



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. 1 TO PROJECT NO. Q1574**

**CONSTRUCTION WORK  
PROVIDE SECURITY & UTILITIES FOR CONTAINERIZED OFFICES  
ARMY AVIATION SUPPORT FACILITY  
330 OLD NISKAYUNA ROAD  
LATHAM, NY**

July 12, 2013

**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.

**BIDDING REQUIREMENTS**

1. Page 002219 – 2 Article 25.1: Add the Following Subparagraph:

“4. SUBMITTALS

- a. As a condition of award, the following shall be transmitted to the Contracting Officer by the apparent low bidder within 14 days after the bids are opened and by any other bidder within 14 days after receiving a written request from the Contracting Officer for such a submission.
  1. Underground Utility Locator Service: Submit experience and qualifications as per SECTION 023313 1.02 SUBMITTALS.
  2. Transformers: Submit required documents as per SECTION 262212.”

**SPECIFICATIONS**

2. Page 011000 – 1 Paragraph 1.02: Change “180 days” to “100 days”.
3. Page 011000 – 1, Add the Following Article to PART 1 GENERAL:

“1.04 RESTRICTED WORK PERIOD

- A. Do not perform the Paving Work between November 15th and April 15th unless approved otherwise, in writing, by the Director.
  1. The above period will not be included in the number of days specified for completion of the Work.”

4. SECTION 337119 ELECTRIC MANHOLES: Add the attached Section (pages 337119 – 1 thru 337119 – 5) to the Project Manual.

**DRAWINGS**

5. Drawing No. E-101:
  - a. Add General Notes Column, to Read:  
  
“GENERAL NOTES:  
A. All underground conduit shall be concrete encased.”.
6. Revised Drawings:
  - a. Drawing No. C-101, noted “REVISED DRAWING” is attached to this Addendum and supersedes the drawing bound in the Project Manual.
  - b. Drawing No. C-102, noted “REVISED DRAWING” is attached to this Addendum and supersedes the drawing bound in the Project Manual.
7. Addendum Drawing:
  - a. Drawing No. E-101A, noted “ADDENDUM DRAWING 7/12/2013” accompanies this Addendum and forms part of the Contract Documents.

**END OF ADDENDUM**

James Dirolf, P.E.  
Director of Design

**SECTION 337119**  
**ELECTRIC MANHOLES**

**PART 1 GENERAL****1.01 RELATED WORK SPECIFIED ELSEWHERE**

- A. Earthwork: Section 310000.
- B. Cast-In-Place Concrete: Section 033000.

**1.02 DEFINITIONS**

- A. The words manhole, handhole and pullbox are synonymous.

**1.03 SUBMITTALS**

- A. Waiver of Submittals: The "Waiver of Certain Submittal Requirements" in Section 013300 does not apply to the following products specified in this Section:
  - 1. Manholes.
  - 2. Manhole covers and frames.
- B. Product Data: Catalog sheets, specifications and installation instructions.
- C. Shop Drawings: Show dimensions, reinforcing and construction details for manholes.

**PART 2 PRODUCTS****2.01 MANHOLES**

- A. Manholes may be precast or field constructed:
  - 1. Field Constructed Manholes: Furnish manholes of dimensions as shown on the drawings.
  - 2. Precast Manholes: As manufactured by The Fort Miller Co., or Lakelands Pre-cast, Inc., having:
    - a. Reinforcing meeting American Association State Highway Officials requirements for H-20 loading. Drawings shall bear the seal of a professional engineer licensed to practice in the State of New York.
    - b. Minimum interior dimensions as shown on the drawings for field constructed manholes.
    - c. Walls minimum 6 inches thick reinforced concrete. Exception:
      - 1) Walls minimum 4-1/2 inches thick reinforced concrete for 30 x 30 inch manholes.
    - d. Top slab minimum 7 inches thick reinforced concrete.  
Exceptions:

- 1) Top slab minimum 6 inches thick reinforced concrete for 4 x 4 foot manholes.
  - 2) Top slab not required for 30 x 30 inch manholes.
  - e. Bottom slab minimum 6 inches thick reinforced concrete.  
Exception:
    - 1) Bottom slab minimum 4 inches thick reinforced concrete for 30 x 30 inch manholes.
  - f. Sealed joints.
- B. Equip manholes with a pulling hook opposite each conduit entrance. Construct hook of 3/4 inch galvanized stock with 3 inch diameter eye and 8 inches for anchoring in manhole wall or use Pennsylvania Pulling Iron as manufactured by Pennsylvania Insert Corporation.
- C. Brick shall comply with the Specifications for Sewer Brick, Grade MS, ASTM C32.
- D. Mortar: One part of Portland cement to 2 parts sand, mixed with water for proper consistency.
- E. Waterproofing for Bricked-Up Throat: Single component, rubber reinforced asphalt elastomeric coating, ASTM D-4586 Type I and ASTM D-4479 Type I.

