

**ELECTRICAL LEGEND**

|        |  |  |   |
|--------|--|--|---|
| CCT    | CIRCUIT ELECTRICAL (SUB) CONTRACTOR EXISTING   |  | FUSED SAFETY SWITCH--AMP SIZE AS NOTED--VOLTAGE AS REQD--NEMA 1 ENCLOSURE U.N.O.--MH 6'0" TO TOP UNO (NF=NON-FUSED; 3R=NEMA 3R ENCL; GK=NEMA 12 GASKETED ENCL; 4K=NEMA 4X STAINLESS STEEL ENCL)   |
| E.C.   | EXISTING   |  | DISCONNECT SWITCH--HP RATED--TOGGLE TYPE--20 AMP--1 TO 3 POLES AS REQUIRED FOR EOPT--600 VOLT--NEMA 1 ENCLOSURE U.N.O.--LOCATE ADJACENT TO EQUIPMENT SERVED. (WP=WEATHERPROOF ENCLOSURE) SQUARE D CLASS 2510 SERIES OREQ                                      |
| EXT.   | FURNISHED BY OTHERS, INSTALLED AND/OR WIRING BY ELECTRICAL CONTRACTOR  |  | MANUAL MOTOR SWITCH--120V--1 SPEED--W/OVERLOAD HEATER & PILOT LT.--MH 44" OR ON EQUIPMENT AS SHOWN (2P= TWO POLE) SQUARE D CLASS 2510 SERIES OREQ   |
| F.B.O. | GENERAL (SUB) CONTRACTOR   |  | COMBINATION FUSED SWITCH & MAGNETIC STARTER W/FUSED C.P.T. + PILOT DEVICE AS REQUIRED--NEMA 1 ENCLOSURE UNO--FURNISHED AND INSTALLED BY E.C. -- MH 6'0" TO TOP UNO (NF=NON-FUSED; 3R=NEMA 3R ENCL; GK=NEMA 12 GASKETED ENCL; 4X=NEMA 4X STAINLESS STEEL ENCL) |
| G.C.   | MECHANICAL (HVAC, PLBG, FP, OR TC) (SUB) CONTRACTOR  |  | VARIABLE SPEED DRIVE W/DISCONNECT AND FUSES--FURNISHED AND INSTALLED BY OTHERS, POWER WIRING BY E.C. PER SUPPLIERS WIRING DIAGRAMS.   |
| HP     | HORSEPOWER   |  | MOTOR--FRACTIONAL H.P.--120 VOLT (EF=EXH. FAN; UH=UNIT HEATER; MD=MOTORIZED DAMPER)   |
| L.D.   | LOCATE AS DIRECTED   |  | MOTOR--SIZE AND FUNCTION AS NOTED--3 PHASE  |
| MAX    | MAXIMUM  |  | RECEPT. PANEL--CIRCUIT BREAKER TYPE--VOLTAGE/PHASE AS NOTED--MH 6'0" TO TOP. SQUARE D NQ SERIES OREQ.   |
| M.C.   | MOUNTING HEIGHT TO BOTTOM OF DEVICE, BOX, OR FIXTURE, UNO  |  | DISTRIBUTION PANEL--CIRCUIT BREAKER TYPE--VOLTAGE/PHASE AS NOTED -- SQUARE D I--LINE SERIES OREQ  |
| MH     | MINIMUM  |  | WORKING CLEARANCE AREA PER NEC 110.26.  |
| MIN    | OR EQUAL   |  | WIRE TICKS INDICATE BRANCH CIRCUIT PHASE, NEUTRAL, & GROUND WIRES, RESPECTIVELY CONDUIT--CONCEALED IN CEILING, WALL OR FLOOR OF NEW CONSTRUCTION. CONCEALED WHEREVER POSSIBLE IN EXISTING CONSTRUCTION (1/2" DIA. MIN.)                                       |
| OREQ   | RELOCATE/RELOCATED   |  | HOMERUN TO PANEL OR LOCATION NOTED  |
| R/M    | REMOVE   |  | INDICATES CONCEALED CONDUIT UNDERGROUND/UNDERFLOOR -- 3/4" MIN.   |
| R/L    | REVIEW   |  | SURFACE MOUNTED RACEWAY--W/MATCHING FITTINGS, BOXES, ACCESSORIES, ETC. WIREMOLD V700 SERIES, HUBBELL 750V SERIES OREQ   |
| REV    | UNLESS NOTED OTHERWISE   |  | INDICATES LOW VOLT CABLING ROUTED THRU PLENUM OR ATTIC SPACE.   |
| UNO    | COMPLETE WITH WEATHERPROOF DEVICE, ENCLOSURE OR COVER PLATE.   |  | EXISTING CONDUIT & WIRING--TO REMAIN  |
| W/     | WITH WIRE GUARD  |  | EXISTING 120 VOLT MOTOR--TO REMAIN--UNO   |
| WG     | WEATHERPROOF DEVICE, ENCLOSURE OR COVER PLATE.   |  | EXISTING JUNCTION BOX--TO REMAIN--UNO   |
| WP     | INDICATES NOTE--SEE TABULATION ON SAME SHEET   |  | EXISTING ITEMS ARE TO REMAIN--UNO   |
| (2)    | LOCAL SWITCH--4 WAY--20A--120/277V--W/C.P.-- COLOR SELECTED BY ARCHITECT -- M.H. 44" HUBBELL #CSB420W OREQ.  |  | EXISTING ITEMS SHOWN DASHED ARE TO BE REMOVED--UNO  |
| \$4    | LED SURFACE/RECESSED FIXTURE--SEE SCHEDULE--SHOWN TO SCALE (APPROX.)   |  | EXISTING EXIT SIGN--TO REMAIN--UNO  |
| □      | EMERGENCY EGRESS OR COMBINATION EXIT EGRESS LIGHT--SEE SCHEDULE  |  | INDICATES EXISTING ITEM SHALL BE REMOVED INCLUDING ASSOCIATED CONDUIT AND WIRING NO LONGER IN SERVICE   |
| ⊕      | DUPLEX RECEPT--20A--120V--NEMA 5--20R W/STAINLESS STEEL C.P. -- M.H. 16" HUBBELL #HBL5352BK OREQ.  |  |   |
| ⊕      | DUPLEX GF RECEPT--20A--125V--NEMA 5--20R W/C.P.-- COLOR SELECTED BY ARCHITECT -- M.H.16" IN READILY ACCESSIBLE LOCATION. HUBBELL #GFST83W OREQ.  |  |   |
| ⊕      | DUPLEX GF RECEPT--WEATHER AND TAMPER RESISTANT DEVICE TO MATCH ABOVE-- W/EXTRA DUTY W.P. IN USE* METAL FLAP C.P.--M.H. 24" IN READILY ACCESSIBLE LOCATION. HUBBELL #GFTWR520SNAPW/SNAP1RA/MP26E OREQ.  |  |   |
| ⊕      | DUPLEX RECEPT--TAMPER RESISTANT--20A--120V--NEMA 5--20R W/C.P.--M.H.--16" U.N.O. COMMERCIAL GRADE HUBBELL #BR20WH1R OREQ. SEE SPECIFICATIONS FOR USE OF 15 AMP DEVICES.  |  |   |
| □      | OUTLET SHALL BE A DUPLEX OR MATCHING RECEPTACLE IF EQUIPMENT IS FURNISHED WITH CORD AND PLUG, OR JUNCTION BOX AND DISCONNECT SWITCH WITH SEALTITE CONNECTION IF EQUIPMENT IS TO BE WIRED DIRECT. IT SHALL BE THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO VERIFY THE REQUIRED OUTLET AND TO WIRE ALL EQUIPMENT COMPLETE. |  |   |
| SPD    | SURGE PROTECTIVE DEVICE-- SEE SPECIFICATIONS FOR MORE INFORMATION.   |  |   |
| ⊕      | PRE-WIRED CONTROL PANEL WITH MAGNETIC STARTERS, CONTACTORS, ETC., PROVIDED WITH EQUIPMENT. WITH OR WITHOUT DISCONNECT AS SHOWN. POWER FEED WIRING BY E.C.  |  |   |
| ⊕      | PHOTOCELL MOUNTED AT ROOF FACING NORTH; LEVITON #EK4236S OREQ PHOTOCELL SHALL BE RATED FOR USE WITH LED FIXTURES AND DRIVERS.  |  |   |

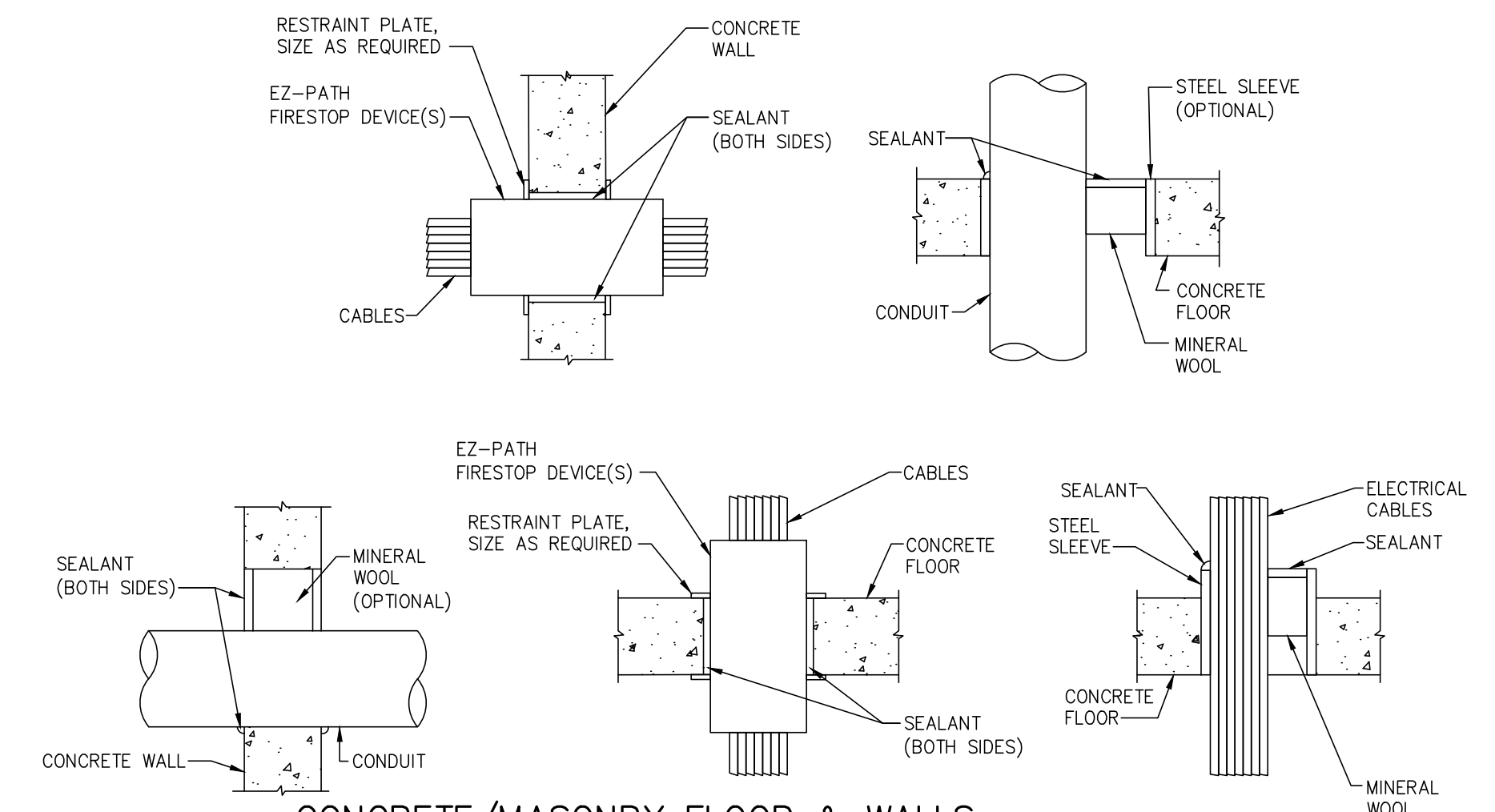
**ALTERNATES**

ALTERNATE E-1: STATE THE AMOUNT TO BE ADDED TO THE BASE BID TO FURNISH ALL MATERIAL, LABOR AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION OF THE FOLLOWING.

1. NEW THREE-PHASE SERVICE (E.C. SHALL COORDINATE WITH UTILITY COMPANY), PAD MOUNTED TRANSFORMER, UNDERGROUND FEEDERS, ATS, MPD, THREE-PHASE PANEL, THREE-PHASE PUMPS & ALL CONNECTIONS AND COMPONENTS AS INDICATED.

