

**ADDENDUM NO. 1  
SHELBY COUNTY FIRING RANGE  
OCTOBER 5, 2012**

**SPECIFICATIONS:**

- ITEM NO. 1: SPECIFICATIONS, SECTION 02925 - HYDRO-MULCH SEEDING WITH FLEXIBLE GROWTH MEDIUM: Part 2.2 B., delete and replace with the following:
- “B. INITIAL TEMPORARY SEEDING AFTER SLOPES HAVE BEEN PLACED SHALL BE, 50 LBS/AC OF KY 31, 25 LBS/AC OF UN-HULLED BERMUDA, 5 LBS/AC OF WHITE CLOVER, 10 LBS/AC OF ANNUAL RYE GRASS AND 10 LBS/AC OF LOVE GRASS.
- AFTER CONSTRUCTION HAS BEEN COMPLETED AND THE SITE IS READY FOR FINAL STABILIZATION, THE PERMANENT GRASS SEED SHALL BE 100 LBS/AC OF HULLED BERMUDA. THIS SHALL BE APPLIED TO ALL AREAS TO RECEIVE GRASS, INCLUDING OVERSEED OF THE SLOPES.”
- ITEM NO. 2: SPECIFICATIONS, SECTION 16496 – AUTOMATIC TRANSFER SWITCHES – LOW VOLTAGE: Insert attached new Section 16496 – AUTOMATIC TRANSFER SWITCHES – LOW VOLTAGE, consisting of 11 pages marked “Revised 10-3-12” in lower left corner.
- ITEM NO. 3: SPECIFICATIONS, SECTION 15950 – FACILITIES MANAGEMENT/AUTOMATIC TEMPERATURE CONTROLS: consisting of 14 pages, delete this section entirely.

**DRAWINGS:**

- ITEM NO. 1: DRAWINGS, SHEET C2.02: Insert attached Sketch C2.02A dated 10-3-12.
- ITEM NO. 2: DRAWINGS, SHEET S2.1: Insert attached Sketch S2.1A dated 10-3-12. Indicates representative location of shear wall sections.
- ITEM NO. 3: DRAWINGS, SHEET S3.2: Insert attached Sketch S3.2A dated 10-3-12. Added sections 1 & 2 showing the connection of shear wall to floor diaphragm. This Detail to be applied at top of all concrete walls along grids 6, 12, D & M.
- ITEM NO. 4: DRAWINGS, SHEET E0.1: Insert attached Sketch E0.1A dated 10-3-12. The exterior lighting for the office building and the flag poles has been modified. The fixture changes have been revised in the fixture schedule and a lighting detail has been added.
- ITEM NO. 5: DRAWINGS, SHEET E0.2: Insert attached Sketch E0.2A dated 10-3-12. Emergency Generator Connections - An automatic transfer switch has been added as a means of connection for a portable generator currently owned by the Shelby County Sheriff's Department.

- ITEM NO. 6: DRAWINGS, SHEET E0.4: Insert attached Sketch E0.4A dated 10-3-12. The circuiting, along with the panel schedule, for some of the mechanical units has been revised.
- ITEM NO. 7: DRAWINGS, SHEET E1.2: Insert attached Sketch E1.2A dated 10-3-12. The exterior lighting for the office building and the flag poles has been modified. The fixture changes have been revised in the fixture schedule and a lighting detail has been added.
- ITEM NO. 8: DRAWINGS, SHEET E1.2: Insert attached Sketch E1.2A dated 10-3-12. Pond Aerator - A power connection was added for the new pond aerator system. A new detail depicting the installation of this power connection was added as well.
- ITEM NO. 9: DRAWINGS, SHEET E2.1: Remove and destroy this sheet and insert the attached revised Sheet E2.1 dated 10-3-12. The exterior lighting for the office building and the flag poles has been modified. The fixture changes have been revised in the fixture schedule and a lighting detail has been added.
- ITEM NO. 10: DRAWINGS, SHEET E2.2: Remove and destroy this sheet and insert the attached revised Sheet E2.2 dated 10-3-12. The exterior lighting for the office building and the flag poles has been modified. The fixture changes have been revised in the fixture schedule and a lighting detail has been added.
- ITEM NO. 11: DRAWINGS, SHEET E3.2: Insert attached Sketch E3.2A dated 10-3-12. The circuiting, along with the panel schedule, for some of the mechanical units has been revised.

THE END.

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SECTION 16496 - AUTOMATIC TRANSFER SWITCHES – LOW VOLTAGE

PART 1 GENERAL

1.01 SCOPE

- A. Furnish and install the low voltage automatic transfer switches having the ratings, features/accessories and enclosures as specified herein and as shown on the contract drawings.

1.02 RELATED SECTIONS

1.03 REFERENCES

- A. The automatic transfer switches and all components shall be designed, manufactured and tested in accordance with the latest applicable standards of UL and NEMA as follows:
1. UL 1008 – Transfer Switches
  2. UL 991 - Tests for Safety-Related Controls Employing Solid-State Devices
  3. NFPA 70 – National Electrical Code
  4. NFPA 99 – Essential Electrical Systems of Health Care Facilities
  5. NFPA 110 – Emergency and Standby Power Systems
  6. NEMA ICS 10 – AC Transfer Switch Equipment
  7. IEEE 446 – Recommended Practice for Emergency and Standby Power Systems

1.04 SUBMITTALS – FOR REVIEW/APPROVAL

- A. The following information shall be submitted to the Engineer:
1. Front view and plan view of the assembly
  2. Schematic diagram
  3. Conduit space locations within the assembly.
  4. Assembly ratings including:
    - a. Withstand and Closing rating
    - b. Voltage
    - c. Continuous current rating
    - d. Short-Time rating if applicable
    - e. Short-circuit rating if ordered with integral protection
  5. Cable terminal sizes
  6. Product Data Sheets.

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- B. Where applicable, the following additional information shall be submitted to the Engineer:
1. Busway connection
  2. Connection details between close-coupled assemblies
  3. Composite front view and plan view of close-coupled assemblies

1.05 SUBMITTALS – FOR CONSTRUCTION

- A. The following information shall be submitted for record purposes:
1. Final as-built drawings and information for items listed in section 1.04
  2. Wiring diagrams
  3. Certified production test reports
  4. Installation information
  5. Seismic certification as specified
- B. The final (as-built) drawings shall include the same drawings as the construction drawings and shall incorporate all changes made during the manufacturing process.

1.06 QUALIFICATIONS

- A. The manufacturer of the assembly shall be the manufacturer of the major components within the assembly.
- B. For the equipment specified herein, the manufacturer shall be ISO 9001 or 9002 certified.
- C. The manufacturer of this equipment shall have produced similar electrical equipment for a minimum period of five (5) years. When requested by the Engineer, an acceptable list of installations with similar equipment shall be provided demonstrating compliance with this requirement.
- D. Provide Seismic qualified equipment as follows:
1. The manufacturer shall certify the equipment based upon a dynamic and/or static structural ***computer analysis*** of the entire assembly structure and its components, provided it is based upon ***actual seismic testing*** from similar equipment. The analysis shall be based upon all applicable seismic requirements of the 2006 International Building Code (IBC) Site Classification D, site Coefficient  $F_a = 1.03$ ,  $F_v = 1.75$  and spectral response accelerations of  $S_S = 1.69g$ ,  $S_1 = 0.3245g$ . The analysis shall be based upon a 5% damping factor, and a peak ( $S_{DS}$ ) of at least  $0.805g$ 's (3 -12 Hz), applied at the base of the equipment in the horizontal direction. The forces in the vertical direction shall be at least 66% of those in the horizontal direction. The analysis shall cover a frequency range from 1 to 100Hz. Guidelines for the installation consistent with these requirements shall be provided by the equipment manufacture and based upon testing of representative equipment. Equipment certification acceptance criteria shall be based upon the ability for

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the equipment to be returned to service immediately after a seismic event within the above requirements without the need for repairs.

