FAYDA ENGINEERING & ENERGY SOLUTIONS, LLC

PRE-BID MEETING MINUTES

ADDENDUM NO. 1

ELECTRICAL IMPROVEMENTS AT THE DELAWARE ARMY NATIONAL GUARD SCANNELL READINESS CENTER

DE ARNG CONTRACT NO. 22-2013

A Mandatory Pre-Bid Meeting for the referenced project was held in the Delaware Army National Guard Scannell Readiness Center Conference Room, PO Box 558, Delaware City, DE 19706 located on the grounds of the Governor Bacon Health Center on Wednesday, August 14, 2014, at 10:00 a.m. Those in attendance were:

CPT Eugene Bledsoe	DE ARNG
Thomas Lippa	Dvorak, LLC
Wayne Comegys	Delcollo Electric
Jason Walters	B.W. Electric
Harold Endy	Philips Brothers Electrical
Matt Bailey	Power Plus Electrical
Mike Justice	Wesco Distribution
Kris Bourque	Wescott Electric
Ed Duff	Carr & Duff
Victor Rolli	Mid-Atlantic Electrical
Fred Fisher	First State Electric
Thomas W. Gargalas	Electrical Integrity, LLC
Bobby Tudor	Tudor Electric
Bob Shirley	Nickle Electrical
Matthew Galinskie, C.E.A.	Fayda Engineering & Energy Solutions, LLC

Date of Report: August 18, 2014

FE&ES Comm. No.: 13-1116

Items of Discussion:

1.0 These Pre-Bid Meeting Minutes, Addendum No. 1, shall be made part of the Project Manual and Drawings dated July 25, 2014 for the Electrical Improvements at the Delaware Army National Guard Scannell Readiness Center.

2.0 Sealed bids for DEARNG Contract No. 22-2013 – Electrical Improvements At The Delaware Army National Guard Scannell Readiness Center will be received by the Delaware Army National Guard at the Security Officers desk in the Main Lobby of the Armed Forces Reserve Center located at 250 Airport Road, New Castle, Delaware, 19720-1502, until 2:00 PM local time on Thursday, September 11, 2014, at which time they will be publicly opened and read aloud in the Multipurpose Room located next to the main lobby. Valid driver's license will be required for site access, front desk where all visitors are required to sign in at the Security Desk. Bidder bears the risk of late delivery. Any bids received after the stated time will be returned unopened.

3.0 Project will include the replacement of incoming electric service, transformers, main switchgear, panelboards, feeders and associated equipment; the installation of a new 100kW diesel fired emergency generator & transfer switch and the preparation of a Power System Study for the facility.

4.0 This is a mandatory pre-bid meeting and prime bidders are limited to those in attendance**.**

5.0 For further bidding information relating to the Project Manual and Drawings, the contractors are directed to contact Edward Fayda, P.E., Project Manager at Fayda Engineering & Energy Solutions, LLC at telephone: 302-999-1060. Requests for clarification or interpretation shall be delivered electronically (by email) to efayda@faydaees.com

6.0 The wage rates for this Project are Delaware Department of Labor and Division of Industrial Affairs for **New Castle County, Building Construction Classification**. A certified copy of the prevailing wage rates for this specific project has been determined by the Department of Labor and is included in the Project Manual. This approved scale of wages must be posted by the Contractor in a prominent and easily accessible place at the work site.

7.0 Contractors are reminded that if they are a recognized contractor that customarily performs the work of a given subcontractor classification; that they can list themselves on the line for that particular subcontractor category. DO NOT LEAVE ANY BLANKS ON THE BID FORM. DO NOT ADD ANY ADDITIONAL VERBIAGE OTHER THAN WHAT IS REQUESTED. FAILURE TO DO SO MAY DISQUALIFY YOUR BID. As an example, if you are an electrical contractor that will self-perform the electrical work, that you list your company on the Electrical Subcontractor line on the bid form. Ensure your address, license, etc. is also included. On the Bid Form, Contractors shall acknowledge receipt of each individual Addenda that is issued during the bidding process.

8.0 The following sections of the specifications were reviewed:

Section	Article	Title
	---	Advertisement for Bids
00 15 40		Security Procedures
00 41 13	---	Bid Form
01 23 00	3.01	Schedule of Alternates
26 05 70	1.01	Power System Study
26 32 13	1.3	Emergency/Standby Generator
	1.5	Acceptable Manufacturers
	1.12	Warranty
26 36 00	2.01	Power Transfer Switch

9.0 Contractor must be a registered plan holder in order to submit a bid. Bid Form shall be submitted in triplicate.

10.0 Contractor must specify a concrete sub-contractor. Electrical Contractors will not be permitted to complete their own structural concrete (generator pad and sidewalk) work.

11.0 Engineer clarified that a two (2) year warranty is required on work and materials beginning on the date of substantial completion. However, the generator is required to have a five (5) year warranty.

12.0 The drawings were generally reviewed to present the intent of the contract documents.

13.0 The following items were discussed in detail:

A. A site walkthrough was conducted immediately following the meeting today. Additional walkthroughs are scheduled for Tuesday, August 19 at 10:00 a.m. and Wednesday, August 27 at 10:00 a.m. Contractors shall contact Matt Galinskie at 302-999-1060 prior to the scheduled walkthrough to confirm their attendance. If no one registers, a walltkthrough will not be held.

C. Working hours are 7:00 a.m. to 4:00 p.m. Monday through Friday. Additional hours must be arranged with the Owner in advance. All shutdowns shall be conducted on weekdays and at the convenience of the owner. Shutdowns must be scheduled and approved by the owner a minimum of two weeks in advance.

D. Contractors are to contact the Department of Labor if they have any questions with regard to the State Prevailing Wage Law.