## 2.02 WATERTIGHT MANHOLE FRAMES AND COVERS

- A. Design of each shall be the same throughout the project unless otherwise specified or indicated on the drawings.
- B. Units shall meet AASHTO H20 wheel loading requirements. Manufacture, workmanship and certified proof-load tests shall conform to AASHTO M306-89.
- 1. Material:
    - a. Cast iron: ASTM A48, Class 30B or 35B.
    - b. Delivered to the site free of any coatings, unless otherwise specified.
  - 2. Frames:
    - a. Round, 6-1/2 inches high with a 27-inch clear opening.
    - b. Minimum bearing area of the flange on the masonry: 645 sq. inches.
    - c. Minimum weight: 156 lbs.
  - 3. Outer Lids:
    - a. Round, approximately 1-1/2 inches thick at the perimeter bearing surface.
    - b. Minimum one inch wide perimeter bearing surface.
    - c. Unperforated checkered surface design.
    - d. Concealed type pick holes.
    - e. The letter "P" 6 inches high cast in the outer lid for power manholes; the letter "S" 6 inches high for signal manholes.
    - f. Minimum weight: 215 lbs.
  - 4. Inner Lids:

- a. Each equipped with two lift handles, a neoprene seating gasket, and a lock bar with a hasp or other means suitable for padlocking.
  - b. Minimum total weight of lid and lock bar: 165 lbs.
- C. Acceptable Frames and Covers: Pattern R1755-G1 by Neenah Foundry Company, P. O. Box 729, Neenah, WI 54957, (414) 729-3661; Pattern 6553 by Syracuse Casting Sales Corp., P. O. Box 190, South Bay Rd., Cicero, NY 13039, (315) 699-2601.

### **2.03 CABLE SUPPORT ASSEMBLIES**

- A. Cable Support Assemblies (Steel): A.B. Chance Co.'s 1225 rack, 1231 Series support arms, 1121 porcelain insulators, or McGraw-Edison's DU10B Series rack, DU9S Series support arms, DE12U porcelain insulators.
- B. Cable Support Assemblies (Nonmetallic): Underground Devices Inc.'s CR36 rack, RA Series support arms.
- C. Cable Ties: Heavy-Duty Durable nylon construction with reinforced head and strap.
  - 1. Length as required.
  - 2. Minimum width .345 inches
  - 3. Minimum loop Tensile 175 lbs.

### **2.04 GROUNDING AND BONDING**

- A. Rod Electrodes: Copper clad (min. .010 jacket) ground rods minimum 5/8 inch diameter by 8'-0" long.
- B. Exothermic Type Weld: Erico Products Inc.'s Cadweld Process.
- C. Compression Connectors: Amp Special Industries' Ampact Grounding System, Burdy Corp.'s Hyground System, or Thomas & Betts Corp.'s Grid and Ground Rod System.
- D. Grounding Electrode Conductors and Bonding Conductors: Bare copper conductors.
- E. Hardware: Silicon-bronze bolts, nuts, flat and lock washers, etc. as manufactured by Burndy Corp., Dossert Corp., or OZ/Gedney Co.

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

- A. Dewater and remove debris from existing manholes used for the Work.
- B. Provide heavy blankets, plywood or other devices to protect existing cables and equipment from physical damage.