2. The following minimum mounting and installation guidelines shall be met, unless specifically modified by the above referenced standards.
  - a. The Contractor shall provide equipment anchorage details, coordinated with the equipment mounting provision, prepared and stamped by a licensed civil engineer in the state. Mounting recommendations shall be provided by the manufacturer based upon the above criteria to verify the seismic design of the equipment.
  - b. The equipment manufacturer shall certify that the equipment can withstand, that is, function following the seismic event, including both vertical and lateral required response spectra as specified in above codes.
  - c. The equipment manufacturer shall document the requirements necessary for proper seismic mounting of the equipment. Seismic qualification shall be considered achieved when the capability of the equipment, meets or exceeds the specified response spectra.

1.07 REGULATORY REQUIREMENTS

- A. Provide a certificate of compliance with UL 1008 for the transfer switches furnished under this section.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Equipment shall be handled and stored in accordance with manufacturer's instructions. One (1) copy of these instructions shall be included with the equipment at time of shipment.

1.09 FIELD MEASUREMENTS

1.10 OPERATION AND MAINTENANCE MANUALS

- A. Equipment operation and maintenance manuals shall be provided with each assembly shipped, and shall include instruction leaflets and instruction bulletins for the complete assembly and each major component.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Eaton/Cutler Hammer
- B. Square D
- C. Siemens

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- A. The listing of specific manufacturers above does not imply acceptance of their products that do not meet the specified ratings, features and functions. Manufacturers listed above are not relieved from meeting these specifications in their entirety. Products in compliance with the specification and manufactured by others not named will be considered only if pre-approved by the engineer ten (10) days prior to bid date.

2.02 RATINGS

- A. The transfer switch shall have equal 3 cycle withstand; closing and interrupting ratings of 65 kAIC at 240 volts.
- B. The transfer switch shall be 100% equipment rated for continuous duty as shown on the drawings and shall conform to the applicable requirements of UL 1008 for emergency system total load..
- C. The voltage rating of the transfer switch shall be no less than the system voltage rating. The continuous current rating of the transfer switch shall be no less than the maximum continuous current requirements of the system.
- D. The automatic transfer switches shall be fully rated to protect all types of loads, inductive and resistive, from loss of continuity of power, without derating, either open or enclosed.

2.03 CONSTRUCTION

- A. For Molded-Case Switching Device – 30-1000 Amp styles as shown on drawings:
1. Switches rated 30-1000 Amps shall be Wall Mount construction utilizing Molded Case Switches or Breakers
  2. Ratings shall be [30, 70, 100, 150, 225, 300, 400, 600, 800, 1000] amperes. All breakers shall be UL listed for application in their intended enclosures for 100% of their continuous ampere rating.
  3. Transfer switches applied in service entrance equipment applications provide molded case circuit breakers with trip units as specified in Section 16904 Paragraph 2.02 A through H
  4. Transfer switch shall operate with a time delay in the neutral position, adjustable from 0 to 120 seconds. {Feature 32A}
- B. The switching panel shall consist of completely enclosed contact assemblies and a separate control or transformer panel. Control power for all transfer operations shall be derived from the line side of the source to which the load is being transferred.
- C. Each transfer switch shall be positively interlocked both mechanically and electrically to prevent simultaneous closing of both sources under either automatic or manual operation. Main contacts shall be mechanically locked in position in both normal and emergency positions. A neutral position shall not be possible under normal electrical operation unless a delayed transition accessory is required for switching highly inductive loads.

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- D. Transfer switches shall be capable of being operated manually under full rated load conditions. Manual operation shall be accomplished by a permanently attached manual operator, or by integrally mounted pushbuttons. Removable manual operating handles, and handles that may move in the event of an electrical operation during the manual operation, are not acceptable. Manual operators requiring source or load disconnection prior to manual operation are not acceptable.
  - E. On transfer switches requiring a fourth pole for switching the neutral, the neutral shall be fully rated with equal withstand, closing and interrupting ratings to the power poles. Switched neutral poles which are add-on or overlap, or that are not capable of breaking full rated load current are not acceptable.
  - F. The transfer switch shall have a multi-tap voltage selection plug for ease of voltage adjustment in the field.
  - G. Where shown on the drawings, transfer switches applied as service entrance equipment, shall be provided with over-current trip units and a service entrance label. A key-operated selector switch shall be provided to disconnect the power supplies. Indicators shall be provided to show the availability of each source as well as breakers in a disconnected position. Provide a neutral disconnect link for three-pole solid neutral switches, and a neutral-to-ground main bonding jumper for all switches to meet UL service entrance requirements. Ground fault protection shall be provided for all switches rated 1000 amperes or more applied on 480Y/277 Vac systems in accordance with NEC Article 230-95 {37}.
  - H. Where indicated on the drawings, the transfer switches shall be provided with a draw-out mechanism to allow easy access for preventive maintenance, testing or inspection. The draw-out mechanism shall provide visual indicators as to the position of the switch/breaker during the draw-out operation.
  - I. When the transfer switches shall be provided with a draw-out mechanism, shuttered cassettes should be provided for safety purposes
  - J. Positive mechanical key interlocks shall be provided for bypass isolation switches to prevent cross connection of services.
  - K. When provided, the automatic transfer switch and the bypass isolation switch sections shall be interconnected with copper bus or cable.

2.04 MICROPROCESSOR LOGIC

- A. The transfer switch shall be equal to a Cutler-Hammer ATC type microprocessor-based controller. The controller shall be hardened against potential problems from transients and surges. Operation of the transfer switch and monitoring of both sources shall be managed by the controller.

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2.05 REFERENCES

- A. The automatic transfer switch controllers shall meet or exceed the following standards in addition to the basic switch standards
1. IEC 61000-4-2 - EMC Testing and Measurement Techniques - Electrostatic Discharge Immunity Test
  2. IEC 61000-4-3 - EMC Testing and Measurement Techniques - Radio-frequency, Electromagnetic Field Immunity Test
  3. IEC 61000-4-4 - EMC Testing and Measurement Techniques - Electrical Fast Transient/Burst Immunity Test
  4. IEC 61000-4-5 - EMC Testing and Measurement Techniques - Surge Immunity Test
  5. IEC 61000-4-6 - EMC Testing and Measurement Techniques - Immunity to Conducted Disturbances, Induced by Radio-frequency Fields
  6. IEC 61000-4-11 - EMC Testing and Measurement Techniques - Voltage Dips, Short Interrupts and Voltage Variations Immunity Tests
  7. CISPR11, Class B - Industrial, Scientific and Medical Radio-frequency Equipment - Electromagnetic Disturbance Characteristics - Limits and Methods of Measurement
  8. FCC Part 15, Subpart B, Class B

2.06 MICROPROCESSOR-BASED CONTROLLER (ATC-300 OPEN TRANSITION)

- A. The microprocessor-based logic controller shall be door mounted and shall provide the operator with an overview of the transfer switch status, parameters, and diagnostic data. The controller shall have a voltage range of 0-790 volts (50/60 Hz) and an accuracy of +/- 1% of nominal input voltage. The controller shall have a frequency range of 40-70 Hz and an accuracy of +/- .3 Hz. Control power input range from 65 VAC – 145 VAC RMS 50/60 Hz. The controller shall be listed under UL Standard 1008 and shall be Eaton type ATC-300 or approved equal.
1. The microprocessor-based logic controller shall have an operating environmental range of:
    - a. Operation –20C to +70C degrees
    - b. Storage –30C to +85C degrees
    - c. Relative Humidity (Non-Condensing) 0-95%
    - d. The microprocessor-based controller display shall be UV resistant and include a backlit LCD display, 2-line, 16 character and shall be capable of displaying the following:
    - e. Connected Source voltages on all phases