E. Requests for substitutions must be submitted to the Engineers office by Monday, September 1, 2014 at 5:00 p.m. Such requests shall include a complete description of the proposed substitutes, along with sufficient documentation and information necessary for a complete evaluation.

F. Pre-approved Electrical Gear manufacturers shall submit the package they would like to be considered for approval within the 10 day prior requirement. This is to ensure that the bidding contractors are pricing an equivalent product to that specified. Being listed as a pre-approved equal does not automatically permit them to be used by a bidding contractor. All approved packages will be released to bidding contractors by addendum.

G. Pre-approved Generator & Transfer Switch manufacturers shall submit the package they would like to be considered for approval within the 10 day prior requirement. This is to ensure that the bidding contractors are pricing an equivalent product to that specified. Being listed as a pre-approved equal does not automatically permit them to be used by a bidding contractor. All approved packages will be released to bidding contractors by addendum.

H. All questions should be directed in writing to the Engineer. Contractors are encouraged to submit questions as soon as possible. All answers to questions not in addendum

format will not be binding. In the case of a conflict between the specifications and drawings or within each not answered by addendum, the greater quantity or better quality shall be provided. The deadline for questions shall be 5:00pm, September 5, 2014.

14.0 A site review of the project site was performed.

15.0 The contractor shall provide the first one thousand (1,000) gallons of fuel for the new generator. Fuel shall be 15PPM ultra low sulfur.

16.0 Successful Contractor shall designate one job foreman who will remain as the main point of contact throughout the duration of the project.

17.0 The successful contractor, their employees and subcontractors who will be working on site shall complete and submit to the DE ARNG Contracting Officer, a request for criminal history record information. DE ARNG has the right to refuse access to the facility based on the results of the background checks. Refer specifically to Specification Section 00 15 40 for additional information.

18.0 Billing for stored material will not be paid unless the material is on the jobsite and in a secure location under the contractor's control.

19.0 Under the first addendum, we will be adding a door specification section and sketch.

20.0 In accordance with Specification Section 00 73 13, Article 9.2.2, an amount equal to 1% of the contract will be identified on the contractor's Schedule of Values for contract closeout documents. Note that this is not part of the 5% retainage.

21.0 Penn Panel & Box Co. is the recommended vendor to supply custom panelboard covers.

22.0 Contractor will be responsible for the removal, testing and proper disposal of existing non-PCB pole mounted transformers. If the transformers test positive for PCB contaminants, it is the contractor's responsibility to dispose of the equipment according to all governing laws and regulations under new Alternate #3 on the attached Bid Form. Contractor shall provide new pole mounted transformers as indicated on the Bid Documents. The existing transformers and campus aerial distribution system are owned by the State of Delaware and the primary service work associated with the removal and replacement of these transformers is the contractor's responsibility. Delmarva Power will not be responsible for shutdowns associated with this work.

23.0 Changes to Specifications

Section 6. 00 41 13 Bid Form- See revised Bid Form Attached

23.1 Doors and Hardware subcontractor category has been added to the Bid Form.
23.2 Add new Alternate #3 for Disposal costs for 3 pole top PCB contaminated transformers.
23.3 Delete Utility Company Allowance in the amount of $10,000.

Section 08 11 13 Steel Doors and Frames

23.4 Add Specification in its entirety.

24.0 Changes to Drawings

Drawing E-2:

24.1 Add sketch SKA-1 in its entirety.

24.2 Revise new door and storefront layout per detail 2/E-2 on Sketch SKA-1.

25.0 Questions/Clarifications

Q1: Will the installation of a splice box be permitted to extend existing feeders from the current switchboard to the location of the new electrical distribution equipment?

A1: Installation of a splice box /top hat box will be permitted to extend only those existing feeders which are not long enough to the terminate in new distribution equipment. Splice box shall contain terminal blocks to extend feeders to new location. Splices will not be permitted in new feeders.

Q2: Will there be a concrete pad for the entire switchboards (480v & 208v), MCC and 112.5 kVA transformer?

A2: Yes, provide 4"H housekeeping pad for the full length of the new electrical distribution lineup. Rectangular concrete pad shall extend 4" beyond the front face and sides of equipment. Do not encroach 36" wide walk area from door in front of gear.

Q3: On drawing E3 there is portable generator outlet shown are we to supply (if so need spec)? Need to size of outlet if we are supplying or not?

A3: The portable generator receptacle is existing as indicated on Removal Work plans on Drawings E-2 & E-3. Reconnect existing generator receptacle as shown on Single Line Diagram – New Work on Drawing E-3.

Q4: Dwg E2 note 1 calls for the service conduits to be removed. Are they encased in concrete? Need final location of the generator annunciator.

A4: 2-4"Conduits from Utility Pole to building shall be new per Feeder Type 1 on Single Line Diagram and concrete encased per new detail 6/E-5 on Sketch SKE-1. Location of Annunciator will be determined in the field. For bidding purposes, include up to 100 ft of run inside building.

Q5: Drawing E-3 indicates an 80kW load bank within the generator enclosure; no written specifications are noted. Please provide written specifications to the 80kW load bank. Is this load bank radiator mounted or freestanding?

A5: Omit load bank, load bank feeder breaker, conduit, conductors and load dump circuit in its entirety.

Q6: Drawing E-2 note 1 states to remove underground feeders and conduit to pole top transformers. Drawing E-3 note 1 states to remove feeders to pole top transformers and retain conduit. The Single Line Diagram and Feeder Schedule on drawing E-3 has that run scheduled with two 4"conduits and feeders, but does not specify if the conduits are new or existing. Which detail/note is correct?

A6: Refer to A4 above.

Q7: New Underground Conduit Installation: Will concrete encasement be required for underground duct banks? If so, please provide a detail.

A7: Refer to A4 above.

Q8: Pole Mounted Transformers – Confirm that the demolition and installation of new pole top transformers is to be completed by the selected electrical contractor or by the utility company.

