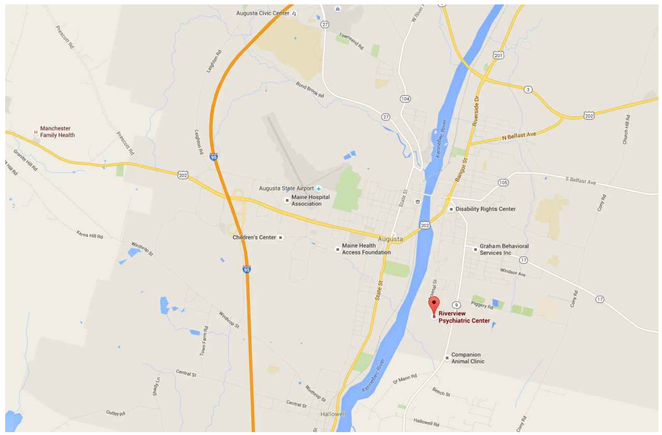
# RIVERVIEW PSYCHIATRIC CENTER

# TRANSFER SWITCH REPLACEMENT

## AUGUSTA, MAINE

**ALLIED PROJECT No. 23015**

**ISSUED FOR BID**
**21 APRIL, 2023**




LOCATION MAP

DRAWING STATUS LIST

| ISSUE | DESCRIPTION | DATE |
|---|---|---|
| | FINAL REVIEW | 2023-04-14 |
| | ISSUED FOR BID | 2023-04-21 |

DRAWINGS

| Sht No. | SHEET TITLE | | |
|---|---|---|---|
| - | COVER SHEET | ○ | ○ |
| E-100 | BOILER ROOM ELECTRICAL PART PLAN | ○ | ○ |
| E-500 | ELECTRICAL PART PLAN - BUILDING EXTERIOR | ○ | ○ |


**Allied Engineering**
Structural Mechanical Electrical Commissioning

**160 Veranda Street**
**Portland, Maine 04103**
**T:** 207.221.2260
**F:** 207.221.2266
**Web:** www.allied-eng.com


STATE OF MAINE
BRIAN T. GARDNER
No. 15506
LICENSED PROFESSIONAL ENGINEER

N:\Projects\2023\23015 - Riverview Generator Transfer Switch\4a DRAWINGS - Revit Version - \23015_E.dwg Apr 20, 2023 - 3:56pm

PROJECT NOTES

1. THE SCOPE OF WORK SHALL INCLUDE PROVIDING ALL WORK INDICATED UNLESS OTHERWISE SPECIFICALLY INDICATED AS EXISTING OR WORK BY OTHERS, AND COORDINATION WITH ALL TRADES SCOPE OF WORK AS INDICATED ON THE CONTRACT DOCUMENTS INCLUDING BOTH THE DRAWINGS AND THE SPECIFICATIONS, WHICH ARE COMPLIMENTARY. WORK REQUIREMENTS INDICATED IN ANY CONTRACT DOCUMENT SHALL BE CONSIDERED PART OF THE SCOPE OF WORK, UNLESS SPECIFICALLY INDICATED AS EXISTING OR WORK BY OTHERS.
2. IN GENERAL, WORK REQUIREMENTS ARE NOT INDICATED IN BOTH DOCUMENTS. WHERE DOCUMENTS CONFLICT WITHIN THEMSELVES OR WITH CODES AND REGULATIONS, PROVIDE THE HIGHER QUANTITY AND QUALITY AND FOLLOW THE STRICTER REQUIREMENTS.
3. WORK AT A MINIMUM SHALL BE IN ACCORDANCE WITH OSHA, NFPA STANDARDS, THE ELECTRICAL CODE AND THE LOCAL GOVERNING AUTHORITIES. THE DRAWINGS AND SPECIFICATIONS DO NOT ATTEMPT TO INDICATE ALL WORK REQUIRED BY CODE AND AUTHORITIES. DO NOT INSTALL WORK THAT DOES NOT MEET THE MINIMUM REQUIREMENTS. IF NECESSARY, REQUEST CLARIFICATION FROM ARCHITECT AND ENGINEER BEFORE PROCEEDING.
4. ALL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER. RECTILINEAR TO BUILDING STRUCTURE.
5. ALL COMPONENTS SHOWN ON THE RISER DIAGRAMS OR DETAILS, BUT NOT ON THE PLAN OR VICE VERSA SHALL BE INCLUDED AS IF SHOWN ON BOTH.
6. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE A WORKING INSTALLATION IN EVERY DETAIL AND ALL ITEMS REQUIRED FOR SUCH AN INSTALLATION SHALL BE PROVIDED WHETHER OR NOT SPECIFICALLY INDICATED OR MENTIONED.
7. VISIT THE SITE TO DETERMINE PRE-EXISTING CONDITIONS AND WORK NECESSARY PRIOR TO SUBMISSION OF BID PRICE. SUBMIT ANY QUESTIONS REQUIRED TO CLARIFY SCOPE PRIOR TO BID. INCLUDE ALL REQUIRED WORK IN BID PRICE.
8. INCLUDE IN BID WHATEVER IS REQUIRED TO MEET SCHEDULE INCLUDING OVERTIME, EXPRESS SHIPPING, EXPEDITING EQUIPMENT, ETC. PLAN FOR PROJECT AND SUBMIT SHOP DRAWING AND ORDER EQUIPMENT IN A TIMELY MANNER; EQUIPMENT SHALL BE BASED ON THE SPECIFIED EQUIPMENT.

