

- LEGEND**
- DRAW-OUT CIRCUIT BREAKER-MEDIUM VOLTAGE 1200A, 3 POLE
 - DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
 - FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER-LOW VOLTAGE-3 POLE FRAME AND/OR TRIP AMPERES NOTED
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER-SEE LEGEND FOR X
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - ∅ PHASE
 - W WIRE
 - 600 VOLT WIRE IN RACEWAY
 - 3#2/0, 1#2G QUANTITY AND SIZE OF WIRES

DRAWING NO	DRAWING TITLE	NOTE
SL0	OVERALL MV DISTRIBUTION	
SL1	UNIT SUBSTATION SS1-ELECTRICAL ROOM 3	
SL2	UNIT SUBSTATION SS2-ELECTRICAL ROOM 3	
SL3	UNIT SUBSTATION SS3-ELECTRICAL ROOM 5	
SL4	MAIN MV SERVICE ENTRANCE SWITCHGEAR & MV SUB 24	
SL5	UNIT SUBSTATION SS5-ELECTRICAL ROOM 4	
SL6	UNIT SUBSTATION SS6-ELECTRICAL ROOM 4	
SL7	UNIT SUBSTATION SS7-ELECTRICAL ROOM 6	
SL8	UNIT SUBSTATION SS8-ELECTRICAL ROOM 6	
SL9	UNIT SUBSTATION SS9-ELECTRICAL ROOM 1	
SL10	UNIT SUBSTATION SS10-ELECTRICAL ROOM 1	
SL11	UNIT SUBSTATION SS11-ELECTRICAL ROOM 1	
SL12	UNIT SUBSTATION SS12-ELECTRICAL ROOM 1	
SL13	UNIT SUBSTATION SS13-ELECTRICAL ROOM 1	
SL14	UNIT SUBSTATION SS14-ELECTRICAL ROOM 2	
SL15	UNIT SUBSTATION SS15-ELECTRICAL ROOM 2	
SL16	UNIT SUBSTATION SS16-ELECTRICAL ROOM 2	
SL17	UNIT SUBSTATION SS17-ELECTRICAL ROOM 2	

SL18	UNIT SUBSTATION SS18-ELECTRICAL ROOM 5
SL19	UNIT SUBSTATION SS19-ELECTRICAL ROOM 5
SL20	UNIT SUBSTATION SS20-ELECTRICAL ROOM 5
SL21	UNIT SUBSTATION SS21-ELECTRICAL ROOM 5
SL22	UNIT SUBSTATION SS22-ELECTRICAL ROOM
SL23	UNIT SUBSTATION SS23-ELECTRICAL ROOM
SL24	EMERGENCY GENERATOR C-ADJACENT TO ELECTRICAL ROOM 1
SL25	EMERGENCY GENERATOR A-ADJACENT TO ELECTRICAL ROOM 2
SL26	EMERGENCY GENERATOR TRAIN SHED-READING TERMINAL MARKET
EQP1	ELECTRICAL EQUIPMENT LOCATION PLAN STREET LEVEL (LEVEL 37)
EQP2	ELECTRICAL EQUIPMENT LOCATION PLANS (LEVELS 63 & 48)
EQP3	ELECTRICAL EQUIPMENT LOCATION PLANS (LEVELS 37, 63 & 102)
EQP4	ELECTRICAL EQUIPMENT LOCATION PLAN OVERLOOK (LEVEL 76)
EQP5	ELECTRICAL EQUIPMENT LOCATION PLAN BALLROOM (LEVEL 89)

REVISIONS

ISSUE	DATE	REVISIONS
A	12/5/2017	ISSUED

Pennsylvania Convention Center PHILADELPHIA

PENNSYLVANIA ONE CALL SYSTEM, INC.
 620 Main Street
 West 10th, Philadelphia
 19122-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BURY OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXX

LEGEND

PRIME CONSULTANT:

DPP PROJECT NUMBER: XX-XX-XXXX-XX
 PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: OVERALL MV DISTRIBUTION

PROJECT NO.: XX-XX-XXXX-XX
DRAWING NO.: E40006
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL0

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

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE



PENNSYLVANIA ONE CALL SYSTEM, INC.



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

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 1
ELECTRICAL ROOM 3

PAC PROJECT NO.: XX-XX-XXXX-XX DRAWING NO.:

CONSULTANT PROJECT NO.: E40006

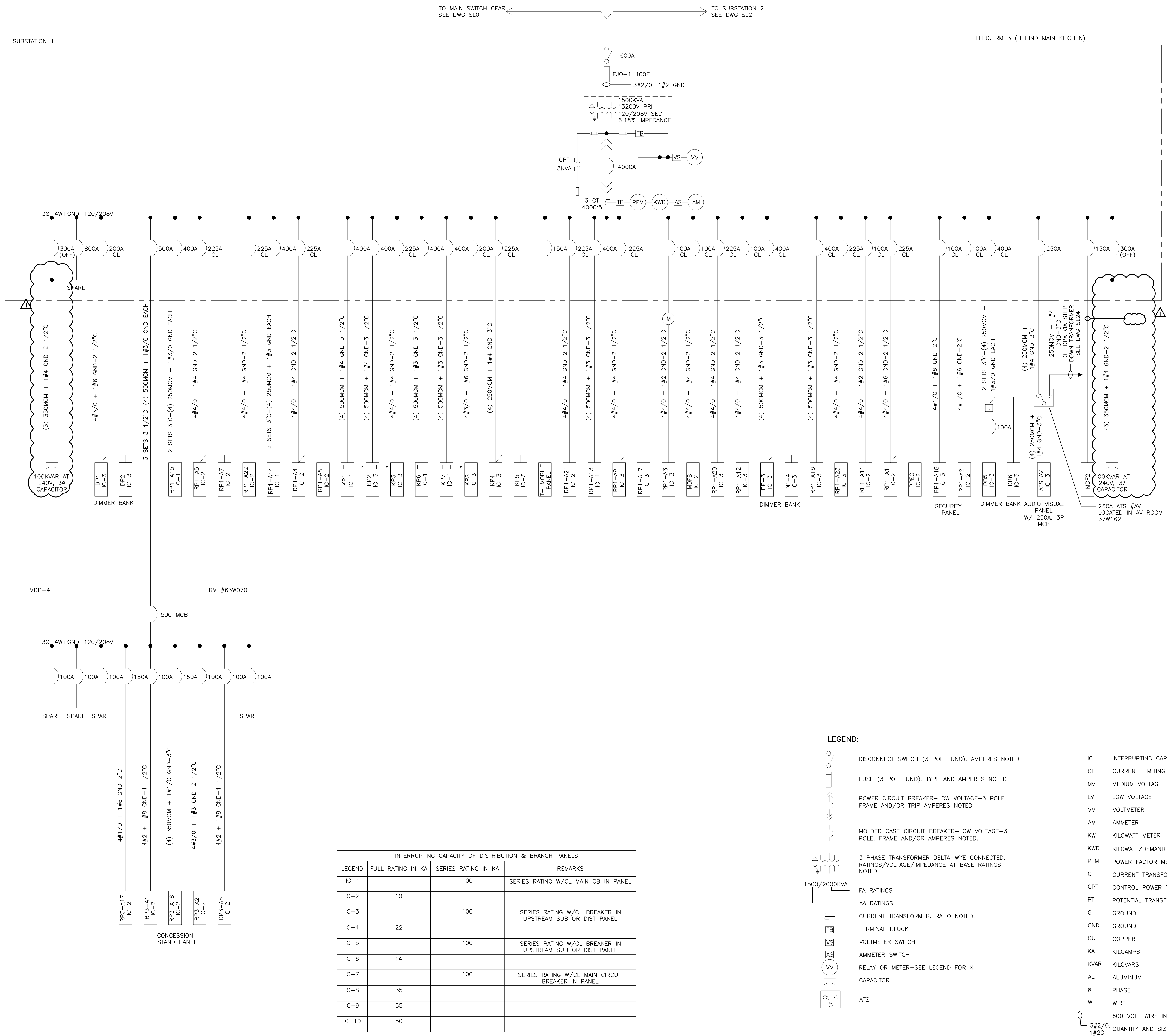
DATE: 09-24-2017

SCALE: NOT TO SCALE

DRAWN BY:

CHECKED BY:

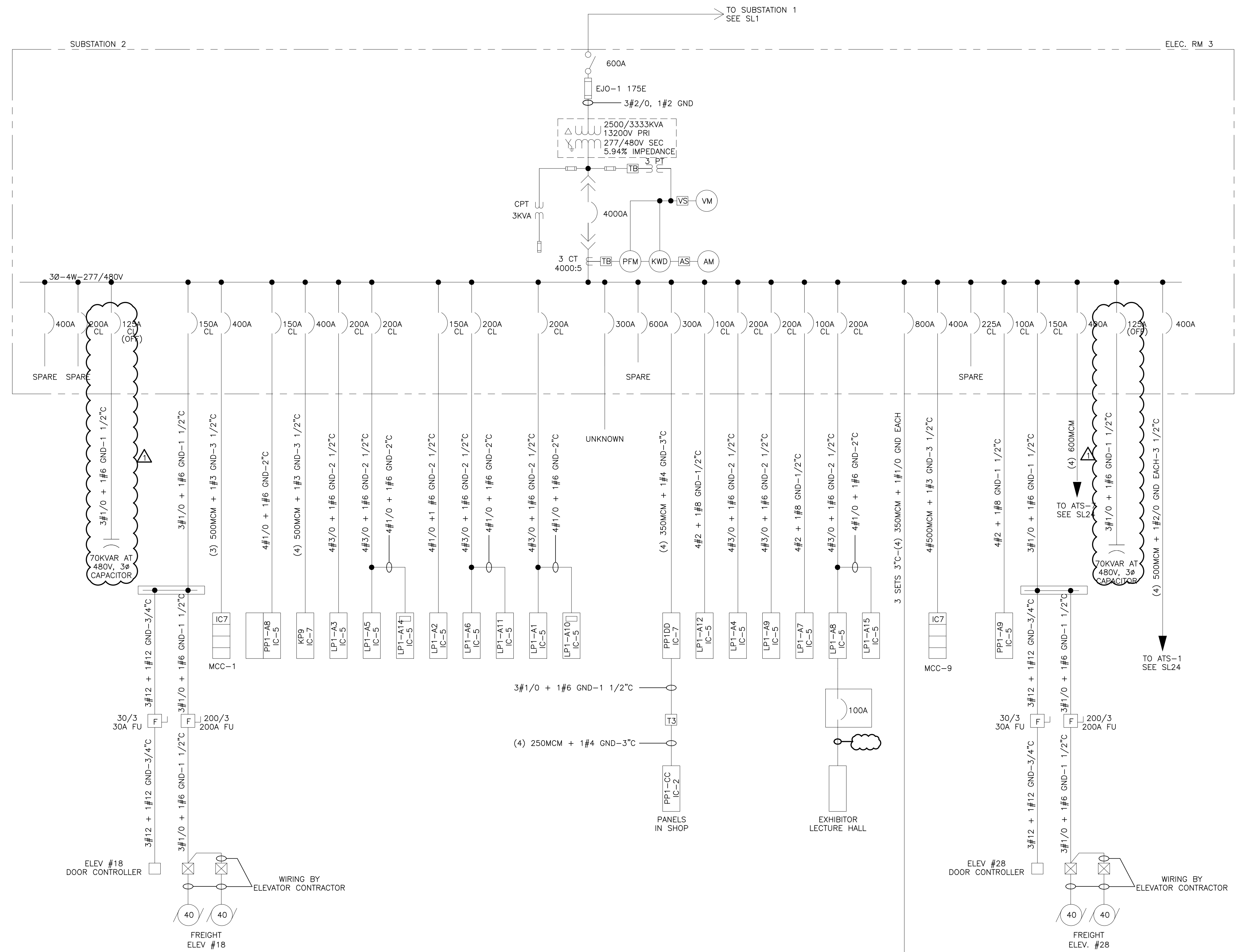
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INTERRUPTING CAPACITY OF DISTRIBUTION & BRANCH PANELS			
LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
 - FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE, FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER, RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - CAPACITOR
 - ATS
 - IC INTERRUPTING CAPACITY—SEE TABLE
 - CL CURRENT LIMITING
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES

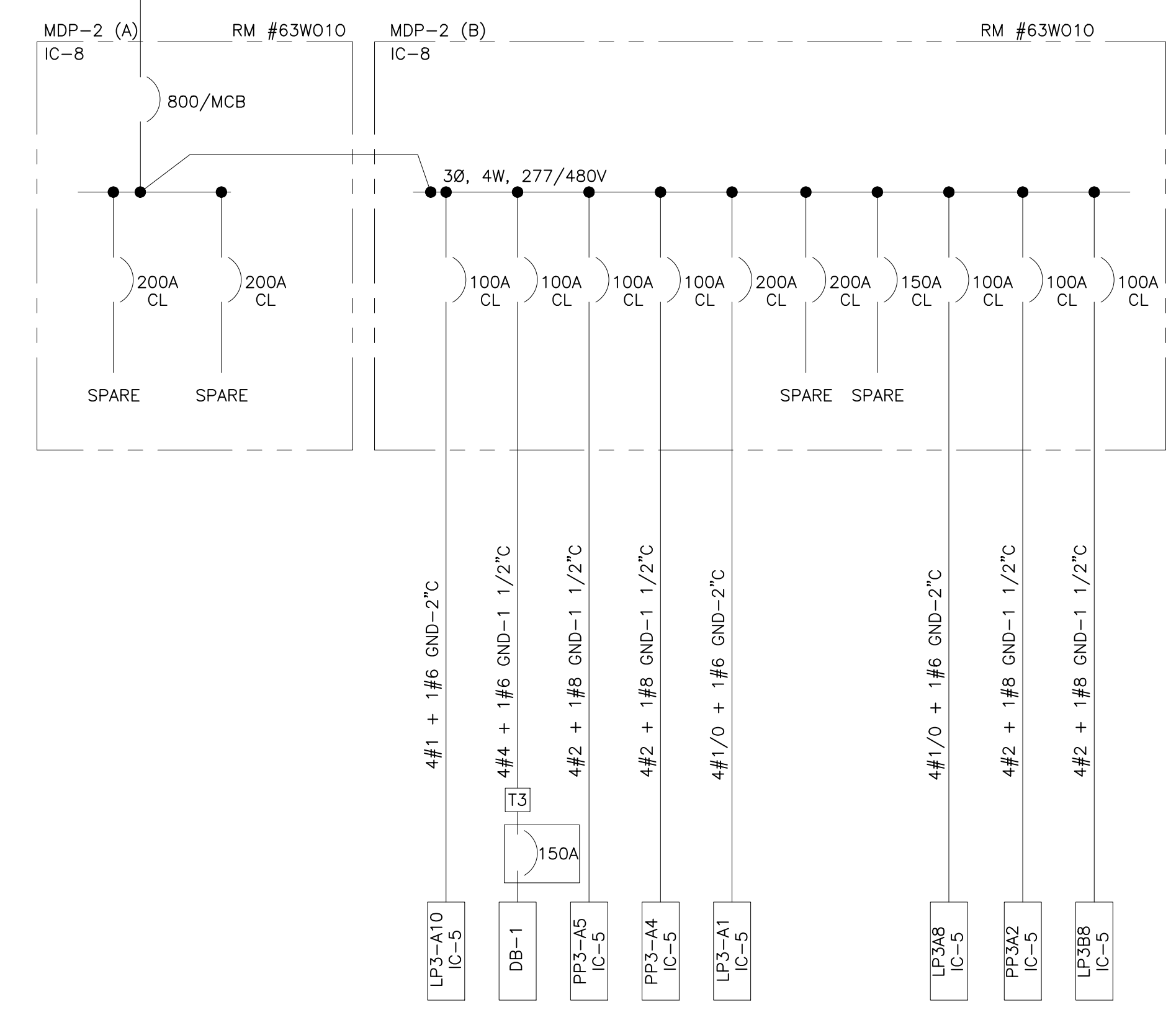
SL1



TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	Ø	WIRE
T-0	6	480V DELTA/120/208V WYE	3Ø	4W
T-1	15	480V DELTA/120/208V WYE	3Ø	4W
T-2	30	480V DELTA/120/208V WYE	3Ø	4W
T-3	45	480V DELTA/120/208V WYE	3Ø	4W
T-4	75	480V DELTA/120/208V WYE	3Ø	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W
T-6	150	480V DELTA/120/208V WYE	3Ø	4W
T-7	225	480V DELTA/120/208V WYE	3Ø	4W
T-8	300	480V DELTA/120/208V WYE	3Ø	4W
T-9	500	480V DELTA/120/208V WYE	3Ø	4W

LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
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 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - CAPACITOR
 - MOTOR STARTER
 - MOTOR STARTER
 - 3 PHASE MOTOR—HP NOTED
 - FUSED DISCONNECT SWITCH—3 POLE
 - DISCONNECT SWITCH—3 POLE
 - TRANSFORMER—SEE SCHEDULE FOR X
 - IC INTERRUPTING CAPACITY—SEE TABLE
 - CL CURRENT LIMITING
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
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 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES



REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 State Street
 West 10th, Philadelphia
 19102

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 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BURN OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

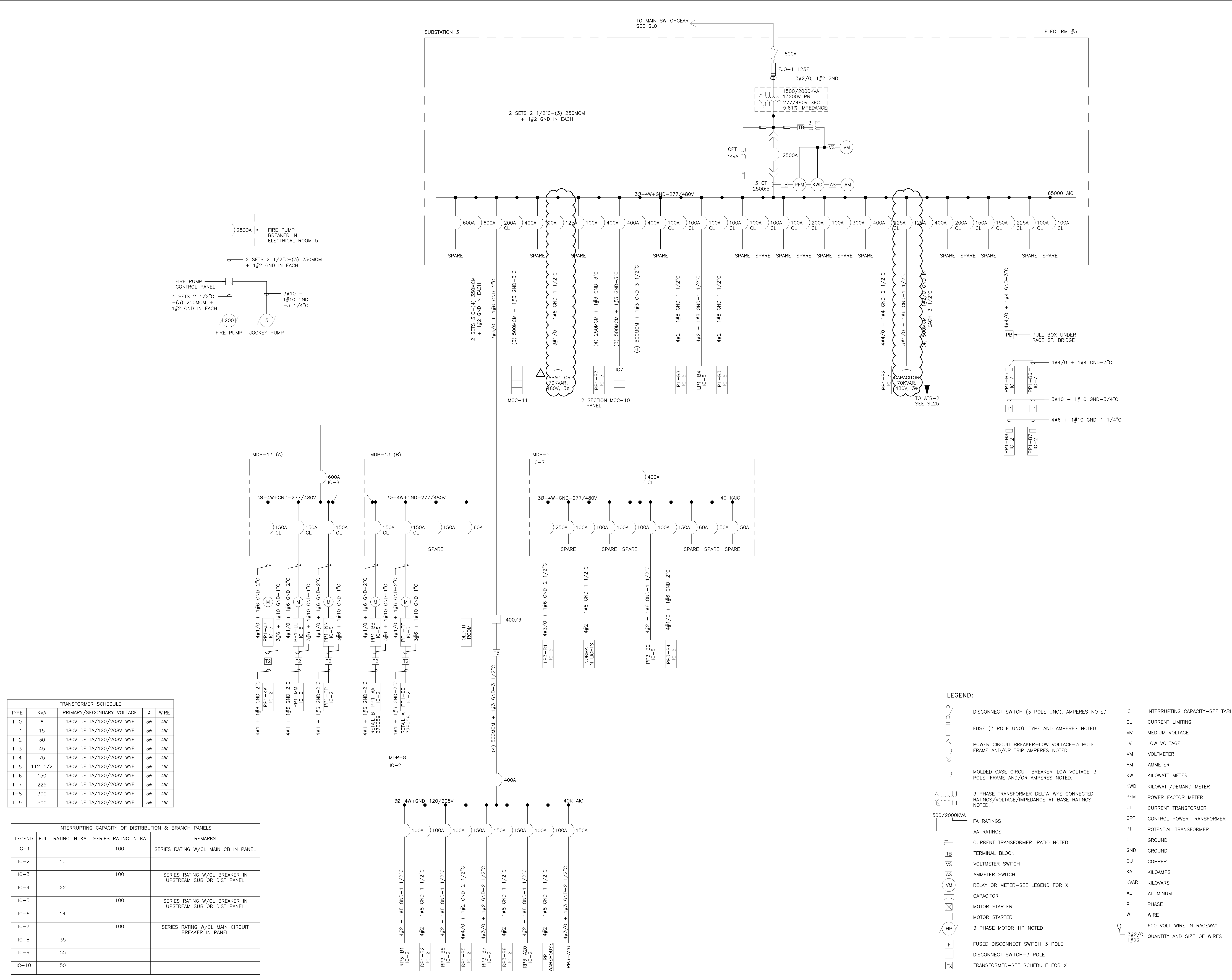
PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 2
ELECTRICAL ROOM 3

PROJECT NO.: XX-XX-XXXX-XX
 CONSULTANT PROJECT NO.: E40006
 DATE: 09-24-2017
 SCALE: NOT TO SCALE
 DRAWN BY:
 CHECKED BY:

SL2

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



TRANSFORMER SCHEDULE				
TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	# WIRE	WIRE
T-0	6	480V DELTA/120/208V WYE	3#	4W
T-1	15	480V DELTA/120/208V WYE	3#	4W
T-2	30	480V DELTA/120/208V WYE	3#	4W
T-3	45	480V DELTA/120/208V WYE	3#	4W
T-4	75	480V DELTA/120/208V WYE	3#	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3#	4W
T-6	150	480V DELTA/120/208V WYE	3#	4W
T-7	225	480V DELTA/120/208V WYE	3#	4W
T-8	300	480V DELTA/120/208V WYE	3#	4W
T-9	500	480V DELTA/120/208V WYE	3#	4W

INTERRUPTING CAPACITY OF DISTRIBUTION & BRANCH PANELS			
LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
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LEGEND:

- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
- FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
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- AA RATINGS
- CURRENT TRANSFORMER, RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- CAPACITOR
- MOTOR STARTER
- MOTOR STARTER
- 3 PHASE MOTOR—HP NOTED
- FUSED DISCONNECT SWITCH—3 POLE
- DISCONNECT SWITCH—3 POLE
- TRANSFORMER—SEE SCHEDULE FOR X
- IC INTERRUPTING CAPACITY—SEE TABLE
- CL CURRENT LIMITING
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVAR
- AL ALUMINUM
- PHASE
- W WIRE
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE



PENNSYLVANIA ONE CALL SYSTEM, INC.
 525 South Main Road
 West Chester, Pennsylvania
 19380-1078

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 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BUST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXXXX
 SEAL FOR REV 1 ONLY

PROJECT TITLE:
 POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

DRAWING TITLE:
 UNIT SUBSTATION 3
 ELECTRICAL ROOM 5

PROJECT NO.: XX-XX-XXXX-XX
 CONSULTANT PROJECT NO.: E40006
 DATE: 09-24-2017
 SCALE: NOT TO SCALE
 DRAWN BY:
 CHECKED BY:

SL3

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

REVISIONS

ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE



PENNSYLVANIA ONE CALL SYSTEM, INC.

