PENNSYLVANIA CONVENTION AUTHORITY (PACA)

300 KVA TRANSFORMERS REPLACEMENT PROJECT

READING TERMINAL MARKET

PHILADELPHIA, PA

GENERAL NOTES:

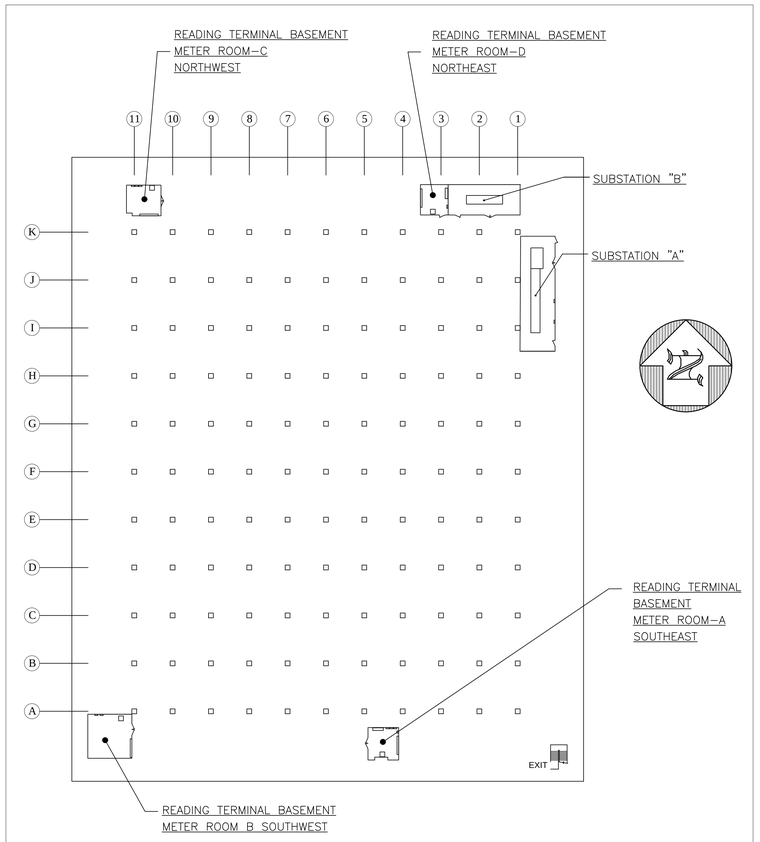
1. WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS WHICH INCLUDE THE OWNER/CONTRACT AGREEMENT, GENERAL AND SUPPLEMENTARY CONDITIONS, THE SPECIFICATIONS, THE DRAWINGS, AND ALL ADDENDA AND BULLETINS ISSUED BY THE OWNER OR ENGINEER.
2. WORK SHALL CONFORM TO ALL CITY, COUNTY, STATE AND FEDERAL CONSTRUCTION, SAFETY, ACCESSIBILITY, AND SANITARY LAWS, CODES, STATUES AND ORDINANCES. ALL DISCREPANCIES, VARIATIONS, OR OMISSIONS IN THE CONTRACT DOCUMENTS SHALL BE REPORTED PROMPTLY TO THE OWNER AND ENGINEER.
3. THE CONTRACTOR SHALL COORDINATE, FILE, OBTAIN AND PAY FEES FOR BUILDING DEPARTMENT AND OTHER AGENCY APPROVALS, PERMITS AND INSPECTIONS. COPIES OF TRANSACTIONS ARE TO BE FORWARDED TO OWNER PRIOR TO COMMENCING WORK. CONTRACTOR SHALL POST ALL APPLICABLE BUILDING PERMITS IN A VISIBLE LOCATION READY FOR INSPECTION BY THE PROPER AUTHORITIES HAVING JURISDICTION.
4. THE CONSTRUCTION AREAS SHALL REMAIN SECURE DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS, DIMENSIONS AND DETAILS PRIOR TO CONSTRUCTION. THE ENGINEER AND OWNER SHALL BE NOTIFIED OF ALL DISCREPANCIES OR OMISSIONS WHICH WOULD INTERFERE WITH THE SATISFACTORY COMPLETION OF THE WORK, PRIOR TO THE START OF ALL WORK.
6. DRAWINGS ARE NOT TO BE SCALED. PLANS ARE INTENDED TO BE DIAGRAMMATIC ONLY. THE WORK INDICATED ON THE DRAWINGS SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPLIANCES AND LABOR NECESSARY TO COMPLETE THE WORK. VERIFY ALL EQUIPMENT LOCATIONS WITH THE OWNER.
7. INSTALL ALL EQUIPMENT AND MATERIALS PER MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFIED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
8. CONFIRM THE ORDERING AND DELIVERY DATES OF LONG LEAD ITEMS WITH THE OWNER TO INSURE AGAINST DELAYS IN PROJECT COMPLETION.
9. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, FOR THE COORDINATION OF WORK AND FOR THE WORK PERFORMED BY HIS SUBCONTRACTORS.
10. PROTECT BUILDING PREMISES AND OCCUPANTS ON PROJECT SITE FROM DAMAGE WITH TEMPORARY PROTECTING COVERS AND BARRIERS, DUST PROOFING, AND SHORING, OR AS REQUIRED. REPAIR ANY DAMAGE IN SHORING AS REQUIRED. REPAIR ANY DAMAGE IN KIND AT NO ADDITIONAL COST TO THE PARTY AFFECTED.
11. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF AS-BUILT AND AS INSTALLED DRAWINGS TO THE OWNER AT THE COMPLETION OF THE WORK. THIS CAN BE RED LINED VERSIONS OF THE CONTRACT DRAWINGS OR NEW DRAWINGS IN A FORM ACCEPTABLE TO THE OWNER.
12. ALL WORK PERFORMED AND MATERIALS SHALL BE NEW AND MEET THE HIGHEST TRADE STANDARDS. AS A MINIMUM STANDARD, CONFORM WITH ALL SPECIFICATIONS AND APPLICABLE CODES, REGULATIONS AND ORDINANCES HAVING JURISDICTION.
13. DIMENSIONS ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE.
14. WORK UNDER THIS CONTRACT INCLUDES GENERAL, AND ELECTRICAL CONSTRUCTION, RIGGING, AND TRANSPORTATION REQUIRED TO PERFORM THE WORK.
15. THE WORD "INSTALL" OR "PROVIDE" MEANS FURNISH AND INSTALL NEW EQUIPMENT. EQUIPMENT THAT SHALL BE PROVIDED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
16. ALL WORK SHALL BE PERFORMED WHILE THE BUILDING IS OCCUPIED. EXTREME CARE AND ALL NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO MAINTAIN THE CLEANLINESS OF THE WORK AREA AND TO PREVENT DAMAGE TO NEW EQUIPMENT AND MATERIAL THAT WILL BE REUSED OR WILL REMAIN.
17. THE CONTRACTOR SHALL ALLOW FOR WORK BEING PERFORMED BY OTHER CONTRACTORS AND SHALL COORDINATE WITH THE OWNER SO THAT NO WORK IS DELAYED.
18. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED ILLUMINATED BARRICADES, WARNING DEVICES, AND SAFETY EQUIPMENT OR DEVICES REQUIRED TO MAINTAIN A SAFE WORK ENVIRONMENT.
19. PROVIDE ADHESIVE LABELS, OR PLASTIC NAMEPLATES, AS NOTED ON THE DRAWINGS, ON ALL NEW AND EXISTING EQUIPMENT AFFECTED BY THE WORK ON THIS PROJECT. ADHESIVE LABELS AND NAMEPLATES SHALL PROVIDE THE INFORMATION SHOWN ON THE DRAWINGS AND WHEN APPLICABLE, THE CIRCUIT NUMBER AND THE PANELBOARD WHICH FEEDS THE EQUIPMENT.
20. CONTRACTOR SHALL FIRE STOP ALL PENETRATIONS THROUGH RATED CONSTRUCTION USING U.L. LISTED THROUGH PENETRATION FIRE STOPS, "3M" OR APPROVED EQUAL.
21. MAINTAIN PERMANENT OR TEMPORARY EMERGENCY LIGHTING AND EXIT SIGNS IN OPERATION THROUGHOUT CONSTRUCTION.
22. CONTRACTOR SHALL USE ULTRASONIC EQUIPMENT OR OTHER APPROVED METHOD TO ENSURE NO OBSTACLES ARE BELOW GRADE OR IN FLOORS PRIOR TO DRILLING OR CUTTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS INVOLVED WITH HITTING AN OBSTACLE DURING DIGGING AND CUTTING.
23. ALL NEW FEEDERS SHALL BE MEGGER TESTED. THE RESULTS OF THE TEST SHALL BE PROVIDED TO THE ENGINEER AND THE OWNER.
24. AS DIRECTED BY THE OWNER, THE CONTRACTOR SHALL PROVIDE A JOB SITE CONSTRUCTION OFFICE TRAILER, EQUIPMENT TRAILER AND PORT-A-POTTY FOR USE OF ITS PERSONNEL AND TO SECURE ITS MATERIAL AND EQUIPMENT PRIOR TO INSTALLATION. THE OWNER WILL PROVIDE A LOCATION WHERE THE CONTRACTOR CAN CONNECT TO A 120 VOLT ELECTRICAL CIRCUIT FOR THE EQUIPMENT TRAILER.
25. ALL SHUTDOWNS MUST BE PLANNED WELL IN ADVANCE AND COORDINATED WITH THE OWNER. CONTRACTOR MUST PROVIDE A LIST OF ALL REQUIRED SHUTDOWNS WITH THEIR BID PACKAGE, INDICATING APPROXIMATE DATE OF SHUTDOWNS AND DURATION.
26. CONDUIT LAYOUTS ARE DIAGRAMMATIC. EXACT LOCATIONS, ROUTING, AND MOUNTING HEIGHTS FOR CONDUIT INSTALLATION SHALL BE COORDINATED IN THE FIELD BY THE CONTRACTOR AND ARE SUBJECT TO APPROVAL BY THE OWNER.

REMOVALS NOTES:

1. REMOVALS WORK SHOWN OR DESCRIBED ON THE DRAWINGS IS DESCRIPTIVE OF THE WORK TO BE PERFORMED BY THE CONTRACTOR. THE CONTRACTOR SHALL CONSULT WITH THE OWNER FOR ADDITIONAL WORK WHICH MAY BE REQUIRED.
2. THE CONTRACTOR SHALL DISCONNECT, REMOVE AND WHERE REQUIRED, RELOCATE AND REINSTALL ANY EXISTING EQUIPMENT WHICH INTERFERE WITH THE INSTALLATION OF NEW WORK. COORDINATE ALL SUCH REMOVALS AND RELOCATIONS WITH THE OWNER.
3. UNLESS NOTED OTHERWISE, EQUIPMENT AND MATERIALS TO BE REMOVED AND NOT REINSTALLED SHALL BECOME THE PROPERTY OF THE CONTRACTOR, WHO SHALL REMOVE IT FROM THE SITE AND DISPOSE OF SAME IN A PROPER AND LEGAL MANNER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL SYSTEMS AND EQUIPMENT REQUIRING RELOCATION TO FULL OPERATING CONDITION, TO THE COMPLETE SATISFACTION OF THE OWNER.
5. INSTALLATION OF RELOCATED EQUIPMENT AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA/ANSI 70), STATE AND LOCAL CODES, AND ALL APPLICABLE OWNER REQUIREMENTS.
6. EXCEPT AS NOTED, EXISTING WIRE, CABLES, CABLE TRAYS, AND CONDUITS TO BE REMOVED SHALL NOT BE REUSED.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF EXISTING AND NEW STRUCTURES AS REQUIRED FOR REMOVALS AND RELOCATIONS, AND FOR INSTALLATION OF NEW WORK.
8. ALL OPENINGS IN EXISTING CONSTRUCTION CREATED BY THE REMOVAL OF EXISTING EQUIPMENT AND CONDUITS SHALL BE SEALED USING MATERIALS APPROVED BY THE OWNER.
9. PRIOR TO STARTING WORK, THE CONTRACTOR SHALL VERIFY THAT WIRING AND CONDUITS SCHEDULED FOR REMOVAL SERVE ONLY EQUIPMENT SCHEDULED FOR REMOVAL.