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- f. Connected Source frequency
  - g. Real time clock for Time / Date stamp
  - h. Historical data
  - i. Programming and set point information
  - j. Password entry
  - k. Timer countdown for each timer while functioning
  - l. Help function for detailed description of displayed messages
2. The microprocessor-based controller shall include five (5) individual LED's for indicating the following:
    - a. Unit Status
    - b. Mimic Diagram showing Availability status of NORMAL source {Feature 12G}
    - c. Mimic Diagram showing Availability status of EMERGENCY source {Feature 12H}
    - d. Mimic Diagram showing Connection status of NORMAL source {Feature 12C}
    - e. Mimic Diagram showing Connection status of EMERGENCY source {Feature 12D}
    - f. The microprocessor-based controller shall contain the following features:
      - g. Password programming protection
      - h. Set points shall be stored in Non-Volatile memory, and use of an external battery source to maintain operation during "dead" periods shall not be required
3. Historical Data Storage to include:
    - a. Engine Run Time
    - b. NORMAL source Available time
    - c. EMERGENCY source Available time
    - d. NORMAL source Connected time
    - e. EMERGENCY source Connected time
    - f. LOAD Energized Time
    - g. Number of Transfers
    - h. Date, Time and Reason for Last Sixteen (16) transfers
    - i. Monitor Mode Event
    - j. Fail Safe Event
    - k. Aborted Test
4. The microprocessor-based controller shall contain the following voltage and frequency features:
    - a. The voltage of each phase of the NORMAL source and the EMERGENCY source shall be monitored, with under-voltage dropout adjustable from 50% to 97% of nominal and pickup adjustable from dropout setting +/-2% to 99% of nominal.
    - b. The voltage of each phase of the NORMAL source shall be monitored, with Phase Reversal protection.

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- c. The voltage of each phase of the EMERGENCY source shall be monitored, with Phase Reversal protection.
5. The microprocessor-based controller shall contain the following time delay features:
  - a. A time delay shall be provided on transfer to EMERGENCY source, adjustable from 0 to 1800 seconds. TDNE – Time Delay Normal to Emergency
  - b. A time delay shall be provided to override a momentary power outage or voltage fluctuation, adjustable from 0 to 120 seconds. TDES – Time Delay engine Start
  - c. A time delay shall be provided on retransfer from EMERGENCY source to NORMAL source, adjustable from 0 to 1800 seconds. TDEN – Time Delay Emergency to Normal
  - d. A time delay shall be provided after retransfer that allows the generator to run unloaded prior to shutdown, adjustable form 0 to 1800 seconds. TDEC – Time Delay Engine Cool down
  - e. A time delay shall be provided for engine failure to start, fixed setting of 6 seconds. TDEF – Time Delay Engine Fail
  - f. A time delay shall be provided for the neutral position, adjustable from 0 to 120 seconds.
  - g. All delays shall be field adjustable from the microprocessor-based controller without the use of special tools.
6. The microprocessor-based controller shall contain the following features, pushbuttons and selector switches:
  - a. Lamp Test Pushbutton
  - b. "INCREASE", "DECREASE", and "STEP/ENTER" pushbuttons
  - c. Plant exerciser, selectable – Daily, 7, 14, 28 day interval, adjustable 0-600 minutes, load or no load with Failsafe
  - d. System Test Pushbutton
  - e. Bypass Time Delay Emergency to Normal (TDEN) Pushbutton {8C}
  - f. Bypass Time Delay Normal to Emergency (TDNE) Pushbutton {8D}
7. The microprocessor-based controller shall contain the following input/output contacts:
  - a. One (1) Form A contact for closure of the Generator start circuit. The contact shall be of silver alloy with gold flashing. The contacts shall be rated for 5-Amp at 250-Vac and 5-Amp at 30-Vdc.
  - b. One (1) Form C contact for NORMAL Source Position. The contacts shall be rated for 10-Amp at 250-Vac and 10-Amp at 30-Vdc.
  - c. One (1) Form C contact for EMERGENCY Source Position. The contacts shall be rated for 10-Amp at 250-Vac and 10-Amp at 30-Vdc.
  - d. One (1) Form C contact for PRE-TRANSFER SIGNAL. The contacts shall be rated for 10-Amp at 250-Vac and 10-Amp at 30-Vdc.

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- e. One (1) Form C contact for ALARM SIGNAL. The contacts shall be rated for 10-Amp at 250-Vac and 10-Amp at 30-Vdc.
- f.

2.07 WIRING/TERMINATIONS

- A. Terminal blocks shall conform to NEMA ICS 4. Terminal facilities shall be arranged for entrance of external conductors from the top or bottom of the enclosure. The main transfer switch terminals shall be suitable for the termination of conductors shown on the plans.

2.08 CUSTOMER METERING

- A. Where indicated on the drawings, provide a separate customer metering compartment with front hinged door and include the following:
  - 1. Current transformers where shown on the drawings or elsewhere specified shall be wired to shorting-type terminal blocks.
- B. Microprocessor-Based Metering System

2.09 ENCLOSURE

- A. Each transfer switch shall be provided in a NEMA 1 enclosure suitable for use in environments indicated in the drawings.

2.10 FINISH

- NEMA 1 enclosures shall be painted with the manufacturer's standard light gray ANSI 61 paint.

PART 3 EXECUTION

3.01 EXAMINATION

3.02 FACTORY TESTING

- A. The following standard factory tests shall be performed on the equipment provided under this section. All tests shall be in accordance with the latest version of UL and NEMA standards.
- B. Insulation check to ensure the integrity of insulation and continuity of the entire system
  - 1. Visual inspection to ensure that the switch matches the specification requirements and to verify that the fit and finish meet quality standards
  - 2. Mechanical tests to verify that the switch's power sections are free of mechanical hindrances
  - 3. Electrical tests to verify the complete electrical operation of the switch and to set up time delays and voltage sensing settings of the logic

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C. The manufacturer shall provide three (3) certified copies of factory test reports.

3.03 INSTALLATION

A. The Contractors shall install all equipment per the manufacturer's recommendations and the contract drawings.

3.04 FIELD QUALITY CONTROL

A. Provide the services of a qualified factory-trained manufacturer's representative to assist the contractor in installation and start-up of the equipment specified under this section for a period of 5 working days. The manufacturer's representative shall provide technical direction and assistance to the contractor in general assembly of the equipment, connections and adjustments, and testing of the assembly and components contained therein.

B. The contractor shall provide three (3) copies of the manufacturer's field start-up.

3.05 MANUFACTURER'S CERTIFICATION

A. A qualified factory-trained manufacturer's representative shall certify in writing that the equipment has been installed, adjusted and tested in accordance with the manufacturer's recommendations.

B. The Contractor shall provide three (3) copies of the manufacturer's representative's certification.

3.06 TRAINING

A. The contractor shall provide a training session for up to five (5) owner's representatives for 10 normal workdays at a jobsite location determined by the owner.

B. A manufacturer's qualified representative shall conduct the training session. The training program shall consist of the instruction on the operation of the assembly, circuit breakers and major components within the assembly.

3.07 INSTALLATION

A. The contractor shall install all equipment per the manufacturer's recommendations and the contract drawings.

B. All necessary hardware to secure the assembly in place shall be provided by the contractor.

C. The equipment shall be installed and checked in accordance with the manufacturer's recommendations.

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3.08 FIELD SERVICE ORGANIZATION

- A. The manufacturer of the ATS shall also have a national service organization that is available throughout the contiguous United States and is available on call 24 hours a day, 365 days a year.

