

CITY OF GEORGETOWN

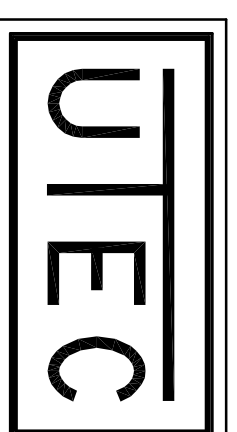
GEORGETOWN, SOUTH CAROLINA

FRONT STREET ELECTRICAL UPGRADE

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PROJECT NO. 171007



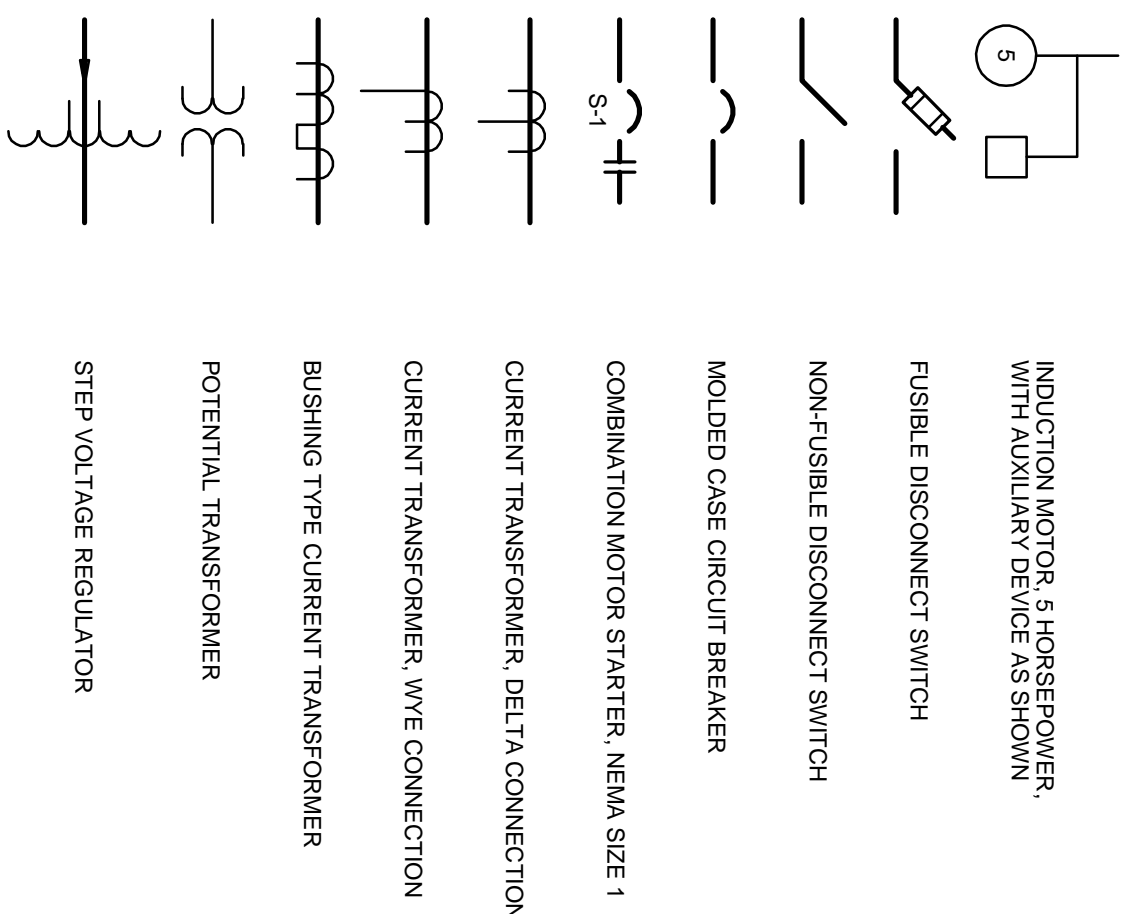
UTILITY TECHNOLOGY

ENGINEERS - CONSULTANTS

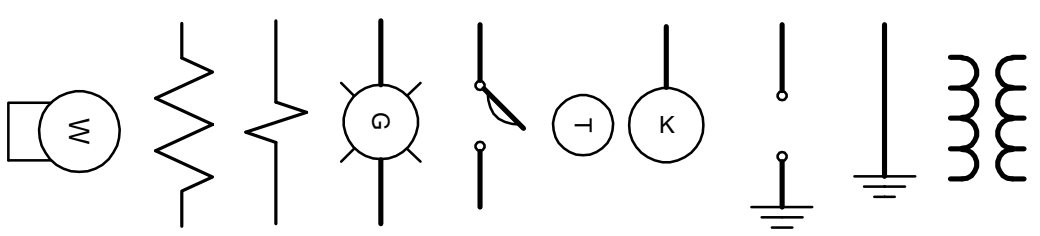
Asheboro, North Carolina
Spartanburg, South Carolina

JANUARY, 2019

NO.		REVISIONS	DATE	PRELIMINARY NOT TO BE USED FOR CONSTRUCTION REVISION _____ 01/23/19	CITY OF GEORGETOWN GEORGETOWN, SC FRONT STREET ELECTRICAL UPGRADE TITLE SHEET
NO.		REVISIONS	DATE		
DATE	SCALE	DATE	DATE	UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS P.O. Box 2629 • Asheboro, North Carolina • 27204	DWG. NO. G001 SHEET NO. 1 OF 1



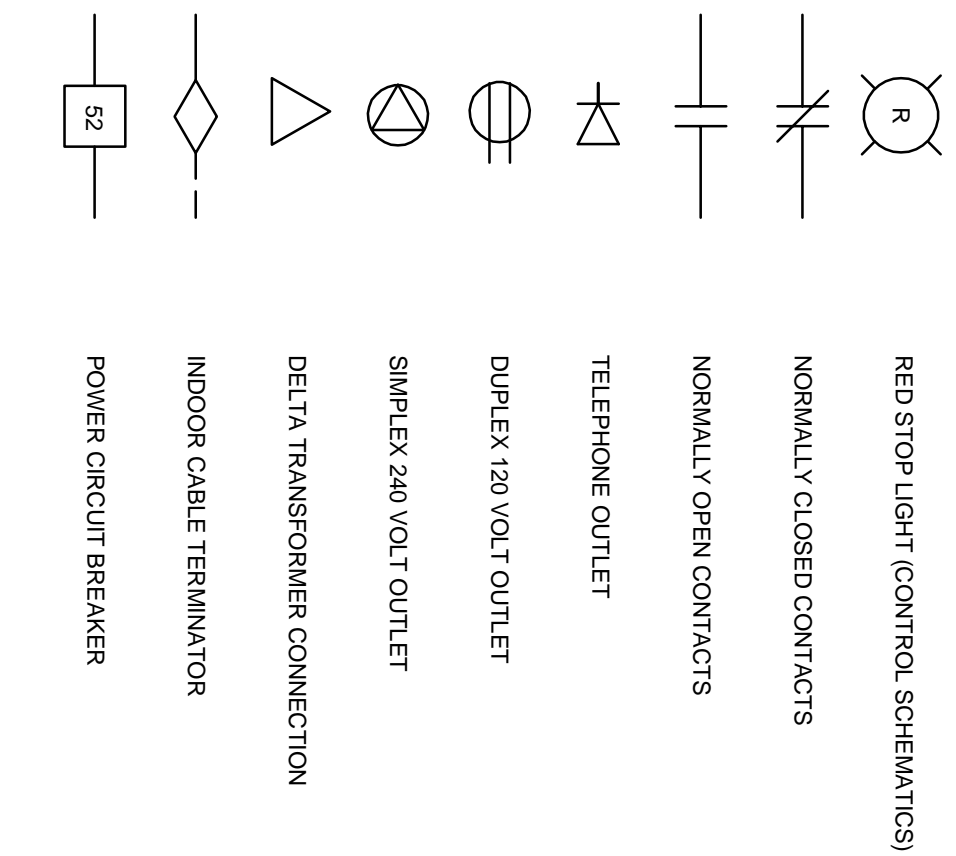
INDUCTION MOTOR & MOTORPOMPER WITH AUXILIARY DEVICE AS SHOWN
 FUSIBLE DISCONNECT SWITCH
 NON-FUSIBLE DISCONNECT SWITCH
 MOLDED CASE CIRCUIT BREAKER
 COMBINATION MOTOR STARTER, NEMA SIZE 1
 CURRENT TRANSFORMER, DELTA CONNECTION
 CURRENT TRANSFORMER, WYE CONNECTION
 BUSHING TYPE CURRENT TRANSFORMER
 POTENTIAL TRANSFORMER
 STEP VOLTAGE REGULATOR



TRANSFORMER
 GROUND CONNECTION
 SURGE ARRESTOR
 KEY INTERLOCK
 THERMOSTAT
 TORQUE SWITCH
 GREEN RUN LIGHT (CONTROL SCHEMATICS)
 RELAY COIL - VOLTAGE
 RELAY COIL - CURRENT
 WHITE INDICATING LIGHT WITH RESISTOR