**FIXTURE SCHEDULE**

| MARK | LAMP CATEGORY | LAMP QTY/TYP                 | VOLTS | DESCRIPTION  | MFR. AND CATALOG SERIES   | VA |
|------|---------------|------------------------------|-------|--|---|----|
| A    | LED           | 31W<br>4,269 LUMENS<br>4000K | 120   | 4' LED STRIP, CHAIN MOUNTED, ROUND SEMI-FROSTED LENS, WHITE STEEL HOUSING, ELECTRIC DRIVER, 0-10V DIMMING. E.C. SHALL CHAIN MOUNT AT A MINIMUM OF 8'-0" A.F.F..  | COOPER #4SNLED-LDS-41SL-LN-UNV-L840-CD-1--AYC-CHAIN/SET REV OR APPROVED EQUAL BY LITHONIA, CREE, ETC. | 35 |
| DA   | FLUOR         | 2-40W-R5                     | 120   | DISCONNECT AND REMOVE EXISTING 1'X4' RECESSED FIXTURE AND BALLAST. EXISTING BRANCH CIRCUITS SHALL BE REWORKED FOR NEW LIGHTING.  |   | 80 |
| E    | LED           | INCLUDED                     | 120   | COMBINATION EXIT/EGRESS LIGHT, WALL OR CEILING MOUNTED, SINGLE OR DOUBLE FACE AS REQUIRED, 6-INCH GREEN LETTERS IN WHITE STENCIL FACE, POLYCARBONATE HOUSING, ARROWS AS SHOWN, WITH TWO HI-INTENSITY ADJUSTABLE FLOOD LIGHT HEADS, UNIVERSAL MOUNTING CANOPY WITH BUILT-IN 90 MINUTE EXTRA CAPACITY BATTERY BACKUP AND OUTDOOR WEATHER PROOF REMOTE FLOODLIGHT HEAD WHERE SHOWN ON PLAN. M.H. 8'0" UNO | COOPER #APC-H-7-G-REV REMOTE HEAD APWR2 OR APPROVED EQUAL BY LITHONIA, CREE, ETC.                     | 10 |
| EM   | LED           | 2-5.3W<br>INCLUDED           | 120   | EMERGENCY EGRESS LIGHT, THERMOPLASTIC HOUSING, WHITE FINISH, LITHIUM IRON PHOSPHATE BATTERY, 90 MIN. BATTERY BACK-UP, M.H. 8'0" UNO  | COOPER #SEL-95-REV OR APPROVED EQUAL BY LITHONIA, CREE, ETC.  | 5  |



**CONCRETE/MASONRY FLOOR & WALLS**  
CONDUIT/CABLE PENETRATIONS THROUGH RATED ASSEMBLIES  
N.T.S.

- GENERAL NOTES**
- CABLE AND CONDUIT PENETRATION DETAILS ARE BASED ON A U.L. LISTED FIRE RATED ASSEMBLY (MINIMUM) UTILIZING STI FIRE STOP PRODUCTS. MANUFACTURE'S SHALL BE STI, HILTI, 3M OR APPROVED EQUAL. REFER TO MANUFACTURE'S SPECIFICATIONS AND INSTALLATION DETAILS FOR EXACT INSTALLATION METHODS.
  - PACKING AND SEALANT DEPTHS SHALL BE PER MANUFACTURE'S SPECIFICATIONS FOR U.L. ASSEMBLY RATING COMPLIANCE.
  - ALL FIRE STOP LOCATIONS SHALL BE LABELED AT POINT OF PENETRATION LABEL SHALL IDENTIFY FIRE STOPPING MATERIAL, U.L. LISTING NUMBER AND HOUR RATING OF WALL/FLOOR

**ELECTRICAL DRAWING LIST**

| DWG NO. | TITLE                                  | FILE NO.       |
|---------|--|----------------|
| E1.01   | ELECTRICAL LEGEND AND DETAILS          | 22079E1.01.dwg |
| E1.02   | ELECTRICAL PANEL SCHEDULES             | 22079E1.02.dwg |
| E1.03   | ELECTRICAL PANEL SCHEDULES             | 22079E1.03.dwg |
| E1.04   | ELECTRICAL SINGLE LINE                 | 22079E1.04.dwg |
| E1.05   | ELECTRICAL SINGLE LINE - ALTERNATE E-1 | 22079E1.05.dwg |
| E2.01   | POWER DEMO PLAN - SOUTH                | 22079E2.01.dwg |
| E2.02   | POWER DEMO PLAN - NORTH                | 22079E2.02.dwg |
| E3.01   | POWER PLAN - SOUTH                     | 22079E3.01.dwg |
| E3.02   | POWER PLAN - NORTH                     | 22079E3.02.dwg |
| E7.01   | SITE PLAN - ALTERNATE E-1              | 22079E7.01.dwg |

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY ROBERT TIMOTHY BRANNAN, PE. USING A DIGITAL SIGNATURE AND DATE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED, AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



(EXISTING CIRCUITING)

### 1 PANELBOARD SCHEDULE

EXISTING PANEL: LP-A

NOTES:  
 MAINS: 200A M.L.O.  GFCI BREAKER  ARC FAULT 22 KAIC  
 VOLTS: 120/240V-1Ø-3W-SN  30 MILLIAMP EQUIPMENT  GROUND FAULT TRIP  SWITCHED NEUTRAL  NON-CONSEQUENT LOAD  
 MOUNTING: RECESSED  SHUNT TRIP  MOTOR OPERATED

| LOAD DESCRIPTION                  | NOTES | VOLT<br>AMPS | C.B.<br>AMP | A | B    | C.B.<br>AMP | VOLT<br>AMPS | NOTES | LOAD DESCRIPTION                  |    |
|-----------------------------------|-------|--------------|-------------|---|------|-------------|--------------|-------|-----------------------------------|----|
| 1 CLASS RM #5                     |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | STAGE PLUGS                       | 16 |
| 2 UNKNOWN                         |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | STAGE PLUGS                       | 17 |
| 3 UNKNOWN                         |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | STAGE PLUGS                       | 18 |
| 4 CLASS RM #3                     |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | CLASS RM 3 & 4 PLUGS              | 19 |
| 5 CORR. CEIL. STAGE-OUT LT GYM DR |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | CLASS RM 1 & 2 PLUGS              | 20 |
| 6 OFFICE                          |       | 720          | 20          | 1 | 1080 | 1           | 20           | 360   | AUDIO PLUGS                       | 21 |
| 7 CLASS RM #6                     |       | 720          | 20          | 1 | 1220 | 1           | 20           | 500   | WIRING RM, OFFICE HEALTH RM PLUGS | 22 |
| 8 CLASS RM #9                     |       | 720          | 20          | 1 | 1440 | 2           | 15           | 720   | OVEN KITCHEN                      | 23 |
| 9 UNKNOWN                         |       | 720          | 20          | 1 | 1440 | 2           | 15           | 720   | -                                 | 24 |
| 10 UNKNOWN                        |       | 720          | 20          | 1 | 720  | 1           | 20           | 0     | GYM FANS (OFF)                    | 25 |
| 11 CLASS RM #2                    |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | UNKNOWN                           | 26 |
| 12 STAGE LTS, CORR. CEILING       |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | UNKNOWN                           | 27 |
| 13 BOR. LTS                       |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | UNKNOWN                           | 28 |
| 14 BOR. LTS                       |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | UNKNOWN                           | 29 |
| 15 CLASS RM 5 & 6 RECEPT          |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | UNKNOWN                           | 30 |

HANDLE TIE  
 HANDLE LOCK

TOTAL LOAD: 20300 TOTAL AMPS: 84.6

(NEW CIRCUITING)

### 2,3 PANELBOARD SCHEDULE

PANEL: LP-A

NOTES:  
 MAINS: 200A M.L.O.  GFCI BREAKER  ARC FAULT 22 KAIC  
 VOLTS: 120/240V-1Ø-3W-SN  30 MILLIAMP EQUIPMENT  GROUND FAULT TRIP  SWITCHED NEUTRAL  NON-CONSEQUENT LOAD  
 MOUNTING: RECESSED  SHUNT TRIP  MOTOR OPERATED

| LOAD DESCRIPTION                  | NOTES | VOLT<br>AMPS | C.B.<br>AMP | A | B    | C.B.<br>AMP | VOLT<br>AMPS | NOTES | LOAD DESCRIPTION                  |    |
|-----------------------------------|-------|--------------|-------------|---|------|-------------|--------------|-------|-----------------------------------|----|
| 1 CLASS RM #5                     |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | STAGE PLUGS                       | 2  |
| 3 UNKNOWN                         |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | STAGE PLUGS                       | 4  |
| 5 UNKNOWN                         |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | STAGE PLUGS                       | 6  |
| 7 CLASS RM #3                     |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | CLASS RM 3 & 4 PLUGS              | 8  |
| 9 CORR. CEIL. STAGE-OUT LT GYM DR |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | CLASS RM 1 & 2 PLUGS              | 10 |
| 11 OFFICE                         |       | 720          | 20          | 1 | 1080 | 1           | 20           | 360   | AUDIO PLUGS                       | 12 |
| 13 CLASS RM #6                    |       | 720          | 20          | 1 | 1220 | 1           | 20           | 500   | WIRING RM, OFFICE HEALTH RM PLUGS | 14 |
| 15 CLASS RM #9                    |       | 720          | 20          | 1 | 1440 | 2           | 15           | 720   | OVEN KITCHEN                      | 16 |
| 17 UNKNOWN                        |       | 720          | 20          | 1 | 1440 | 2           | 15           | 720   | -                                 | 18 |
| 19 UNKNOWN                        |       | 720          | 20          | 1 | 720  | 1           | 20           | 0     | GYM FANS (OFF)                    | 20 |
| 21 CLASS RM #2                    |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | UNKNOWN                           | 22 |
| 23 STAGE LTS, CORR. CEILING       |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | UNKNOWN                           | 24 |
| 25 BOR. LTS                       |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | UNKNOWN                           | 26 |
| 27 BOR. LTS                       |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | UNKNOWN                           | 28 |
| 29 CLASS RM 5 & 6 RECEPT          |       | 720          | 20          | 1 | 1440 | 1           | 20           | 720   | UNKNOWN                           | 30 |
| 31 SPARE                          |       | 0            | 20          | 1 | 756  | 1           | 15           | 756   | UV-11                             | 32 |
| 33 UV-5                           |       | 756          | 15          | 1 | 1512 | 1           | 15           | 756   | UV-10                             | 34 |
| 35 UV-4 & CUH-4                   |       | 956          | 20          | 1 | 1712 | 1           | 15           | 756   | UV-9                              | 36 |
| 37 UV-3                           |       | 756          | 15          | 1 | 756  | 1           | 20           | 0     | SPARE                             | 38 |
| 39 PANEL RECEPT                   |       | 180          | 20          | 1 | 180  | 1           | 20           | 0     | SPARE                             | 40 |
| 41 SPARE                          |       | 0            | 20          | 1 | 0    | 1           | 20           | 0     | SPARE                             | 42 |

HANDLE TIE  
 HANDLE LOCK

TOTAL LOAD: 25216 TOTAL AMPS: 105.1

### 2 PANELBOARD SCHEDULE

PANEL: LP-C1

NOTES:  
 MAINS: 200A M.L.O.  GFCI BREAKER  ARC FAULT 22 KAIC  
 VOLTS: 120/240V-1Ø-3W-SN  30 MILLIAMP EQUIPMENT  GROUND FAULT TRIP  SWITCHED NEUTRAL  NON-CONSEQUENT LOAD  
 MOUNTING: RECESSED  SHUNT TRIP  MOTOR OPERATED

| LOAD DESCRIPTION | NOTES | VOLT<br>AMPS | C.B.<br>AMP | A | B    | C.B.<br>AMP | VOLT<br>AMPS | NOTES | LOAD DESCRIPTION |    |
|------------------|-------|--------------|-------------|---|------|-------------|--------------|-------|------------------|----|
| 1 PANEL RECEPT.  |       | 180          | 20          | 1 | 1186 | 1           | 20           | 1006  | UV-1 & CUH-1     | 2  |
| 3 SPARE          |       | 0            | 20          | 1 | 756  | 1           | 15           | 756   | UV-2             | 4  |
| 5 SPARE          |       | 0            | 20          | 1 | 756  | 1           | 15           | 756   | UV-6             | 6  |
| 7 SPARE          |       | 0            | 20          | 1 | 756  | 1           | 15           | 756   | UV-7             | 8  |
| 9 SPARE          |       | 0            | 20          | 1 | 756  | 1           | 15           | 756   | UV-8             | 10 |
| 11 SPARE         |       | 0            | 20          | 1 | 0    | 0           | 1            | 20    | 0                | 12 |
| 13 SPARE         |       | 0            | 20          | 1 | 0    | 0           | 1            | 20    | 0                | 14 |
| 15 SPARE         |       | 0            | 20          | 1 | 0    | 0           | 1            | 20    | 0                | 16 |
| 17 SPARE         |       | 0            | 20          | 1 | 0    | 0           | 1            | 20    | 0                | 18 |
| 19 SPARE         |       | 0            | 20          | 1 | 0    | 0           | 1            | 20    | 0                | 20 |
| 21 SPARE         |       | 0            | 20          | 1 | 0    | 0           | 1            | 20    | 0                | 22 |
| 23 SPARE         |       | 0            | 20          | 1 | 0    | 0           | 1            | 20    | 0                | 24 |
| 25 SPARE         |       | 0            | 20          | 1 | 0    | 0           | 1            | 20    | 0                | 26 |
| 27 SPARE         |       | 0            | 20          | 1 | 0    | 0           | 1            | 20    | 0                | 28 |
| 29 SPARE         |       | 0            | 20          | 1 | 0    | 0           | 1            | 20    | 0                | 30 |
| 31 SPACE         |       | 0            | 0           | 0 | 0    | 0           | 0            | 0     | SPACE            | 32 |
| 33 SPACE         |       | 0            | 0           | 0 | 0    | 0           | 0            | 0     | SPACE            | 34 |
| 35 SPACE         |       | 0            | 0           | 0 | 0    | 0           | 0            | 0     | SPACE            | 36 |
| 37 SPACE         |       | 0            | 0           | 0 | 0    | 0           | 0            | 0     | SPACE            | 38 |
| 39 SPACE         |       | 0            | 0           | 0 | 0    | 0           | 0            | 0     | SPACE            | 40 |
| 41 SPACE         |       | 0            | 0           | 0 | 0    | 0           | 0            | 0     | SPACE            | 42 |

HANDLE TIE  
 HANDLE LOCK

TOTAL LOAD: 4210 TOTAL AMPS: 17.5

ALTERNATE E-1

### 2 PANELBOARD SCHEDULE

PANEL: LP-C1

NOTES:  
 MAINS: 200A M.L.O.  GFCI BREAKER  ARC FAULT 25 KAIC RATING  
 VOLTS: 120/240V-3Ø-4W-SN  30 MILLIAMP EQUIPMENT  GROUND FAULT TRIP  SWITCHED NEUTRAL  NON-CONSEQUENT LOAD  
 MOUNTING: SURFACE  SHUNT TRIP  MOTOR OPERATED  RELAY CONTROLLED