923 1st Run Road
West 68th, Philadelphia
19122 - 1078

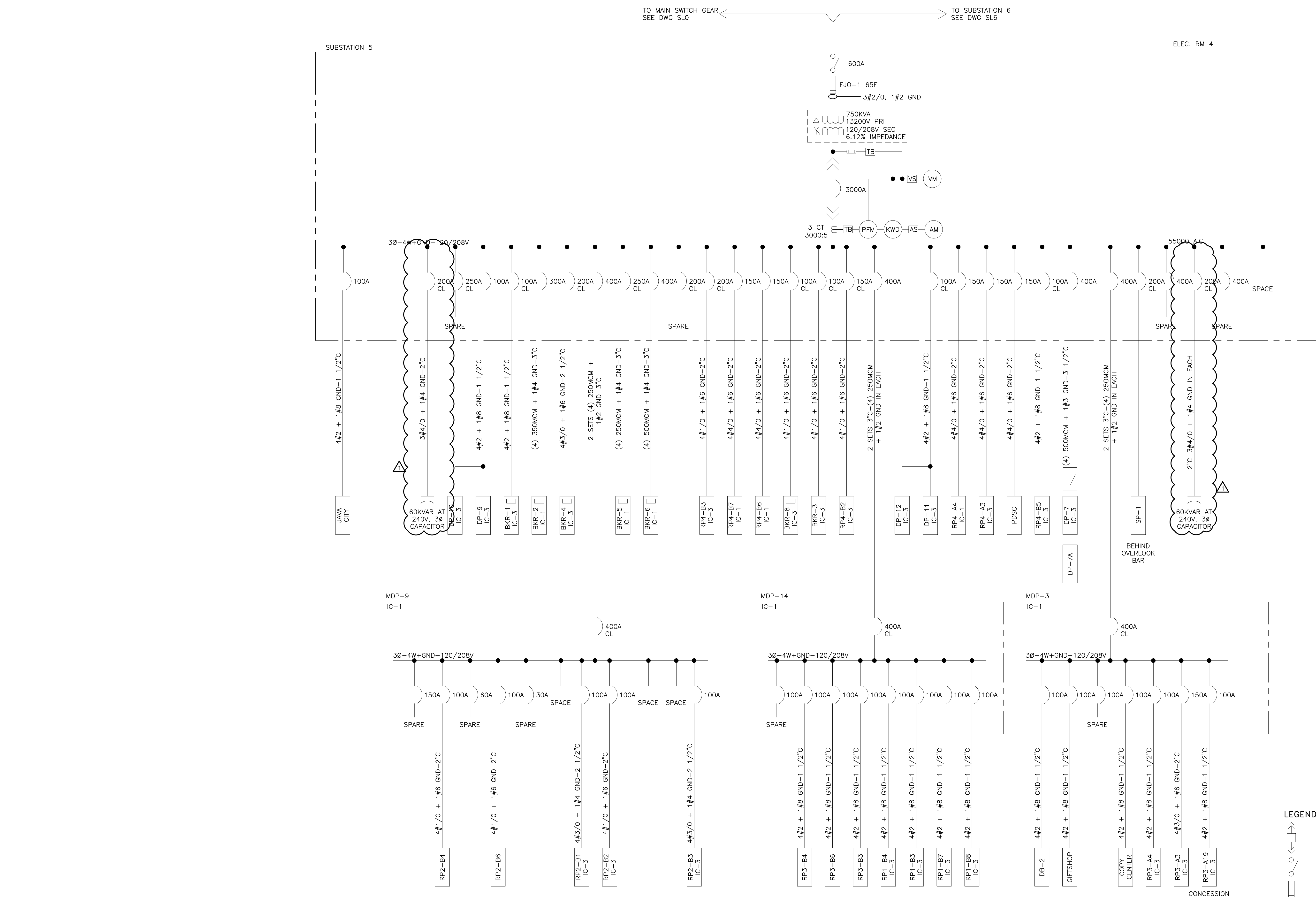


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PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL SEAL FOR REV 1 ONLY



LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
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IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	φ	WIRE
T-0	6	480V DELTA/120/208V WYE	3φ	4W
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LEGEND:

- DRAW-OUT CIRCUIT BREAKER-MEDIUM VOLTAGE 1200A, 3 POLE
- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
- FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
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- ZERO SEQUENCE TRANSFORMER
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- AL ALUMINUM
- φ PHASE
- W WIRE
- IFC OVERCURRENT RELAY
- CS CONTROL SWITCH (OPEN/CLOSE/TRIP)
- HEA 86 RELAY
- Ⓢ GREEN LIGHT
- Ⓡ RED LIGHT
- Ⓟ WHITE LIGHT
- 3#2/0, 1#2G 600 VOLT WIRE IN RACEWAY QUANTITY AND SIZE OF WIRES

PRIMARY CONSULTANT:

ELECTRICAL:
DRAWING REPRESENTS THE POWER SYSTEM AS OBSERVED DURING FIELD SURVEYS FOR THE POWER SYSTEM STUDY PROJECT

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

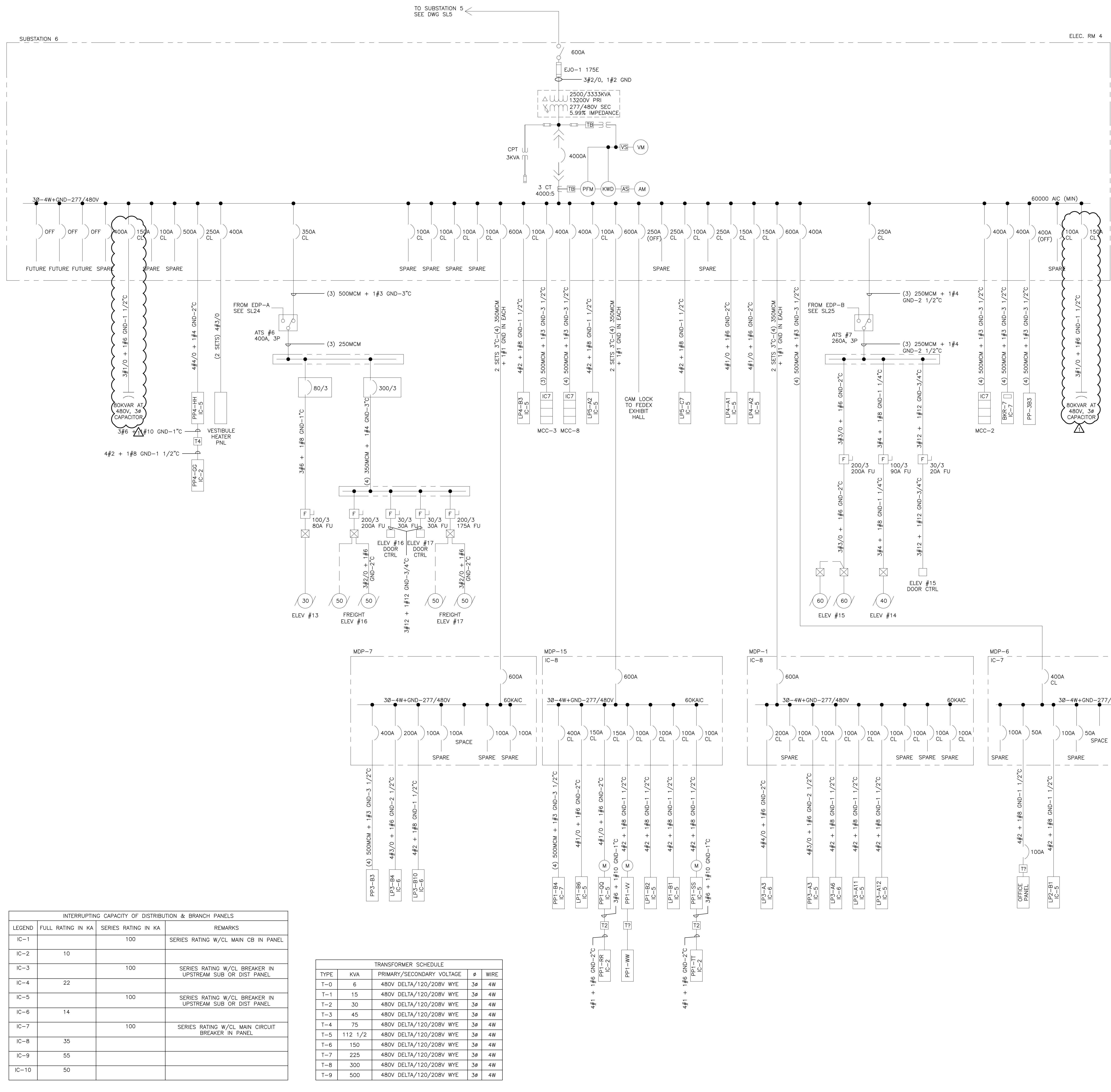
PHASE:
BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
UNIT SUBSTATION 5
ELECTRICAL ROOM 4

PACD PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL5

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 - GND GROUND
 - CU COPPER
 - KA KILOVOLTS
 - KVAR KILOVARS
 - AL ALUMINUM
 - ∅ PHASE
 - W WIRE
 - IFC OVERCURRENT RELAY
 - CS CONTROL SWITCH (OPEN/CLOSE/TRIP)
 - HEA 86 RELAY
 - Ⓞ GREEN LIGHT
 - Ⓞ RED LIGHT
 - Ⓞ WHITE LIGHT
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LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
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ISSUE	DATE	REVISIONS
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 925 1st Run Road
 West Mifflin, Pennsylvania
 15122 - 1078

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 NON-MEMBERS MUST BE CONTACTED DIRECTLY
 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU DIG, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXX
 DRP PROJECT COORDINATOR: XXXXXXXXXX

SEAL SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL:
 DRAWING REPRESENTS THE POWER SYSTEM AS OBSERVED DURING FIELD SURVEYS FOR THE POWER SYSTEM STUDY PROJECT

DRP PROJECT NUMBER: XX-XX-XXXX-XX
 PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

PHASE:
 BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 UNIT SUBSTATION 6 ELECTRICAL ROOM 4

PAOC PROJECT NO.: XX-XX-XXXX-XX (DRAWING NO.):
 CONSULTANT PROJECT NO.: E40006
 DATE: 09-24-2017
 SCALE: NOT TO SCALE
 DRAWN BY:
 CHECKED BY:
SL6

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

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE



PENNSYLVANIA ONE CALL SYSTEM, INC.

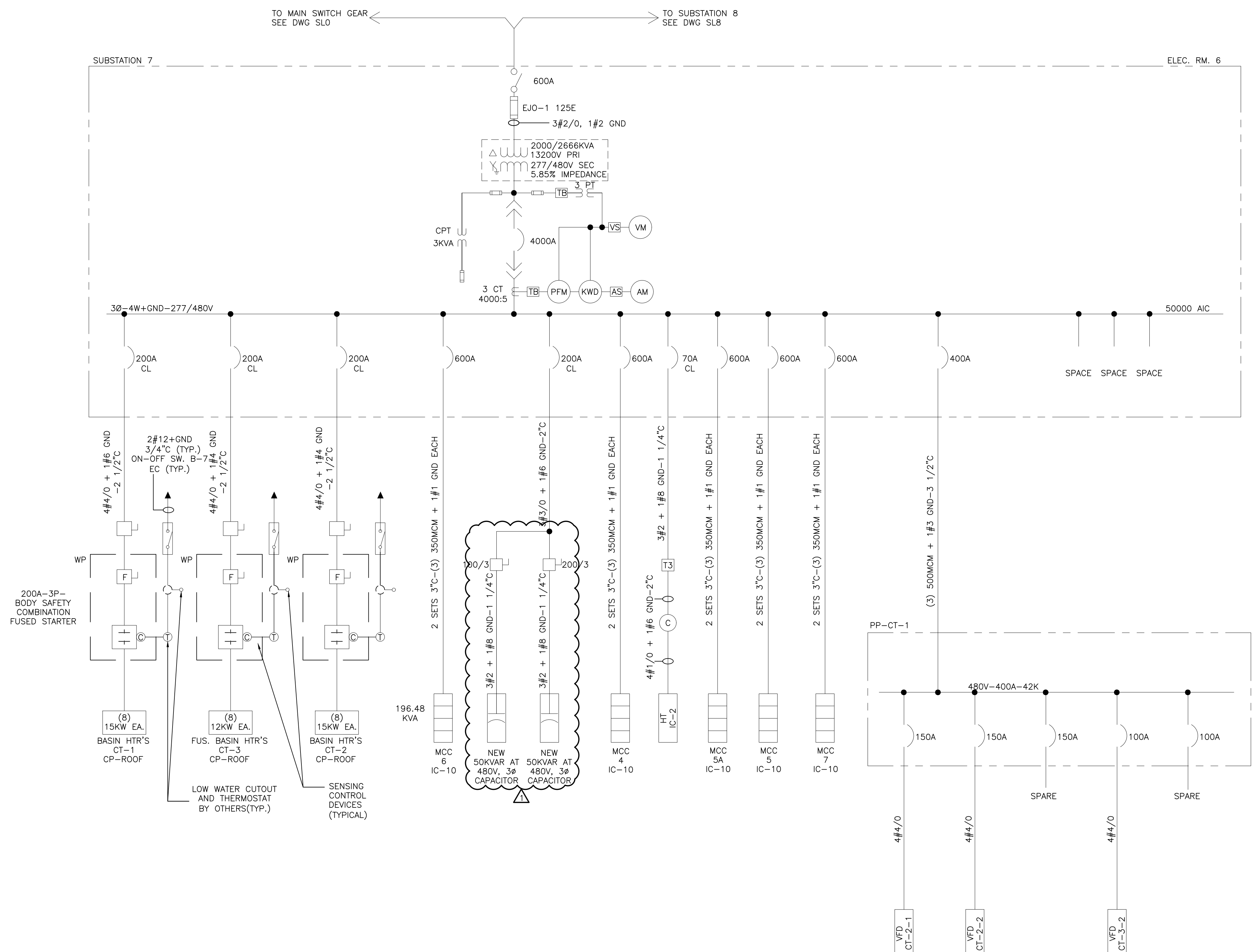


BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
NON-MEMBERS MUST BE CONTACTED DIRECTLY
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BUST OR DEMOLISH

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

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL FOR REV 1 ONLY



TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	Ø	WIRE
T-0	6	480V DELTA/120/208V WYE	3Ø	4W
T-1	15	480V DELTA/120/208V WYE	3Ø	4W
T-2	30	480V DELTA/120/208V WYE	3Ø	4W
T-3	45	480V DELTA/120/208V WYE	3Ø	4W
T-4	75	480V DELTA/120/208V WYE	3Ø	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W
T-6	150	480V DELTA/120/208V WYE	3Ø	4W
T-7	225	480V DELTA/120/208V WYE	3Ø	4W
T-8	300	480V DELTA/120/208V WYE	3Ø	4W
T-9	500	480V DELTA/120/208V WYE	3Ø	4W

LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

LEGEND:

- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
- FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE, FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED, RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER, RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- CAPACITOR
- MOTOR STARTER
- MOTOR STARTER
- 3 PHASE MOTOR—HP NOTED
- DISCONNECT SWITCH—3 POLE
- TRANSFORMER—SEE SCHEDULE FOR X
- IC INTERRUPTING CAPACITY—SEE TABLE
- CL CURRENT LIMITING
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOWATTS
- KVAR KILOVARS
- AL ALUMINUM
- Ø PHASE
- W WIRE
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 7 ELECTRICAL ROOM 6

PROJECT NO.: XX-XX-XXXX-XX DRAWING NO.:

CONSULTANT PROJECT NO.: E40006

DATE: 09-24-2017

SCALE: NOT TO SCALE

DRAWN BY:

CHECKED BY:

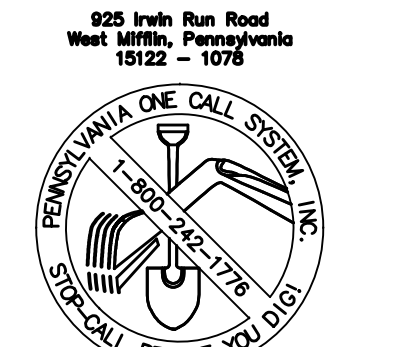
NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

SL7

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE



PENNSYLVANIA ONE CALL SYSTEM, INC.



BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BURN OR DEMOLISH

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

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

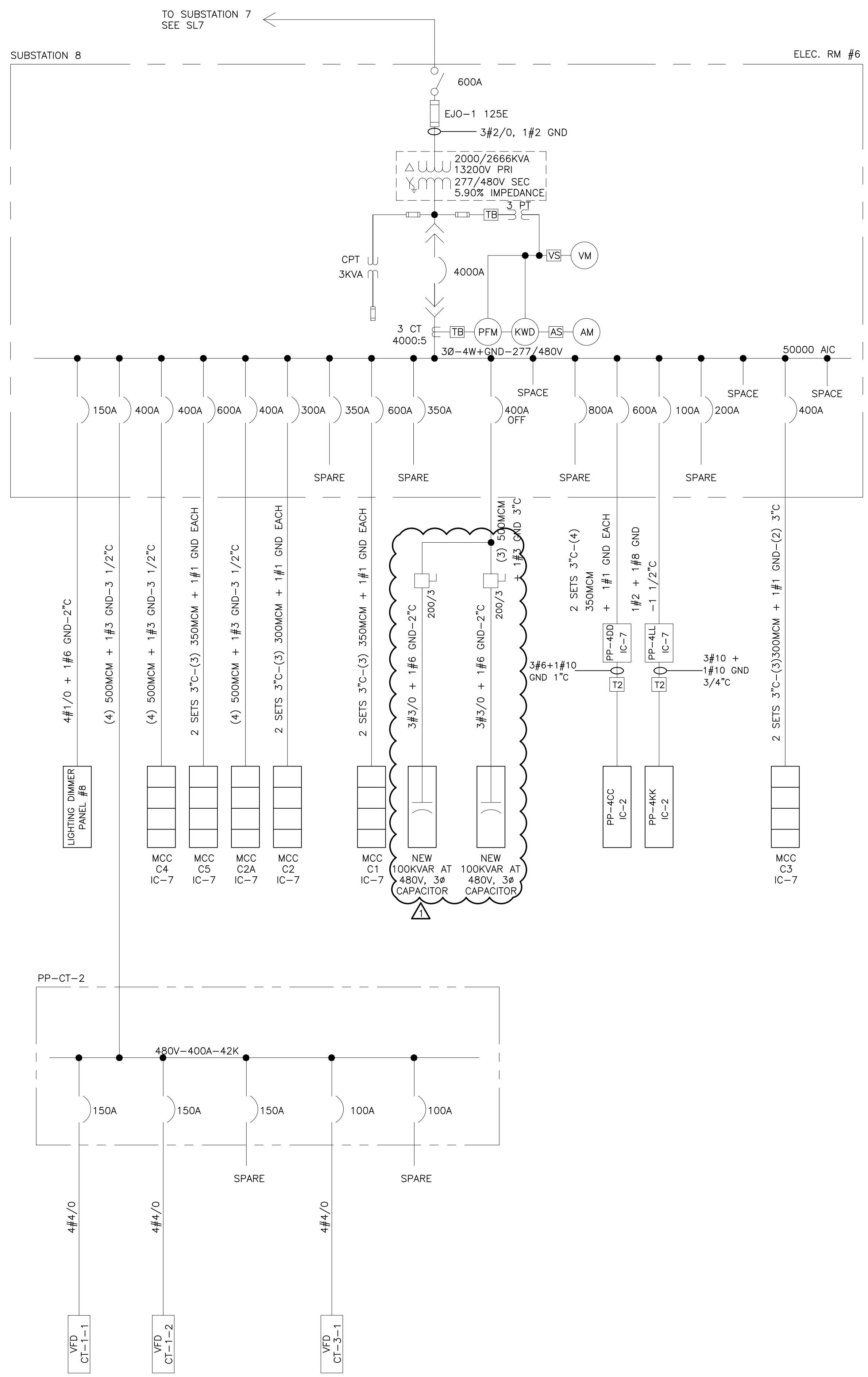
PHASE: BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 8 ELECTRICAL ROOM 6

PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL8

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



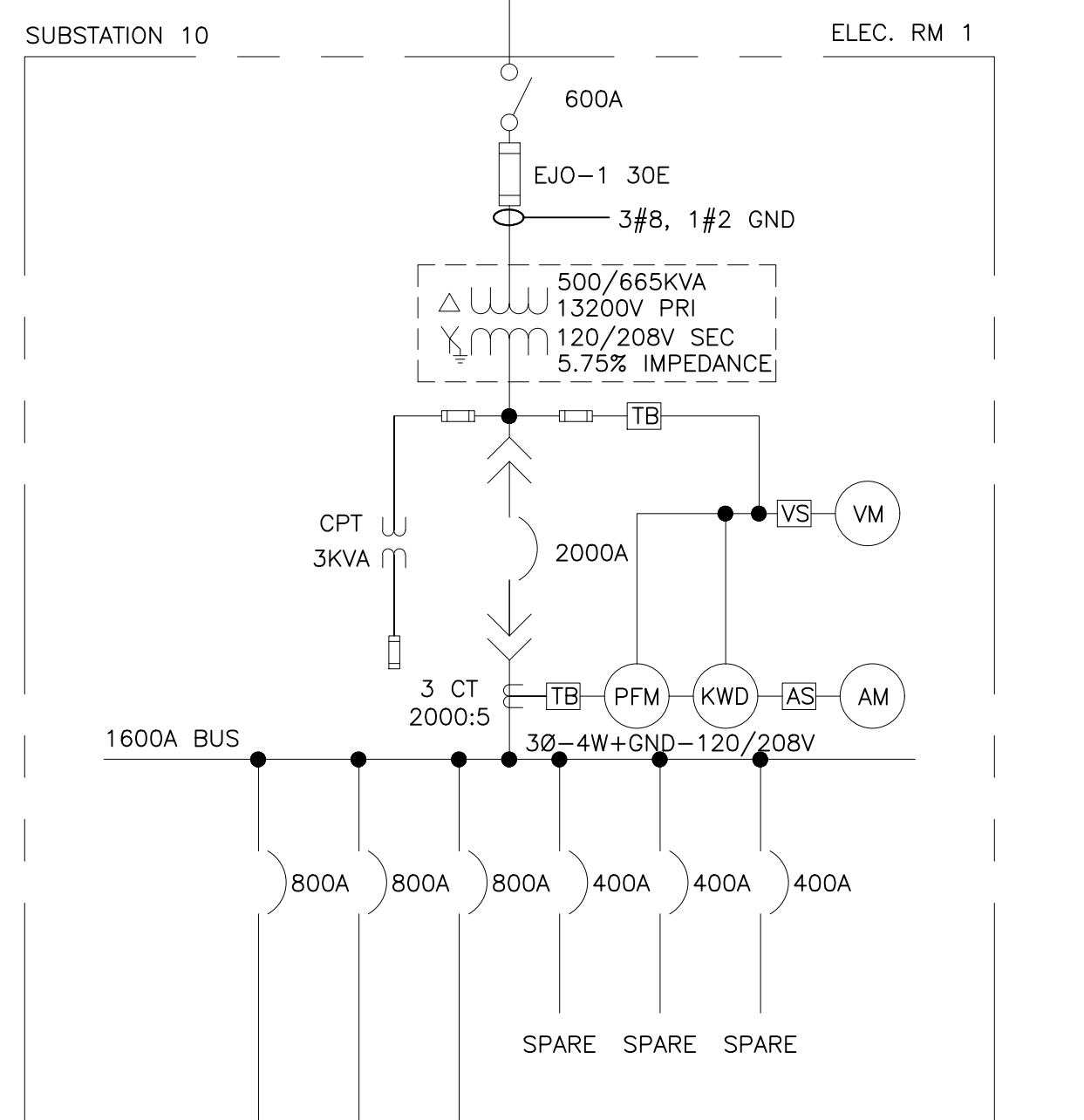
TRANSFORMER SCHEDULE				
TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	Ø	WIRE
T-0	6	480V DELTA/120/208V WYE	3Ø	4W
T-1	15	480V DELTA/120/208V WYE	3Ø	4W
T-2	30	480V DELTA/120/208V WYE	3Ø	4W
T-3	45	480V DELTA/120/208V WYE	3Ø	4W
T-4	75	480V DELTA/120/208V WYE	3Ø	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W
T-6	150	480V DELTA/120/208V WYE	3Ø	4W
T-7	225	480V DELTA/120/208V WYE	3Ø	4W
T-8	300	480V DELTA/120/208V WYE	3Ø	4W
T-9	500	480V DELTA/120/208V WYE	3Ø	4W

INTERRUPTING CAPACITY OF DISTRIBUTION & BRANCH PANELS			
LEGEND	FULL RATING IN KA	SERIES RATING IN KA	REMARKS
IC-1		100	SERIES RATING W/CL MAIN CB IN PANEL
IC-2	10		
IC-3		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-4	22		
IC-5		100	SERIES RATING W/CL BREAKER IN UPSTREAM SUB OR DIST PANEL
IC-6	14		
IC-7		100	SERIES RATING W/CL MAIN CIRCUIT BREAKER IN PANEL
IC-8	35		
IC-9	55		
IC-10	50		

- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
 - 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
 - FA RATINGS
 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - CAPACITOR
 - MOTOR STARTER
 - MOTOR STARTER
 - 3 PHASE MOTOR—HP NOTED
 - FUSED DISCONNECT SWITCH—3 POLE
 - DISCONNECT SWITCH—3 POLE
 - TRANSFORMER—SEE SCHEDULE FOR X
 - IC INTERRUPTING CAPACITY—SEE TABLE
 - CL CURRENT LIMITING
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES

TO SUBSTATION 9
SEE DWG SL9

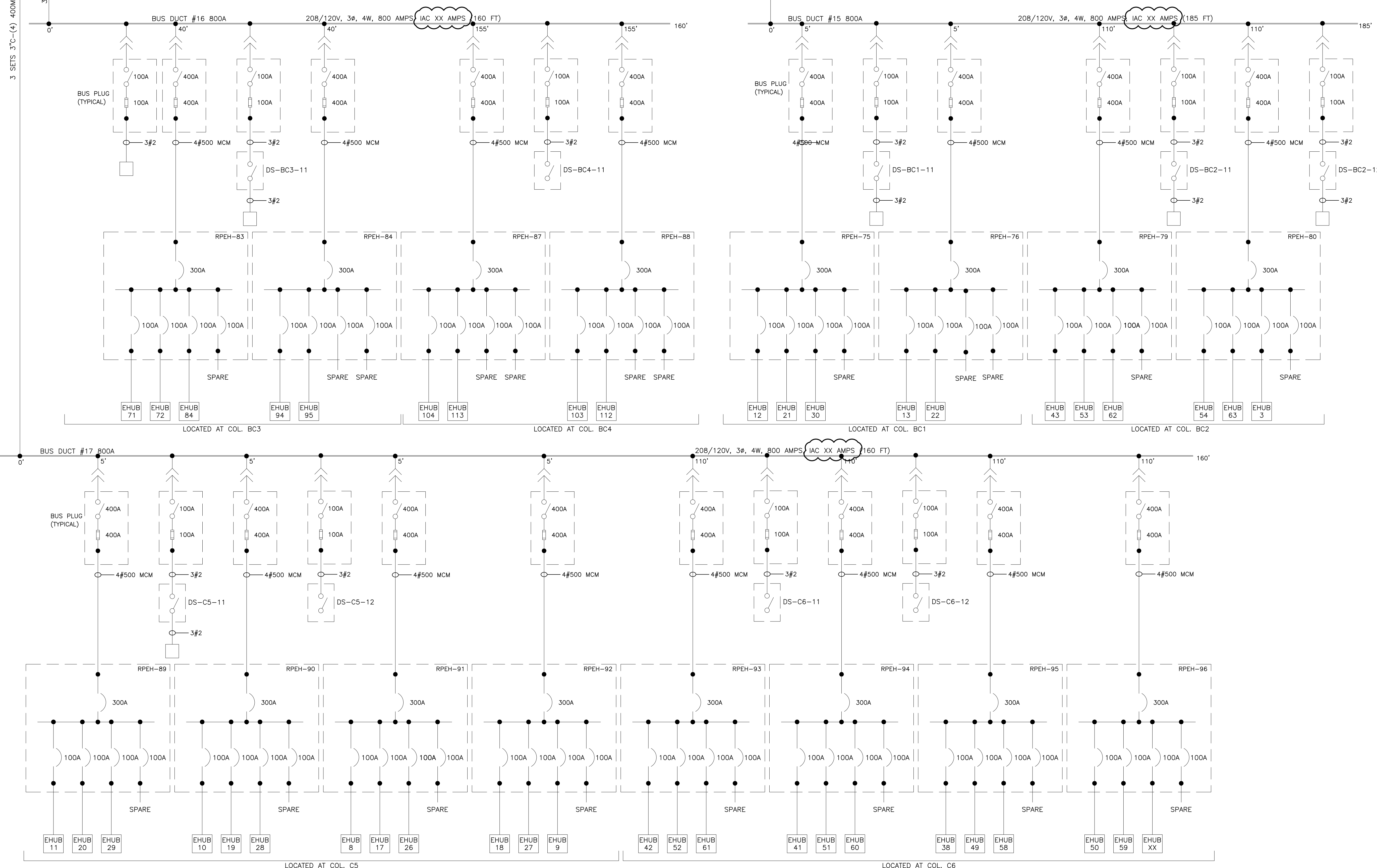
TO SUBSTATION 11
SEE DWG SL11



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
- FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
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- AA RATINGS
- CURRENT TRANSFORMER. RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVARS
- AL ALUMINUM
- ϕ PHASE
- W WIRE

3 SETS 3" C-(4) 400MCM + 1#1/0 GND EACH



REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
625 South Main Road
West Chester, Pennsylvania
19380-1078

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NON-MEMBERS MUST BE CONTACTED DIRECTLY
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BAST OR DEMOLISH

PA ONE CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXX
DPP PROJECT COORDINATOR: XXXXXXXXX

SEAL:

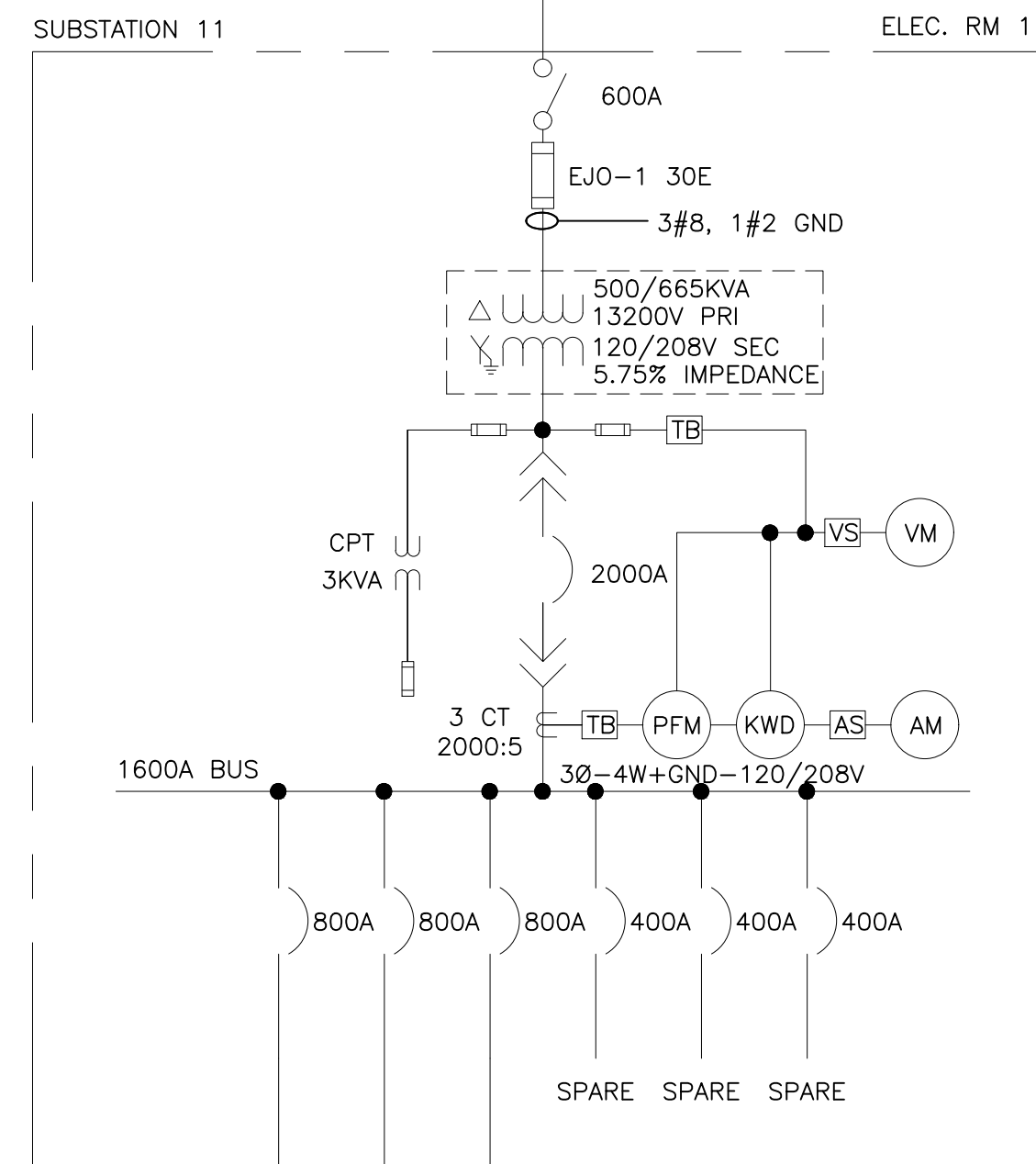
PRIMARY CONSULTANT:

ELECTRICAL	
DPP PROJECT NUMBER	XX-XX-XXXXXX
PROJECT TITLE	POWER SYSTEM STUDY ARC FLASH ASSESSMENT
PHASE	BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED
DRAWING TITLE	UNIT SUBSTATION 10 ELECTRICAL ROOM 1
PACC PROJECT NO.	XX-XX-XXXXXX
CONSULTANT PROJECT NO.	E40006
DATE	09-24-2017
SCALE	NOT TO SCALE
DRAWN BY:	
CHECKED BY:	
NOTE:	ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

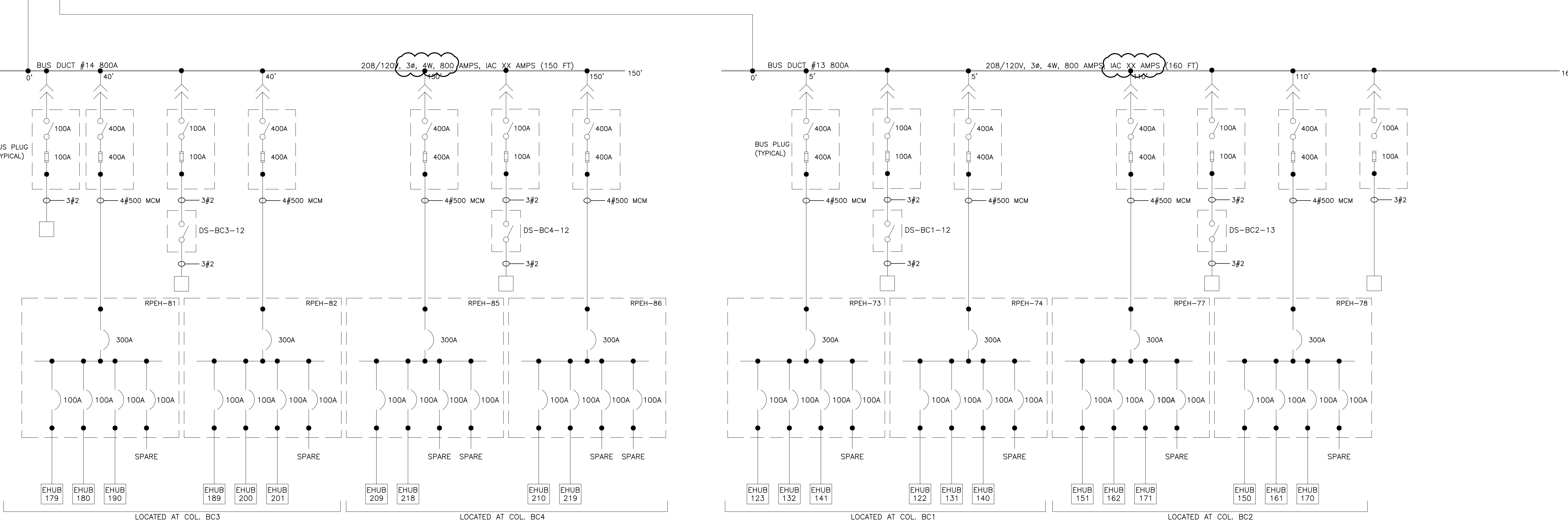
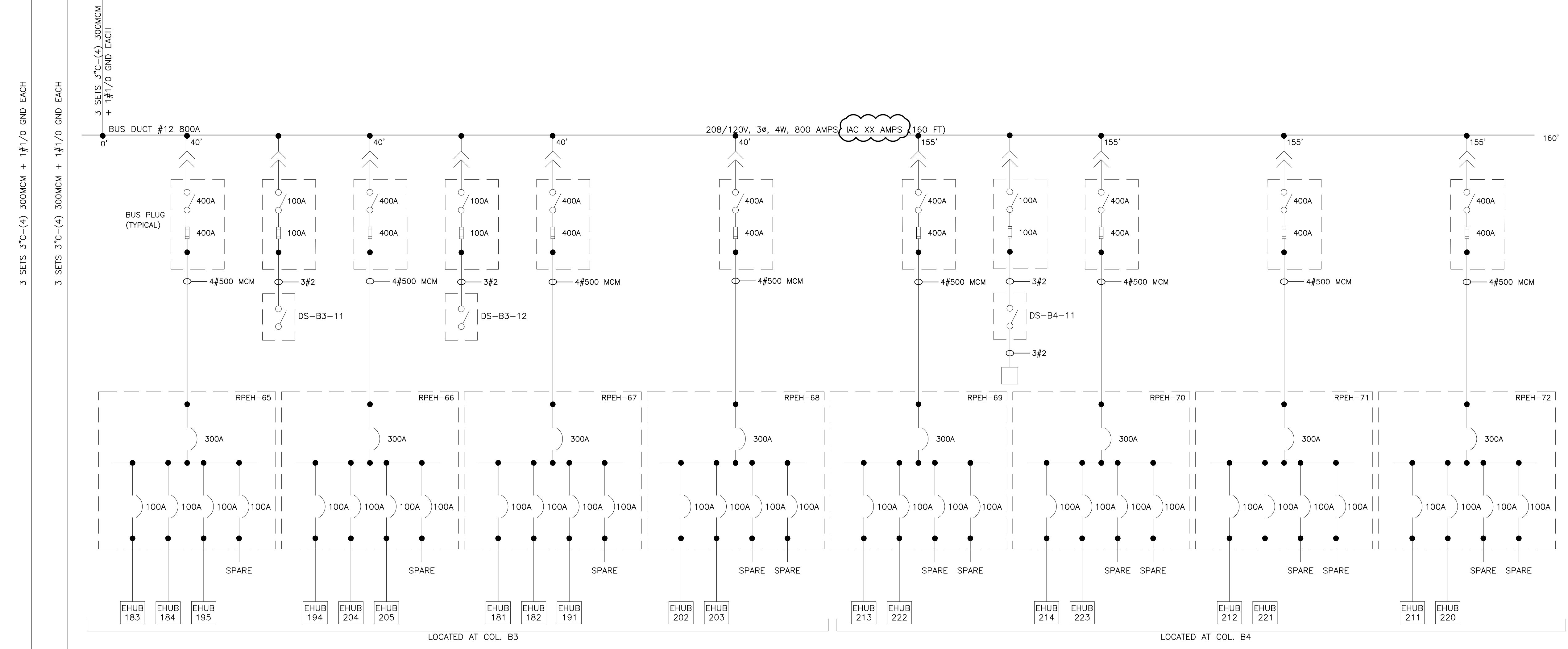
SL10

TO SUBSTATION 10
SEE DWG SL10

TO SUBSTATION 12
SEE SL12



- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
 - FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
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 - AA RATINGS
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 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - # PHASE
 - W WIRE



REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
525 South Main Street
West Chester, Pennsylvania
19380-1078

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NON-MEMBERS MUST BE CONTACTED DIRECTLY
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BUST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX
PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 11
ELECTRICAL ROOM 1

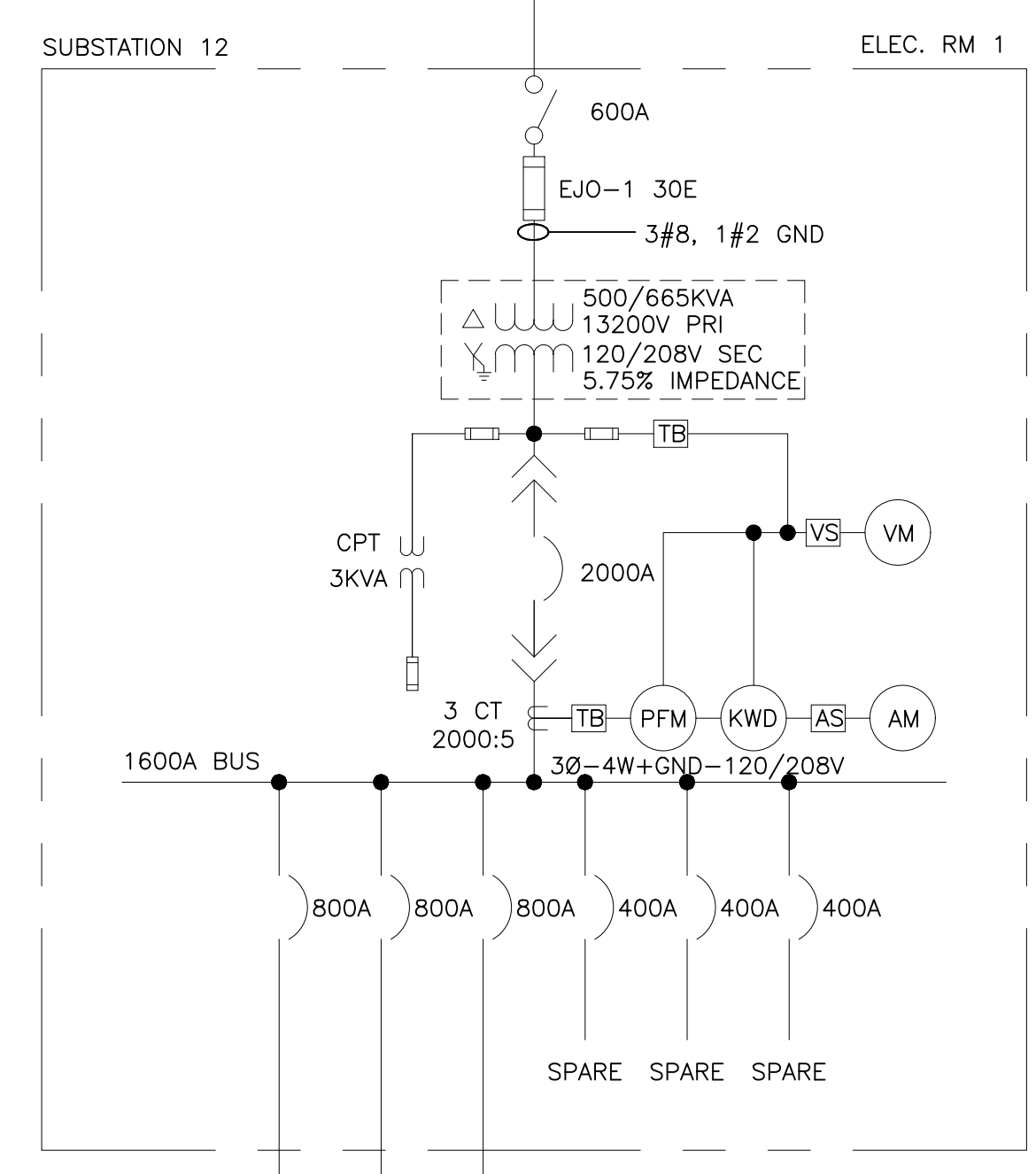
PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL11