PROTECTIVE RELAYING DEVICE NUMBERS AND FUNCTIONS

- 2 TIME-DELAY STARTING, OR CLOSING, RELAY
- 14 UNDER-SPEED DEVICE
- 15 SPEED OR FREQUENCY, MATCHING DEVICE
- 18 ACCELERATING OR DECELERATING DEVICE
- 19 STARTING-TO-RUNNING TRANSITION CONTACTOR
- 21 DISTANCE RELAY
- 25 SYNCHRONIZING OR SYNCHRONISM-CHECK DEVICE
- 27 UNDERVOLTAGE RELAY
- 30 ANNUNCIATOR RELAY
- 32 DIRECTIONAL POWER RELAY
- 38 BEARING PROTECTIVE DEVICE
- 40 FIELD RELAY
- 43 MANUAL TRANSFER OR SELECTOR DEVICE
- 46 REVERSE PHASE OR NEGATIVE SEQUENCE OVERCURRENT RELAY
- 47 PHASE SEQUENCE VOLTAGE RELAY
- 49 MACHINE, OR TRANSFORMER, THERMAL RELAY
- 50 INSTANTANEOUS OVERCURRENT, OR RATE-OF-RISE RELAY
- 51 A-C TIME OVERCURRENT RELAY
- 52 A-C CIRCUIT BREAKER
- 59 OVERVOLTAGE RELAY
- 60 VOLTAGE BALANCE RELAY
- 62 TIME-DELAY STOPPING OR OPENING RELAY
- 63 LIQUID OR GAS PRESSURE, LEVEL, OR FLOW RELAY
- 67 A-C DIRECTIONAL OVERCURRENT RELAY
- 79 A-C RECLOSING RELAY
- 81 FREQUENCY RELAY
- 86 LOCKING-OUT RELAY
- 87 DIFFERENTIAL PROTECTIVE RELAY
- 88 LINE SWITCH
- 94 TRIPPING OR TRIP-FREE RELAY



RED STOP LIGHT (CONTROL SCHEMATICS)
 NORMALLY CLOSED CONTACTS
 NORMALLY OPEN CONTACTS
 TELEPHONE OUTLET
 DUPLEX 120 VOLT OUTLET
 SIMPLEX 240 VOLT OUTLET
 DELTA TRANSFORMER CONNECTION
 INDOOR CABLE TERMINATOR
 POWER CIRCUIT BREAKER
 GENERATOR 1, 1600KW
 UNDERGROUND CIRCUIT
 GROUNDED Y TRANSFORMER CONNECTION
 FLUSH MOUNTED JUNCTION BOX
 FLUSH MOUNTED SWITCH
 FLUSH MOUNTED 3-WAY SWITCH
 GROUND ROD
 CIRCUIT WITH TWO INSULATED PHASE CONDUCTORS AND INSULATED NEUTRAL CONDUCTOR; ONE GROUND CONDUCTOR
 POWER RESISTOR (RATING AS SHOWN)

a	CONTACT OPEN WHEN MAIN DEVICE IS IN STANDARD REFERENCE POSITION
A	AMPERES
AM	AMMETER
AS	AMMETER SWITCH
b	CONTACT CLOSED WHEN MAIN DEVICE IS IN STANDARD REFERENCE POSITION
C1	INSTRUMENT CIRCUIT 1
CC	CLOSING COIL
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CSW	CIRCUIT SWITCHER
CS	CONTROL SWITCH
FL	FAULT LOCATOR

G, G03	GROUND GROUNDING
GFOI	GROUND FAULT CURRENT INTERRUPTER
H	HIGH SIDE
I/O	INPUT/OUTPUT
JB	JUNCTION BOX
KVA	THOUSAND VOLT-AMPERES
MCC	MOTOR CONTROL CENTER
MOC	MOTOR OPERATED GANG SWITCH
N	NEGATIVE, NEUTRAL
P	POLE POSITIVE, PHASE
PE	PHOTO-ELECTRIC CELL
PMMG	PERMANENT MAGNET
PP-4A	POWER PANEL CIRCUIT 4A

PT	POTENTIAL TRANSFORMER
Q	NEGATIVE SEQUENCE
RBC	REMOTE BUILDING CONTROLLER
RP	RECEPFALE PANEL
RTD	RESISTANCE TEMPERATURE DEVICE
SD	SMOKE DETECTOR
SSI	STARTING SWITCH, NO. 1
T	TRANSFORMER, TELEPHONE CIRCUIT
TC	TRIP COIL
UH	UNIT HEATER
V	VOLTS
VAC, VDC	VOLTS AC, VOLTS DC

VARI	VARIEMETER
VM	VOLTMETER
VS	VOLTMETER SWITCH
VT	VOLTAGE TRANSFORMER
WHD	WATTHOUR DEMAND METER
WHM	WATTHOUR METER
WM	WATT METER
W/M	WATT/VA METER
XDCER	TRANSUDCER
XEMR	TRANSFORMER

ELECTRICAL ABBREVIATIONS

GENERAL

MARKS CHANGES MADE IN REVISION 1

NO.	REVISIONS	DATE

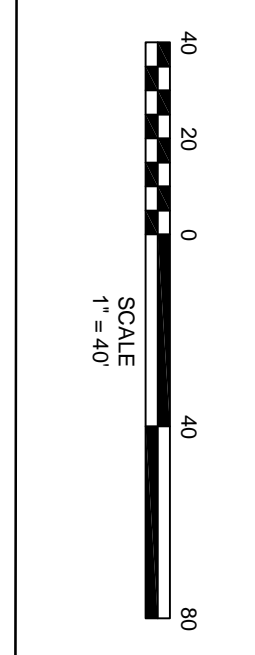
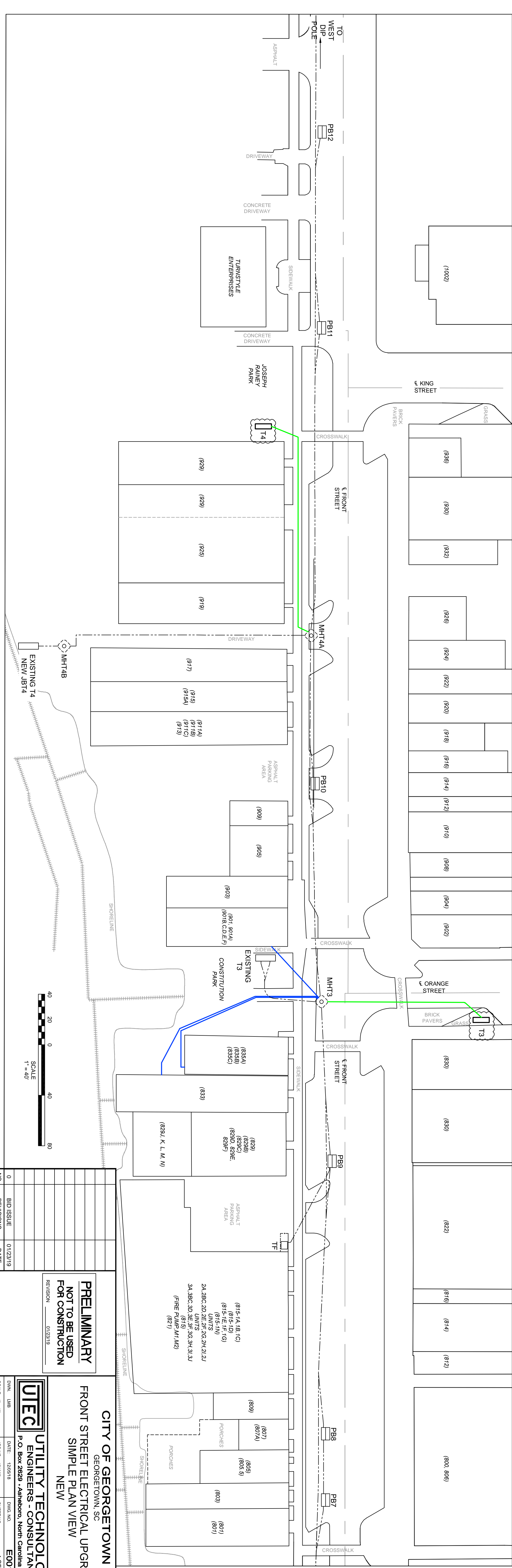
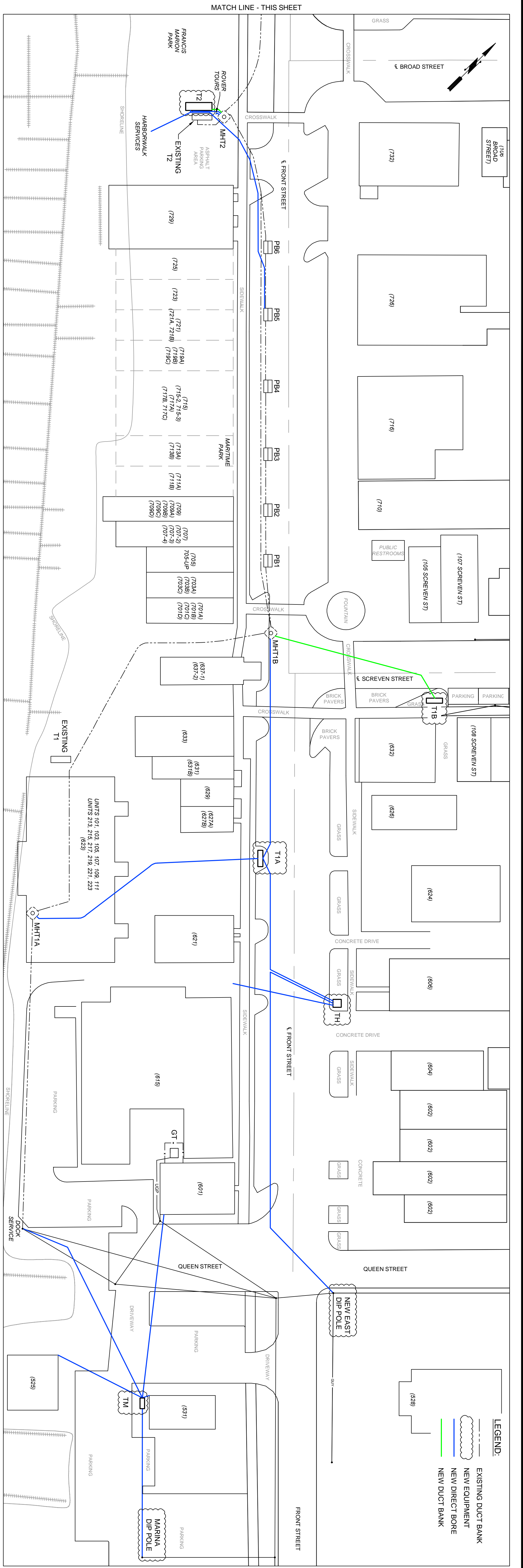
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REVISION 01/23/19