PROJECT NOTES CONTINUED

9. ANY EQUIPMENT TO BE SUBSTITUTED SHALL BE IDENTIFIED AT THE TIME OF BID. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR SUBSTITUTIONS.
10. ALL ELECTRICAL DEVICES, WHEN INSTALLED, SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. COVER PLATES SHALL BE INSTALLED AFTER FINISH MATERIALS HAVE BEEN APPLIED.
11. TEST ALL EQUIPMENT AND SYSTEMS INSTALLED TO CERTIFY COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, CODES, LOCAL AUTHORITIES AND REGULATIONS, INCLUDE LABOR AND COSTS FOR TESTING, REVIEWS, COMMISSIONING, APPROVALS AND CERTIFICATIONS.
12. PROVIDE TRAINING TO OWNER ON ALL EQUIPMENT AND SYSTEMS INSTALLED.
13. TEMPORARY LIGHTING AND POWER SHALL BE PROVIDED AS REQUIRED BY OSHA, CODES AND LOCAL AUTHORITIES. REMOVE ALL TEMPORARY FACILITIES PROVIDED AT PROJECT COMPLETION.

WIRING NOTES

1. UNLESS OTHERWISE INDICATED ON PLANS OR IN SPECIFICATIONS; ALL CONDUCTORS, POWER DISTRIBUTION EQUIPMENT BUSSING AND TRANSFORMER WINDINGS SHALL BE FABRICATED OF 98% CONDUCTIVE COPPER MATERIAL.
2. WIRING IS INDICATED ON DRAWINGS ONLY FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS.
3. ALL WIRING SHALL BE RUN CONCEALED UNLESS SPECIFIED OTHERWISE. ALL EXPOSED WIRING INCLUDING THAT WHICH IS INSTALLED ABOVE BUT IS VISIBLE FROM BELOW, PARTIALLY OR FULLY OPEN CEILING, SHALL BE INSTALLED IN CONDUIT OR RACEWAYS. REFER TO SPECIFICATIONS FOR ACCEPTABLE WIRING METHODS.
4. PROVIDE WATERTIGHT AND GAS TIGHT SEALS INSIDE AND OUTSIDE OF CONDUITS THAT PENETRATE THE BUILDING BELOW GRADE. O.Z. GEDNEY OR APPROVED EQUAL. PROVIDE WEATHER TIGHT SEAL AT PENETRATIONS ABOVE GRADE.
5. PROVIDE NRTL LISTED SMOKE AND FIRE SEALS AT ALL PENETRATIONS THROUGH FLOORS OR FULL HEIGHT (FLOOR TO FLOOR) WALLS.

