

Generator Upgrade Project for Berlin High School

139 Patterson Way
Berlin, Connecticut 06037

GENERAL DEMOLITION NOTES – ELECTRICAL

1. ELECTRICAL DEMOLITION TO BE SUPERVISED BY LICENSED ELECTRICAL CONTRACTOR. EACH CIRCUIT SHALL BE VERIFIED "COLD" & DISCONNECTED FROM ELECTRICAL SERVICE PRIOR TO COMMENCING REMOVAL.
2. REMOVE EXISTING ELECTRICAL EQUIPMENT & MATERIALS AS REQUIRED TO ACCOMMODATE ARCHITECTURAL WORK AND AS SPECIFICALLY NOTED ON THE DEMOLITION DRAWINGS.
3. ALL MATERIALS BEING REMOVED SHALL BE HANDLED IN A MANNER COMPLYING WITH ALL PERTINENT LAWS, CODES AND ENVIRONMENTAL REGULATIONS.
4. WHERE ELECTRICAL EQUIPMENT & DEVICES ARE BEING REMOVED, COORDINATE AND FIELD VERIFY IF BRANCH CIRCUIT FEEDS THROUGH TO EQUIPMENT/DEVICES TO REMAIN. BRANCH CIRCUITS SHALL BE SPLICED OR RELOCATED TO MAINTAIN CONTINUATION OF SERVICES.
5. WHERE EXISTING DEVICES ARE REMOVED & NO NEW DEVICES ARE INSTALLED IN THE SAME LOCATION, REMOVE ALL WIRING FROM BOX & PROVIDE PROPERLY SIZED BLANK COVER PLATE.
6. ELECTRICAL COMPONENTS NOTED FOR DEMOLITION ON THE DRAWINGS, AND THE ASSOCIATED CONDUIT, WIRE & BOXES ARE TO BE REMOVED AND DISPOSED OF UNLESS SPECIFICALLY NOTED OTHERWISE.
7. ALL REMOVED COMPONENTS SHALL BE LEGALLY DISPOSED OF BY CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.

GENERAL NOTES

1. SPECIFICATION SECTIONS, GENERAL CONDITIONS, SUPPLEMENTAL GENERAL CONDITIONS AND DRAWINGS ARE INTEGRAL PARTS OF CONTRACT DOCUMENTS.
2. SYSTEM COMPONENTS ARE LOCATED APPROXIMATELY ON DRAWINGS. BASE ACTUAL LOCATIONS ON FIELD VERIFICATION OF EXISTING BUILDING CHARACTERISTICS INCLUDING BUT NOT LIMITED TO STRUCTURAL, MECHANICAL, ELECTRICAL & ARCHITECTURAL COMPONENTS.
3. ALL WORK AND ACTION DEPICTED AND DESCRIBED IN CONTRACT DOCUMENTS SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
4. REFERENCE TO SPECIFIC SUB-CONTRACTORS SUCH AS "MECHANICAL", "ELECTRICAL", ETC. ARE INTENDED TO SUGGEST POSSIBLE DIVISION OF RESPONSIBILITY. PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND EXECUTION OF ALL WORK.
5. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
6. ALL EQUIPMENT, MATERIALS AND RELATED SYSTEM COMPONENTS SHALL BE NEW UNLESS NOTED OTHERWISE.
7. REPAIR AND REPLACE AT NO COST TO OWNER ALL EQUIPMENT AND MATERIALS DAMAGED DURING CONSTRUCTION.
8. STUDY THE PROJECT MANUAL.
9. ELECTRICAL CONDUITS & BOXES SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS WHEREVER POSSIBLE.
10. FURNISH & INSTALL GFCI RECEPTACLES IN ALL WET LOCATIONS.
11. ALL PENETRATIONS THRU RATED WALLS & CEILINGS SHALL BE SEALED USING U.L. LISTED METHODS APPROPRIATE FOR INDICATED RATING.
12. NO PENETRATIONS ARE ALLOWED INTO STAIR ENCLOSURES EXCEPT AS REQUIRED FOR SERVICES UTILIZED IN THE STAIR.
13. ALL INSTALLATIONS ON NEW WALLS SHALL BE FULLY RECESSED. INSTALLATIONS ON EXISTING MASONRY WALLS SHALL BE RUN WITH SURFACE RACEWAY PAINTED TO MATCH WALL FINISH AND SURFACE BOXES. INSTALLATIONS ON EXISTING STUD WALLS SHALL CUT IN OLD-WORK STYLE BOXES AND FISH WIRING IN WALL CAVITY.