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CITY OF GEORGETOWN
 GEORGETOWN, SC
 FRONT STREET ELECTRICAL UPGRADE
 LEGEND, ABBREVIATIONS
 & GENERAL NOTES

DATE: 01/22/19
 DRAWN BY: [Name]
 SHEET NO: G002
 SCALE: 1/8" = 1'-0"



NO.	REVISIONS	DATE
0.	BID ISSUE	01/23/19

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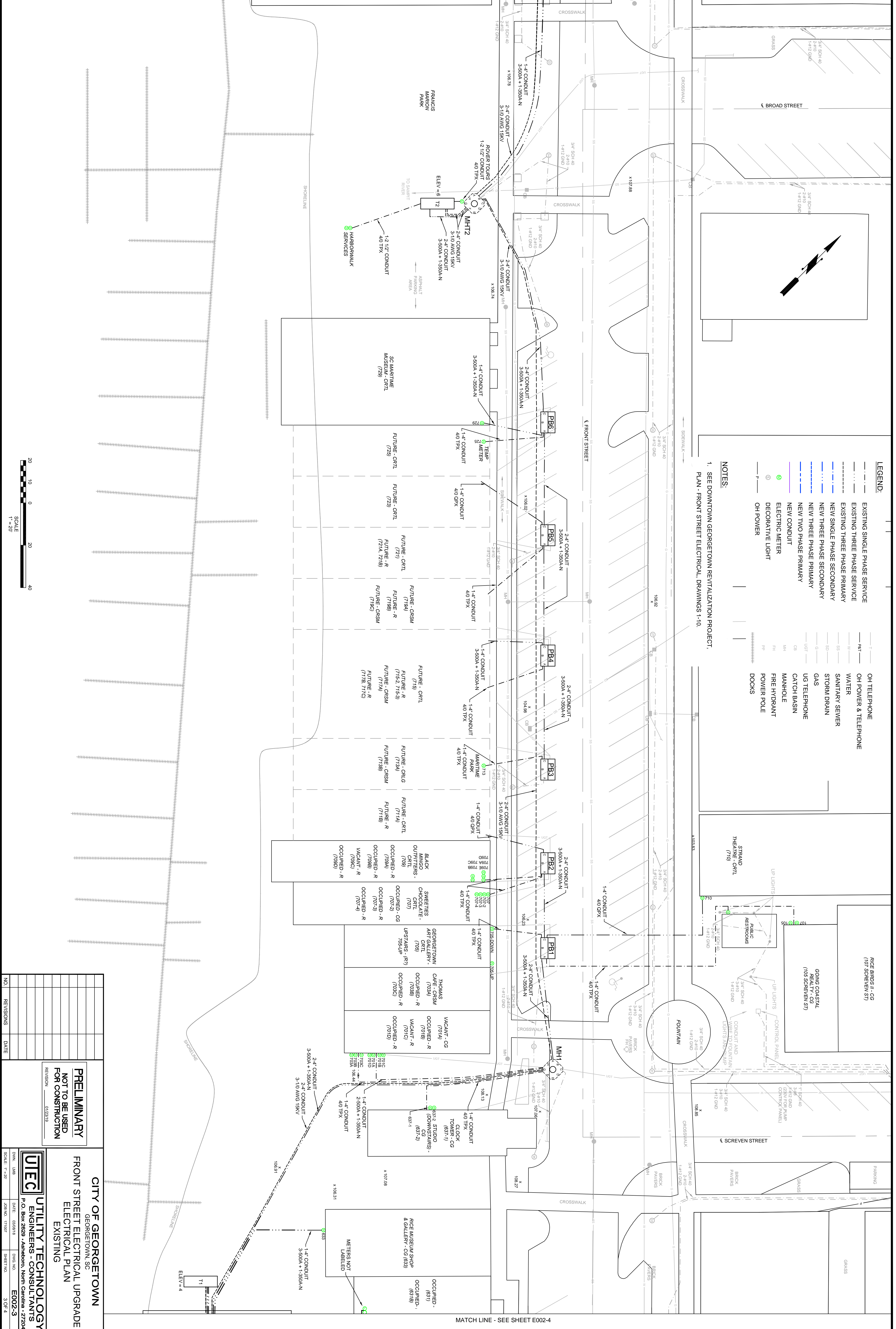
REVISION 01/23/19

CITY OF GEORGETOWN
GEORGETOWN, SC
FRONT STREET ELECTRICAL UPGRADE
SIMPLE PLAN VIEW
NEW

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DATE: 12/05/18	DWG. NO. E001
DATE NO. 17/001	SHEET NO. 1 OF 1

MATCH LINE - SEE SHEET E002-2



- LEGEND:**
- EXISTING SINGLE PHASE SERVICE
 - EXISTING THREE PHASE SERVICE
 - NEW SINGLE PHASE PRIMARY
 - NEW THREE PHASE SECONDARY
 - NEW THREE PHASE PRIMARY
 - NEW TWO PHASE PRIMARY
 - NEW CONDUIT
 - ELECTRIC METER
 - DECORATIVE LIGHT
 - OH POWER
- NOTES:**
- SEE DOWNTOWN GEORGETOWN REVITALIZATION PROJECT, PLAN - FRONT STREET ELECTRICAL, DRAWINGS 1-10.
- OH TELEPHONE & TELEPHONE**
- OH TELEPHONE
 - OH POWER & TELEPHONE
 - WATER
 - SANITARY SEWER
 - STORM DRAIN
 - GAS
 - UG TELEPHONE
 - CB
 - MAHOLE
 - FIRE HYDRANT
 - POWER POLE
 - DOCKS



MATCH LINE - SEE SHEET E002-4

NO.	REVISIONS	DATE

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FOR CONSTRUCTION

REVISION: 01/23/18

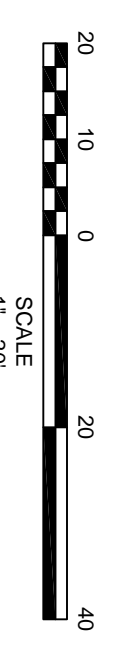
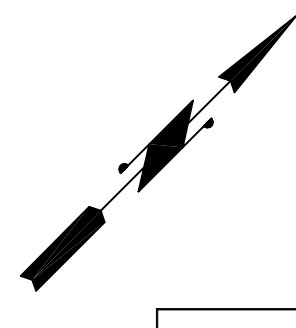
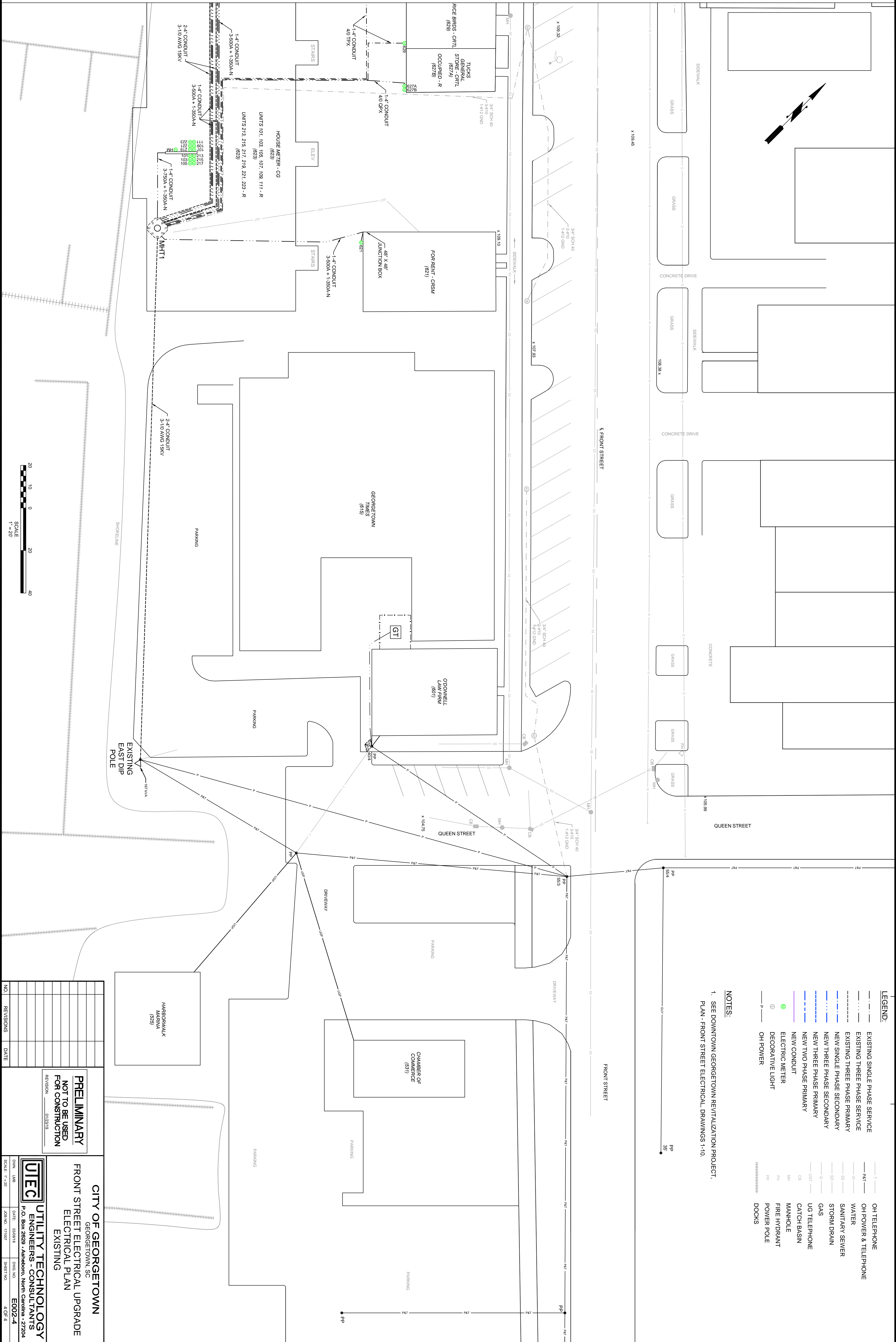
CITY OF GEORGETOWN
GEORGETOWN, SC

