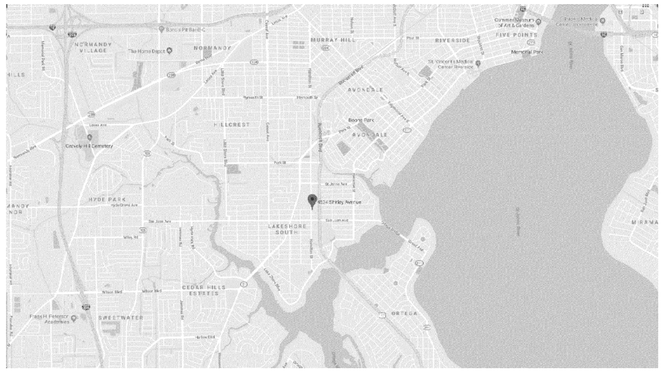


N

VICINITY MAP
N.T.S.

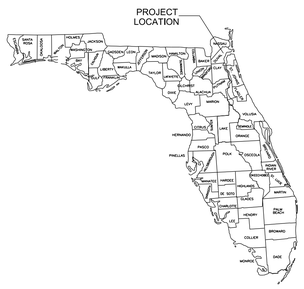
LOCATION: 4534 SHIRLEY AVENUE, JACKSONVILLE, FL 32210

INDEX TO DRAWINGS			
DWG #	DRAWING NAME	TOTAL SHEETS	DRAWING TITLE
01	HA2019-CV	1	COVER SHEET
02	HA2019-FP	1	FOUNDATION PLAN
03	HA2019-EP	1	ELECTRICAL PLAN
04	HA2019-E5	1	26KV ELEVATIONS
05	HA2019-ED	1	ELECTRICAL DETAILS
06	HA2019-CP	1	CONDUIT & GROUNDING PLAN
07	HA2019-CS	1	CONDUIT SCHEDULE
08	HA2019-CT	1	CABLE SCHEDULE
09	HA2019-LV	1	STATION SERVICE & ELECTRICAL PANELS

BID DRAWINGS
FOR THE

HAMILTON STREET SUBSTATION
BREAKER 307, 308, 310, 311 & 312 REPLACEMENTS

BUILDING COMMUNITY



SUBSTATION & TRANSMISSION PROJECTS 20410
PROJECT # 8005239

JEA
BUILDING COMMUNITY
21 W CHURCH ST.
JACKSONVILLE, FLORIDA 32202

ISSUED FOR BID

PROFESSIONAL ENGINEER'S SEAL

LATEST REVISION ORIGINALLY PREPARED UNDER THE RESPONSIBLE SUPERVISION OF

PE: _____-_____
LIC. NO.: _____-_____
STATE: _____-_____
DATE: _____-_____

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BY	BLS
REVIEW	-
DRAFTING	
DATE	7-23-2019
BY	BLS
REVIEW	-