SILVER / PETRUCELLI + ASSOCIATES

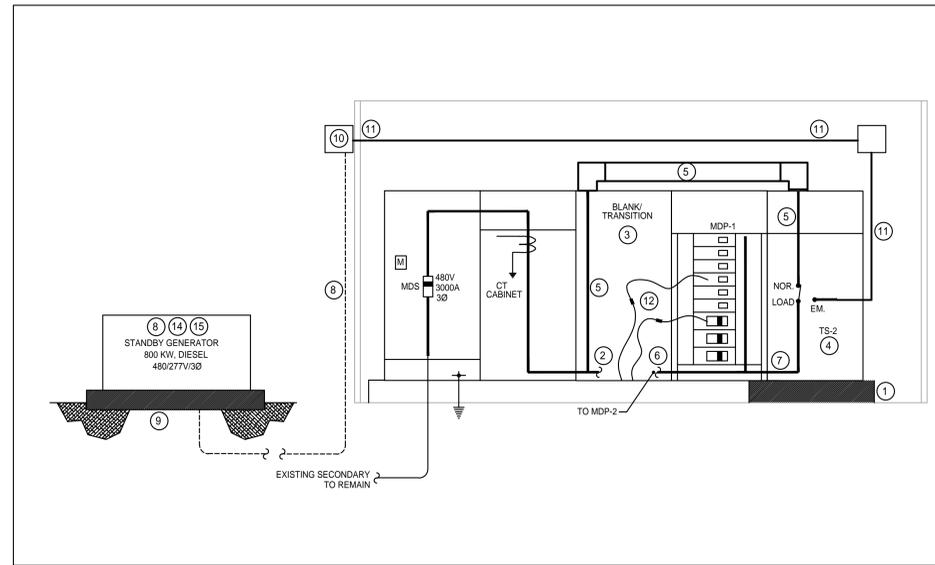
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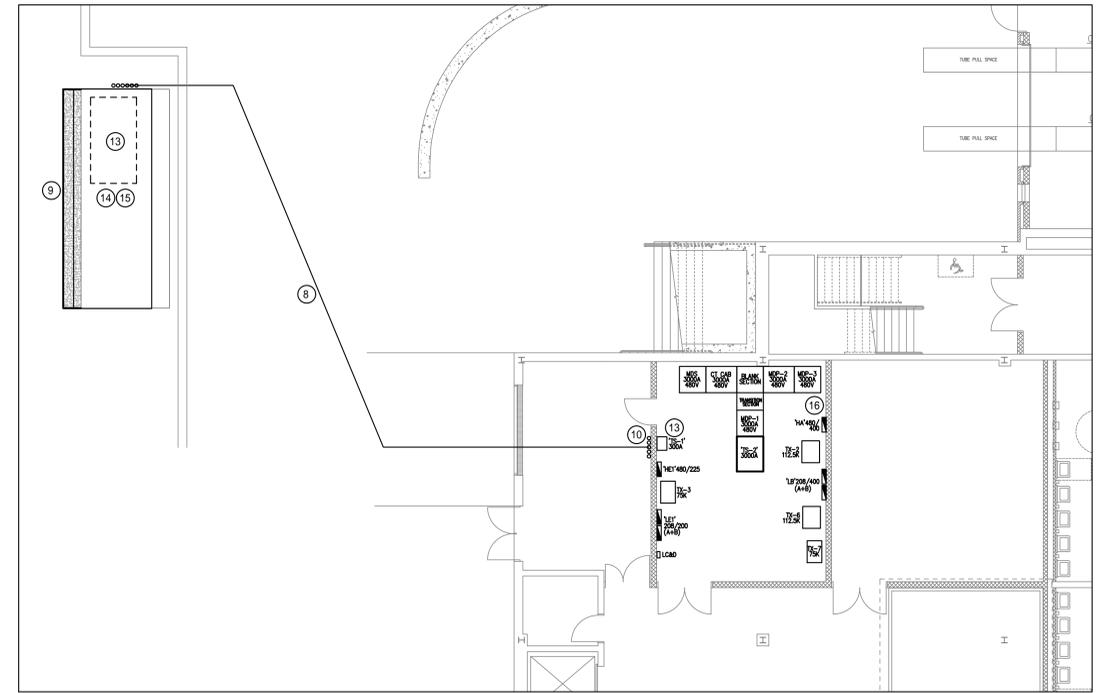