A8: Refer to Article 22.0 above.

Q9: Alternate #1 – Confirm that contractors may reuse the existing conduits when re-feeding panelboards replaced under this alternate.

A9: Existing conduit may be reused permitted it is adequate for new service for the new feeder. No extras will be granted during construction if new conduit is required.

Original on File

MATTHEW GALINSKIE, C.E.A.

EF/ef
13-1116Pre-Bid Meeting Minutes & Addendum No 1

Attachments: Specification Section 00 41 13 Bid Form
Specification Section 08 11 13 Steel Doors & Frames
Sketch SKA-1
Sketch SKE-1
Pre Bid Meeting Sign-In Sheet

cc: All in Attendance
CPT. Reigner DEARNG
CPT. Gravino DEARNG
Van Summers DEARNG
Construction Software Tech. iSqFt
MABX – Mid Atlantic BX
Reed Construction Data, Inc.
Superior Electric
Associated Builders & Contractors, Inc.
Delaware Contractors Association
P File

BID FORM

For Bids Due: 2:00 p.m. September 11, 2014 **To:** CPT. Eugene Bledsoe
AFRC-DEARNG-FMO
Provide 3 Copies 250 Airport Road
New Castle, DE 19720

Name of Bidder: _____

Delaware Business License No.: _____ **Taxpayer ID No.:** _____

(Other License Nos.): _____

Phone No.: ( ) _____ - _____ Fax No.: ( ) _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

BASE BID: Provide new Secondary Feeders, Switchboards, Motor Controls and Distribution Equipment Modifications in Boiler Room.

Amount: _____($)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 1: Provide branch circuit panel and feeder replacement throughout the 1st and 2nd floors of the Armory Building.

Add: _____ ($)

Alternate No. 2: Provide 100kW diesel gas generator and associated appurtenances.

Add: _____ ($)

Alternate No. 3: Additional costs for disposal of PCB filled transformers in lieu of non-PCB filled transformers. To be awarded during construction after testing of transformers.
Add: _____ ($)

ALLOWANCE ACKNOWLEDGEMENT: There are no Allowances.

UNIT PRICES: There Are No Unit Prices.

BID FORM

I/We acknowledge Addenda numbered _____ and the price(s) submitted includes any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for 30 days from the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid.

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

Should I/We be awarded this contract, I/We pledge to achieve substantial completion of all the Base Bid work within 180 calendar days of the Notice to Proceed.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

_____
(State of Corporation)

Business Address:_____
_____
_____

Witness: _____ **By:** _____
(Authorized Signature)

(SEAL)

_____
(Title)

Date: _____

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Security
(Others as Required by Project Manuals)

BID FORM

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor **must be listed for each category** where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

Subcontractor Category	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Electrical			
2. Excavation			
3. Concrete			
4. Doors & Hardware			
5.			
6.			

BID FORM

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date to the Office of Management and Budget, Division of Facilities Management.

All the terms and conditions of this project have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE (TYPED): _____

AUTHORIZED REPRESENTATIVE (SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

_____

_____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____day of _____ 20____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

SECTION 08 11 13
STEEL DOORS AND FRAMES

PART 1 - GENERAL

1.1. SECTION INCLUDES

A. Comply with the requirements of Division 1.
B. Provide the following products as listed on the door schedule and shown on the drawings, including but not limited to the following:
   1. Hollow metal doors
   2. Hollow metal frames
   3. Side lights, transom frames and borrowed lights
   4. Hollow metal panels
   5. Preparation of hollow metal doors and frames for finish hardware.

1.2. RELATED SECTIONS

A. The following description of work is included for reference only and shall not be presumed complete:
   1. Finish carpentry: 06 20 00
   2. Wood doors: 08 14 00
   3. Stainless steel doors: 08 11 19
   4. Sound control door assemblies: 08 34 73
   5. Door hardware: 08 71 00
   6. Glazing: 08 80 00
   7. Painting and coating: 09 90 00
   8. Electrical: 26 00 00

1.3. REFERENCES

A. ANSI A250.3-2007: Test Procedure and Acceptance Criteria for Factory Applied Finish Painted Steel Surfaces for Steel Doors and Frames
B. ANSI A250.4-2001: Test Procedure and Acceptance Criteria for Physical Endurance for Steel Door and Hardware Reinforcing
C. ANSI A250.10-1998 (R2004): Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames
D. ANSI A250.13-2008: Testing and Rating of Severe Windstorm Resistant Components for Swinging Door Assemblies
E. ANSI/UL 1784-2004: Air Leakage Tests of Door Assemblies, 3rd edition
F. ASTM A653/A653M-10: Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
G. ASTM E90-09: Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

H. ASTM C518 – 04: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
I. ASTM E413-04: Classification for Rating Sound Insulation
J. NAAMM-HMMA 803-08: Steel Tables
K. NAAMM-HMMA 810-09: Hollow Metal Doors
L. NAAMM-HMMA 820-08: Hollow Metal Frames
M. NAAMM-HMMA 831-11: Recommended Hardware Locations for Hollow Metal Doors and Frames
N. NAAMM-HMMA 840-07: Guide Specification for Installation of Hollow Metal Doors and Frames
O. NAAMM-HMMA 850-00: Fire Rated Hollow Metal Doors and Frames
P. NFPA 80-10: Standard for Fire Door and Other Opening Protectives
Q. NFPA 101: Life Safety Code
R. NFPA 105-10: Standard for the Installation of Smoke Door Assemblies
S. NFPA 252-08: Standard Methods of Fire Tests of Door Assemblies
T. NFPA 257-07: Standard on Fire Tests for Window and Glass Block Assemblies
U. CAN/ULCS770-09: Standard Test Method for Determination of Long-term Thermal Resistance of Closed-Cell Thermal Insulating Foams
V. UL 10C: Standard for Safety Positive Pressure Fire Tests of Door Assemblies