ELECTRICAL SPECIFICATIONS:

1. A MATERIAL AND EQUIPMENT SUPPLIED BY THE CONTRACTOR SHALL BE NEW UL LISTED AND INSTALLED IN ACCORDANCE WITH THE UL LISTING, THE APPLICABLE BUILDING AND FIRE CODES AND THE MANUFACTURE'S REQUIREMENTS AND TO OWNER'S SATISFACTION.
2. THE CONTRACTOR SHALL PROVIDE MANUFACTURERS' CUT SHEETS FOR ALL MATERIAL IT IS PROVIDING FOR REVIEW AND APPROVAL BY OWNER'S PRIOR TO PURCHASING MATERIAL AND EQUIPMENT. ONLY MATERIAL APPROVED BY PACC SHALL BE INSTALLED ON THIS PROJECT.
3. ABOVE GRADE RACEWAYS SHALL BE GALVANIZED ELECTRICAL METALLIC TUBING (NEC TYPE EMT) INDOORS. EMT FITTINGS SHALL BE COMPRESSION TYPE.
4. GROUNDING ELECTRODE CONDUCTOR CONNECTOR SHALL BE UL LISTED, COPPER, BURNDY MODEL GBL30 OR EQUAL WITH LUG SUITABLE FOR A #4/0 BARE COPPER WIRE.
5. POWER WIRE SHALL BE THE GAUGES SHOWN ON THE DRAWING OR AS REQUIRED BY THE NEC, WHICHEVER IS LARGER, STRANDED COPPER NEC TYPE THHN/THWN AND SHALL BE INSTALLED WITHOUT SPLICES UNLESS NOTED OTHERWISE. WIRES SHALL BE THE COLORS SHOWN ON THE TABLE ON THIS DRAWING OR SHALL BE LABELED WITH THE COLORS SHOWN ON THE TABLE ON THIS DRAWING FOR SIZES WHERE COLOR WIRE IS NOT READILY AVAILABLE.
6. POWER WIRE TERMINATION LUGS SHALL BE HIGH COPPER ALLOY, MECHANICAL TYPE AND SUITABLE FOR THE INSTALLATION.
7. JUNCTION AND PULL BOXES SHALL BE GALVANIZED STEEL, UL LISTED OR LABLED WITH GALVANIZED STEEL COVER PLATES AND SHALL BE GROUNDED IN ACCORDANCE WITH THE NEC. PROVIDE GROUNDING WIRE AND HIGH COPPER ALLOY GROUNDING LUGS AND HARDWARE.



READING TERMINAL MARKET BASEMENT LEVEL

1 / E0 PROJECT SITE PACC BASEMENT
SCALE: NTS

WIRE COLOR CHART		
PHASE	208/120V	480/277V
AØ	BLACK	BROWN
BØ	RED	ORANGE
CØ	BLUE	YELLOW
NEUTRAL	WHITE	GRAY
GROUND	GREEN	GREEN

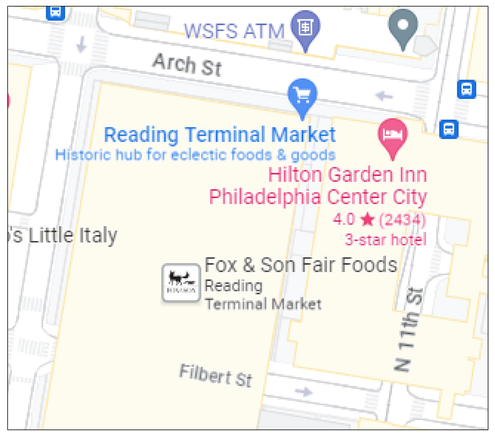
DRAWING LIST		
DRAWING	REV.	TITLE
E0	A	COVER SHEET AND NOTES
E1	A	METER ROOM A, MC-2 METER CENTER SOUTHEAST AND ONE-LINE DIAGRAM
E2	A	METER ROOM B, MC-4 METER CENTER SOUTHWEST AND ONE-LINE DIAGRAM
E3	A	METER ROOM C, MC-3 METER CENTER NORTHWEST AND ONE-LINE DIAGRAM
E4	A	METER ROOM D, MC-1 METER CENTER NORTHEAST AND ONE-LINE DIAGRAM
E5	A	TRANSFORMER AND METER WIRING DIAGRAM AND DETAILS

METER NUMBER	LOCATION	REFERENCE DRAWING
2023-A	METER ROOM A	E1
2023-B	METER ROOM B	E2
2023-C	METER ROOM C	E3
2023-D	METER ROOM D	E4

OWNER: PENNSYLVANIA CONVENTION CENTER. (PACC)

ENGINEER: Joseph F. Maida, PE, 215-353-6110 Jmaida@maidaeng.com

SITE: SEISMIC DESIGN CATEGORY IS "B"



N 1 / E0 SITE LOCATION MAP
NOT TO SCALE

REVISIONS

ISSUE	DATE	REVISIONS
A	8/15/2023	ISSUE FOR BID

Pennsylvania Convention Center
PHILADELPHIA

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Harvest Drive, Suite 200
Blue Bell, Pennsylvania 19422
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776
NON-MEMBERS MUST BE CONTACTED DIRECTLY
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE. DRILL, BLAST OR DEMOLISH.

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXX

OPP PROJECT COORDINATOR: XXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

MAIDA ENGINEERING INC.
CONSULTING ENGINEERS
Philadelphia Office
1315 Walnut Street
Suite 804
Philadelphia, PA 19107
(215) 542-8700

		DATE
PROJECT NO.	E45009	
PROJECT ENG.	ALA	07/27/23
CHECKED	JFM	07/27/23

ELECTRICAL

OPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
PACC READING TERMINAL TRANSFORMER REPLACEMENT

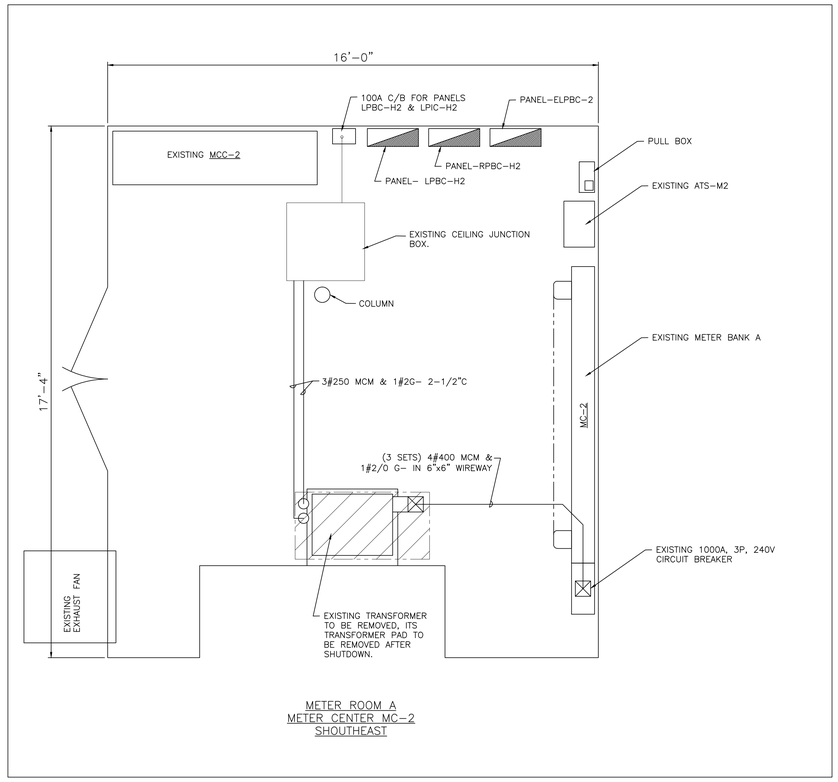
PHASE: X

DRAWING TITLE:
TITLE SHEET
TRANSFORMER REPLACEMENT
GENERAL NOTES AND DETAILS

PACC PROJECT NO.:	XX-XX-XXXX-XX
CONSULTANT PROJECT NO.:	E45009
DATE:	07-28-2023
SCALE:	SCALE AS NOTED
DRAWN BY:	
CHECKED BY:	