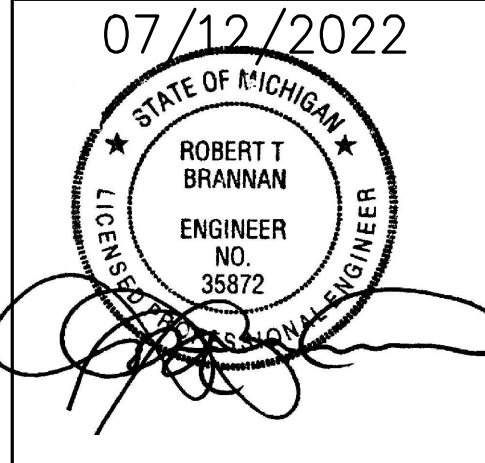
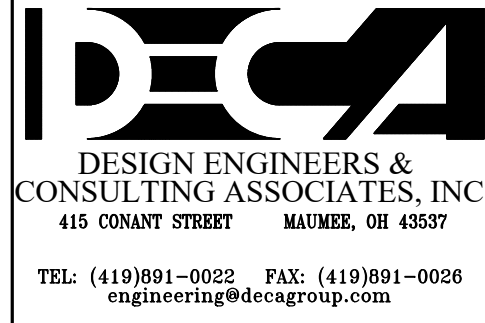
| LOAD DESCRIPTION | NOTES | VOLT<br>AMPS | C.B.<br>AMP | A | B    | C | C.B.<br>AMP | VOLT<br>AMPS | NOTES | LOAD DESCRIPTION |    |
|------------------|-------|--------------|-------------|---|------|---|-------------|--------------|-------|------------------|----|
| 1 PANEL RECEPT.  |       | 180          | 20          | 1 | 1186 |   | 1           | 20           | 1006  | UV-1 & CUH-1     | 2  |
| 3 (WILD LEG)     |       | 0            |             |   | 0    |   |             | 0            |       | (WILD LEG)       | 4  |
| 5 SPARE          |       | 0            | 20          | 1 | 756  |   | 1           | 15           | 756   | UV-2             | 6  |
| 7 SPARE          |       | 0            | 20          | 1 | 756  |   | 1           | 15           | 756   | UV-6             | 8  |
| 9 (WILD LEG)     |       | 0            |             |   | 0    |   |             | 0            |       | (WILD LEG)       | 10 |
| 11 SPARE         |       | 0            | 20          | 1 | 756  |   | 1           | 15           | 756   | UV-7             | 12 |
| 13 SPARE         |       | 0            | 20          | 1 | 756  |   | 1           | 15           | 756   | UV-8             | 14 |
| 15 (WILD LEG)    |       | 0            |             |   | 0    |   |             | 0            |       | (WILD LEG)       | 16 |
| 17 SPARE         |       | 0            | 20          | 1 | 756  |   | 1           | 15           | 756   | UV-9             | 18 |
| 19 SPARE         |       | 0            | 20          | 1 | 0    |   | 1           | 20           | 0     | SPARE            | 20 |
| 21 (WILD LEG)    |       | 0            |             |   | 0    |   |             | 0            |       | (WILD LEG)       | 22 |
| 23 SPARE         |       | 0            | 20          | 1 | 0    |   | 1           | 20           | 0     | SPARE            | 24 |
| 25 SPARE         |       | 0            | 20          | 1 | 0    |   | 1           | 20           | 0     | SPARE            | 26 |
| 27 (WILD LEG)    |       | 0            |             |   | 0    |   |             | 0            |       | (WILD LEG)       | 28 |
| 29 SPARE         |       | 0            | 20          | 1 | 0    |   | 1           | 20           | 0     | SPARE            | 30 |
| 31 SPARE         |       | 0            | 20          | 1 | 0    |   | 1           | 20           | 0     | SPARE            | 32 |
| 33 (WILD LEG)    |       | 0            |             |   | 0    |   |             | 0            |       | (WILD LEG)       | 34 |
| 35 SPARE         |       | 0            | 20          | 1 | 0    |   | 1           | 20           | 0     | SPARE            | 36 |
| 37 SPARE         |       | 0            | 20          | 1 | 0    |   | 1           | 20           | 0     | SPARE            | 38 |
| 39 (WILD LEG)    |       | 0            |             |   | 0    |   |             | 0            |       | (WILD LEG)       | 40 |
| 41 SPARE         |       | 0            | 20          | 1 | 0    |   | 1           | 20           | 0     | SPARE            | 42 |

HANDLE TIE  
 HANDLE LOCK

TOTAL LOAD: 4210 TOTAL AMPS: 10.1

**PANEL SCHEDULE NOTES**

- 1 RE-CIRCUIT EXISTING BRANCH CIRCUIT TO PANEL AS SHOWN. REFER TO PANEL SCHEDULE ON THIS SHEET. EXISTING BREAKER IN OFF POSITION SHALL BECOME SPARE AND/OR AVAILABLE FOR NEW CIRCUITING. NEW BRANCH CIRCUITS SHALL BE IN DEDICATED RACEWAYS AS PER THE SPECIFICATIONS.
- 2 E.C. SHALL UPDATE PANEL DIRECTORY AT COMPLETION OF PROJECT.
- 3 EXISTING BRANCH CIRCUIT SHALL BE RE-CIRCUITED TO NEW PANEL AS SHOWN.



| DATE       | DESCRIPTION            |
|------------|------------------------|
| 07.12.2022 | BIDDING & STATE REVIEW |

**MECHANICAL UPDATES & RELATED WORK**

**WATERLOO ELEMENTARY SCHOOL**  
 1833 SOUTH CUSTER ROAD, MONROE, MI 48161

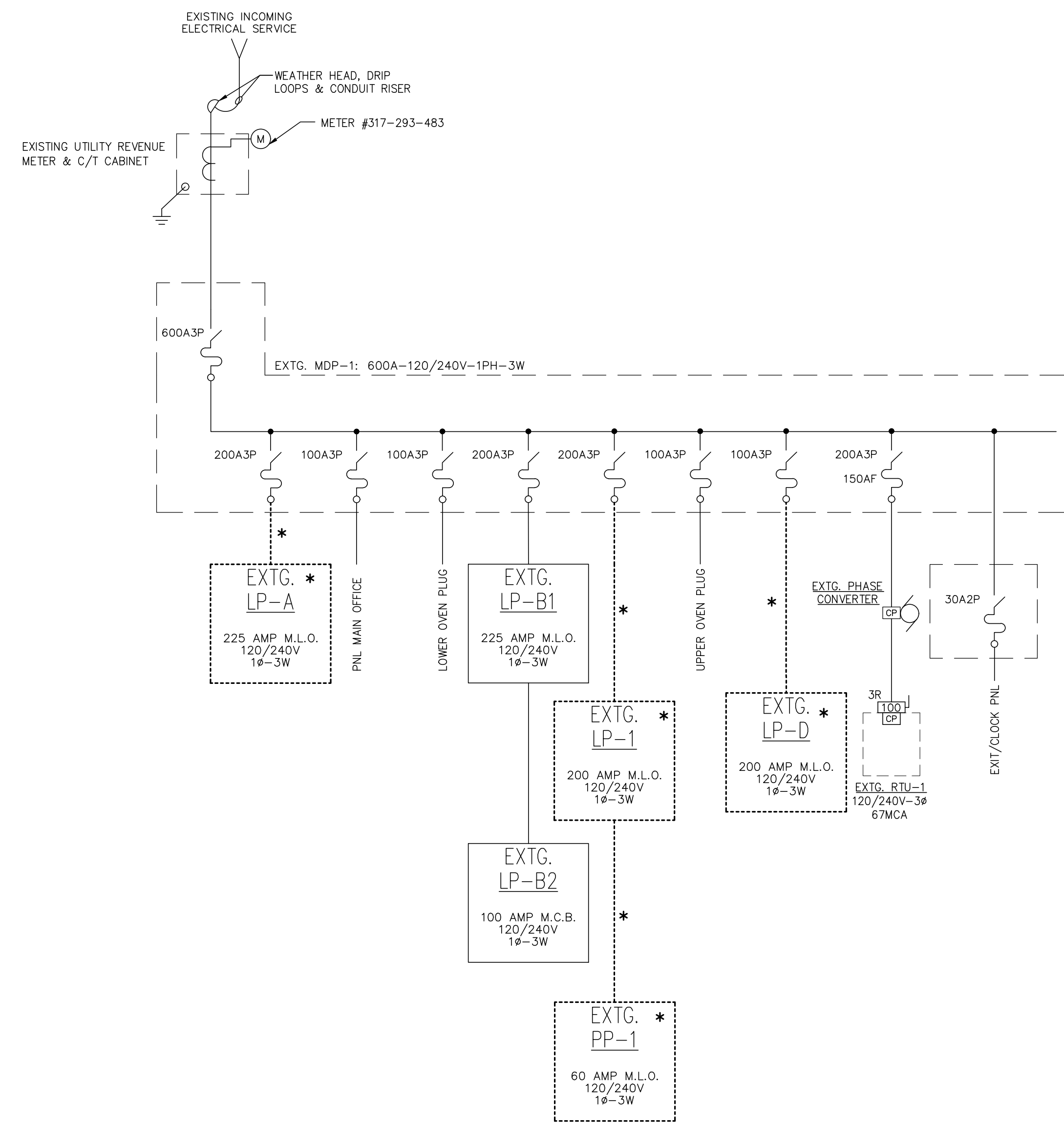
**MONROE PUBLIC SCHOOLS**  
 1275 N. MACOMB STREET, MONROE, MI 48162

|         |       |
|---------|-------|
| JOB #   | 22114 |
| DRAWN   | NCB   |
| CHECKED | MAK   |

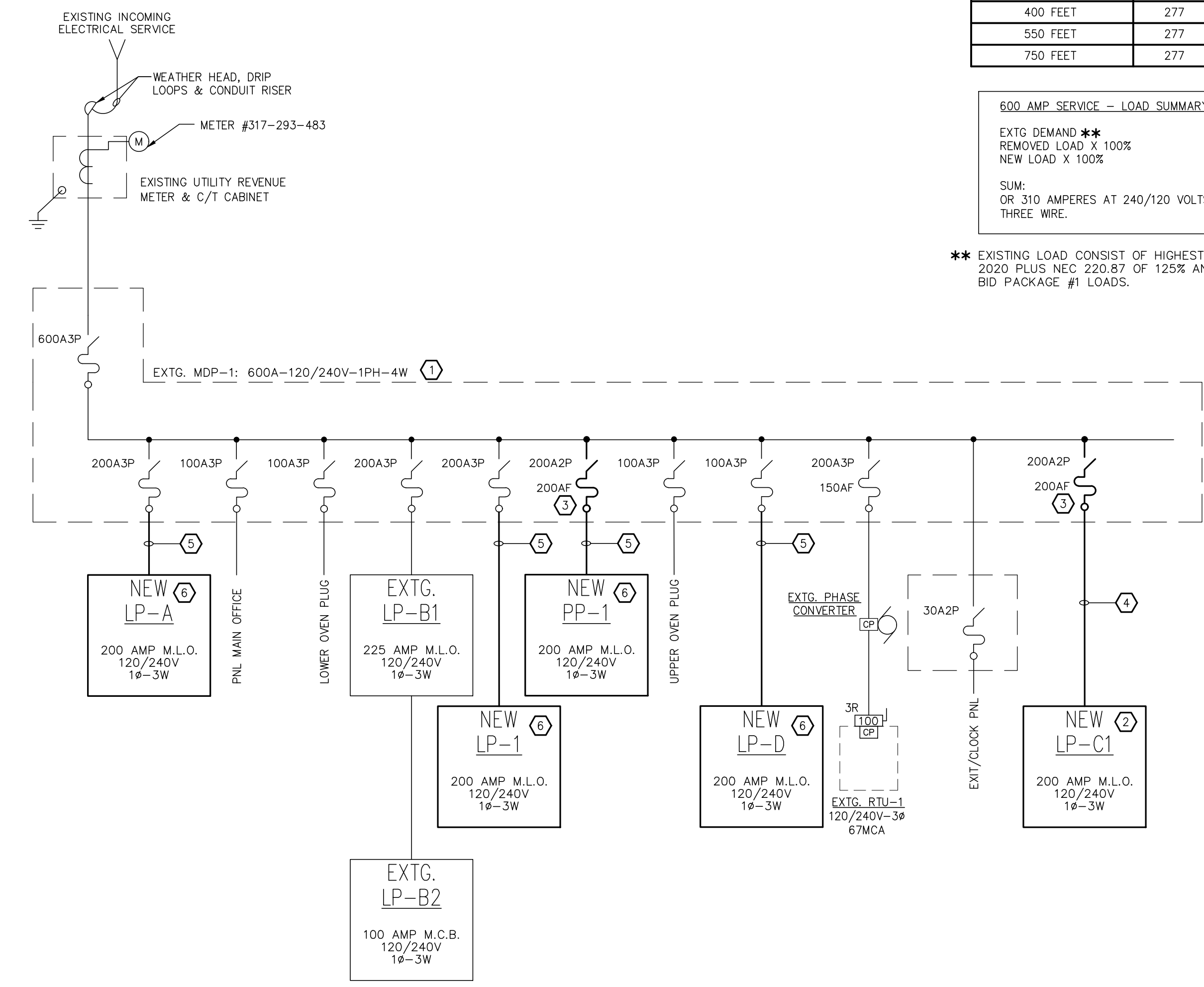
ELECTRICAL PANEL SCHEDULES

**E1.03**

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**ELECTRICAL SINGLE LINE DIAGRAM – DEMO/EXISTING**  
N.T.S.



**ELECTRICAL SINGLE LINE DIAGRAM**  
N.T.S.

**SINGLE LINE NOTES**

- ① E.C. SHALL NEATLY UPDATE EQUIPMENT TAGS, NAMEPLATE INFORMATION, DIRECTORY, ETC. AS NEATLY AS POSSIBLE.
- ② REFERENCE SHEET E3.01 FOR LOCATION OF EQUIPMENT.
- ③ INSTALL NEW SIEMENS VACU-BREAK SWITCH IN AVAILABLE SPACE. SWITCH SHALL MATCH OTHER SWITCHES IN TYPE, STYLE AND INTERRUPTING RATING.
- ④ 3#250KCMIL + #4G - 2°C
- ⑤ 3#3/0 + #6G - 2°C
- ⑥ REFERENCE SHEET E3.02 FOR LOCATION OF EQUIPMENT.