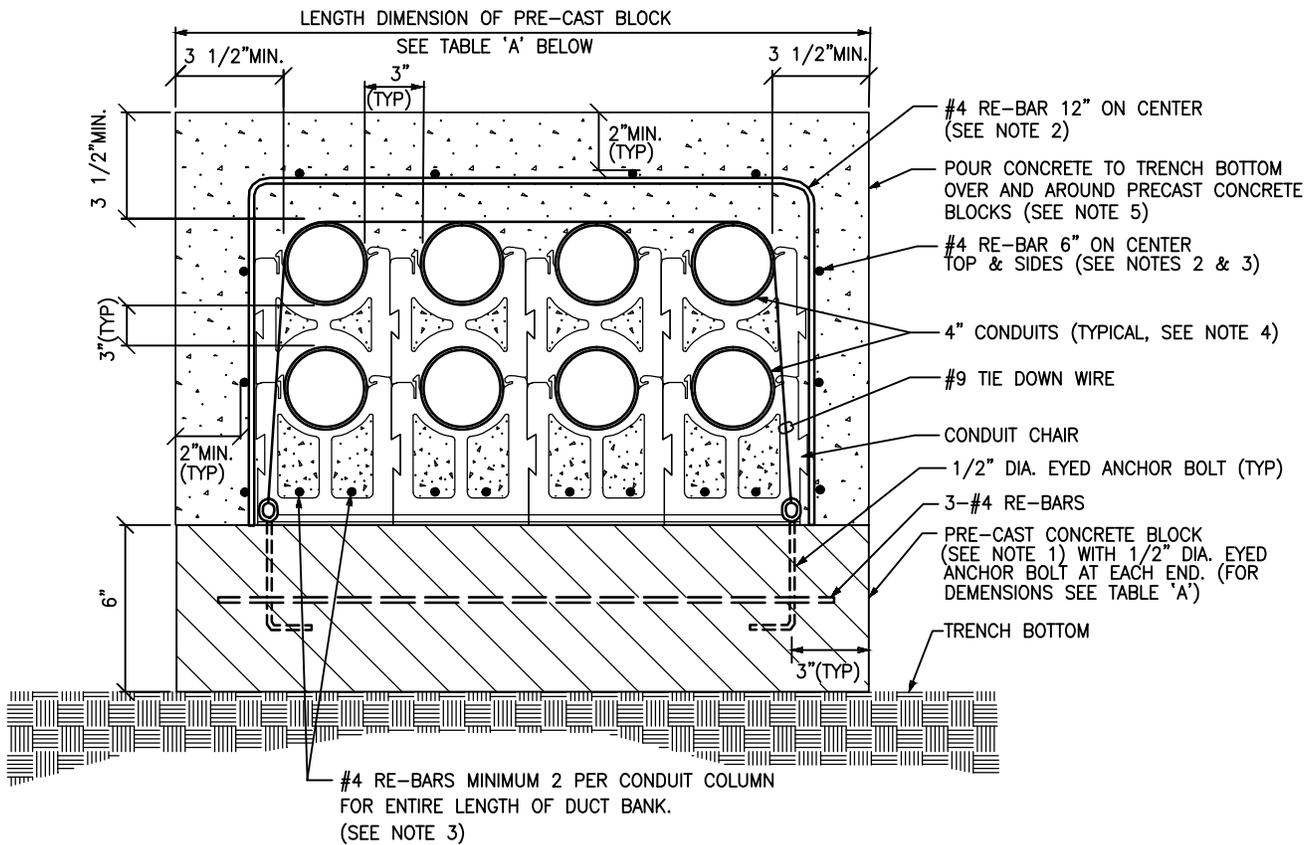
**3.02 INSTALLATION**

- A. Depth: Install manholes at depth required to bring top of manhole covers 2 inches above finished grade in lawns, and flush with paved surfaces of walks, roads, or parking spaces.
- B. Bricked-Up Throat: Mortar brick into place. Set manhole frame with mortar. Waterproof exterior of throat with minimum thickness of 3/32 inch elastic bituminous plastic cement coating.
- C. Cable Supports: Install racks, support arms and insulators of size and number to provide one insulator (or equivalent space on nonmetallic support arms) on each cable support assembly for each conduit entering the manhole:
  - 1. New Manholes or Pullboxes: Route cables around periphery of manholes (or pullbox). Secure cables to cable support assemblies with cable ties. Equip manholes and pullboxes with number of cable support assemblies indicated below:
    - a. Manholes:
      - 1) Where conduits penetrate 2 adjacent sides of a manhole, provide a minimum of 3 cable support assemblies.
      - 2) Where conduits penetrate 2 opposite sides of a manhole, provide a minimum of 3 cable support assemblies.
      - 3) Where conduits penetrate 3 sides of a manhole, provide a minimum of 3 cable support assemblies.
      - 4) Where conduits penetrate 4 sides of a manhole, provide a minimum of 6 cable support assemblies.
    - b. Pullboxes:
      - 1) Where conduits penetrate 2 adjacent sides of a pullbox, provide a minimum of 2 cable support assemblies.
      - 2) Where conduits penetrate 2 opposite sides of a pullbox, provide a minimum of 1 cable support assemblies.
      - 3) Where conduits penetrate 3 sides of a pullbox, provide a minimum of 3 cable support assemblies.
      - 4) Where conduits penetrate 4 sides of a pullbox, provide a minimum of 4 cable support assemblies.
  - 2. Existing Manholes or Existing Pullboxes: Equip existing manholes (or pullboxes) with cable support assemblies as required to support new cables. Route new cables around periphery of manhole. Secure cables with cable ties to cable support assemblies. Equip manholes and pullboxes with number of cable support assemblies indicated in paragraphs "a and b" above to support new cables.
    - a. Set existing unracked cables on cable support assemblies where indicated on the drawings. Secure cables with cable ties to cable support assemblies.