1.4. PRE-INSTALLATION MEETING

A. Plan and manage a pre-installation meeting to explain the proper methods to install hollow metal doors and frames.

1.5. SUBMITTALS

A. Make submittals in accordance with Section 01 33 00.
B. Provide the following items in the submittal package:
1. Door schedule
2. Elevations of each door type
3. Details of doors, including vertical and horizontal edge details and metal thickness
4. Frame details for each frame type, including profiles and metal thickness
5. Locations of reinforcements and preparation for hardware
6. Details of each different wall opening condition
7. Details of anchorage, joints, field splices and connections
8. Details of accessories
9. Details of moldings, removable stops and glazing
10. Details of conduit and preparations for power, signal, and control systems
C. Upon Architect request, provide technical information on selected items.
D. Upon Architect request, provide 254 mm x 254 mm (10 in x 10 in) corner sample on selected items.

1. Doors: Show vertical edge, end channels, core, hinges and other applied hardware reinforcements; glazing if applicable.
2. Frames: Show profile, corner joint at head and jamb, anchors, glazing stop to show intersection between head and jamb; fixed panels if applicable.

E. Finish paint: Submit finish paint color samples of 127 mm x 127 mm (5 in x 5 in).

F. Provide products meeting the following LEED performance criteria:

1. MRc4: For a product with recycled content, documentation indicating percentages by weight of post-consumer and pre-consumer recycled content. Provide product with maximum pre-consumer and post-consumer recycled content available, supported by appropriate documentation

G. Test and evaluation reports: Submit the following test and evaluation reports:
1. Steel door and frame assemblies supplied under this section meet acceptance criteria of ANSI A250.4, Level A **[**Level B**]**, **[**Level C**]**
2. Primer applied on steel door and frame assemblies meet acceptance criteria of ANSI A250.10.
3. Factory painted steel door and frame assemblies meet acceptance criteria of ANSI A250.3.
4. Insulated doors supplied in exterior openings meet specified thermal resistance rating.
5. Acoustic door and frame assemblies provide the STC and sound TL values specified within the critical frequency range, as determined and scheduled by the Consultant.
6. Windstorm rated assemblies meet standard ANSI A250.13, Class 1 requirements.
7. Ensure reports include name of testing authority, date of test, location of test facility, descriptions of test specimens, procedures used in testing and indicate compliance with acceptance criteria of the test.

H. Closeout submittals
1. Provide the following information to the Owner:
    a. One copy of the as-built door and frame schedule;
    b. Name, address and phone number of manufacturer’s distributors;
    c. One copy of the manufacturer’s product warranty;
    d. Manufacturer’s product maintenance instructions.

1.6. QUALITY ASSURANCE

A. Manufacturers: Execute work in this Section by a manufacturer who is a member of NAAMM. Ensure product quality meets standards set by this association.

B. Ensure product is manufactured by a firm experienced in design and production of standard and custom commercial steel door and frame assemblies, integration

of builders' or electronic hardware and glazing assemblies, and other items affecting work.

C. Distributors: Execute work in this Section by a distributor who has a minimum of 5 years' experience in similar projects.

D. Installers: Execute work in this Section by an installer who has a minimum of 5 years' experience in similar projects.

E. Doors and frames from a single source manufacturer.

1.7. DELIVERY, STORAGE AND HANDLING

A. Delivery:

1. Make deliveries in accordance with Section 01 65 00.
2. Identify products with a label indicating manufacturer's name, Architect's opening number, product description and dimensions.
3. Protect doors and frames during shipping.
4. Upon delivery, inspect products for quantity and damage.
5. Repair or replace damaged products before installation.

A. Storage and handling:

1. Store and handle products in accordance with Section 01 66 00.
2. Store products in a clean, dry and secure area.
3. Store and protect materials in accordance with NAAMM-HMMA 840.
4. Remove wrappings or coverings from doors upon delivery at site. Store doors and welded frames in a vertical position with a minimum of 6 mm (1/4 in) space between them. Place material on blocking at least 102 mm (4 in) off the ground to permit air circulation.

1.8. WARRANTY

A. Manufacturer's warranty: One year from substantial completion of the project on both material and workmanship.

PART 2 - PRODUCTS

2.1. MANUFACTURERS

A. Acceptable manufacturers:

1. De La Fontaine Inc. : www.delafontaine.com.
2. Republic Doors : www.republicdoor.com
3. Mesker Doors : www.meskerdoor.com.
4. HMF : www.hmfexpress.com.
5. Karpen Steel Products : www.karpensteel.com.

B. Substitutions:

1. Comply with Section 01 25 00

2. Equal products in design, function and quality will be accepted upon Architect's approval only.

2.2. MATERIALS

A. Steel requirements:

1. Interior doors and frames: Comply with ASTM A653, Designation ZF 120 (A40)
2. Exterior doors and frames: Comply with ASTM A653, Designation ZF 180 (A60).

2.3. ACCESSORIES

A. Glazing moldings and stops

1. Sandwich overlapping kit
    a. Two components with welded mitered corners and secured with minimum # 6 corrosion-resistant countersunk sheet metal screws.
    b. Glazing moldings fabricated from 20-gauge, 0.8 mm (0.032 in) minimum.
    c. Fire-rated doors shall be prepared for listed glazing as required in accordance with the door manufacturer's fire rating procedure.
    d. Install screws on non-secure side.
    e. 18-gauge, 1.1 mm (0.042 in) channel reinforcements on glass size equal to or bigger than half-glass.
    f. Glazing to comply with Section 08 80 00.