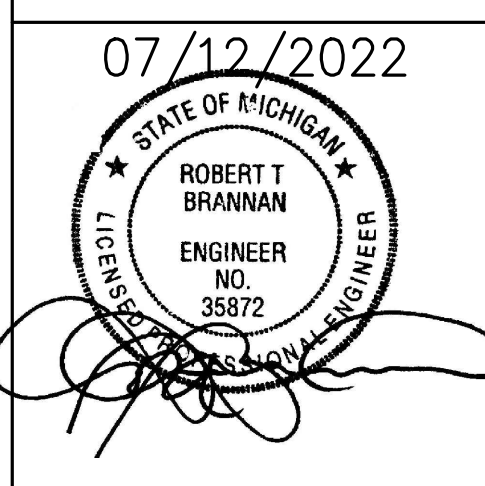
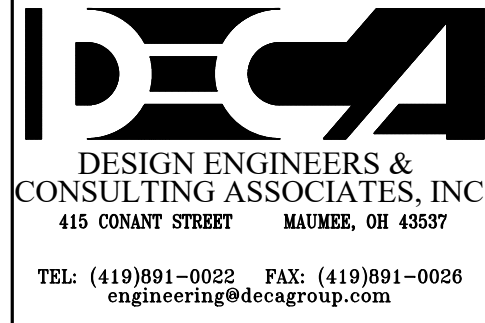
**BRANCH CIRCUIT CONDUCTOR SIZING CHART**

| MAX. CIRCUIT LENGTH TO FARTHEST OUTLET | CIRCUIT VOLTAGE | MINIMUM BRANCH CIRCUIT SIZE |
|--|-----------------|-----------------------------|
| 100 FEET                               | 120             | #12 AWG                     |
| 165 FEET                               | 120             | #10 AWG                     |
| 265 FEET                               | 120             | #8 AWG                      |
| 400 FEET                               | 120             | #6 AWG                      |
| 250 FEET                               | 277             | #12 AWG                     |
| 400 FEET                               | 277             | #10 AWG                     |
| 550 FEET                               | 277             | #8 AWG                      |
| 750 FEET                               | 277             | #6 AWG                      |

**600 AMP SERVICE – LOAD SUMMARY:**

|   |                  |
|---|------------------|
| EXTG DEMAND **  | 71.70 KVA        |
| REMOVED LOAD X 100%                                       | 16.56 KVA        |
| NEW LOAD X 100%   | 19.32 KVA        |
| <b>SUM:</b>   | <b>74.46 KVA</b> |
| OR 310 AMPERES AT 240/120 VOLTS SINGLE PHASE, THREE WIRE. |                  |

\*\* EXISTING LOAD CONSIST OF HIGHEST ELECTRICAL DEMAND IN 2020 PLUS NEC 220.87 OR 125% AND MONROE BOND WORK BID PACKAGE #1 LOADS.



| DATE       | DESCRIPTION            |
|------------|------------------------|
| 07.12.2022 | BIDDING & STATE REVIEW |

**MECHANICAL UPDATES & RELATED WORK**  
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1833 SOUTH CUSTER ROAD, MONROE, MI 48161  
**MONROE PUBLIC SCHOOLS**  
1275 N. MACOMB STREET, MONROE, MI 48162

|         |       |
|---------|-------|
| JOB #   | 22114 |
| DRAWN   | NCB   |
| CHECKED | JTH   |

ELECTRICAL SINGLE-LINE

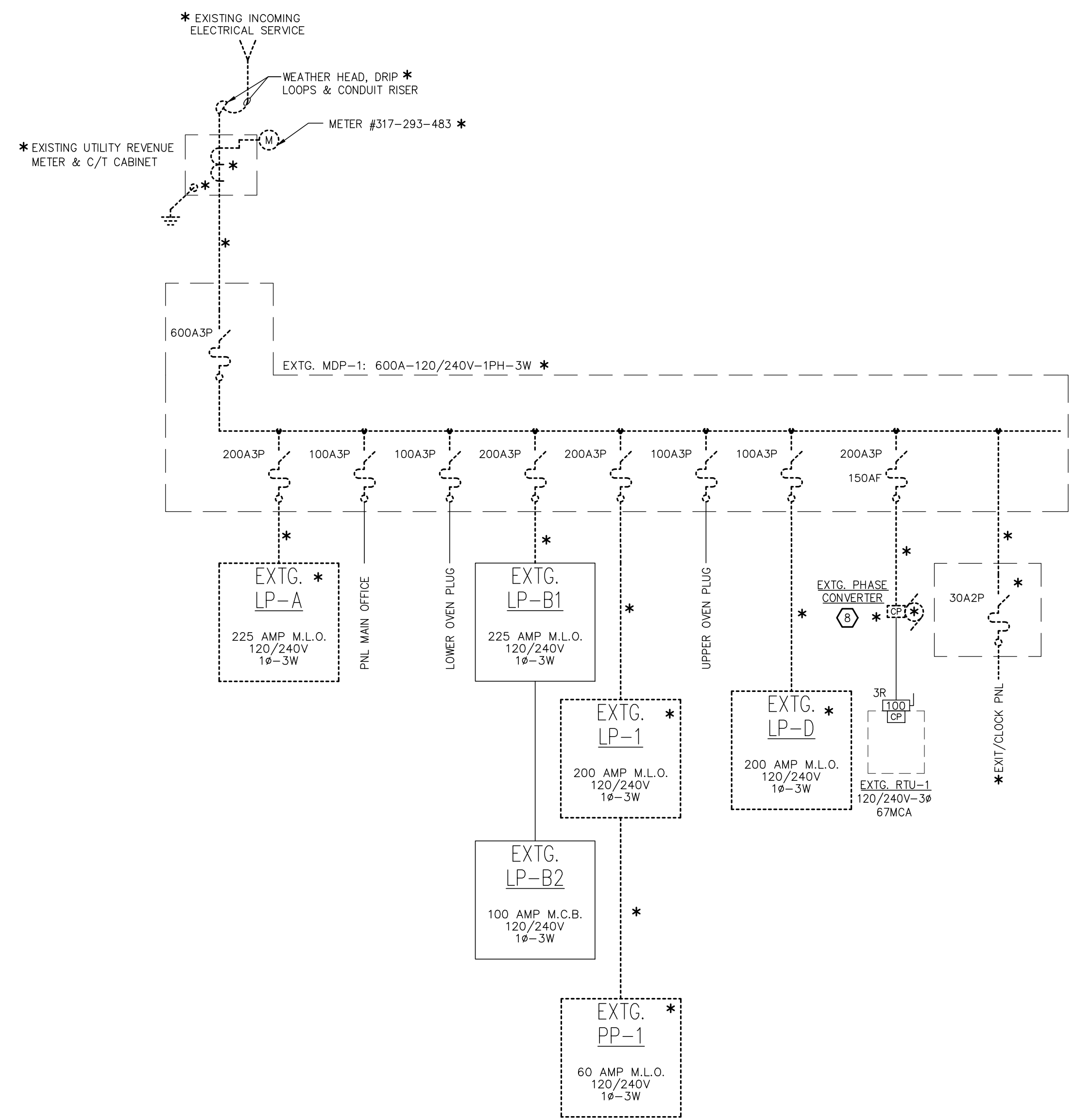
**E1.04**

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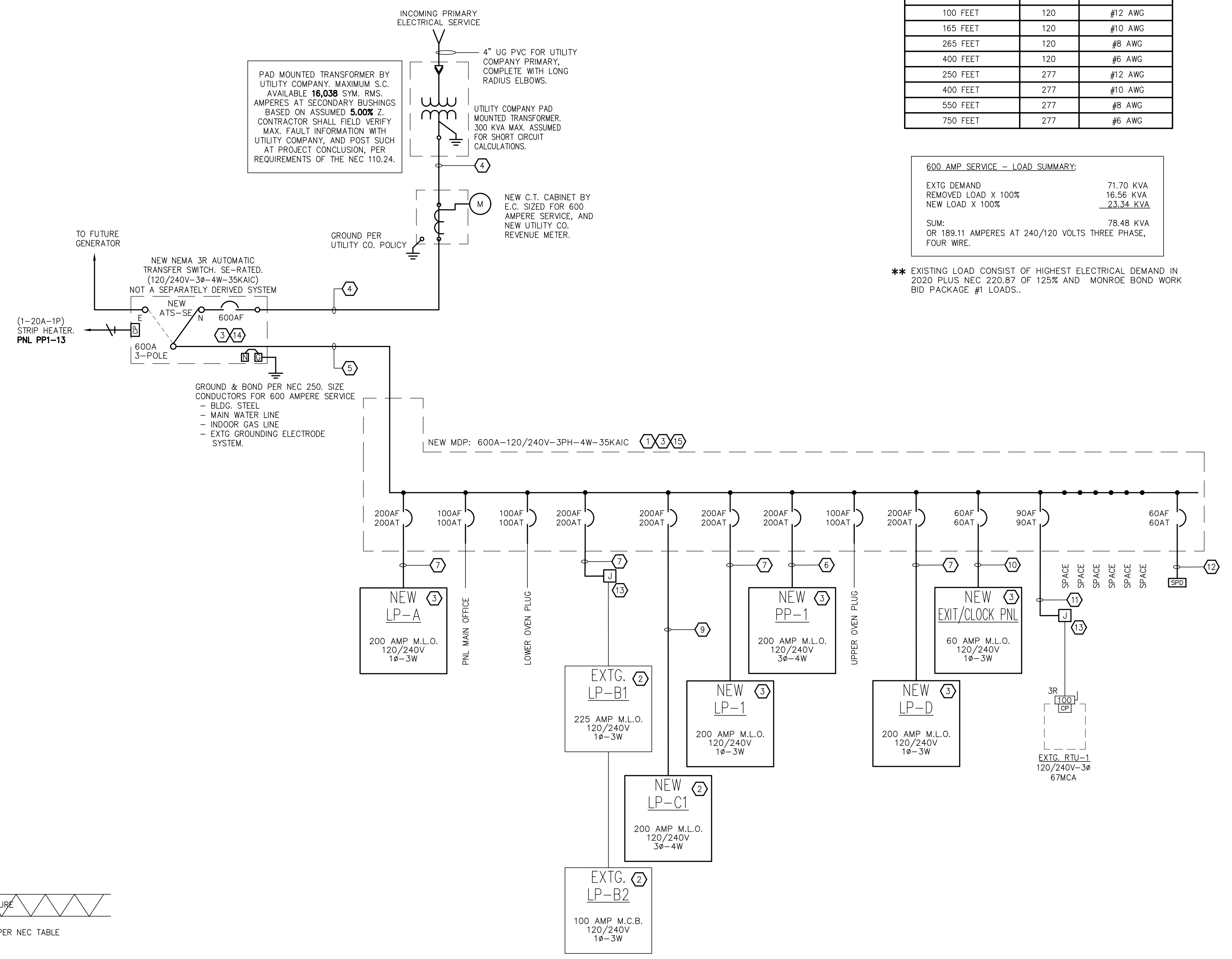
| BRANCH CIRCUIT CONDUCTOR SIZING CHART  |                 |                             |
|--|-----------------|-----------------------------|
| MAX. CIRCUIT LENGTH TO FARTHEST OUTLET | CIRCUIT VOLTAGE | MINIMUM BRANCH CIRCUIT SIZE |
| 100 FEET                               | 120             | #12 AWG                     |
| 165 FEET                               | 120             | #10 AWG                     |
| 265 FEET                               | 120             | #8 AWG                      |
| 400 FEET                               | 120             | #6 AWG                      |
| 250 FEET                               | 277             | #12 AWG                     |
| 400 FEET                               | 277             | #10 AWG                     |
| 550 FEET                               | 277             | #8 AWG                      |
| 750 FEET                               | 277             | #6 AWG                      |

| 600 AMP SERVICE - LOAD SUMMARY:                            |           |
|--|-----------|
| EXTG DEMAND  | 71.70 KVA |
| REMOVED LOAD X 100%  | 16.56 KVA |
| NEW LOAD X 100%  | 23.34 KVA |
| SUM:   | 78.48 KVA |
| OR 189.11 AMPERES AT 240/120 VOLTS THREE PHASE, FOUR WIRE. |           |

\*\* EXISTING LOAD CONSIST OF HIGHEST ELECTRICAL DEMAND IN 2020 PLUS NEC 220.87 OF 125% AND MONROE BOND WORK BID PACKAGE #1 LOADS..

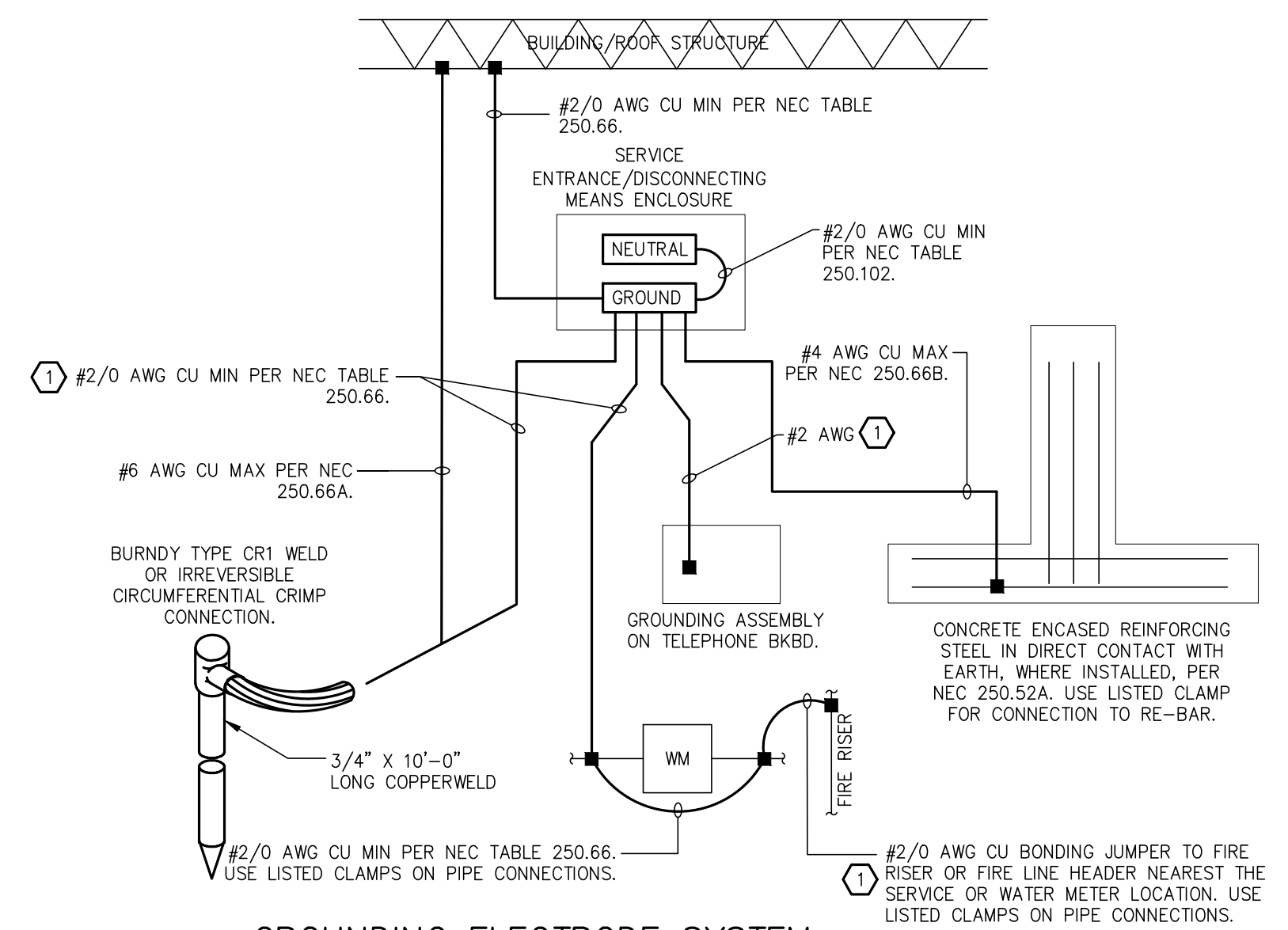


ELECTRICAL SINGLE LINE DIAGRAM -- DEMO/EXISTING  
N.T.S.