FRONT STREET ELECTRICAL UPGRADE
ELECTRICAL PLAN
EXISTING

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DATE: 08/18	DWG. NO: E002-3
SCALE: 1" = 20'	SHEET NO: 3 OF 4

MATCH LINE - SEE SHEET E002-3



LEGEND:

---	EXISTING SINGLE PHASE SERVICE	---	OH TELEPHONE
---	EXISTING THREE PHASE SERVICE	---	OH POWER & TELEPHONE
---	EXISTING THREE PHASE PRIMARY	---	WATER
---	NEW SINGLE PHASE SECONDARY	---	SANITARY SEWER
---	NEW THREE PHASE SECONDARY	---	STORM DRAIN
---	NEW THREE PHASE PRIMARY	---	GAS
---	NEW TWO PHASE PRIMARY	---	UG TELEPHONE
---	NEW CONDUIT	---	CATCH BASIN
---	ELECTRIC METER	---	MANHOLE
---	DECORATIVE LIGHT	---	FIRE HYDRANT
---	OH POWER	---	POWER POLE
---		---	DOCKS

- NOTES:**
- SEE DOWNTOWN GEORGETOWN REVITALIZATION PROJECT, PLAN - FRONT STREET ELECTRICAL DRAWINGS 1-10.

NO.	REVISIONS	DATE

PRELIMINARY
NOT TO BE USED
FOR CONSTRUCTION

REVISION: 01/23/18

CITY OF GEORGETOWN
GEORGETOWN, SC
FRONT STREET ELECTRICAL UPGRADE
ELECTRICAL PLAN
EXISTING

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DWG. NO.	E002-4
DATE	03/08/18
SCALE	1" = 20'
DWG. NO.	2829-113001
SHEET NO.	4 OF 4

HARBORWALK MARINA (529)

CHAMBER OF COMMERCE (531)

SHORELINE

PARKING

PARKING

PARKING

PARKING

PARKING

PARKING

PARKING

PARKING

EXISTING EAST DIP POLE

SHORELINE

PARKING

PARKING

PARKING

PARKING

PARKING

PARKING

HOUSE METER - CG UNITS 101, 103, 105, 107, 109, 111 - R (623)

HOUSE METER - CG UNITS 213, 215, 217, 219, 221, 223 - R (623)

HOUSE METER - CG UNITS 101, 103, 105, 107, 109, 111 - R (623)

HOUSE METER - CG UNITS 213, 215, 217, 219, 221, 223 - R (623)

HOUSE METER - CG UNITS 101, 103, 105, 107, 109, 111 - R (623)

HOUSE METER - CG UNITS 213, 215, 217, 219, 221, 223 - R (623)

HOUSE METER - CG UNITS 101, 103, 105, 107, 109, 111 - R (623)

HOUSE METER - CG UNITS 213, 215, 217, 219, 221, 223 - R (623)

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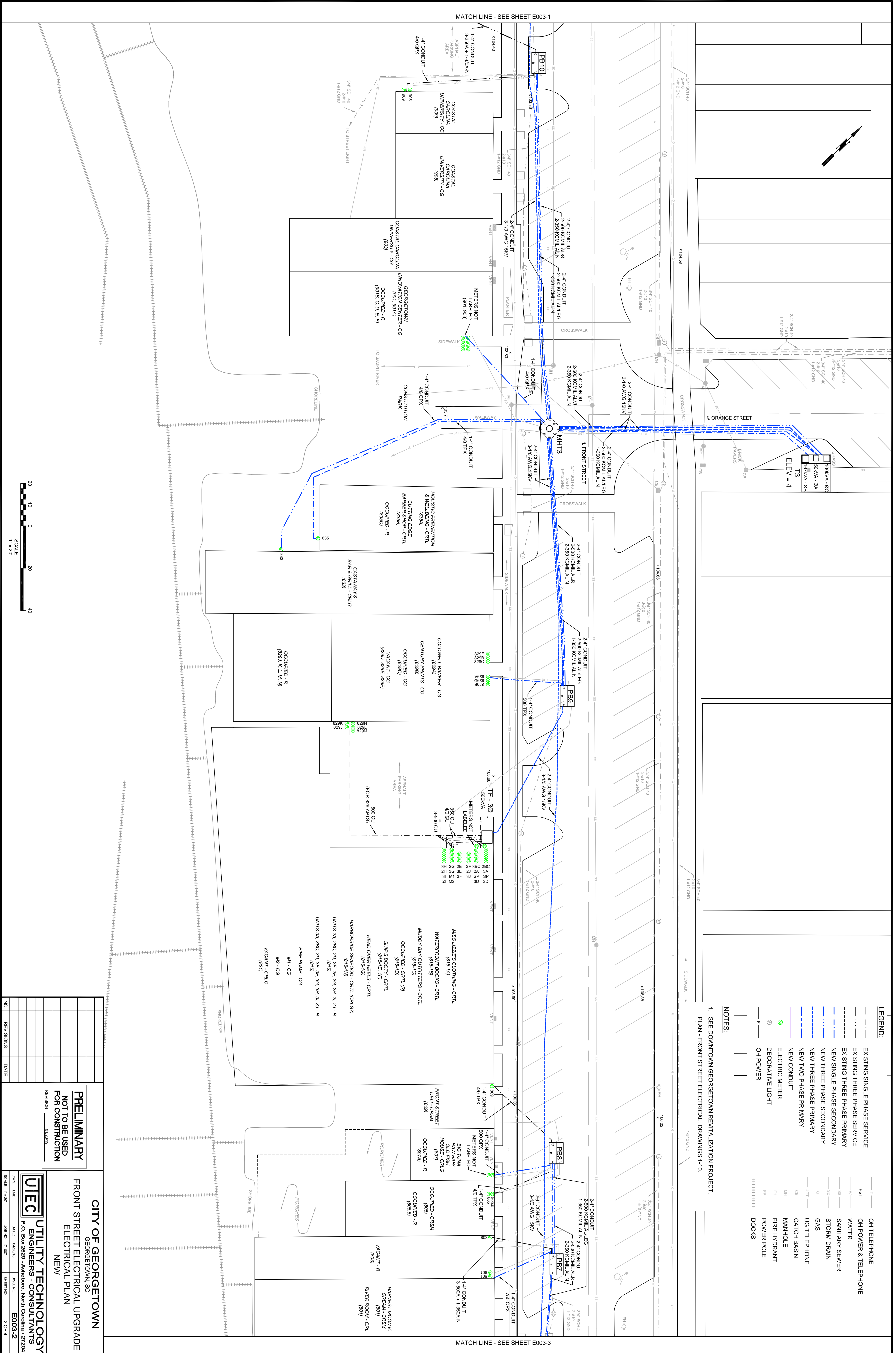
FRONT STREET

FRONT STREET

FRONT STREET

FRONT STREET

FRONT STREET



LEGEND:

- EXISTING SINGLE PHASE SERVICE
- EXISTING THREE PHASE SERVICE
- EXISTING THREE PHASE PRIMARY
- NEW SINGLE PHASE SECONDARY
- NEW THREE PHASE SECONDARY
- NEW THREE PHASE PRIMARY
- NEW TWO PHASE PRIMARY
- NEW CONDUIT
- ELECTRIC METER
- DECORATIVE LIGHT
- OH POWER
- OH TELEPHONE
- OH POWER & TELEPHONE
- WATER
- SANITARY SEWER
- STORM DRAIN
- GAS
- UG TELEPHONE
- CATCH BASIN
- MANHOLE
- FIRE HYDRANT
- POWER POLE
- DOCKS