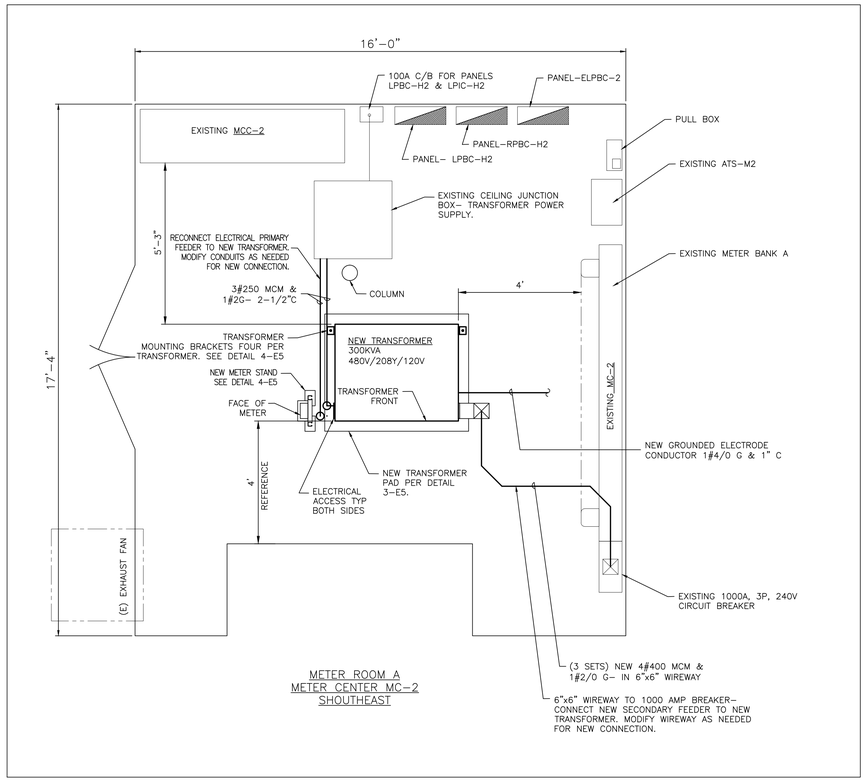
DRAWING NO.: E0

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



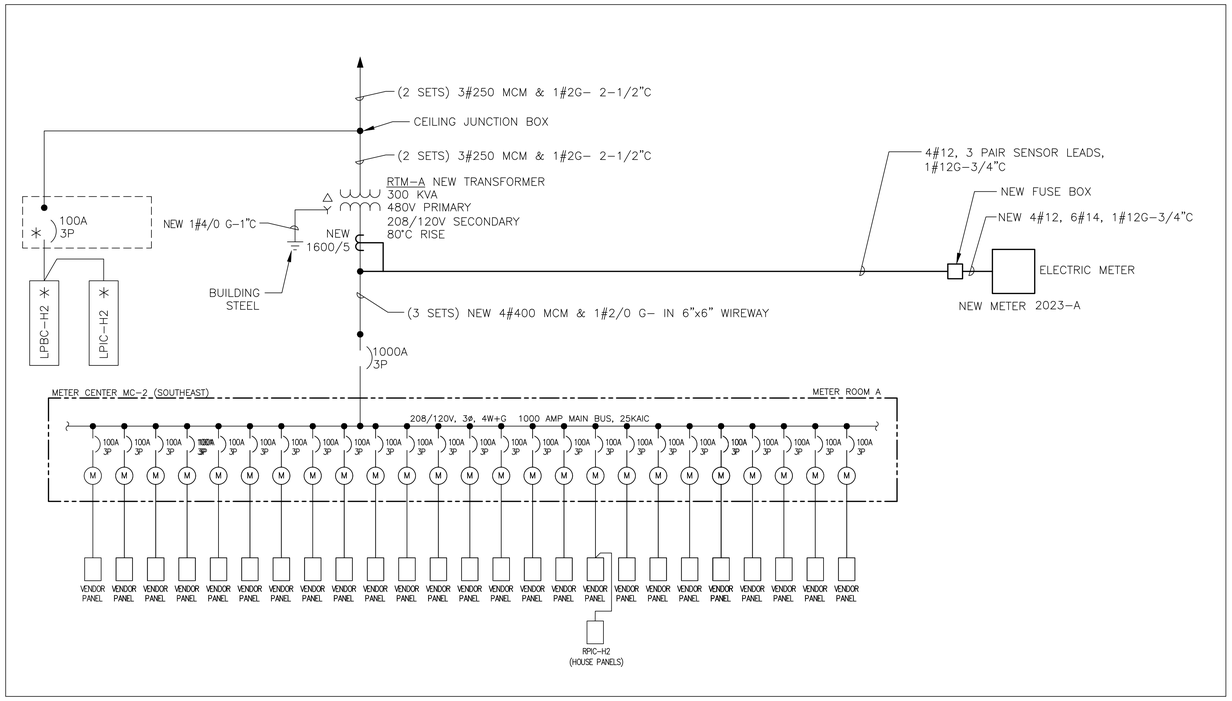
METER ROOM A
METER CENTER MC-2
SHOUTHEAST

1 / E1 METER ROOM A EXISTING
SCALE: 1/2" = 1' - 0"



METER ROOM A
METER CENTER MC-2
SHOUTHEAST

2 / E1 METER ROOM A NEW
SCALE: 1/2" = 1' - 0"



3 / E1 SOUTHEAST METER ROOM A ONE-LINE DIAGRAM
SCALE: NTS

METER ROOM A - SOUTHEAST
SCOPE OF WORK

PRIOR TO SHUTDOWN

1. CONSTRUCT A NEW TRANSFORMER PAD WHERE AND AS SHOWN ON DRAWINGS.
2. FURNISH AND INSTALL A NEW 300 KVA, 480 VOLT / 208/120 VOLT, 80° RISE, DRY TRANSFORMER, ALUMINUM WINDINGS, SQUARE D CATALOG NUMBER EX300T68HB WITH FLOOR MOUNTING BRACKET, SQUARE D CATALOG NUMBER 7400FMB.
3. FURNISH AND INSTALL NEW #4/0 COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" CONDUIT FROM THE NEW TRANSFORMER SECONDARY NEUTRAL TO GROUNDED BUILDING STEEL.
4. FURNISH AND INSTALL NEW SECTIONS OF 6" X 6" WIREWAY FROM THE NEW TRANSFORMER TO THE LOCATION WHERE IT WILL CONNECT TO THE EXISTING 6" X 6" WIREWAY DURING THE SHUTDOWN.
5. FURNISH AND INSTALL THE NEW ELECTRIC METER (E-MON D-MON CLASS 2000), NEW FUSE BOX, NEW METER SUPPORT STAND, NEW CURRENT SENSORS (E MON D-MON MODEL CS), NEW VOLTAGE SENSING WIRES, NEW CONDUIT, ETC. FOR THE NEW ELECTRIC METER AS SHOWN ON THE DRAWINGS.

DURING A SCHEDULED SHUTDOWN.

1. OPEN AND LOCK OUT THE 500 AMP FUSED DISCONNECT SWITCH IN SUBSTATION A THAT FEEDS THE SOUTHEAST METER ROOM A. USING PROPER PPE, VERIFY THAT THE EXISTING 300 KVA TRANSFORMER AND THE FEEDERS TO AND FROM IT ARE DE-ENERGIZED.
2. DISCONNECT THE EXISTING TRANSFORMER'S PRIMARY FEEDER CONDUCTORS (2 SETS OF 3#250 MCM & 1#2 G IN 2 ½" C). PULL THE PRIMARY FEEDER CONDUCTORS BACK INTO THE EXISTING CEILING JUNCTION BOX. REROUTE AND REWORK AS NEEDED THE EXISTING TRANSFORMER'S PRIMARY FEEDER'S CONDUITS FROM THE EXISTING TRANSFORMER TO THE NEW TRANSFORMER. INSTALL THE PRIMARY FEEDER CONDUCTORS IN THE REROUTED CONDUITS AND TERMINATE THE CONDUCTORS ONTO THE NEW TRANSFORMER'S PRIMARY TERMINATION PADS, PROVIDING NEW TWO (2) HOLE CONDUCTOR TERMINAL LUGS AS PER THE TRANSFORMER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. DISCONNECT, REMOVE AND DISCARD THE EXISTING TRANSFORMER'S SECONDARY FEEDER CONDUCTORS (3 SETS OF 4#400 MCM & 1#2/0 G IN 6" X 6" WIREWAY) FROM THE EXISTING TRANSFORMER TO THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER.
4. INSPECT THE 1,000 AMP, 3 POLE CIRCUIT BREAKER FOR ANY CRACKS OR SIGNS OF DAMAGE, OPENING AND CLOSING THE CIRCUIT BREAKER A NUMBER OF TIMES TO ASCERTAIN THAT IT SHOULD OPERATE PROPERLY. TAKE A PHOTO OF THE CIRCUIT BREAKER THAT WILL SHOW ITS MAKE AND MODEL AND TRIP SETTINGS. PROVIDE A WRITTEN VERIFICATION THAT THE CIRCUIT BREAKER WAS VISUALLY INSPECTED AND OPERATED MANUALLY AND COPIES OF THE PHOTO TO PACC.
5. VERIFY THAT A GROUNDING ELECTRODE CONDUCTOR DOES NOT EXIST BETWEEN THE NEUTRAL IN THE 1,000 AMP, 3 POLE CIRCUIT BREAKER AND GROUND. IF IT DOES, THIS SHOULD BE DISCONNECTED AND REMOVED.
6. REWORK AND MODIFY AS NEEDED THE NEW AND EXISTING 6" X 6" WIREWAY SO THAT THE 6" X 6" WIREWAY CONNECTS THE NEW TRANSFORMER TO THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER.
7. FURNISH AND INSTALL NEW TRANSFORMER'S SECONDARY FEEDER CONDUCTORS (3 SETS OF 4#400 MCM & 1#2/0 G IN 6" X 6" WIREWAY) BETWEEN THE NEW TRANSFORMER SECONDARY TERMINATION PADS AND THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER. PROVIDE NEW TWO (2) HOLE CONDUCTOR TERMINAL LUGS, AS PER THE TRANSFORMER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
8. COMPLETE THE INSTALLATION OF THE ELECTRIC METER'S CURRENT SENSORS AND VOLTAGE SENSING WIRES WITHIN THE NEW TRANSFORMER.
9. SET THE NEW TRANSFORMER'S VOLTAGE TAP AT THE SAME VOLTAGE AS THE TAP OF THE EXISTING TRANSFORMER. NOTE THE TAP SETTING ON THE RECORD DRAWINGS.
10. AFTER VERIFYING THAT THE INSTALLATION OF THE NEW TRANSFORMER IS COMPLETE, CLOSE THE 500 AMP FUSED DISCONNECT SWITCH IN SUBSTATION A THAT FEEDS THE SOUTHEAST METER ROOM A.
11. VERIFY THAT THE NEW METER IS OPERATIONAL AND THAT THE EXISTING METER BANK IS ENERGIZED.

AFTER THE SCHEDULED SHUTDOWN.

1. REMOVE AND PROPERLY DISCARD THE EXISTING TRANSFORMER AND ALL REMAINING PORTIONS OF RACEWAY AND CONDUCTORS THAT ARE NO LONGER IN USE. CLOSE ALL OPENINGS, IF ANY, IN THE EXISTING CEILING JUNCTION BOX.
2. FURNISH AND INSTALL NEW NAMEPLATES ON THE NEW TRANSFORMER AND NEW METER.
3. REMOVE THE HOUSEKEEPING PAD THAT WAS USED FOR THE EXISTING TRANSFORMER AND REPAIR THE FLOOR UNDER THE HOUSEKEEPING PAD TO THE SATISFACTION OF THE PACC.
4. VERIFY THE OPERATION OF THE NEW ELECTRIC METER AND TRAIN PACC PERSONNEL ON THE USE OF THE METER.
5. WITHIN ONE WEEK OF THE COMPLETION OF THE SHUTDOWN, RETURN TO THE SITE AND USING PROPER PPE, PERFORM AN INFRARED SCANS OF ALL CONNECTIONS AND MEASURE THE SECONDARY VOLTAGE OF THE NEW TRASFORMER. IF NEEDED, SCHEDULE SYSTEM SHUTDOWN AND ADJUST THE TRANSFORMER TAP TO PROVIDE 120/208 VOLTS.