ELECTRICAL SINGLE LINE DIAGRAM  
N.T.S.

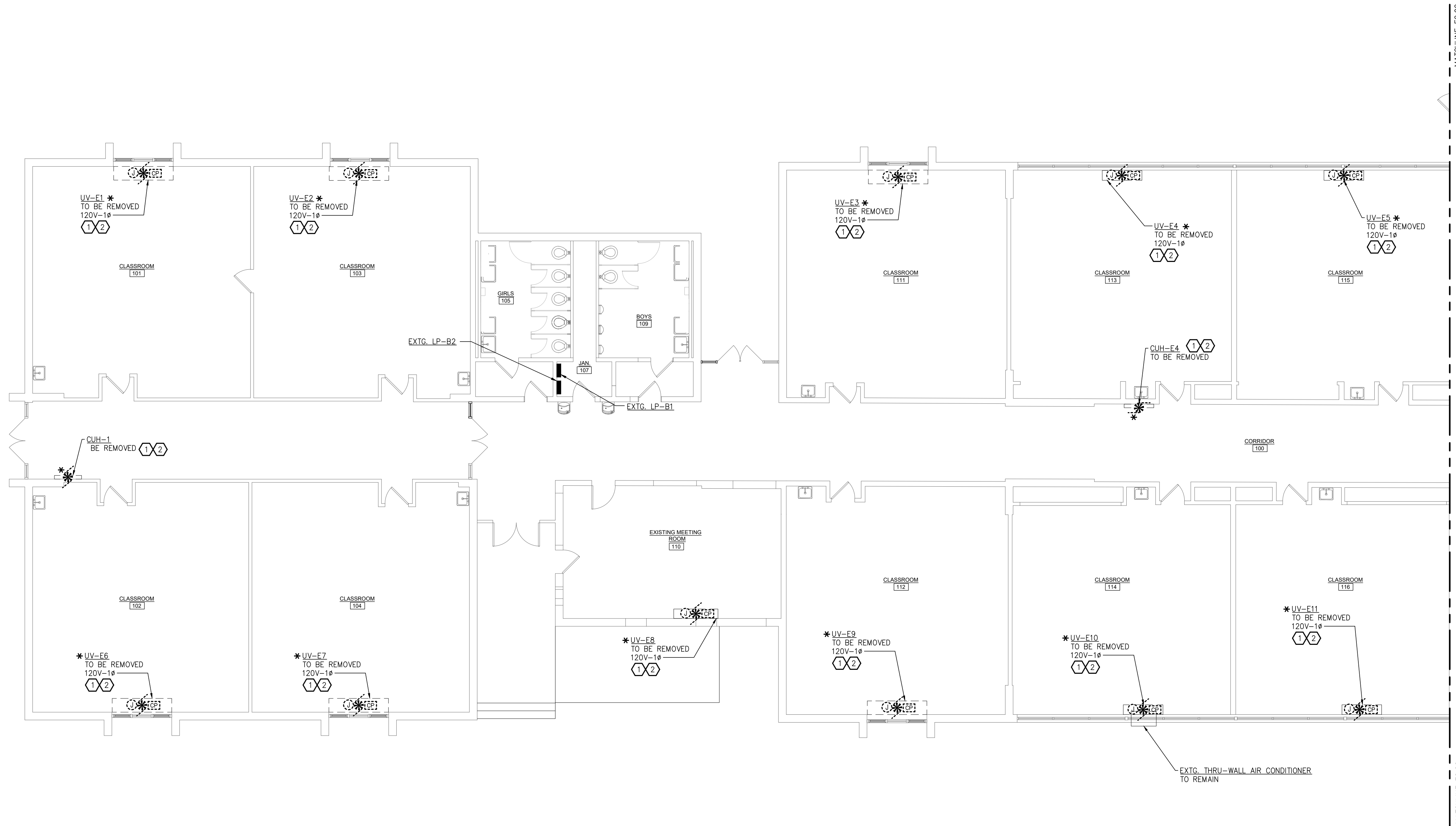
- SINGLE LINE NOTES**
- E.C. SHALL NEATLY UPDATE EQUIPMENT TAGS, NAMEPLATE INFORMATION, DIRECTORY, ETC. AS NEATLY AS POSSIBLE.
  - REFERENCE SHEET E3.01 FOR LOCATION OF EQUIPMENT.
  - REFERENCE SHEET E3.02 FOR LOCATION OF EQUIPMENT.
  - 2(4#350KCMIL - 4" C)
  - 2(4#350KCMIL + #2/0G - 4" C)
  - 4#3/0 + #6G - 2" C
  - 3#3/0 + #6G - 2" C
  - E.C. SHALL REMOVE WITH CARE AND TURN OVER TO OWNER.
  - 4#4/0 + #4G - 2.5" C
  - 3#6 + #10G - .75" C
  - 3#4 + #8G - 1" C
  - 4 #6 + #10G-1" SHORT AND STRAIGHT AS POSSIBLE.
  - INTERCEPT AND REWORK EXISTING FEEDER, CONDUIT AND WIRING, TO NEW BREAKER AS INDICATED.
  - 100% RATED MAIN BREAKER.
  - E.C. SHALL FEED ALL SINGLE PHASE PANELS WITH A & C LEG.



GROUNDING ELECTRODE SYSTEM  
N.T.S.

(ALSO PROVIDE #12 AWG BONDING CONNECTION TO INTERIOR GAS LINE PER NEC 250.104, AT AN ACCESSIBLE LOCATION NEAR GAS WATER HEATER IF INSTALLED, WHERE PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.)

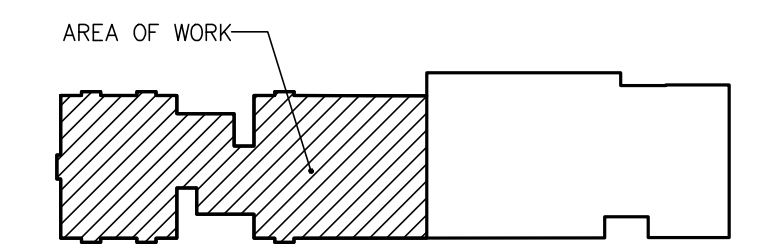
(1) GROUNDING ELECTRODE CONDUCTOR MAY BE ROUTED TO THE CLOSEST POINT OF THE GROUNDING ELECTRODE SYSTEM AND BONDED THERETO. BUILDING STEEL STRUCTURE IS A GROUNDING ELECTRODE IN THIS FACILITY.



**POWER DEMO PLAN - SOUTH**  
 SCALE: 1/8" = 1'-0"

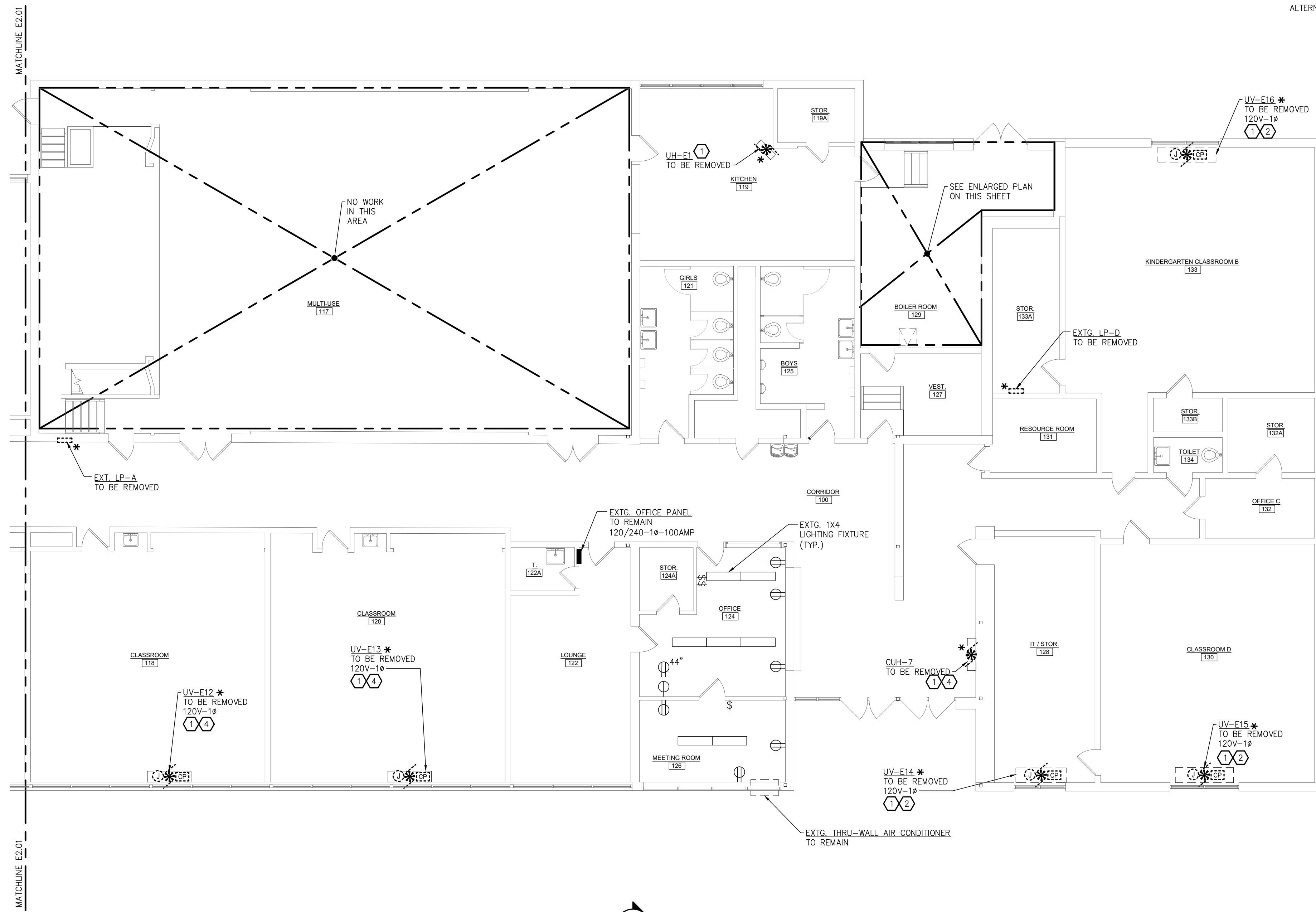
- PLAN NOTES**
- E.C. SHALL DISCONNECT EXISTING ELECTRICAL CONNECTIONS TO ACCOMMODATE REMOVAL OF MECHANICAL EQUIPMENT BY OTHERS. COORDINATE WITH M.C. BEFORE COMMENCEMENT OF WORK.
  - E.C. SHALL FIELD VERIFY EXISTING BRANCH CIRCUITS THAT SHALL BE REMOVED BACK TO SOURCE. ASSUMED SOURCE IS EXISTING PANEL LP-B1.

**GENERAL NOTES**  
 E.C. SHALL COORDINATE WITH MECHANICAL DRAWINGS AND CONTRACTOR FOR PROJECT SCOPE AND SEQUENCE OF CONSTRUCTION BEFORE COMMENCING ANY WORK.



**AREA OF WORK KEY PLAN**  
 NO SCALE

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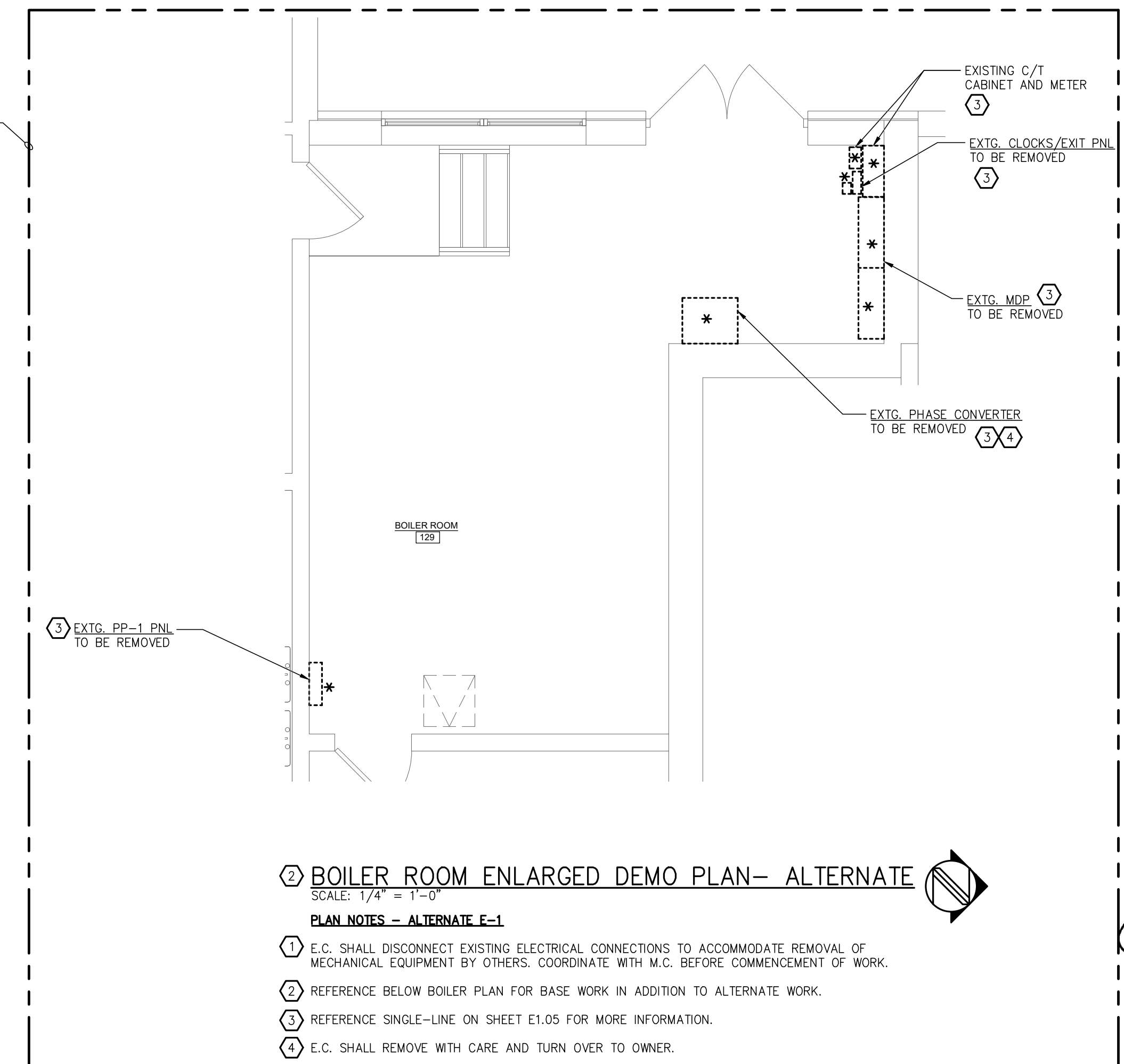
**POWER DEMO PLAN - NORTH**  
SCALE: 1/8" = 1'-0"

**SHEET NOTES**

- 1 E.C. SHALL DISCONNECT EXISTING ELECTRICAL CONNECTIONS TO ACCOMMODATE REMOVAL OF MECHANICAL EQUIPMENT BY OTHERS. COORDINATE WITH M.C. BEFORE COMMENCEMENT OF WORK.
- 2 E.C. SHALL FIELD VERIFY EXISTING BRANCH CIRCUITS THAT SHALL BE REMOVED BACK TO SOURCE. ASSUMED SOURCE IS EXISTING PANEL LP-D.
- 3 REFERENCE SINGLE-LINE ON SHEET E1.04 FOR MORE INFORMATION.
- 4 E.C. SHALL FIELD VERIFY EXISTING BRANCH CIRCUITS THAT SHALL BE REMOVED BACK TO SOURCE. ASSUMED SOURCE IS EXISTING PANEL LP-1.