INSTALLATION COORDINATION NOTES

1. THE LOCATION OF EQUIPMENT, OUTLETS, ETC. AS GIVEN ON THE DRAWINGS IS APPROXIMATE. IT SHALL BE UNDERSTOOD THAT THESE LOCATIONS ARE SUBJECT TO MODIFICATION AS MAY BE FOUND NECESSARY OR DESIRABLE AT THE TIME OF INSTALLATION IN ORDER TO MEET PROJECT REQUIREMENTS. SUCH CHANGES SHALL BE MADE WITHOUT EXTRA CHARGE.
2. IF EXACT LOCATION, MOUNTING OR RACEWAY ROUTING ARE NOT INDICATED OR ARE NOT CLEAR OR CONFLICT (LOCATION OR HEIGHT) COORDINATE WITH OTHER TRADES AND REQUEST CLARIFICATION PRIOR TO ROUGH-IN OR INSTALLATION. DRAWINGS ARE DIAGRAMMATIC ONLY. EXACT LOCATION, MOUNTING HEIGHTS OR EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED WITH THE EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS.
3. UNLESS OTHERWISE DIRECTED, PROVIDE ALL NEW POWER DISTRIBUTION EQUIPMENT WITH AIC RATINGS THAT MATCH OR EXCEED THE AIC RATING OF THE NEXT ACTIVE EXISTING UPSTREAM OVER-CURRENT PROTECTIVE DEVICE SERVING THE PANEL WHEN SERVED DIRECTLY BY ITS SOURCE (E.G. NO TRANSFORMER) OR PROVIDE AIC RATING THAT EXCEEDS BY 10% THE MAXIMUM LET THROUGH FAULT CURRENT (UNDER INFINITE PRIMARY BUSS) OF THE NEXT ACTIVE UPSTREAM TRANSFORMER (EXISTING OR NEW) SERVING THE RESPECTIVE PANEL.
4. SUBMIT SHORT CIRCUIT STUDY WITH POWER DISTRIBUTION EQUIPMENT SUBMITTALS FOR REVIEW AND APPROVAL. IN THE STUDY DEMONSTRATE THAT THE AIC RATING SELECTIONS ARE PROPERLY INTEGRATED AND COORDINATED WITH THE EXISTING AND NEW POWER DISTRIBUTION EQUIPMENT. CONFIRM THAT THE AIC RATING SELECTIONS HAVE INCORPORATED THE AVAILABLE FAULT DUTY VALUES OBTAINED FROM THE UTILITY COMPANY FOR THE PROJECTS ELECTRICAL SERVICE POINT OF COMMON COUPLING.
5. SUBMIT ARC FLASH REPORT, FOR ALL NEW POWER DISTRIBUTION EQUIPMENT, WITH POWER DISTRIBUTION EQUIPMENT SUBMITTALS FOR REVIEW AND APPROVAL. PROVIDE NEW ARC FLASH LABELS ON NEW OR MODIFIED EXISTING DISTRIBUTION EQUIPMENT.