REVISIONS

ISSUE	DATE	REVISIONS
A	8/15/2023	ISSUE FOR BID

Pennslyvania Convention Center
PHILADELPHIA

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXX

OPP PROJECT COORDINATOR: XXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

MAIDA ENGINEERING INC.
CONSULTING ENGINEERS
Philadelphia Office
1315 Walnut Street
Suite 804
Philadelphia, PA 19107
(215) 542-8700

PROJECT NO.	E45009	DATE
PROJECT ENG.	ALA	07/27/23
CHECKED	JFM	07/27/23

0 1' 2' 3' 4' 5' 6'
1/2"=1'-0"

ELECTRICAL

OPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
PACC READING TERMINAL TRANSFORMER REPLACEMENT

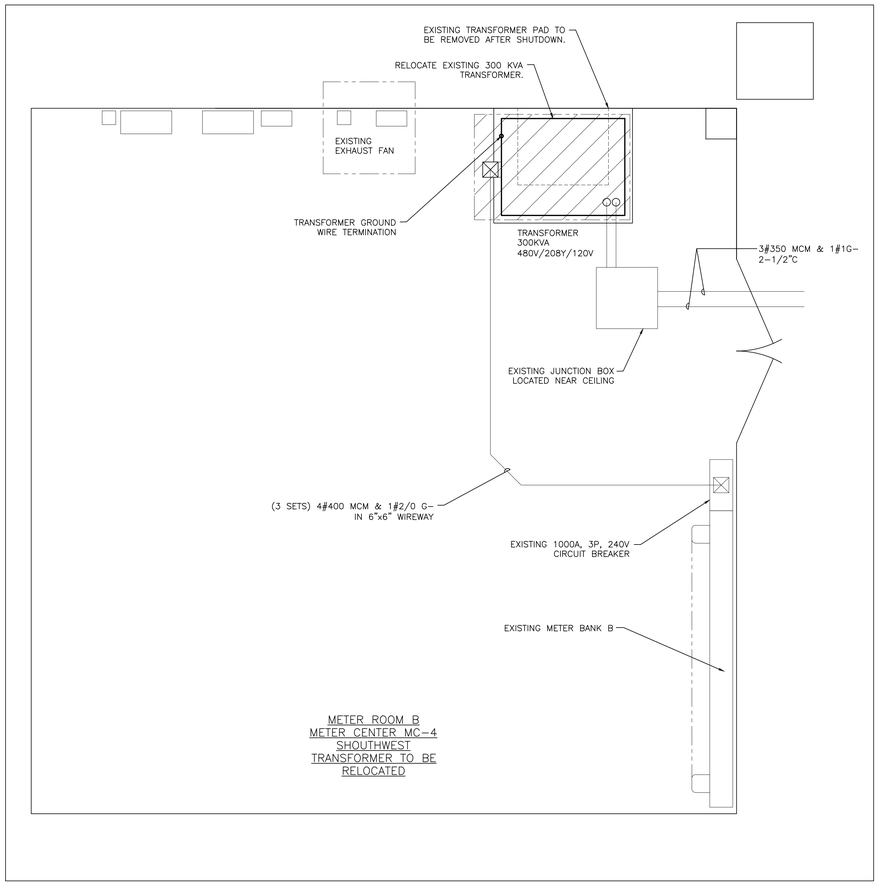
PHASE:
X

DRAWING TITLE:
SOUTHEAST METER ROOM A AND ONE-LINE DIAGRAM LOCATED IN BASEMENT

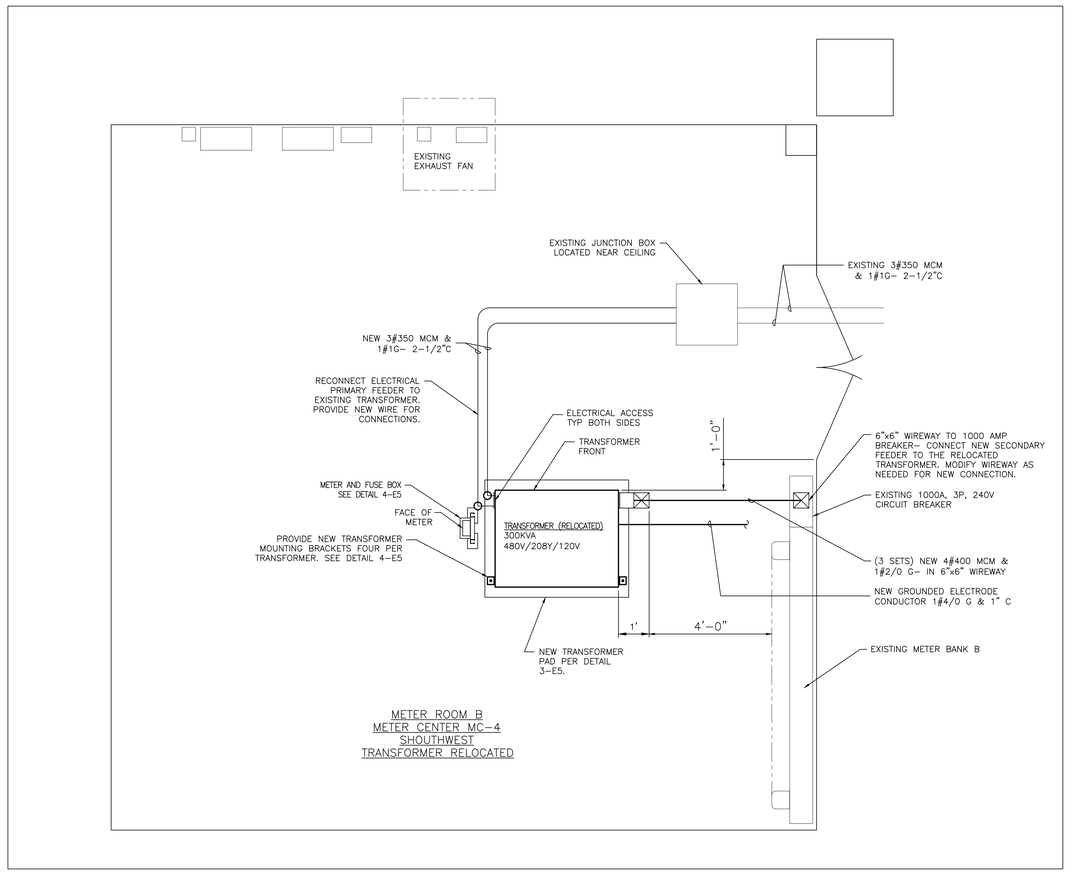
PACC PROJECT NO.:	XX-XX-XXXX-XX
CONSULTANT PROJECT NO.:	E45009
DATE:	07-28-2023
SCALE:	SCALE AS NOTED
DRAWN BY:	
CHECKED BY:	

DRAWING NO.: E1

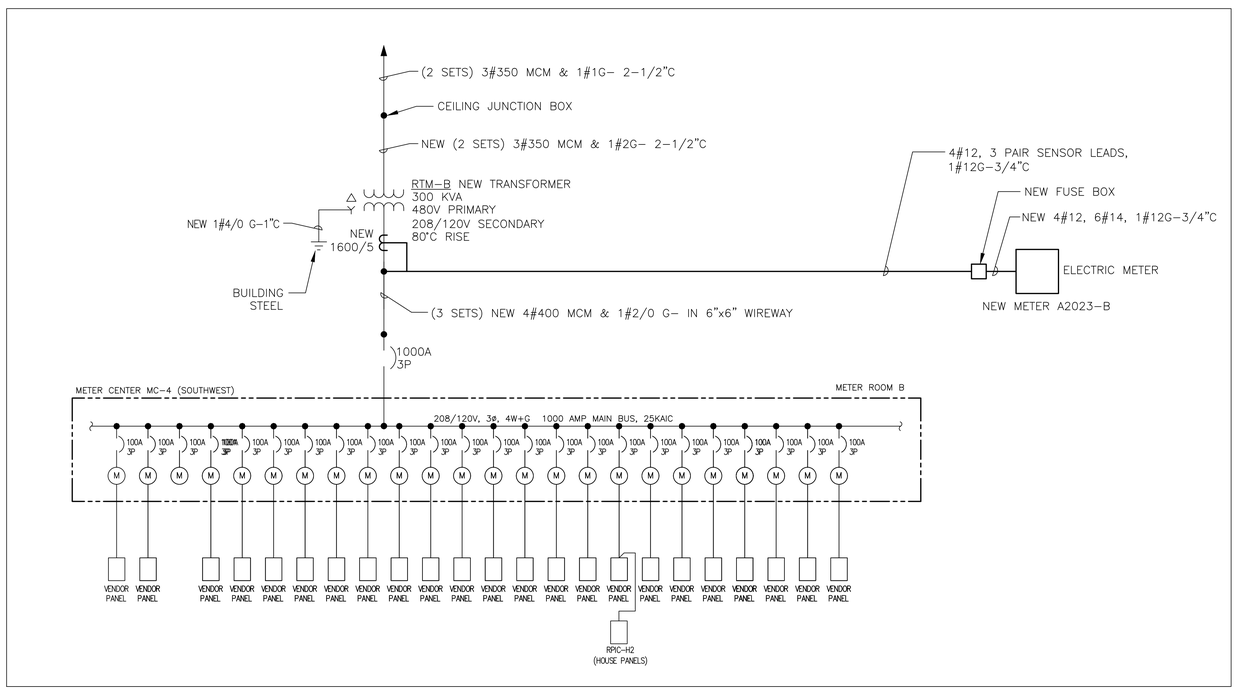
NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



1 E2 METER ROOM B EXISTING
SCALE: 1/2" = 1' - 0"



2 E2 METER ROOM B NEW
SCALE: 1/2" = 1' - 0"



3 E2 METER ROOM B - ONE-LINE DIAGRAM
SOUTHWEST

METER ROOM B - SOUTHWEST
SCOPE OF WORK

PRIOR TO SHUTDOWN

1. CONSTRUCT A NEW TRANSFORMER PAD WHERE AND AS SHOWN ON DRAWINGS.
2. FURNISH AND INSTALL NEW #4/0 COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" CONDUIT THAT WILL BE USED TO CONNECT THE RELOCATED TRANSFORMER SECONDARY NEUTRAL TO EFFECTIVELY GROUNDED BUILDING STEEL.
3. FURNISH AND INSTALL NEW SECTIONS OF 6" X 6" WIREWAY THAT WILL BE USED TO CONNECT THE RELOCATED TRANSFORMER SECONDARY TO THE LOCATION WHERE IT WILL CONNECT TO THE EXISTING 6" X 6" WIREWAY DURING THE SHUTDOWN.
4. FURNISH AND INSTALL THE NEW ELECTRIC METER (E-MON D-MON CLASS 2000), NEW FUSE BOX, NEW METER SUPPORT STAND, NEW CURRENT SENSORS (E MON D-MON MODEL CS), NEW VOLTAGE SENSING WIRES, NEW CONDUIT, ETC. FOR THE NEW ELECTRIC METER AS SHOWN ON THE DRAWINGS.