ELECTRICAL 1-LINE DIAGRAM
SCALE: NONE

5
EG1

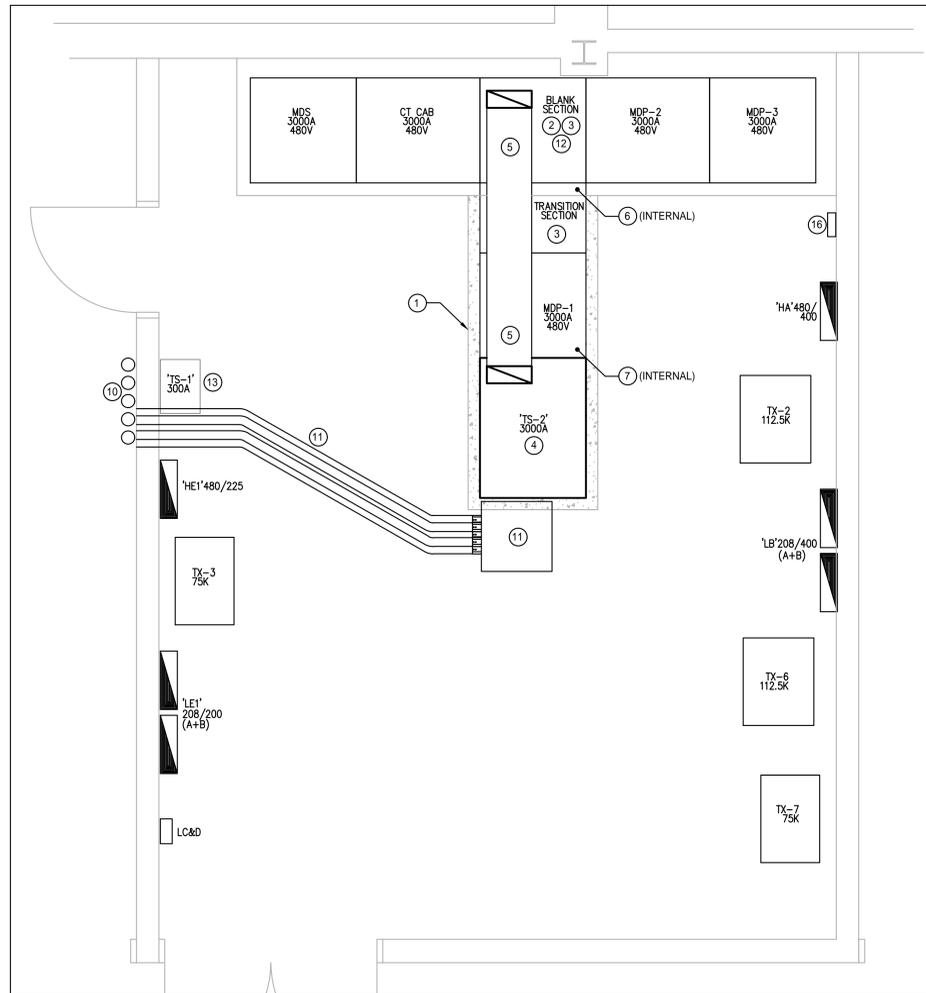
ELECTRICAL NOTES

1. PROVIDE CONCRETE HOUSEKEEPING PAD EXTENSION TO MATCH EXISTING PAD HEIGHT. COORDINATE EXACT DIMENSIONS WITH NEW EQUIPMENT FOR MINIMUM 4' EXTENSION BEYOND FOOTPRINT.
2. REMOVE A PORTION OF THE EXISTING SWITCHGEAR BUS TO BREAK THE CONNECTION FROM THE CT SECTION TO DISTRIBUTION SECTION MDP-1 AND FROM MDP-1 TO MDP-2 TO ALLOW FOR RELOCATION OF THE MDP-1 SECTION WITH ALL BREAKERS. FURNISH NEW END PANELS.
3. PROVIDE NEW BLANK AND TRANSITION SECTIONS TO ALLOW FOR SPECIFIED BUS AND CABLE CONNECTIONS BETWEEN EXISTING AND NEW/RELOCATED SECTIONS. THIS AREA WILL ALSO BE UTILIZED FOR EXTENSION OF LOADS FROM MDP-1 SECTION.
4. INSTALL AND CONNECT NEW CAT SERIES CTG 3000 AMP, 4-POLE AUTOMATIC TRANSFER SWITCH TS-2 FURNISHED BY THE OWNER. PROVIDE NEW GENERATOR START WIRING TO NEW 800 KW GENERATOR.
5. FURNISH & INSTALL 3000 AMP, 480V, 4-WIRE ENCLOSED COPPER BUS FROM BUS IN BLANK SECTION DOWNSTREAM OF THE CT'S TO NORMAL TERMINALS OF THE ATS. BUS CONNECTION DIMENSIONS MUST BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS.
6. FURNISH & INSTALL 3000 AMP, 480V, 4-WIRE COPPER BUS FROM RELOCATED MDP-1 SECTION TO MDP-2 BUS IN BLANK SECTION.
7. FURNISH & INSTALL 3000 AMP, 480V, 4-WIRE COPPER BUS OR CABLE CONNECTION FROM LOAD TERMINALS OF TS-2 TO EXISTING BUS IN MDP-1 SECTION.
8. PROVIDE 1600A, 480V, 3Ø FEED FROM NEW GENERATOR TO NEW TRANSFER SWITCH. USE 5 SETS OF 400KCMIL IN CONDUIT AS DESCRIBED BELOW. CONDUIT FROM GENERATOR PAD INTO BUILDING IS 5 AT 4".
9. CONTRACTOR SHALL EXTEND EXISTING POURED CONCRETE GENERATOR PAD BY 24" TO ALLOW SUFFICIENT CLEARANCE ON THE RETAINING WALL SIDE. PROVIDE A MINIMUM OF 2 PINS EVERY 4" INTO EXISTING PAD. PROVIDE MODIFICATIONS TO GRADE IN THIS AREA TO ALLOW FOR CONSTRUCTION OF THE EXTENSION.
