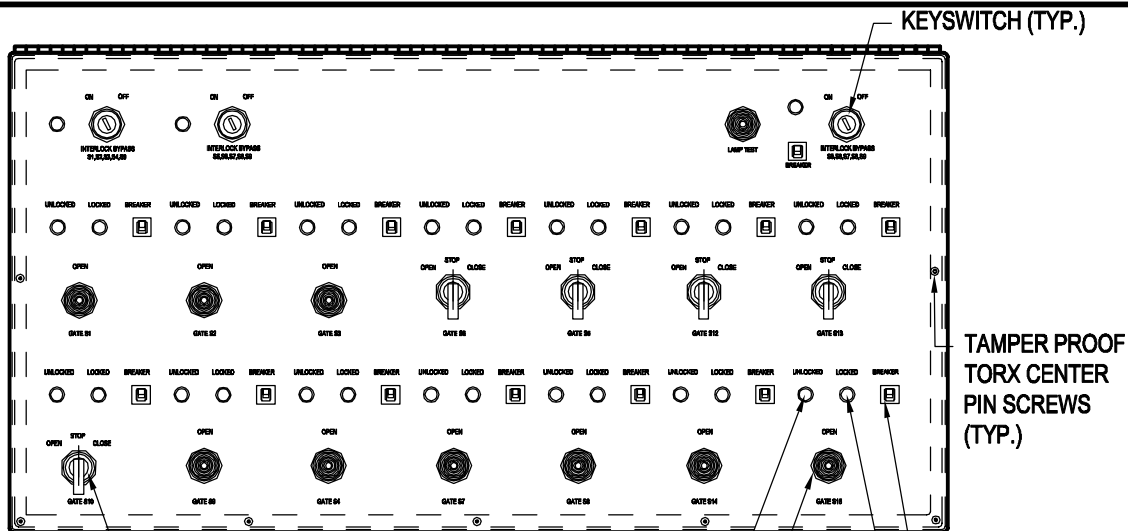
MARK	DATE	DESCRIPTION
3	2/12/2016	BLDG 29 CONDUIT ROUTE

PROJECT NUMBER:	44854	- E
DESIGNED BY:	MAAMARO	
DRAWN BY:	D.H.WETHEY	
FIELD CHECK:	MAAMARO	
APPROVED:	S.H.SHOVA	

INTERSITE GATE FIBER ROUTING

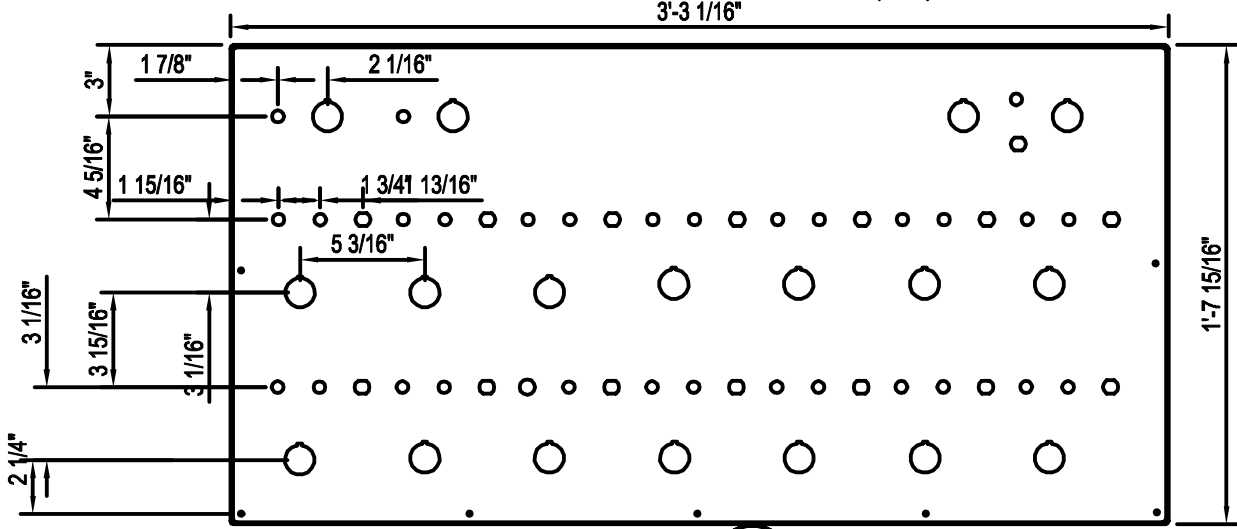
DRAWING NUMBER: EY-100D

SHEET 60 OF 65



1 CONSOLE PANEL
SCALE: NOT TO SCALE

KEYSWITCH (TYP.)
LAMP TEST
INDICATOR LIGHT RED (TYP.)
INDICATOR LIGHT GREEN (TYP.)
BREAKER (TYP.)
LEVER SWITCH (TYP.)
TAMPER PROOF TORX CENTER PIN SCREWS (TYP.)