F9 | GENERAL NOTES

DEMOLITION KEYED NOTES

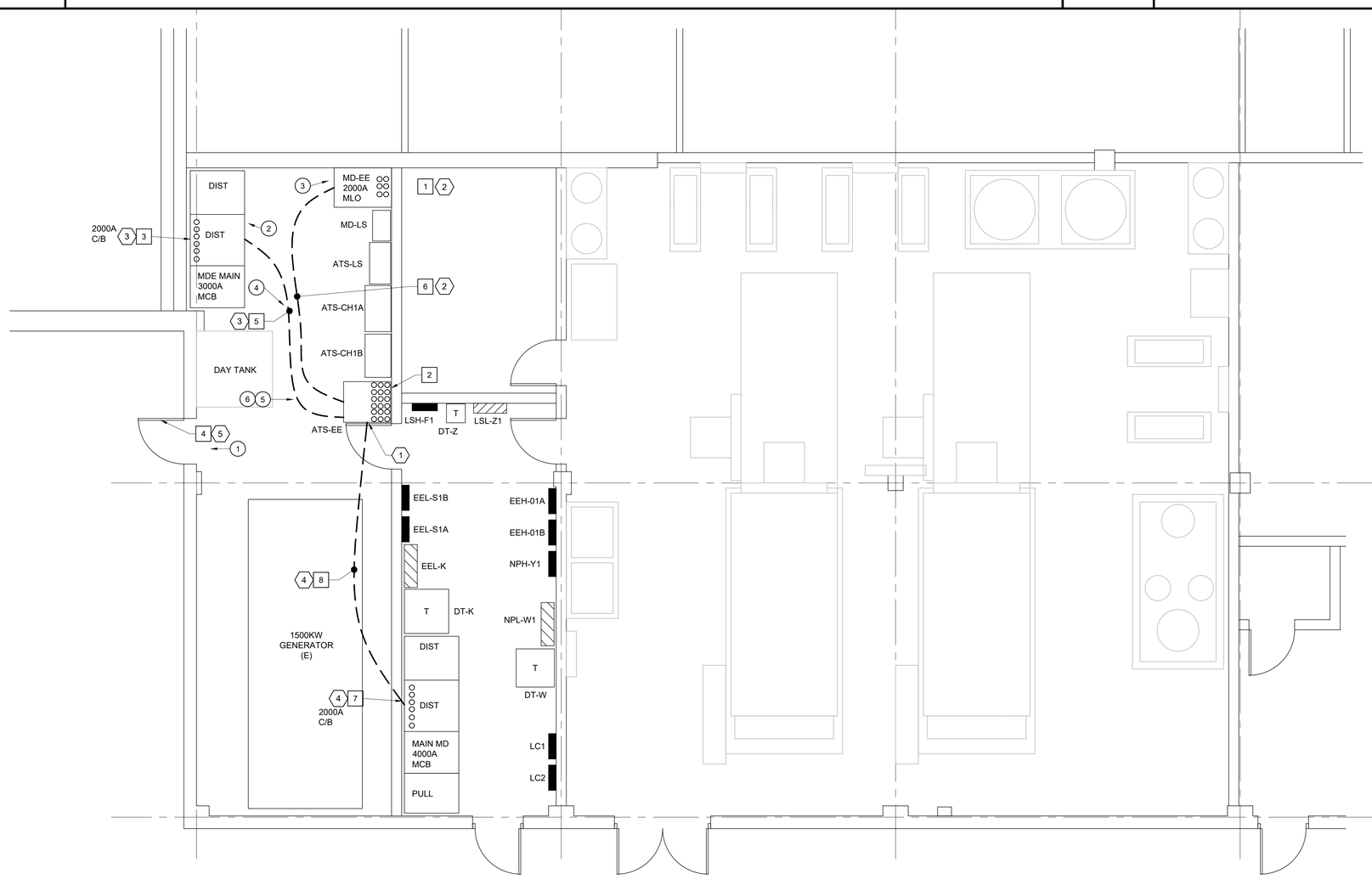
1. DISCONNECT AND MAKE SAFE THE EXISTING INCOMING UNDERSLAB 2500 AMP LOAD FEEDER FROM LUGS AT SWITCHBOARD (MD-EE). THE EXISTING SWITCHBOARD AND ALL RESPECTIVE LOADS SHALL BE MAINTAINED.
2. DISCONNECT AND MAKE SAFE THE EXISTING INCOMING UNDERSLAB 2500 AMP LOAD/NORMAL/EMERGENCY FEEDERS FROM THEIR RESPECTIVE LUGS AT THE AUTOMATIC TRANSFER SWITCH SCHEDULED FOR REPLACEMENT (ATS-EE). THE EXISTING CONDUITS AND CONCRETE HOUSEKEEPING EQUIPMENT PAD SHALL BE MAINTAINED.
3. DISCONNECT AND MAKE SAFE THE EXISTING INCOMING UNDERSLAB 2500 AMP EMERGENCY FEEDER FROM LUGS AT SWITCHBOARD (MDE). SWITCHBOARD AND ALL RESPECTIVE LOADS SHALL BE MAINTAINED.
4. REMOVE THE EXISTING STEEL SINGLE LEAF PERSONNEL EGRESS DOOR AND FRAME IN ORDER TO PERMIT REMOVAL OF THE EXISTING ATS-EE AND THE INSTALLATION OF THE NEW ATS-EE UNIT. BREAK DOWN AND SAFELY STORE THE FRAME FOR REINSTALLATION IF POSSIBLY OR PROVIDE NEW DOOR IF NOT (VERIFY THOUGH FIELD SITE VISIT)
5. MAINTAIN AND REUSE EXISTING UNDER SLAB EMERGENCY FEEDER CONDUITS (6-4" PVC COND WITH STEEL SWEEPS).
6. MAINTAIN AND REUSE EXISTING UNDER SLAB LOAD FEEDER CONDUITS (6-4" PVC COND WITH STEEL SWEEPS).
7. DISCONNECT AND MAKE SAFE THE EXISTING INCOMING UNDERSLAB 2500 AMP NORMAL FEEDER FROM LUGS AT SWITCHBOARD (MD). SWITCHBOARD AND ALL RESPECTIVE LOADS SHALL BE MAINTAINED.
8. MAINTAIN AND REUSE EXISTING UNDER SLAB NORMAL FEEDER CONDUITS (6-4" PVC COND WITH STEEL SWEEPS).