NOTES:

1. SEE DOWNTOWN GEORGETOWN REVITALIZATION PROJECT, PLAN - FRONT STREET ELECTRICAL DRAWINGS 1-10.

NO.	REVISIONS	DATE

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

REVISION: 01/23/18

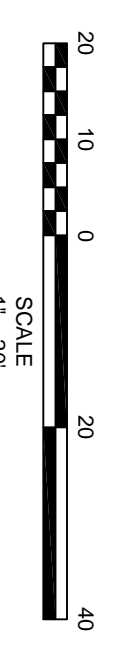
CITY OF GEORGETOWN
GEORGETOWN, SC
FRONT STREET ELECTRICAL UPGRADE
ELECTRICAL PLAN
NEW

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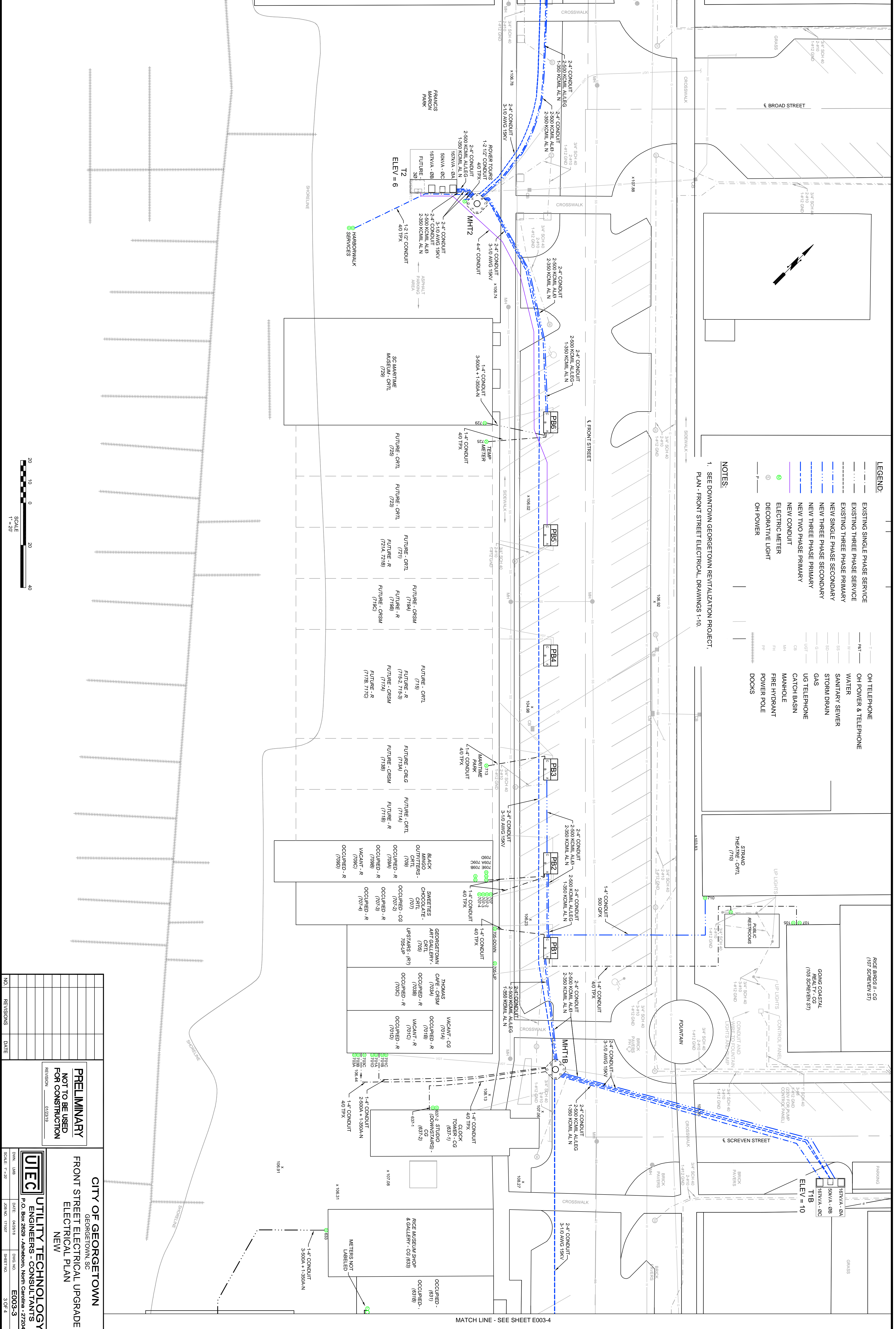
DATE: 06/28/18
DWG NO: E003-2
SHEET NO: 2 OF 4

MATCH LINE - SEE SHEET E003-1

MATCH LINE - SEE SHEET E003-3



MATCH LINE - SEE SHEET E003-2



LEGEND:

- EXISTING SINGLE PHASE SERVICE
- EXISTING THREE PHASE SERVICE
- NEW SINGLE PHASE SECONDARY
- NEW THREE PHASE SECONDARY
- NEW THREE PHASE PRIMARY
- NEW TWO PHASE PRIMARY
- NEW CONDUIT
- ELECTRIC METER
- DECORATIVE LIGHT
- OH POWER

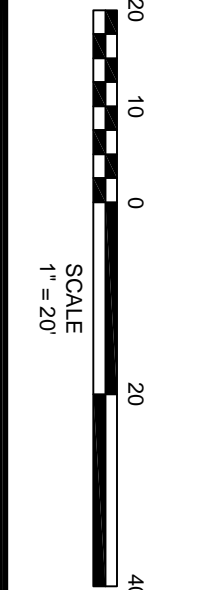
NOTES:

- SEE DOWNTOWN GEORGETOWN REVITALIZATION PROJECT, PLAN - FRONT STREET ELECTRICAL, DRAWINGS 1-10.

OH TELEPHONE & TELEPHONE

- OH TELEPHONE
- WATER
- SANITARY SEWER
- STORM DRAIN
- GAS
- UG TELEPHONE
- CATCH BASIN
- MANHOLE
- FIRE HYDRANT
- POWER POLE
- DOCKS

MATCH LINE - SEE SHEET E003-4



CITY OF GEORGETOWN
 GEORGETOWN, SC
FRONT STREET ELECTRICAL UPGRADE
 ELECTRICAL PLAN
 NEW

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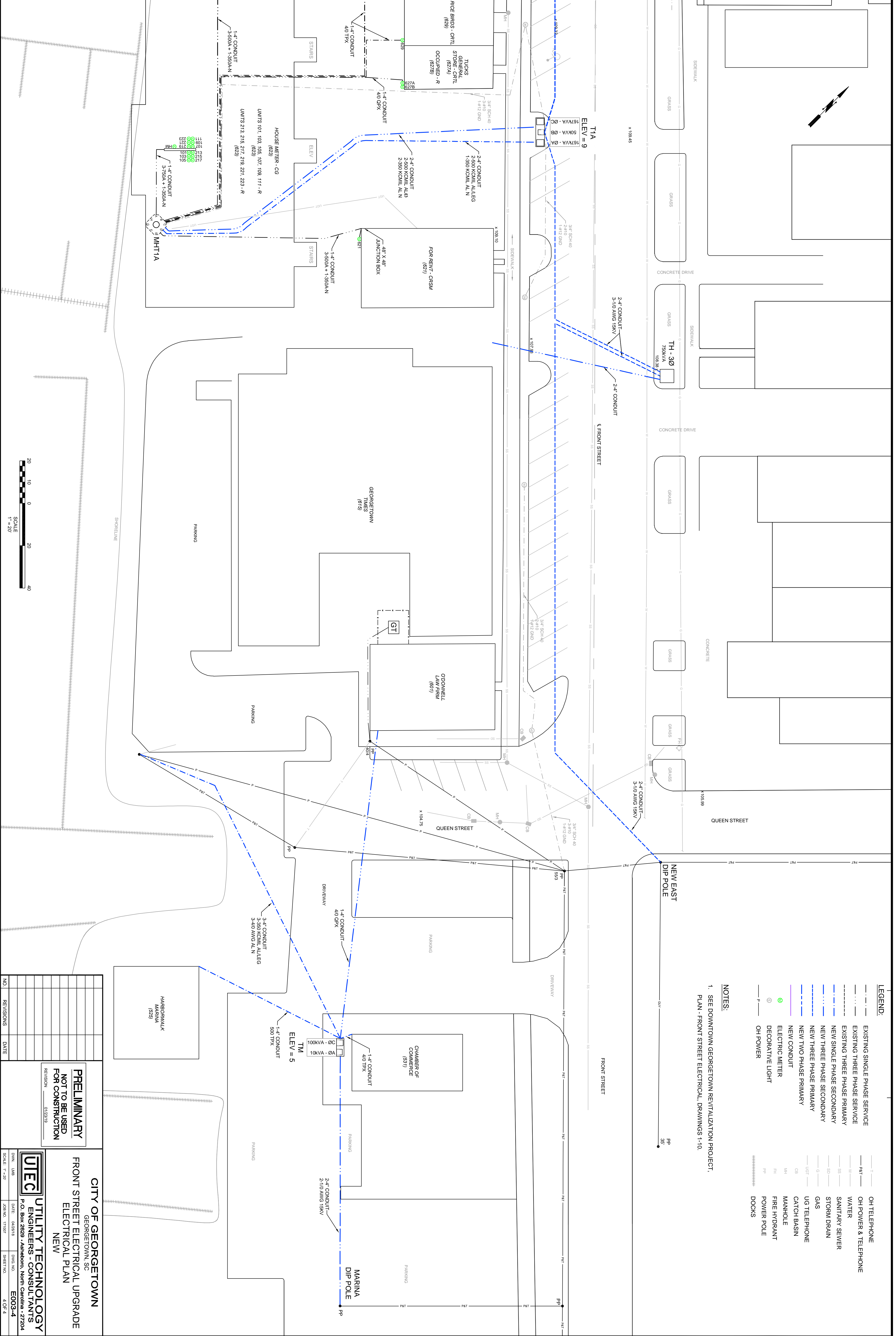
NO.	REVISIONS	DATE