BREAKER 307, 308, 310, 311 & 312 REPLACEMENTS

COVER SHEET

HAMILTON STREET SUBSTATION

SCALE: -

SUBSTATION & TRANSMISSION PROJECTS 20410

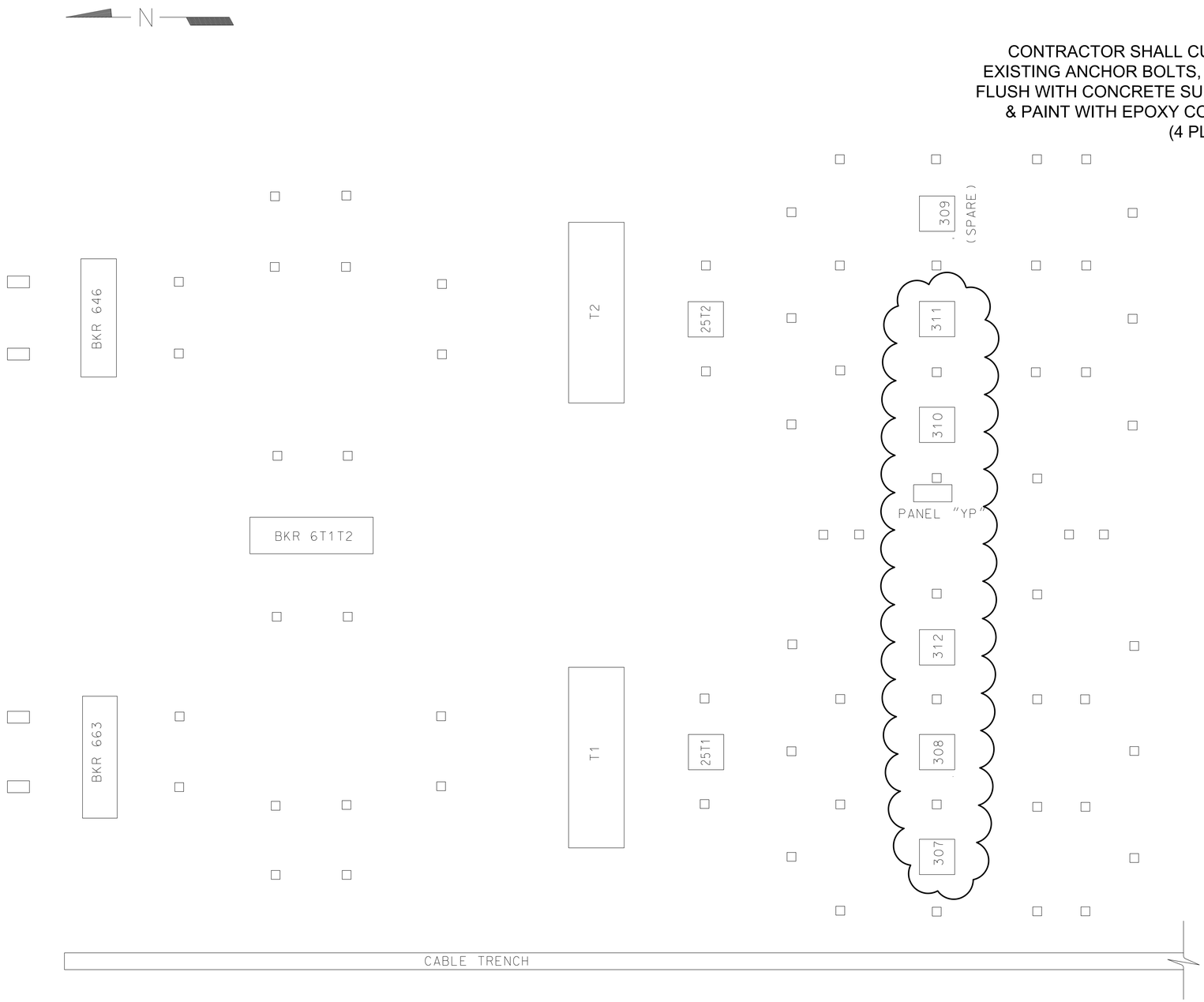
PROJ #: 8005239

DRAWING NAME: HA2019-CV

DRAWING SET: HA2019

DRAWING #: 01 OF 09

JEA ARCH-D (24X36) (02/17) HR172CV1.dgn 2017-6-22 - 14:32

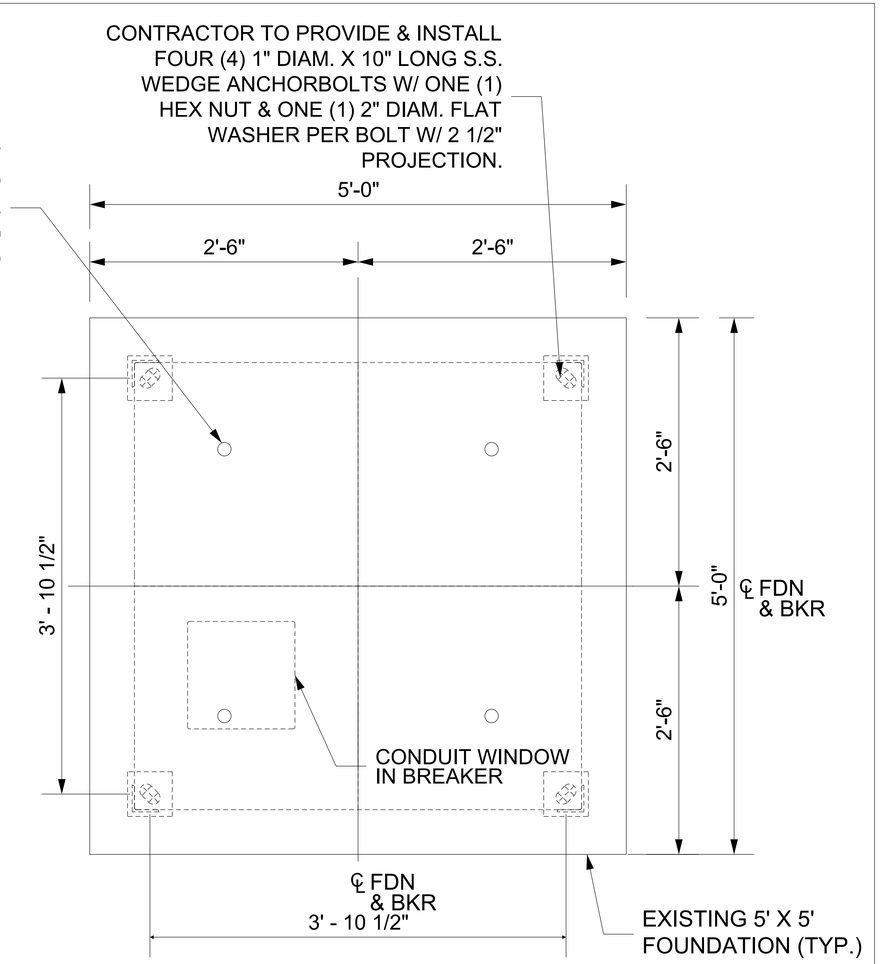


LEGEND:

EXISTING FOUNDATION

FOUNDATION PLAN

SCALE: 1/8" = 1'-0"



FOUNDATION DETAILS

SCALE: 1" = 1'-0"

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL REUSE THE EXISTING FOUNDATIONS FOR THE BREAKERS AS SHOWN.
2. FOR PROPER BUSHING ORIENTATION, SEE ELECTRICAL DETAIL DWG.

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JACKSONVILLE, FLORIDA 32202

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BY	BLS
REVIEW	-

BREAKER 307, 308, 310, 311, & 312 REPLACEMENTS

FOUNDATION PLAN & DETAILS

HAMILTON STREET SUBSTATION

SCALE: AS SHOWN

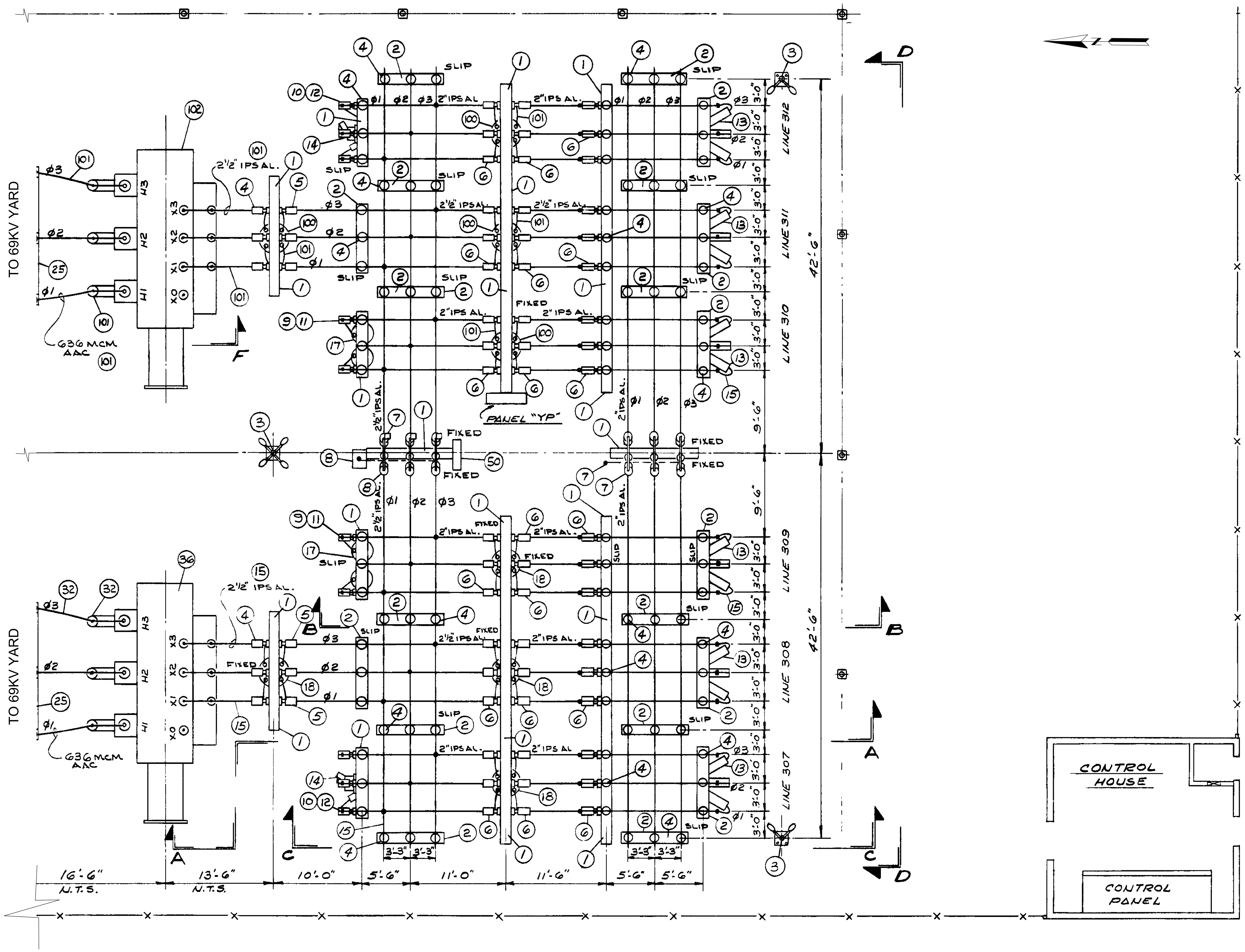
SUBSTATION & TRANSMISSION PROJECTS 20410

PROJ #: 8005239

DRAWING NAME: HA2019-FP

DRAWING SET: HA2019

DRAWING #: 02 OF 09



NOTES:

1. THIS DRAWING IS FOR REFERENCE ONLY (REF. DWG # HA712EP1) NUMERICAL CALLOUTS SHOWN REFER TO THE ORIGINAL PROJECT MATERIAL LIST & SHALL BE DISREGARDED FOR THIS PROJECT.

2. REFER TO DRAWING HA2019-E5 FOR SECTION ELEVATIONS.

JEA
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21 W CHURCH ST.
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REVIEW	-
DRAFTING	
DATE	8-12-2019
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REVIEW	-

BREAKER 307, 308, 310, 311 & 312 REPLACEMENTS

ELECTRICAL PLAN

HAMILTON STREET SUBSTATION

SCALE: 1" - 6' - 0"

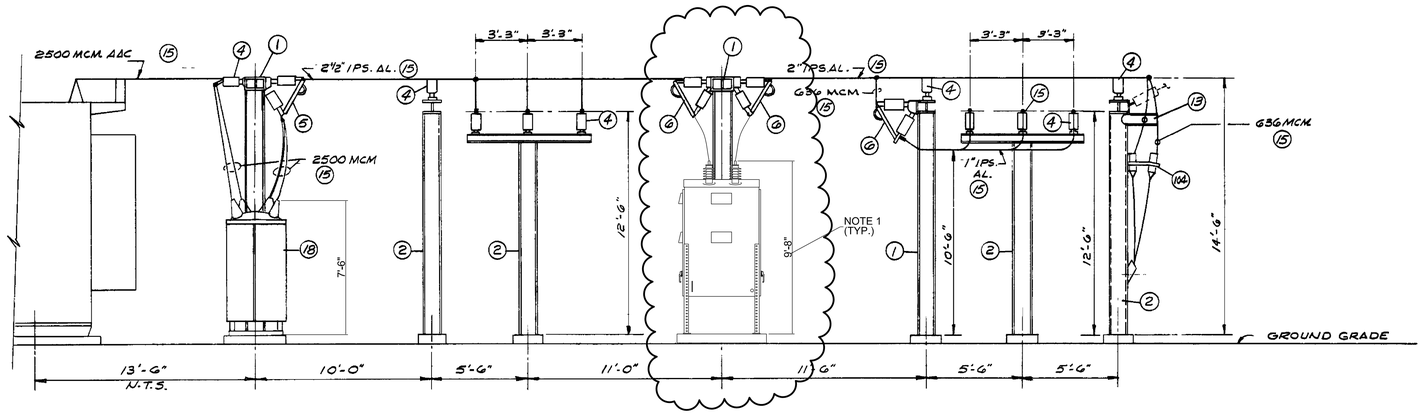
SUBSTATION & TRANSMISSION PROJECTS 20410