2. Flush kit
    a. On non-secure side, provide a full flush, non-removable molding.
    b. Glazing moldings fabricated from 20-gauge, 0.8 mm (0.032 in) minimum.
    c. Removable glass stops shall be channel-shaped, 20-gauge, 0.8 mm (0.032 in) minimum thickness, with tight-fitting butt or mitered corners and secured with minimum # 6 corrosion-resistant countersunk sheet metal screws.
    d. Fire-rated doors shall be prepared for listed glazing as required in accordance with the door manufacturer's fire rating procedure.
    e. Install screws on non-secure side.
    f. 18-gauge, 1.1 mm (0.042 in) channel reinforcements on glass size equal to or bigger than half-glass.
    g. Glazing to comply with Section 08 80 00.

B. Frame accessories

1. Provide dust/mortar box at strike location on drywall and masonry frames.
2. Provide mortar guards for hinge reinforcements on masonry frames.

3. Provide temporary spreaders on welded frames. Provide one (1) bar for frames with less than 178 mm (7 in) jamb depth. Provide two (2) bars for frames with 178 mm (7 in) or greater jamb depth.
4. Drill holes for silencers. Single openings: 3 per strike jamb, located at hinge height. Pair openings: 2 per header at approximately 150 mm (6 in) each side of centerline of head stop.

C. Louvers
Vandal-Proof Design 1500A Louver by "Air Louver" of 18 gage CRS frames and blades with 12 gage CRS security grill

2.4. DOOR FABRICATION

A. Door cores:

1. Interior openings: Impregnated honeycomb, with 25 mm (1 in) cell maximum diameter.
Steel stiffened core: Continuous vertically formed steel sections, full thickness of the interior space between door faces. Stiffeners shall be 22 gauge, 0.6 mm (0.026 in) minimum thickness, spaced 152 mm (6 in) apart and securely fastened to both face sheets by industrial glue or laser welds **[**spot welded spaced a maximum of 127 mm (5 in) o. c. vertically**]**. Spaces between stiffeners shall be filled with polystyrene core Type 1, fire retardant conforming to ASTM C518.

B. Hollow metal doors in heavy duty application

1. Physical performance: Level A according to ANSI A250.4.
2. Metal thickness: 16-gauge, 1.34 mm (0.053 in).
3. Edge construction: Full flush lock seam on edge **[**full flush lock seam on edge, industrial adhesive or tack welded every 254 mm (10 in) and putty filled**]**, **[**full flush seamless with continuously welded edge seam; flush internal edge reinforcements of 16-gauge, 1.34 mm (0.053 in)**]**.
4. Fabricate door to be flush with one continuous face free from joints, tool markings and abrasions, and with provision for glass and/or louvers as indicated on Door Schedule and Drawings.

C. Door models

1. As indicated in the Door and Frame schedule.

D. End channels:
1. Interior door:
    a. Top of door: Close top of door with same material as face sheets, minimum 18-gauge, 1.1 mm (0.042 in). Steel inverted channel, projection welded. **[**Steel flush channel unfilled, projection welded.**]**,**[**Fully continuously welded centered seam, no putty with flush internal reinforcement of minimum 18-gauge, 1.1 mm (0.042 in)**]**.

b. Bottom of door: Close bottom of door with same material as face sheets, minimum 18-gauge, 1.1 mm (0.042 in). Steel inverted channel projection welded. **[**Steel flush channel unfilled, projection welded**]**, **[**Fully continuously welded centered seam, no putty with flush internal reinforcement of minimum 18-gauge, 1.1 mm (0.042 in)**]**.

E. Vertical edges on active doors:

1. Beveled edges on both sides: 3 mm per 50 mm, (1/8 in per 2 in). Square vertical edges are not acceptable.

2.5. FRAME FABRICATION

A. Hollow metal frames in heavy duty application

1. Frames:
   a. Physical performance: Level A according to ANSI A250.4.
   b. Metal thickness: 16-gauge, 1.34 mm (0.053 in).
   c. Metal thickness for openings over 1219 mm (48 in): 14-gauge, 1.70 mm (0.067 in).
   d. Frame assembly: Face welded, dressed smooth with seamless face. **[**Continuously welded through the entire profile, dressed smooth with seamless face**]**, Knockdown frames are not acceptable.

2.6. ANCHORS

A. Suitable for wall conditions

1. Located close to hinge reinforcements and at the same height on strike jamb. Quantity: 2 per jamb up to 1,524 mm (60 in) of door opening height, one additional anchor for each additional 762 mm (30 in) of door height (or fraction thereof).
2. Provide a welded adjustable floor anchor at the bottom of each jamb on welded frames; same material as frame and with 2 holes for bolting to floor.
3. Masonry anchors: Provide T-strap wall anchors, minimum 16-gauge, 1.34 mm (0.053 in).
4. Existing wall anchors: Minimum 18-gauge, 1.1 mm (0.042 in), spot welded to the frame.
5. Steel/wood stud anchors: Minimum 18-gauge, 1.1 mm (0.042 in). Provide steel snap-in or welded in “Z” type stud anchors.
6. Knockdown frame: Adjustable compression anchors and L brackets spot welded to back of frame.

2.7. CLEARANCES

A. On fire-rated openings: Comply with NFPA 80

B. On non-fire rated openings, the clearance shall be 3 mm (1/8 in) between the door and frame and between meeting edges of a pair of doors. The clearance between the bottom of the door and the bottom of the frame shall be 19 mm (3/4 in) without threshold.

2.8. MANUFACTURING TOLERANCES

A. Frame:
1. Width and height: +1.6 mm (1/16 in), -0.8 mm (-1/32 in)
2. Face, stop and rabbet: +/- 0.8 mm (+/- 1/32 in)
3. Jamb depth: +/- 1.6 mm (+/- 1/16 in),

B. Door:
1. Width and height: +/- 1.2 mm (+/- 3/64 in)
2. Thickness: +/- 1.6 mm (+/- 1/16 in)
3. Edge flatness: 1.6 mm (1/16 in) maximum
4. Surface flatness: 3.1 mm (1/8 in) maximum
5. Door twist: +/- 1.6 mm (+/- 1/16 in)

C. Hardware:
1. Cutouts: Template dimension +0.38 mm (+0.015 in)
2. Location: +/- 0.8 mm (+/- 1/32 in)
3. Between hinge centerlines: +/- 0.4 mm (+/- 1/64)

2.9. FIRE-RATED OPENINGS

A. Manufacture doors and frames as successfully tested in accordance with:
1. NFPA 80
2. NFPA 252
3. NFPA 257
4. UL 10C

B. Identify each product with a fire label from one of the following testing agency: Underwriters Laboratories, Warnock Hersey (ITS).

