

PROJECT LOCATION:
4377 HECKSCHER DRIVE
JACKSONVILLE, FL 32226

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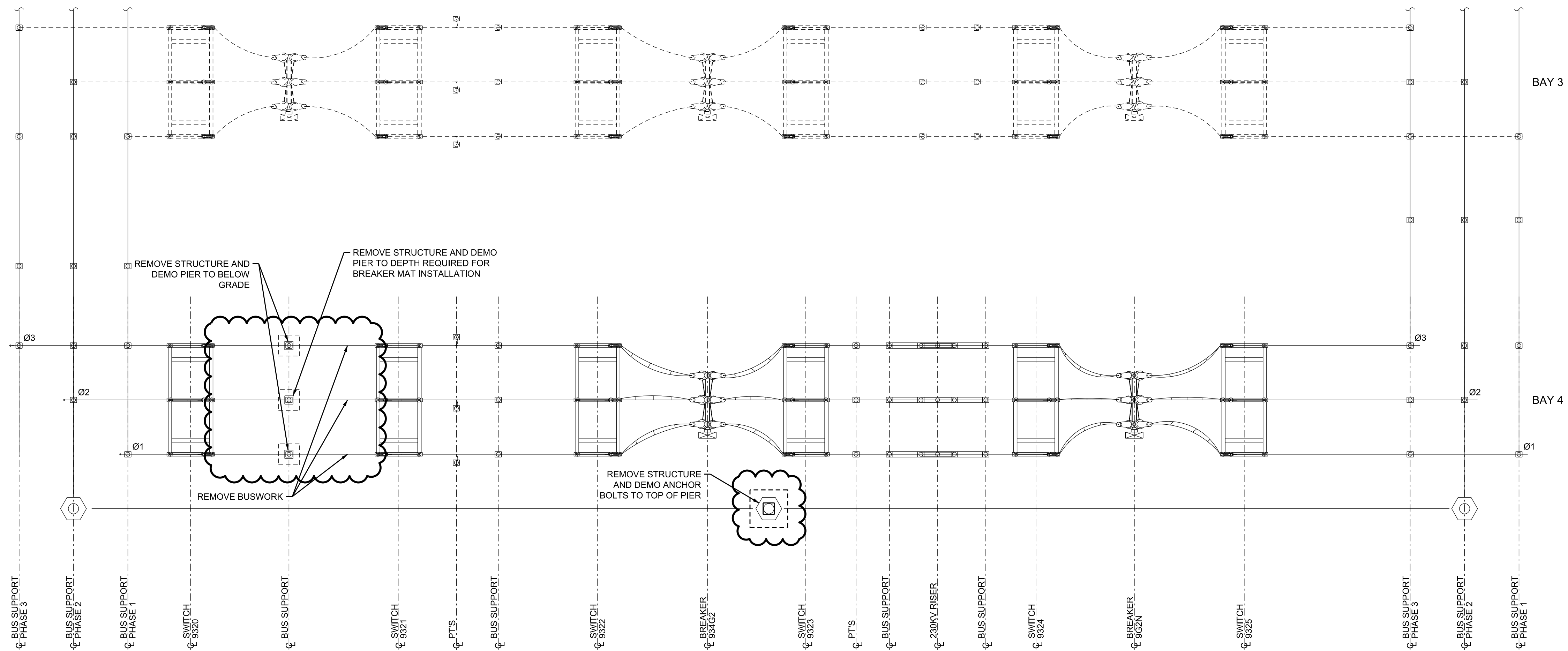
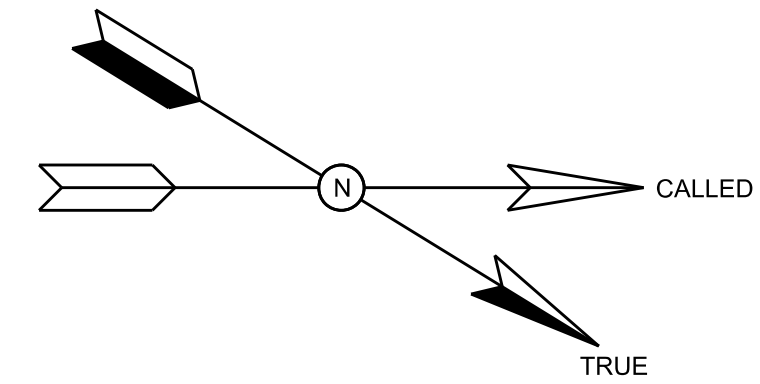
VICINITY MAP N.T.S.

NORTHSIDE BAY COMPLETION

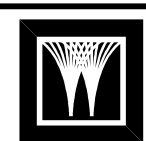
BUILDING COMMUNITY

FILED: 04/10/2023 08:10 NP172CV1.dwg 2014-20- 1810

 WorleyParsons resources & energy 2675 MORGANTOWN ROAD READING, PENNSYLVANIA 19607 FL COA 8777	PROFESSIONAL ENGINEER'S SEAL	<table><tr><th>REV</th><th>DATE</th><th>PROJ #</th><th>REVISION DESCRIPTION</th><th>BY</th><th>REVIEW</th><th>ENGINEERING</th></tr><tr><td>A</td><td>07-03-17</td><td></td><td>ISSUED FOR 90% REVIEW</td><td>JBA</td><td>TLB</td><td>DATE - BY TLB REVIEW - DRAFTING DATE - BY JBA REVIEW -</td></tr></table>	REV	DATE	PROJ #	REVISION DESCRIPTION	BY	REVIEW	ENGINEERING	A	07-03-17		ISSUED FOR 90% REVIEW	JBA	TLB	DATE - BY TLB REVIEW - DRAFTING DATE - BY JBA REVIEW -	NORTHSIDE COVER SHEET		 JEA <small>BUILDING COMMUNITY</small>	DRAWING #: NP172CV1
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A	07-03-17		ISSUED FOR 90% REVIEW	JBA	TLB	DATE - BY TLB REVIEW - DRAFTING DATE - BY JBA REVIEW -														
FOR REVIEW ONLY NOT FOR CONSTRUCTION	LATEST REVISION ORIGINALLY PREPARED UNDER THE RESPONSIBLE SUPERVISION OF PE: <u>ROBERT E MCALISTER</u> LIC. NO.: <u>72481</u> STATE: <u>FL</u> DATE: <u>-</u>	230/138kV GENERATING STATION SWITCHYARD		DRAWING SET NP-230-17																
				SCALE: NONE		SUBSTATION & TRANSMISSION ENGINEERING	PROJ #: -	SHEET#: 1 OF 13												



- REFERENCE DRAWINGS:
- NP172SL1 ONE LINE DIAGRAM
 - NP172EP1 ELECTRICAL PLAN



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NORTHSIDE REMOVAL PLAN

230/138kV GENERATING STATION SWITCHYARD

SCALE:
1" = 16' - 0"

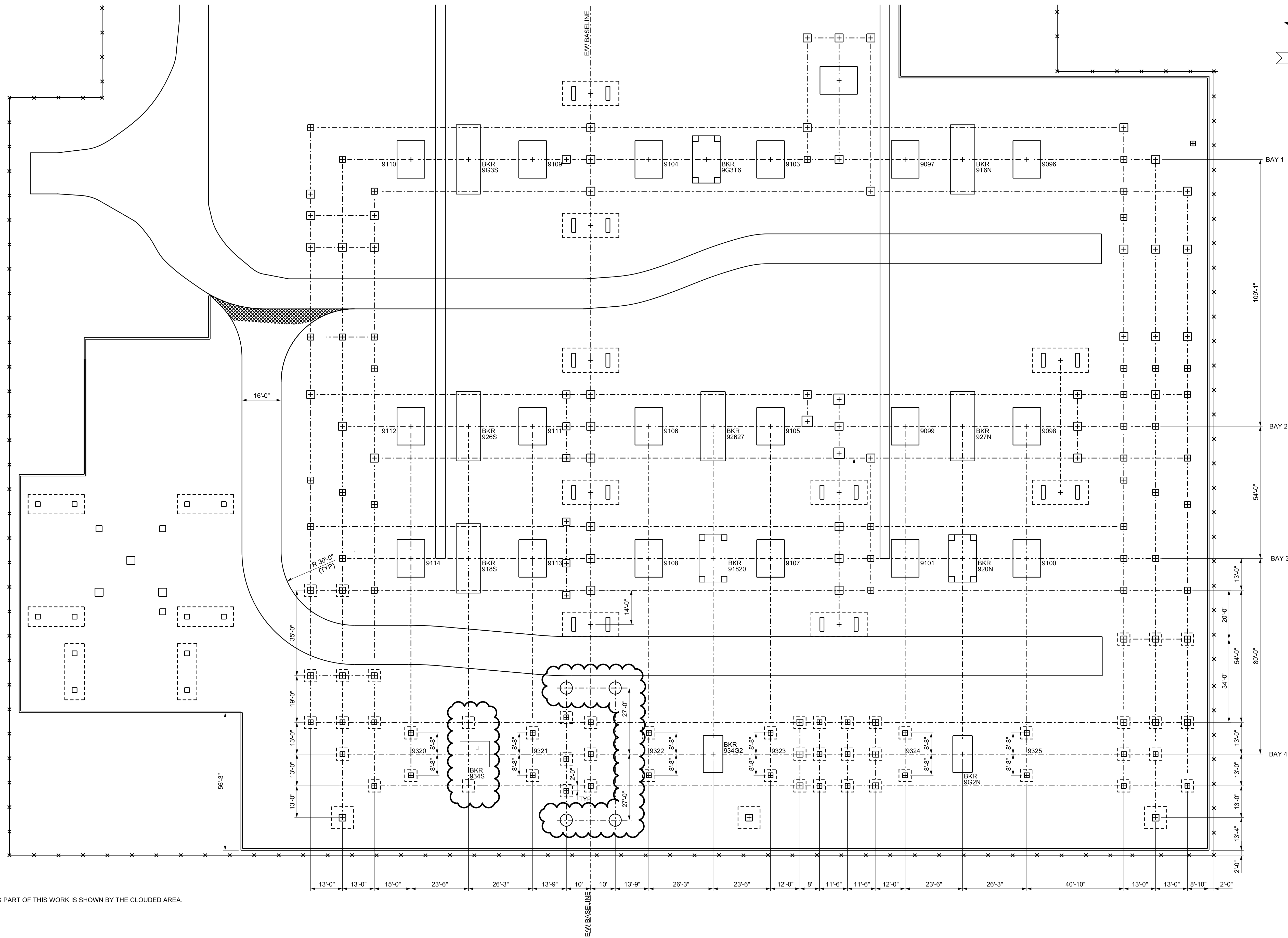
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DRAWING #:
NP172RP1

DRAWING SET
NP-230-17

SHEET#:
2 OF 13



FOUNDATION PLAN NOTES:

1. NEW FOUNDATION WORK TO BE PERFORMED AS PART OF THIS WORK IS SHOWN BY THE CLOUDED AREA.

REFERENCE DRAWINGS:

1. NP172EP1 ELECTRICAL PLAN
2. NP172FD1 FOUNDATION DETAILS
3. NP172GP1 GROUNDING PLAN
4. NP172CP1 CONDUIT PLAN



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1	12-17-10		ISSUED FOR CONSTRUCTION BID	REM		DATE -
2	06-16-11		FINAL ISSUED FOR CONSTRUCTION	MOI		BY REM
A	07-03-17		ISSUED FOR 90% REVIEW	JBA	JRC	REVIEW REM
						DRAFTING
						DATE -
						BY REM
						REVIEW MOI

1" = 20'

NORTHSIDE
FOUNDATION PLAN

230/138kV GENERATING STATION SWITCHYARD

SCALE: 1" = 20'