END OF SECTION



REVISIONS:

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|-----|----------|------------------|
| NO. | DATE     | DESCRIPTION      |
| 1   | 10/10/12 | ADD 1 - EXT. LVS |

DATE: OCTOBER 3, 2012  
DRAWN BY: KES  
CHECKED BY: KES

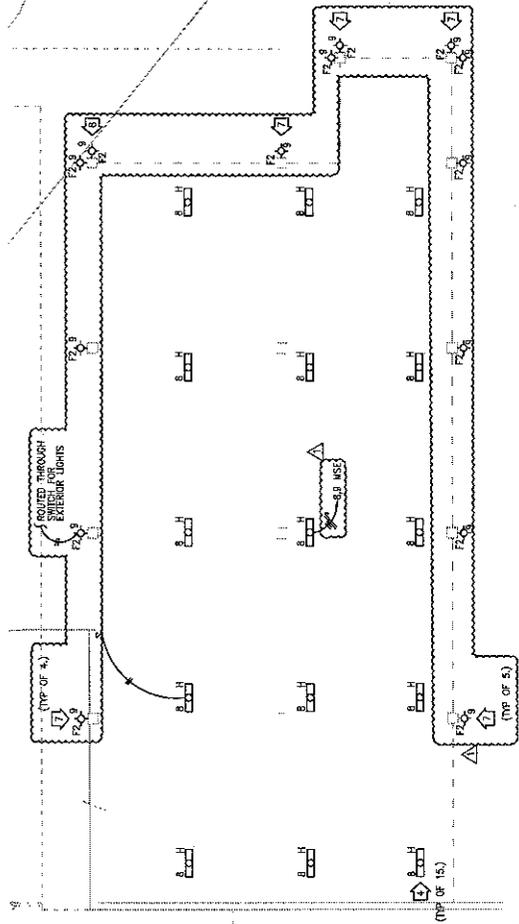
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BELOW GRADE  
PLAN -  
LIGHTING -  
ELECTRICAL

SHEET NO:  
**E2.2**

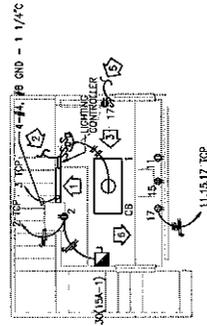
Allen & Hoshall  
Engineering Since 1912  
1740 W. W. WALKER BLVD., SUITE 200  
MEMPHIS, TN 38117  
www.a-h.com

- GENERAL NOTES (SHEET E2.2)
- CONTRACTOR SHALL NOT ALTER FUTURE COUNTS WITHOUT ENGINEER'S APPROVAL.
  - CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL EXTERIOR FIXTURES WITH ARCH. ELEVATIONS.

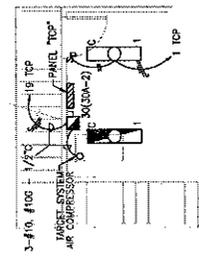
- REFERENCE NOTES (SHEET E2.2)
- CONTRACTOR SHALL PROVIDE A LETTER RATED DIMS. OF MODEL A2024-112, OR APPROX. EQUAL, FOR CONTROL OF THE LED RANGE LIGHTING. CONTRACTOR SHALL ALSO PROVIDE AND INSTALL (6) DIMMER SWITCHES OF MODEL A2024-112, OR APPROX. EQUAL, TO CONTROL THE LED RANGE LIGHTING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION AND INSTALLATION OF ALL APPROPRIATE APPURTENANCES REQUIRED FOR A COMPLETE AND FUNCTIONING DIMMING SYSTEM.
  - INTERCEPT PARKING LOT LIGHTING CIRCUITRY.
  - CONTRACTOR SHALL PROVIDE AND INSTALL A RED LAMP COVER OVER THE CENTER LAMP. CONTRACTOR SHALL SWITCH CENTER LAMP INDEPENDENTLY.
  - CONTRACTOR SHALL MOUNT FIXTURE TO BEAM.
  - INTERCEPT LIGHTING CIRCUITRY TO RED LAMP NIGHT LIGHT MOUNTED IN NOTE 12 ON SHEET E1.2.
  - CONTRACTOR SHALL PROVIDE AND INSTALL PA SYSTEM AND ALL APPROPRIATE APPURTENANCES TO PROVIDE A COMPLETE AND FUNCTIONING RANGE COMMUNICATIONS SYSTEM. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY COMMUNICATIONS CABLES AND EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE COMMUNICATIONS SCHEDULE AND SPECIFICATIONS.
  - INSTALL FIXTURE 6" FROM COLUMN FACE. FIXTURE TO BE CENTER MOUNTED TO 18"X18" CONCRETE PAD. PAD SHALL BE FLUSH WITH FINISHED GRADE. SEE DETAIL 1 ON SHEET E2.01. COORDINATE EXACT LOCATIONS WITH CIVIL CONTRACTOR.
  - FIXTURE TO BE MOUNTED TO STRUCTURE ABOVE. INSTALL FIXTURE 6" FROM COLUMN FACE.



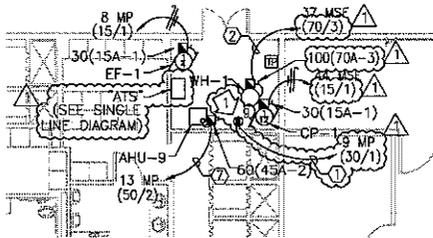
1 BELOW GRADE PLAN - LIGHTING - ELECTRICAL  
SCALE: 1/4" = 1'-0"



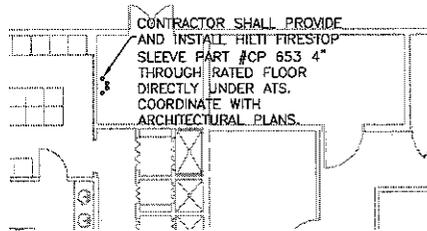
3 CONTROL TOWER - UPPER FLOOR PLAN - ELECTRICAL  
SCALE: 1/4" = 1'-0"



2 CONTROL TOWER - LOWER FLOOR PLAN - ELECTRICAL  
SCALE: 1/4" = 1'-0"



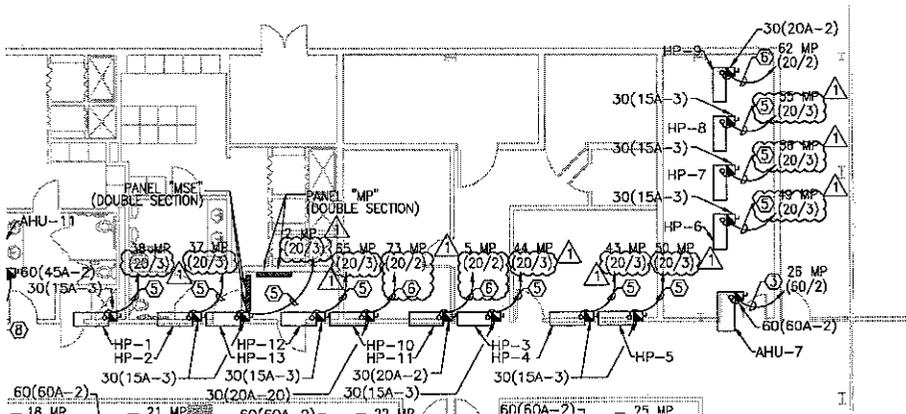
1 FLOOR PLAN - EQUIPMENT POWER - ELECTRICAL  
SCALE: 1/4" = 1'-0"



2 FLOOR PLAN - FIRESTOP SLEEVE PENETRATIONS - ELECTRICAL  
SCALE: 1/4" = 1'-0"



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3 BELOW FLOOR PLAN - EQUIPMENT POWER - ELECTRICAL  
SCALE: 1/4" = 1'-0"