2.10. FRAME HARDWARE PREPARATION

A. Factory to prepare hollow metal frame to receive template mortised hardware; include cut-outs, reinforcement, mortising, drilling, and tapping according to the Door and Hardware Schedule and templates.

B. Surface applied hardware: Factory reinforced only, 12-gauge, 2.36 mm (0.093 in).

C. Hinge and pivot reinforcements: 10-gauge, 3.12 mm (0.123 in) high frequency hinge reinforcements, with a flange **[**7-gauge, 4.24 mm (0.167 in) flat hinge reinforcements**]**.

D. Strike reinforcement: 16-gauge, 1.34 mm (0.053 in) **[**12-gauge, 2.36 mm (0.093 in)**]**.

E. Closer reinforcement: 12-gauge, 2.36 mm (0.093 in).

F. Other reinforcements: 16-gauge, 1.34 mm (0.053 in) **[**12-gauge, 2.36 mm (0.093 in)**]**.

2.11. DOOR HARDWARE PREPARATION

A. Factory to prepare hollow metal door to receive template mortised hardware; include cut-outs, reinforcement, mortising, drilling, and tapping according to the Door and Hardware Schedule and templates.

B. Surface applied hardware: Factory reinforced only, 16-gauge, 1.34 mm (0.053 in), **[**12-gauge; 2.36 mm (0.093 in)**]**.

C. Hinge and pivot reinforcements: 10-gauge, 3.12 mm (0.123 in) high frequency hinge reinforcements, with a flange **[**7-gauge, 4.24 mm (0.167 in) flat hinge reinforcements.
D. Lock front reinforcement: 12-gauge, 2.36 mm (0.093 in).
E. Flush bolt reinforcement: 12-gauge, 2.36 mm (0.093 in).
F. Closer reinforcement: 16-gauge, 1.34 mm (0.053 in) **[**12-gauge, 2.36 mm (0.093 in)**]**.
G. Other reinforcements: 16-gauge, 1.34 mm (0.053 in) **[**12-gauge, 2.36 mm (0.093 in)**]**.

2.12. FINISHING

A. Galvannealed steel A40/A60: Factory applied primer to protect the area where zinc was removed in the welding process.
B. Primer: Comply with ANSI A250.10.
C. Factory prefinished doors and frames: Comply with ANSI A250.3.
1. Select color from manufacturer's standard color chart **[**custom color selected by the Designer**]**.
2. Provide touch-up paint for field repairs

PART 3 - EXECUTION

3.1. EXAMINATION

A. Inspect rough openings to detect problems that would prevent the proper installation of doors and frames.
B. Rough openings shall be square, level and plumb with accurate dimensions.

3.2. INSTALLATION

A. Remove temporary spreaders on welded frames before installation and verify frame dimensions, swing, fire rating and opening number.
B. For grouted frames, apply on site a coat of bituminous coating inside the frame throat.
C. Install doors and frames in accordance with:
1. Approved door and hardware schedule
2. Approved shop drawings
3. Manufacturer's recommendations
4. Local building codes
5. NFPA 80
6. NFPA 105
7. ANSI/DHI A115.1G
8. NAAMM HMMA 840

3.3. ADJUSTING, CLEANING AND PROTECTION

A. Repair or replace damaged products.
B. Correct defects in installation.
C. Clean area in accordance with Section 01 74 00.
D. Protect doors and frames until transfer of the building to the Owner.

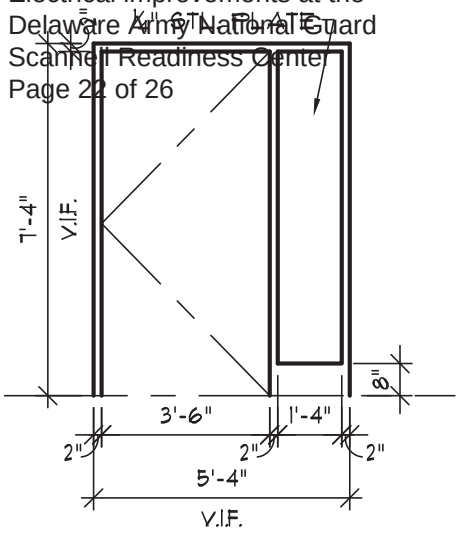
3.4. INSPECTION

A. Inspection of fire rated openings
   1. Comply with NFPA 80 requirements.
   2. Fire door assemblies shall be inspected and tested by an individual with knowledge and understanding of the operating components of the type of door. This person must confirm the door assembly will perform its intended function when exposed to fire conditions.
   3. A report shall be written for the AHJ and shall be submitted to the Owner.
   4. All deficiencies must be corrected before turning keys to the Owner.