DURING A SCHEDULED SHUTDOWN

1. OPEN AND LOCK OUT THE 500 AMP FUSED DISCONNECT SWITCH IN SUBSTATION A THAT FEEDS THE SOUTHWEST METER ROOM B. USING PROPER PPE, VERIFY THAT THE EXISTING 300 KVA TRANSFORMER AND THE FEEDERS TO AND FROM IT ARE DE-ENERGIZED.
2. DISCONNECT THE EXISTING TRANSFORMER'S PRIMARY FEEDER CONDUCTORS (2 SETS OF 3#350 MCM & 1#1 G IN 2 ½" C). PULL THE PRIMARY FEEDER CONDUCTORS BACK INTO THE EXISTING CEILING JUNCTION BOX.
3. DISCONNECT, REMOVE AND DISCARD THE EXISTING TRANSFORMER'S SECONDARY FEEDER CONDUCTORS (3 SETS OF 4#400 MCM & 1#2/0 G IN 6" X 6" WIREWAY) FROM THE EXISTING TRANSFORMER TO THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER.
4. DISCONNECT THE GROUND WIRE CONNECT TO THE OUTSIDE OF THE EXISTING TRANSFORMER.
5. RELOCATED THE EXISTING 300 KVA, 480 VOLT / 208/120 VOLT, 80° RISE, DRY TRANSFORMER, ALUMINUM WINDINGS, SQUARE D CATALOG NUMBER EX300T68HB TO THE NEW TRASFORMER PAD AND ANCHOR IT, FURNISHING AND INSTALLING NEW FLOOR MOUNTING BRACKET, SQUARE D CATALOG NUMBER 7400FMB.
6. FURNISH AND INSTALL THE NEW PORTION OF THE TRANSFORMER PRIMARY FEEDER (2 SETS OF 3 #350 MCM AND 1#1 G - 2 ½"C) FROM THE CEILING JUNCTION BOX TO THE NEW TRANSFORMER'S PRIMARY TERMINATION PADS, PROVIDING NEW TWO (2) HOLE CONDUCTOR TERMINAL LUGS AS PER THE TRANSFORMER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITHIN THE TRASFORMER AND NEW INSULATED WIRE CONNECTORS, POLARIS OR EQUAL, TO SPLICE THE NEW PORTION OF TRANSFORMER PRIMARY FEEDER TO THE EXISTING TRANSFORMER PRIMARY FEEDER IN THE CEILING JUNCTION BOX.
7. INSPECT THE 1,000 AMP, 3 POLE CIRCUIT BREAKER FOR ANY CRACKS OR SIGNS OF DAMAGE, OPENING AND CLOSING THE CIRCUIT BREAKER A NUMBER OF TIMES TO ASCERTAIN THAT IT SHOULD OPERATE PROPERLY. TAKE A PHOTO OF THE CIRCUIT BREAKER THAT WILL SHOW ITS MAKE AND MODEL AND TRIP SETTINGS. PROVIDE A WRITTEN VERIFICATION THAT THE CIRCUIT BREAKER WAS VISUALLY INSPECTED AND OPERATED MANUALLY AND COPIES OF THE PHOTO TO PACC.
8. VERIFY THAT A GROUNDING ELECTRODE CONDUCTOR DOES NOT EXIST BETWEEN THE NEUTRAL IN THE 1,000 AMP, 3 POLE CIRCUIT BREAKER AND GROUND. IF IT DOES, THIS SHOULD BE DISCONNECTED AND REMOVED.
9. REWORK AND MODIFY AS NEEDED THE NEW AND EXISTING 6" X 6" WIREWAY SO THAT THE 6" X 6" WIREWAY CONNECTS THE RELOCATED TRANSFORMER TO THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER.
10. FURNISH AND INSTALL NEW TRANSFORMER'S SECONDARY FEEDER CONDUCTORS (3 SETS OF 4#400 MCM & 1#2/0 G IN 6" X 6" WIREWAY) BETWEEN THE NEW TRANSFORMER SECONDARY TERMINATION PADS AND THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER. PROVIDE NEW TWO (2) HOLE CONDUCTOR TERMINAL LUGS, AS PER THE TRANSFORMER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
11. COMPLETE THE INSTALLATION OF THE ELECTRIC METER'S CURRENT SENSORS AND VOLTAGE SENSING WIRES WITHIN THE RELOCATED TRANSFORMER.
12. CLOSE ALL UNUSED OPENING IN THE EXISTING TRANSFORMER HOUSING. NOTE THE TRANSFORMER TAP SETTING ON THE RECORD DRAWINGS.
13. AFTER VERIFYING THAT THE INSTALLATION OF THE RELOCATED TRANSFORMER IS COMPLETE, CLOSE THE 500 AMP FUSED DISCONNECT SWITCH IN SUBSTATION A THAT FEEDS THE SOUTHWEST METER ROOM B.
14. VERIFY THAT THE NEW METER IS OPERATIONAL AND THAT THE EXISTING METER BANK B IS ENERGIZED.

AFTER THE SCHEDULED SHUTDOWN

1. REMOVE AND PROPERLY DISCARD ALL REMAINING PORTIONS OF RACEWAY AND CONDUCTORS THAT ARE NO LONGER IN USE. CLOSE ALL OPENINGS, IF ANY, IN THE EXISTING CEILING JUNCTION BOX.
2. FURNISH AND INSTALL NEW NAMEPLATES ON THE NEW TRANSFORMER AND NEW METER.
3. REMOVE THE HOUSEKEEPING PAD THAT WAS USED FOR THE RELOCATED TRANSFORMER AND REPAIR THE FLOOR UNDER THE HOUSEKEEPING PAD TO THE SATISFACTION OF THE PACC.
4. VERIFY THE OPERATION OF THE NEW ELECTRIC METER AND TRAIN PACC PERSONNEL ON THE USE OF THE METER.
5. WITHIN ONE WEEK OF THE COMPLETION OF THE SHUTDOWN, RETURN TO THE SITE AND USING PROPER PPE, PERFORM AN INFRARED SCANS OF ALL CONNECTIONS AND MEASURE THE SECONDARY VOLTAGE OF THE NEW TRASFORMER. IF NEEDED, SCHEDULE A SHUTDOWN AND ADJUST THE TRANSFORMER TAP TO PROVIDE 120/208 VOLTS.

REVISIONS

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Suite 804
Philadelphia, PA 19107
(215) 542-8700

PROJECT NO.	E45009	DATE
PROJECT ENG.	ALA	07/27/23
CHECKED	JFM	07/27/23

0 1' 2' 3' 4' 5' 6'
1/2"=1'-0"

ELECTRICAL

OPP PROJECT NUMBER: XX-XX-XXXX-XX
PROJECT TITLE: PACC READING TERMINAL TRANSFORMER REPLACEMENT
PHASE: X
DRAWING TITLE: SOUTHWEST METER ROOM B AND ONE-LINE DIAGRAM LOCATED IN BASEMENT

PACC PROJECT NO.:	XX-XX-XXXX-XX
CONSULTANT PROJECT NO.:	E45009
DATE:	07-28-2023
SCALE:	SCALE AS NOTED
DRAWN BY:	
CHECKED BY:	

DRAWING NO.: E2

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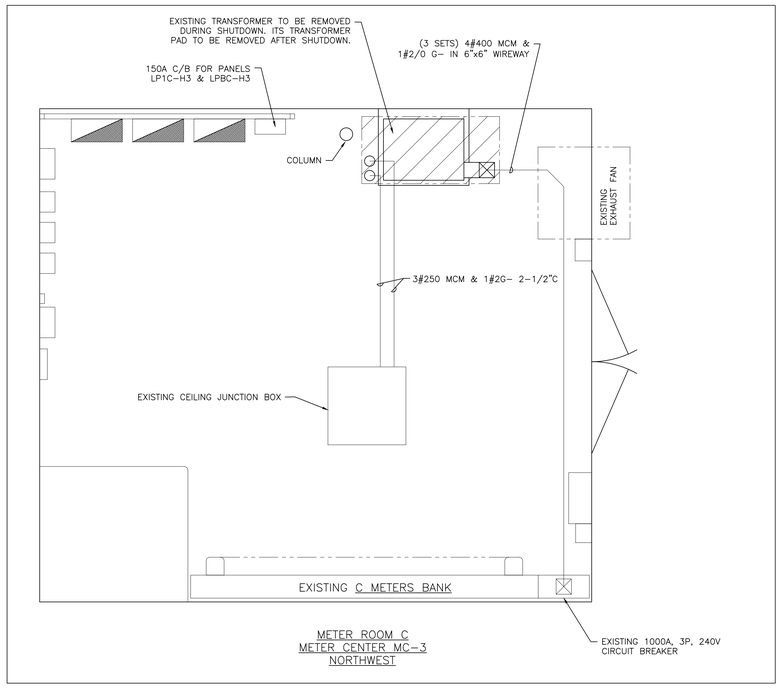
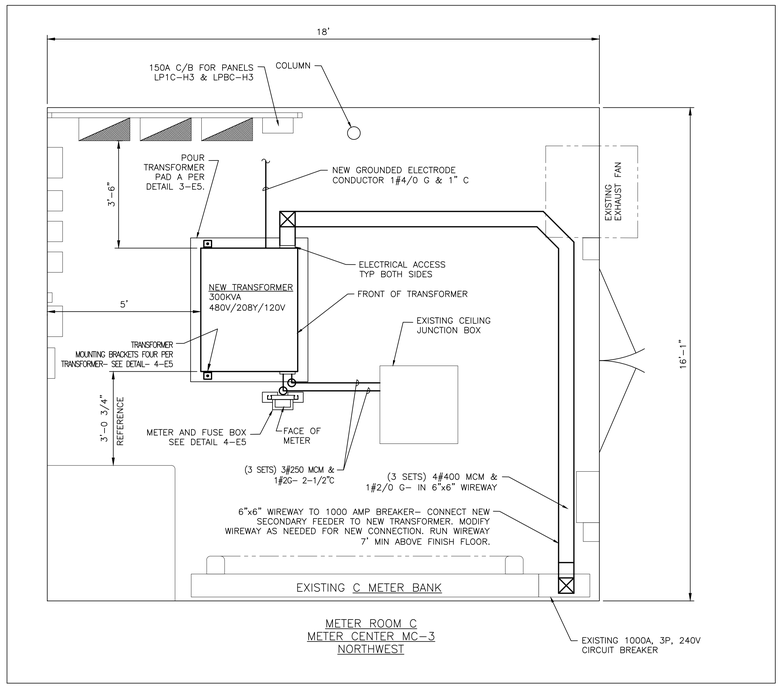


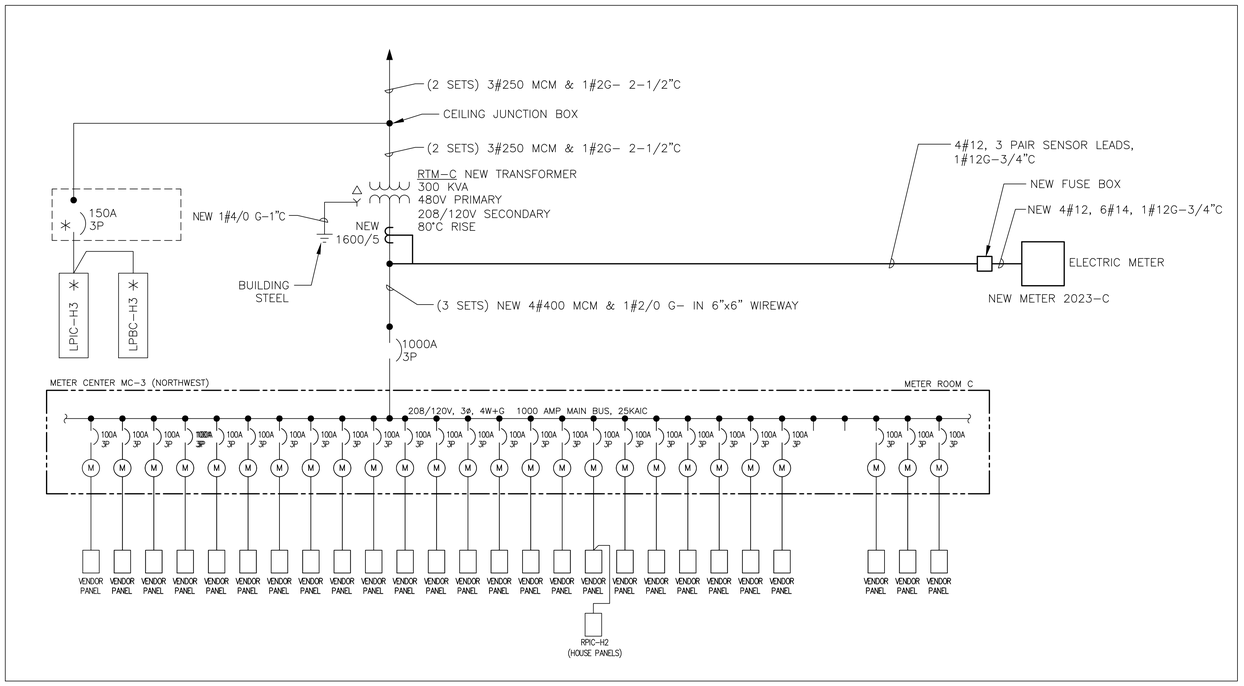
METER ROOM C
METER CENTER MC–3
NORTHWEST