**GENERAL NOTES**

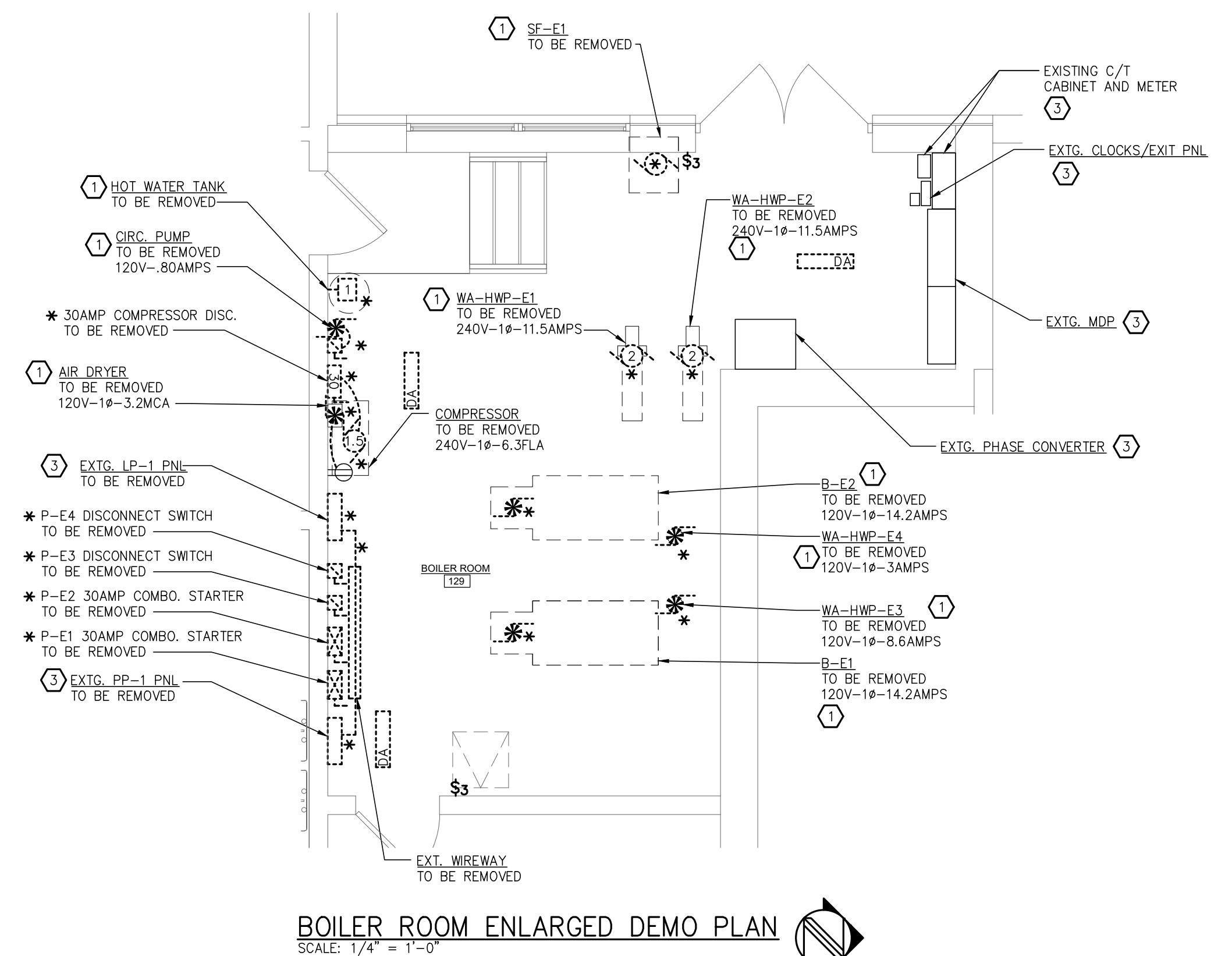
E.C. SHALL COORDINATE WITH MECHANICAL DRAWINGS AND CONTRACTOR FOR PROJECT SCOPE AND SEQUENCE OF CONSTRUCTION BEFORE COMMENCING ANY WORK.



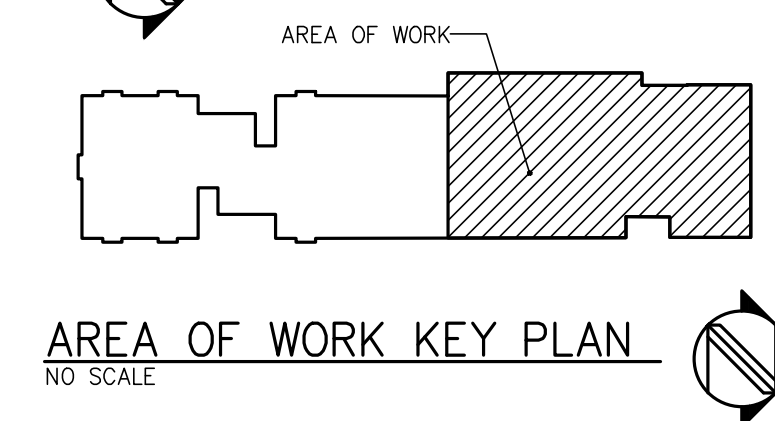
**BOILER ROOM ENLARGED DEMO PLAN- ALTERNATE E-1**  
SCALE: 1/4" = 1'-0"

**PLAN NOTES - ALTERNATE E-1**

- 1 E.C. SHALL DISCONNECT EXISTING ELECTRICAL CONNECTIONS TO ACCOMMODATE REMOVAL OF MECHANICAL EQUIPMENT BY OTHERS. COORDINATE WITH M.C. BEFORE COMMENCEMENT OF WORK.
- 2 REFERENCE BELOW BOILER PLAN FOR BASE WORK IN ADDITION TO ALTERNATE WORK.
- 3 REFERENCE SINGLE-LINE ON SHEET E1.05 FOR MORE INFORMATION.
- 4 E.C. SHALL REMOVE WITH CARE AND TURN OVER TO OWNER.



**BOILER ROOM ENLARGED DEMO PLAN**  
SCALE: 1/4" = 1'-0"



**AREA OF WORK KEY PLAN**  
NO SCALE

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DESIGN ENGINEERS & CONSULTING ASSOCIATES, INC.  
415 CONANT STREET MAUMEE, OH 43537  
TEL: (419)891-0023 FAX: (419)891-0028  
engineer@decagroup.com

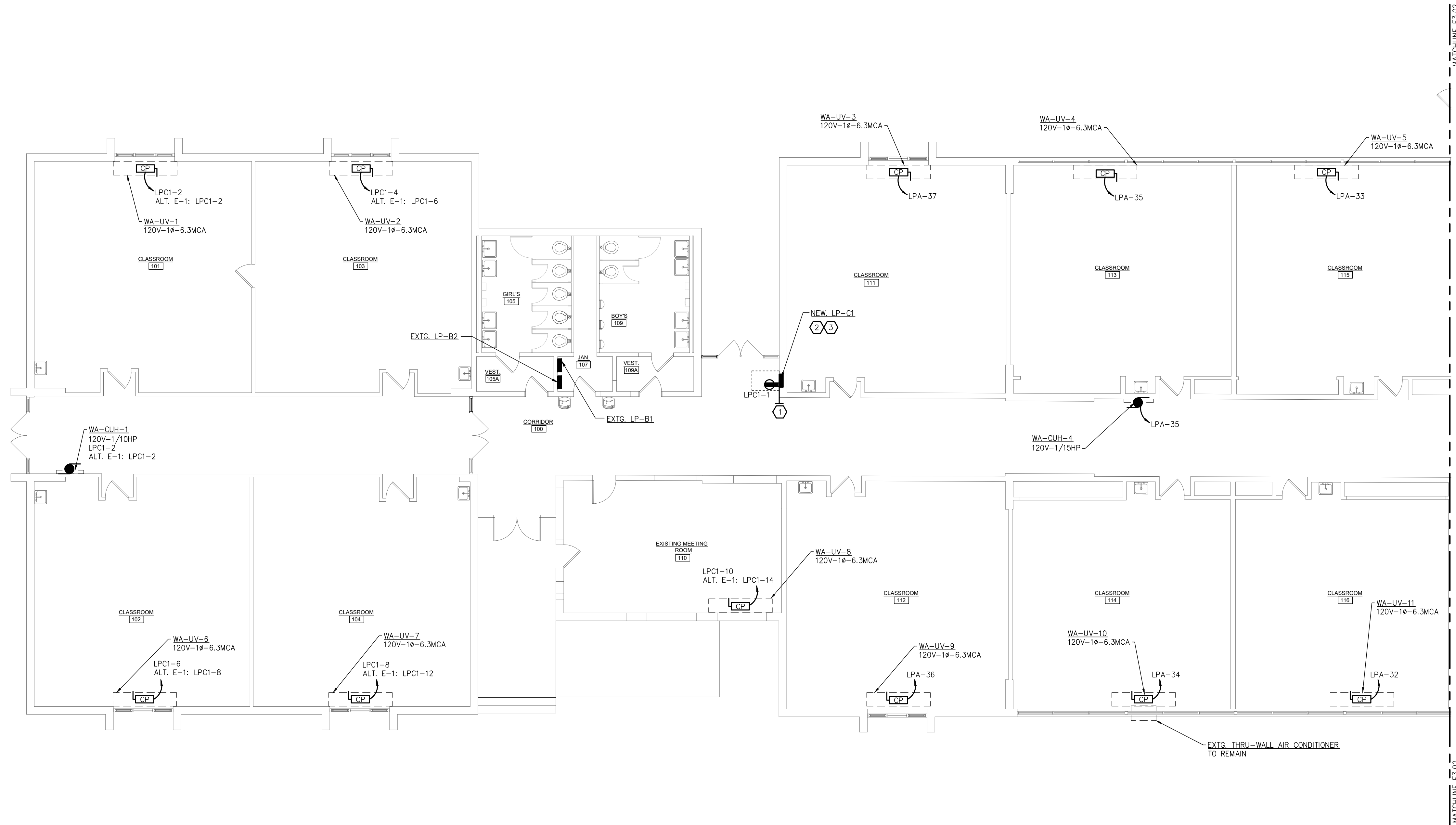
07/12/2022  
STATE OF MICHIGAN  
ROBERT T. BRANNAN  
ENGINEER  
NO. 35872  
LICENSED PROFESSIONAL ENGINEER

| DATE       | DESCRIPTION            |
|------------|------------------------|
| 07.12.2022 | BIDDING & STATE REVIEW |

**MECHANICAL UPDATES & RELATED WORK**  
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**MONROE PUBLIC SCHOOLS**  
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|         |       |
|---------|-------|
| JOB #   | 22114 |
| DRAWN   | NCB   |
| CHECKED | MAK   |

POWER DEMO  
PLAN - NORTH  
**E2.02**



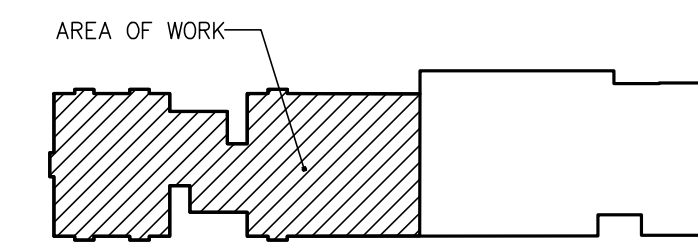
**POWER PLAN - SOUTH**  
 SCALE: 1/8" = 1'-0"

**PLAN NOTES:**

- 1 PROVIDE (3) 1" STUB/SLEEVE TO ACCESSIBLE CORRIDOR CEILING FOR FUTURE.
- 2 NEW FEEDERS SHALL FOLLOW EXISTING FEEDER ROUTE. REFERENCE SINGLE LINE FOR MORE INFORMATION.
- 3 REFERENCE SHEET E1.03 FOR MORE INFORMATION.

**GENERAL NOTES**

E.C. SHALL COORDINATE WITH MECHANICAL DRAWINGS AND CONTRACTOR FOR PROJECT SCOPE AND SEQUENCE OF CONSTRUCTION BEFORE COMMENCING ANY WORK.