END OF SECTION 08 11 13

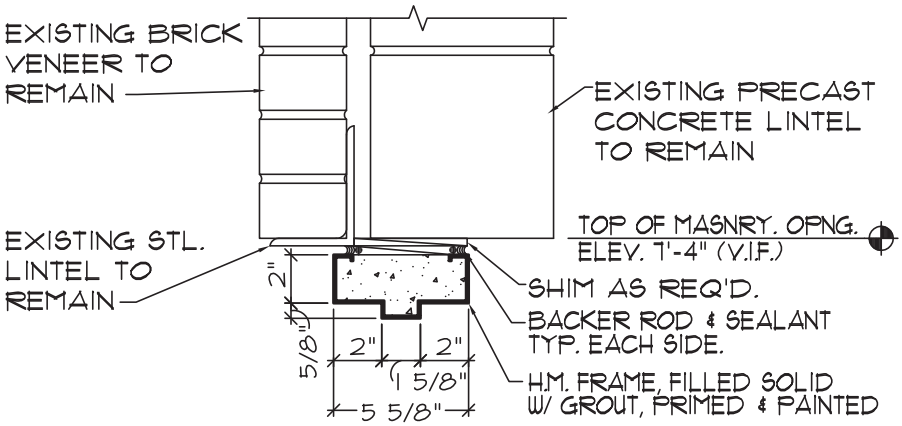
GENERAL NOTES
DOORS, FRAMES & HARDWARE

1. INTERIOR DOOR CLOSERS MUST BE SET NO HIGHER THAN 5 POUNDS OF PRESSURE TO OPERATE (TYP. FOR INTERIOR NON-RATED DOORS ONLY)
2. OPENING HARDWARE IS CENTERED A MAXIMUM OF 48" ABOVE FINISH FLOOR.
3. MINIMUM STRIKE SIDE CLEARANCE ON PULL SIDE OF DOOR:
   - A. 24" MIN. EXTERIOR DOORS.
   - B. 18" MIN. INTERIOR DOORS, FRONT APPROACH.
   - C. 36" MIN. INTERIOR DOORS, HINGE APPROACH (IF CORRIDOR IS 60" MINIMUM).
   - D. 42" MIN. INTERIOR DOORS, HINGE APPROACH (IF CORRIDOR IS LESS THAN 60", BUT GREATER THAN 54").
   - E. 24" MIN. INTERIOR DOORS, LATCH APPROACH.
4. MINIMUM STRIKE SIDE CLEARANCE ON PUSH SIDE OF DOOR:
   - A. 0", FRONT APPROACH.
   - B. 12" MIN., FRONT APPROACH W/LATCH AND CLOSER.
   - C. 54" MIN. TOTAL WIDTH, HINGE APPROACH.
   - D. 24" MIN., LATCH APPROACH.
5. DOOR CLOSERS MUST BE SET SO THAT IT TAKES AT LEAST 3 SECONDS TO CLOSE FROM AN OPEN POSITION OF 70^ TO WITHIN 3" OF THE LATCH.
6. ALL WIRING CONDUIT IDENTIFIED ON THE DRAWINGS, OR REQUIRED FOR THE INSTALLATION OF ELECTRONIC COMPONENTS, THAT IS WITHIN HOLLOW METAL FRAMES SHALL BE PROVIDED AS PART OF THE HOLLOW METAL FRAME, WITH TERMINATIONS APPROPRIATE FOR EXTENSION BY OTHER TRADES. G.C. COORD
7. NEW HOLLOW METAL DOOR IS TO BE 16 GA. PRIMED & PAINTED.
8. NEW DOOR FRAMES ARE TO BE 16GA HOLLOW METAL, FULLY WELDED, PRIMED AND PAINTED.
9. DOOR HARDWARE: PROVIDE FULL ADA PACKAGE WITH LEVER, LOCK, WEATHERSTRIPPING AND CLOSER. COORDINATE AND MATCH OWNERS KEYING SYSTEM.



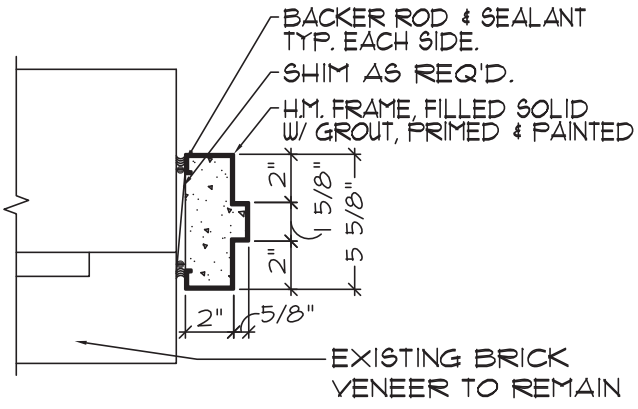
3 / E-2 DOOR DETAIL ELEVATION

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



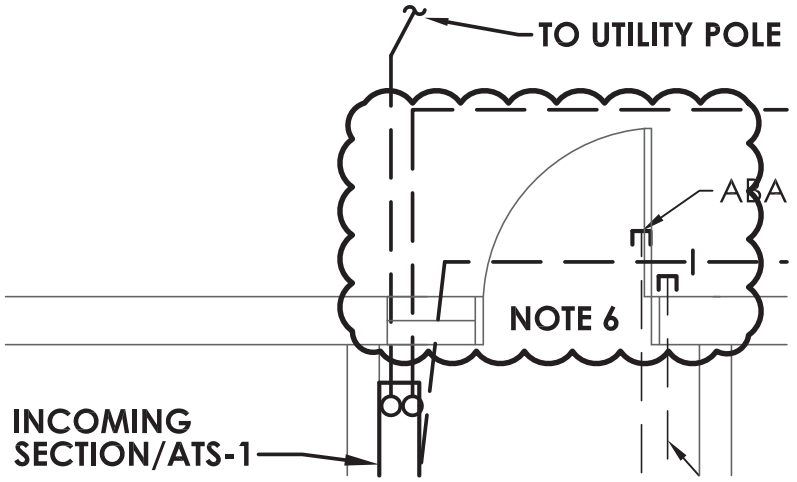
4 / E-2 DOOR HEADER DETAIL

SCALE: 1-1/2"=1'-0"



5 / E-2 DOOR JAMB DETAIL

SCALE: 1-1/2"=1'-0"