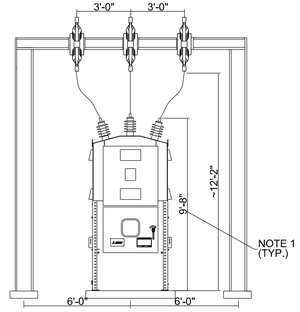
PROJ #: 8005239

DRAWING NAME: HA2019-EP

DRAWING SET: HA2019

DRAWING #: 03 OF 09





TYPICAL SECTION VIEW
MECHANISM SIDE

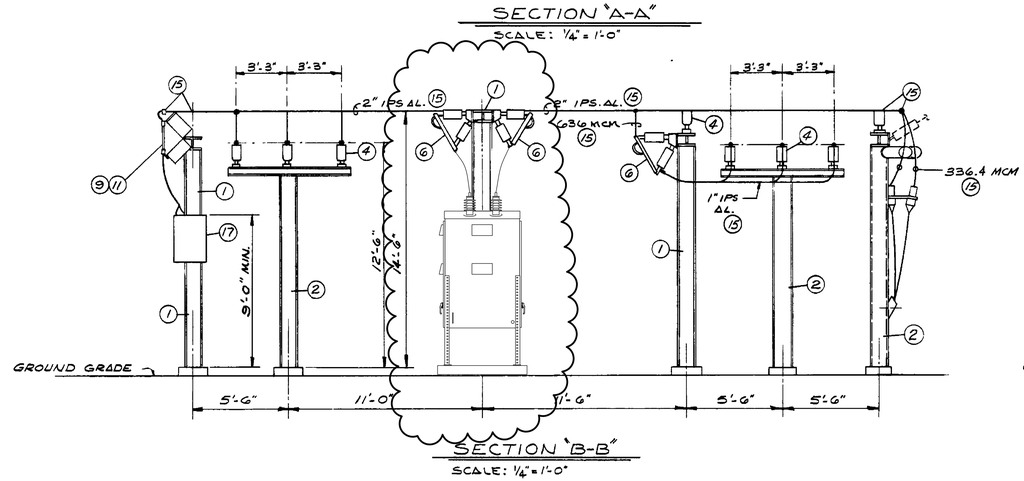
CONSTRUCTION NOTES:

1. CONTRACTOR SHALL PLACE NEW BREAKERS SO THAT LOWEST ENERGIZED PART IS >9'6" ABOVE GRADE. SHOULD ADJUSTMENT(S) BE REQUIRED, CONTRACTOR SHALL CONTRACT PROJECT REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO FINAL PLACEMENT OF BREAKER.

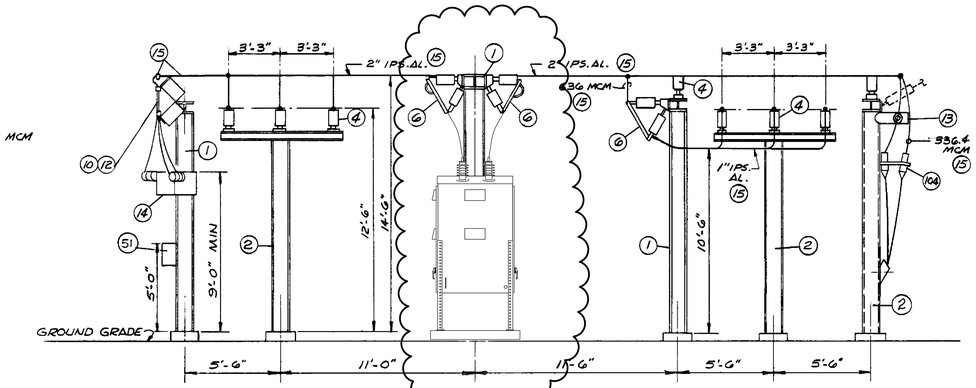
2. ELEVATIONS SHOWN ARE TYPICAL - NOT EVERY BREAKER IS SHOWN ON THIS DWG.

3. THIS DRAWING WAS REPRODUCED FROM DRAWING HA712E51. DIMENSIONS MAY VARY WITHIN A FEW INCHES AND MUST BE FIELD VERIFIED. NUMBERICAL CALLOUTS SHOWN REFER TO THE ORIGINAL PROJECT MATERIAL LIST & SHALL BE DISREGARDED FOR THIS PROJECT.

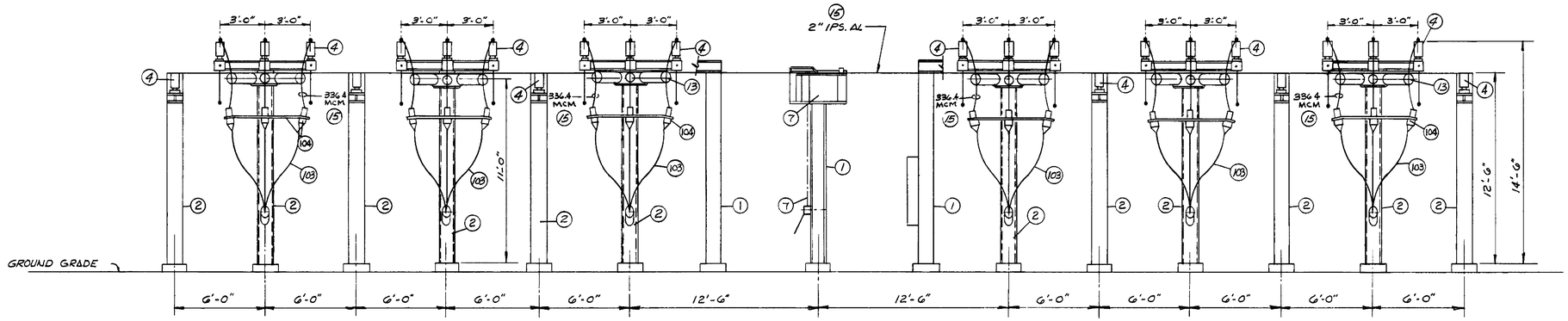
SECTION "A-A"
SCALE: 1/4" = 1'-0"



SECTION "B-B"
SCALE: 1/4" = 1'-0"



SECTION "C-C"
SCALE: 1/4" = 1'-0"



SECTION "D-D"
SCALE: 1/4" = 1'-0"

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BY	BLS
REVIEW	-

BREAKER 307, 308, 310, 311 & 312 REPLACEMENTS

26KV ELEVATIONS

HAMILTON STREET SUBSTATION

SUBSTATION & TRANSMISSION PROJECTS 20410

SCALE: 1" - 4' - 0"