DATE: 06/28/18
 DWG. NO.: 171201
 SHEET NO.: E003-3
 SCALE: 1" = 20'

PRELIMINARY
 NOT TO BE USED
 FOR CONSTRUCTION

REVISION: 01/23/18

MATCH LINE - SEE SHEET E003-3



LEGEND:

- EXISTING SINGLE PHASE SERVICE
- EXISTING THREE PHASE SERVICE
- EXISTING THREE PHASE PRIMARY
- NEW SINGLE PHASE SECONDARY
- NEW THREE PHASE SECONDARY
- NEW THREE PHASE PRIMARY
- NEW TWO PHASE PRIMARY
- NEW CONDUIT
- ELECTRIC METER
- DECORATIVE LIGHT
- OH POWER
- OH TELEPHONE
- OH POWER & TELEPHONE
- WATER
- SANITARY SEWER
- STORM DRAIN
- GAS
- UG TELEPHONE
- CATCH BASIN
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- DOCKS

NOTES:

- SEE DOWNTOWN GEORGETOWN REVITALIZATION PROJECT, PLAN - FRONT STREET ELECTRICAL DRAWINGS 1-10.

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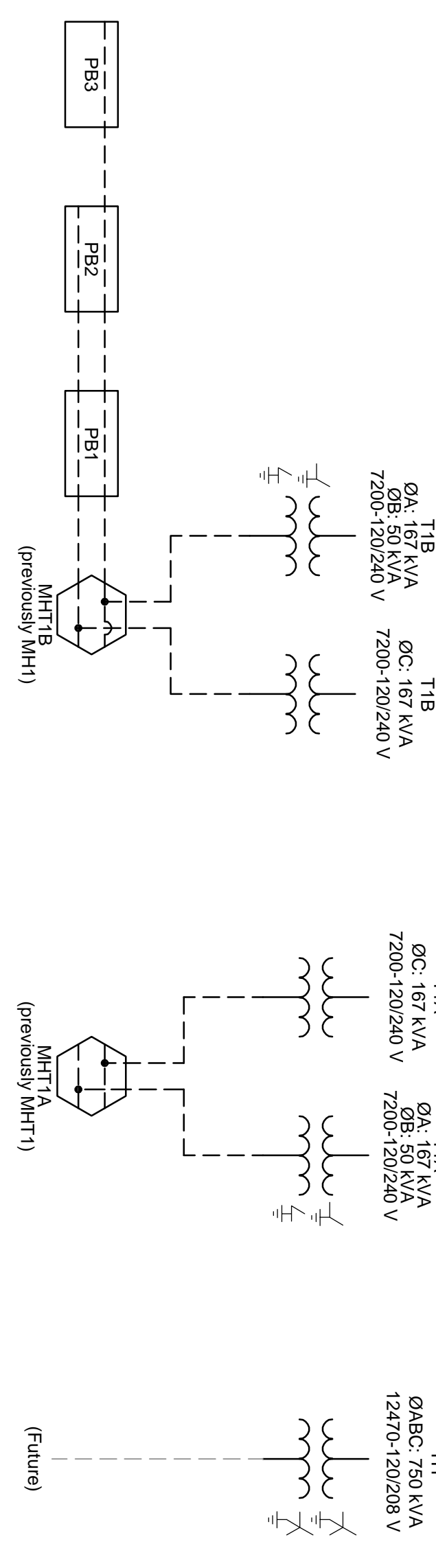
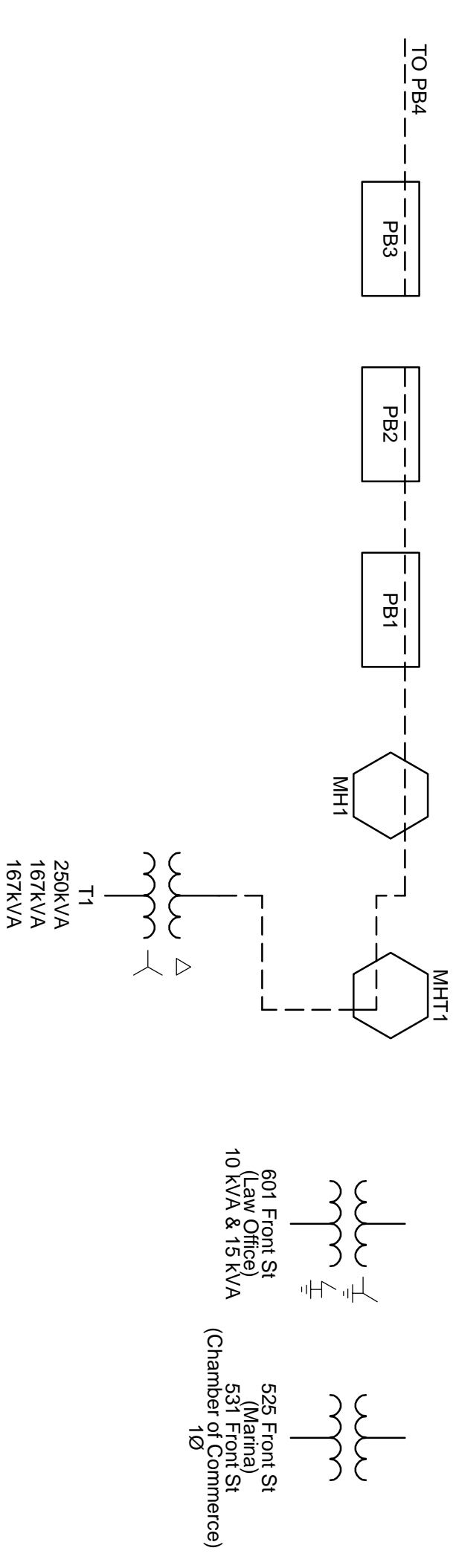
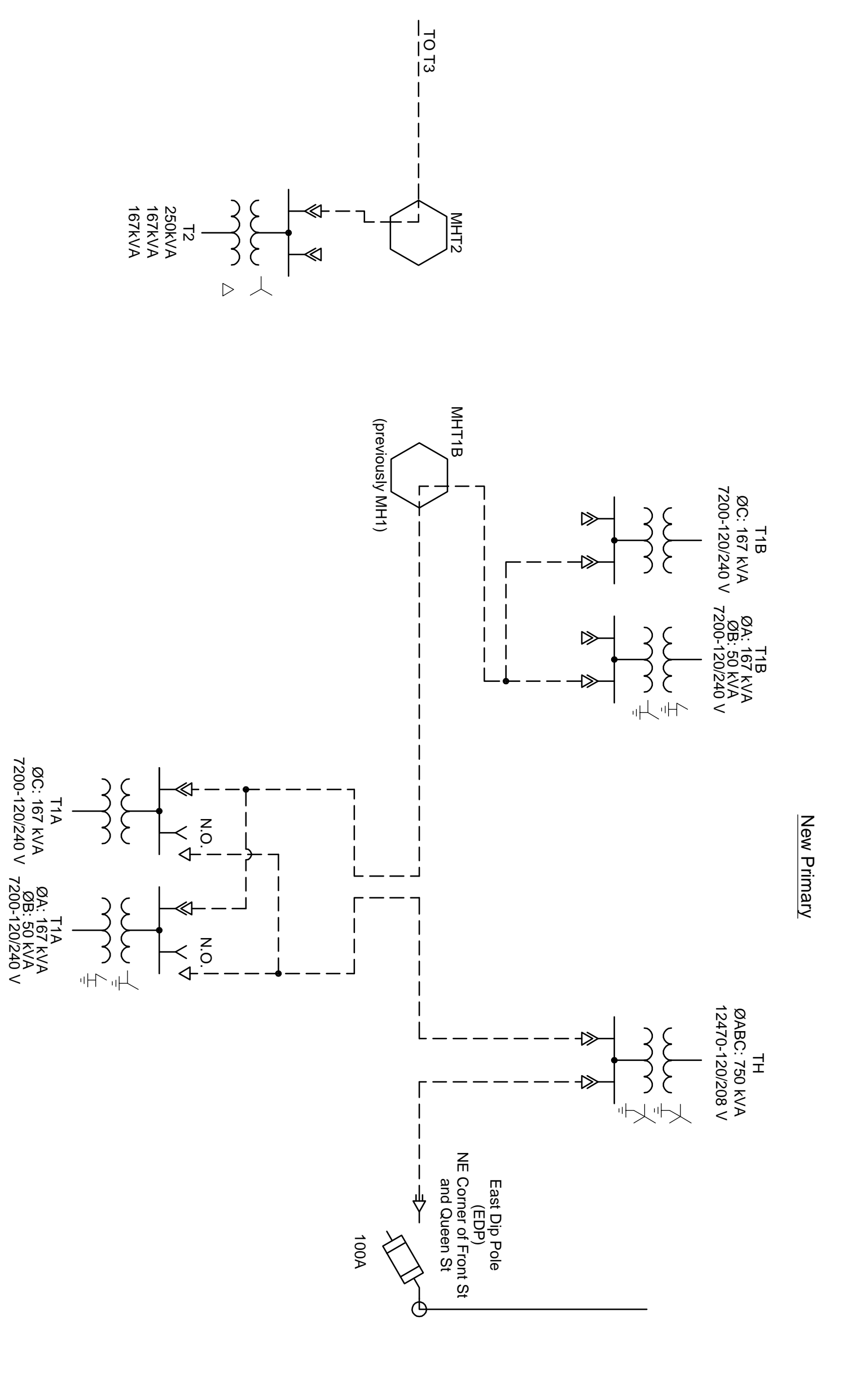
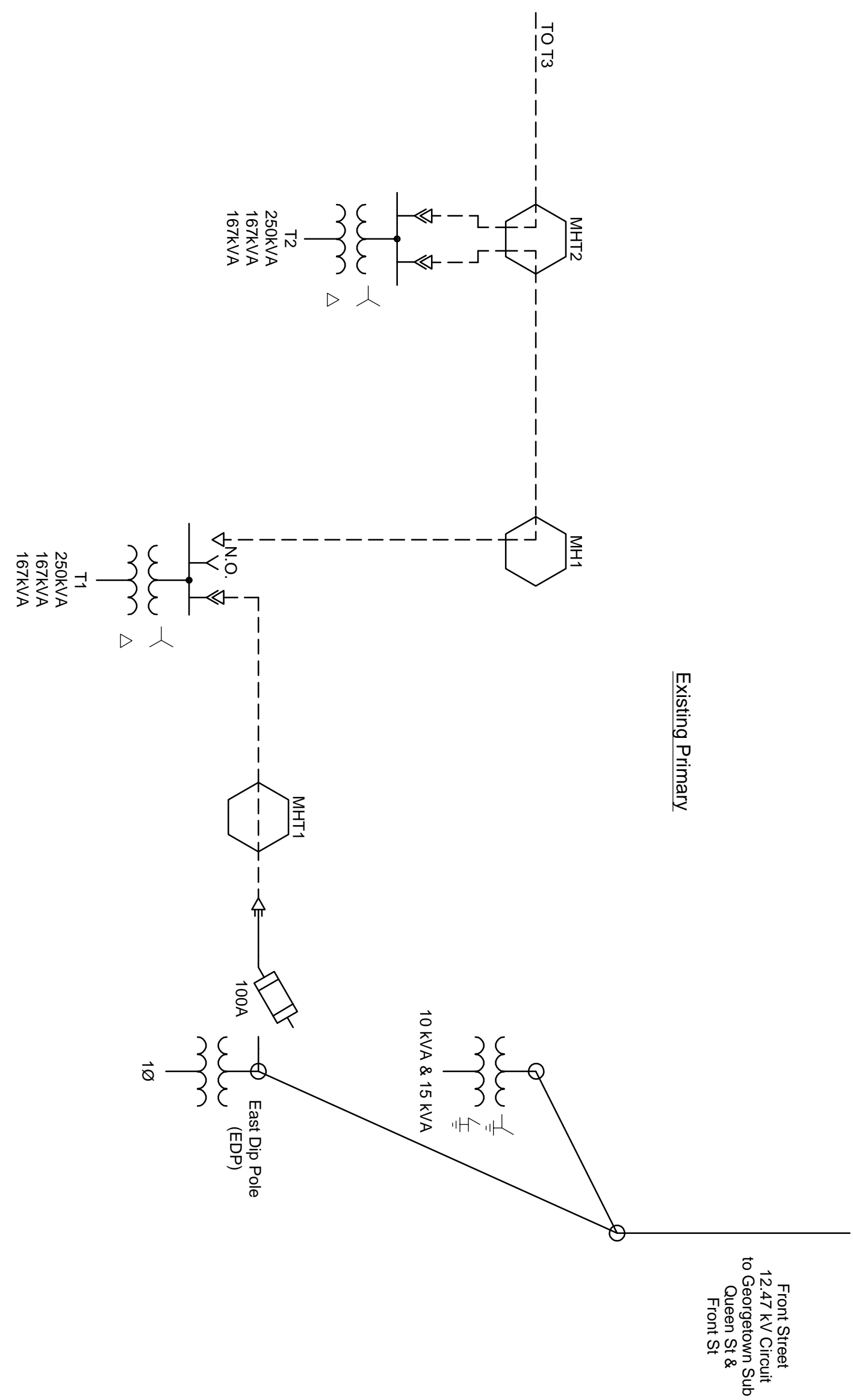
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CITY OF GEORGETOWN
GEORGETOWN, SC
FRONT STREET ELECTRICAL UPGRADE
ELECTRICAL PLAN
NEW