D9 | DEMOLITION KEYED NOTES

KEYED NOTES

1. FURNISH AND INSTALL NEW 2500 AMP, 480 VOLT, 3 POLE ATS UNIT. THE NEW UNIT SHALL BE EQUAL TO EXISTING UNIT IN DIMENSION AND MUST BE CAPABLE OF INSTALLING ON THE EXISTING EQUIPMENT PAD WITH ENCLOSURE CONDUIT WINDOW CAPABLE OF RECEIVING THE EXISTING NORMAL/EMERGENCY/LOAD CONDUITS IN THE FLOOR SLAB LOCATED BENEATH THE EXISTING ATS UNIT SCHEDULED FOR REPLACEMENT. COORDINATE EXACT DIMENSIONS IN THE FIELD PRIOR TO PROCURING THE NEW ATS UNIT. REFER TO SHEET E-500, DETAIL A-1 FOR SKETCH OF THE EXISTING EXTERIOR DIMENSIONS OF THE EXISTING UNIT. THE NEW UNIT WILL NOT REQUIRE LOAD SHEDDING, BY-PASS OR CURRENT LIMITING OPTIONS; REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. PROVIDE NEW UNIT MANUFACTURED BY ASCO, RUSSELECTRIC (DIVISION OF SIEMENS) OR CUMMINS.
2. MAINTAIN THE EXISTING UNDERSLAB CONDUITS AND THE EXISTING 2500 AMP LOAD FEEDER. TERMINATE ON THE LOAD LUGS OF THE NEW ATS UNIT. REUSE THE EXISTING FEEDER AND REATTACH TO THE NEW ATS UNIT LUGS. COORDINATE THE LENGTH OF THE EXISTING CABLE IN THE EXISTING ATS UNIT FROM THE FLOOR SLAB TO THE RESPECTIVE TERMINATION LUGS AND ADJUST LUG HEIGHT AS REQUIRED TO CAPTURE EXISTING FEEDER TERMINATIONS.
3. MAINTAIN THE EXISTING UNDERSLAB CONDUITS AND THE EXISTING 2500 AMP EMERGENCY FEEDER. TERMINATE ON THE EMERGENCY LUGS OF THE NEW ATS UNIT. REUSE THE EXISTING FEEDER AND REATTACH TO THE NEW ATS UNIT LUGS. COORDINATE THE LENGTH OF THE EXISTING CABLE IN THE EXISTING ATS UNIT FROM THE FLOOR SLAB TO THE RESPECTIVE TERMINATION LUGS AND ADJUST LUG HEIGHT AS REQUIRED TO CAPTURE EXISTING FEEDER TERMINATIONS.
4. MAINTAIN THE EXISTING UNDERSLAB CONDUITS AND THE EXISTING 2500 AMP NORMAL FEEDER. TERMINATE ON THE NORMAL LUGS OF THE NEW ATS UNIT. REUSE THE EXISTING FEEDER AND REATTACH TO THE NEW ATS UNIT LUGS. COORDINATE THE LENGTH OF THE EXISTING CABLE IN THE EXISTING ATS UNIT FROM THE FLOOR SLAB TO THE RESPECTIVE TERMINATION LUGS AND ADJUST LUG HEIGHT AS REQUIRED TO CAPTURE EXISTING FEEDER TERMINATIONS.
5. REINSTALL THE REMOVED STEEL SINGLE LEAF PERSONNEL EGRESS DOOR AND FRAME; PROVIDE NEW IF THE EXISTING DOOR AND FRAME UNIT WAS NOT ABLE TO BE SALVAGED. TRANSFER THE EXISTING HARDWARE TO THE NEW DOOR IF NEW UNIT IS INSTALLED.

D9 | KEYED NOTES




PLAN NORTH

A1 | BOILER ROOM ELECTRICAL PART PLAN
1/4"=1'-0"

- PANELBOARD ~ SURFACE MOUNTED
- PANELBOARD ~ FLUSH MOUNTED
- FUSED DISCONNECT SWITCH
- NON-FUSED DISCONNECT SWITCH
- MOTOR STARTER ~ NUMBER INDICATES NEMA SIZE
- COMBINATION MOTOR STARTER/FUSED DISCONNECT
- MOTOR OR FAN
- METER AND CABINET
- JUNCTION BOX ~ CEILING MOUNTED
- JUNCTION BOX ~ WALL MOUNTED
- TRANSFORMER ~ NUMBER INDICATES DESIGNATION SEE TRANSFORMER SCHEDULE
- VARIABLE FREQUENCY DRIVE
- TRANSIENT VOLTAGE SURGE SUPPRESSOR
- EMERGENCY SHUTOFF SWITCH ~ WALL MOUNTED 48" TO CENTERLINE ~ PROVIDE TAMPER-PROOF COVER
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- WIRING UNDERGROUND OR UNDERSLAB
- HOMERUN ~ (2)#12+(1)#12G UNO (EXCEPT LIGHTING CIRCUITS: (1)#12+(1)#10N+(1)#12G UNO)
- SINGLE-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT
- 3-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT
- FLEXIBLE CONNECTION
- GROUNDING SYSTEM
- RECEPTACLE PROVIDED BY MANUFACTURER
- DEMO KEYNOTE
- PHOTO ID REFER TO SHEET E-500
- KEY NOTE

A9 | ELECTRICAL LEGEND
NO SCALE


160 Veranda Street
Portland, Maine 04103
T: 207.221.2260
F: 207.221.2266
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STATE OF MAINE
BRIAN T. GARDNER
No. 15506
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REVISIONS

| DESCRIPTION | BY | DATE | NUMBER |
|---|---|---|---|

Date: 04/21/23
Drawn By: RT
Checked By: BTG
Project Mgr: BTG
Project No: 23015
Cad File: 23015_E.dwg
Graphic Scale: 0 1"