10. APPROXIMATE LOCATION OF EXISTING 4" CONDUIT STUB-UP. EXTEND TO CEILING AND OFFSET 2 CONDUITS TO CREATE TWO ROWS. PROVIDE 32"H x 24"W x 24"D PULL BOX TO TRANSITION TO 3" CONDUITS TOWARD NEW TS-2.
11. PENETRATE & SEAL ELECTRICAL ROOM WALL AND EXTEND FIVE 3" CONDUITS OVER TO TS-2. PROVIDE 24"H x 24"W x 24"D PULL BOX OR CONDUIT BODIES TO SWEEP CONDUIT DOWN ALONG THE SIDE OF TS-2 AND INTO THE SWITCH.
12. CONTRACTOR SHALL HI-PRESS AND EXTEND ALL EXISTING 3Ø FEEDERS CURRENTLY FED FROM MDP-1 BREAKERS TO ALLOW FOR RELOCATION OF UNIT. EXISTING SIZES ARE: (1) 400A, (1) 225A, (3) 200A, (1) 125A, (1) 50A AND (5) 20A.
13. CONTRACTOR SHALL DISCONNECT EXISTING 130KW GENERATOR AND DELIVER TO OWNER REQUESTED LOCATION IN TOWN. CONNECT TEMPORARY PORTABLE GENERATOR PROVIDED BY THE TOWN TO EXISTING TS-1 TRANSFER SWITCH INCLUDING START SIGNAL WIRING. CONTRACTOR SHALL REMOVE TS-1 AND ASSOCIATED WIRING UPON COMPLETION OF NEW GENERATOR INSTALLATION.
14. NEW 800 KW CATERPILLAR DIESEL GENERATOR IS FURNISHED BY THE OWNER FOR INSTALLATION BY THE CONTRACTOR. REFER TO SUBMITTAL DATA IN THE PROJECT MANUAL FOR ADDITIONAL INFORMATION. CONTRACTOR IS RESPONSIBLE FOR UNLOADING, PLACING AND CONNECTING THE GENERATOR. START-UP, TESTING AND TRAINING IS BY CATERPILLAR. PROVIDE NEW GROUND ROD AT PAD AND GROUNDING CONDUCTOR TO FRAME.
15. CONTRACTOR SHALL REMOVE ANY CIRCUITS ASSOCIATED WITH EXISTING BLOCK HEATER & BATTERY CHARGER. PROVIDE NEW 60A, 208V, 1-PHASE CIRCUIT FROM PANEL LPB FOR NEW GENERATOR ACCESSORIES. UTILIZE EXISTING UNDERGROUND CONDUIT FROM GENERATOR PAD TO ELECTRICAL ROOM.
16. CONTRACTOR SHALL REPLACE EXISTING REMOTE ANNUNCIATOR WITH NEW UNIT FURNISHED WITH THE GENERATOR. INSTALL IN SAME LOCATION AS EXISTING AND UTILIZE EXISTING CONDUIT TO GENERATOR PAD. PROVIDE NEW/ADDITIONAL SIGNAL WIRING AS REQUIRED.
17. DIMENSIONS OF BUS SHOWN ARE BASED ON SQUARE D COPPER FEEDER BUS. CONTRACTOR SHALL COORDINATE SPACE REQUIREMENTS OF ANY ALTERNATE SYSTEM.