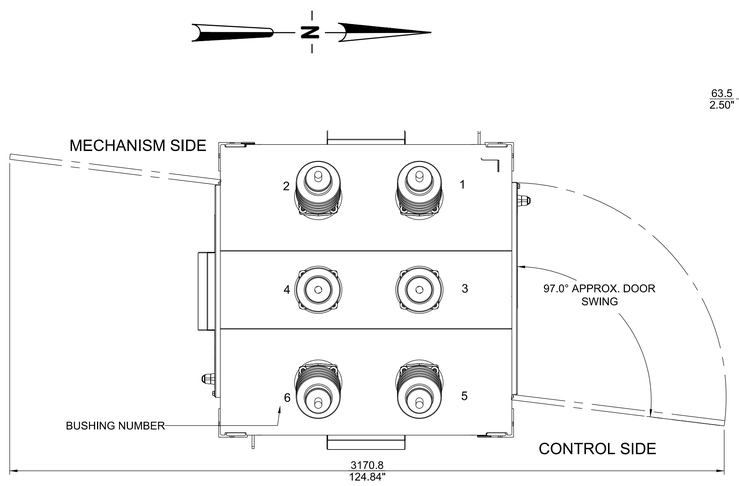
PROJ #: 8005239

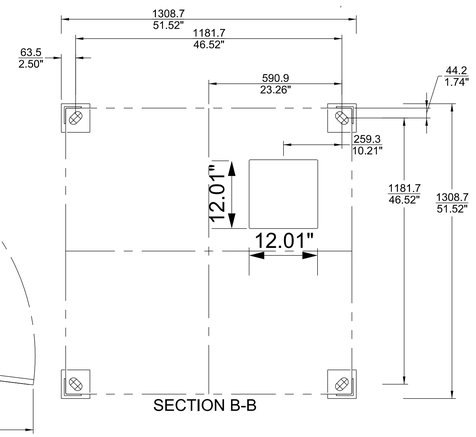
DRAWING NAME: HA2019-E5

DRAWING SET: HA2019

DRAWING #: 04 OF 09

JEA ARCH-D (ANSI) (02/17) HR172C01.dgn 2017-6-22 - 14:32



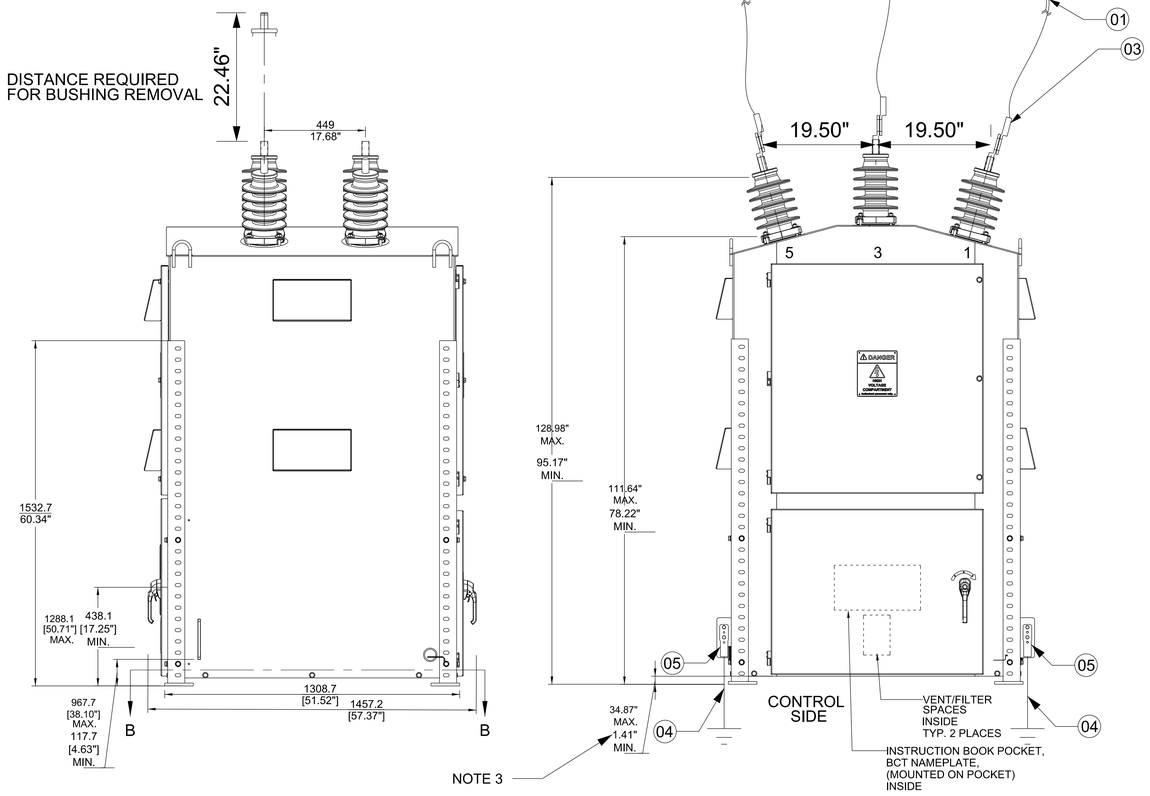


ITEM #	QTY	UNIT	DESCRIPTION	JEA PART #	COMMENTS	REV
1	125	LF	(1 PER PHASE) 10000 MCM, 61 STRAND, MEDIUM HARD DRAWN, BARE COPPER	COBCO042	length is approximate (contractor to verify)	
2	30	EA	CABLE-TO-FLAT 2 HOLE, BOLTED STRAIGHT, TIN PLATED BRONZE	CNNTL730	use for switch terminations	
3	30	EA	CABLE TO FLAT 4 HOLE BOLTED, STRAIGHT 4" 4/0-1000 MCM TIN PLATED BRONZE	CNNTL773	use for all circuit breaker bushing terminations	
4	200	LF	7 # 5 COPPERWELD	COBCW016	length is approximate (contractor to verify)	
5	10	EA	TERMINAL, BOLTED, CABLE TO 2 HOLE PAD, TIN PLATED BRONZE WITH SILICON BRONZE HARDWARE	CNNTE046	use for ground terminations	
6	250	EA	BOLT KIT FOR CONNECTORS (PACKS	BOLTE001		

BREAKER INFORMATION:

NOTES:

1. **RATINGS:**
   - RATED MAXIMUM VOLTAGE..... 28.4 kV
   - RATED CONTINUOUS CURRENT..... 1200A
   - RATED SHORT CIRCUIT CURRENT..... 25 kA
   - RATED DRY WITHSTAND VOLTAGE (60 Hz)..... 60 kV
   - RATED FULL WAVE IMPULSE WITHSTAND VOLTAGE (PEAK)..... 150 kV
2. **WEIGHT:**
   - TOTAL & SHIPPING WEIGHT (APPROX.)..... 1292 kg [2850 lbs]
3. **INSULATOR:**
   - TYPE..... PORCELAIN
   - MINIMUM CREEPAGE DISTANCE ALONG SURFACE..... 673 [26.5"]
4. **SURFACE TEATMENT:**
   - SUPPORT STRUCTURE..... HOT DIPPED GALVANIZED
   - HOUSING..... PAINT ANSI 70 LIGHT GRAY INSIDE AND OUTSIDE
5. **DYNAMIC LOADING:**
   - HORIZONTAL – (ACTING ALONG TANK CENTER LINE)..... 0.33kN [74-lb]
   - VERTICAL UP – (ACTING THROUGH CG)..... 1.62kN [365-lb]
   - VERTICAL DOWN – (ACTING THROUGH CG)..... 2.10kN [472-lb]
   - VERTICAL FORCES ADD TO OR SUBTRACT FROM BREAKER WEIGHT.
6. **INSTALLATION NOTE:**
   LEVEL THE BREAKER BY INSERTING SHIMS BETWEEN THE BREAKER STRUCTURE AND THE FOUNDATION.
7. **HEIGHT DIMENSIONS:**
   INCREMENTALLY CHANGE BY 50mm (1.96 in) RELATIVE TO LEG ADJUSTMENT.



CONSTRUCTION NOTES:

1. CONTRACTOR SHALL REMOVE FROM FOUNDATION AND TRANSPORT EXISTING BREAKERS TO JEA'S WESTSIDE SERVICE CENTER HAZMAT BUILDING DURING SCHEDULED OUTAGES WITH SOCC AND SUB/RELAY O&M.
2. INSTALL BREAKERS TO MATCH BUSHING NUMBERS RELATIVE TO NORTH ARROW. BREAKERS SHALL BE SET AT CENTER OF EXISTING FOUNDATIONS.
3. SET BOTTOM OF BREAKER CABINETS TO HEIGHT OF ~29" FROM TOP OF FOUNDATION THIS IS THE RECOMMENDED HEIGHT, BUT MAY NEED TO BE ADJUSTED FOR LOCATIONS WHERE CLEARANCES ARE AN ISSUE.
4. INSTALL JUMPERS AND TERMINALS AS SHOWN.
5. BOND EXISTING COPPER FROM GROUND GRID TO EQUIPMENT ON EACH SIDE OF THE BREAKER AS SHOWN
   - IF EXISTING GROUND TAIL CANNOT REACH EQUIPMENT, THEN A NEW 7#5 COPPERWELD SHALL BE INSTALLED FROM THE GROUND GRID USING APPROVED EXOTHERMIC CADWELD PLUS MOLDS MANUFACTURED BY CADWELD. INSTALLATION SHALL STRICTLY FOLLOW MANUFACTURER'S INSTRUCTIONS.
6. CONTRACTOR SHALL LABEL THE NEW BREAKERS.