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DATE: 06/2018	DWG. NO. E003-4
DATE: 06/2018	DWG. NO. E003-4
DATE: 06/2018	DWG. NO. E003-4
DATE: 06/2018	DWG. NO. E003-4

SCALE: 1" = 20'



PHASE 1 - PRE-CONSTRUCTION/MOBILIZATION

1. PROVIDE DETAILED CONSTRUCTION PLAN AND SCHEDULE
2. PRE-CONSTRUCTION MEETING
3. SET CONSTRUCTION TRAILER
4. TEMPORARY UTILITY SERVICES
5. SITE INSPECTION AND FINALIZE CONSTRUCTION SCHEDULE

PHASE 2 - DIP POLES, FOUNDATIONS, DUCT BANK, AND DIRECT BORE CONDUITS

1. INSTALL NEW EAST DIP POLE (EDP) AND MARINA AREA DIP POLE (MADP) (BY OTHERS)
2. INSTALL FOUNDATIONS FOR NEW T1A, T1B, T1C, T2, T3, AND T4 TRANSFORMERS.
3. INSTALL NEW DUCT BANKS: T1B TO MHT1B (PREVIOUSLY MHT1); T2 TO MHT2; T3 TO MHT3; AND T4 TO MHT4 (PREVIOUSLY MHT2).
4. INSTALL NEW DIRECT BORE CONDUITS: NEW MADP TO T1A, T1B TO CUSTOMERS 525 FRONT ST, 531 FRONT ST, 601 FRONT ST, AND MARINA DOCK SERVICE; NEW EDP TO TH, T1 TO T1A, T1B TO STUB UP JUST INSIDE 615 FRONT ST PROPERTY; T1A TO MHT1A (PREVIOUSLY MHT1) AND MHT1B; MHT2 TO ROBERTSONS AND HARBORWALK SERVICE; MHT3 TO CUSTOMERS 833 FRONT ST, 853 FRONT ST, AND 901/903 FRONT ST.

PHASE 3 - TRANSFORMERS T1A, T1B, AND TH

1. INSTALL NEW T1A, T1B, AND TH TRANSFORMERS.
2. INSTALL NEW PRIMARY CABLE FROM NEW EDP TO TH, T1 TO T1A.
3. REMOVE EXISTING CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT1A. LEAVE EXISTING CABLES IN MANHOLE.
4. INSTALL NEW CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT1A.
5. INSTALL NEW SECONDARY CABLE FROM T1A TO MHT1A.
6. DE-ENERGIZE EXISTING T1 TRANSFORMERS.
7. DISCONNECT ALL SERVICES IN MHT1A FROM EXISTING T1 TRANSFORMER SECONDARIES. INSTALL INSULATING SLEEVE COVERS ON EXISTING CONNECTORS WHERE SERVICES WERE REMOVED.
8. RE-ENERGIZE EXISTING T1 TRANSFORMERS TO RESTORE SERVICE TO REMAINING T1 CUSTOMERS FED FROM MHT1B, PB1, AND PB2.
9. RECONNECT ALL SERVICES IN MHT1A TO NEW T1A TRANSFORMER SECONDARIES.
10. ENERGIZE NEW T1A TRANSFORMERS FROM NEW TH TRANSFORMER.
11. REMOVE EXISTING CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT1B, PB1, PB2, AND PB3. LEAVE EXISTING CABLES IN MANHOLE/PULLBOXES.
12. INSTALL NEW CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT1B, PB1, PB2, AND PB3.
13. INSTALL NEW PRIMARY CABLE FROM T1A TO T1B.
14. INSTALL NEW SECONDARY CABLE FROM T1B TO MHT1B.
15. INSTALL NEW SECONDARY CABLE FROM MHT1B TO PB1, PB2 AND PB3 FOR THE OPEN-WYE/OPEN-DELTA TRANSFORMER ONLY.
16. DE-ENERGIZE EXISTING T1 TRANSFORMERS.
17. SWAP ALL SERVICES IN MHT1B FROM EXISTING T1 TRANSFORMERS SECONDARIES TO NEW T1B TRANSFORMER SECONDARIES. NEW LARGER SERVICE CABLE TO BE INSTALLED FOR CUSTOMER 701/703 FRONT ST. SWAP ALL SERVICES IN PB1 AND PB2 FROM EXISTING T1 TRANSFORMERS TO NEW T1B OPEN-WYE/OPEN-DELTA TRANSFORMER BANK SECONDARIES ONLY. NEW LARGER SERVICE CABLE TO BE INSTALLED FOR CUSTOMER THEATRE. REMOVE ALL PREVIOUS SECONDARY CABLES IN MHT1A, MHT1B, PB1 AND PB2.
18. ENERGIZE NEW T1B TRANSFORMERS FROM NEW T1A.
19. REMOVE PREVIOUS PRIMARY CABLES FROM EXISTING T1 TO EDP AND TO EXISTING T2.
20. INSTALL NEW SECONDARY CABLE FROM MHT1B THRU PB1 AND PB2 FOR THE T1B SINGLE PHASE TRANSFORMER.
21. DE-ENERGIZE NEW T1B TRANSFORMERS.
22. SWAP SINGLE PHASE SERVICES IN PB1 AND PB2 TO NEW T1B SINGLE PHASE TRANSFORMER SECONDARY.
23. DE-ENERGIZE EXISTING TRANSFORMER T2.
24. SWAP SERVICE IN PB3 TO NEW T1B OPEN-WYE/OPEN-DELTA TRANSFORMER BANK SECONDARY.
25. REMOVE PREVIOUS SECONDARY BETWEEN PB3 AND PB4. INSTALL INSULATING SLEEVE COVERS ON EXISTING CONNECTORS WHERE SERVICE AND SECONDARY CABLES WERE REMOVED.
26. RE-ENERGIZE EXISTING TRANSFORMER T2.
27. ENERGIZE NEW T1B TRANSFORMERS FROM NEW T1A.
28. REMOVE EXISTING T1 TRANSFORMERS, ENCLOSURE, CABLES, ASSOCIATED EQUIPMENT AND FOUNDATION. CUT CONDUITS TO BELOW GROUNDLINE. FILL FOUNDATION AREA WITH TOPSOIL AND SEED WITH GRASS.