ELECTRICAL PLANS, NOTES AND LEGEND

RIVERVIEW PSYCHIATRIC CENTER
~ TRANSFER SWITCH REPLACEMENT
AUGUSTA, MAINE

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E-100

ISSUED FOR BID ~ 21 APRIL 2023

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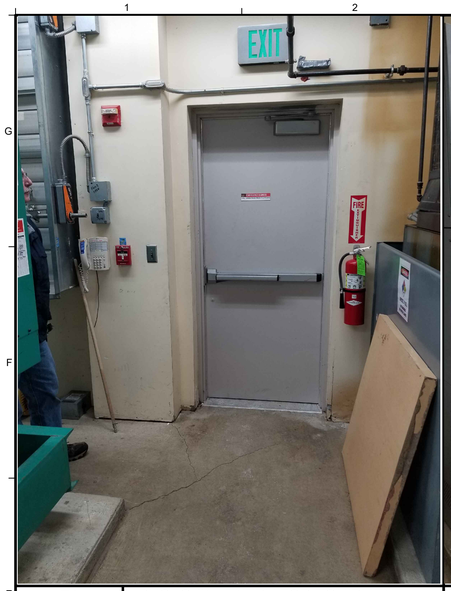


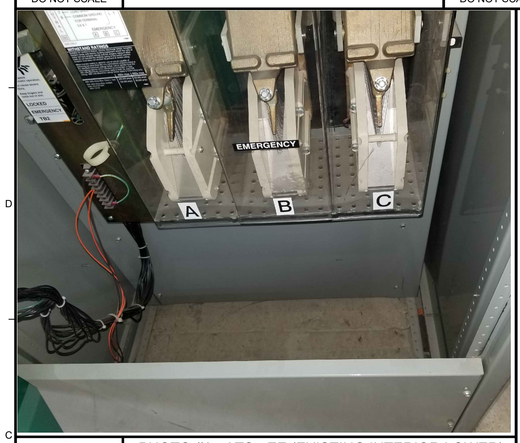

| E1 | PHOTO #1 - ENTRY FOR EQUIPMENT |
|---|---|
| DO NOT SCALE | |


| E2 | PHOTO #2 - MDE (EXISTING) |
|---|---|
| DO NOT SCALE | |

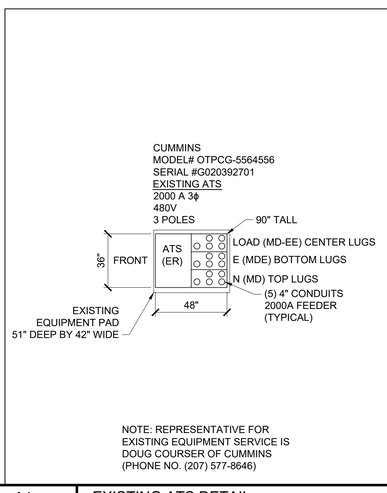

| E4 | PHOTO #3 - MD-EE (EXISTING) |
|---|---|
| DO NOT SCALE | |

| E6 | PHOTO #4 - ATS - EE (EXISTING) |
|---|---|
| DO NOT SCALE | |


| E8 | PHOTO #5 - ATS - EE (EXISTING INTERIOR UPPER) |
|---|---|
| DO NOT SCALE | |




| C1 | PHOTO #6 - ATS - EE (EXISTING INTERIOR LOWER) |
|---|---|
| DO NOT SCALE | |




NOTE: REPRESENTATIVE FOR
EXISTING EQUIPMENT SERVICE IS
DOUG COURSER OF CUMMINS
(PHONE NO. (207) 577-8646)