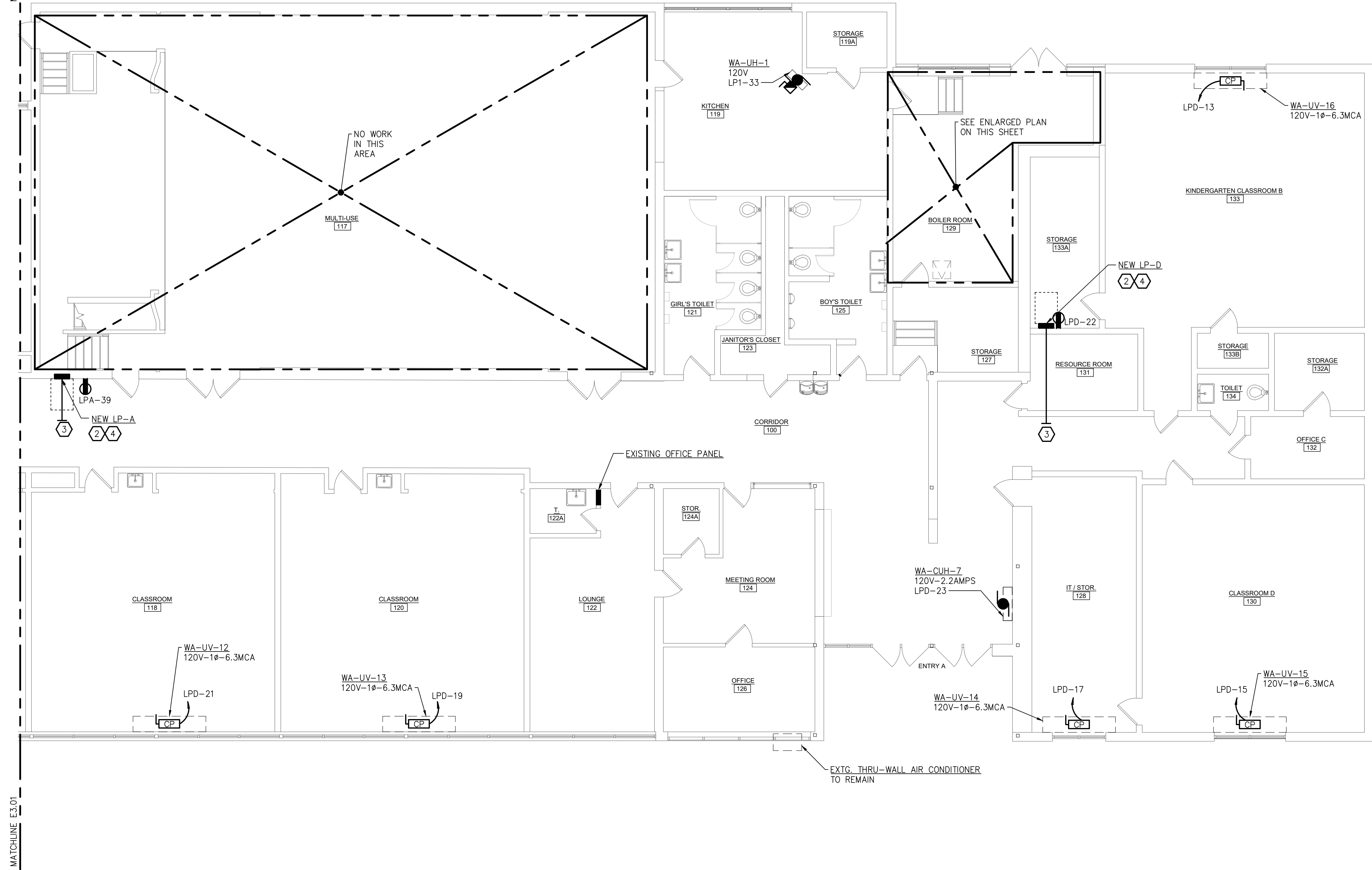


**AREA OF WORK KEY PLAN**  
 NO SCALE

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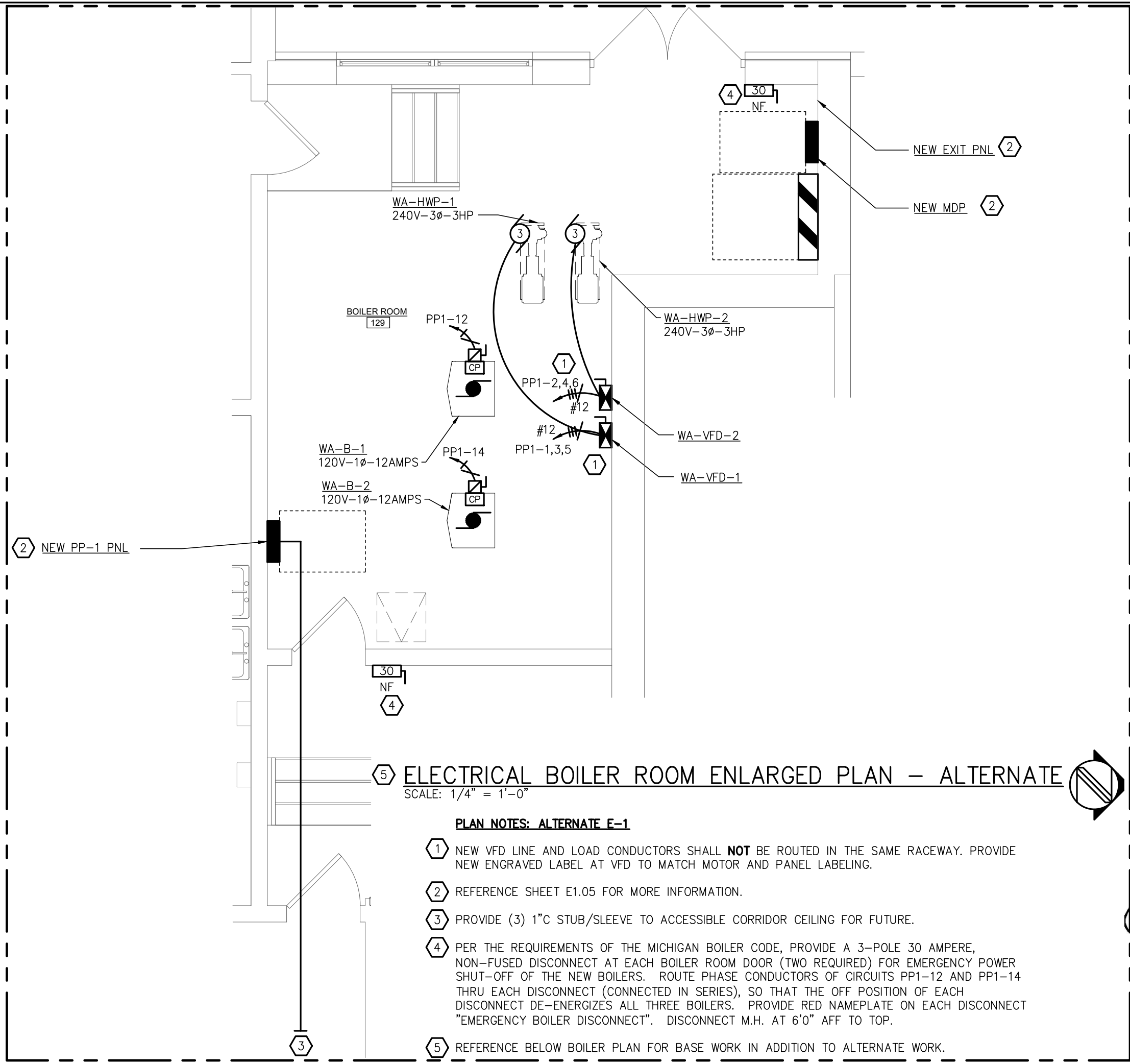
MATCHLINE E3.01



**POWER PLAN - NORTH**  
SCALE: 1/8" = 1'-0"

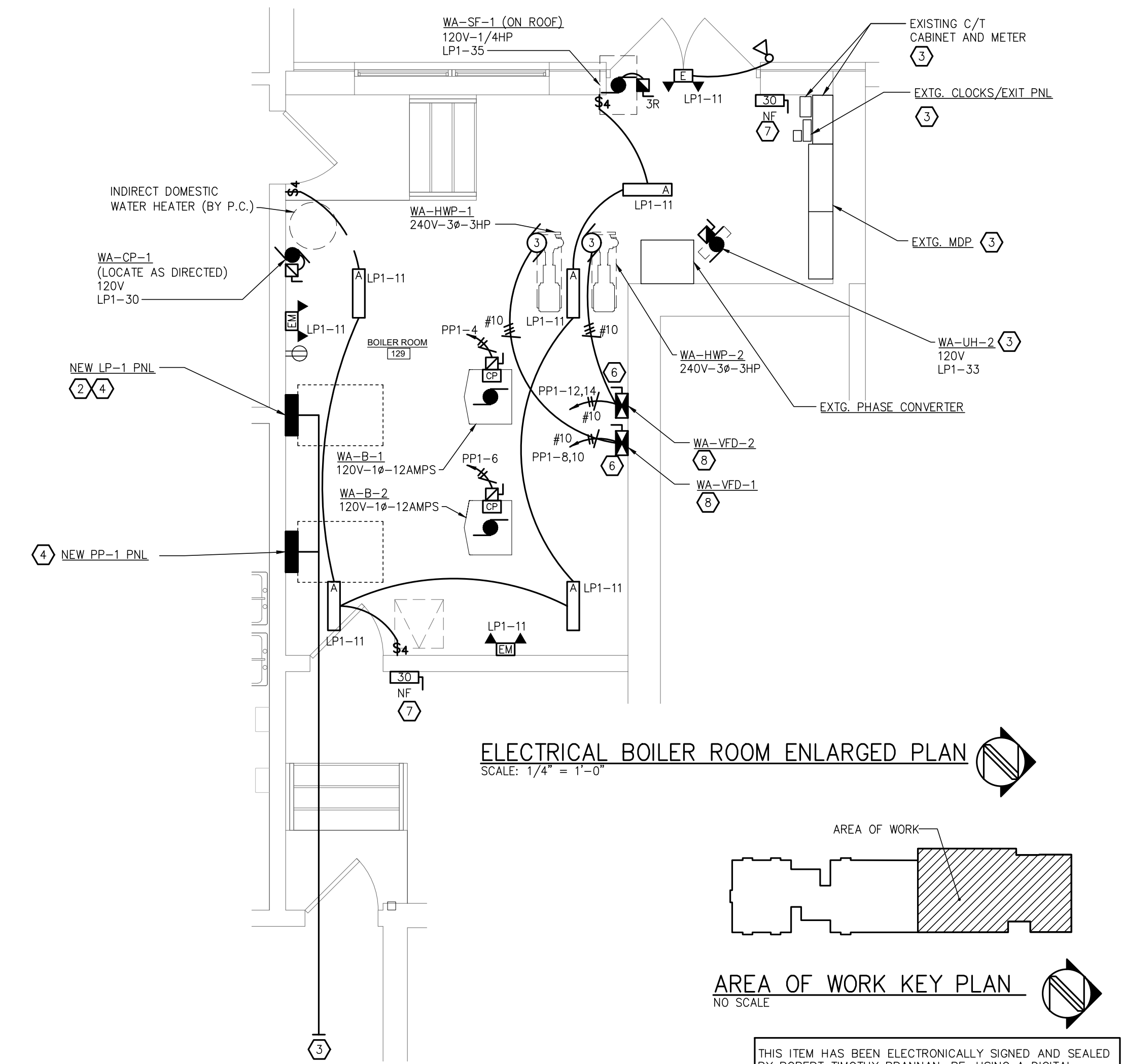
- SHEET NOTES:**
- 1 NOT USED
  - 2 PANELS NOTED WERE REPLACED AND NEW FEEDERS SHALL FOLLOW EXISTING REMOVED FEEDER ROUTE. REFERENCE SINGLE LINE FOR MORE INFORMATION.
  - 3 PROVIDE (3) 1" C STUB/SLEEVE TO ACCESSIBLE CORRIDOR CEILING FOR FUTURE.
  - 4 REFERENCE SHEET E1.04 FOR MORE INFORMATION.
  - 5 NOT USED
  - 6 NEW VFD LINE AND LOAD CONDUCTORS SHALL **NOT** BE ROUTED IN THE SAME RACEWAY. PROVIDE NEW ENGRAVED LABEL AT VFD TO MATCH MOTOR AND PANEL LABELING.
  - 7 PER THE REQUIREMENTS OF THE MICHIGAN BOILER CODE, PROVIDE A 3-POLE 30 AMPERE, NON-FUSED DISCONNECT AT EACH BOILER ROOM DOOR (TWO REQUIRED) FOR EMERGENCY POWER SHUT-OFF OF THE NEW BOILERS. ROUTE PHASE CONDUCTORS OF CIRCUITS PP1-4 AND PP1-6 THRU EACH DISCONNECT (CONNECTED IN SERIES), SO THAT THE OFF POSITION OF EACH DISCONNECT DE-ENERGIZES ALL THREE BOILERS. PROVIDE RED NAMEPLATE ON EACH DISCONNECT "EMERGENCY BOILER DISCONNECT". DISCONNECT M.H. AT 6'0" AFF TO TOP.
  - 8 NEW VFD SHALL BE PROGRAMMED TO CONVERT SINGLE-PHASE POWER INTO THREE-PHASE POWER. E.C. SHALL COORDINATE COMMISSIONING OF THE VFD WITH THE MANUFACTURE AND VERIFY ALL FINAL CONNECTIONS.

**GENERAL NOTES**  
E.C. SHALL COORDINATE WITH MECHANICAL DRAWINGS AND CONTRACTOR FOR PROJECT SCOPE AND SEQUENCE OF CONSTRUCTION BEFORE COMMENCING ANY WORK.