SUBSTATION & TRANSMISSION ENGINEERING

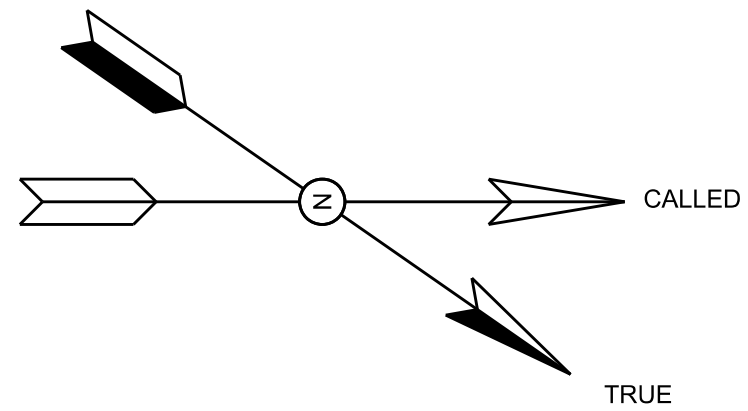
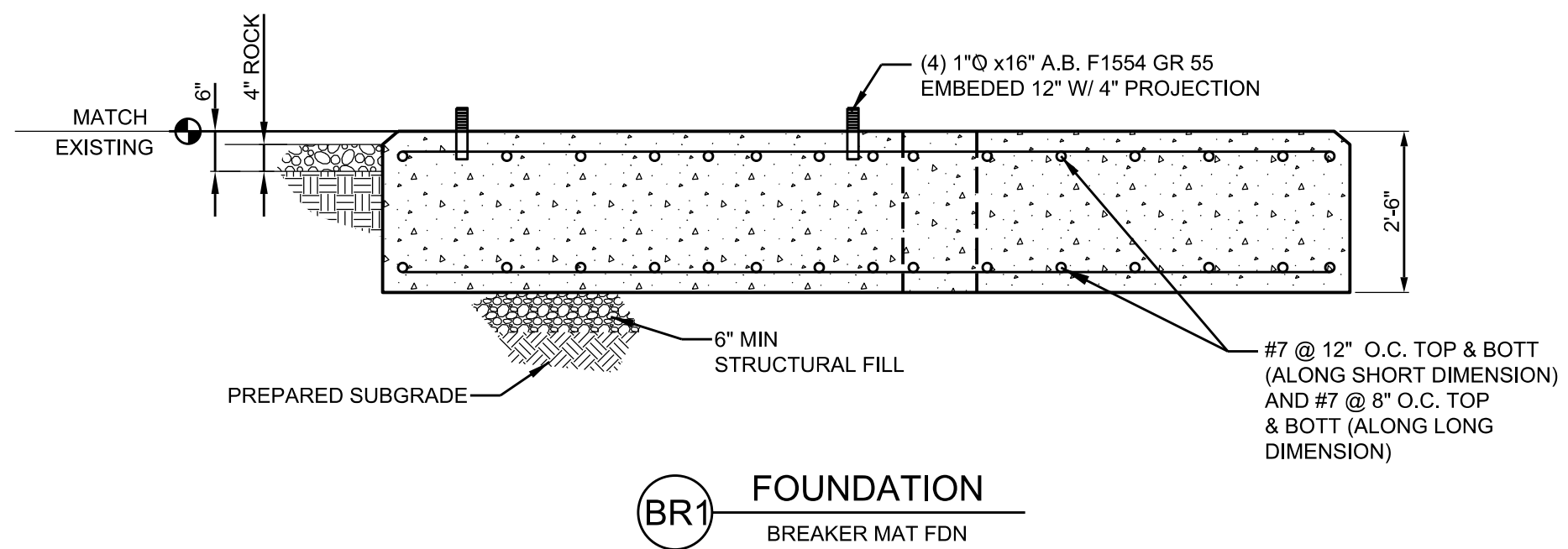
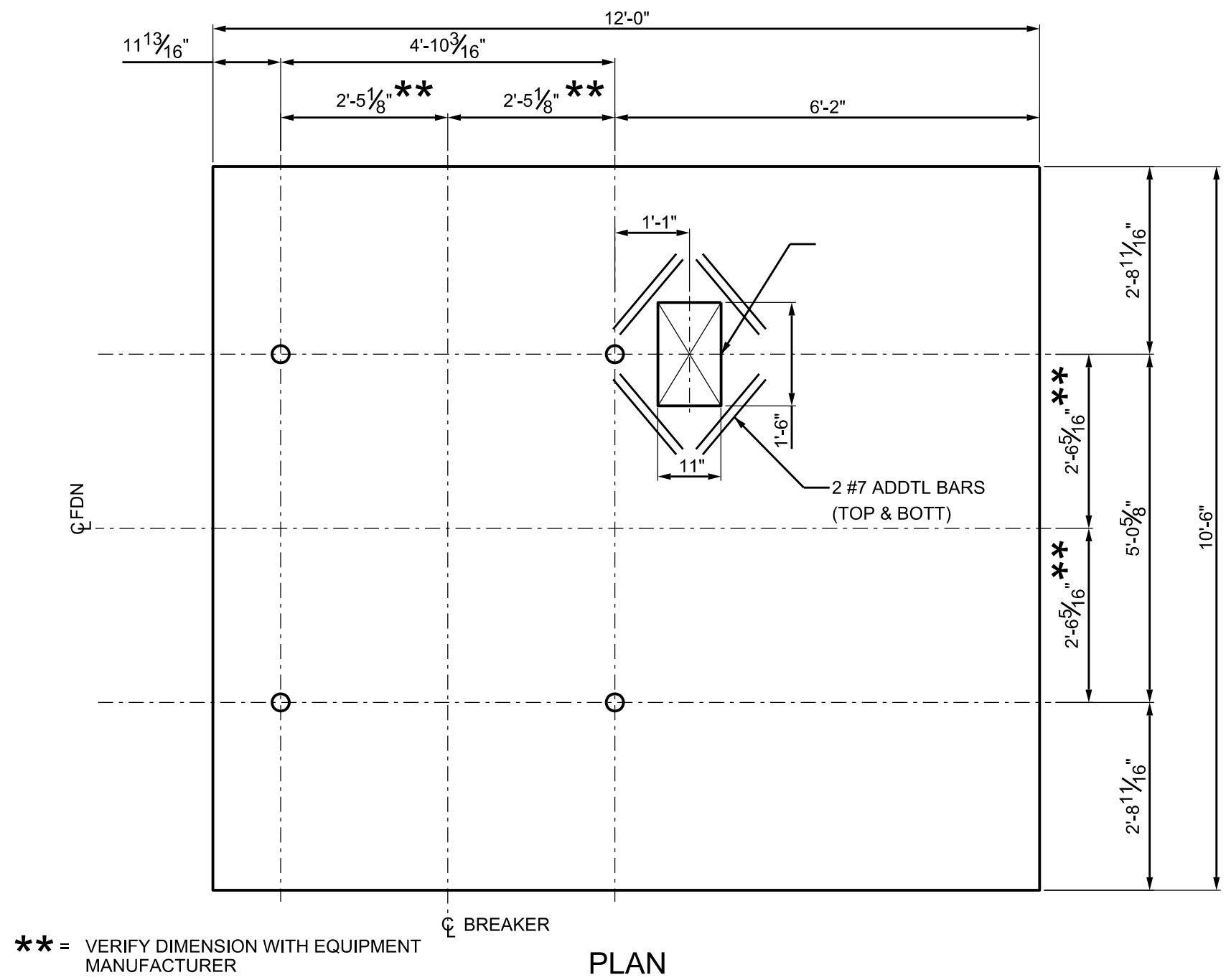
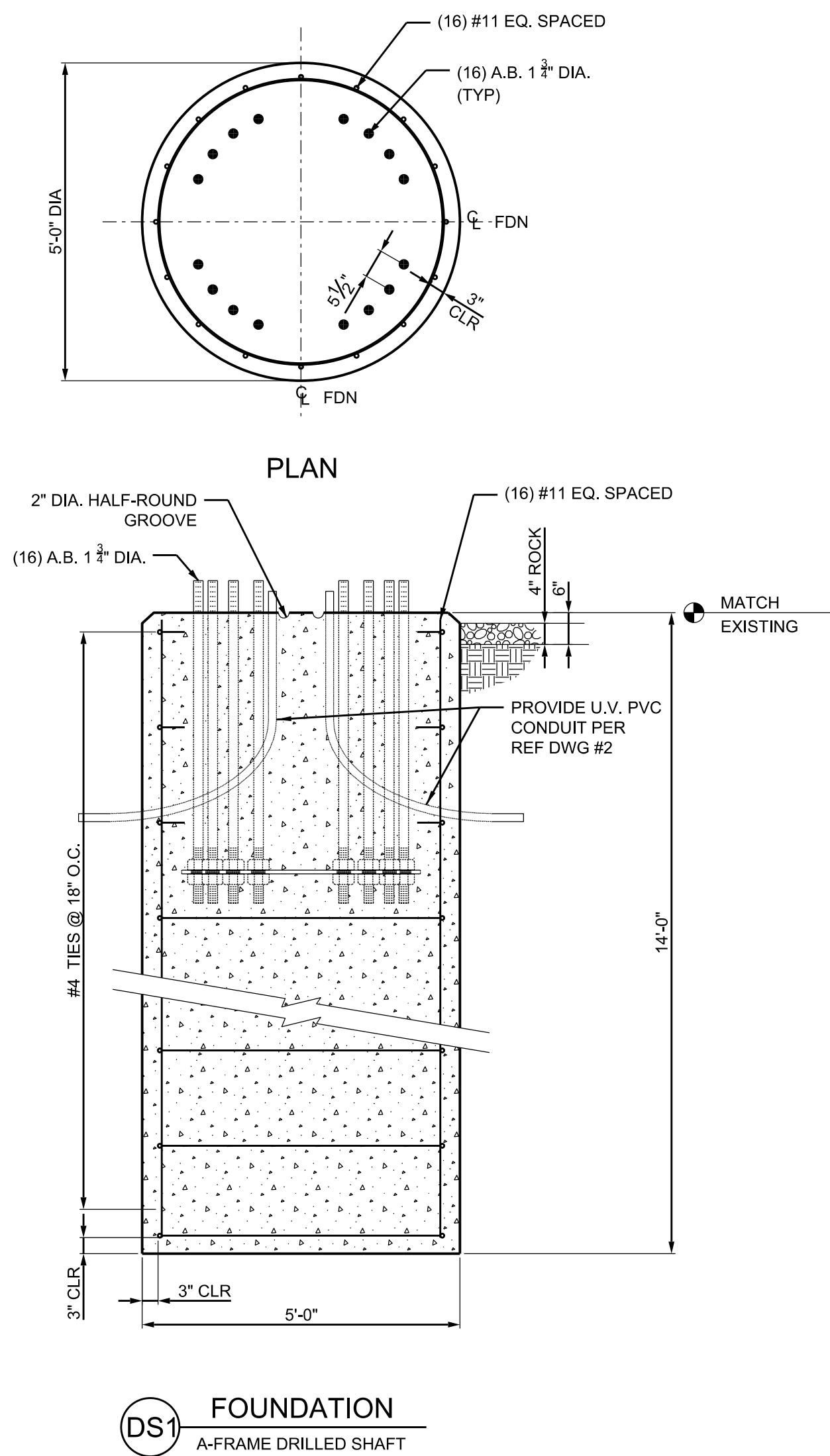


DRAWING #:
NP172FP1

DRAWING SET
NP-230-17

SHEET#:
3 OF 13

PROJ #:



- NOTES:**
- CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE TO CONSTRUCTION SPECIFICATIONS.
 - ALL CONCRETE WORK SHALL CONFORM TO THE ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (LATEST EDITION).
 - THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH ALL REFERENCE DRAWINGS.
 - REFERENCE THE CONDUIT AND GROUNDING PLANS FOR COORDINATION OF EMBEDDED ITEMS AND FOUNDATION GROUNDING.
 - REINFORCING STEEL
 - A. ASTM A615, GRADE 60
 - B. NO MECHANICAL SPLICES WILL BE PERMITTED
 - C. MINIMUM LAP LENGTH OF #7 REBAR IS 42"
 - CONTRACTOR SHALL PLACE ALL REBAR TO MISS ANCHOR BOLTS.
 - ALL REINFORCEMENT SHALL BE HELD SECURELY IN PLACE WITH STANDARD ACCESSORIES DURING THE PLACEMENT OF CONCRETE.
 - MINIMUM BOTTOM CONCRETE COVER SHALL BE 3" MINIMUM AND TOP COVER CONCRETE SHALL BE 2" MINIMUM.
 - ALL ABOVE GRADE FOUNDATION SURFACES SHALL BE STEEL TROWEL FINISHED, UNLESS OTHERWISE NOTED.
 - TOP OF CONCRETE FOR ALL NEW 138kV FOUNDATIONS SHALL MATCH EXISTING 138kV TOP OF CONCRETE UNLESS OTHERWISE NOTED.
 - CONCRETE MINIMUM 28-DAY COMPRESSIVE STRENGTH SHALL BE 5000 PSI FOR DRILLED SHAFTS AND 4500 PSI FOR SPREAD FOOTINGS.
 - ALL ABOVE GROUND FOUNDATIONS SHALL HAVE 3/4 INCH CHAMFER, UNLESS OTHERWISE SPECIFIED.