| A1 | EXISTING ATS DETAIL |
|---|---|
| DO NOT SCALE | |

## ELECTRICAL WORK TASK MATRIX

| STEP | DESCRIPTION | EC | RPC | AEI | VEN |
|---|---|---|---|---|---|
| GENERAL | Listed below is an outline/schematic version of the expected work plan. The contractor will assemble a work plan for review and comment by the owner and the engineer of record prior to initiating any procurement effort. The contractor shall set up a work plan meeting to acquire input from the owner and the design team. The work plan will include as a minimum each of the step listed below (however should elaborate with more detail, steps and information. Include in the workplan each step beginning with investigation work and following through to close-out; step ID and description, approximate duration, if shut-down required, quantity of staff utilized, tools and equipment required for step, loads at risk, contingency plans, date and time of day for step | R | | | |
| GENERAL | The columns listed to the right identify, electrical contractor (EC) and/or CM if utilized, Riverview Psychiatric Center (RPC), allied engineering (AEI) and vendor (VEN). When columns are selected in indicates team members that shall be included in a particular set; (R) denotes responsible party, (X) denotes team members to be included and coordinated with | R | | | |
| GENERAL | The maximum acceptable shut down period for the loads served by the MD-EE switchboard is 2 hours. The power shut downs can only occur during the 4AM to 6AM and 7PM to 9PM time slots. The power shut downs can only occur during the fall or the spring cooling/heating seasons. The power shuts down can only occur during the 5 day standard work week. | R | | | |
| GENERAL | The proposed temporary generator size is 750 KW (480 volt, rated, three phase) provided with sufficient fuel storage to eliminate or minimize scheduled refueling during operation. The temporary generator shall not be run overnight. All work associated with connecting temporary cables, disconnecting temporary cables, removing old ATS-EE and installing new ATS shall be completed within 4AM to 9PM of a single work day. | R | | | |
| GENERAL | The electrical contractor shall have on-site the necessary material to temporarily make up a normal feeder to lad feeder splice inside the existing ATS-EE (or new ATS unit) as a contingency should a serious issue occur during the work related to removing the existing ATS-EE or installing the new ATS unit | R | | | |
| | | | | | |
| PRE-CON | | | | | |
| 1 | Schedule time to visit site with owner to review work area, lay down area, access requirements for on-site staff and proposed temporary generator location | R | X | | |
| 2 | Develop DRAFT of the proposed work plan and schedule time to review the DRAFT with owner and the engineer | R | X | X | |
| 3 | Revise and reissue FINAL work plan based on review meeting for DRAFT of work plan | R | X | X | |
| 4 | Issue APPROVED work plan to team based on the owner and engineer comments to the FINAL work plan | R | | | |
| 5 | Schedule time for 2 hour shut down of ATS-EE unit in order to deenergize ATS-EE , remove access panels and take measurements and photos of existing bussing heights and conduit entry points for each feeder. Contractor may include vendor technician if they have preselected one. | R | X | X | |
| 6 | On scheduled shutdown disarm generator start signal from ATS-EE to the generator control panel (ensure the start signal for the other three ATS units have been maintained operational). OPEN the dedicated respective 2000A circuit breaker in MDE and MD switchgear to isolate ATS-EE for safe removal of access panels and information gathering at ATS-EE. Test to ensure ATS-EE components are deenergized. Proceed with necessary investigation and measurement. Once investigation work is complete close up access panels and CLOSE the two isolating switchgear breakers. | R | X | X | |
| 7 | Schedule time for 2 hour shut down of MD-EE to remove access panels and gather information to determine means and methods for connecting temporary generator cables to switchboard for supporting building loads during ATS replacement step | R | X | X | |
| 8 | On scheduled shutdown disarm generator start signal from ATS-EE to the generator control panel (ensure the start signal for the other three ATS units have been maintained operational). OPEN the dedicated respective 2000A circuit breaker in MDE and MD switchgear to isolate ATS-EE and MD-EE for safe removal of access panels and information gathering at MD-EE. Test to ensure MD-EE components are deenergized. Proceed with necessary investigation and measurement. Once investigation work is complete close up access panels and CLOSE the two isolating switchgear breakers. | R | X | X | |
| | | | | | |
| PROCURE | | | | | |
| 9 | Provide information gathered from measurement survey to vendor to ensure a unit will be constructed that will fit in the same footprint and not require any new feeders ; reusing the existing feeders within the ATS enclosure | R | | | X |
| 10 | Provide copy of any questions or comments received from the vendor to the owner and engineer | R | X | X | |
| 11 | Have vendor produce submittal / shop drawing package for review and comment by the project team | R | X | X | X |
| | | | | | |
| FACTORY | | | | | |
| 12 | Execute the necessary pre-demonstration operational and capacity tests, at the factory, to ensure all features and components of the equipment is functioning as required | R | | | X |
| 13 | Demonstrate to representative(s) of the project team the functionality of the unit , at the factory (or designated test site), prior to packaging for shipment. The minimum team member representation with be the design engineer and the electrical contractor project manager and installation superintendent for the electrical contractor | R | | X | X |
| | | | | | |