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

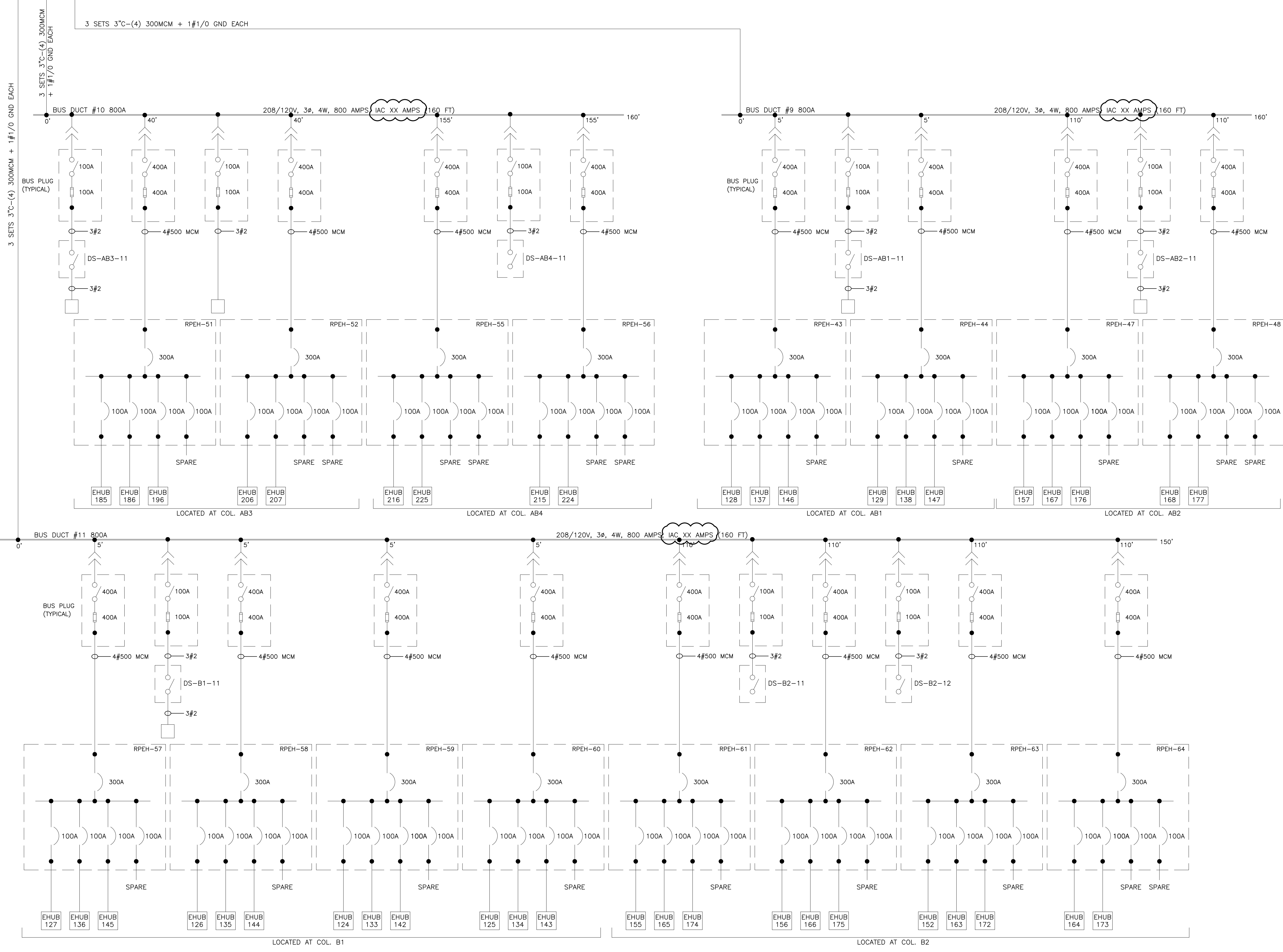
TO SUBSTATION 11 SEE SL11

TO SUBSTATION 13 SEE DWG SL13



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
- FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER. RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- MEDIUM VOLTAGE
- LOW VOLTAGE
- VOLTMETER
- AMMETER
- KILOWATT METER
- KILOWATT/DEMAND METER
- POWER FACTOR METER
- CURRENT TRANSFORMER
- CONTROL POWER TRANSFORMER
- POTENTIAL TRANSFORMER
- GROUND
- GROUND
- COPPER
- KILOAMPS
- KVAR KILOWARS
- ALUMINUM
- PHASE
- WIRE



REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 North Broad Street
 West 10th Floor, Philadelphia
 19122-4107

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 NON-MEMBERS MUST BE CONTACTED DIRECTLY
 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BUST OR DEMOLISH

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

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
 POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

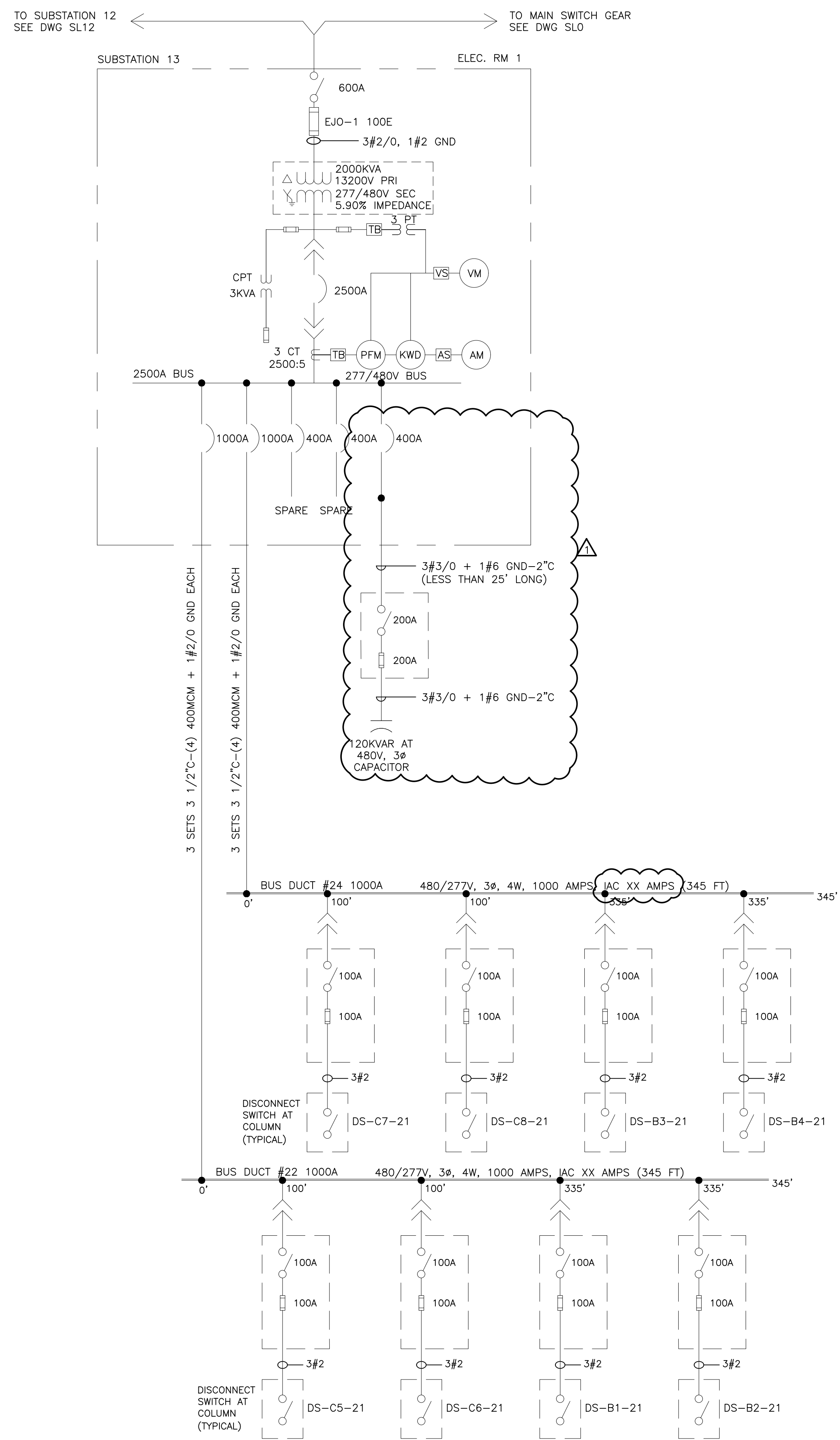
PHASE:
 BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 UNIT SUBSTATION 12
 ELECTRICAL ROOM 1

PROJECT NO.: XX-XX-XXXX-XX **DRAWING NO.:**
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL12

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



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
- FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE, FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER, RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
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- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
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- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOWAMPS
- AL ALUMINUM
- Ø PHASE
- W WIRE

REVISIONS

ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 North Broad Street
 West Philadelphia, Pennsylvania
 19122-4107

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

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
 POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

PHASE:
 BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 UNIT SUBSTATION 13
 ELECTRICAL ROOM 1

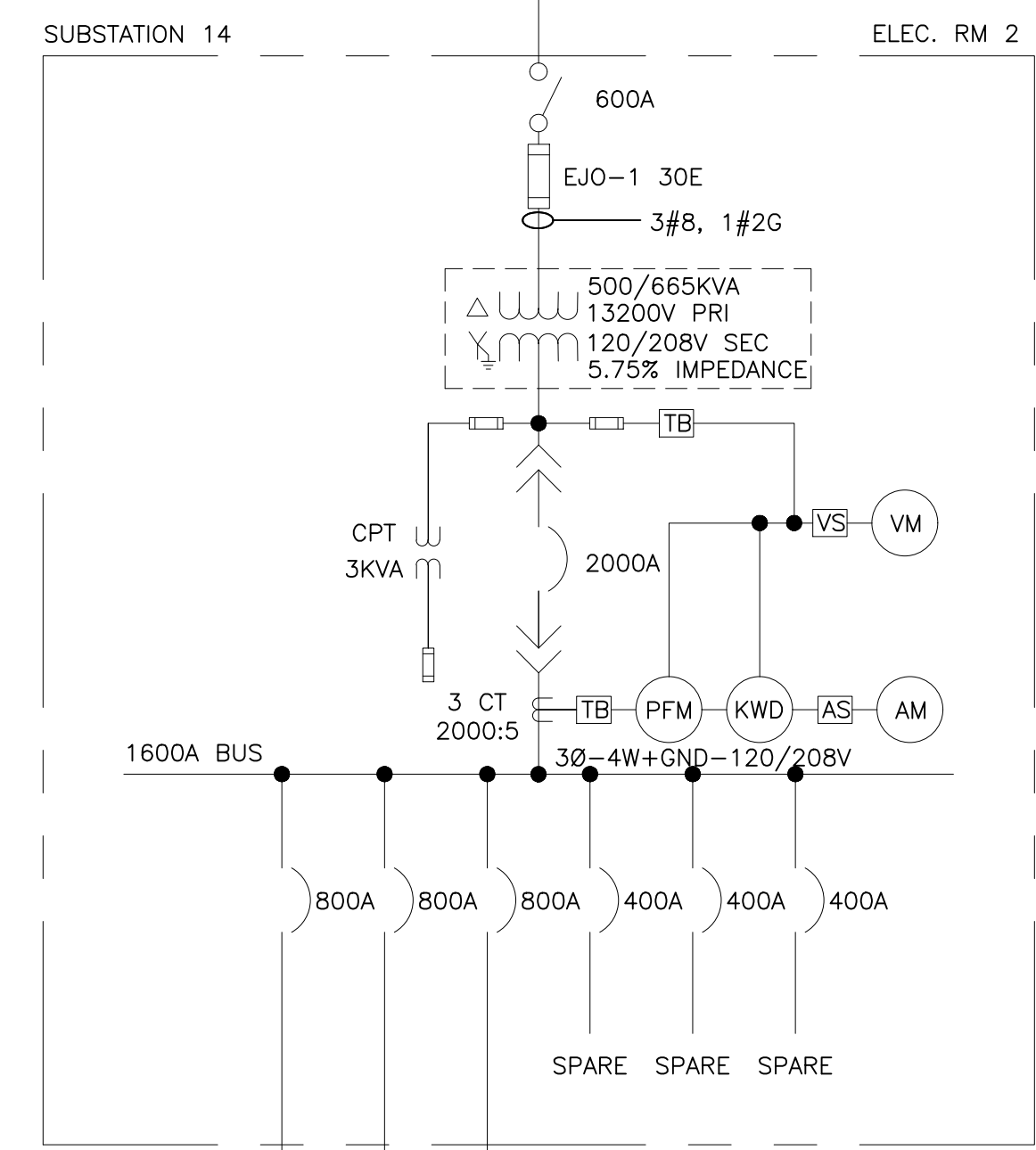
PROJECT NO.: XX-XX-XXXX-XX
 CONSULTANT PROJECT NO.: E40006
 DATE: 09-24-2017
 SCALE: NOT TO SCALE
 DRAWN BY:
 CHECKED BY:

SL13

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

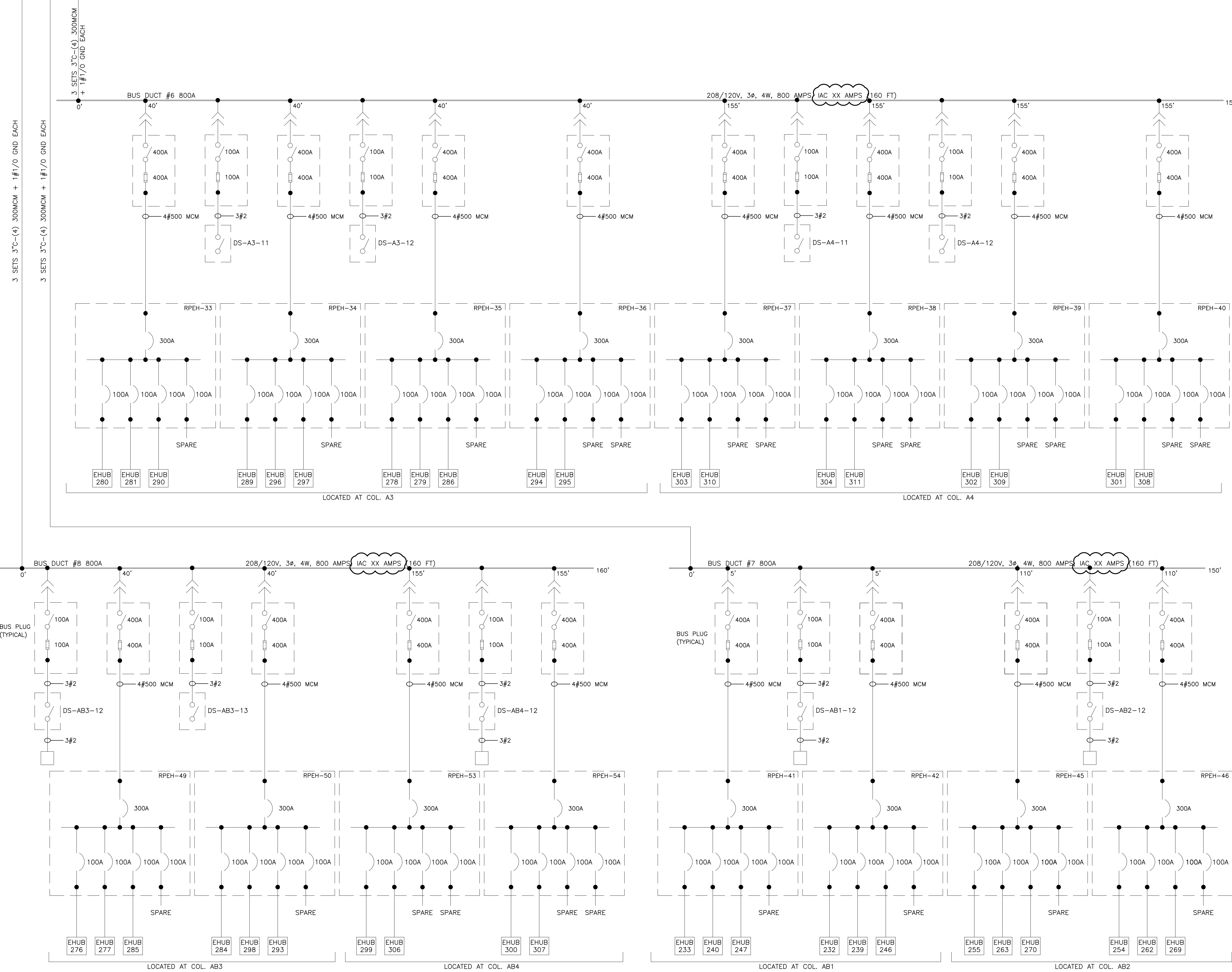
TO MAIN SWITCH GEAR
SEE DWG SLD

TO SUBSTATION 15
SEE DWG SL15



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
- FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE, FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER, RATIO NOTED.
- TERMINAL BLOCK
- VOLT METER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLT METER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILODAMPS
- KVAR KILOVARS
- AL ALUMINUM
- Ø PHASE
- W WIRE



REVISIONS

ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



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625 South Main Street
West Chester, Pennsylvania
19380-1078

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

DPP PROJECT COORDINATOR: XXXXXXXXXX

REVISIONS:

NOTES:

PRIMARY CONSULTANT:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 14
ELECTRICAL ROOM 2

PROJECT NO.: XX-XX-XXXX-XX

CONSULTANT PROJECT NO: E40006

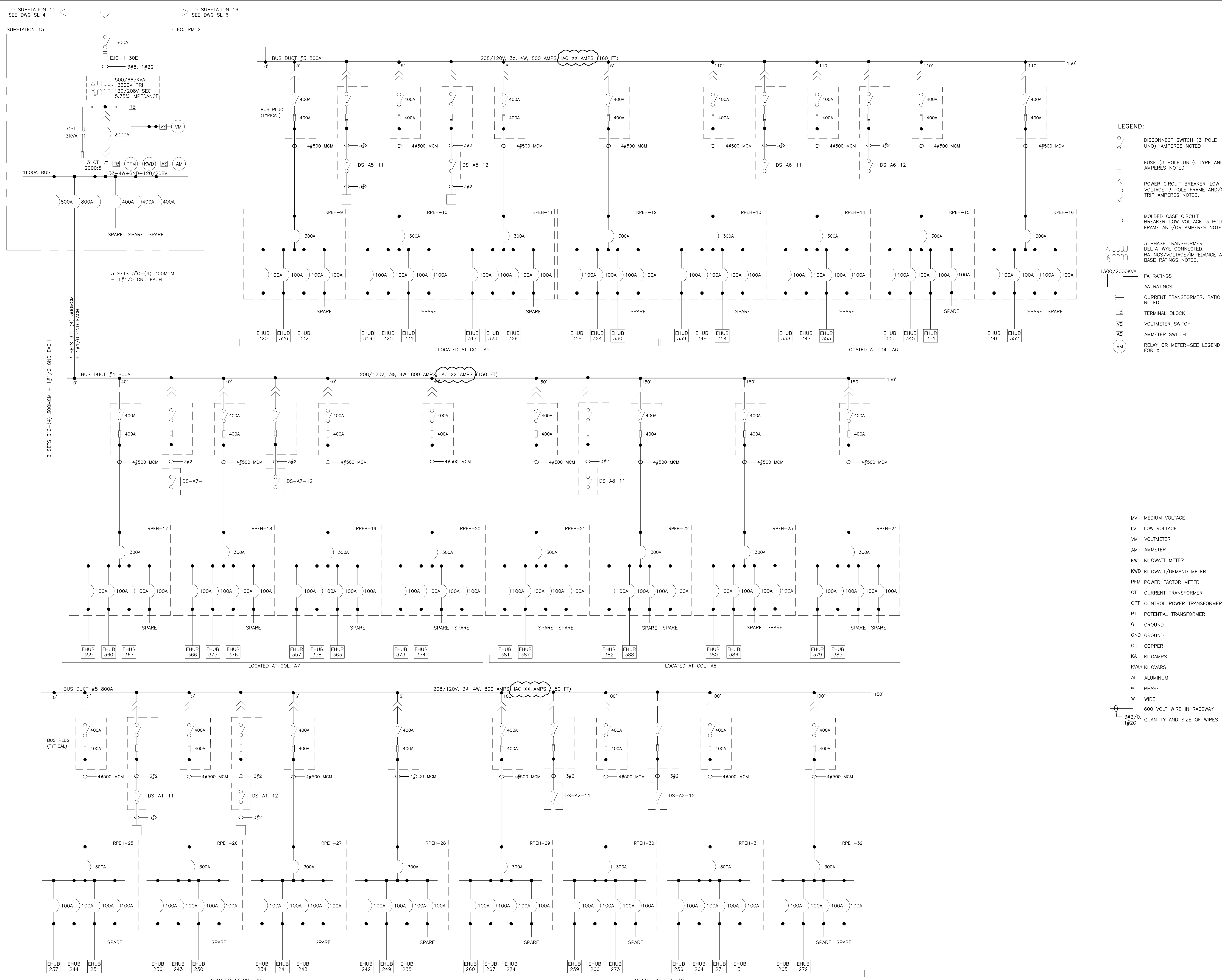
DATE: 09-24-2017

SCALE: NOT TO SCALE

SL14

CHECKED BY:

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



REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 525 North Broad Street
 West Philadelphia, Pennsylvania
 19122-1078

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, BUST OR DEMOLISH

PA ONE CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXX

NOTES:

LEGEND:

- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
- FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR AMPERES NOTED.
- 3 PHASE TRANSFORMER DELTA-WYE CONNECTED. RATINGS/VOLTAGE/IMPEDANCE AT BASE RATINGS NOTED.
- FA RATINGS
- AA RATINGS
- CURRENT TRANSFORMER. RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X

MV MEDIUM VOLTAGE
 LV LOW VOLTAGE
 VM VOLTMETER
 AM AMMETER
 KW KILOWATT METER
 KWD KILOWATT/DEMAND METER
 PFM POWER FACTOR METER
 CT CURRENT TRANSFORMER
 CPT CONTROL POWER TRANSFORMER
 PT POTENTIAL TRANSFORMER
 G GROUND
 GND GROUND
 CU COPPER
 KA KILOAMPS
 KVAR KILOVARS
 AL ALUMINUM
 ø PHASE
 W WIRE
 600 VOLT WIRE IN RACEWAY
 QUANTITY AND SIZE OF WIRES

PRIMARY CONSULTANT:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
 POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

PHASE:
 BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 UNIT SUBSTATION 15
 ELECTRICAL ROOM 2

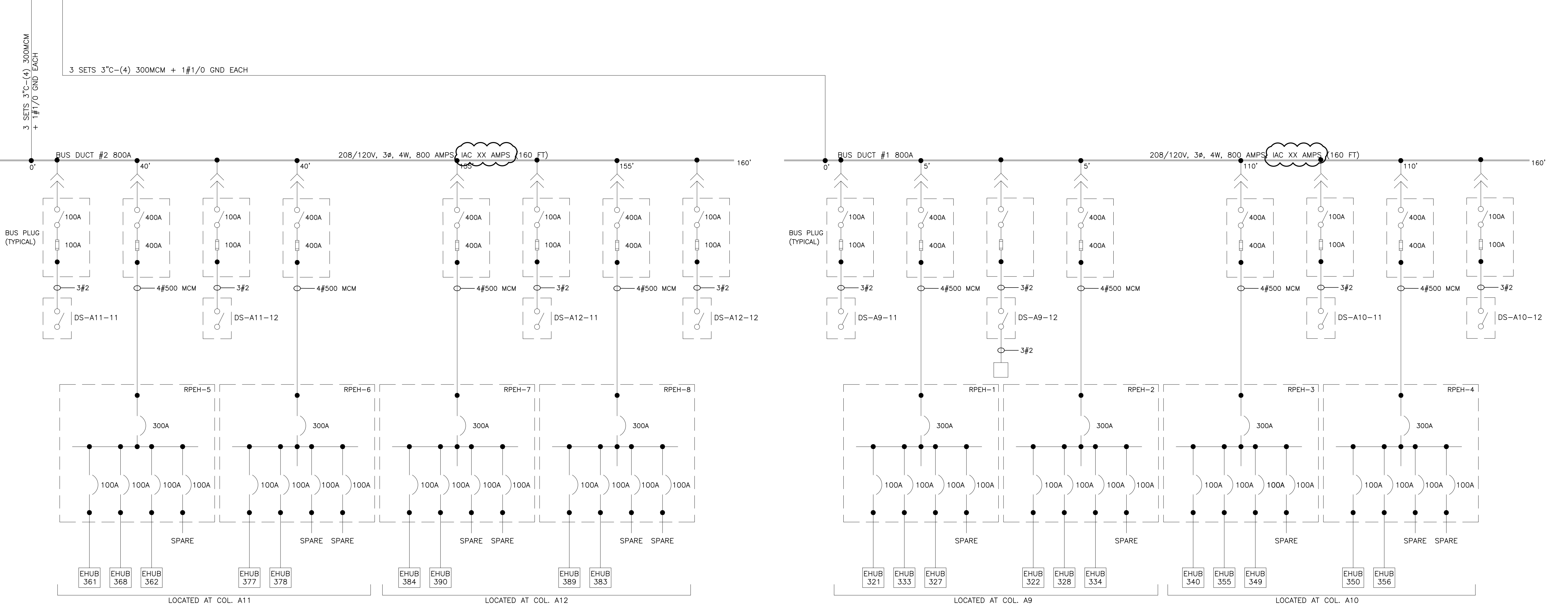
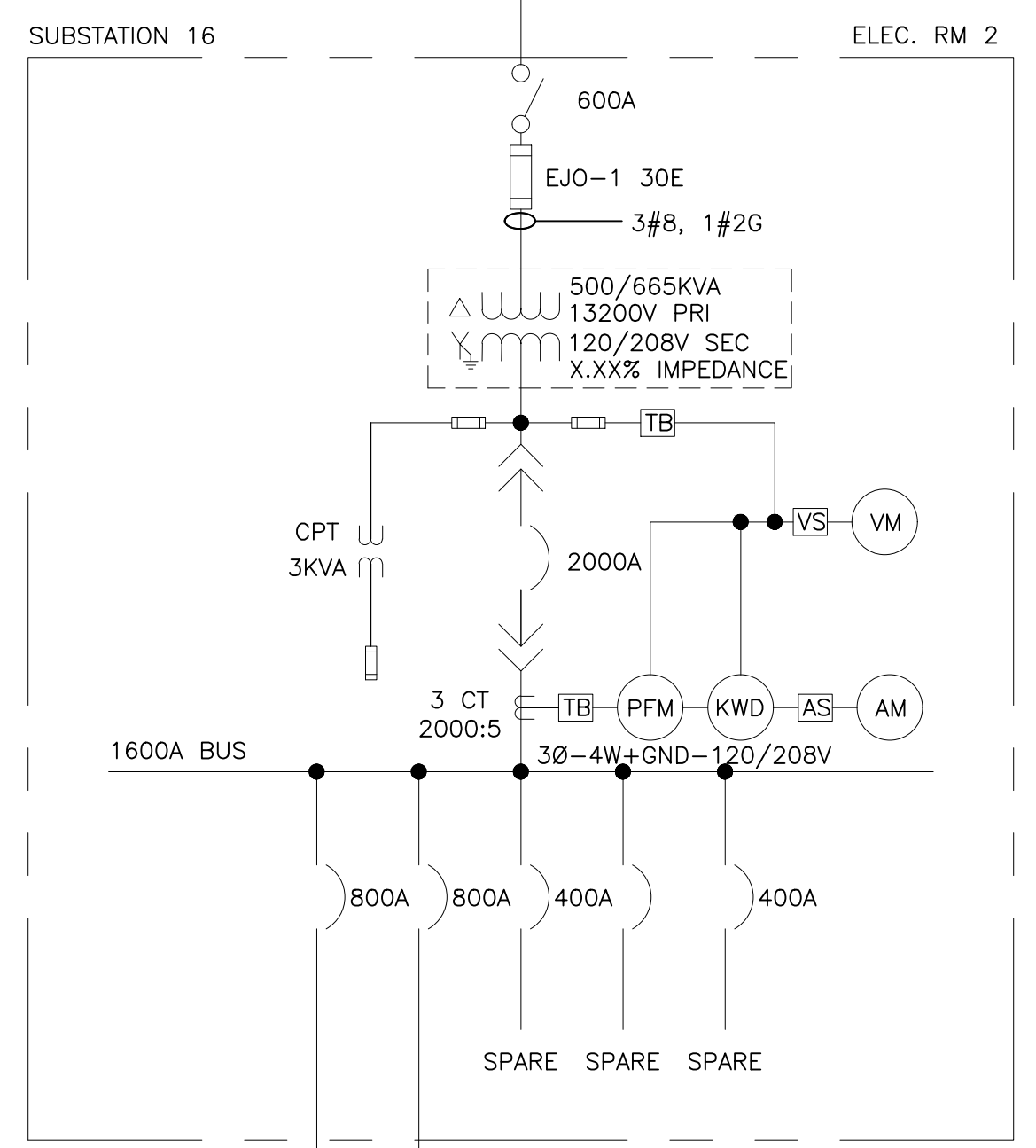
PROJECT NO.: XX-XX-XXXX-XX
 CONSULTANT PROJECT NO.: E40006
 DATE: 09-24-2017
 SCALE: NOT TO SCALE
 DRAWN BY:
 CHECKED BY:

SL15

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

TO SUBSTATION 15 SEE DWG SL15

TO SUBSTATION 17 SEE DWG SL17



- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
 - FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
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 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLTMETER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVAR
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 620 North Broad Street
 West 10th, Philadelphia
 19122-1078

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, BUST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX
 PROJECT TITLE: POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

PHASE:

BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

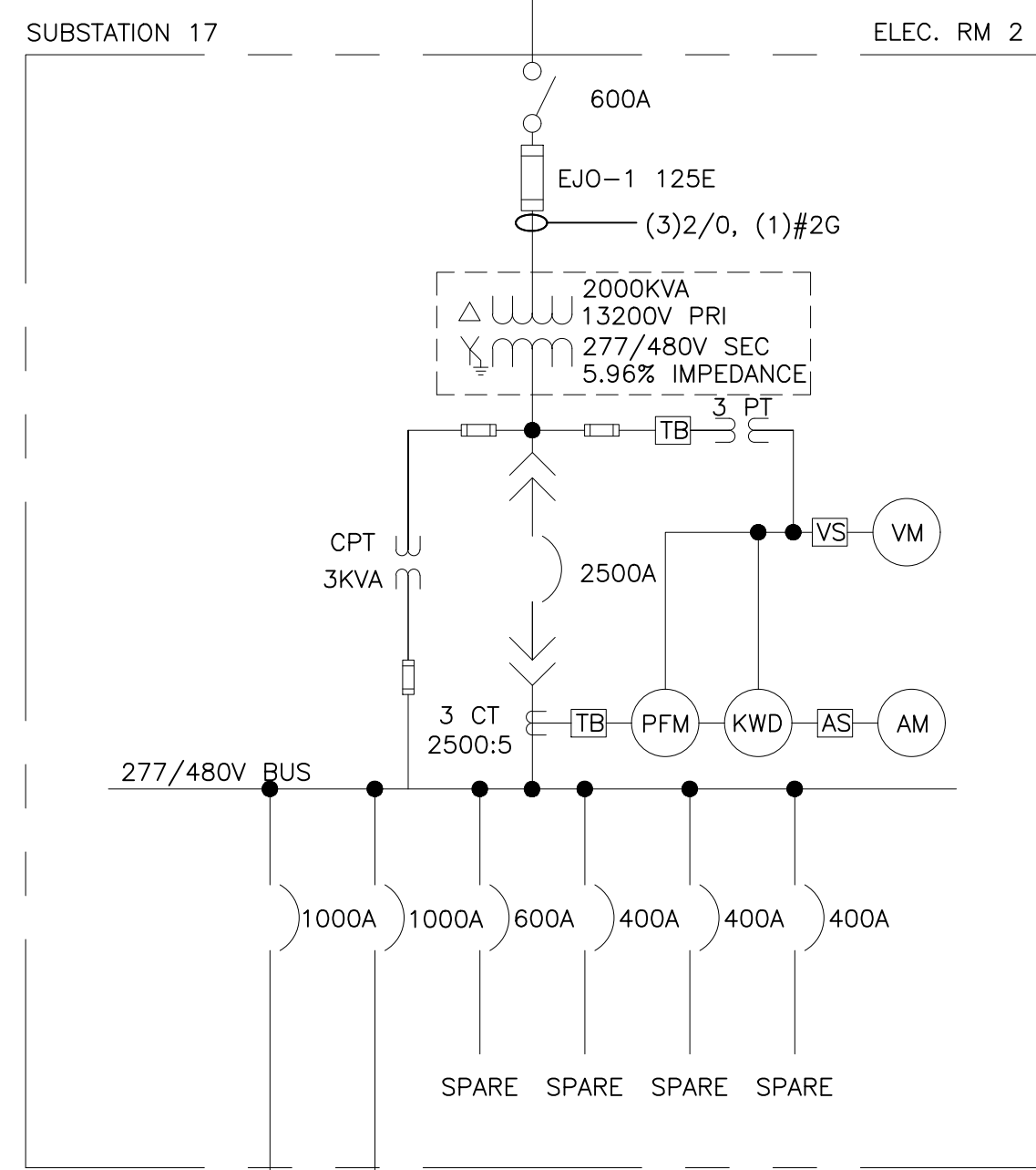
DRAWING TITLE: UNIT SUBSTATION 16
 ELECTRICAL ROOM 2

PROJECT NO.: XX-XX-XXXX-XX
 CONSULTANT PROJECT NO.: E40006
 DATE: 09-24-2017
 SCALE: NOT TO SCALE
 DRAWN BY:
 CHECKED BY:

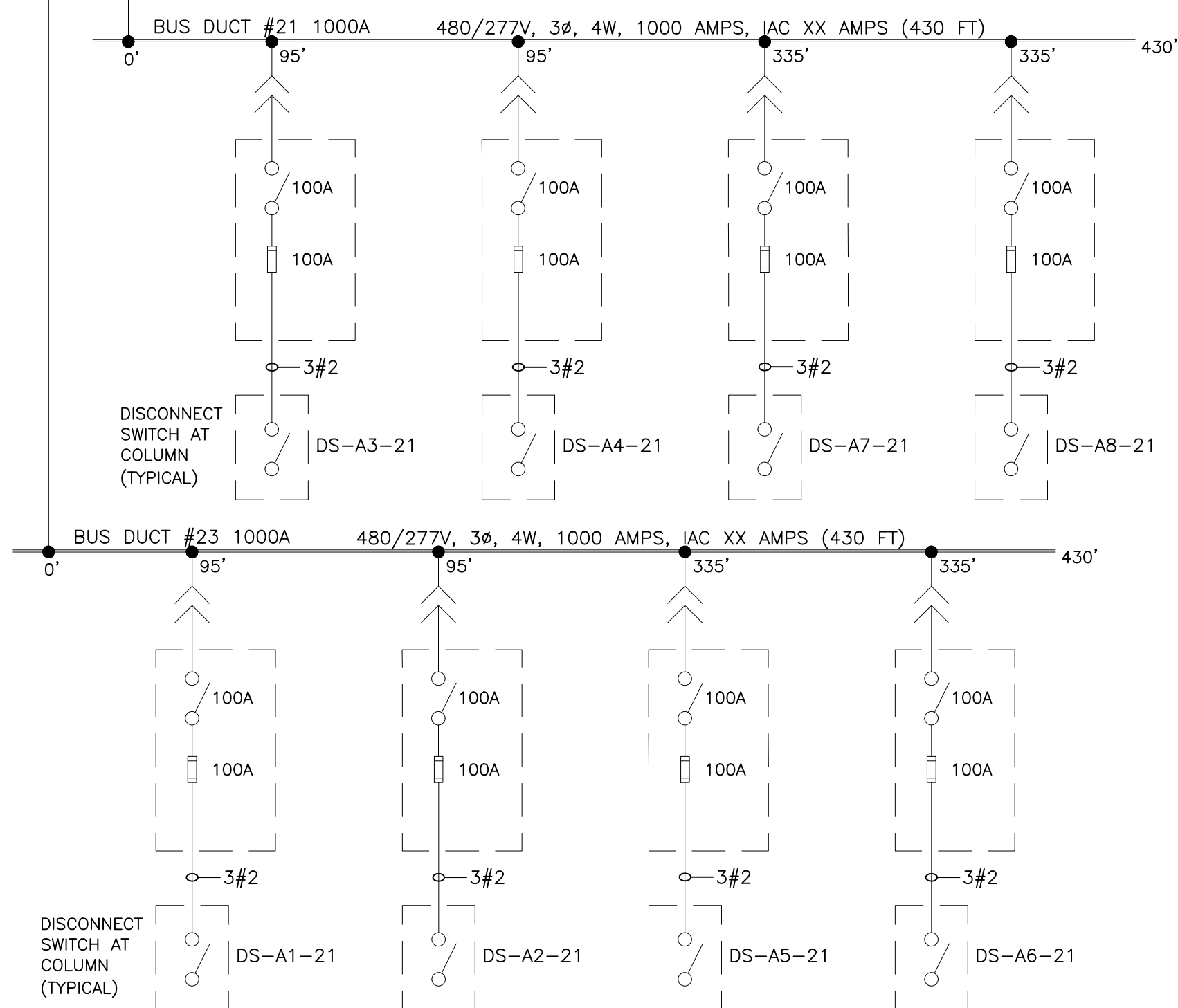
SL16

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

TO SUBSTATION 16
SEE DWG SL16



3 SETS 3 1/2" C-(4) 400MCM + 1#2/0 GND EACH
3 SETS 3 1/2" C-(4) 400MCM + 1#2/0 GND EACH



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
- FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
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- AA RATINGS
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- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVARS KILOVARS
- AL ALUMINUM
- Ø PHASE
- W WIRE

REVISIONS

ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.



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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): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

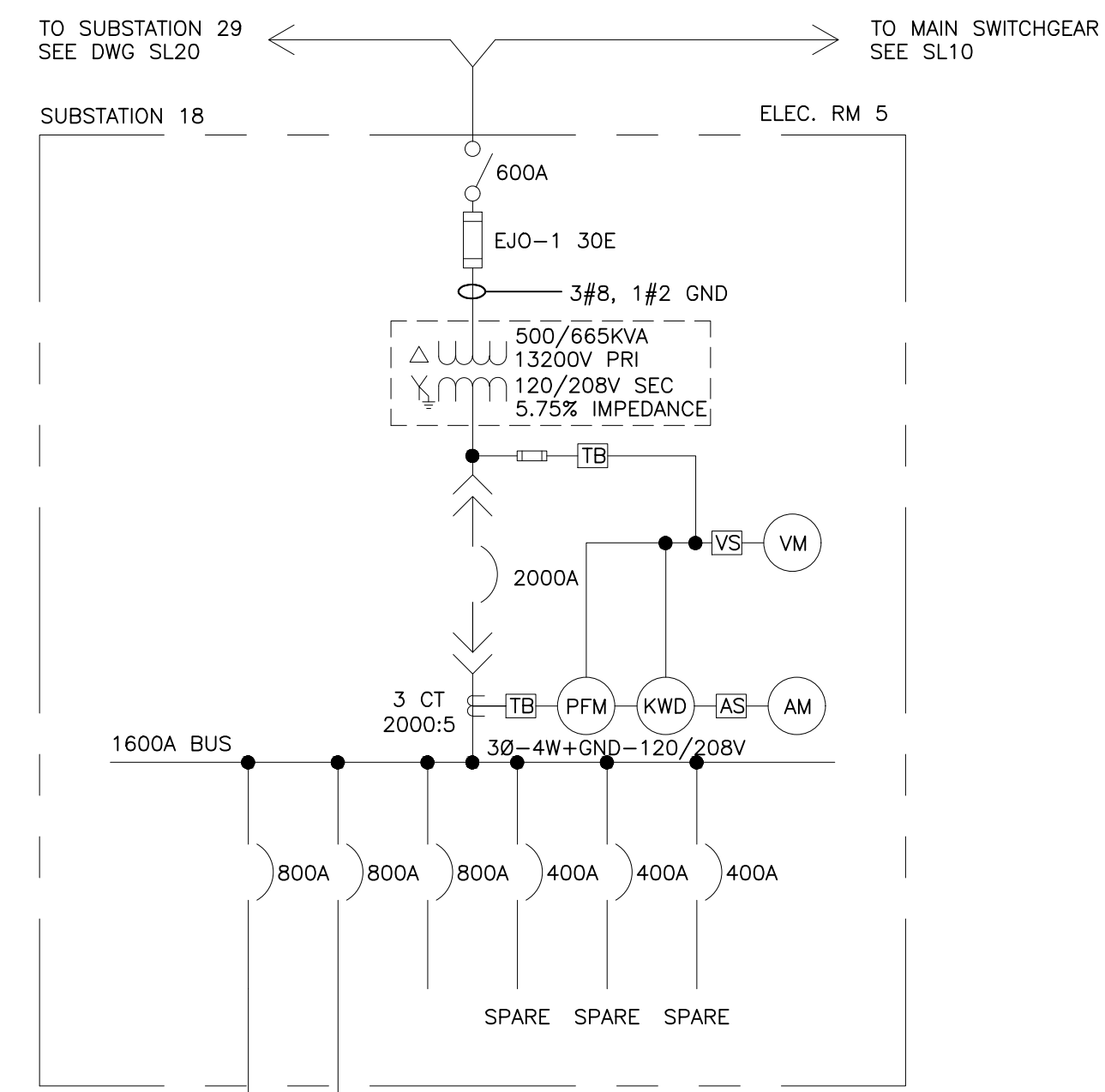
PHASE:
BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
UNIT SUBSTATION 17
ELECTRICAL ROOM 2