  - 3. Signal Manholes or Pullboxes: In addition to cable support assemblies, provide across and spanning the support arms, troughs for support of each signal cable. Troughs shall consist of lengths of 4 inch diameter Schedule 40 plastic conduit split lengthwise into halves. Route cables around periphery of manhole. Set trough on the support arms, lay in cable and secure with cable ties.

- D. Grounding and Bonding:
1. New Manholes Containing Feeder Circuits Over 600 Volts:
    - a. Install rod electrode in each manhole near a wall. Install rod electrode thru floor into earth below manhole with 4 inches protruding for ground connection.
    - b. Bond manhole cover frame, steel cable support assemblies and splices (lead sheath of splice or cable shields for non-lead type cables) to rod electrode with No. 6 AWG bare copper ground conductor.
    - c. Make connection to rod electrode with exothermic type weld or compression connectors.
  2. Existing Manholes Containing New Splices Over 600 Volts:
    - a. Install a rod electrode in each manhole where new cable splices are required (existing rod electrodes may be utilized if available). Install rod electrode thru floor into earth below manhole with 4 inches protruding for ground connection.
    - b. Bond existing manhole cover frame, new and existing steel cable support assemblies and new splices (lead sheath of splice or cable shields for non-lead type cables) to rod electrode with No. 6 AWG bare copper ground conductor.
    - c. Make connection to rod electrode with exothermic type weld or compression connectors.

**END OF SECTION**

PAD



**CROSS SECTION OF CONCRETE ENCASED  
UNDERGROUND CONDUIT DUCT BANK  
SINGLE POUR METHOD**

NOT TO SCALE

**NOTES:**

1. LOCATE PRE-CAST CONCRETE BLOCKS AND CONDUIT CHAIRS A MAXIMUM OF 8' ON CENTER.
2. PROVIDE RE-BAR AT TOP & SIDES FOR A DISTANCE OF 10' OUT FROM ALL MANHOLES AND BUILDING WALLS ONLY.
3. CAST RE-BARS INTO MANHOLE WALLS.
4. FOR DUCT BANKS WITH QUANTITY AND SIZE OF CONDUITS OTHER THAN AS SHOWN, ADJUST OVERALL WIDTH AND HEIGHT DIMENSIONS ACCORDINGLY.
5. EARTH CUTS WILL BE PERMITTED AS THE FORM WHERE TRENCHES ARE NEATLY EXCAVATED IN STABLE SOILS, OTHERWISE, FORM SIDES OF THE CONCRETE ENCASEMENT.

DUCT BANK NUMBER OF CONDUITS	PRE-CAST CONCRETE BLOCK DIMENSIONS		
	LENGTH	WIDTH	THICK
4	2'	1'	6"
6	2 1/2'	1'	6"
8	3'	1'	6"
10	3 1/2'	1'	6"



CONTRACT: CONSTRUCTION  
 PROJ. NO: Q1574-C  
 DATE: 07-12-13  
 DRAWN: PD/FRO  
 APPROVED:

SHEET TITLE: ADDENDUM DRAWING  
 UNDER GROUND CONDUIT DETAIL  
 PROJECT: PROVIDE SECURITY & UTILITIES FOR CONTAINERIZED OFFICES

WARNING: THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

DWG NO:  
**E-101A**