SHELBY COUNTY SHERIFF'S OFFICE RANGE OPERATIONS BUILDING - ADDENDUM NO. 1

SHELBY COUNTY SHERIFF DEPARTMENT

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

61902

Job Number

10-3-12

Date

E3.2A

Sheet Number



**CLARK/DIXON**  
**ARCHITECTS**

2035 MADISON AVENUE / MEMPHIS, TN 38104 / 901/272-9250 / clarkdixonarchitects.com

**R. LARRY CLARK, R.A., NCARB**

**DIANNE R. DIXON, AIA, NCARB**

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**MEMORANDUM**

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Date: October 5, 2012

To: All Bidders

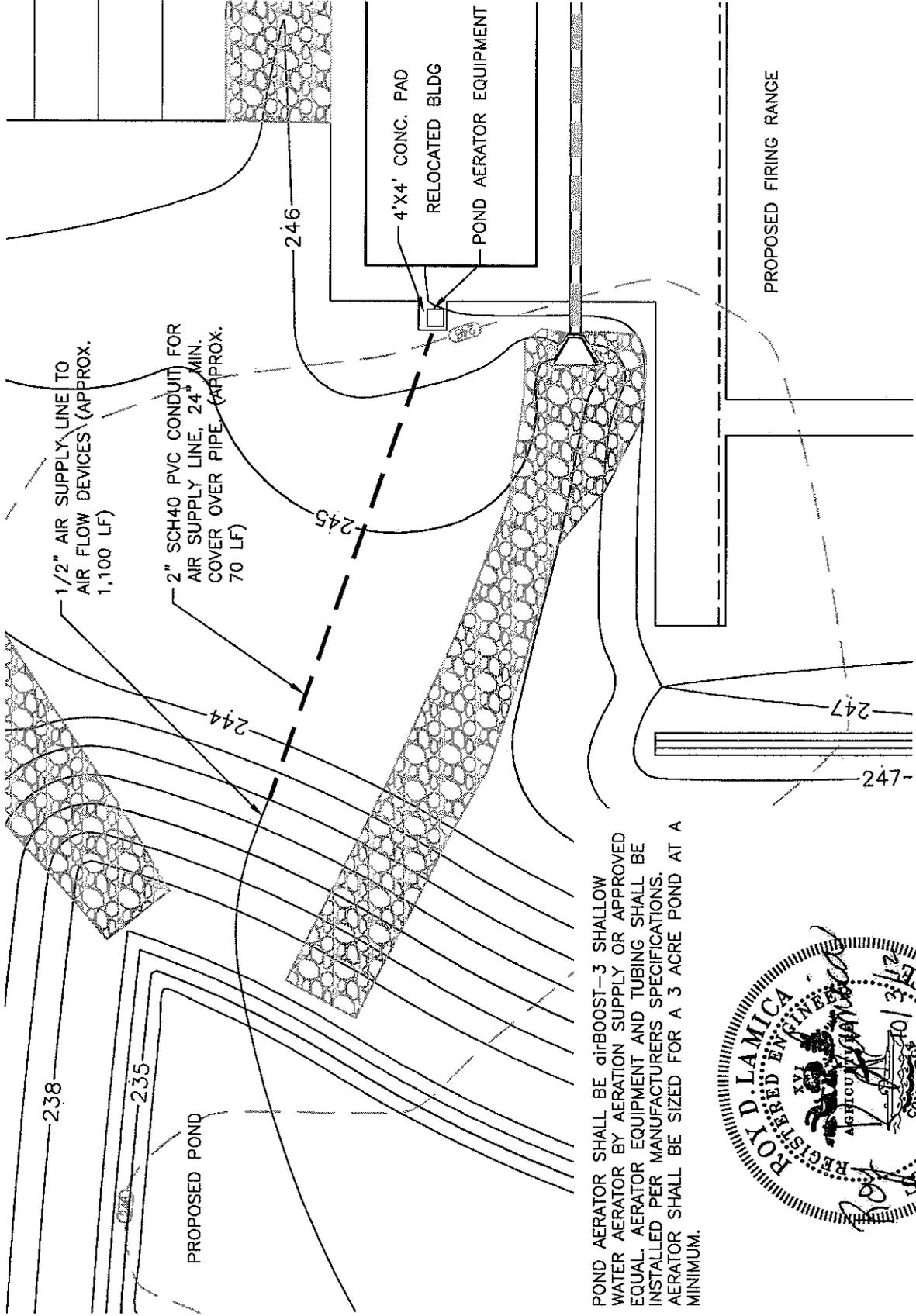
Subject: Request for Product Approval  
Shelby County Sheriffs Office  
RFP #13-009-14

From: Dianne Dixon, AIA  
Clark/Dixon Architects

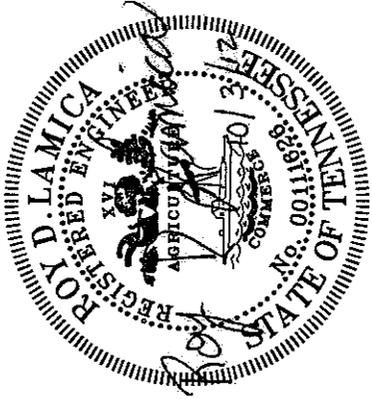
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During the bid time several suppliers have submitted documentation for our consideration concerning their products for use in this construction. The following is our determination for each product reviewed.

1. Section 08710 Finish Hardware; DORMA Architectural Hardware was submitted for review by Cassie Campbell, CC Hardware Consultants. The manufacturer is approved for bidding.
  2. Section 08710 Finish Hardware; McKinney Architectural Hinges, Rockwood Push-Pulls-Stops-Flush Bolts & Coordinators and Pemko-Weatherstrip & Gasketing were submitted for review by David Bruce. These manufacturers are approved for bidding.
  3. Section 07410 Standing Seam Metal Roofing; METAL Panel Systems, Inc. was submitted for the roof system by Greg Parsons. The manufacturer has been approved for bidding under these conditions. Panel must be rated for the minimum slope as designed & the weather tight warranty term must be 20 years.
  4. Section 07410 Standing Seam Metal Roofing; CCG was submitted for the metal roof panels by Brian P. Hunter. The panel lengths required (60') exceeds the manufacturer's standards. Product is not approved for bidding
  5. Section 07410 Standing Seam Metal Roofing, METAL ROOFING Systems, Inc. was submitted for the metal roof panels by Jeremiah Buechner. The roof material is not available in roll form continuous lengths. Maximum length available is 55'. Product is not approved for bidding.
-



POND AERATOR SHALL BE airBOOST-3 SHALLOW WATER AERATOR BY AERATION SUPPLY OR APPROVED EQUAL. AERATOR EQUIPMENT AND TUBING SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. AERATOR SHALL BE SIZED FOR A 3 ACRE POND AT A MINIMUM.

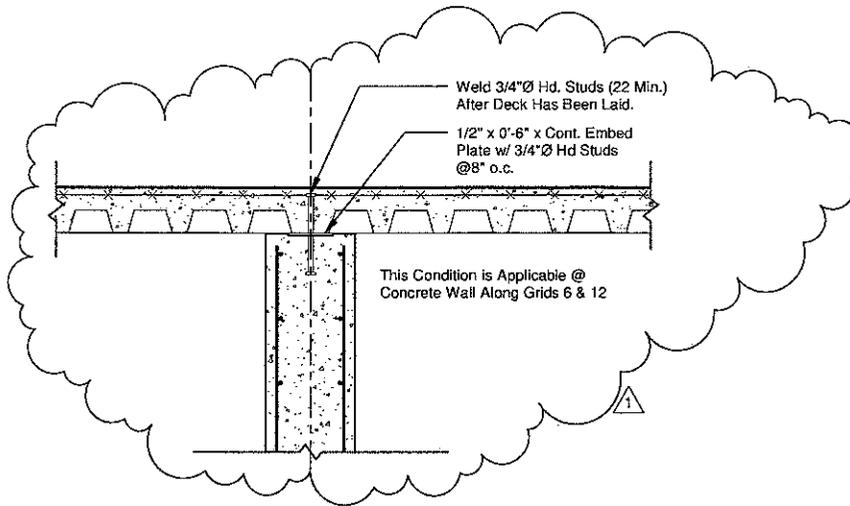


SCALE: 1" = 20'