Voltage (kV)	BIL (kV)	Min. Phase-Phase (in)	Min. Phase-Phase (ft-in)	Min. Phase-Ground (in)	Min. Phase-Ground (ft-in)	Phase Spacing (ft-in)	Min. Above Grade Personnel (ft-in)	Min. Above Grade Roadway (ft)	Min. to Fence Horizontal (ft)
13.2	110	12"	1'-0"	7"	0'-7"	2'-0"	9'-0"	21'	10'
34.5	200	18"	1'-6"	13"	1'-1"	3'-0"	9'-6"	22'	10'
69	350	31"	2'-7"	25"	2'-1"	5'-0"	10'-5"	23'	12'
138	650	63"	5'-3"	50"	4'-2"	8'-0"	12'-2"	25'	14'
230	900	89"	7'-5"	71"	5'-11"	11'-0"	14'-10"	27'	16'

Reference RUS Bulletin 1724E-300 (2001), & NESC (2007)

JEA
BUILDING COMMUNITY
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REVIEW	-

BREAKER 307, 308, 310, 311, & 312 REPLACEMENTS

ELECTRICAL DETAILS

HAMILTON STREET SUBSTATION

SCALE: N.T.S.

SUBSTATION & TRANSMISSION PROJECTS 20410

PROJ #: 8005239

DRAWING NAME: HA2019-ED

DRAWING SET: HA2019

DRAWING #: 05 OF 09

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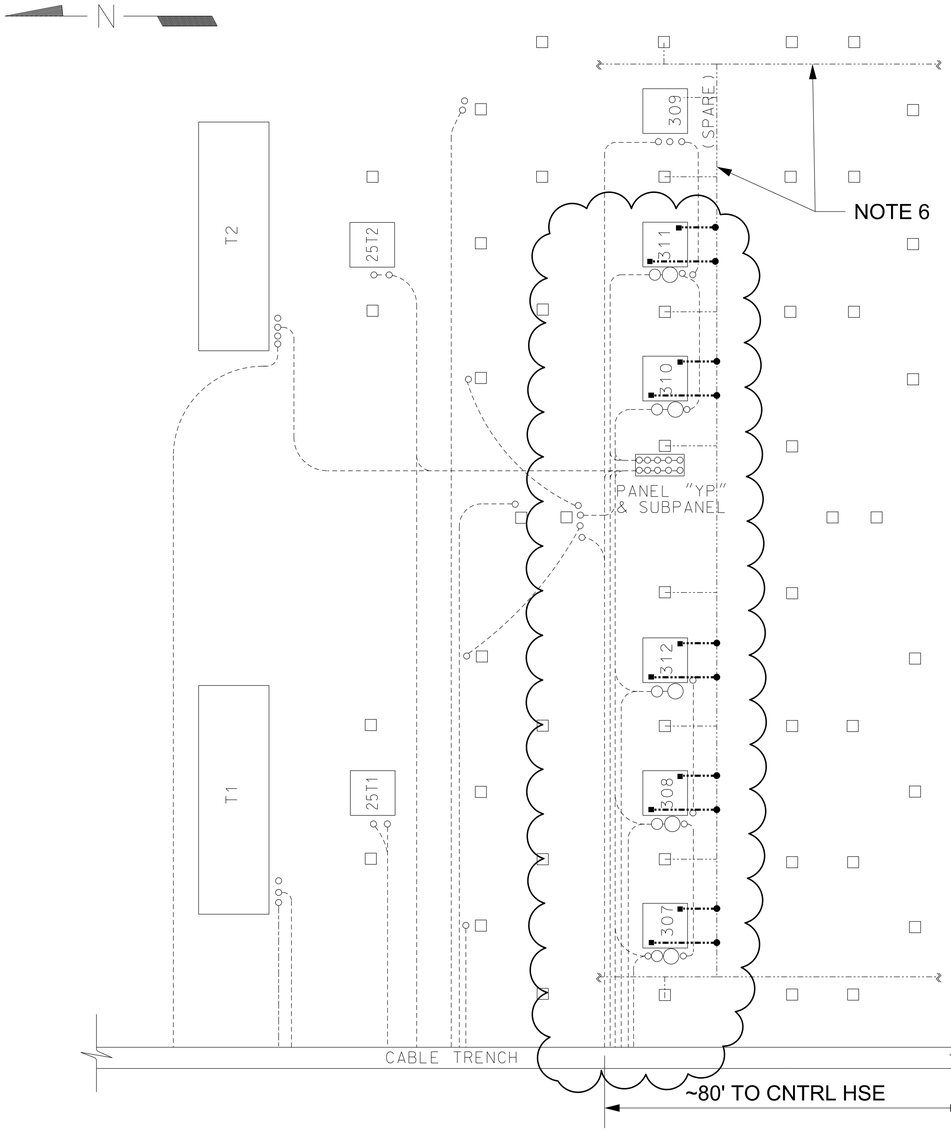
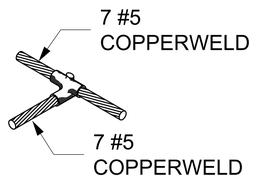
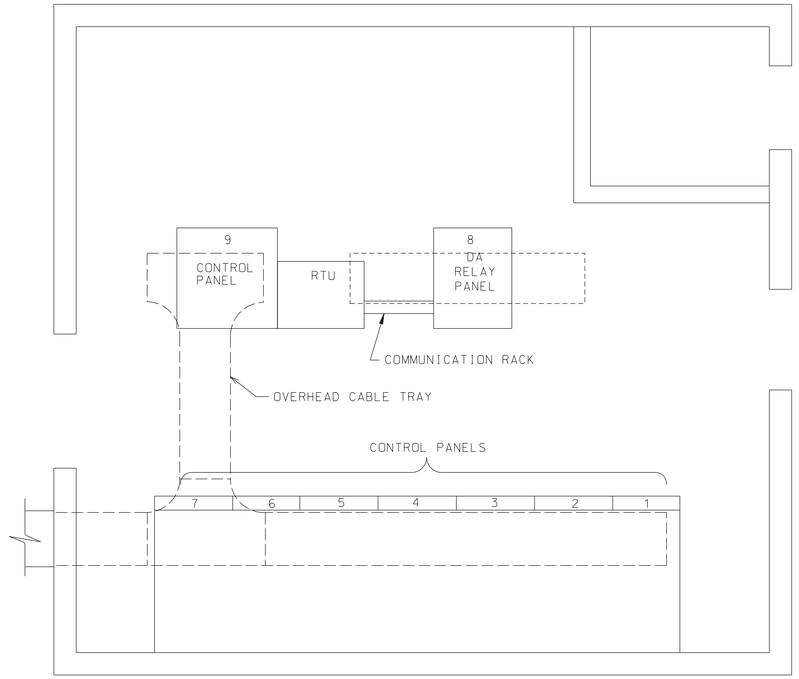




DETAIL 1
TYPICAL GROUND CONNECTION



CONTROL HOUSE EQUIPMENT LOCATION DETAIL

N.T.S.

26KV CONDUIT, CABLE TRENCH, AND PARTIAL GROUNDING PLAN

SCALE: 1/8" = 1'-0"

LEGEND

- EXISTING CONDUIT
- EXISTING 7#5 COPPERWELD GROUND CABLE
- NEW 7#5 COPPERWELD GROUND CABLE
- NEW EXOTHERMIC GROUND CONNECTION
- NEW MECHANICAL GROUND CONNECTION

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL REUSE EXISTING CONDUITS PER THE CONDUIT SCHEDULE AND CUT BACK/CAP ANY UNUSED CONDUITS BELOW GRADE.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL CONDUIT AS LISTED IN THE CONDUIT SCHEDULE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING ALL CABLES LISTED IN THE CABLE SCHEDULE. THE CONTRACTOR SHALL ONLY TERMINATE CABLES IN THE NEW GAS CIRCUIT BREAKER CONTROL PANEL. JEA WILL TERMINATE IN CONTROL HOUSE PANELS.