- REFERENCE DRAWINGS:**
- NP172FP1 FOUNDATION PLAN
 - NP172CP1 CONDUIT PLAN
 - NP172GP1 GROUNDING PLAN

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U.C. NO.: 76921

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**NORTHSIDE
FOUNDATION DETAILS**

230/138kV GENERATING STATION SWITCHYARD

SCALE: 1/2" = 1'-0"

SUBSTATION & TRANSMISSION ENGINEERING

PROJ #: -

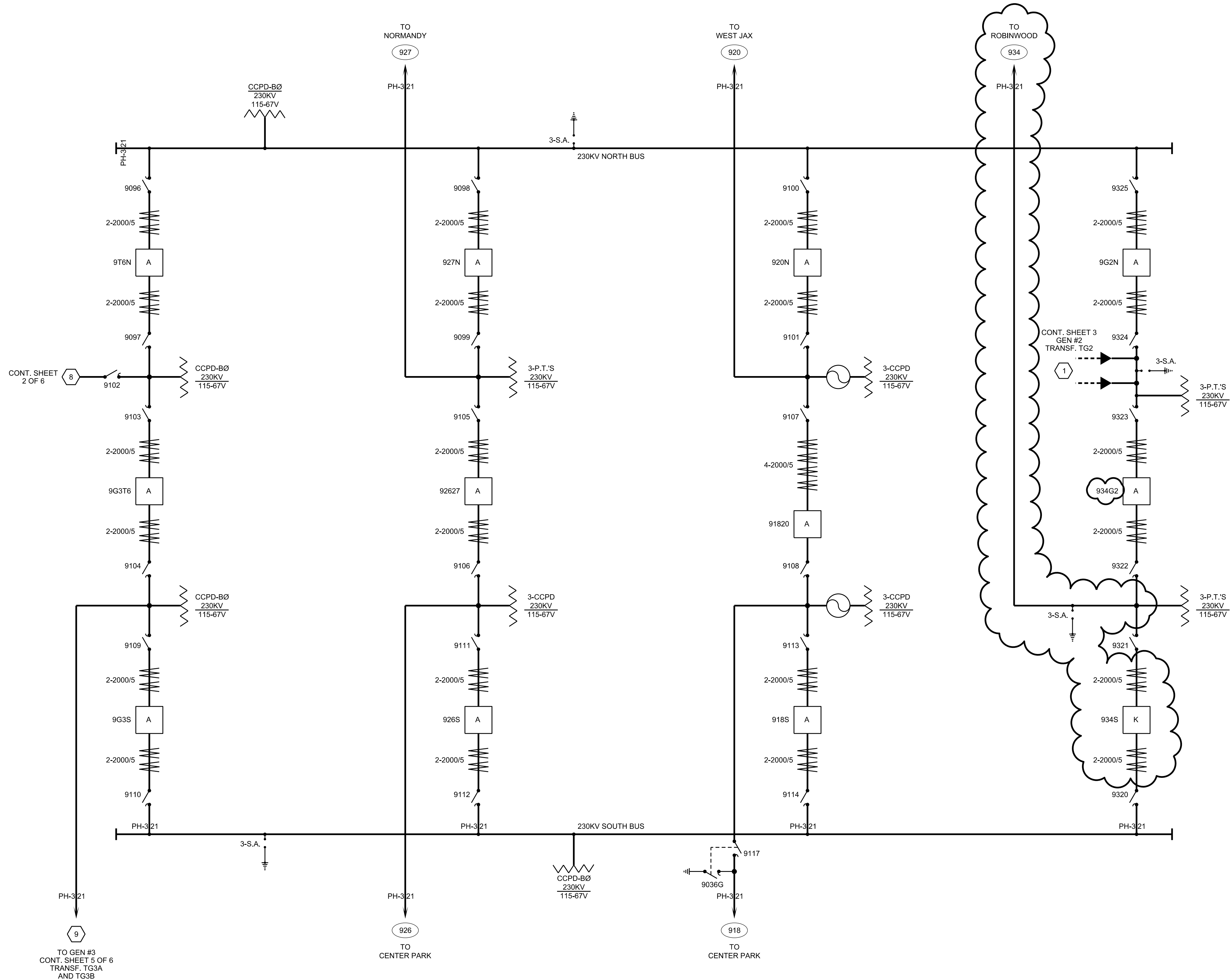
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DRAWING #: NP172FD1

DRAWING SET NP-230-17


SHEET#: 4 OF 13

JEANLOUJACK30 (06/15) NP172SL1.dgn 2017-6-29 - 17:49



NOTES:
1. THIS ONE LINE DIAGRAM REPRESENTS THE FINAL SWITCHYARD CONFIGURATION.

REFERENCE DRAWINGS:
1. NP172EP1 ELECTRICAL PLAN
2. NP172E91 ELECTRICAL SECTIONS



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A	06-02-17	-	ISSUED FOR 30% REVIEW	TLB	REM	DATE -
B	07-03-17	-	ISSUED FOR 90% REVIEW	TLB	DD	BY TLB
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						DRAFTING
						DATE -
						BY TLB
						REVIEW -

NORTHSIDE
ONE LINE DIAGRAM

230/138kV GENERATING STATION SWITCHYARD


SCALE: NONE

SUBSTATION & TRANSMISSION ENGINEERING

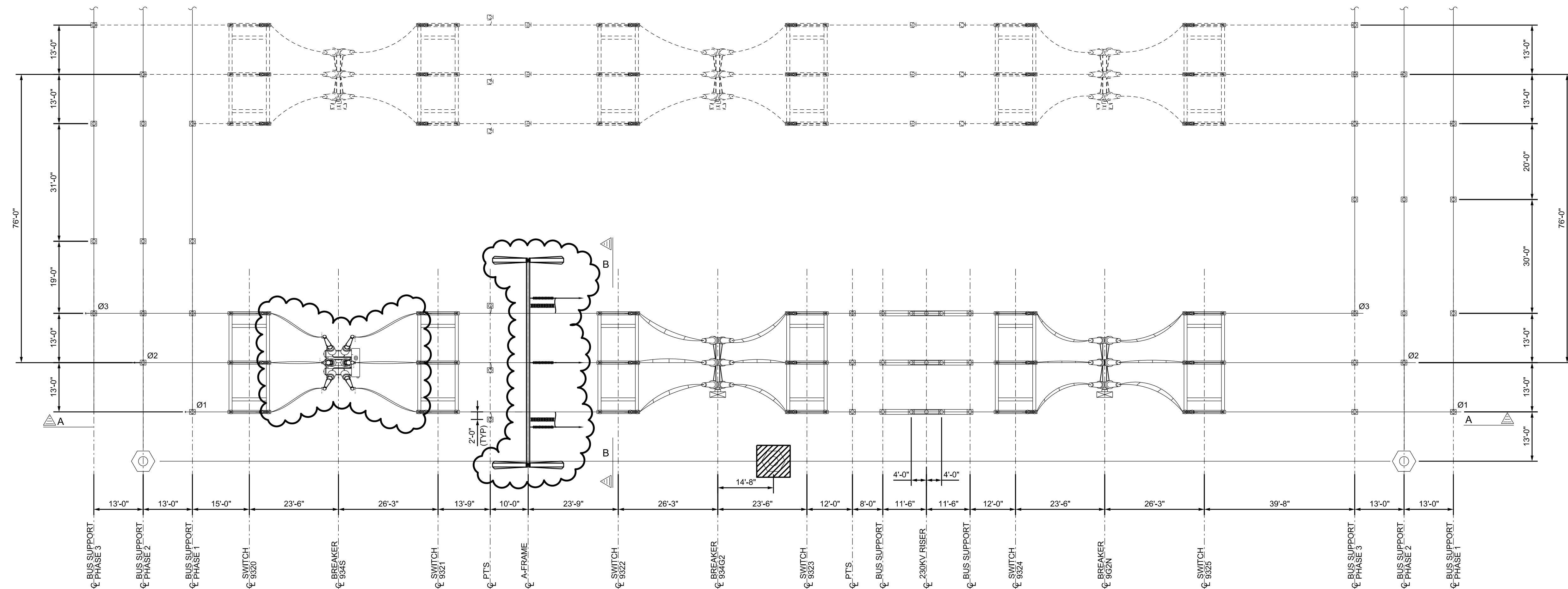
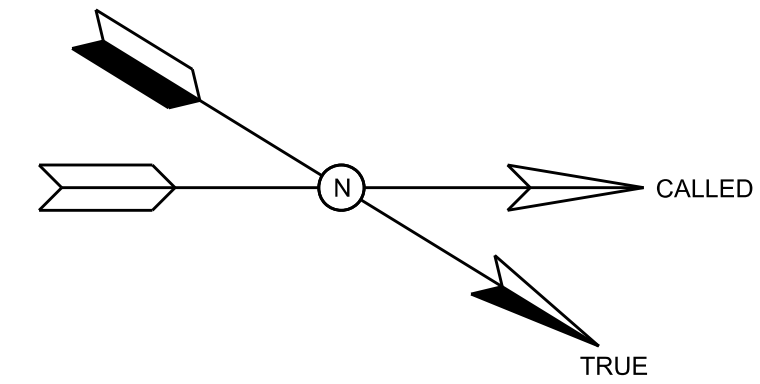
DRAWING #:
NP172SL1

DRAWING SET
NP-230-17

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5 OF 13

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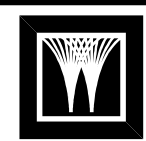


ELECTRICAL LAYOUT
PLAN VIEW

1/16" = 1'-0"

REFERENCE DRAWINGS:
1. NP172SL1 ONE LINE DIAGRAM
2. NP172E91 ELECTRICAL SECTIONS

SUPERSEDES DWG NP012EP1



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						REVIEW -
						DRAFTING
						DATE -
						BY TLB
						REVIEW -

NORTHSIDE ELECTRICAL PLAN

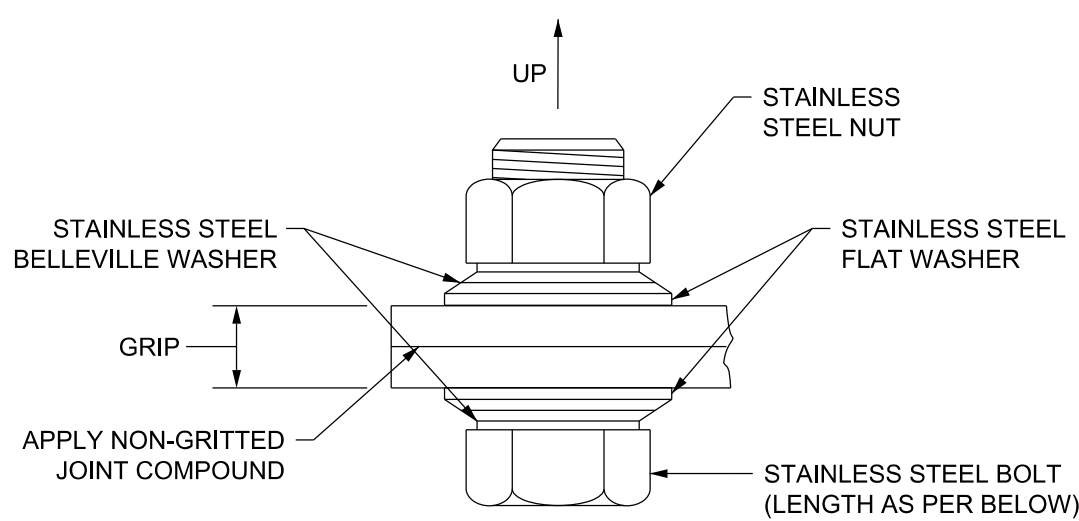
230/138kV GENERATING STATION SWITCHYARD

SCALE:
1" = 16' - 0"

SUBSTATION & TRANSMISSION ENGINEERING



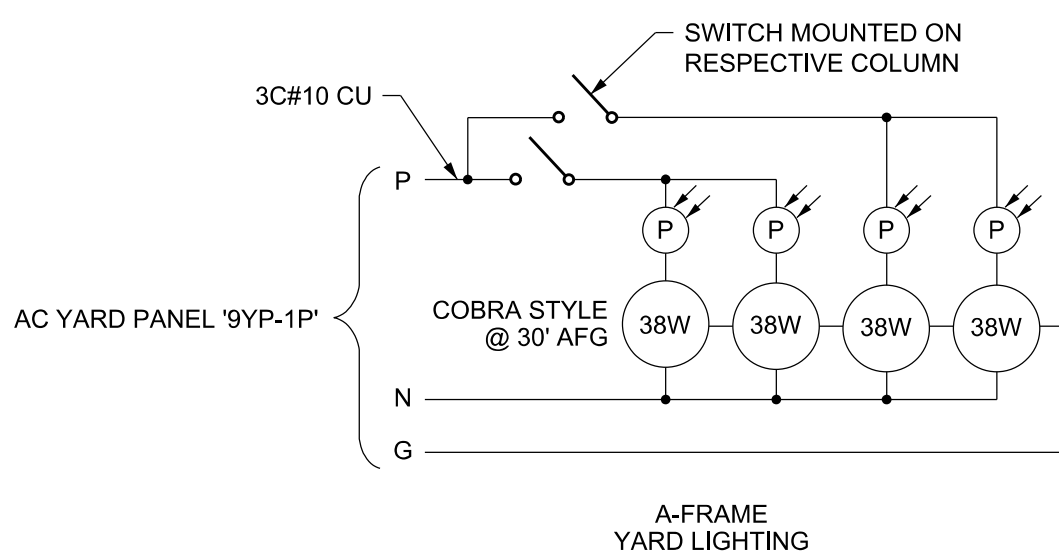
DRAWING #:
NP172EP1
DRAWING SET
NP-230-17
SHEET#:
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UP TO GRIP	BOLT LENGTH
1/2"	1.5"
1"	2"
1.5"	2.5"
2"	3"
2.5"	3.5"
3"	4"

NOTE: GRIP OF FW/FW/BW/BW/NUT IS APPROXIMATELY 1/16". AS SUCH, BOLT LENGTH SHALL BE AT LEAST 1" BEYOND REQUIRED GRIP LENGTH.