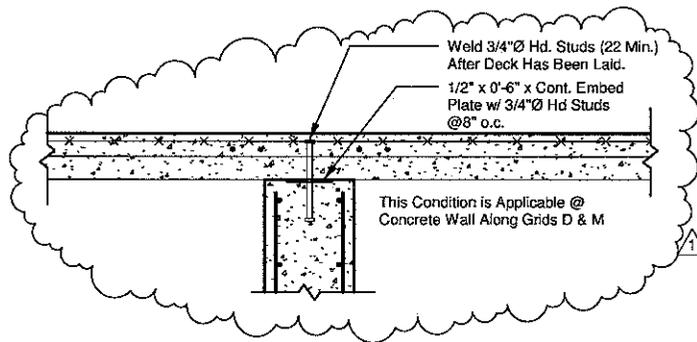
ADDEDNDUM #1

SHELBY COUNTY SHERIFFS OFFICE - RANGE OPERATIONS BUILDING





1 Section @ Top of Shear Wall  
3/4" = 1'-0"



2 Section @ Top of Shear Wall  
3/4" = 1'-0"

Sections - ADDENDUM #1



**Allen & Hoshall**  
since 1915

A&H Job No: 61902

Shelby County Sheriff's Office Range Operations Building

800 Dovecrest Memphis, Tennessee

S3.2A

10/03/12

FIXTURE MOUNTING: R-RECESSED, S-SURFACE  
 FIXTURE TYPE: F-FLUORESCENT, LED-LIGHT EMITTING DIODE, CMH-COMMERCIAL METAL HALIDE  
 LENS: A-ACRYLIC, PC-POLYCARBONATE  
 FINISH: SV-SILVER, WH-WHITE

| TYPE NO. | MANUFACTURER   | CATALOG NO.                       | FIX. MTC. | FIX. TYPE | LENS | FIN. | LAMP NO. WATTS | VOLTS   | COMMENTS                                                                                  |
|----------|----------------|-----------------------------------|-----------|-----------|------|------|----------------|---------|-------------------------------------------------------------------------------------------|
| A        | DAY-BRITE      | 257023E-D-18W-1/2-EB              | R         | F         | A    | WH   | 2 32           | 120/277 | 2X4 FLUORESCENT RECESSED TROFFER                                                          |
| AD       | DAY-BRITE      | 257023HG-O-18W-1/2-EB             | R         | F         | A    | WH   | 2 54           | 120/277 | 2X4 FLUORESCENT RECESSED TROFFER                                                          |
| AC       | DAY-BRITE      | 257023JG-S-01-18W-1/21-EB         | R         | F         | A    | WH   | 3 32           | 120/277 | 2X4 FLUORESCENT RECESSED TROFFER                                                          |
| B        | DAYBRITE       | D 2 32 82B                        | S         | F         | ---  | WH   | 2 32           | 120/277 | 1X4 FLUORESCENT STRIP - FIXTURE SHALL BE CHAIN MOUNTED 6'-0" AFF. UOL                     |
| C        | DAY-BRITE      | 153113E-S-18W-1/1-EB              | S         | F         | A    | WH   | 1 32           | 120/277 | 1X4 FLUORESCENT SURFACE TROFFER                                                           |
| D        | OMEGA          | QMS27L1-C5-120/277                | R         | CFE       | ---  | MS   | 1 32           | 120/277 | INTERIOR FLUORESCENT DOWNLIGHT - PROVIDE SLOPE CEILING ADAPTER                            |
| E        | LEDORAN        | UFS 0 120/277 DL R                | U         | LED       | ---  | MS   | 3 120          | 120     | LED FOOT BRIDGE                                                                           |
| F        | HALO           | HL200825-0948/565-PH              | R         | LED       | PC   | WH   | 1 14           | 120/277 | WET LOCATION LED DOWNLIGHT                                                                |
| F2       | FRIDOR         | FM-20M6/70-SP-LED-CL-SL           | S         | CMH       | G    | SW   | 1 20           | 120/277 | WET LOCATION UPLIGHT - MOUNT TO CONCRETE PAD. AM FIXTURE AT STRUCTURE                     |
| F3       | LUMINAPLUSE    | LOC RD-120-36-35K-32000-LMWS-S-40 | S         | LED       | G    | SW   | 1 20           | 120     | LED GRAZER - MID. TO BOTTOM OF SOFFIT                                                     |
| F4       | LUMINAPLUSE    | LOC RD-120-12-35K-32000-LMWS-S-40 | S         | LED       | G    | SW   | 1 15           | 120     | LED GRAZER - MID. TO LOWER MIDDLE OF LANTERN. SEE DETAIL ON SHEET                         |
| F5       | LUMINAPLUSE    | LOC RD-120-24-35K-32000-LMWS-S-40 | S         | LED       | G    | SW   | 1 20           | 120     | LED GRAZER - MID. TO LOWER MIDDLE OF LANTERN. SEE DETAIL ON SHEET                         |
| G        | OMEGA          | QMS27L1-C5-120/277                | R         | CFE       | ---  | MS   | 1 32           | 120     | WET LOCATION LED DOWNLIGHT                                                                |
| G2       | OMEGA          | QMS27L1-C5-120/277                | R         | CFE       | ---  | MS   | 1 32           | 120     | WET LOCATION LED DOWNLIGHT                                                                |
| H        | LEDORAN        | UFS 0 120/277 DL R                | U         | LED       | ---  | MS   | 3 120          | 120     | WET LOCATION LED DOWNLIGHT                                                                |
| I2       | OMEGA          | QMS27L1-C5-120/277                | R         | CFE       | ---  | MS   | 1 32           | 120     | WET LOCATION LED DOWNLIGHT                                                                |
| C3       | TENSE-LITE     | TLD-45L-400                       | PL        | LED       | ---  | MS   | 4 400          | 120/240 | LED FLOODLIGHT - MOUNT TWO 12" AND TWO 36" BEAM ANGLE HEADS ON UNDERST. AT 3'-0" AFF.     |
| H        | LEDORAN        | UFS 0 120/277 DL R                | U         | LED       | ---  | MS   | 3 120          | 120     | WET LOCATION LED DOWNLIGHT                                                                |
| J        | RECALLON       | RRP-2-0-R-7-R-4-A                 | W         | F         | ---  | MS   | 2 32           | 120     | WET LOCATION FLUORESCENT STRIP                                                            |
| K        | INTENSE        | IFS805LJ-4G                       | R         | CFE       | ---  | MS   | 1 13           | 120     | FLUORESCENT STRIP LIGHT                                                                   |
| L        | COLOUR KENZERS | CK3-00009-01                      | S         | LED       | G    | MS   | 1 15           | 120     | LED FLOOD LIGHT - PROVIDE FULL HEIGHT GLARE SHIELD AND MOUNTING ACCESSORIES AS NECESSARY. |
| M        | DAY-BRITE      | 18172-40-LM-ED                    | W         | F         | A    | MS   | 1 32           | 120/277 | VARY FIXTURE - MOUNT TO WALL AT 4" ABOVE WINDOW.                                          |
| N        | DAY-BRITE      | 18172-120-EB                      | S         | F         | A    | MS   | 1 17           | 120     | UNDERCABINET LIGHT                                                                        |
| P        | SEA DULL       | 12830-665                         | S         | ---       | ---  | EM   | ---            | 120     | 52" CEILING FAN - MOUNT FAN AT SAME HEIGHT AS LIGHTING.                                   |

- GENERAL LIGHTING NOTES**
- ALL FLUORESCENT FIXTURES SHALL BE LAMPED WITH 5000K LAMPS, WITH A MINIMUM CRI = 80, UOL.
  - ALL BALLASTS SHALL BE ELECTRONIC WITH ≤ 10% THD.