3. ALL ABOVE GRADE CONDUIT SHALL BE EITHER RIGID GALVANIZED STEEL OR ULTRA-VIOLET 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 AND TO MINIMIZE TRIPPING HAZARDS WHILE WORKING IN THE CONTROL CABINET.

4. ALL CABLES SHALL BE CLEARLY LABELED AT BOTH ENDS AND AT ALL ENTRANCE AND EXIT POINTS TO THE CABLE TRENCH. ALL CONDUIT RUNS SHALL ALSO BE CLEARLY LABELED AT BOTH ENDS.

5. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL CONDUIT, CABLE, AND GROUND CONDUCTOR LENGTHS AND LOCATIONS.

6. EXISTING GROUND GRID IS 7#5 COPPERWELD PER SUBSTATION RECORD DWGS. ONLY GROUND GRID WITHIN WORK AREA IS SHOWN ON THIS DRAWING.

7. ALL 7#5 COPPERWELD CONDUCTOR SHALL BE FURNISHED BY JEA AND INSTALLED BY THE CONTRACTOR. ALL GROUND GRID CONDUCTORS AND TAPS SHALL BE CONNECTED USING CADWELD EXOTHERMIC CONNECTIONS AND SHALL BE INSTALLED 24" BELOW GRADE (28" BELOW ROCK SURFACE) EXCEPT WHERE CONECTION TO STRUCTURES AND EQUIPMENT IS ABOVE GRADE.

8. ALL ABOVE GRADE CONNECTIONS OF GROUND CONDUCTOR TO STRUCTURES AND EQUIPMENT, SUCH AS TRANSFORMERS, BREAKERS, LIGHTNING ARRESTERS, ETC. SHALL BE CONNECTED USING OWNER FURNISHED MECHANICALCONNECTORS. ALL EQUIPMENT AND STRUCTURES ERECTED IN THE SUBSTATION MUST BE GROUNDED THE SAME DAY.

JEA
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BREAKER 307, 308, 310, 311, & 312 REPLACEMENTS

CONDUIT & GROUNDING PLAN

HAMILTON STREET SUBSTATION

SCALE: AS SHOWN

SUBSTATION & TRANSMISSION PROJECTS 20410

PROJ #: 8005239

DRAWING NAME: HA2019-CP

DRAWING SET: HA2019

DRAWING #: 06 OF 09

JEA ARCH2D 24X36 (02/17) HR172E01.dgn 2017-4-23 - 16:05

CONDUIT SCHEDULE

CONDUIT NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CONDUIT MATERIALS, INCLUDING FITTINGS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL CONDUIT LENGTHS. CONDUIT LENGTHS ARE APPROXIMATE.
3. CONTROL HOUSE CONDUIT EXPOSED RUNS SHALL BE EMT. CONTRACTOR MAY CONCEAL CONTROL HOUSE CONDUIT WITHIN BLOCK WALLS UNLESS STATED OTHERWISE IN THE DRAWINGS. CONTRACTOR SHALL NOT CONCEAL ALUMINUM CONDUIT RUNS.
4. ALL RUNS WITHIN BATTERY ROOM SHALL UTILIZE ALUMINUM CONDUIT. PENETRATIONS THROUGH THE BLOCK WALL SHALL UTILIZE PVC COATED ALUMINUM TO PROVIDE SUFFICIENT ALKALI CORROSION PROTECTION, WITH PENETRATION PROPERLY SEALED.

CONDUIT LEGEND:

UV	UV RESISTANT PVC CONDUIT, SCH 40
EMT	ELECTRICAL METALLIC TUBING
RMC	RIGID METALLIC (GALVANIZED STEEL) CONDUIT
IMC	INTERMEDIATE METALLIC CONDUIT
LFM	LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT
WW	SQAURE WIREWAY

BREAKER 307

CONDUIT #	FROM	TO	SIZE (IN)	TYPE	LENGTH (FT)	CABLE IN CONDUIT	REMARKS	REV
307C1	BKR 307	CABLE TRENCH	5	UV	10	307/C1, 307/C2, 307/PH, 307/MET	EXISTING 5" CONDUIT	
307C2	BKR 307	AC YARD PANEL YP-3P	3	UV	10	307/AC	EXISTING 3" CONDUIT	

CONSTRUCTION NOTES:

1. USE EXISTING 3" AND 5" CONDUITS; INSTALL LB AND/OR FLEX TO NEW BREAKER CONDUIT OPENING

BREAKER 308

CONDUIT #	FROM	TO	SIZE (IN)	TYPE	LENGTH (FT)	CABLE IN CONDUIT	REMARKS	REV
308C1	BKR 308	CABLE TRENCH	5	UV	10	308/C1, 308/C2, 308/PH, 308/MET	EXISTING 5" CONDUIT	
308C2	BKR 308	AC YARD PANEL YP-3P	3	UV	10	308/AC	EXISTING 3" CONDUIT	

BREAKER 310

CONDUIT #	FROM	TO	SIZE (IN)	TYPE	LENGTH (FT)	CABLE IN CONDUIT	REMARKS	REV
310C1	BKR 310	CABLE TRENCH	5	UV	10	310/C1, 310/C2, 310/PH, 310/MET	EXISTING 5" CONDUIT	
310C2	BKR 310	AC YARD PANEL YP-3P	3	UV	10	310/AC	EXISTING 3"CONDUIT	

BREAKER 311

CONDUIT #	FROM	TO	SIZE (IN)	TYPE	LENGTH (FT)	CABLE IN CONDUIT	REMARKS	REV
311C1	BKR 311	CABLE TRENCH	5	UV	10	311/C1, 311/C2, 311/PH, 311/MET	EXISTING 5" CONDUIT	
311C2	BKR 311	AC YARD PANEL YP-3P	3	UV	10	311/AC	EXISTING 3" CONDUIT	

BREAKER 312

CONDUIT #	FROM	TO	SIZE (IN)	TYPE	LENGTH (FT)	CABLE IN CONDUIT	REMARKS	REV
312C1	BKR 312	CABLE TRENCH	5	UV	10	312/C1, 312/C2, 312/PH, 312/MET	EXISTING 5" CONDUIT	
312C2	BKR 312	AC YARD PANEL YP-3P	3	UV	10	312/AC	EXISTING 3" CONDUIT	

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REV	DATE	PROJ #	REVISION DESCRIPTION	BY	REVIEW
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ENGINEERING	
DATE	7-23-2019
BY	BLS
REVIEW	-
DRAFTING	
DATE	7-23-2019
BY	BLS
REVIEW	-

BREAKER 307, 308, 310, 311, & 312 REPLACEMENTS

CONDUIT SCHEDULE

HAMILTON STREET SUBSTATION

SCALE: -

SUBSTATION & TRANSMISSION PROJECTS 20410

PROJ #: 8005239

DRAWING NAME: HA2019-CS

DRAWING SET HA2019

CABLE SCHEDULE

CABLE NOTES:

1. TYPE B, BS, F, AND FO CABLE SHALL BE FURNISHED BY THE OWNER, UNLESS OTHERWISE SPECIFIED.
2. THE CONTRACTOR SHALL FURNISH ALL OTHER CABLE, AS SPECIFIED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL CABLE LENGTHS. CABLE LENGTHS ARE APPROXIMATE.