PACC PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

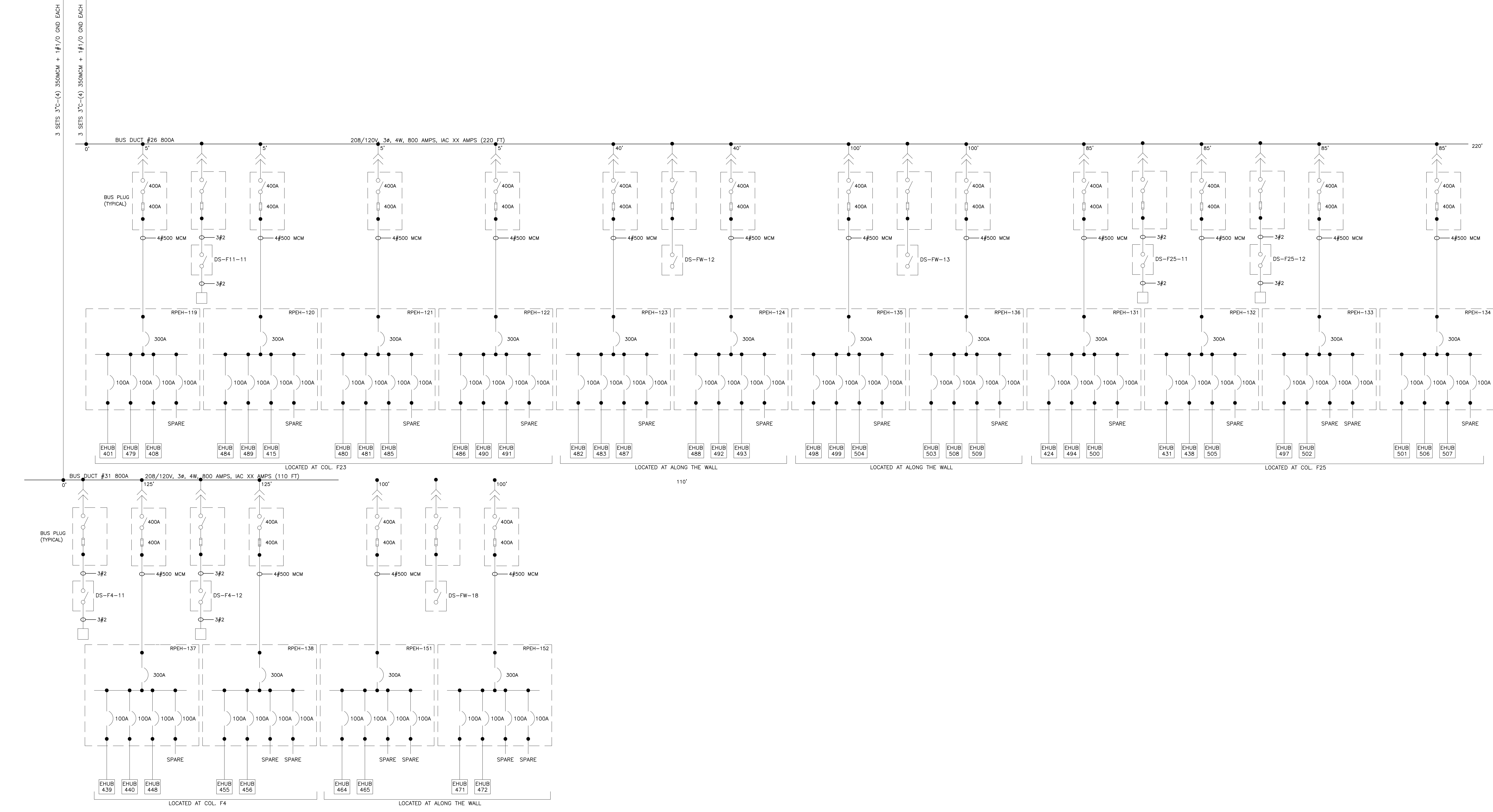
SL17

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



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
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- AMMETER SWITCH
- RELAY OR METER-SEE LEGEND FOR X
- 600 VOLT WIRE IN RACEWAY QUANTITY AND SIZE OF WIRES
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
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- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
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- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVARS KILOVARS
- AL ALUMINUM
- Ø PHASE
- W WIRE



REVISIONS

ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 625 North Broad Street
 West Philadelphia, Pennsylvania
 19122-1078

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 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): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 18
ELECTRICAL ROOM 5

PAC PROJECT NO.: XX-XX-XXXX-XX **DRAWING NO.:**

CONSULTANT PROJECT NO.: E40006

DATE: 09-24-2017 **SL18**

SCALE: NOT TO SCALE

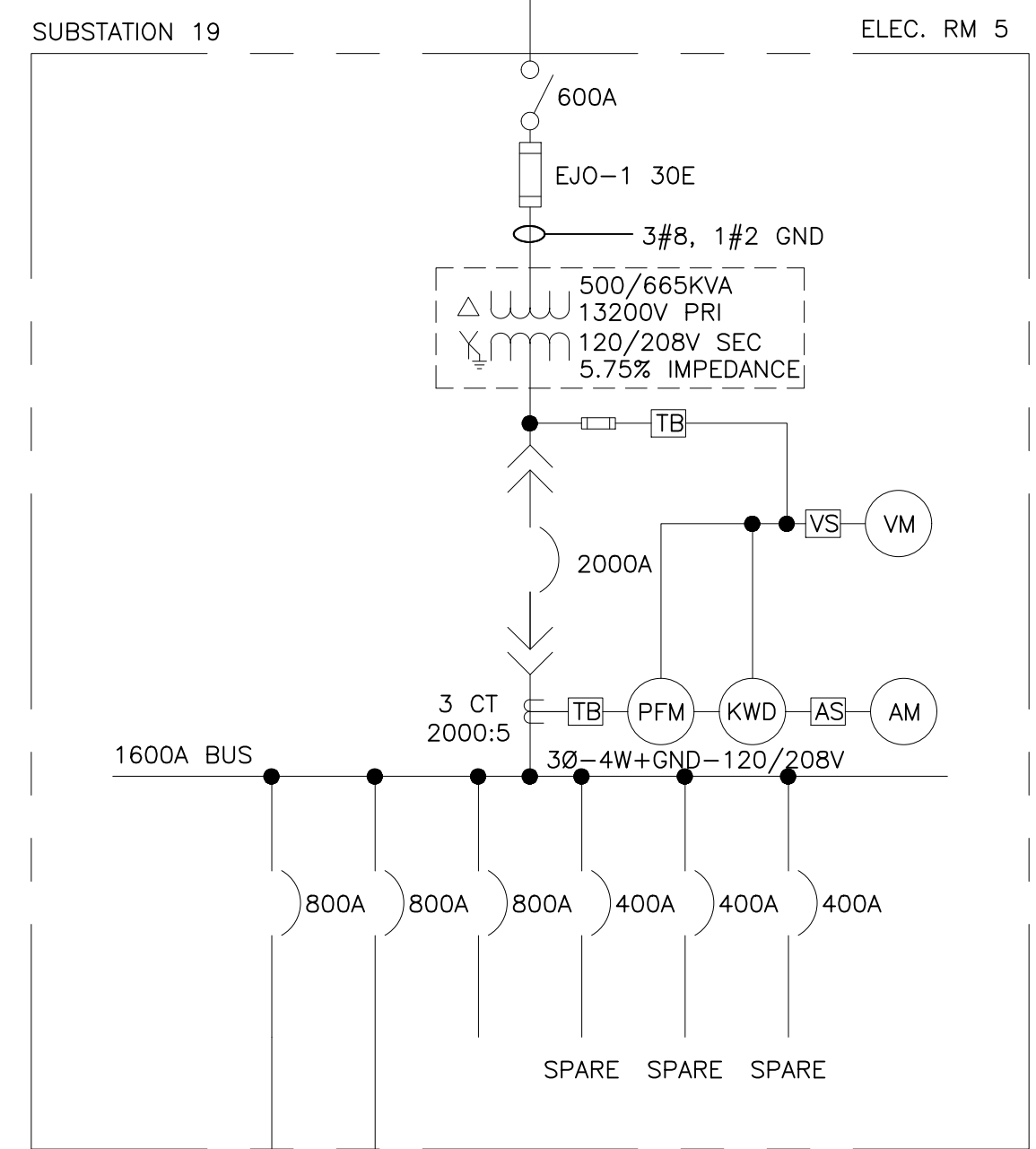
DRAWN BY:

CHECKED BY:

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

TO SUBSTATION 20
SEE DWG SL20

TO SUBSTATION 18
SEE SL18



LEGEND:

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- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVARS KILOVAR
- AL ALUMINUM
- Ø PHASE
- W WIRE

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
525 North 30th Street
West Philadelphia, Pennsylvania
19122-1078

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PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SCALE:

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE:
BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
UNIT SUBSTATION 19
ELECTRICAL ROOM 5

PAOC PROJECT NO.: XX-XX-XXXX-XX **DRAWING NO.:**

CONSULTANT PROJECT NO.: E40006

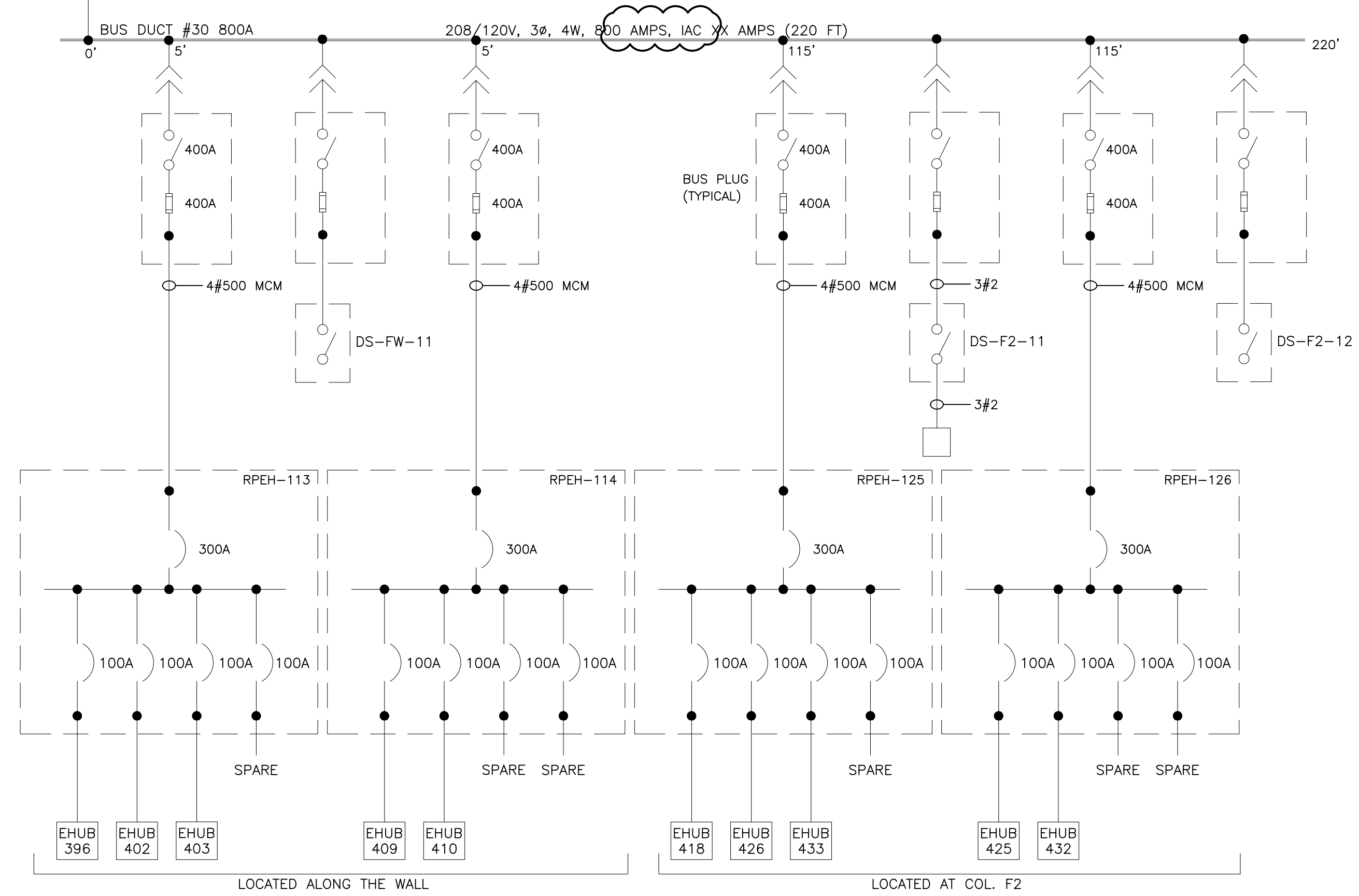
DATE: 09-24-2017

SCALE: NOT TO SCALE

DRAWN BY:

CHECKED BY:

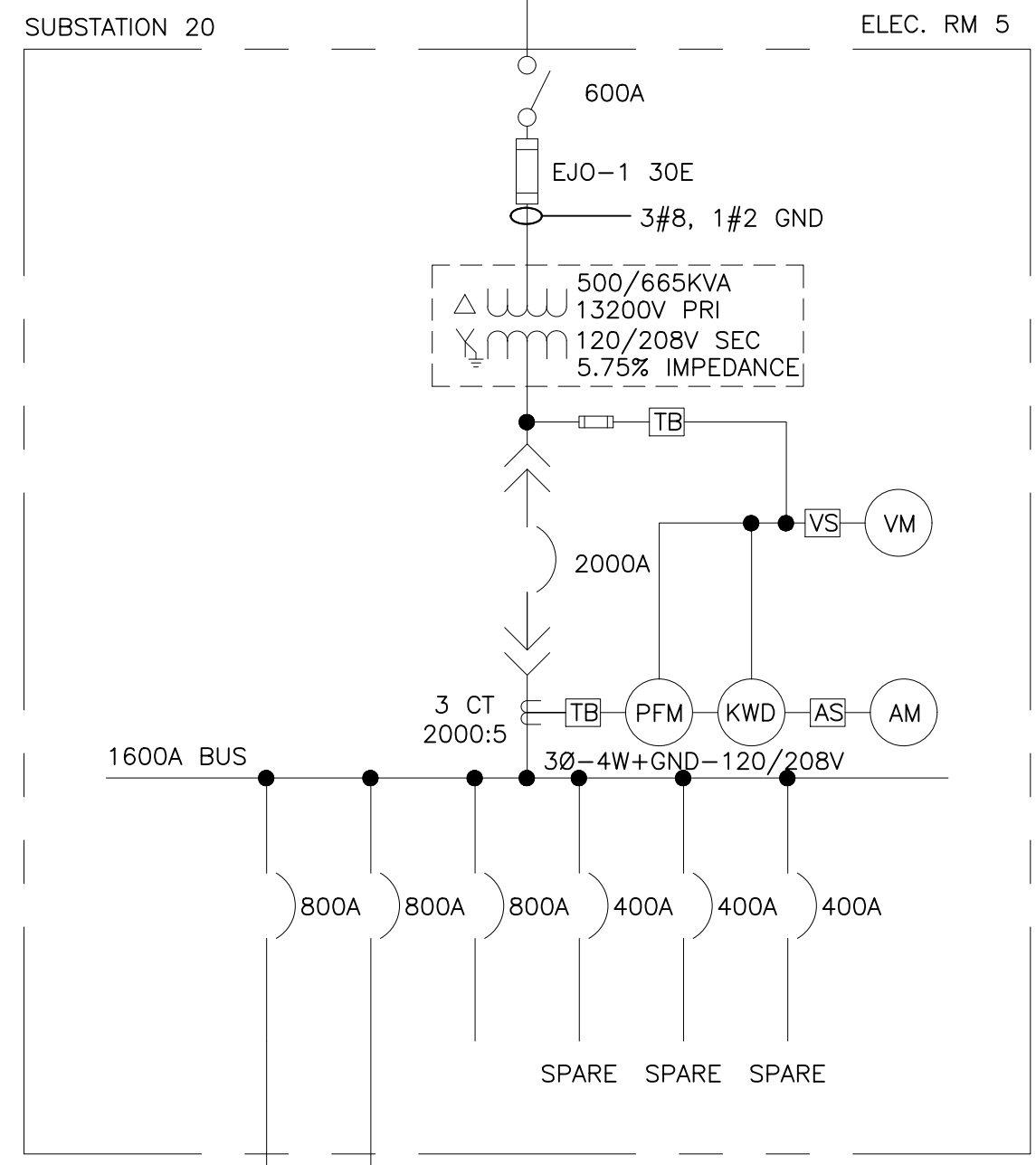
NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



SL19

TO SUBSTATION 21
SEE DWG SL21

TO SUBSTATION 19
SEE SL19

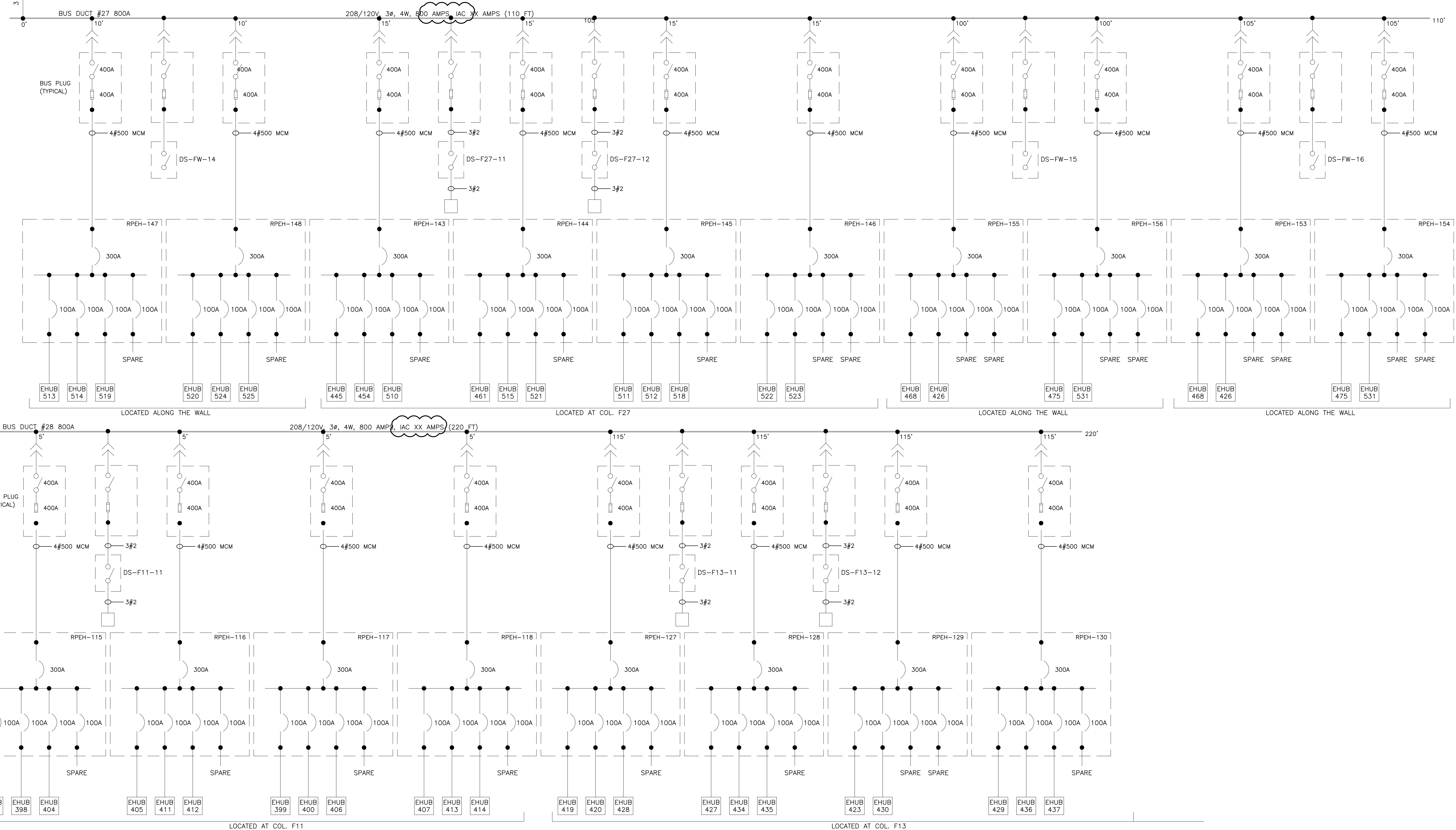


LEGEND:

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- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KV KILOVOLTS
- AL ALUMINUM
- Ø PHASE
- W WIRE

3 SETS 3" C-(4) 350MCM + 1#1/0 GND EACH

3 SETS 3" C-(4) 350MCM + 1#1/0 GND EACH



REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
525 North Star Road
West Chester, Pennsylvania
19382-1078