1 E3 METER ROOM C EXISTING
SCALE: 1/2" = 1' – 0"



METER ROOM C
METER CENTER MC–3
NORTHWEST

2 E3 METER ROOM C NEW
SCALE: 1/2" = 1' – 0"



3 E3 METER ROOM C ONE–LINE DIAGRAM
NORTHWEST

METER ROOM C – NORTHWEST
SCOPE OF WORK

PRIOR TO SHUTDOWN

1. CONSTRUCT A NEW TRANSFORMER PAD WHERE AND AS SHOWN ON DRAWINGS.
2. FURNISH AND INSTALL A NEW 300 KVA, 480 VOLT / 208/120 VOLT, 80° RISE, DRY TRANSFORMER, ALUMINUM WINDINGS, SQUARE D CATALOG NUMBER EX300T68HB WITH FLOOR MOUNTING BRACKET, SQUARE D CATALOG NUMBER 7400FMB.
3. FURNISH AND INSTALL NEW #4/0 COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" CONDUIT FROM THE NEW TRANSFORMER SECONDARY NEUTRAL TO EFFECTIVELY GROUNDED BUILDING STEEL.
4. FURNISH AND INSTALL NEW SECTIONS OF 6" X 6" WIREWAY FROM THE NEW TRANSFORMER TO THE LOCATION WHERE IT WILL CONNECT TO THE EXISTING 6" X 6" WIREWAY DURING THE SHUTDOWN.
5. FURNISH AND INSTALL THE NEW ELECTRIC METER (E–MON D–MON CLASS 2000), NEW FUSE BOX, NEW METER SUPPORT STAND, NEW CURRENT SENSORS (E MON D–MON MODEL CS), NEW VOLTAGE SENSING WIRES, NEW CONDUIT, ETC. FOR THE NEW ELECTRIC METER AS SHOWN ON THE DRAWINGS.

DURING A SCHEDULED SHUTDOWN

1. OPEN AND LOCK OUT THE 500 AMP FUSED DISCONNECT SWITCH IN SUBSTATION A THAT FEEDS THE NORTHWEST METER ROOM C. USING PROPER PPE, VERIFY THAT THE EXISTING 300 KVA TRANSFORMER AND THE FEEDERS TO AND FROM IT ARE DE–ENERGIZED.
2. DISCONNECT THE EXISTING TRANSFORMER'S PRIMARY FEEDER CONDUCTORS (2 SETS OF 3#250 MCM & 1#2 G IN 2 ½" C). PULL THE PRIMARY FEEDER CONDUCTORS BACK INTO THE EXISTING CEILING JUNCTION BOX. REROUTE AND REWORK AS NEEDED THE EXISTING TRANSFORMER'S PRIMARY FEEDER'S CONDUITS FROM THE EXISTING TRANSFORMER TO THE NEW TRANSFORMER. INSTALL THE PRIMARY FEEDER CONDUCTORS IN THE REROUTED CONDUITS AND TERMINATE THE CONDUCTORS ONTO THE NEW TRANSFORMER'S PRIMARY TERMINATION PADS, PROVIDING NEW TWO (2) HOLE CONDUCTOR TERMINAL LUGS AS PER THE TRANSFORMER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. DISCONNECT, REMOVE AND DISCARD THE EXISTING TRANSFORMER'S SECONDARY FEEDER CONDUCTORS (3 SETS OF 4#400 MCM & 1#2/0 G IN 6" X 6" WIREWAY) FROM THE EXISTING TRANSFORMER TO THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER.
4. INSPECT THE 1,000 AMP, 3 POLE CIRCUIT BREAKER FOR ANY CRACKS OR SIGNS OF DAMAGE, OPENING AND CLOSING THE CIRCUIT BREAKER A NUMBER OF TIMES TO ASCERTAIN THAT IT SHOULD OPERATE PROPERLY. TAKE A PHOTO OF THE CIRCUIT BREAKER THAT WILL SHOW ITS MAKE AND MODEL AND TRIP SETTINGS. PROVIDE A WRITTEN VERIFICATION THAT THE CIRCUIT BREAKER WAS VISUALLY INSPECTED AND OPERATED MANUALLY AND COPIES OF THE PHOTO TO PACC.
5. VERIFY THAT A GROUNDING ELECTRODE CONDUCTOR DOES NOT EXIST BETWEEN THE NEUTRAL IN THE 1,000 AMP, 3 POLE CIRCUIT BREAKER AND GROUND. IF IT DOES, THIS SHOULD BE DISCONNECTED AND REMOVED.
6. REWORK AND MODIFY AS NEEDED THE NEW AND EXISTING 6" X 6" WIREWAY SO THAT THE 6" X 6" WIREWAY CONNECTS THE NEW TRANSFORMER TO THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER.
7. FURNISH AND INSTALL NEW TRANSFORMER'S SECONDARY FEEDER CONDUCTORS (3 SETS OF 4#400 MCM & 1#2/0 G IN 6" X 6" WIREWAY) BETWEEN THE NEW TRASFORMER SECONDARY TERMINATION PADS AND THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER. PROVIDE NEW TWO (2) HOLE CONDUCTOR TERMINAL LUGS, AS PER THE TRANSFORMER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
8. COMPLETE THE INSTALLATION OF THE ELECTRIC METER'S CURRENT SENSORS AND VOLTAGE SENSING WIRES WITHIN THE NEW TRANSFORMER.
9. SET THE NEW TRANSFORMER'S VOLTAGE TAP AT THE SAME VOLTAGE AS THE TAP OF THE EXISTING TRANSFORMER. NOTE THE TAP SETTING ON THE RECORD DRAWINGS.
10. AFTER VERIFYING THAT THE INSTALLATION OF THE NEW TRANSFORMER IS COMPLETE, CLOSE THE 500 AMP FUSED DISCONNECT SWITCH IN SUBSTATION A THAT FEEDS THE SOUTHEAST METER ROOM C.
11. VERIFY THAT THE NEW METER IS OPERATIONAL AND THAT THE EXISTING METER BANK IS ENERGIZED.

AFTER THE SCHEDULED SHUTDOWN

1. REMOVE AND PROPERLY DISCARD THE EXISTING TRANSFORMER AND ALL REMAINING PORTIONS OF RACEWAY AND CONDUCTORS THAT ARE NO LONGER IN USE. CLOSE ALL OPENINGS, IF ANY, IN THE EXISTING CEILING JUNCTION BOX.
2. FURNISH AND INSTALL NEW NAMEPLATES ON THE NEW TRANSFORMER AND NEW METER.
3. REMOVE THE HOUSEKEEPING PAD THAT WAS USED FOR THE EXISTING TRANSFORMER AND REPAIR THE FLOOR UNDER THE HOUSEKEEPING PAD TO THE SATISFACTION OF THE PACC.
4. VERIFY THE OPERATION OF THE NEW ELECTRIC METER AND TRAIN PACC PERSONNEL ON THE USE OF THE METER.
5. WITHIN ONE WEEK OF THE COMPLETION OF THE SHUTDOWN, RETURN TO THE SITE AND USING PROPER PPE, PERFORM AN INFRARED SCANS OF ALL CONNECTIONS AND MEASURE THE SECONDARY VOLTAGE OF THE NEW TRASFORMER. IF NEEDED, SCHEDULE A SHUTDOWN AND ADJUST THE TRANSFORMER TAP TO PROVIDE 120/208 VOLTS.

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0 1' 2' 3' 4' 5' 6'
1/2"=1'–0"

ELECTRICAL

OPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
PACC READING TERMINAL TRANSFORMER REPLACEMENT

PHASE:
X

DRAWING TITLE:
NORTH WEST METER ROOM C AND ONE-LINE DIAGRAM LOCATED IN BASEMENT

PACC PROJECT NO.: XX-XX-XXXX-XX	DRAWING NO.: E3
CONSULTANT PROJECT NO.: E45009	
DATE: 07-28-2023	
SCALE: SCALE AS NOTED	
DRAWN BY:	
CHECKED BY:	