**2 LIGHTING FIXTURE SCHEDULE**  
SCALE: NONE

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SHELBY COUNTY SHERIFFS OFFICE RANGE OPERATIONS BUILDING - ADDENDUM NO. 1

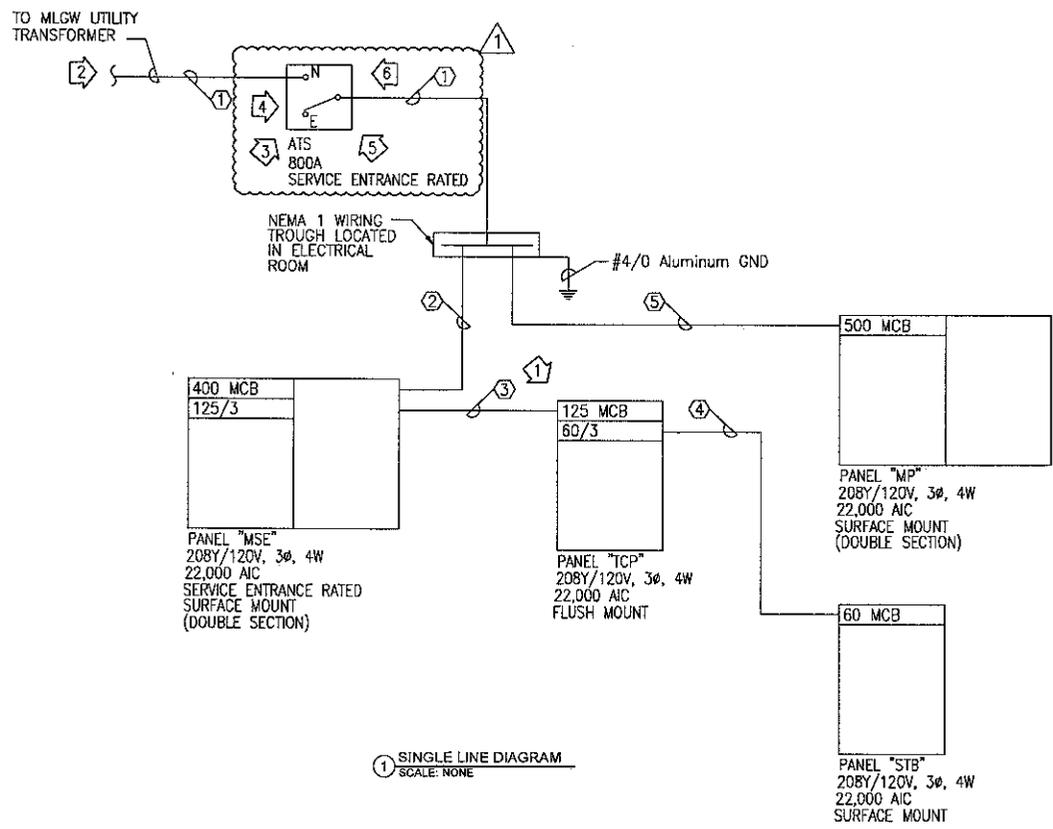
SHELBY COUNTY SHERIFF DEPARTMENT

SCALE: NONE

61902  
Job Number  
10-3-12  
Date  
EO.1A  
Sheet Number

➡ REFERENCE NOTES:

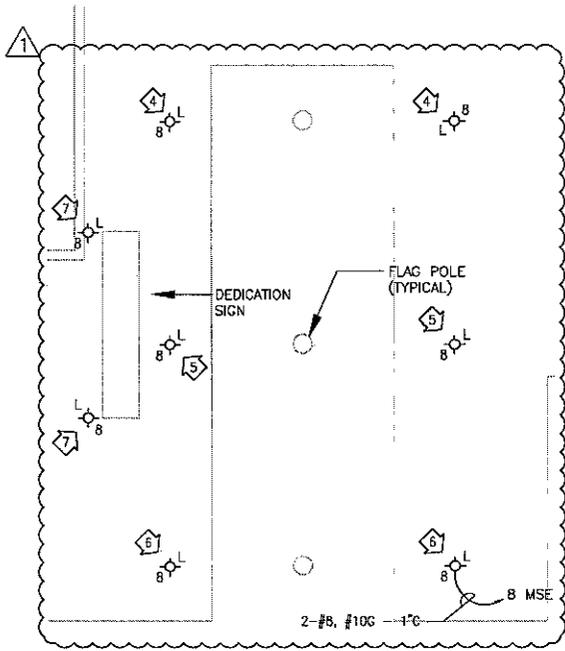
- ① 3. CONTRACTOR SHALL PROVIDE CROUSE HINDS E-1016 SERIES CAM-LOK TYPE CONNECTORS FOR TEMPORARY CONNECTION FROM GENERATOR TO ATS. CABLES SHALL BE COLOR CODED RED, BLUE, AND BLACK FOR PHASE CONDUCTORS AND GREEN FOR THE GROUND CONDUCTOR. CONTRACTOR SHALL PROVIDE #4/0 CABLES FOR EACH OF THE FOUR PARALLEL RUNS PER PHASE FOR INTERNAL CONNECTIONS TO BUS BAR FROM CAM-LOK. CONTRACTOR SHALL MAKE ALL CONNECTIONS.
4. TRANSFER SWITCH SHALL INCLUDE A PHASE ROTATION METER.
5. GENERATOR MUST PROVIDE POWER WITHIN 10 SECONDS PER NFPA.
6. PROVIDE ADDITIONAL SUPPORT IN WALL FOR MOUNTING ATS.



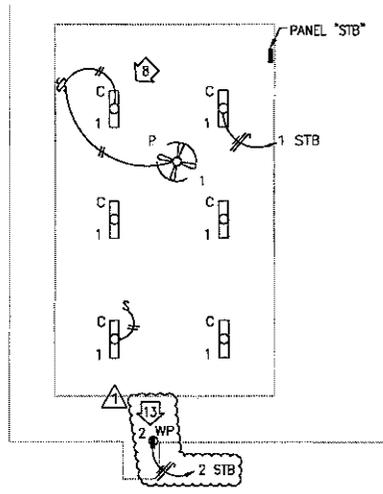
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13. OUTLET FOR POND AERATOR. OUTLET SHALL BE MOUNTED AS INDICATED IN DETAIL ON THIS SHEET. CONTRACTOR SHALL ALSO ROUTE (1) 1" PVC CONDUIT FROM CONTROL PANEL TO AERATOR LOCATION IN POND. CONDUIT SHALL BE ROUTED BELOW THE SLAB. COORDINATE EXACT LOCATION AND POWER REQUIREMENTS WITH CIVIL CONTRACTOR.