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, BUST OR DEMOLISH

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

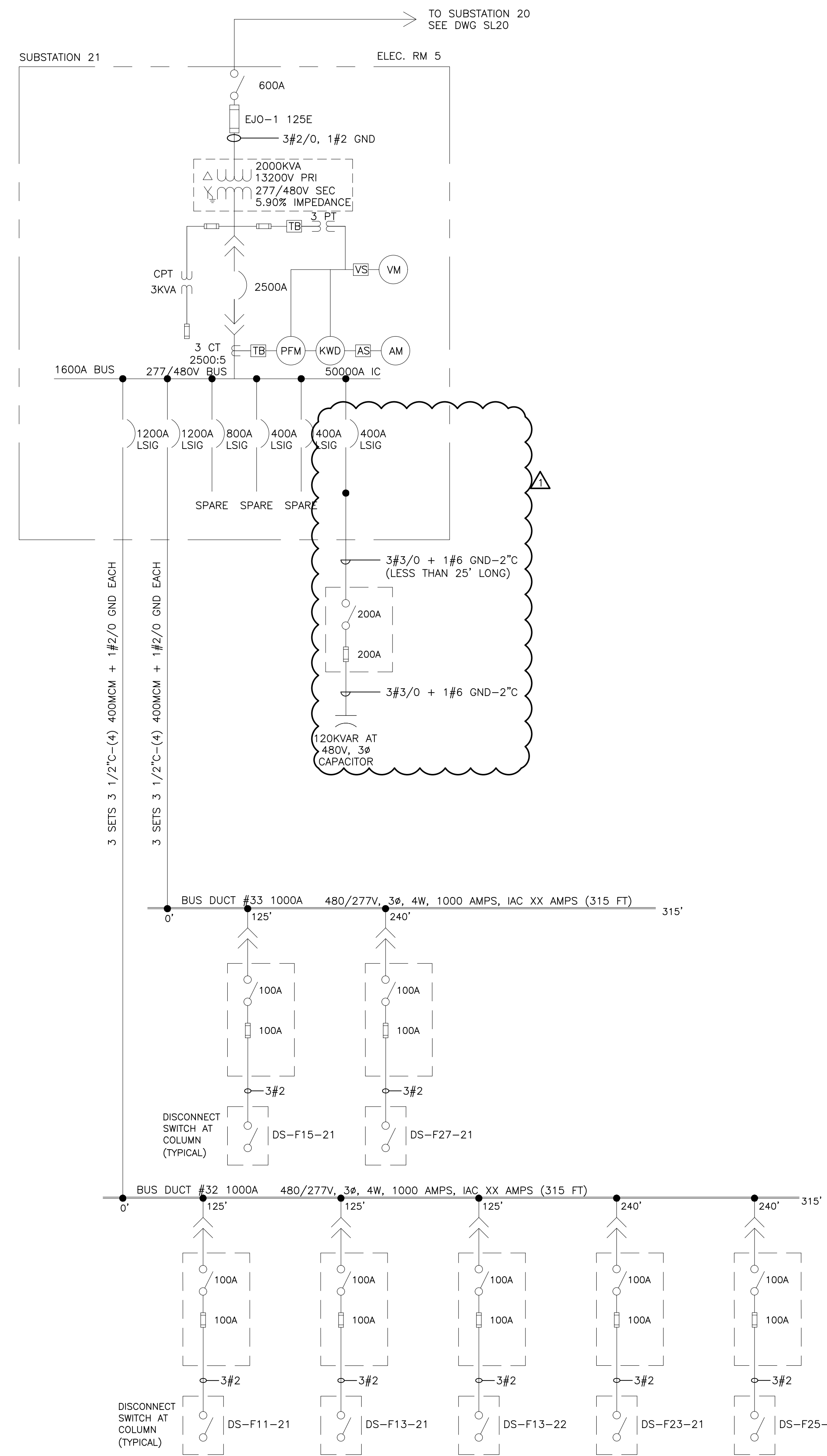
DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL	
DPP PROJECT NUMBER	XX-XX-XXXX-XX
PROJECT TITLE	POWER SYSTEM STUDY ARC FLASH ASSESSMENT
PHASE	BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED
DRAWING TITLE	UNIT SUBSTATION 20 ELECTRICAL ROOM 5
PAC PROJECT NO.	XX-XX-XXXX-XX
CONSULTANT PROJECT NO.	E40006
DATE	09-24-2017
SCALE	NOT TO SCALE
DRAWN BY:	
CHECKED BY:	
NOTE:	ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

SL20



- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
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 - AA RATINGS
 - CURRENT TRANSFORMER. RATIO NOTED.
 - TERMINAL BLOCK
 - VOLT METER SWITCH
 - AMMETER SWITCH
 - RELAY OR METER—SEE LEGEND FOR X
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES
 - MEDIUM VOLTAGE
 - LOW VOLTAGE
 - VOLTMETER
 - AMMETER
 - KILOWATT METER
 - KILOWATT/DEMAND METER
 - POWER FACTOR METER
 - CURRENT TRANSFORMER
 - CONTROL POWER TRANSFORMER
 - POTENTIAL TRANSFORMER
 - GROUND
 - GROUND
 - COPPER
 - KILOAMPS
 - KILOVAR
 - ALUMINUM
 - PHASE
 - WIRE

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE



PENNSYLVANIA ONE CALL SYSTEM, INC.
 525 South Main Road
 West Chester, Pennsylvania
 19382-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 NON-MEMBERS MUST BE CONTACTED DIRECTLY
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PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL: SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

ELECTRICAL

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE:
 POWER SYSTEM STUDY
 ARC FLASH ASSESSMENT

PHASE:
 BASE AND ALTERNATE 2
 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE:
 UNIT SUBSTATION 21
 ELECTRICAL ROOM 5

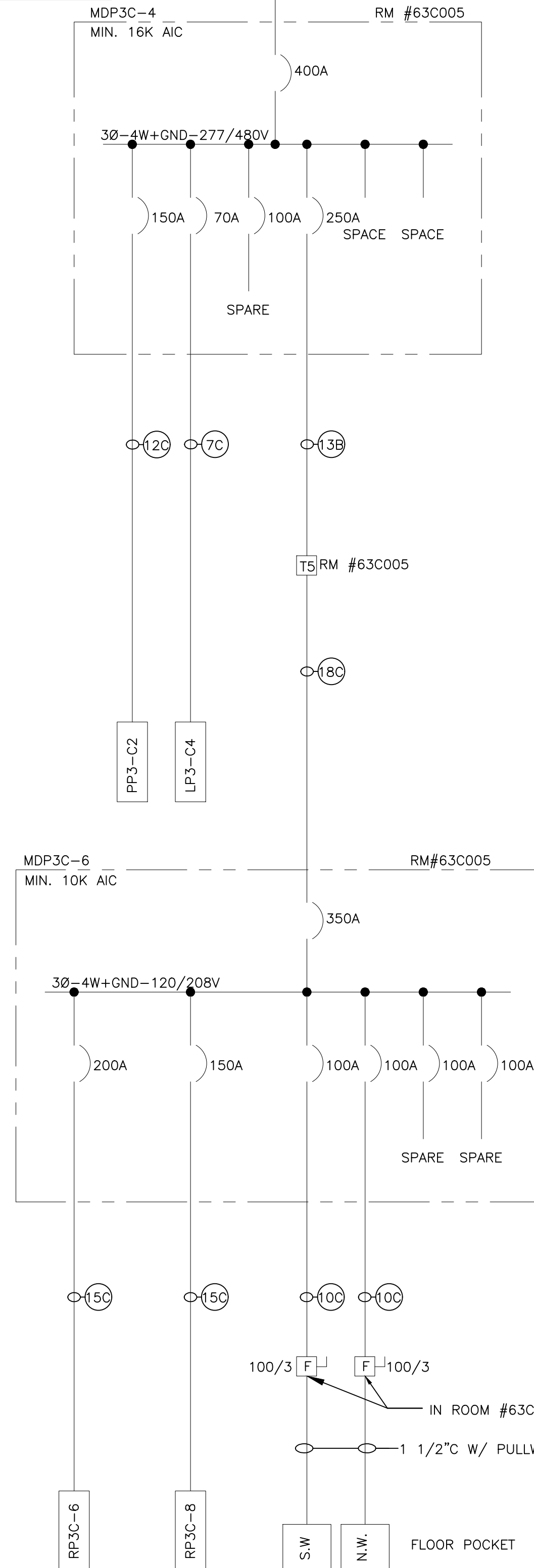
PROJECT NO.: XX-XX-XXXX-XX
 CONSULTANT PROJECT NO.: E40006
 DATE: 09-24-2017
 SCALE: NOT TO SCALE
 DRAWN BY:
 CHECKED BY:

SL21

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

WIRE AND CONDUIT SIZING SCHEDULE					
CONDUC. / # & NEUTRAL	GROUND	A	B	C	
1	14	14	3/4	3/4	3/4
2	12	12	3/4	3/4	3/4
3	10	10	3/4	3/4	3/4
4	8	10	3/4	1	1
5	6	10	3/4	1	1 1/4
6	4	10	1	1 1/4	1 1/4
7	4	8	1	1 1/4	1 1/4
8	3	8	1	1 1/4	1 1/4
10	2	8	1 1/4	1 1/4	1 1/2
11	1	6	1 1/4	1 1/2	2
12	1/0	6	1 1/4	1 1/2	2
13	3/0	6	1 1/2	2	2 1/2
14	4/0	4	2	2	2 1/2
15	250	4	3	2 1/2	3
16	350	4	2 1/2	3	3
18	500	3	3	3	3 1/2
19	(2) 250	(2) 2	(2) 2 1/2	(2) 3	(2) 3
20	(2) 350	(2) 1	(2) 3	(2) 3	(2) 3
21	(3) 300	(3) 1/0	(3) 2 1/2	(3) 3	(3) 3
22	(3) 400	(3) 2/0	(3) 3	(3) 3 1/2	(3) 3 1/2
23	(4) 350	(4) 3/0	(4) 3	(4) 3	(4) 3
24	(5) 400	(5) 4/0	(5) 3	(5) 3 1/2	(5) 3 1/2
25	(6) 400	(6) 250	(6) 3	(6) 3 1/2	(6) 3 1/2
26	(6) 500	(6) 400	(6) 3 1/2	(6) 4	(6) 4
27	(5) 500	(5) 250		(5) 4	(5) 4

TRANSFORMER SCHEDULE					
TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	Ø	WIRE	
T-0	6	480V DELTA/120/208V WYE	3Ø	4W	
T-1	15	480V DELTA/120/208V WYE	3Ø	4W	
T-2	30	480V DELTA/120/208V WYE	3Ø	4W	
T-3	45	480V DELTA/120/208V WYE	3Ø	4W	
T-4	75	480V DELTA/120/208V WYE	3Ø	4W	
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W	
T-6	150	480V DELTA/120/208V WYE	3Ø	4W	
T-7	225	480V DELTA/120/208V WYE	3Ø	4W	
T-8	300	480V DELTA/120/208V WYE	3Ø	4W	
T-9	500	480V DELTA/120/208V WYE	3Ø	4W	



LEGEND:

- DISCONNECT SWITCH (3 POLE UNO), AMPERES NOTED
- FUSE (3 POLE UNO), TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE, FRAME AND/OR AMPERES NOTED.
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- AA RATINGS
- CURRENT TRANSFORMER, RATIO NOTED.
- TERMINAL BLOCK
- VOLTMETER SWITCH
- AMMETER SWITCH
- RELAY OR METER—SEE LEGEND FOR X
- CAPACITOR
- MOTOR STARTER
- 3 PHASE MOTOR—HP NOTED
- FUSED DISCONNECT SWITCH—3 POLE
- DISCONNECT SWITCH—3 POLE
- TRANSFORMER—SEE SCHEDULE FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- IC INTERRUPTING CAPACITY—SEE TABLE
- CL CURRENT LIMITING
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- G GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVARS
- AL ALUMINUM
- Ø PHASE
- W WIRE

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED
REV 1	4/27/18	POWER FACTOR UPGRADE



PENNSYLVANIA ONE CALL SYSTEM, INC.
 525 South Main Road
 West Chester, Pennsylvania
 19380-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BURN OR DEMOLISH

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

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL FOR REV 1 ONLY

PRIMARY CONSULTANT:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: UNIT SUBSTATION 23 ELECTRICAL ROOM

PACC PROJECT NO.: XX-XX-XXXX-XX DRAWING NO.: E40006

DATE: 09-24-2017 SCALE: NOT TO SCALE

CHECKED BY: DRAWN BY:

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

SL23

REVISIONS		
ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.



BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

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

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: EMERGENCY GENERATOR C
ADJACENT TO ELECTRICAL ROOM 1

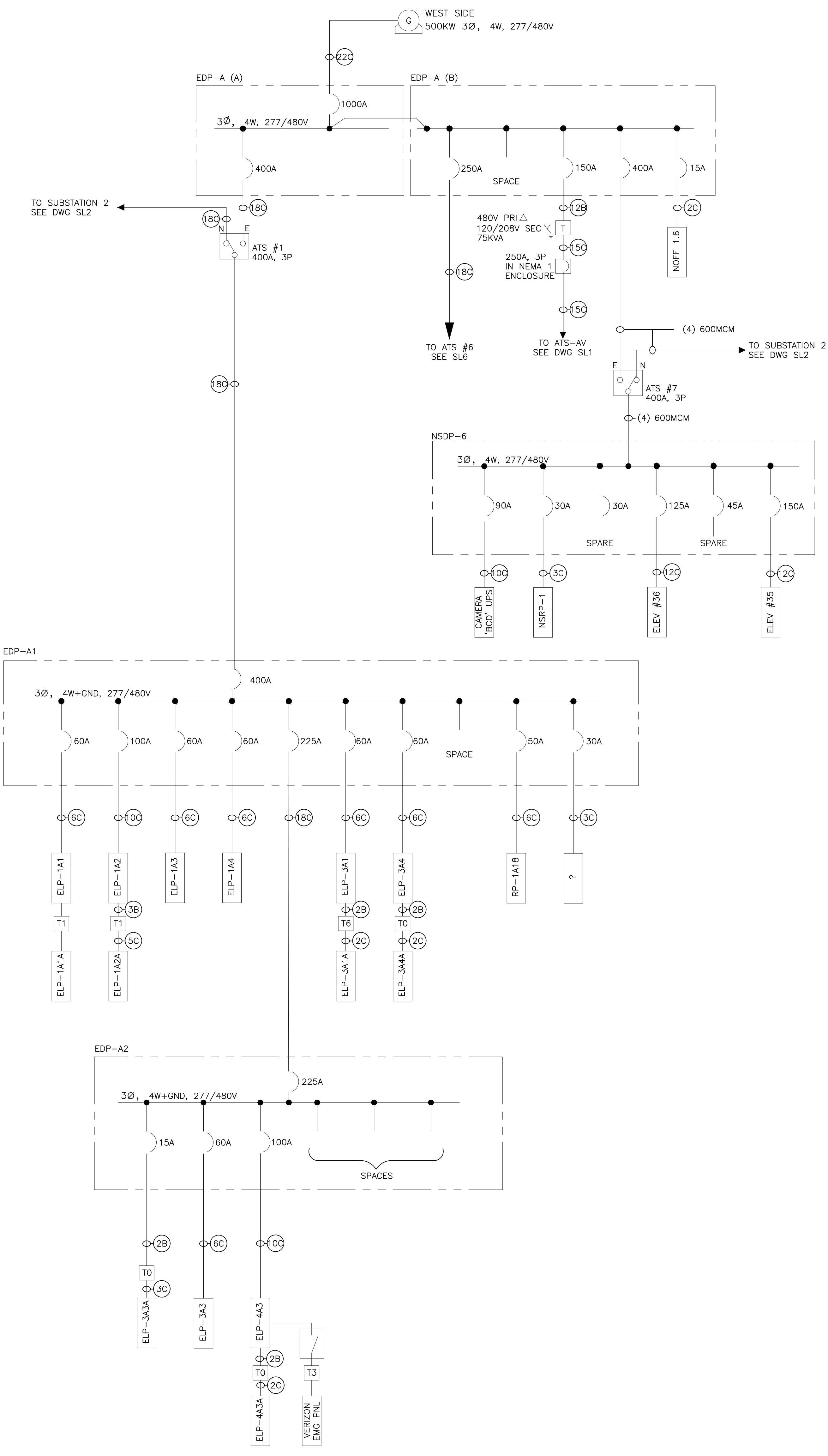
PROJECT NO.: XX-XX-XXXX-XX DRAWING NO.: E40006

DATE: 09-24-2017

SCALE: NOT TO SCALE

CHECKED BY:

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



CONDUCTOR / # & NEUTRAL	GROUND	A			B			C		
		18, 2W	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
1	14	14	3/4	3/4	3/4	3/4				
2	12	12	12	3/4	3/4	3/4				
3	10	10	3/4	3/4	3/4	3/4				
4	8	10	3/4	1	1	1				
5	6	10	3/4	1	1 1/4	1 1/4				
6	4	10	1	1 1/4	1 1/4	1 1/4				
7	4	8	1	1 1/4	1 1/4	1 1/4				
8	3	8	1	1 1/4	1 1/4	1 1/4				
10	2	8	1 1/4	1 1/4	1 1/2	1 1/2				
11	1	6	1 1/4	1 1/2	2	2				
12	1/0	6	1 1/4	1 1/2	2	2				
13	3/0	6	1 1/2	2	2 1/2	2 1/2				
14	4/0	4	2	2	2 1/2	2 1/2				
15	250	4	3	2 1/2	3	3				
16	350	4	2 1/2	3	3	3				
18	500	3	3	3	3 1/2	3 1/2				
19	(2) 250	(2) 2		(2) 2 1/2	(2) 3	(2) 3				
20	(2) 350	(2) 1		(2) 3	(2) 3	(2) 3				
21	(3) 300	(3) 1/0		(3) 2 1/2	(3) 3	(3) 3				
22	(3) 400	(3) 2/0		(3) 3	(3) 3 1/2	(3) 3 1/2				
23	(4) 350	(4) 3/0		(4) 3	(4) 3	(4) 3				
24	(5) 400	(5) 4/0		(5) 3	(5) 3 1/2	(5) 3 1/2				
25	(6) 400	(6) 250		(6) 3	(6) 3 1/2	(6) 3 1/2				
26	(6) 500	(6) 400		(6) 3 1/2	(6) 4	(6) 4				
27	(5) 500	(5) 250		(5) 250	(5) 4	(5) 4				

TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	#	WIRE
T-0	6	480V DELTA/120/208V WYE	3Ø	4W
T-1	15	480V DELTA/120/208V WYE	3Ø	4W
T-2	30	480V DELTA/120/208V WYE	3Ø	4W
T-3	45	480V DELTA/120/208V WYE	3Ø	4W
T-4	75	480V DELTA/120/208V WYE	3Ø	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W
T-6	150	480V DELTA/120/208V WYE	3Ø	4W
T-7	225	480V DELTA/120/208V WYE	3Ø	4W
T-8	300	480V DELTA/120/208V WYE	3Ø	4W
T-9	500	480V DELTA/120/208V WYE	3Ø	4W

- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
 - MOTOR STARTER
 - MOTOR STARTER
 - 3 PHASE MOTOR—HP NOTED
 - FUSED DISCONNECT SWITCH—3 POLE
 - DISCONNECT SWITCH—3 POLE
 - TRANSFORMER—SEE SCHEDULE FOR X
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES
 - IC INTERRUPTING CAPACITY—SEE TABLE
 - CL CURRENT LIMITING
 - MV MEDIUM VOLTAGE
 - LV LOW VOLTAGE
 - VM VOLTMETER
 - AM AMMETER
 - KW KILOWATT METER
 - KWD KILOWATT/DEMAND METER
 - PFM POWER FACTOR METER
 - CT CURRENT TRANSFORMER
 - CPT CONTROL POWER TRANSFORMER
 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - Ø PHASE
 - W WIRE

SL24

REVISIONS		
ISSUE	DATE	REVISIONS
B	4/27/18	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.



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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): XXXXXXXXXX

DPP PROJECT COORDINATOR: XXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

DPP PROJECT NUMBER: XX-XX-XXXX-XX

PROJECT TITLE: POWER SYSTEM STUDY
ARC FLASH ASSESSMENT

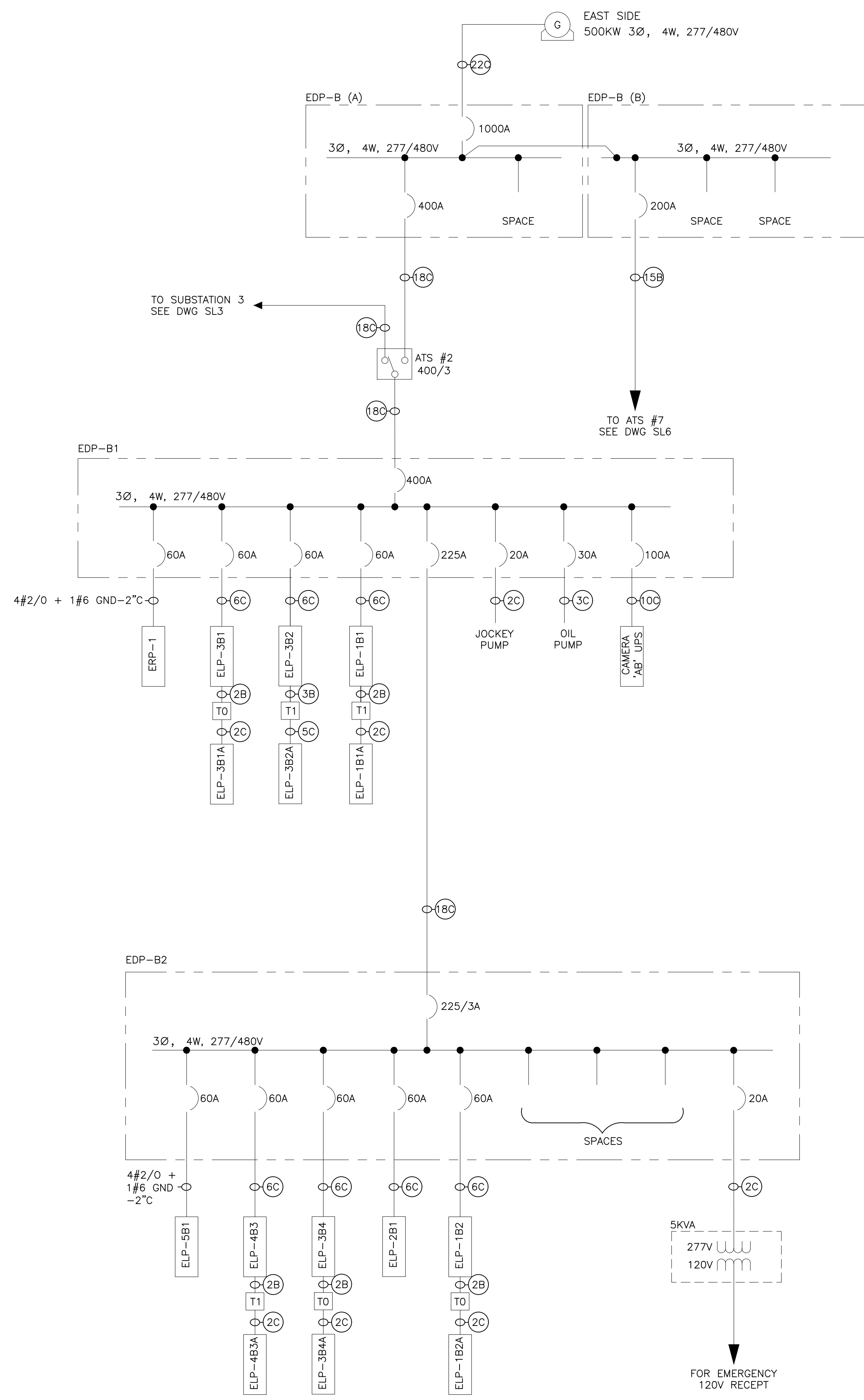
PHASE: BASE AND ALTERNATE 2
EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: EMERGENCY GENERATOR A
ADJACENT TO ELECTRICAL ROOM 2