1 ELECTRICAL CONNECTION
TYPICAL NOT TO SCALE



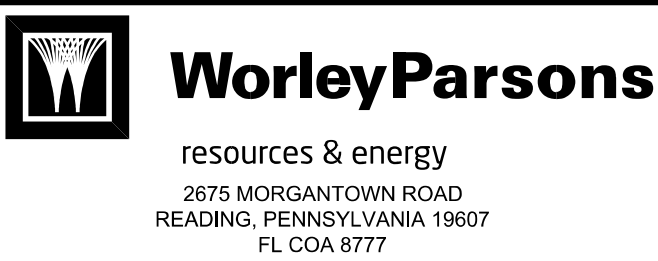
YARD LIGHT LEGEND

- PHOTOCELL MOUNTED ONTO LUMINAIRE (FURNISHED BY JEA)
- COBRA-STYLE LUMINAIRE WITH 38W LED LIGHT (FURNISHED BY JEA)

2 A-FRAME LIGHTING WIRING DIAGRAM
TYPICAL

- NOTES:
1. CONNECTION DETAILS FOR THE MAIN AC AND DC DISTRIBUTION PANELS CAN BE FOUND ON OR REFERENCED WITHIN DRAWING LV1.

- REFERENCE DRAWINGS:
1. NP172E91 ELECTRICAL SECTIONS
2. NP172CP1 CONDUIT PLAN
3. NP172LV1 LOW VOLTAGE AC & DC DIAGRAMS



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STATE: FL
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						DATE - BY JBA REVIEW -

NORTHSIDE
ELECTRICAL DETAILS



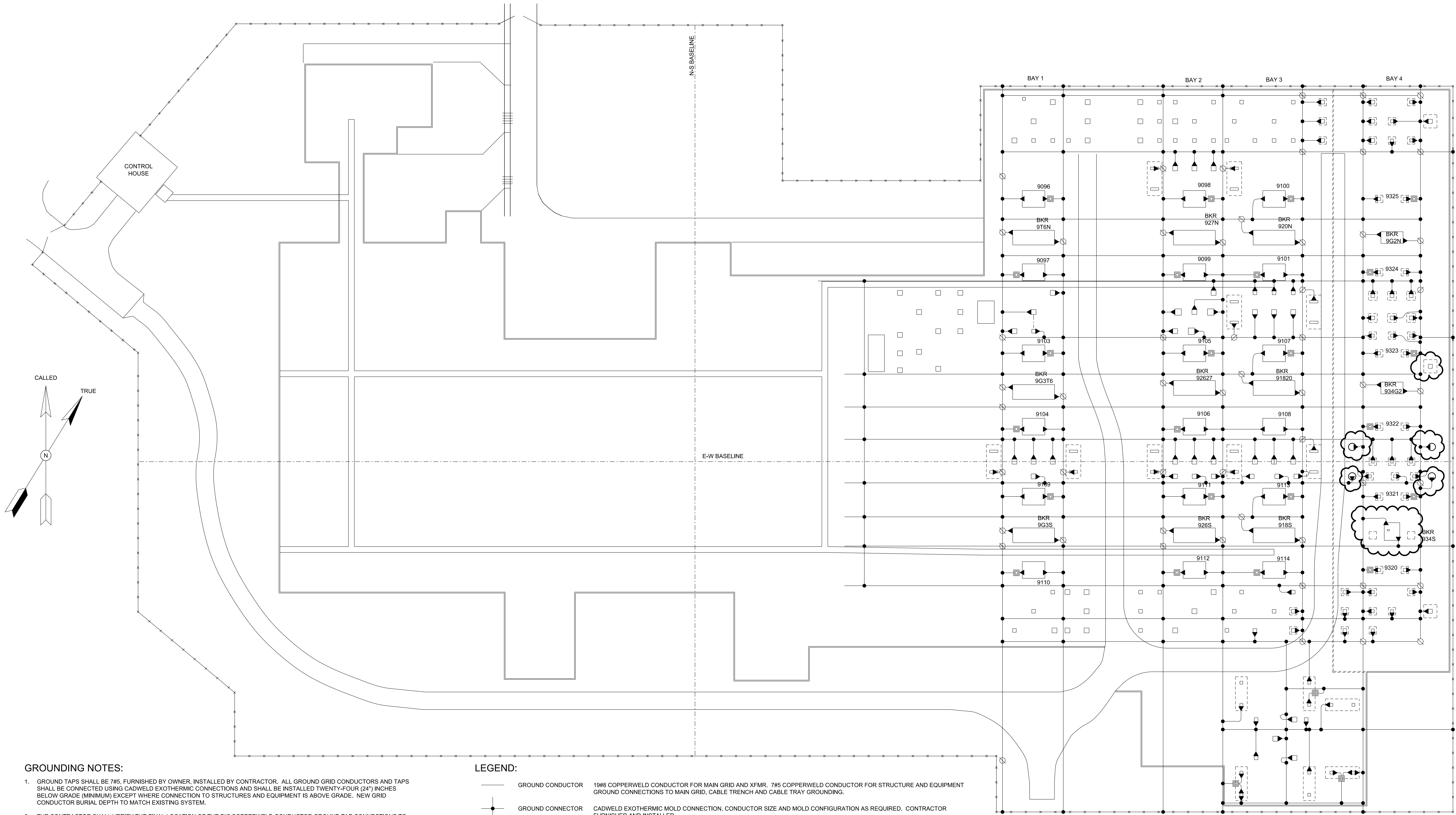
230/138kV GENERATING STATION SWITCHYARD

SUBSTATION & TRANSMISSION ENGINEERING

DRAWING #:
NP172ED1

DRAWING SET
NP-230-17

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GROUNDING NOTES:

1. GROUND TAPS SHALL BE 7#5, FURNISHED BY OWNER, INSTALLED BY CONTRACTOR. ALL GROUND GRID CONDUCTORS AND TAPS SHALL BE CONNECTED USING CADWELD EXOTHERMIC CONNECTIONS AND SHALL BE INSTALLED TWENTY-FOUR (24") INCHES BELOW GRADE (MINIMUM) EXCEPT WHERE CONNECTION TO STRUCTURES AND EQUIPMENT IS ABOVE GRADE. NEW GRID CONDUCTOR BURIAL DEPTH TO MATCH EXISTING SYSTEM.
2. THE CONTRACTOR SHALL VERIFY THE FINAL LOCATION OF THE 7#5 COPPERWELD CONDUCTOR GROUND TAP CONNECTIONS TO THE STRUCTURES AND EQUIPMENT USING THE MANUFACTURER'S SHOP DRAWINGS, THE LOCATIONS OF GROUND TAPS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY.
3. THE CONTRACTOR SHALL REFER TO THE GROUNDING DETAIL DRAWING FOR OTHER GROUND GRID CONNECTIONS THAT MAY BE REQUIRED BUT NOT SHOWN ON THIS DRAWING. LOW VOLTAGE EQUIPMENT AND CIRCUITS SHALL HAVE EQUIPMENT GROUND CONDUCTOR INSTALLED AS PER NEC REQUIREMENTS.
4. ALL ABOVE GRADE CONNECTIONS OF GROUND CONDUCTOR TO STRUCTURES AND EQUIPMENT, SUCH AS BREAKERS, LIGHTNING ARRESTORS, ETC., SHALL BE CONNECTED USING OWNER FURNISHED MECHANICAL CONNECTORS. ALL EQUIPMENT AND STRUCTURES ERECTED IN THE SUBSTATION SHALL BE GROUNDED TO THE MAIN GRID WITHIN THE SAME WORKING DAY.

LEGEND:

- GROUND CONDUCTOR
- 19#8 COPPERWELD CONDUCTOR FOR MAIN GRID AND XFMR. 7#5 COPPERWELD CONDUCTOR FOR STRUCTURE AND EQUIPMENT GROUND CONNECTIONS TO MAIN GRID, CABLE TRENCH AND CABLE TRAY GROUNDING.
- GROUND CONNECTOR
- CADWELD EXOTHERMIC MOLD CONNECTION, CONDUCTOR SIZE AND MOLD CONFIGURATION AS REQUIRED. CONTRACTOR FURNISHED AND INSTALLED.
- GROUND PLATFORM
- SWITCH OPERATOR.
- ⊗

GROUND ROD
- COPPERWELD RODS 5/8" DIAMETER, 8' IN LENGTH, COUPLED AND DRIVEN TO A DEPTH OF FIFTY (50') FEET.
- ◀

GROUND STINGER
- 7#5 COPPERWELD STINGER TO STRUCTURE AND/OR EQUIPMENT.

REFERENCE DRAWINGS:

1. NP172EP1 ELECTRICAL PLAN
2. NP172FP1 FOUNDATION PLAN
3. NP172GD1 GROUNDING DETAILS



REVISION: 03/15/2015, NP172GP-1, 2015-2017-1726

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0	03-14-01		INITIAL ISSUE PROJECT 61503	B&V	GRE	DATE -
1	05-18-01		ISSUE FOR CONSTRUCTION (PROJECT 61503)	B&V		BY SJJ
2	09-29-05		AS-BUILT PER REDLINES (FROM C&C POWERLINE 5-17-02)	MAP		REVIEW -
A	07-03-17		ISSUED FOR 90% REVIEW	TLB	DD	DRAFTING
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						BY GRW
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230/138kV GENERATING STATION SWITCHYARD

NORTHIDE
GROUNDING PLAN

1" = 30'

SUBSTATION & TRANSMISSION ENGINEERING

DRAWING #:
NP172GP1

DRAWING SET
NP-230-17

SHEET#:
9 OF 13

PROJ #:
-

BUILDING COMMUNITY

Diagram illustrating the connection of a Ground Control Cabinet to a Ground Grid:

- GROUND CONTROL CABINET WITH LISTED CONNECTORS**: The cabinet is shown at the top right, connected to the conductors.
- #2 AWG CU**: Two conductors are shown running from the cabinet down to the ground grid.
- TO GRID IN TWO (2) PLACES (DIAGONAL)**: The conductors are connected to the ground grid at two diagonal points.
- 6**: Two circular markers labeled '6' indicate the connection points on the ground grid.
- 7#5 COPPERWELD TO GROUND GRID**: The ground grid is shown at the bottom, with two rods labeled '7#5 COPPERWELD TO GROUND GRID' connecting it to the conductors.

[illegible]

Diagram illustrating the connection of a cable tray to an equipment enclosure. The cable tray is shown with three cables. A label 'P1' is circled and points to the connection point. A label 'SEE NOTE 1' points to the connection point. A label 'EQUIPMENT ENCLOSURE' points to the enclosure. A label 'CONDUIT' points to the conduit. A label 'PERWELDED TO' points to the connection point.