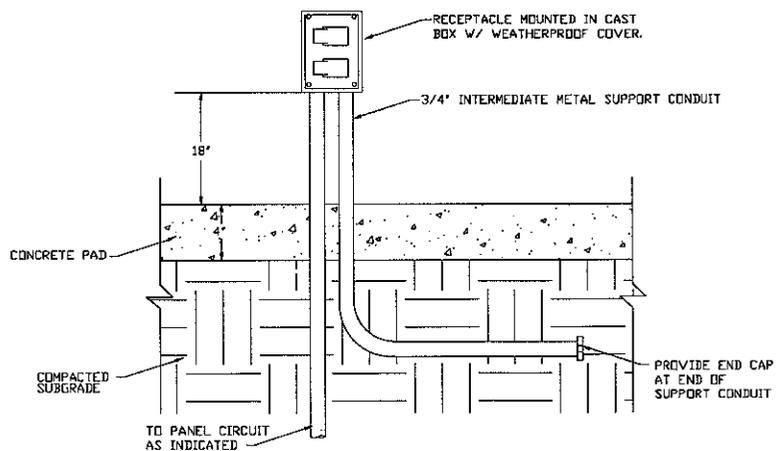


1 ENLARGED FLAG POLE LIGHTING ALTERNATE  
SCALE: 1/4" = 1'-0"



2 ENLARGED CLASSROOM BUILDING LIGHTING PLAN  
SCALE: 1/4" = 1'-0"

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3 RECEPTACLE MOUNTED IN CONCRETE PAD  
SCALE: NONE

SHELBY COUNTY SHERIFFS OFFICE RANGE OPERATIONS BUILDING - ADDENDUM NO. 1

SHELBY COUNTY SHERIFF DEPARTMENT

SCALE: VARIES

61902  
Job Number

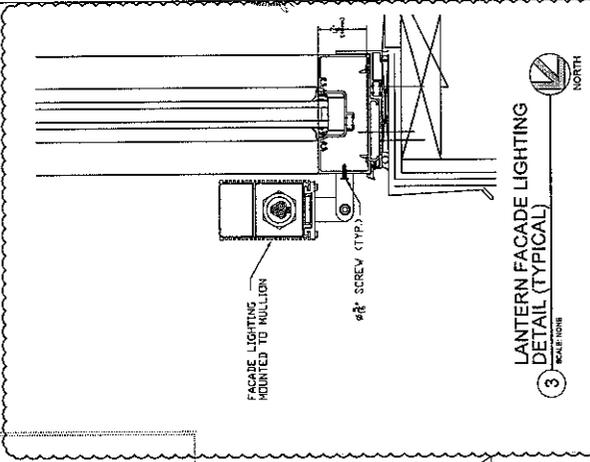
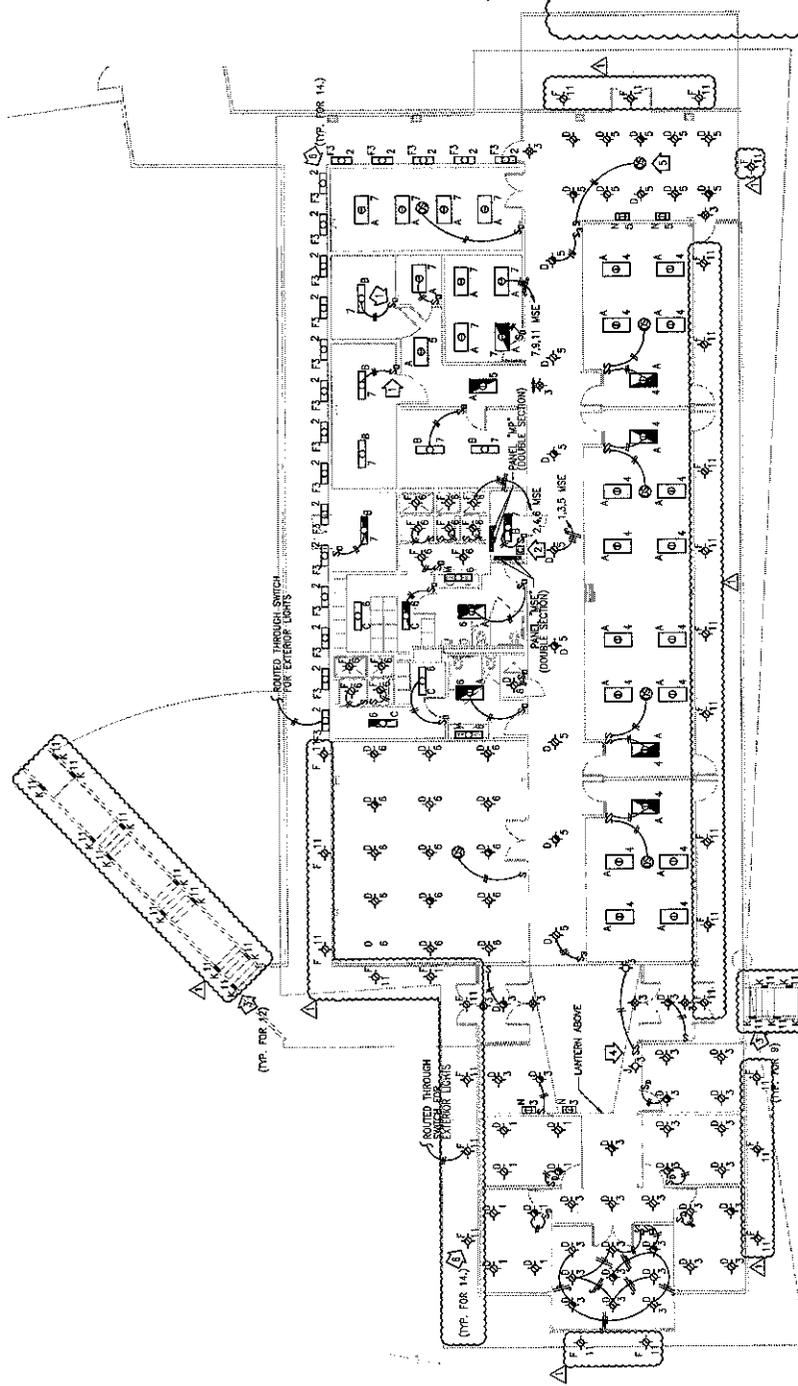
10-3-12  
Date

E1.2A  
Sheet Number

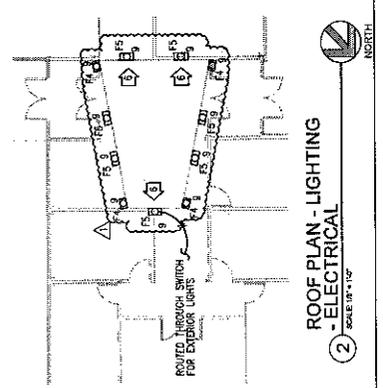


- GENERAL NOTES (SHEET E2.1)**
- CONTRACTOR SHALL NOT ALTER FUTURE COUNTS WITHOUT ENGINEER'S APPROVAL.
  - CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL FIXTURES WITH ARCHITECTURAL ELEVATIONS WITH ARCHITECTURAL PLANS.
  - CONTRACTOR SHALL PROVIDE SLOPED CEILING ADAPTERS AS NEEDED.
  - COORDINATE WITH ARCHITECTURAL PLANS.

- REFERENCE NOTES (SHEET E2.1)**
- WALLS ARE 4" THICK CONCRETE. CONTRACTOR SHALL SURFACE PENETRATION LOCATION WITH OTHER TRADES.
  - LIGHTING CONTRACTOR - 120V COIL AND 20 AMP JAW CONTACTS AS REQUIRED. SEE SHEET E03 FOR WIRING DETAIL.
  - CONCRETE STOP.
  - SWITCH FOR EXTERIOR LIGHTING - CONTRACTOR SHALL CONNECT SWITCH TO LIGHTING CONTRACTOR FOR CONTROL OF ALL EXTERIOR FIXTURES AT SWITCH. SWITCH SHALL BE ROUTED THROUGH THE CONTRACTOR MENTIONED IN NOTE 2.
  - PROVIDE OCCUPANCY SENSOR SUITABLE FOR CEILING HEIGHTS HIGHER THAN 12'-0" AFF.
  - MOUNT FIXTURE IN SRAFTING FROM EXTERIOR WALL FACE.
  - INSTALL FIXTURE 6" FROM EXTERIOR WALL FACE. FIXTURE TO BE CENTER MOUNTED TO 18"x18" CONCRETE PAD. PAD SHALL BE FLUSH WITH BRIDGE. SEE DETAIL 1 ON SHEET E2.01. COORDINATE EXACT LOCATION WITH CIVIL CONTRACTOR.



1 FLOOR PLAN - LIGHTING - ELECTRICAL  
 SCALE: 1/4" = 1'-0"



2 ROOF PLAN - LIGHTING - ELECTRICAL  
 SCALE: 1/4" = 1'-0"

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