PROJECT NO.: XX-XX-XXXX-XX
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL25

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

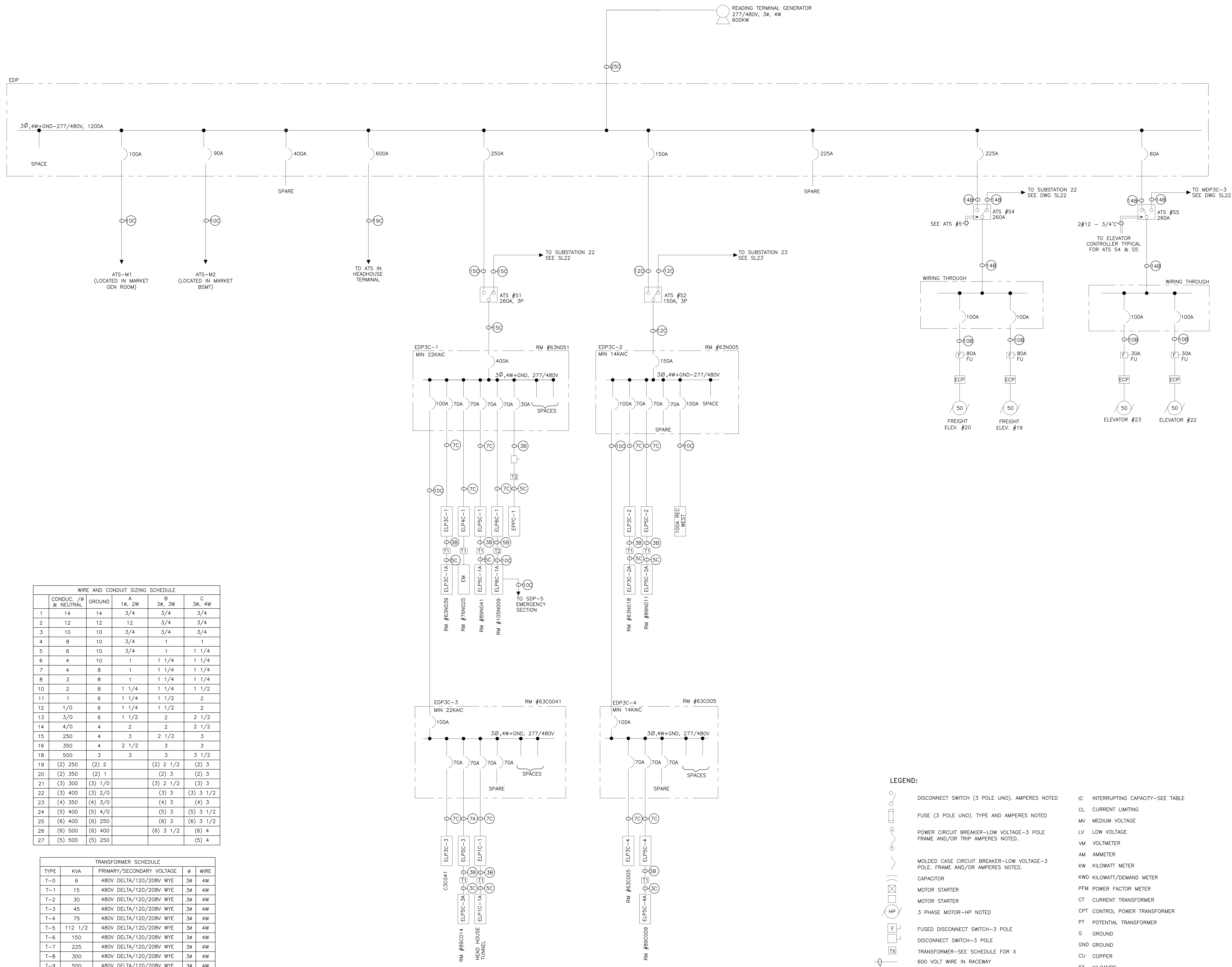


CONDUC. /Ø & NEUTRAL	GROUND	B		
		A 1Ø, 2W	3Ø, 3W	C 3Ø, 4W
1	14	14	3/4	3/4
2	12	12	3/4	3/4
3	10	10	3/4	3/4
4	8	10	3/4	1
5	6	10	3/4	1
6	4	10	1	1 1/4
7	4	8	1	1 1/4
8	3	8	1	1 1/4
10	2	8	1 1/4	1 1/4
11	1	6	1 1/4	1 1/2
12	1/0	6	1 1/4	2
13	3/0	6	1 1/2	2
14	4/0	4	2	2 1/2
15	250	4	3	3
16	350	4	2 1/2	3
18	500	3	3	3 1/2
19	(2) 250	(2) 2	(2) 2 1/2	(2) 3
20	(2) 350	(2) 1	(2) 3	(2) 3
21	(3) 300	(3) 1/0	(3) 2 1/2	(3) 3
22	(3) 400	(3) 2/0	(3) 3	(3) 3 1/2
23	(4) 350	(4) 3/0	(4) 3	(4) 3
24	(5) 400	(5) 4/0	(5) 3	(5) 3 1/2
25	(6) 400	(6) 250	(6) 3	(6) 3 1/2
26	(6) 500	(6) 400	(6) 3 1/2	(6) 4
27	(5) 500	(5) 250		(5) 4

TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	#	WIRE
T-0	6	480V DELTA/120/208V WYE	3Ø	4W
T-1	15	480V DELTA/120/208V WYE	3Ø	4W
T-2	30	480V DELTA/120/208V WYE	3Ø	4W
T-3	45	480V DELTA/120/208V WYE	3Ø	4W
T-4	75	480V DELTA/120/208V WYE	3Ø	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3Ø	4W
T-6	150	480V DELTA/120/208V WYE	3Ø	4W
T-7	225	480V DELTA/120/208V WYE	3Ø	4W
T-8	300	480V DELTA/120/208V WYE	3Ø	4W
T-9	500	480V DELTA/120/208V WYE	3Ø	4W

LEGEND:

- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
- FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
- POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
- MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE. FRAME AND/OR AMPERES NOTED.
- CAPACITOR
- MOTOR STARTER
- MOTOR STARTER
- 3 PHASE MOTOR—HP NOTED
- FUSED DISCONNECT SWITCH—3 POLE
- DISCONNECT SWITCH—3 POLE
- TRANSFORMER—SEE SCHEDULE FOR X
- 600 VOLT WIRE IN RACEWAY
- QUANTITY AND SIZE OF WIRES
- IC INTERRUPTING CAPACITY—SEE TABLE
- CL CURRENT LIMITING
- MV MEDIUM VOLTAGE
- LV LOW VOLTAGE
- VM VOLTMETER
- AM AMMETER
- KW KILOWATT METER
- KWD KILOWATT/DEMAND METER
- PFM POWER FACTOR METER
- CT CURRENT TRANSFORMER
- CPT CONTROL POWER TRANSFORMER
- PT POTENTIAL TRANSFORMER
- GND GROUND
- GND GROUND
- CU COPPER
- KA KILOAMPS
- KVAR KILOVARS
- AL ALUMINUM
- W WIRE



CONDUC. /# & NEUTRAL	GROUND	A 1φ, 2W	B 3φ, 3W	C 3φ, 4W
1	14	14	3/4	3/4
2	12	12	12	3/4
3	10	10	3/4	3/4
4	8	10	3/4	1
5	6	10	3/4	1 1/4
6	4	10	1	1 1/4
7	4	8	1	1 1/4
8	3	8	1	1 1/4
10	2	8	1 1/4	1 1/4
11	1	6	1 1/4	1 1/2
12	1/0	6	1 1/4	1 1/2
13	3/0	6	1 1/2	2
14	4/0	4	2	2 1/2
15	250	4	3	2 1/2
16	350	4	2 1/2	3
18	500	3	3	3 1/2
19	(2) 250	(2) 2	(2) 2 1/2	(2) 3
20	(2) 350	(2) 1	(2) 3	(2) 3
21	(3) 300	(3) 1/0	(3) 2 1/2	(3) 3
22	(3) 400	(3) 2/0	(3) 3	(3) 3 1/2
23	(4) 350	(4) 3/0	(4) 3	(4) 3
24	(5) 400	(5) 4/0	(5) 3	(5) 3 1/2
25	(6) 400	(6) 250	(6) 3	(6) 3 1/2
26	(6) 500	(6) 400	(6) 3 1/2	(6) 4
27	(5) 500	(5) 250	(5) 3	(5) 4

TYPE	KVA	PRIMARY/SECONDARY VOLTAGE	#	WIRE
T-0	6	480V DELTA/120/208V WYE	3φ	4W
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T-2	30	480V DELTA/120/208V WYE	3φ	4W
T-3	45	480V DELTA/120/208V WYE	3φ	4W
T-4	75	480V DELTA/120/208V WYE	3φ	4W
T-5	112 1/2	480V DELTA/120/208V WYE	3φ	4W
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T-8	300	480V DELTA/120/208V WYE	3φ	4W
T-9	500	480V DELTA/120/208V WYE	3φ	4W

- LEGEND:**
- DISCONNECT SWITCH (3 POLE UNO). AMPERES NOTED
 - FUSE (3 POLE UNO). TYPE AND AMPERES NOTED
 - POWER CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR TRIP AMPERES NOTED.
 - MOLDED CASE CIRCUIT BREAKER—LOW VOLTAGE—3 POLE FRAME AND/OR AMPERES NOTED.
 - CAPACITOR
 - MOTOR STARTER
 - MOTOR STARTER
 - 3 PHASE MOTOR—HP NOTED
 - FUSED DISCONNECT SWITCH—3 POLE
 - DISCONNECT SWITCH—3 POLE
 - TRANSFORMER—SEE SCHEDULE FOR X
 - 600 VOLT WIRE IN RACEWAY
 - QUANTITY AND SIZE OF WIRES
 - IC INTERRUPTING CAPACITY—SEE TABLE
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 - PFM POWER FACTOR METER
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 - PT POTENTIAL TRANSFORMER
 - G GROUND
 - GND GROUND
 - CU COPPER
 - KA KILOAMPS
 - KVAR KILOVARS
 - AL ALUMINUM
 - φ PHASE
 - W WIRE

ISSUE	DATE	REVISIONS
A	12/5/17	ISSUED



PENNSYLVANIA ONE CALL SYSTEM, INC.
 525 North 10th Street
 West Philadelphia, Pennsylvania
 19122-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776
 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

PA ONE-CALL NUMBER (FOR DESIGN ONLY): XXXXXXXXXXXX
 DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

ELECTRICAL:

DPP PROJECT NUMBER: XX-XX-XXXX-XX
 PROJECT TITLE: POWER SYSTEM STUDY ARC FLASH ASSESSMENT

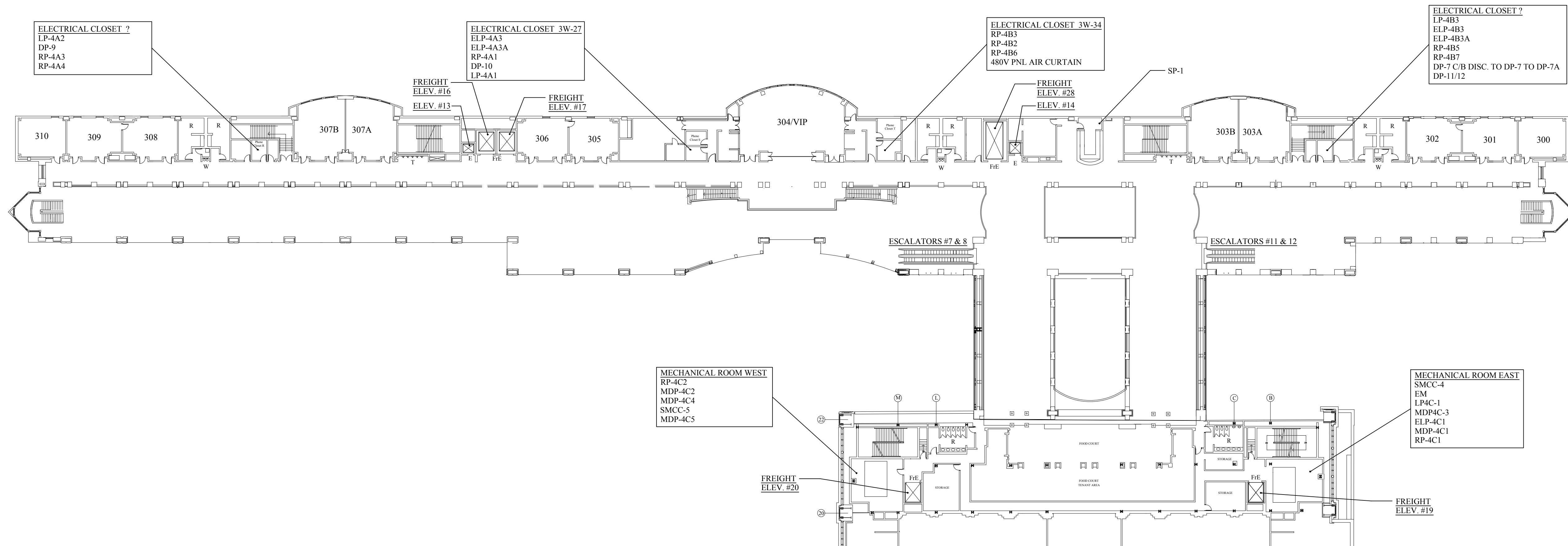
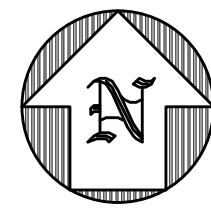
PHASE: BASE AND ALTERNATE 2 EXHIBIT HALLS & TRAIN SHED

DRAWING TITLE: EMERGENCY GENERATOR TRAIN SHED READING TERMINAL MARKET

PROJECT NO.: XX-XX-XXXX-XX **DRAWING NO.:** E40006
CONSULTANT PROJECT NO.: E40006
DATE: 09-24-2017
SCALE: NOT TO SCALE
DRAWN BY:
CHECKED BY:

SL26

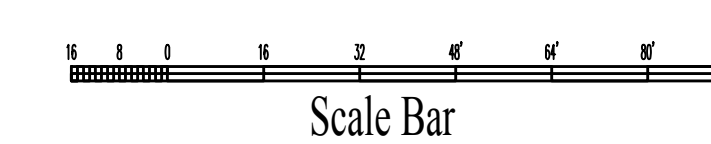
NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.



OVERLOOK (LEVEL 76)

KEY

- T Telephone
- R Restroom
- W Water Fountain
- E Elevator
- FEE Freight Elevator
- C Concussion



REVISIONS

ISSUE	DATE	REVISIONS



PENNSYLVANIA ONE CALL SYSTEM, INC.
325 South Pine Street
West Philadelphia, Pennsylvania
19107-2172



BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA, CALL 800-4-A-DIG. NON-MEMBERS MUST BE CONTACTED DIRECTLY. WHILE IN THE FIELD, CALL 800-4-A-DIG, 800-4-A-DIG, 800-4-A-DIG, 800-4-A-DIG.

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

DPP PROJECT COORDINATOR: XXXXXXXXXXXX

SEAL:

PRIMARY CONSULTANT:

DPP PROJECT NUMBER: XX-XX-XXXXXX

PROJECT TITLE:
SHORT CIRCUIT AND COORDINATION STUDY AND ARC FLASH ASSESSMENT

PHASE:
BASE AND ALTERNATE 2 OVERLOOK

DRAWING TITLE:
ELECTRICAL EQUIPMENT LOCATION PLAN LEVEL 76

PACC PROJECT NO.: XXX-XXXX-XX DRAWING NO.:

CONSULTANT PROJECT NO.: XXXX-XXXXX

DATE: 07-12-2017

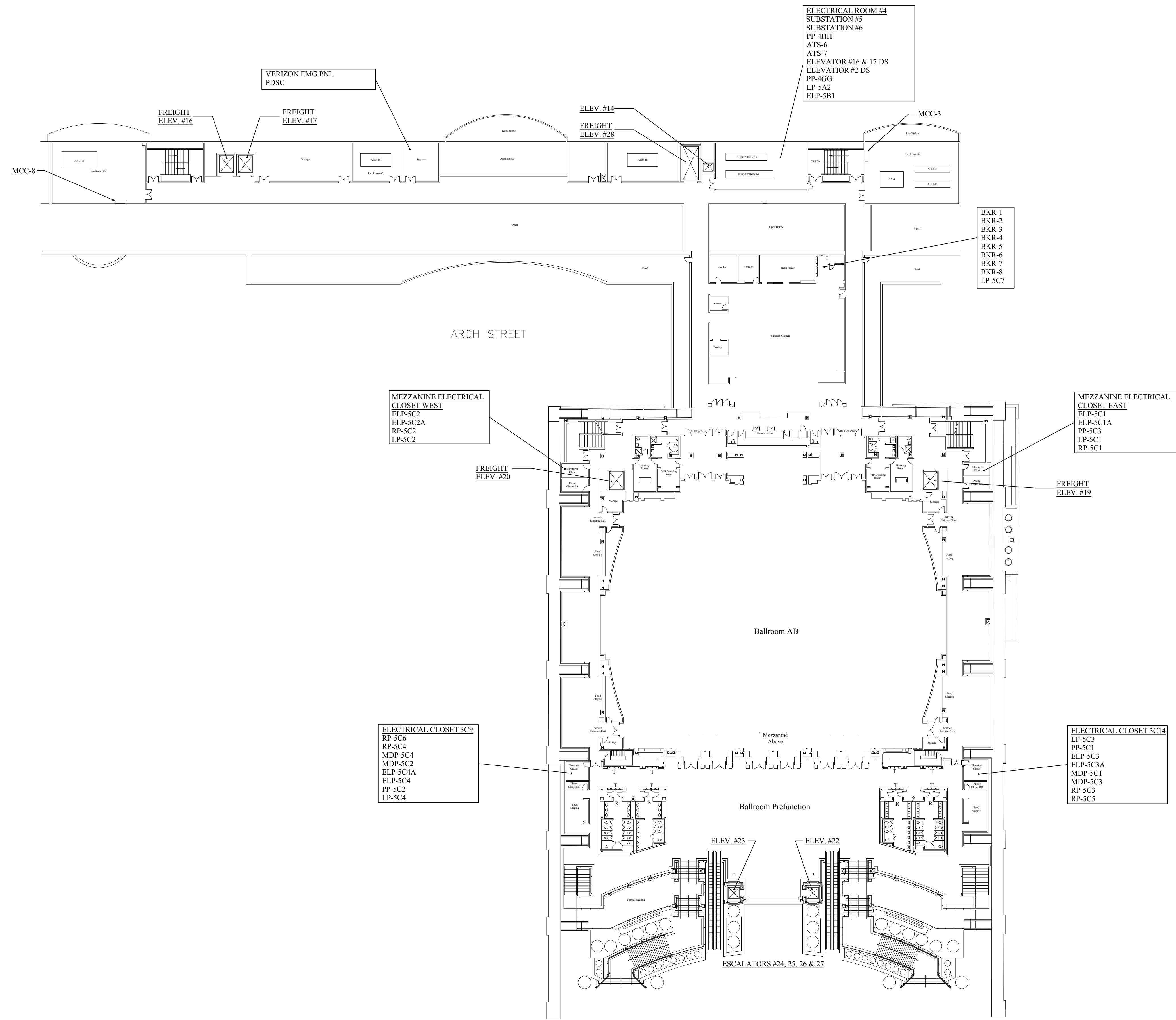
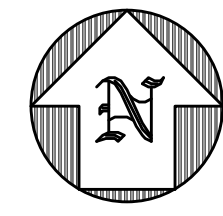
SCALE: 1/32" = 1'-0"

DRAWN BY:

CHECKED BY:

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

EQP4



BALLROOM (LEVEL 89)

KEY
 T Telephone
 R Restroom
 W Water Fountain
 E Elevator
 FE Freight Elevator
 C Concession



REVISIONS		
ISSUE	DATE	REVISIONS

PENNSYLVANIA ONE CALL SYSTEM, INC. <small>325 East Erie Road West Chester, Pennsylvania 19380-1178</small>	
<small>BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA, CALL 800-441-2346 OR VISIT US AT WWW.PENNSYLVANIAONECALL.COM. NON-MEMBERS MUST BE CONTACTED DIRECTLY. WHILE IN THE FIELD, ALWAYS CALL 811. DRILL, BLAST OR DEMOLISH.</small>	
PA ONE-CALL NUMBER (FOR DESIGN ONLY):	XXXXXXXXXX
DPP PROJECT COORDINATOR:	XXXXXXXXXX
REVISIONS (Empty table for revisions)	
DPP PROJECT NUMBER:	XX-XX-XXXX-XX
PROJECT TITLE SHORT CIRCUIT AND COORDINATION STUDY AND ARC FLASH ASSESSMENT	
PHASE BASE AND ALTERNATE 2 BALLROOM	
DRAWING TITLE ELECTRICAL EQUIPMENT LOCATION PLAN LEVEL 89	
PAGE PROJECT NO.: XXX-XXXX-XX CONSULTANT PROJECT NO.: XXXX-XXXXX DATE: 07-12-2017 SCALE: 1/32" = 1'-0" DRAWN BY: CHECKED BY:	DRAWING NO.: EQP5
<small>NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.</small>	