CABLE LEGEND:

A	THHN INSULATED COPPER CONDUCTOR
B	CONTROL CABLE
BS	SHIELDED CONTROL CABLE
C	RHW, THHW, OR THWN INSULATED COPPER CONDUCTOR
F	INSTRUMENT CABLE
FO	FIBER OPTIC CABLE
M	MULTIPLE CONDUCTOR
S	SINGLE CONDUCTOR
TRAY	CONTROL HOUSE CABLE TRAY
TRENCH	CABLE TRENCH

BREAKER 307

CABLE #	FROM	TO	VOLT (V)	SIZE	#C	S/M	TYPE	LENGTH (FT)	CONDUIT ROUTE	REMARKS	REV
DA 307 – C2	*BKR 307*	*26KV PNL 8*								*REMOVE CABLE*	
DA 307 – C1	*BKR 307*	*26KV PNL 8*								*REMOVE CABLE*	
104-3	*BKR 307*	*RTU PNL*								*REMOVE CABLE*	
118-2	*BKR 307*	*26KV PNL 3*								*REMOVE CABLE*	
146-1	*BKR 307*	*BKR 308*								*REMOVE CABLE*	
104-1	*BKR 307*	*26KV PNL 3*								*REMOVE CABLE*	
120-1	*BKR 307*	*PANEL YP*								*REMOVE CABLE*	
307/C1	BKR 307	26KV PNL 8	600	10	21	M	BS	200	307C1, TRENCH, TRAY	BREAKER 307 CONTROL	
307/C2	BKR 307	26KV PNL 3	600	10	21	M	BS	190	307C1, TRENCH, TRAY	BREAKER 307 CONTROL	
307/PH	BKR 307	26KV PNL 8	600	10	4	M	BS	200	307C1, TRENCH, TRAY	BREAKER 307 RELAYING	
307/MET	BKR 307	26KV PNL 8	600	10	4	M	BS	200	307C1, TRENCH, TRAY	BREAKER 307 METERING	
307/AC	BKR 307	AC YARD PANEL YP	600	8	3	M	C	110	307C2	240 VAC	

BREAKER 311

CABLE #	FROM	TO	VOLT (V)	SIZE	#C	S/M	TYPE	LENGTH (FT)	CONDUIT ROUTE	REMARKS	REV
DA 311 – C2	*BKR 311*	*26KV PNL 8*								*REMOVE CABLE*	
DA 311 – C1	*BKR 311*	*26KV PNL 8*								*REMOVE CABLE*	
128-3	*BKR 311*	*RTU PNL*								*REMOVE CABLE*	
145-1	*BKR 311*	*BKR 309*								*REMOVE CABLE*	
128-1	*BKR 311*	*26KV PNL 3*								*REMOVE CABLE*	
123-1	*BKR 311*	*PANEL YP*								*REMOVE CABLE*	
311/C1	BKR 311	26KV PNL 8	600	10	21	M	BS	275	311C1, TRENCH, TRAY	BREAKER 311 CONTROL	
311/C2	BKR 311	26KV PNL 5	600	10	21	M	BS	265	311C1, TRENCH, TRAY	BREAKER 311 CONTROL	
311/PH	BKR 311	26KV PNL 8	600	10	4	M	BS	275	311C1, TRENCH, TRAY	BREAKER 311 RELAYING	
311/MET	BKR 311	26KV PNL 8	600	10	4	M	BS	275	311C1, TRENCH, TRAY	BREAKER 311 METERING	
311/AC	BKR 311	AC YARD PANEL YP	600	8	3	M	C	75	311C2	240 VAC	

BREAKER 308

CABLE #	FROM	TO	VOLT (V)	SIZE	#C	S/M	TYPE	LENGTH (FT)	CONDUIT ROUTE	REMARKS	REV
DA 308 – C2	*BKR 308*	*26KV PNL 8*								*REMOVE CABLE*	
DA 308 – C1	*BKR 308*	*26KV PNL 8*								*REMOVE CABLE*	
105-3	*BKR 308*	*RTU PNL*								*REMOVE CABLE*	
147-1	*BKR 308*	*BKR 312*								*REMOVE CABLE*	
105-1	*BKR 308*	*26KV PNL 3*								*REMOVE CABLE*	
120-1	*BKR 308*	*PANEL YP*								*REMOVE CABLE*	
308/C1	BKR 308	26KV PNL 8	600	10	21	M	BS	215	308C1, TRENCH, TRAY	BREAKER 308 CONTROL	
308/C2	BKR 308	26KV PNL 3	600	10	21	M	BS	205	308C1, TRENCH, TRAY	BREAKER 308 CONTROL	
308/PH	BKR 308	26KV PNL 8	600	10	4	M	BS	215	308C1, TRENCH, TRAY	BREAKER 308 RELAYING	
308/MET	BKR 308	26KV PNL 8	600	10	4	M	BS	215	308C1, TRENCH, TRAY	BREAKER 308 METERING	
308/AC	BKR 308	AC YARD PANEL YP	600	8	3	M	C	95	308C2	240 VAC	

BREAKER 312

CABLE #	FROM	TO	VOLT (V)	SIZE	#C	S/M	TYPE	LENGTH (FT)	CONDUIT ROUTE	REMARKS	REV
DA 312 – C2	*BKR 312*	*26KV PNL 8*								*REMOVE CABLE*	
DA 312 – C1	*BKR 312*	*26KV PNL 8*								*REMOVE CABLE*	
106-3	*BKR 312*	*RTU PNL*								*REMOVE CABLE*	
106-1	*BKR 312*	*26KV PNL 3*								*REMOVE CABLE*	
120-1	*BKR 312*	*PANEL YP*								*REMOVE CABLE*	
312/C1	BKR 312	26KV PNL 8	600	10	21	M	BS	230	312C1, TRENCH, TRAY	BREAKER 312 CONTROL	
312/C2	BKR 312	26KV PNL 3	600	10	21	M	BS	220	312C1, TRENCH, TRAY	BREAKER 312 CONTROL	
312/PH	BKR 312	26KV PNL 8	600	10	4	M	BS	230	312C1, TRENCH, TRAY	BREAKER 312 RELAYING	
312/MET	BKR 312	26KV PNL 8	600	10	4	M	BS	230	312C1, TRENCH, TRAY	BREAKER 312 METERING	
312/AC	BKR 312	AC YARD PANEL	600	8	3	M	C	80	312C2	240 VAC	

BREAKER 310

CABLE #	FROM	TO	VOLT (V)	SIZE	#C	S/M	TYPE	LENGTH (FT)	CONDUIT ROUTE	REMARKS	REV
DA 310 – C2	*BKR 310*	*26KV PNL 8*								*REMOVE CABLE*	
DA 310 – C1	*BKR 310*	*26KV PNL 8*								*REMOVE CABLE*	
127-3	*BKR 310*	*RTU PNL*								*REMOVE CABLE*	
127-2	*BKR 310*	*26KV PNL 5*								*REMOVE CABLE*	
146-1	*BKR 310*	*BKR 311*								*REMOVE CABLE*	
127-1	*BKR 310*	*26KV PNL 5*								*REMOVE CABLE*	
122-1	*BKR 310*	*PANEL YP*								*REMOVE CABLE*	
310/C1	BKR 310	26KV PNL 8	600	10	21	M	BS	260	310C1, TRENCH, TRAY	BREAKER 310 CONTROL	
310/C2	BKR 310	26KV PNL 5	600	10	21	M	BS	245	310C1, TRENCH, TRAY	BREAKER 310 CONTROL	
310/PH	BKR 310	26KV PNL 8	600	10	4	M	BS	260	310C1, TRENCH, TRAY	BREAKER 310 RELAYING	
310/MET	BKR 310	26KV PNL 8	600	10	4	M	BS	260	310C1, TRENCH, TRAY	BREAKER 310 METERING	
310/AC	BKR 310	AC YARD PANEL	600	8	3	M	C	60	310C2	240 VAC	

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ENGINEERING	
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REVIEW	-