2 CONSOLE PANEL DIMENSIONS
SCALE: NOT TO SCALE

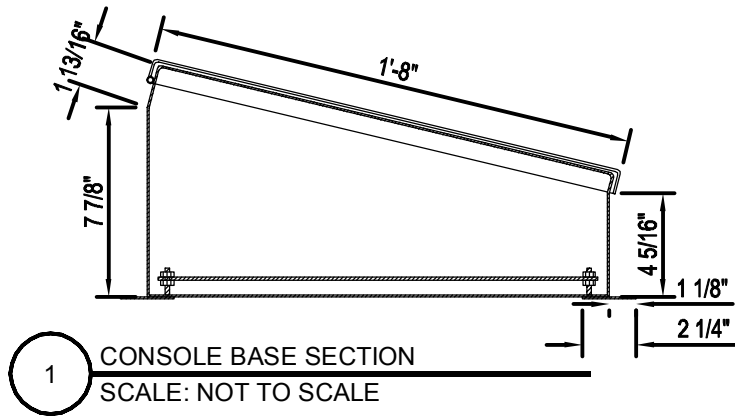
GENERAL NOTES

1. CONSOLE FACE PLATE SHALL BE FABRICATED FROM 11 GAUGE STAINLESS STEEL.
2. CONSOLE PANEL KNOCKOUTS FOR THE FLUSH MOUNTED CIRCUIT BREAKERS SHALL BE SO CONFIGURED AS TO PREVENT THE CIRCUIT BREAKER FROM ROTATING (FLAT BOTTOM OR SQUARE PROPERLY SIZED ONLY). ROUND HOLED KNOCKOUTS ARE NOT ACCEPTABLE.
3. ALL OPENINGS ARE FOR REFERENCE ONLY. EXACT SIZED SHALL BE COORDINATED WITH COMPONENT VENDOR PRIOR TO FABRICATION.
4. SECURE CONSOLE TO DESK WITH CARRIAGE BOLTS, WASHERS, AND SELF LOCKING NUTS.
5. INTERLOCK BYPASS KEYS SHALL INCORPORATE A CONTROL SEAL WHICH IS TO BE ATTACHED TO SIDE OF CONSOLE. PANEL SEAL MUST BE BROKEN IN ORDER TO UTILIZE BYPASS KEYS.

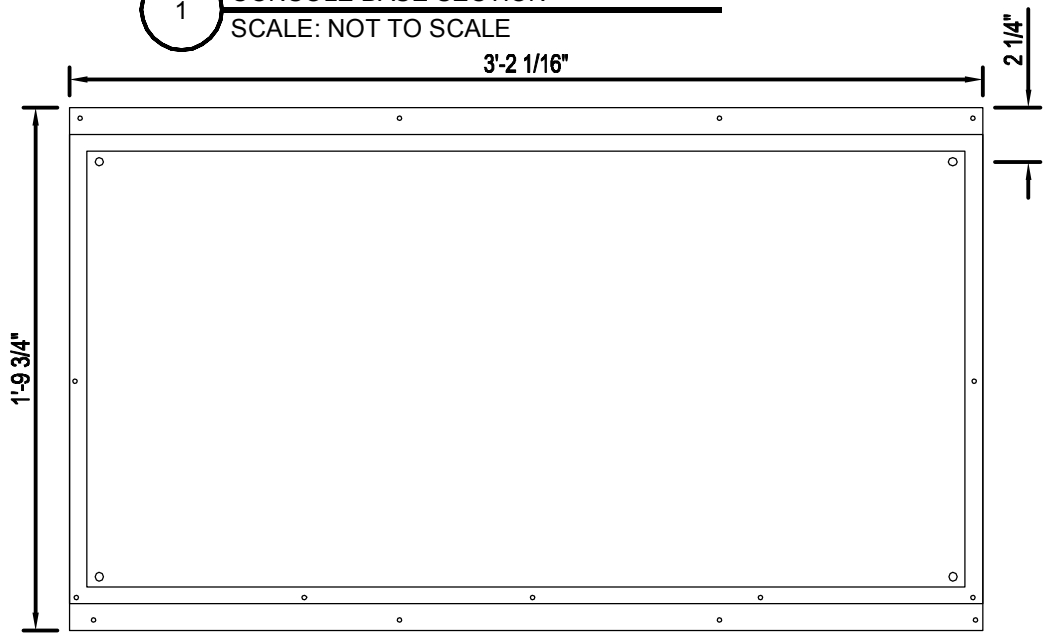
REFERENCE DRAWING: EY-503

CONTRACT: E
 PROJ. NO: 44854-E
 DATE: 2/12/2016
 DRAWN: M.A.A.
 APPROVED: M.A.A.

SHEET TITLE:	GATE CONTROL CONSOLE DETAIL
PROJECT:	PROVIDE CENTRAL SECURITY BUILDING NO. 51
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1 CONSOLE BASE SECTION
SCALE: NOT TO SCALE



2 CONSOLE BASE PLAN
SCALE: NOT TO SCALE

GENERAL NOTES

1. CONSOLE FACE PLATE SHALL BE FABRICATED FROM 11 GAUGE STAINLESS STEEL.
2. CONSOLE BASE TO SHALL BE FABRICATED FROM 10 GAUGE MILDSTEEL WITH HAMMER TONE GREY FINISH.
3. ALL OPENINGS ARE FOR REFERENCE ONLY. EXACT SIZED SHALL BE COORDINATED WITH COMPONENT VENDOR PRIOR TO FABRICATION.
4. SECURE CONSOLE TO DESK WITH CARRIAGE BOLTS, WASHERS, AND SELF LOCKING NUTS.
5. INTERLOCK BYPASS KEYS SHALL INCORPORATE A CONTROL SEAL WHICH IS TO BE ATTACHED TO SIDE OF CONSOLE. PANEL SEAL MUST BE BROKEN IN ORDER TO UTILIZE BYPASS KEYS.

REFERENCE DRAWING: EY-503

SHEET TITLE: GATE CONTROL
CONSOLE DETAIL

PROJECT: PROVIDE CENTRAL SECURITY
BUILDING NO. 51

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DWG NO:
SD-EY-02



CONTRACT: E
 PROJ. NO: 44854-E
 DATE: 2/12/2016
 DRAWN: M.A.A.
 APPROVED: M.A.A.