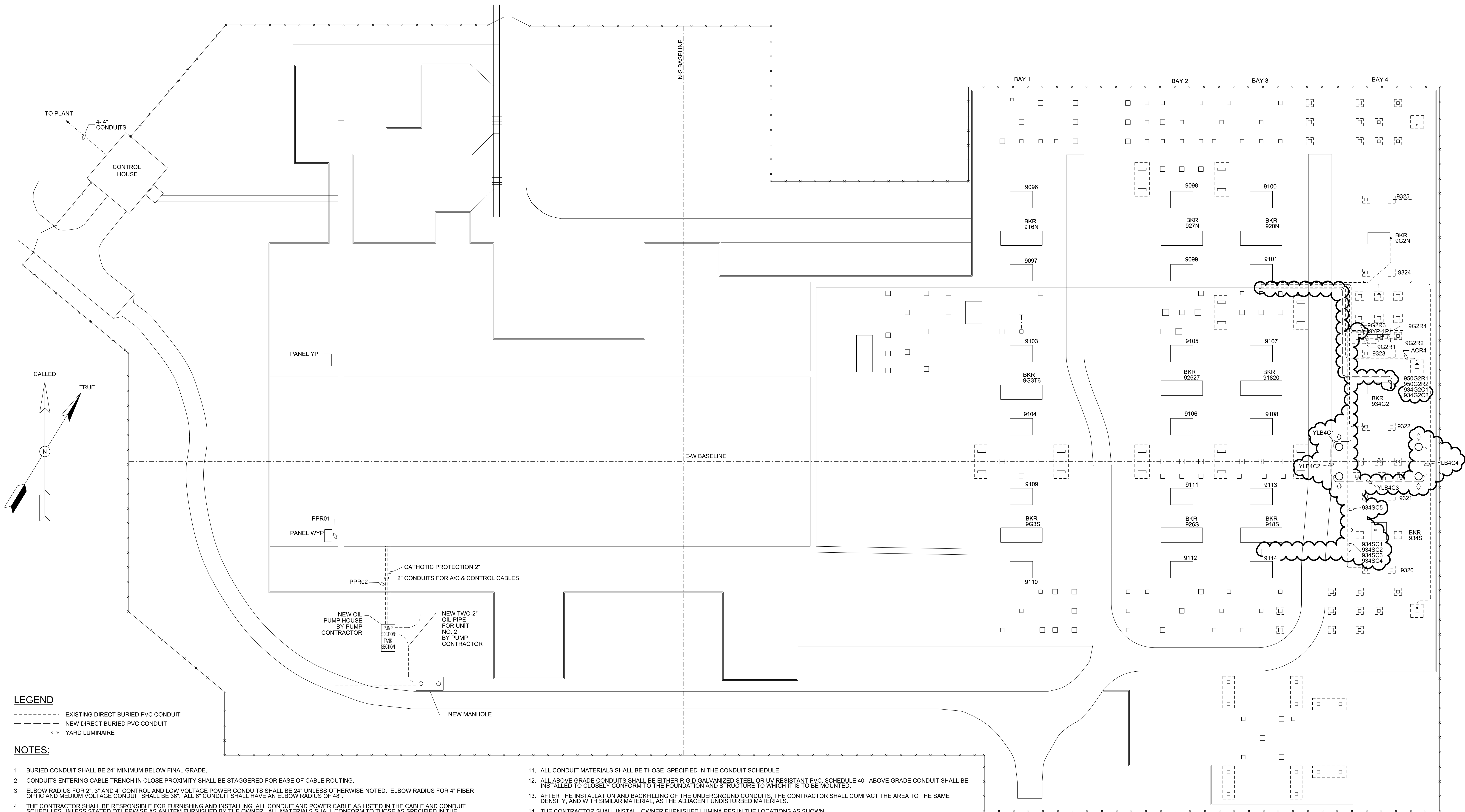
SEE THIS DWG, DETAIL 2
FOR STRUCTURE BASE —
GROUNDING DETAILS

REFERENCE DRAWINGS

1. NP172GP1 GROUNDING PLAN

IEA ARCH-D 24X36 (06/15) NP172GD1 don 2017-8-29 - 18:12

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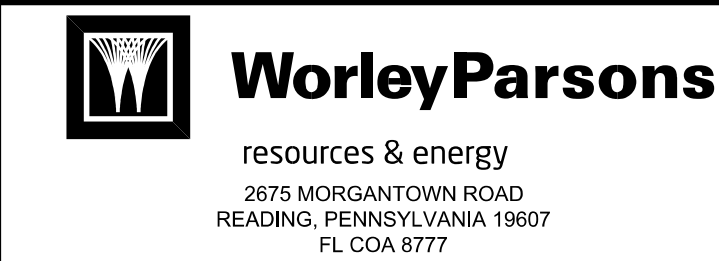
- LEGEND**
- EXISTING DIRECT BURIED PVC CONDUIT
 - - - - - NEW DIRECT BURIED PVC CONDUIT
 - ◇ YARD LUMINAIRE

- NOTES:**
- BURIED CONDUIT SHALL BE 24" MINIMUM BELOW FINAL GRADE.
 - CONDUITS ENTERING CABLE TRENCH IN CLOSE PROXIMITY SHALL BE STAGGERED FOR EASE OF CABLE ROUTING.
 - ELBOW RADIUS FOR 2", 3" AND 4" CONTROL AND LOW VOLTAGE POWER CONDUITS SHALL BE 24" UNLESS OTHERWISE NOTED. ELBOW RADIUS FOR 4" FIBER OPTIC AND MEDIUM VOLTAGE CONDUIT SHALL BE 36". ALL 6" CONDUIT SHALL HAVE AN ELBOW RADIUS OF 48".
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL CONDUIT AND POWER CABLE AS LISTED IN THE CABLE AND CONDUIT SCHEDULES UNLESS STATED OTHERWISE AS AN ITEM FURNISHED BY THE OWNER. ALL MATERIALS SHALL CONFORM TO THOSE AS SPECIFIED IN THE SCHEDULES.
 - CONTROL CABLE PULLING AND TERMINATION BY OTHERS.
 - THE CONDUIT LOCATIONS SHOWN ON THIS DRAWING AND IN THE REFERENCED DETAILS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE FINAL CONDUIT RISER LOCATIONS USING THE EQUIPMENT MANUFACTURER'S FINAL SHOP DRAWINGS.
 - THE CONDUIT ROUTING SHOWN ON THIS DRAWING WAS DESIGNED TO MINIMIZE TRENCHING WHILE REDUCING LENGTHS OF CABLE AND CONDUIT. HOWEVER, WITH THE APPROVAL OF THE PROJECT REPRESENTATIVE, THE CONTRACTOR MAY CHOOSE TO FIND OTHER ROUTINGS FOR CONDUITS, PROVIDED THAT SUCH ROUTINGS DO NOT CAUSE A SUBSTANTIAL COST INCREASE FOR ADDITIONAL CABLE OR CONDUIT. SUCH CHANGES, IF ANY, WILL BE NOTED ON THE AS-BUILT DRAWINGS.
 - ALL CABLES SHALL BE CLEARLY LABELED AT BOTH ENDS AND AT ALL ENTRANCE AND EXIT POINTS TO CABLE TRENCHES, PULL BOXES OR JUNCTION BOXES. REFER TO SPECIFICATIONS SECTION IX LABELING DETAILS.
 - ALL CONDUIT ENDS SHALL BE SEALED WITH AN EXPANDING WATERPROOF FOAM SPRAY TO KEEP THE CONDUIT FREE FROM DIRT AND OTHER FOREIGN MATERIAL.
 - A PULL CORD SHALL BE PULLED IN ALL SPARE CONDUITS. ALL SPARE OR FUTURE CONDUITS 4" OR LARGER, OR THOSE CAPPED BELOW GRADE, SHALL BE SUPPLIED WITH CONDUIT PLUGS.

- ALL CONDUIT MATERIALS SHALL BE THOSE SPECIFIED IN THE CONDUIT SCHEDULE.
- ALL ABOVE GRADE CONDUITS SHALL BE EITHER RIGID GALVANIZED STEEL OR UV RESISTANT PVC, SCHEDULE 40. ABOVE GRADE CONDUIT SHALL BE INSTALLED TO CLOSELY CONFORM TO THE FOUNDATION AND STRUCTURE TO WHICH IT IS TO BE MOUNTED.
- AFTER THE INSTALLATION AND BACKFILLING OF THE UNDERGROUND CONDUITS, THE CONTRACTOR SHALL COMPACT THE AREA TO THE SAME DENSITY, AND WITH SIMILAR MATERIAL, AS THE ADJACENT UNDISTURBED MATERIALS.
- THE CONTRACTOR SHALL INSTALL OWNER FURNISHED LUMINAIRES IN THE LOCATIONS AS SHOWN.
- FOR THOSE STRUCTURES WHICH DO NOT INCLUDE MOUNTING BRACKETS FOR THE REMAINING OUTLETS, RELAY BOXES OR JUNCTION BOXES, THE CONTRACTOR SHALL SUPPLY ALL STAINLESS STEEL HARDWARE NECESSARY FOR FASTENING THE OUTLETS AND BOXES TO THE STRUCTURES, VIA A NON-PENETRATING FASTENING TECHNIQUE SUCH AS BACK TO BACK UNISTRUT. THE FASTENING SYSTEM SHALL NOT PENETRATE THE GALVANIZATION OF THE STRUCTURE.



- REFERENCE DRAWINGS:**
- NP172EP1 ELECTRICAL PLAN
 - NP172CD1 CONDUIT DETAILS



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1	05-18-01		ISSUE FOR CONSTRUCTION (PROJECT 61503)	B&V		BY SJJ
2	08-08-01		ADD PUMP PLANT	GRE		REVIEW -
A	07-03-17		ISSUED FOR 90% REVIEW	TLB	DD	DRAFTING
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						REVIEW -

NORTHSIDE CONDUIT PLAN

230/138kV GENERATING STATION SWITCHYARD

SCALE:
1" = 30'

SUBSTATION & TRANSMISSION ENGINEERING

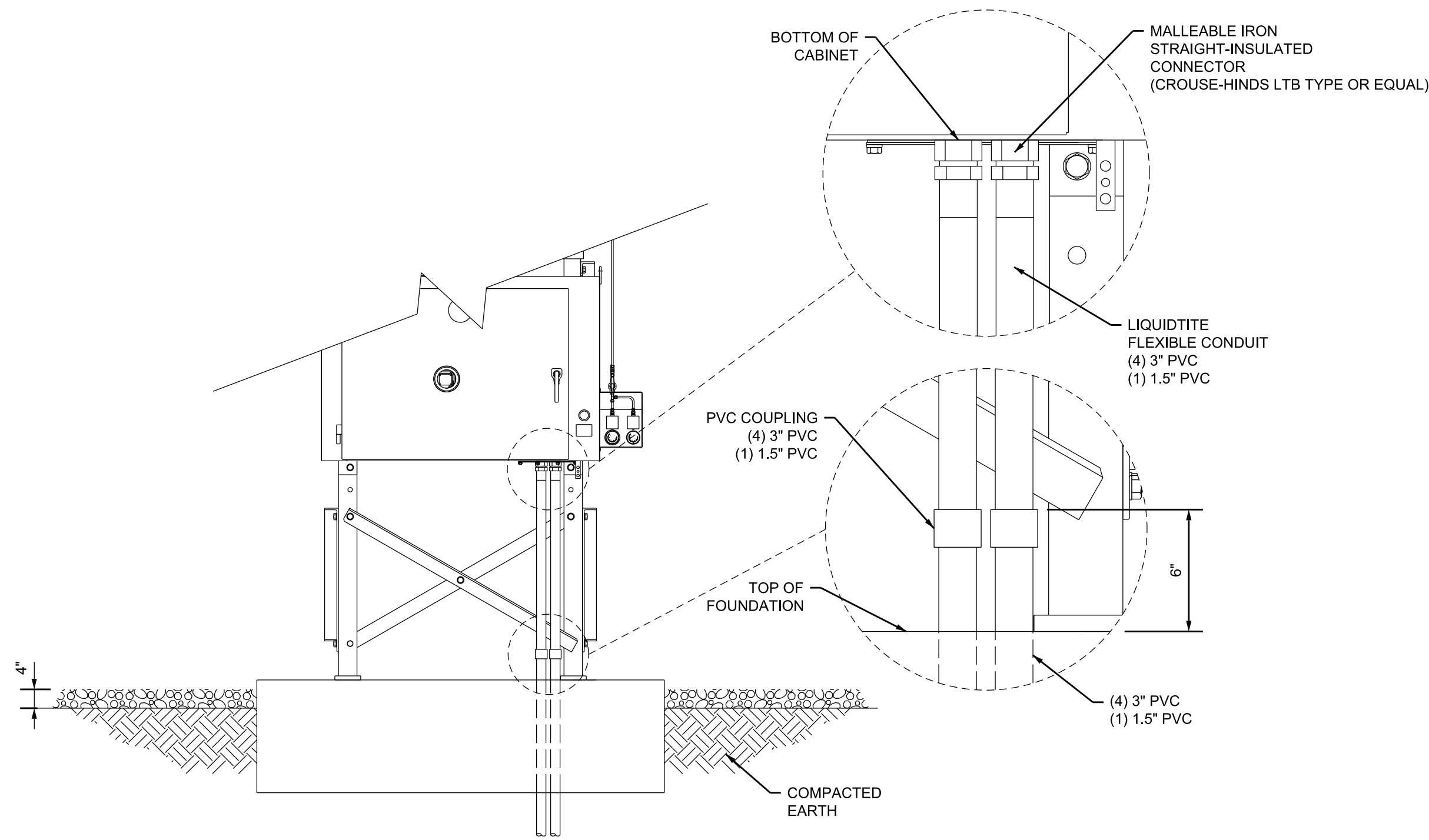


PROJ #:

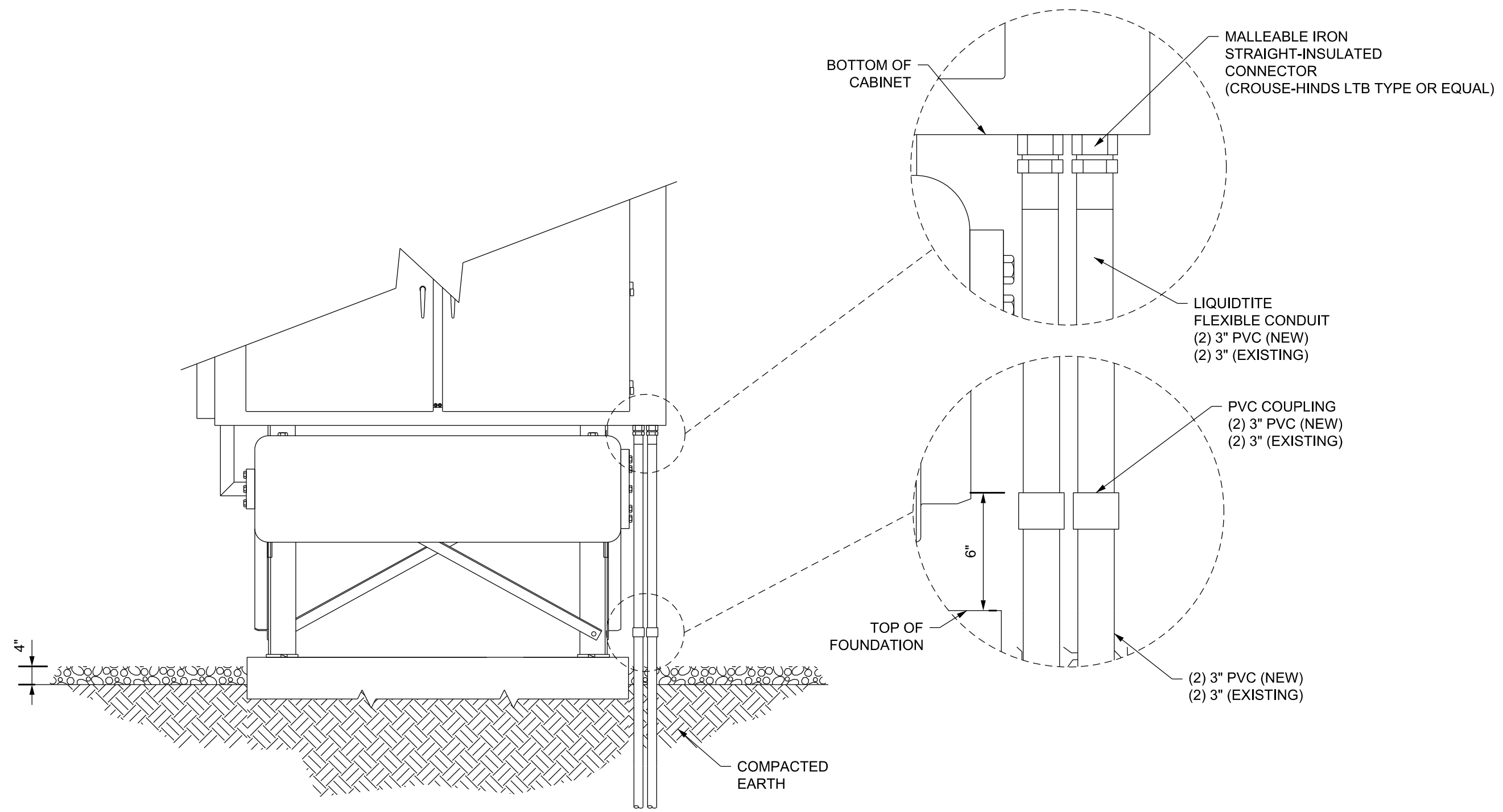
DRAWING #:
NP172CP1

DRAWING SET
NP-230-17

SHEET#:
11 OF 13



1 CONDUIT STUB UP AT 230KV BREAKER 934S
TYPICAL 1 PLC
NOT TO SCALE



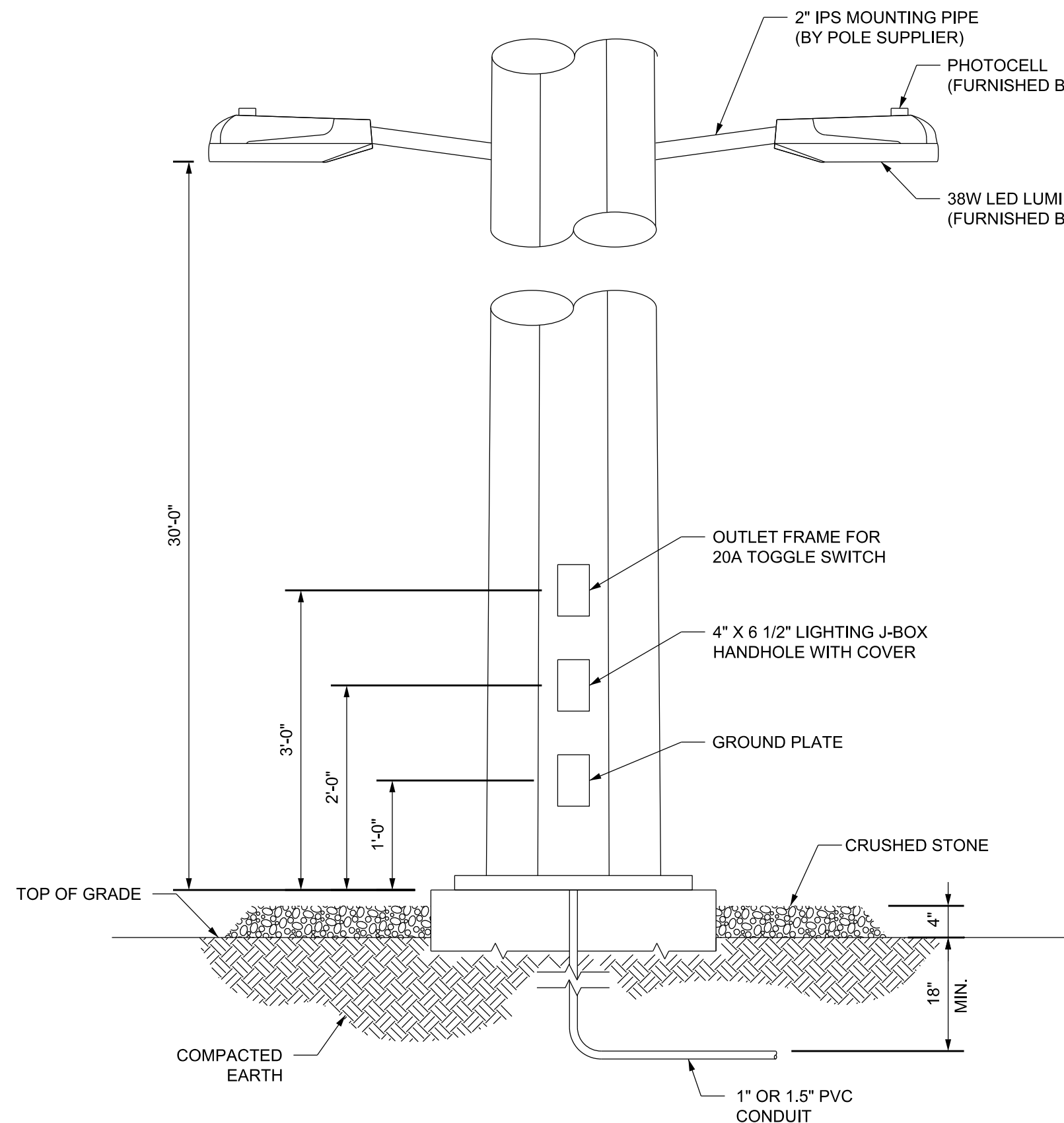
2 CONDUIT STUB UP AT 230KV BREAKER 934G2
TYPICAL 1 PLC
NOT TO SCALE

NOTES:

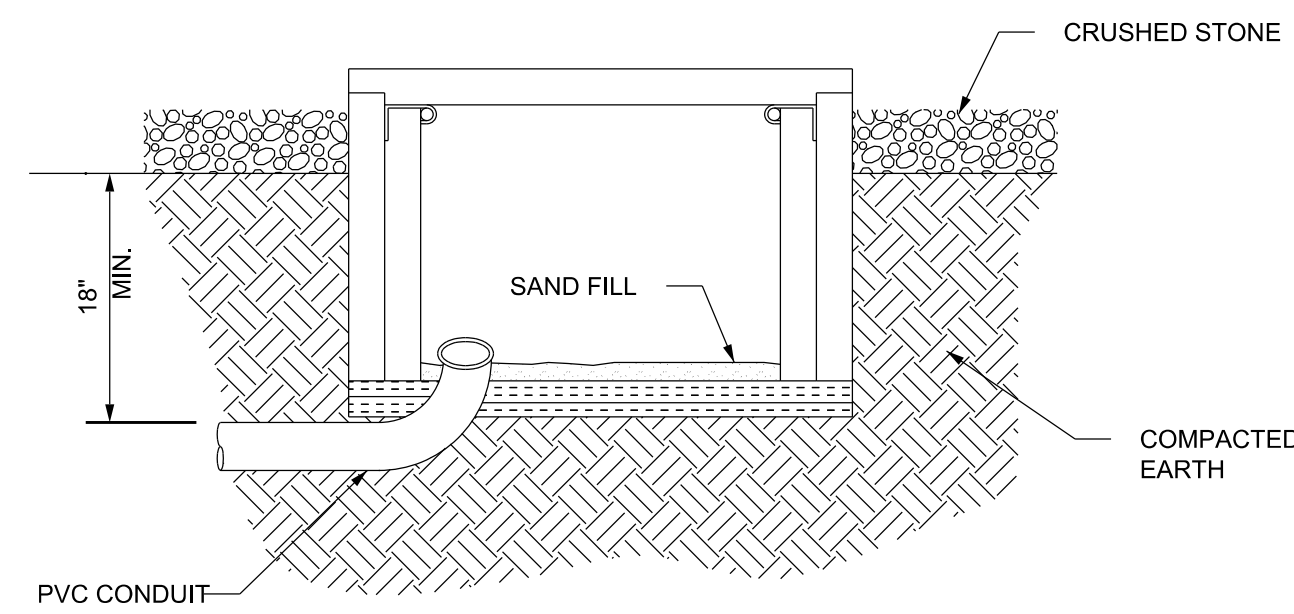
1. THE CONTRACTOR SHALL USE APPROPRIATE CONDUIT CLAMPS TO ATTACH THE CONDUIT TO THE STEEL STRUCTURES AS REQUIRED. THIS SHALL INCLUDE A CLAMP AT EACH BEND WHERE THE CONDUIT RUN DEPARTS FROM THE STRUCTURE AND A MAXIMUM SPACING BETWEEN CLAMPS OF 4'-0".
2. FLEXIBLE PVC CONDUIT LENGTH SHALL NOT BE MORE THAN 6'-0".
3. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE EQUIPMENT AND CONDUIT AS SHOWN. IN SOME CASES, IT MAY BE NECESSARY TO PROVIDE A SEPARATE "CONDUIT ENTRY CABINET" INTO THE BOTTOM OF THE PANELS; SHOULD THIS PROVE NECESSARY, THE CONTRACTOR SHALL PROVIDE THIS AT NO ADDITIONAL CHARGE.
4. THE CONTRACTOR SHALL CONNECT AC POWER AND LIGHTING TO THE CIRCUITS AS SHOWN ON DRAWINGS LV1 AND ED1.

REFERENCE DRAWINGS:

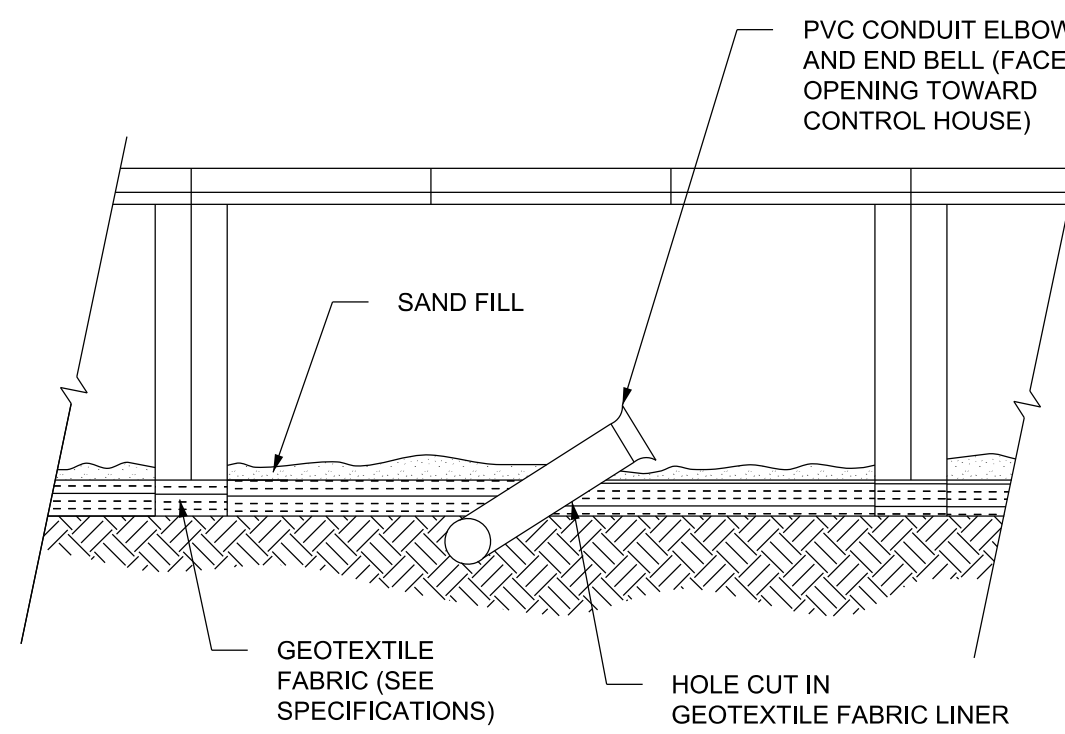
1. NP172CP1 CONDUIT PLAN



3 A-FRAME YARD LIGHTS
NOT TO SCALE

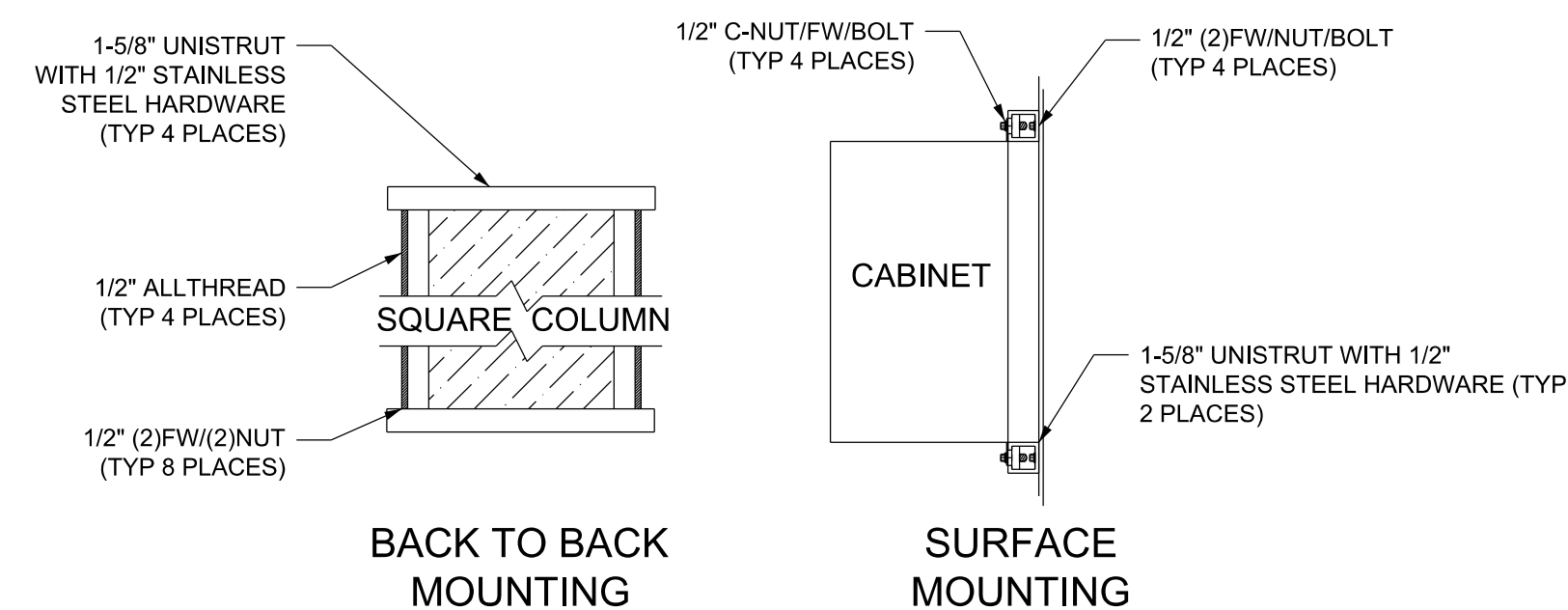


END ELEVATION

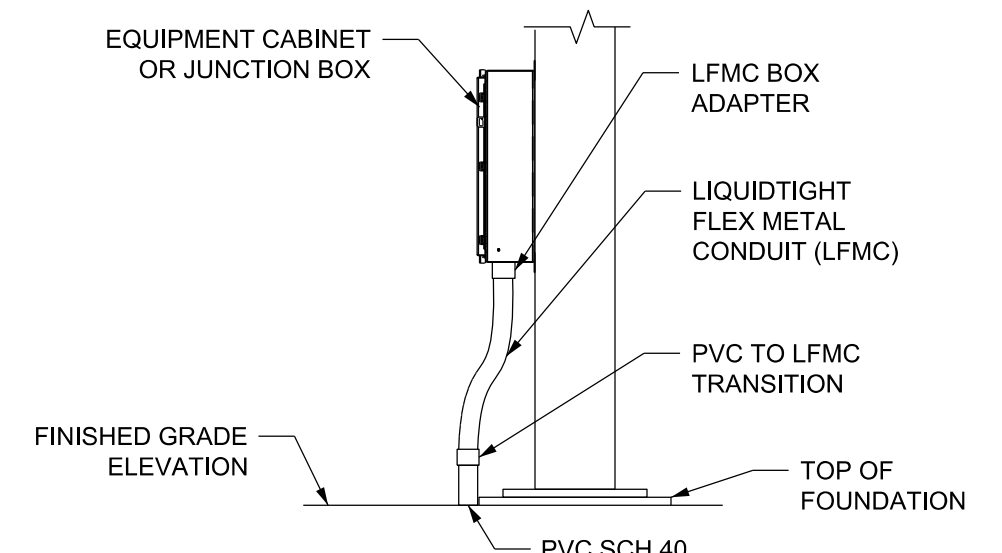


SIDE ELEVATION

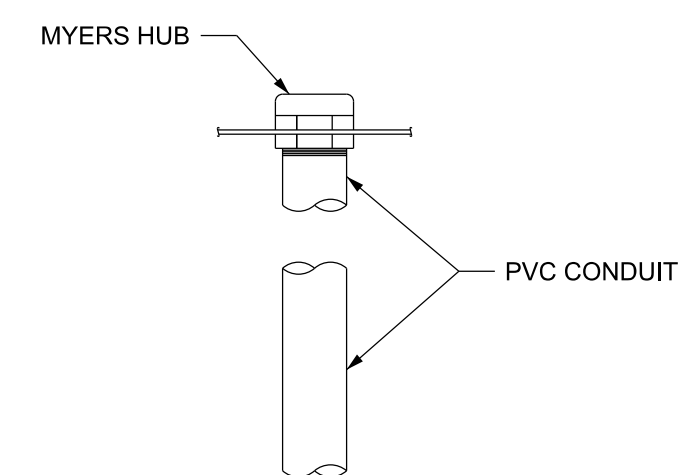
4 CONDUIT RISER IN CABLE TRENCH
NOT TO SCALE



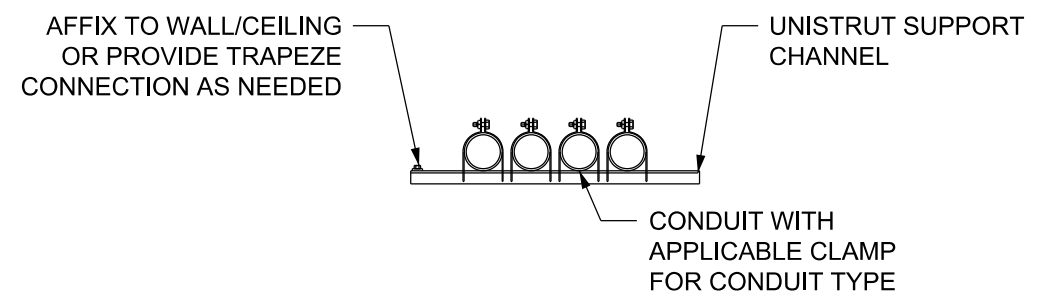
5 UNISTRUT MOUNTING DETAILS
TYPICAL NOT TO SCALE



6 FLEXIBLE CONDUIT RISER DETAIL
TYPICAL NOT TO SCALE



7 CONDUIT FITTINGS
(AS REQUIRED)
NOT TO SCALE



8 CONDUIT SUPPORT DETAIL
TYPICAL NOT TO SCALE



resources & energy
2675 MORGANTOWN ROAD
READING, PENNSYLVANIA 19607
FL COA 8777

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PROFESSIONAL
ENGINEER'S SEAL

LATEST REVISION
ORIGINALLY PREPARED UNDER
THE RESPONSIBLE SUPERVISION OF
PE: ROBERT E MCALISTER
LIC. NO.: 72481
STATE: FL
DATE: -

REV	DATE	PROJ #	REVISION DESCRIPTION	BY	REVIEW	ENGINEERING
A	07-03-17	-	ISSUED FOR 90% REVIEW	TLB	DD	DATE -
						BY TLB
						REVIEW -
						DRAFTING
						DATE -
						BY JBA
						REVIEW -