BREAKER 307, 308, 310, 311, & 312 REPLACEMENTS

CABLE SCHEDULE

HAMILTON STREET SUBSTATION

SCALE: -

SUBSTATION & TRANSMISSION PROJECTS 20410

PROJ #: 8005239

DRAWING NAME: HA2019-CT

DRAWING SET: HA2019

DRAWING #: 08 OF 09

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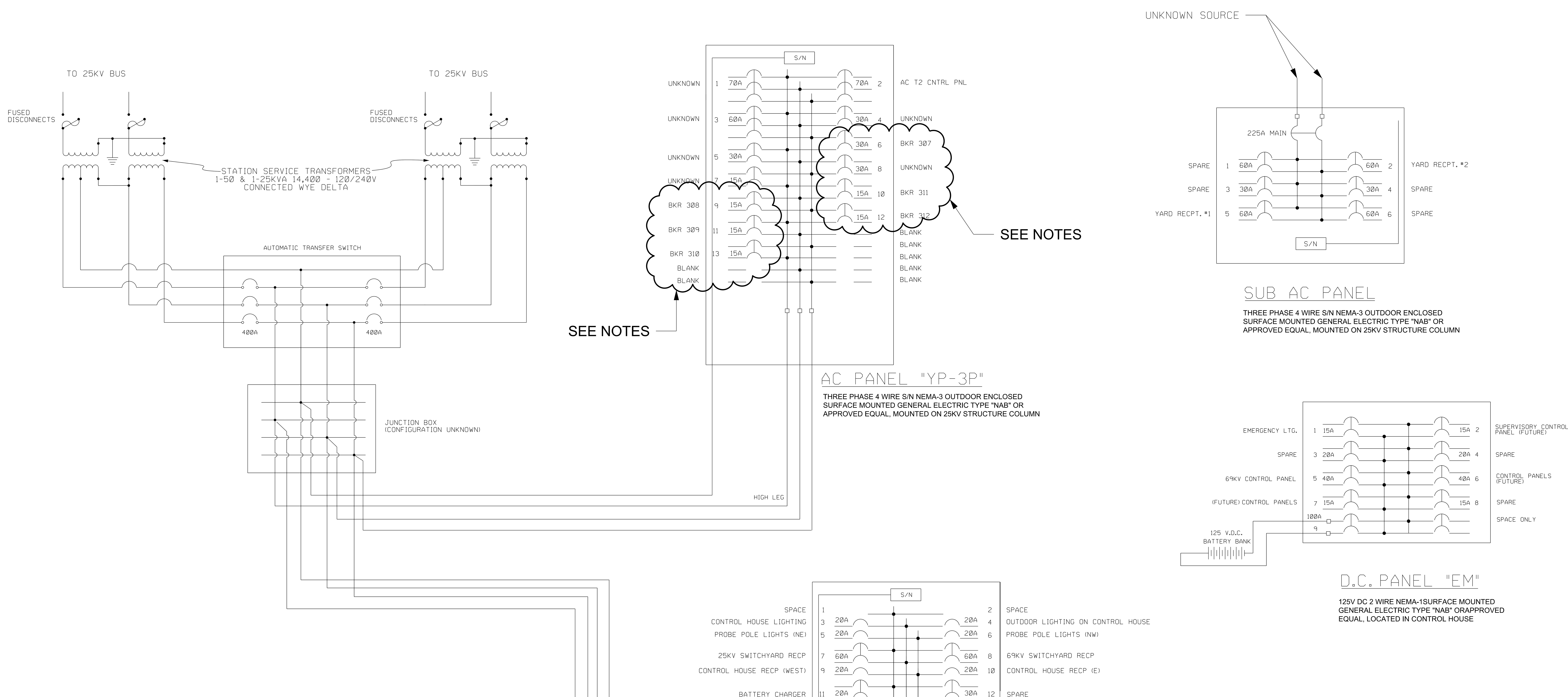

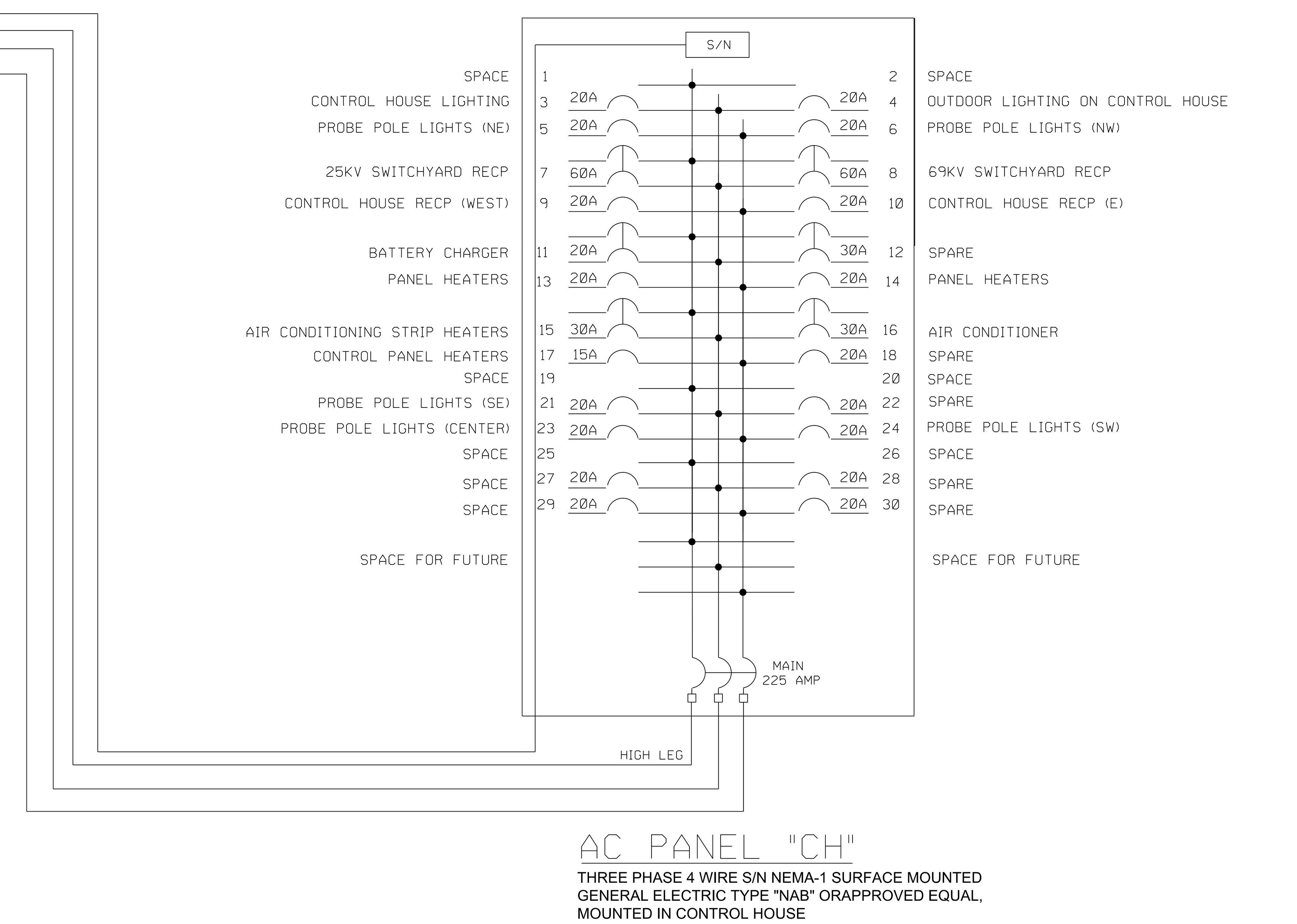

NOTES:

1) THIS DRAWING IS BEING PROVIDED TO SHOW THE SUBSTATION'S EXISTING STATION SERVICE CONFIGURATION BASED ON DWG HA712LV1 AND VISIBLE FIELD CONDITIONS. PANEL "CH" CONFIGURATION NOT FIELD VERIFIED

2) CONTRACTOR SHALL VERIFY 30 AMP BRANCH CIRCUIT BREAKERS FROM EXISTING AC PANEL "YP-3P" ARE PROVIDING 120/240V TO EACH 28KV VACUUM BREAKER. IF SMALLER THAN 30A, CONTRACTOR SHALL PROVIDE AND INSTALL NEW 30A DOUBLE POLE BREAKER. CONTRACTOR SHALL REMOVE OLD CONDUCTORS AND INSTALL NEW 3C #8 IN EXISTING CONDUIT.

3) CONTRACTOR SHALL LABEL ALL 30A FEEDS WITH RESPECTIVE VACUUM BREAKER #.

JEA ARCH-D 24X36 (02/17) HR17ZED1.dgn 2017-6-23 - 16:05

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ENGINEERING	
DATE	7-23-2019
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REVIEW	-
DRAFTING	
DATE	7-23-2019
BY	BLS
REVIEW	-

BREAKER 307, 308, 310, 311, & 312 REPLACEMENTS

STATION SERVICE & ELECTRICAL PANELS

HAMILTON STREET SUBSTATION

SCALE: N.T.S.

SUBSTATION & TRANSMISSION PROJECTS 20410

PROJ #: 8005239

DRAWING NAME: HA2019-LV

DRAWING SET: HA2019

DRAWING #: 09 OF 09