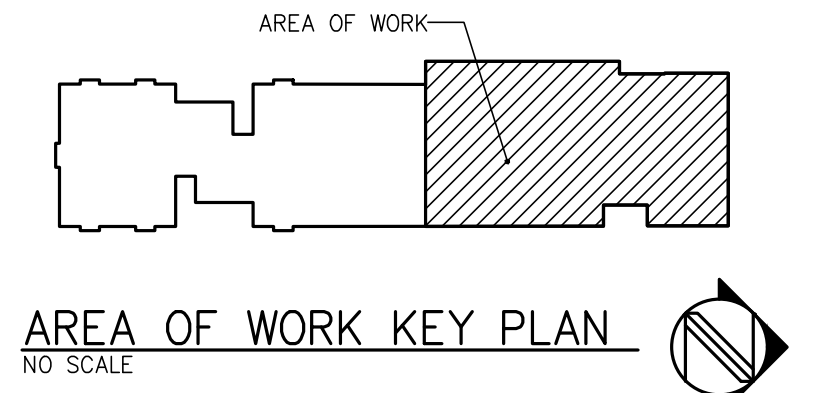


**5 ELECTRICAL BOILER ROOM ENLARGED PLAN - ALTERNATE**  
SCALE: 1/4" = 1'-0"

- PLAN NOTES: ALTERNATE E-1**
- 1 NEW VFD LINE AND LOAD CONDUCTORS SHALL **NOT** BE ROUTED IN THE SAME RACEWAY. PROVIDE NEW ENGRAVED LABEL AT VFD TO MATCH MOTOR AND PANEL LABELING.
  - 2 REFERENCE SHEET E1.05 FOR MORE INFORMATION.
  - 3 PROVIDE (3) 1" C STUB/SLEEVE TO ACCESSIBLE CORRIDOR CEILING FOR FUTURE.
  - 4 PER THE REQUIREMENTS OF THE MICHIGAN BOILER CODE, PROVIDE A 3-POLE 30 AMPERE, NON-FUSED DISCONNECT AT EACH BOILER ROOM DOOR (TWO REQUIRED) FOR EMERGENCY POWER SHUT-OFF OF THE NEW BOILERS. ROUTE PHASE CONDUCTORS OF CIRCUITS PP1-12 AND PP1-14 THRU EACH DISCONNECT (CONNECTED IN SERIES), SO THAT THE OFF POSITION OF EACH DISCONNECT DE-ENERGIZES ALL THREE BOILERS. PROVIDE RED NAMEPLATE ON EACH DISCONNECT "EMERGENCY BOILER DISCONNECT". DISCONNECT M.H. AT 6'0" AFF TO TOP.
  - 5 REFERENCE BELOW BOILER PLAN FOR BASE WORK IN ADDITION TO ALTERNATE WORK.



**ELECTRICAL BOILER ROOM ENLARGED PLAN**  
SCALE: 1/4" = 1'-0"



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MONROE, MICHIGAN 48161  
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DESIGN ENGINEERS & CONSULTING ASSOCIATES, INC.  
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TEL: (419)891-0022 FAX: (419)891-0028  
engineer@makegroup.com

07/12/2022  
STATE OF MICHIGAN  
ROBERT T. BRANNAN  
ENGINEER  
NO. 35872

| DATE       | DESCRIPTION            |
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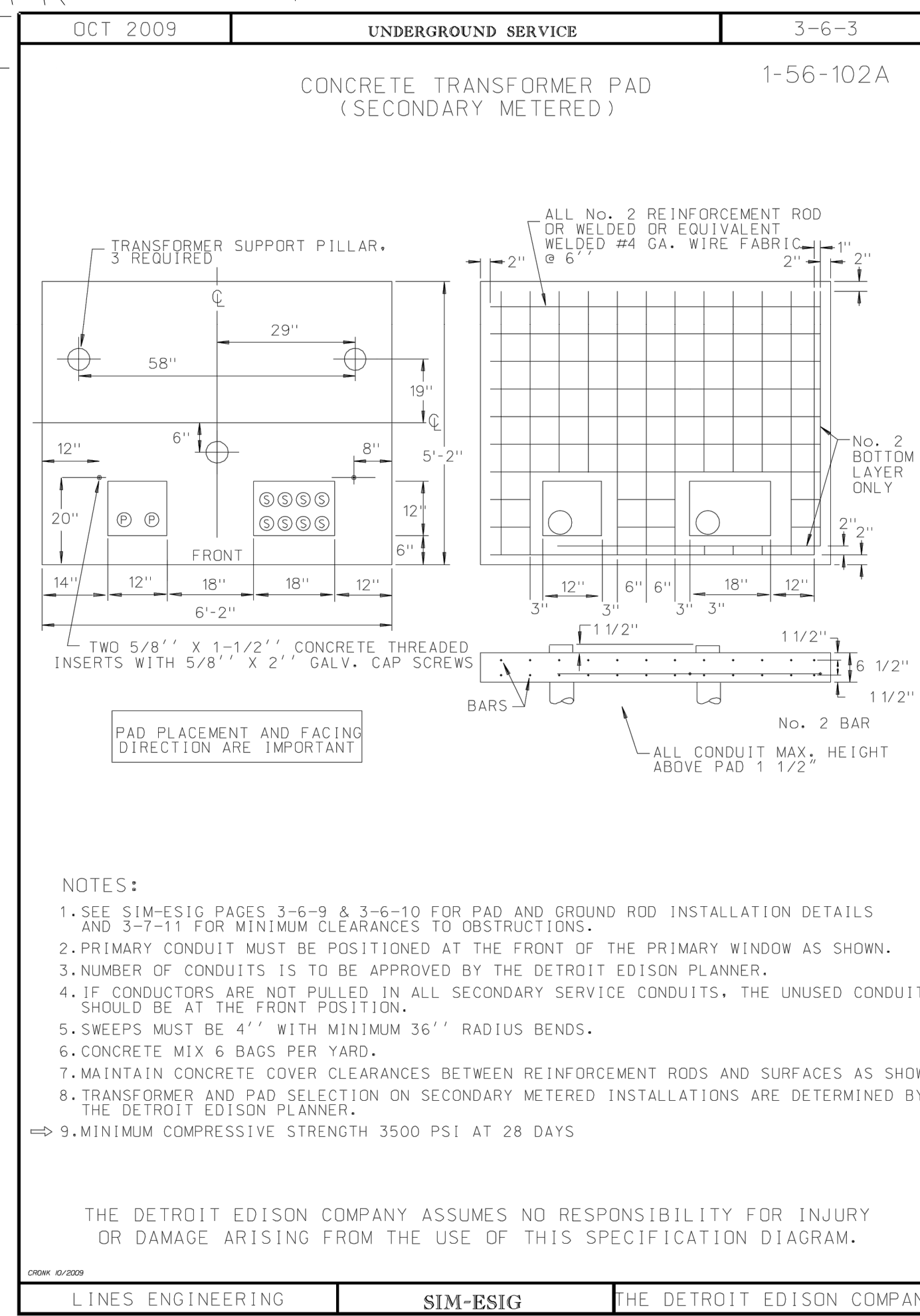
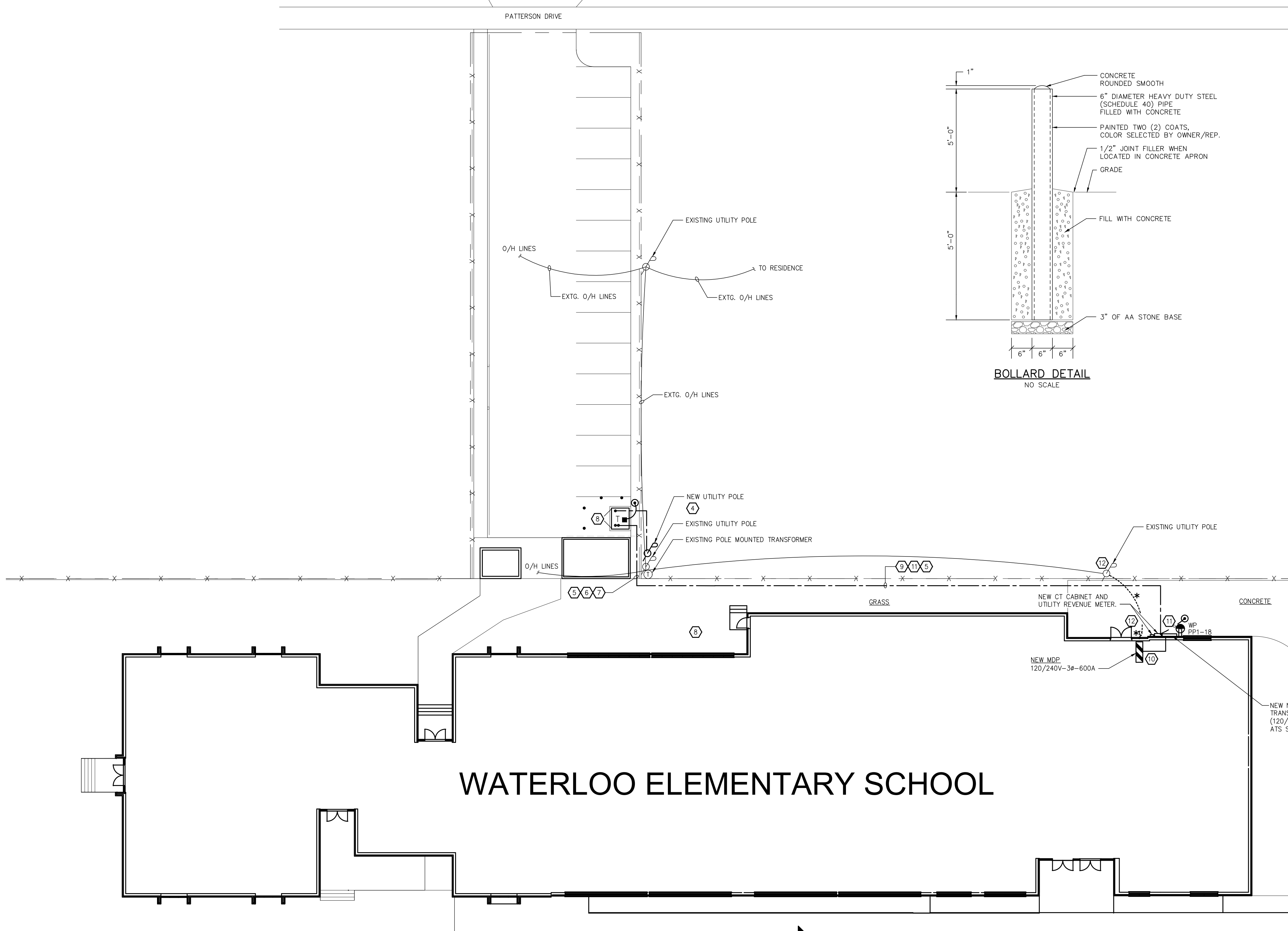
**MECHANICAL UPDATES & RELATED WORK**  
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1275 N. MACOMB STREET, MONROE, MI 48162

|         |       |
|---------|-------|
| JOB #   | 22114 |
| DRAWN   | NCB   |
| CHECKED | MAK   |

POWER PLAN  
- NORTH  
**E3.02**

S:\22\22079\dwg\22079E3.02.dwg 07/07/22 16:40:01 NBruno

S:\22\22079.dwg\22079E7.01.dwg 07/07/22 11:21:09 nBhuo



**NOTES:**

- SEE SIM-ESIG PAGES 3-6-9 & 3-6-10 FOR PAD AND GROUND ROD INSTALLATION DETAILS AND 3-7-11 FOR MINIMUM CLEARANCES TO OBSTRUCTIONS.
- PRIMARY CONDUIT MUST BE POSITIONED AT THE FRONT OF THE PRIMARY WINDOW AS SHOWN.
- NUMBER OF CONDUITS IS TO BE APPROVED BY THE DETROIT EDISON PLANNER.
- IF CONDUITS ARE NOT PULLED IN ALL SECONDARY SERVICE CONDUITS, THE UNUSED CONDUIT SHOULD BE AT THE FRONT POSITION.
- SWEEPS MUST BE 4' WITH MINIMUM 36' RADIUS BENDS.
- CONCRETE MIX 6 BAGS PER YARD.
- MAINTAIN CONCRETE COVER CLEARANCES BETWEEN REINFORCEMENT RODS AND SURFACES AS SHOWN.
- TRANSFORMER AND PAD SELECTION ON SECONDARY METERED INSTALLATIONS ARE DETERMINED BY THE DETROIT EDISON PLANNER.
- MINIMUM COMPRESSIVE STRENGTH 3500 PSI AT 28 DAYS.

THE DETROIT EDISON COMPANY ASSUMES NO RESPONSIBILITY FOR INJURY OR DAMAGE ARISING FROM THE USE OF THIS SPECIFICATION DIAGRAM.

# WATERLOO ELEMENTARY SCHOOL

## 1-2-3 SITE PLAN SCALE: 1/16" = 1'-0"

- PLAN NOTES**
- PERFORM ALL SERVICE WORK IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS AND PER APPROVED UTILITY COMPANY ENGINEERED WORK ORDERS.
  - COORDINATE WITH OWNER TO ARRANGE TIME FOR POWER OUTAGE AND CONNECTION OF NEW SERVICE.
  - SEE SINGLE LINE DIAGRAM FOR SERVICE INFORMATION ON SHEET E1.05.
  - E.C. SHALL COORDINATE FURTHER WITH ELECTRIC UTILITY COMPANY NEEDED FOR POWER CONNECTION.
  - MISS DIG OR OTHERS SHALL INVESTIGATE EXISTING UNDERGROUND INTERFERENCES BEFORE COMMENCEMENT OF EXCAVATION.
  - PRIMARY SERVICE CABLES SUPPLIED AND INSTALLED BY ELECTRICAL UTILITY COMPANY. PRIMARY SERVICE CONDUITS, SECONDARY SERVICE CABLES, AND SECONDARY CONDUITS SUPPLIED AND INSTALLED BY E.C.
  - NEW PRIMARY 4" PVC CONDUIT DIRECTLY-BORED BY EC. USE LONG SWEEP ELBOWS.
  - PAD MOUNTED TRANSFORMER BY UTILITY COMPANY. CONCRETE PAD AND GROUNDING BY E.C. PER UTILITY CO. POLICY. SEE PAD DETAIL ON THIS SHEET.
  - (2) NEW 4" CONDUITS UNDERGROUND SUPPLIED AND INSTALLED BY EC. LOCATE 24 INCHES BELOW GRADE MINIMUM. USE LONG SWEEP ELBOWS. INSTALL VIA HAND DUG TRENCH AND BACKFILL AS NOTED. WHERE HAND DUG BURY A CONTINUOUS PLASTIC WARNING TAPE 12" DIRECTLY ABOVE CONDUIT.
  - PROVIDE SEALING MEANS FOR EXISTING BRICK/CONCRETE. REPAIR EXISTING STRUCTURE AND GRADING PER ARCHITECTURAL SPECIFICATIONS.
  - E.C. SHALL COORDINATE WITH G.C. ON EXISTING CONCRETE REMOVAL FOR INSTALLATION OF UNDERGROUND CONDUITS.
  - EXISTING OVERHEAD ELECTRICAL SERVICE, WEATHERHEAD AND CONDUITS SHALL BE REMOVED AND EXISTING OPENING TO BE SEALED AND PATCHED.

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MONROE, MICHIGAN 48161  
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**MAKE + MAKE**

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DESIGN ENGINEERS & CONSULTING ASSOCIATES, INC.  
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TEL: (419)891-0022 FAX: (419)891-0028  
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07/12/2022  
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ROBERT T. BRANNAN  
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NO. 35872  
LICENSED PROFESSIONAL ENGINEER

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| DRAWN   | NCB   |
| CHECKED | MAK   |

SITE PLAN  
- ALTERNATE E-1  
**E7.01**