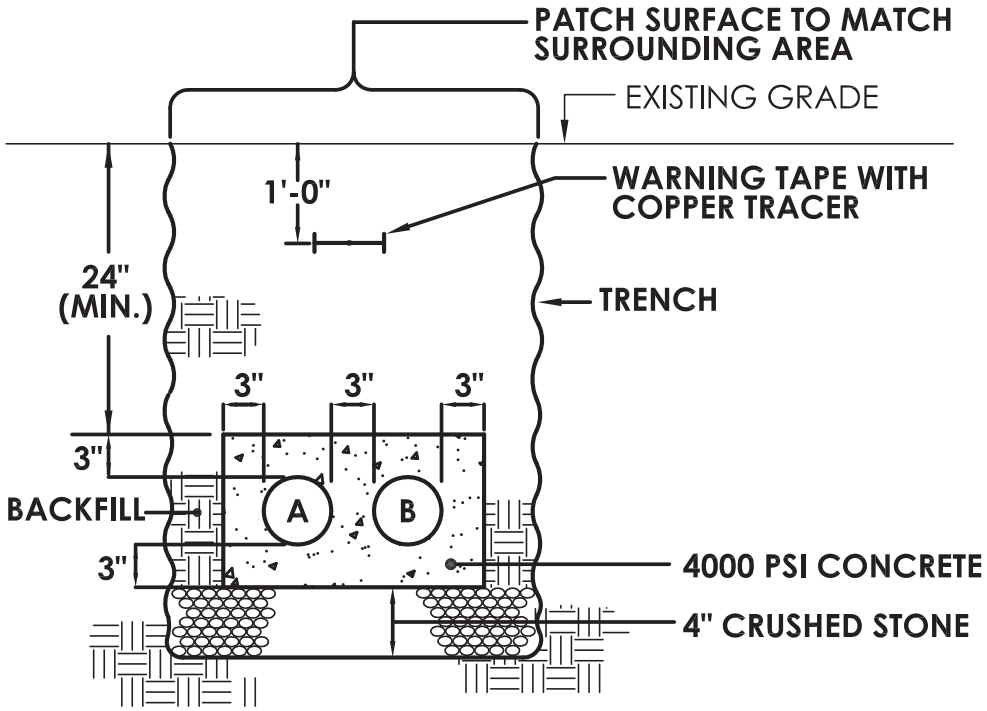
2 / E-2 ELEC. RM PLAN - NEW WORK

SCALE: 1/8"=1'-0"

FAYDA ENGINEERING & ENERGY SOLUTIONS, LLC
801 W. Newport Pike, Wilmington, DE 19804
Tel: 302-999-1060, Fax: 302-999-1053
www.FaydaEES.com

PROJECT: ELECTRICAL IMPROVEMENTS AT THE DEARNG SCANNELL READINESS CENTER	DATE: 08/19/2014
	SCALE: AS NOTED
SUBJECT: DOORS, FRAMES & HARDWARE	SHEET AFFECTED: E-2
	SKETCH NO: SKA-1
REVISION/ISSUE: ADDENDUM #1	
DEARNG PROJ. NO: 12-2013 FE&ES PROJ. NO:13-1116	

A	4" CONDUIT
B	4" CONDUIT - SPARE



6
E-5

DUCTBANK DETAIL

NOT TO SCALE

FAYDA ENGINEERING & ENERGY SOLUTIONS, LLC
801 W. Newport Pike, Wilmington, DE 19804
Tel: 302-999-1060, Fax: 302-999-1053
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PROJECT: ELECTRICAL IMPROVEMENTS AT THE DEARNG SCANNELL READINESS CENTER	DATE: 08/19/2014
	SCALE: AS NOTED
SUBJECT: DUCTBANK DETAIL	SHEET AFFECTED: E-5
	SKETCH NO: SKE-1
REVISION/ISSUE: ADDENDUM #1	
DEARNG PROJ. NO: 12-2013 FE&ES PROJ. NO:13-1116	

FAYDA ENGINEERING & ENERGY SOLUTIONS, LLC

PLEASE FILL OUT COMPLETELY AND LEGIBLY.

August 14, 2014

PROJECT NAME: Electrical Improvements at the DEARNG Scannell Readiness Center — FE&ES/Comm No.: 13-1116

Governor Bacon Health Center, Delaware City, DE 19706 — DEARNG Project No.: 22-2013

PRE-BID MEETING: Thurssday, August 14, 2014 @ 10:00 a.m.

BIDS DUE: Thursday, September 11, 2014 @ 2:00 p.m

Company Name	Representative	Address	Phone & Fax	Email
~~Fayda Engineering & Energy Solutions, LLC~~	~~Edward Fayda, P.E.~~	~~801 W. Newport Pike Wilmington, DE 19804~~	~~P: 302-999-1060 F: 302-999-1053~~	~~efayda@faydaees.com~~
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DELCOLLO ELECT	WAYNE COMEGYS	226 BROOKSIDE DR WILM DE 19804	302-994-3400 302-995-1023	WAYNE @ DELCOLLO. COM
BW ELECTRIC	JASON WALTERS		302-566-6248 302-566-6249	BWELECTRIC@ gmail.com

Company	REP.	ADDRESS	T- F	Email
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WESCO Distribution	MIKE JUSTICE	5 GERMANY DR WILMINGTON DE 19804	302-655-9611	myjustice@wesco.com
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MID-ATLANTIC ELECTRICAL	VICTOR ROLLI	24556 BETTS POND RD MILLSBORO, DE 19966	302 934 9171 [illegible] 7170	VROLLI@MAES1.COM

Pre-Bid Sign In Log
Electrical Improvements
Scannell Readiness Center
DEARNG Project: 22-2013

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Nickle	Bob Shirley	114 Mill Rock Court Newark	302 453-4000	bshirley@nickle.email