## ELECTRICAL WORK TASK MATRIX

| STEP | DESCRIPTION | EC | RPC | AEI | VEN |
|---|---|---|---|---|---|
| INSTALLATION | | | | | |
| 14 | Review with installation team, owner and engineer the Approved work plan 2 weeks prior to the first scheduled step | R | X | | |
| 15 | Have all required equipment, fuel, temporary generator and construction materials safely secured on site , especially the replacement ATS unit and anything required to execute contingency plans | R | | | X |
| 16 | Remove the existing door leading from the exterior to the stand-by power electrical room. Work with the owner to safely store the removed door for reinstallation and for owner acceptable means to secure the opening during times when electrical contractor staff is on site and off site. | R | X | | |
| 17 | Move the replacement ATS unit into position within the emergency electrical room such that it can be easily moved into place and also not impede the related work clearance needed for working about and removing the existing ATS-EE. Set up ramps over the temporary cables that will permit the removal of the existing ATS-EE unit. | R | | | |
| 18 | Schedule time for 2 hour shut down of MD-EE to remove access panels, disconnect load feeder, make safe and connect the temporary generator flexible cables. | R | X | | |
| 19 | On scheduled shutdown disarm generator start signal from ATS-EE to the generator control panel (ensure the start signal for the other three ATS units have been maintained operational). OPEN the dedicated respective 2000A circuit breaker in MDE and MD switchgear to isolate ATS-EE and MD-EE for safe removal of access panels to gain access for connecting temporary cables. Test to ensure MD-EE components are deenergized. Proceed with connection of temporary cables. Bring generator on line and confirm MS-EE loads are now safely supported by the temporary generator. | R | X | X | |
| 20 | The respective dedicated circuit breakers in MDE and MD shall remain OPEN and secured by proper LOTO methods. The start signal for ATS-EE shall remain disconnected. The loads served by MD-EE switchboard are now supported by the temporary generator. The removal and replacement of the existing ATS-EE can now begin. | | | | |
| 21 | Disconnect the normal, emergency and load feeders from the existing ATS-EE. Remove existing ATS-EE unit completely out of the work zone. | R | | | |
| 22 | Clean up and inspect the existing feeder conductor termination points; make ready for connection to new ATS lugs. Set the new ATS unit in place. Make up the terminations from the existing normal, emergency and load feeders to the respective termination lugs on the new ATS unit. Check for proper torque and ensure all grounding and component/control wiring has been completed. Secure all access panels | R | | | |
| 23 | Schedule time for 2 hour shut down of MD-EE to disconnect temporary cables and reconnect the existing load feeder. | R | X | | |
| 24 | On scheduled shutdown disarm generator start signal from the new ATS to the generator control panel (ensure the start signal for the other three ATS units have been maintained operational). Shut down the temporary generator (unit will run through its cool down procedure). Confirm the dedicated respective 2000A circuit breaker in MDE and MD switchgear are still OPEN to isolate ATS-EE and MD-EE for safe removal of the temporary cables. Test to ensure MD-EE components are deenergized. Proceed with disconnection of temporary cables. | R | X | X | |
| 25 | Remove the LOTO methods on the respective dedicated circuit breakers in MDE and MD and CLOSE these two breakers. Re-terminate the start signal from the new ATS unit to the generator control panel. The loads served by MD-EE switchboard are now supported by new ATS unit. Run the new ATS unit through a normal to emergency and emergency to normal power transfer operation. | R | X | X | |
| 26 | Reinstall the existing door leading from the exterior to the stand-by power electrical room. Ensure all access and security system associated with the reinstalled door are returned to proper full functionality | R | X | | |
| 27 | Clear all equipment, tools, generator, cables and debris from work zone | R | X | | |
| | | | | | |
| CLOSE-OUT | | | | | |
| 28 | Provide owner with demonstration on operation and maintenance task for the new ATS; utilize a factory trained technician | R | X | | X |
| 29 | Provide an O and M submittal package for the new ATS unit. It shall be reviewed by design team prior to providing the owner with a final copy | R | X | X | X |
| | | | | | |

| A3 | WORK SEQUENCE, SHUT DOWN PREPARATION AND CONTINGENCY PLAN REQUIREMENT NOTES |
|---|---|
| DO NOT SCALE | |


160 Veranda Street
Portland, Maine 04103
T: 207.221.2260
F: 207.221.2266
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BRIAN T. GARDNER
No. 15506
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL

REVISIONS

| NUMBER | DATE | BY | DESCRIPTION |
|---|---|---|---|
| | | | |

Date: 04/21/23
Drawn By:
Checked By: BTG
Project Mgr: BTG
Project No: 23015
Cad File: 23015_E.dwg
Graphic Scale: 0 1"

ELECTRICAL DETAIL AND PHOTOS

RIVERVIEW PSYCHIATRIC CENTER
~ TRANSFER SWITCH REPLACEMENT
AUGUSTA, MAINE


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