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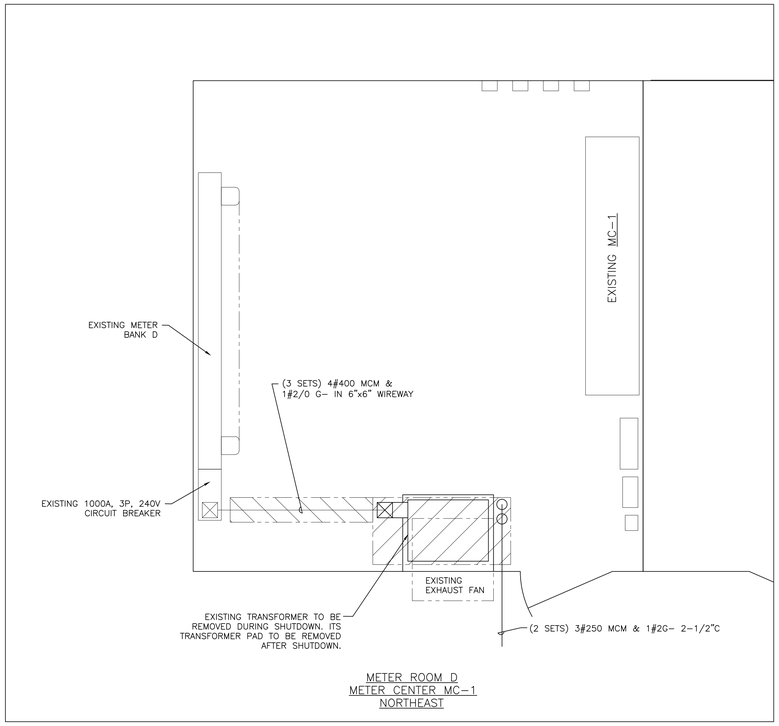
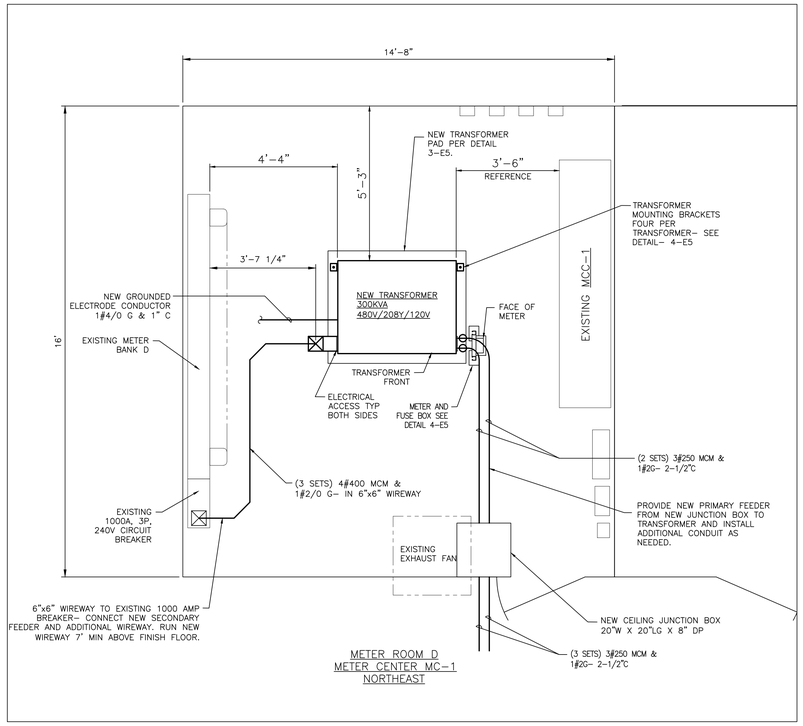
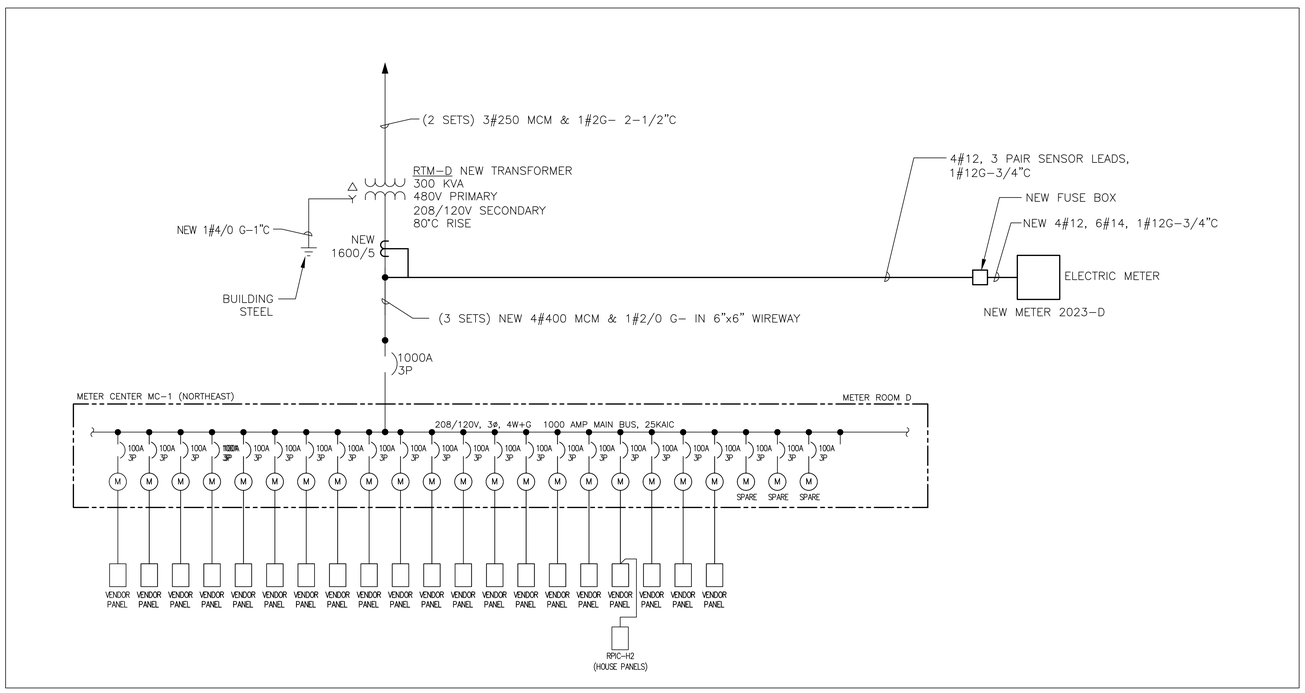


1 / E4 METER ROOM D EXISTING
SCALE: 1/2" = 1' - 0"



2 / E4 METER ROOM D NEW
SCALE: 1/2" = 1' - 0"



3 / E4 METER ROOM D ONE-LINE DIAGRAM
NORTHEAST

METER ROOM D- NORTHEAST
SCOPE OF WORK

PRIOR TO SHUTDOWN

1. CONSTRUCT A NEW TRANSFORMER PAD WHERE AND AS SHOWN ON DRAWINGS.
2. FURNISH AND INSTALL A NEW 300 KVA, 480 VOLT / 208/120 VOLT, 80° RISE, DRY TRANSFORMER, ALUMINUM WINDINGS, SQUARE D CATALOG NUMBER EX300T68HB WITH FLOOR MOUNTING BRACKET, SQUARE D CATALOG NUMBER 7400FMB.
3. FURNISH AND INSTALL NEW #4/0 COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" CONDUIT FROM THE NEW TRANSFORMER SECONDARY NEUTRAL TO EFFECTIVELY GROUNDED BUILDING STEEL.
4. FURNISH AND INSTALL THE SECTION OF THE NEW TRANSFORMER PRIMARY FEEDER CONDUIT (2 -2 ½"C) FROM THE NEW TRANSFORMER TO THE LOCATION WHERE A NEW CEILING MOUNTED JUNCTION BOX WILL BE INSTALLED DURING THE SHUTDOWN.
5. FURNISH AND INSTALL NEW SECTIONS OF 6" X 6" WIREWAY FROM THE NEW TRANSFORMER TO THE LOCATION WHERE IT WILL CONNECT TO THE EXISTING 6" X 6" WIREWAY DURING THE SHUTDOWN.
6. FURNISH AND INSTALL THE NEW ELECTRIC METER (E-MON D-MON CLASS 2000), NEW FUSE BOX, NEW METER SUPPORT STAND, NEW CURRENT SENSORS (E MON D-MON MODEL CS), NEW VOLTAGE SENSING WIRES, NEW CONDUIT, ETC. FOR THE NEW ELECTRIC METER AS SHOWN ON THE DRAWINGS.

DURING A SCHEDULED SHUTDOWN

1. OPEN AND LOCK OUT THE 500 AMP FUSED DISCONNECT SWITCH IN SUBSTATION A THAT FEEDS THE SOUTHEAST METER ROOM D. USING PROPER PPE, VERIFY THAT THE EXISTING 300 KVA TRANSFORMER AND THE FEEDERS TO AND FROM IT ARE DE-ENERGIZED.
2. DISCONNECT THE EXISTING TRANSFORMER'S PRIMARY FEEDER CONDUCTORS (2 SETS OF 3#250 MCM & 1#2 G IN 2 ½" C). PULL THE PRIMARY FEEDER CONDUCTORS BACK INTO THE EXISTING CONDUIT, FURNISHING AND INSTALLING A NEW CEILING MOUNTED, 20" X 20" GALVANIZED SHEET STEEL ELECTRICAL PULL BOX WITH SHEET STEEL COVER PLATE AND GROUNDING LUG, INTO WHICH THE EXISTING CONDUIT AND THE RECENTLY INSTALLED CONDUIT WILL BE CONNECTED.
3. FURNISH AND INSTALL A NEW PORTION OF THE TRANSFORMER PRIMARY FEEDER (2 SETS OF 3#250 MCM & 1# 2 G) IN THE RECENTLY INSTALLED CONDUIT FROM THE CEILING JUNCTION BOX TO THE NEW TRANSFORMER'S PRIMARY TERMINATION PADS, PROVIDING NEW TWO (2) HOLE CONDUCTOR TERMINAL LUGS AS PER THE TRANSFORMER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITHIN THE TRANSFORMER. FURNISH AND INSTALL NEW INSULATED WIRE CONNECTORS, POLARIS OR EQUAL, TO SPLICE THE NEW PORTION OF TRANSFORMER PRIMARY FEEDER TO THE EXISTING TRANSFORMER PRIMARY FEEDER IN THE NEW CEILING JUNCTION BOX.
4. DISCONNECT, REMOVE AND DISCARD THE EXISTING TRANSFORMER'S SECONDARY FEEDER CONDUCTORS (3 SETS OF 4#400 MCM & 1#2/0 G IN 6" X 6" WIREWAY) FROM THE EXISTING TRANSFORMER TO THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER.
5. INSPECT THE 1,000 AMP, 3 POLE CIRCUIT BREAKER FOR ANY CRACKS OR SIGNS OF DAMAGE, OPENING AND CLOSING THE CIRCUIT BREAKER A NUMBER OF TIMES TO ASCERTAIN THAT IT SHOULD OPERATE PROPERLY. TAKE A PHOTO OF THE CIRCUIT BREAKER THAT WILL SHOW ITS MAKE AND MODEL AND TRIP SETTINGS. PROVIDE A WRITTEN VERIFICATION THAT THE CIRCUIT BREAKER WAS VISUALLY INSPECTED AND OPERATED MANUALLY AND COPIES OF THE PHOTO TO PACC.
6. VERIFY THAT A GROUNDING ELECTRODE CONDUCTOR DOES NOT EXIST BETWEEN THE NEUTRAL IN THE 1,000 AMP, 3 POLE CIRCUIT BREAKER AND GROUND. IF IT DOES, THIS SHOULD BE DISCONNECTED AND REMOVED.
7. REWORK AND MODIFY AS NEEDED THE NEW AND EXISTING 6" X 6" WIREWAY SO THAT THE 6" X 6" WIREWAY CONNECTS THE NEW TRANSFORMER TO THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER.
8. FURNISH AND INSTALL NEW TRANSFORMER'S SECONDARY FEEDER CONDUCTORS (3 SETS OF 4#400 MCM & 1#2/0 G IN 6" X 6" WIREWAY) BETWEEN THE NEW TRANSFORMER SECONDARY TERMINATION PADS AND THE EXISTING 1,000 AMP, 3 POLE CIRCUIT BREAKER. PROVIDE NEW TWO (2) HOLE CONDUCTOR TERMINAL LUGS, AS PER THE TRANSFORMER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
9. COMPLETE THE INSTALLATION OF THE ELECTRIC METER'S CURRENT SENSORS AND VOLTAGE SENSING WIRES WITHIN THE NEW TRANSFORMER.
10. SET THE NEW TRANSFORMER'S VOLTAGE TAP AT THE SAME VOLTAGE AS THE TAP OF THE EXISTING TRANSFORMER. NOTE THE TAP SETTING ON THE RECORD DRAWINGS.
11. AFTER VERIFYING THAT THE INSTALLATION OF THE NEW TRANSFORMER IS COMPLETE, CLOSE THE 500 AMP FUSED DISCONNECT SWITCH IN SUBSTATION A THAT FEEDS THE SOUTHEAST METER ROOM D.
12. VERIFY THAT THE NEW METER IS OPERATIONAL AND THAT THE EXISTING METER BANK IS ENERGIZED.