NORTHSIDE
CONDUIT DETAILS

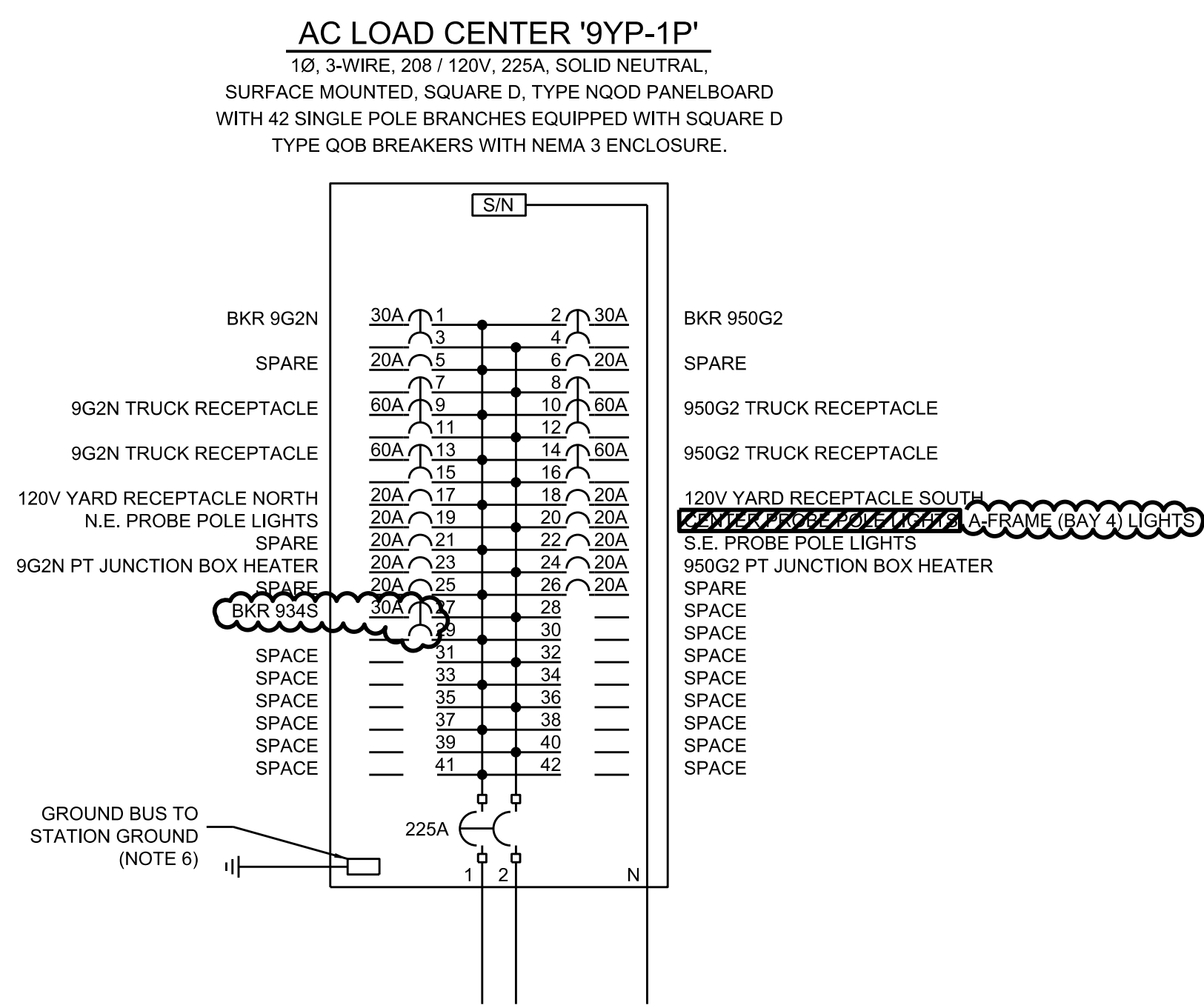
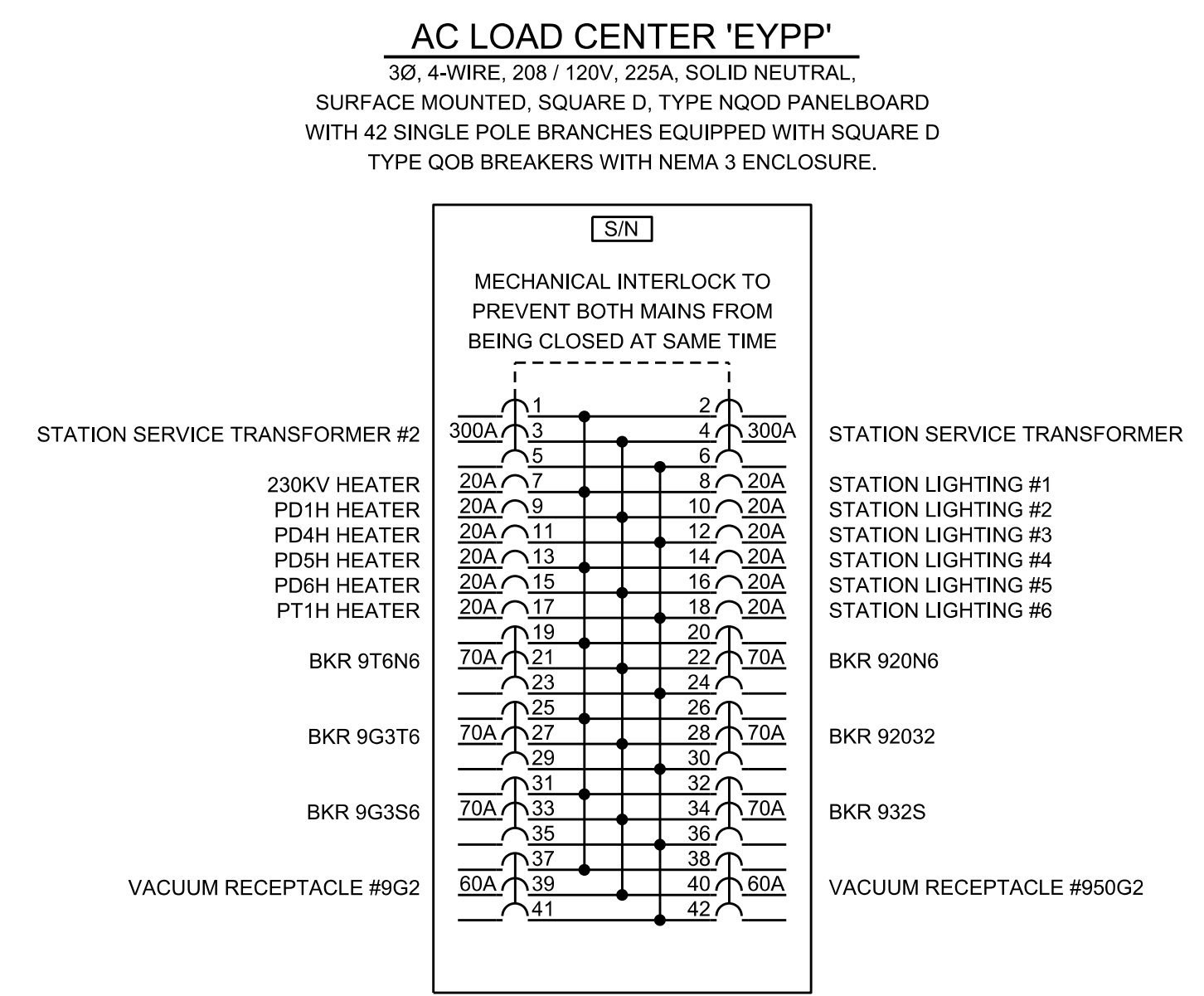
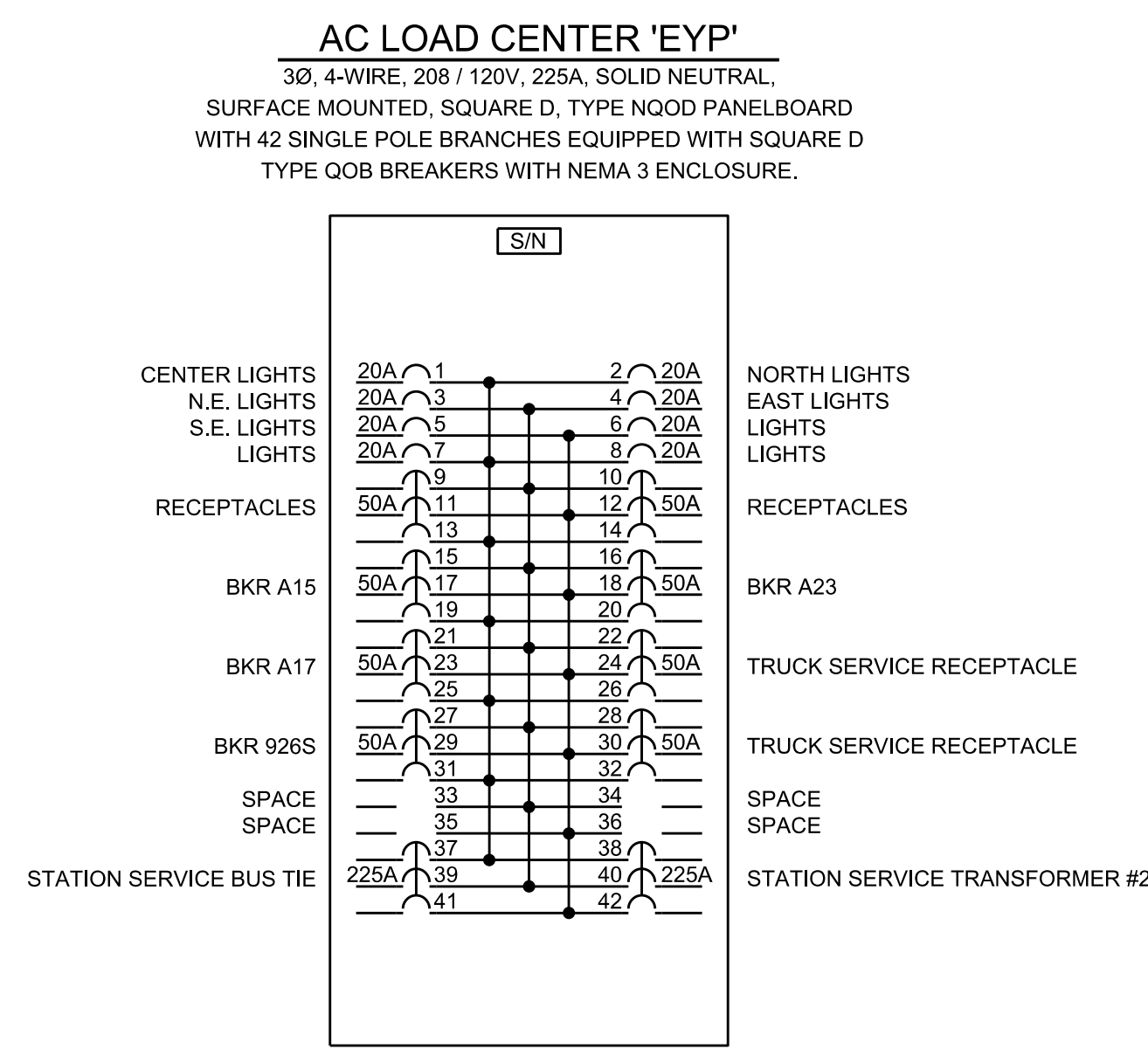
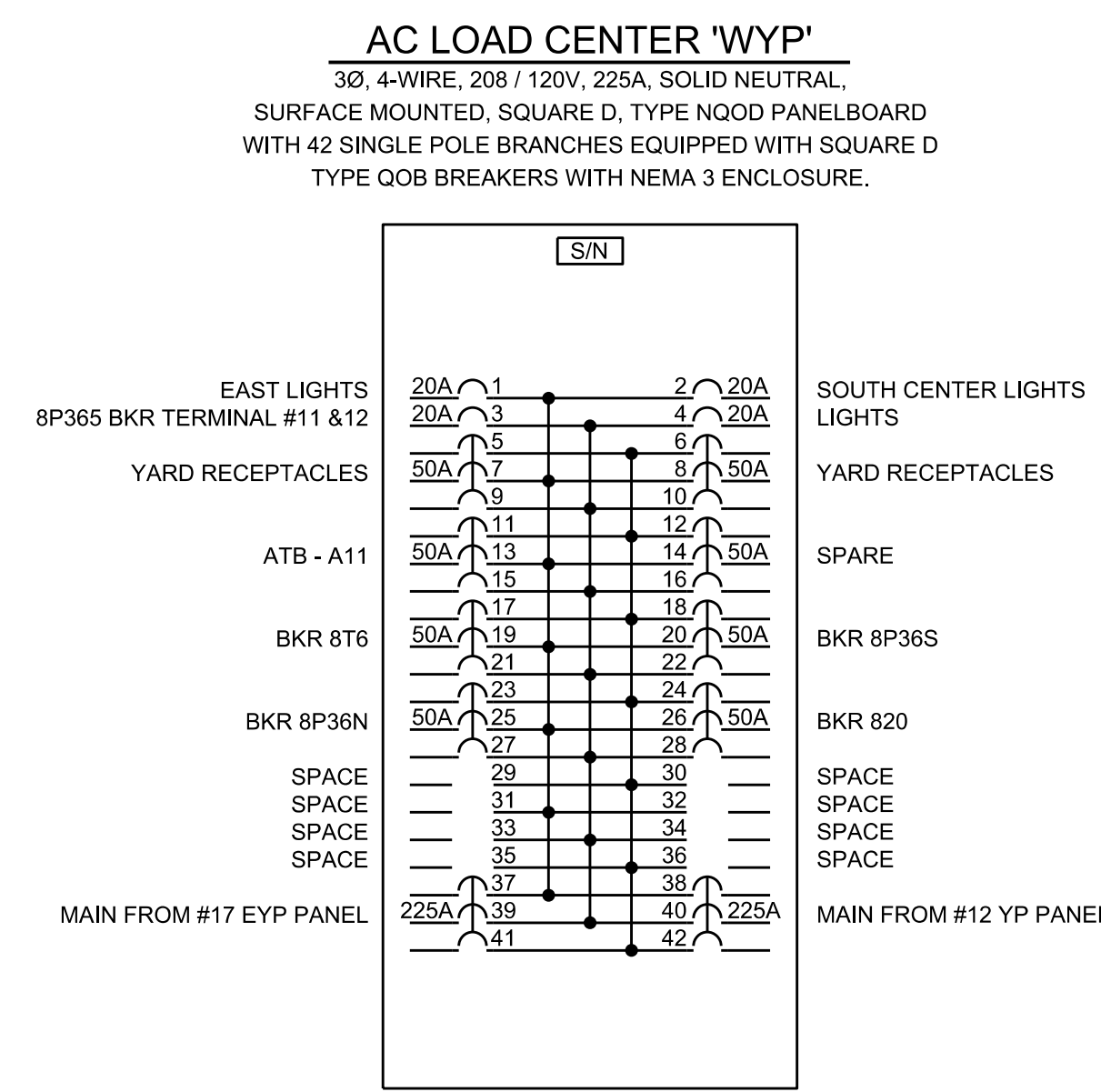
230/138kV GENERATING STATION SWITCHYARD

SUBSTATION & TRANSMISSION ENGINEERING



BUILDING COMMUNITY

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NP172CD1
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NP-230-17
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- NOTES:**
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL PANEL BREAKERS REQUIRED AND AS SPECIFIED. PANEL BREAKERS SHALL BE BOLT-ON TYPE AND LABELED AND RATED IN ACCORDANCE WITH THIS DRAWING.
 - THE CONTRACTOR SHALL LABEL THE BRANCH BREAKERS ACCORDING TO THE INSTRUCTIONS OF THE LABELING SUBSECTION OF SPECIFICATION SECTION IX.
 - ELECTRICAL INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. LUG TEMPERATURE RATINGS SHALL BE 75°C.
 - WIRE TYPE AND MINIMUM SIZE, FOR AC CIRCUITS NOT SHOWN ON THIS SHEET OR DEFINED ON THE CONDUIT & CIRCUIT SCHEDULE SHALL BE AS FOLLOWS, UNLESS SPECIFIED OTHERWISE:
 - 20A BREAKER - STRANDED 12 AWG THWN CU.
 - 30A BREAKER - STRANDED 10 AWG THWN CU.
 - 40A BREAKER - STRANDED 8 AWG THWN CU.
 - 50A & 60A BREAKER - STRANDED 6 AWG THWN CU.
 - FOR UNSPECIFIED 120V CIRCUITS WITH TOTAL LENGTHS GREATER THAN 100 FEET, INCREASE TO NEXT EVEN AWG CONDUCTOR SIZE. WIRE COLORS ARE AS FOLLOWS. FOR 6 AWG AND LARGER, MARK WIRES NO LESS THAN EVERY 40 INCHES:
 - PHASE "A" - BLACK
 - PHASE "B" (OR PHASE 2 OF SINGLE PHASE) - RED
 - PHASE "C" - BLUE
 - NEUTRAL - WHITE
 - GROUND - GREEN
 - SWITCHED OR TRAVELER - YELLOW, ORANGE, BROWN

- REFERENCE DRAWINGS:**
- NP172CP1 CONDUIT PLAN

 resources & energy 2675 MORGANTOWN ROAD READING, PENNSYLVANIA 19607 FL COA 8777	PROFESSIONAL ENGINEER'S SEAL	<table><tr><th>REV</th><th>DATE</th><th>PROJ #</th><th>REVISION DESCRIPTION</th><th>BY</th><th>REVIEW</th><th>ENGINEERING</th></tr><tr><td>A</td><td>07-03-17</td><td>-</td><td>ISSUED FOR 90% REVIEW</td><td>TLB</td><td>DD</td><td>DATE -</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>BY TLB</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>REVIEW -</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>DRAFTING</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>DATE -</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>BY TLB</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>REVIEW -</td></tr></table>	REV	DATE	PROJ #	REVISION DESCRIPTION	BY	REVIEW	ENGINEERING	A	07-03-17	-	ISSUED FOR 90% REVIEW	TLB	DD	DATE -							BY TLB							REVIEW -							DRAFTING							DATE -							BY TLB							REVIEW -	NORTHSIDE LOW VOLTAGE AC & DC DIAGRAMS 230/138kV GENERATING STATION SWITCHYARD SCALE: NONE SUBSTATION & TRANSMISSION ENGINEERING PROJ #: -	DRAWING #: NP172LV1
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JEA\BOLLO, JACOB (6619) NP172LV1.dgn 2017-6-29 - 18:12