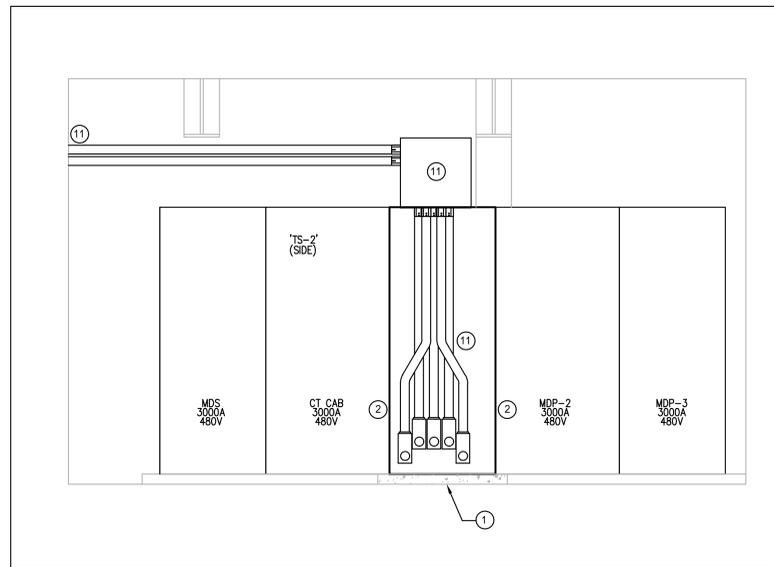
OVERALL ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

1
EG1



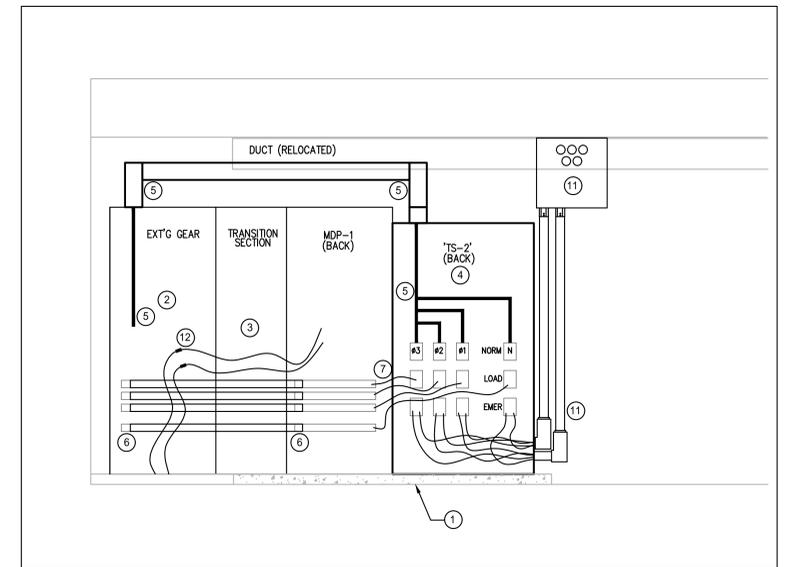
ELECTRICAL ROOM ENLARGED PLAN
SCALE: 1/2" = 1'-0"

4
EG1



GEAR EAST ELEVATION
SCALE: 1/2" = 1'-0"

3
EG1



GEAR SOUTH ELEVATION
SCALE: 1/2" = 1'-0"

2
EG1



Revision	Description	Date	Revised By