AFTER THE SCHEDULED SHUTDOWN

1. REMOVE AND PROPERLY DISCARD THE EXISTING TRANSFORMER AND ALL REMAINING PORTIONS OF RACEWAY AND CONDUCTORS THAT ARE NO LONGER IN USE.
2. FURNISH AND INSTALL NEW NAMEPLATES ON THE NEW TRANSFORMER AND NEW METER.
3. REMOVE THE HOUSEKEEPING PAD THAT WAS USED FOR THE EXISTING TRANSFORMER AND REPAIR THE FLOOR UNDER THE HOUSEKEEPING PAD TO THE SATISFACTION OF THE PACC.
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ELECTRICAL

OPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
PACC READING TERMINAL TRANSFORMER REPLACEMENT

PHASE:
X

DRAWING TITLE:
NORTHEAST
METER ROOM D AND ONE-LINE DIAGRAM
LOCATED IN BASEMENT

PACC PROJECT NO.: XX-XX-XXXX-XX	DRAWING NO.: E4
CONSULTANT PROJECT NO.: E45009	
DATE: 07-28-2023	
SCALE: SCALE AS NOTED	
DRAWN BY:	
CHECKED BY:	

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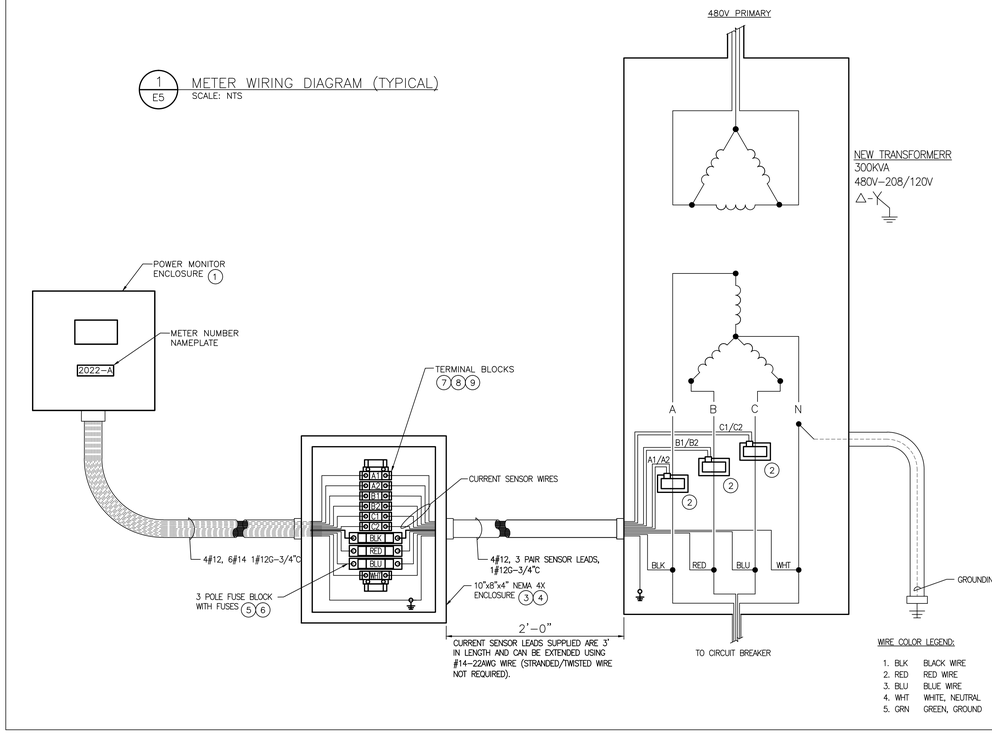


1 / E5 METER WIRING DIAGRAM (TYPICAL)
SCALE: NTS

SHEET NOTES:

1. PROVIDE SPLIT CORE SENSORS THAT ARE COMPATIBLE WITH AND PROVIDED BY THE MANUFACTURES OF THE METER WITH A CURRENT RATING OF 1200 AMPS OR THE NEXT HIGHER STANDARD RATING.

WIRE COLOR LEGEND:

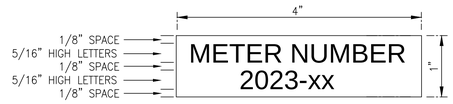
1. BLK BLACK WIRE
2. RED RED WIRE
3. BLU BLUE WIRE
4. WHT WHITE, NEUTRAL
5. GRN GREEN, GROUND

BILL OF MATERIAL

ITEM	QUANT.	DESCRIPTION
1	1	POWER MONITOR WITH NEMA 4X ENCLOSURE, E-MON, D-MON, CLASS 2000 OR EQUAL.
2	3	CURRENT SENSOR, SPLIT CORE TYPE, E-MON, D-MON, MODEL CS** OR EQUAL.
3	1	ENCLOSURE- 10" X 8" X 4", TYPE 4X HOFFMAN #B1008NFSS6, OR EQUAL.
4	1	SUB-PANEL- 8.75" X 6.88" HOFFMAN #A10P8 OR EQUAL.
5	1	FUSE BLOCK- CLASS CC, 3 POLE, FERRAZ SHAWMUT #USCC3.
6	3	FUSE- 0.1A, 600V, LITTLEFUSE #KLDR-100 OR EQUAL.
7	7	TERMINAL BLOCK- 600V, ALLEN-BRADLEY CAT# 1492-CAM1 OR EQUAL.
8	2	END ANCHOR- ALLEN-BRADLEY CAT# EAJ35 OR EQUAL.
9	1	DIN RAIL- 35 MM, ALLEN-BRADLEY CAT#1492-DR9 OR EQUAL.

NAMEPLATE SCHEDULE

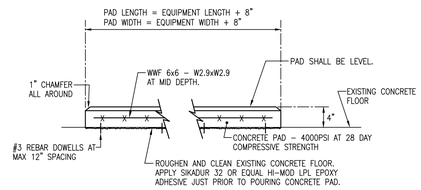
METER NUMBER	LOCATION	REFERENCE DRAWING
2023–A	METER ROOM A	E1
2023–B	METER ROOM B	E2
2023–C	METER ROOM C	E3
2023–C	METER ROOM D	E4



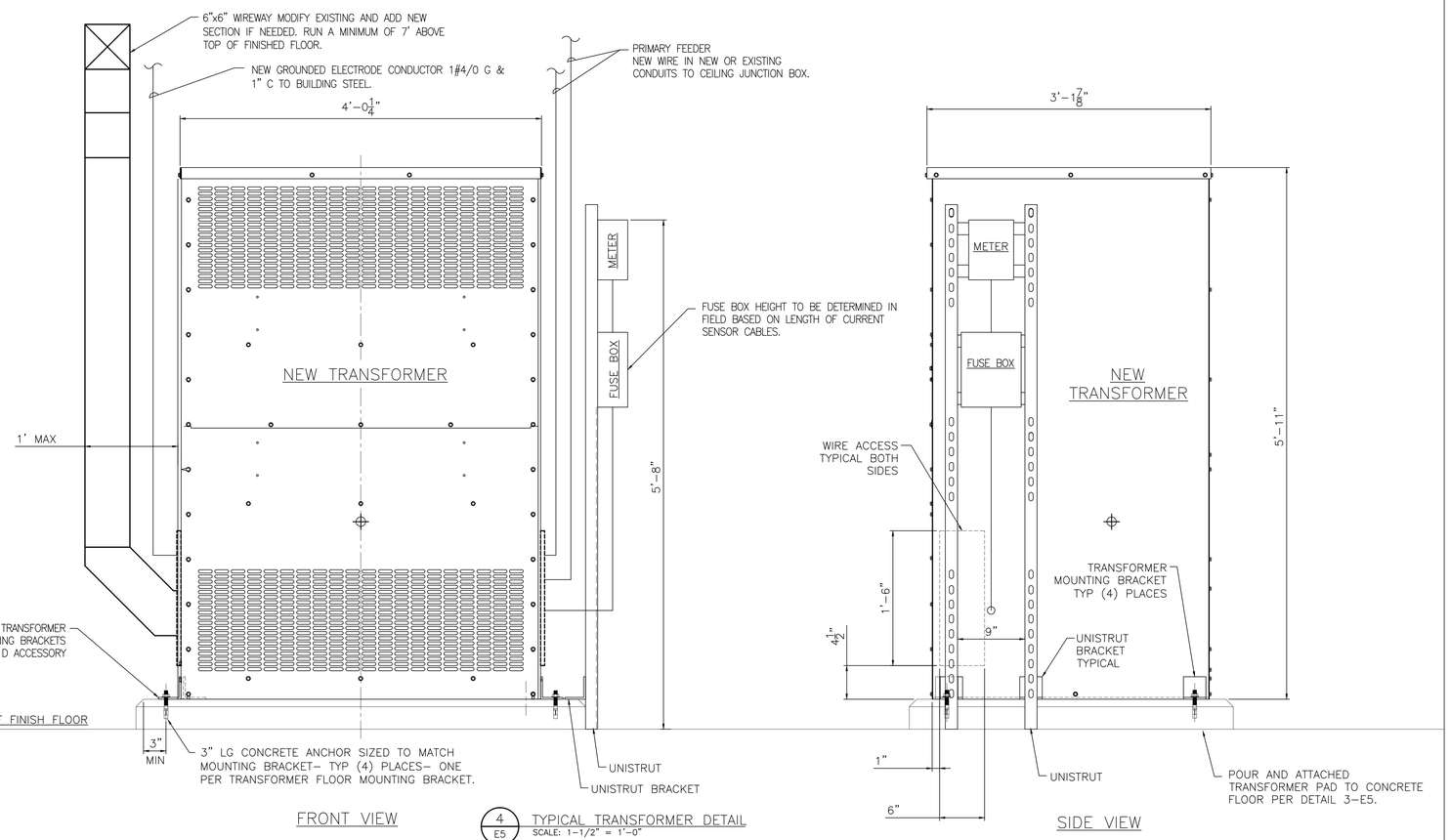
EQUIPMENT

1. NAMEPLATES OR LEGEND DEVICE PLATES SHALL BE 1/16" THICK TWO PLY "GRAVOPLY", COLORS AS INDICATED BELOW.
2. LETTERS SHALL BE ENGRAVED BLOCK TYPE.
3. NAMEPLATES SHALL BE ATTACHED TO DEVICE PLATE WITH DOUBLE STICK TAPE.
4. LETTERING SHALL BE AS BLACK LETTERS WITH WHITE BACKGROUND.
5. SUBMIT NAMEPLATES FOR APPROVAL PRIOR TO ENGRAVING.
6. PROVIDE FOR ALL POWER MONITORING EQUIPMENT AS STATED IN THE SCOPE OF WORK.

2 / E5 METER NAME TAGS
SCALE: NTS



3 / E5 DETAIL – CONCRETE EQUIPMENT PAD
SCALE: 1" = 1' – 0"



4 / E5 TYPICAL TRANSFORMER DETAIL
SCALE: 1–1/2" = 1'–0"

REVISIONS

ISSUE	DATE	REVISIONS
A	8/15/2023	ISSUE FOR BID

Pennsylvania Convention Center
PHILADELPHIA

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

MAIDA ENGINEERING INC.
CONSULTING ENGINEERS
Philadelphia Office
1315 Walnut Street
Suite 804
Philadelphia, PA 19107
(215) 542–8700

PROJECT NO.	E45009	DATE
PROJECT ENG.	ALA	07/27/23
CHECKED	JFM	07/27/23

0 1' 2' 3'
1"=1'–0"
0 6" 1' 18" 2'
1.5"=1'–0"

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
PACC READING TERMINAL TRANSFORMER REPLACEMENT

PHASE:
X

DRAWING TITLE:
TRANSFORMER AND METER WIRING DIAGRAMS AND DETAILS LOCATED IN BASEMENT

PACC PROJECT NO.: XX-XX-XXXX-XX	DRAWING NO.: E5
CONSULTANT PROJECT NO.: E45009	
DATE: 07-28-2023	
SCALE: NOT TO SCALE	
DRAWN BY: ARMELLINI	
CHECKED BY:	

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.