NO.	BID/ISSUE	DATE	REVISIONS
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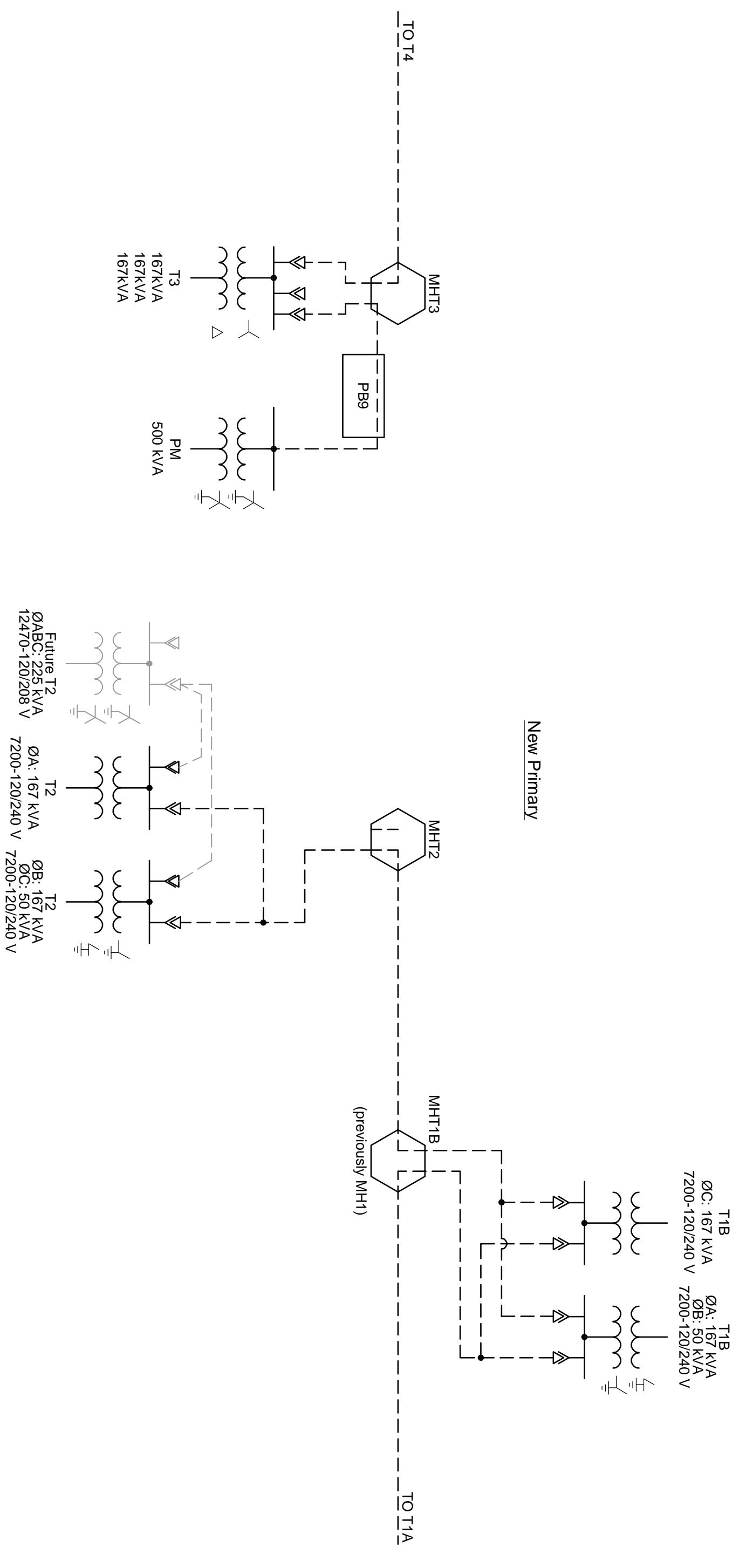
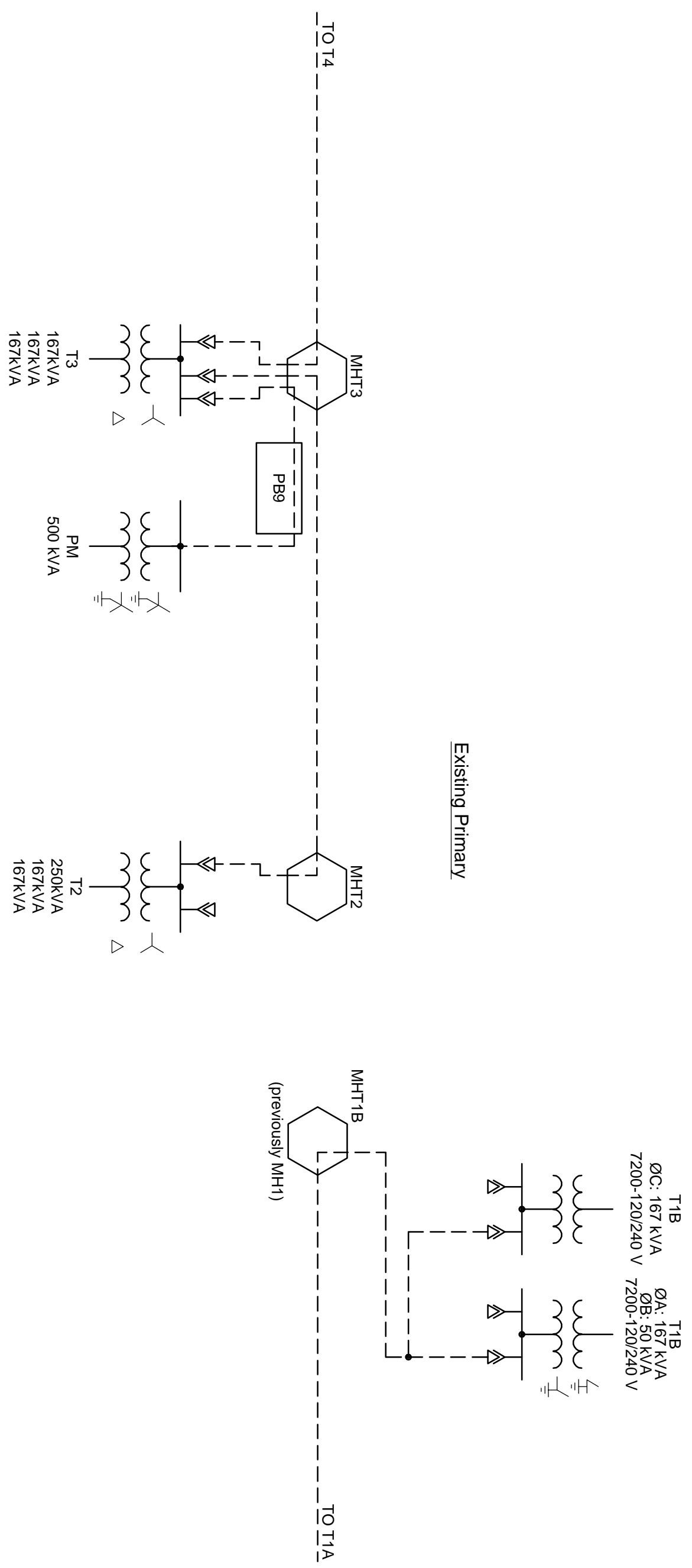
CITY OF GEORGETOWN
GEORGETOWN, SC

**FRONT STREET ELECTRICAL UPGRADE
CONSTRUCTION SEQUENCE
PHASES 1 - 3**

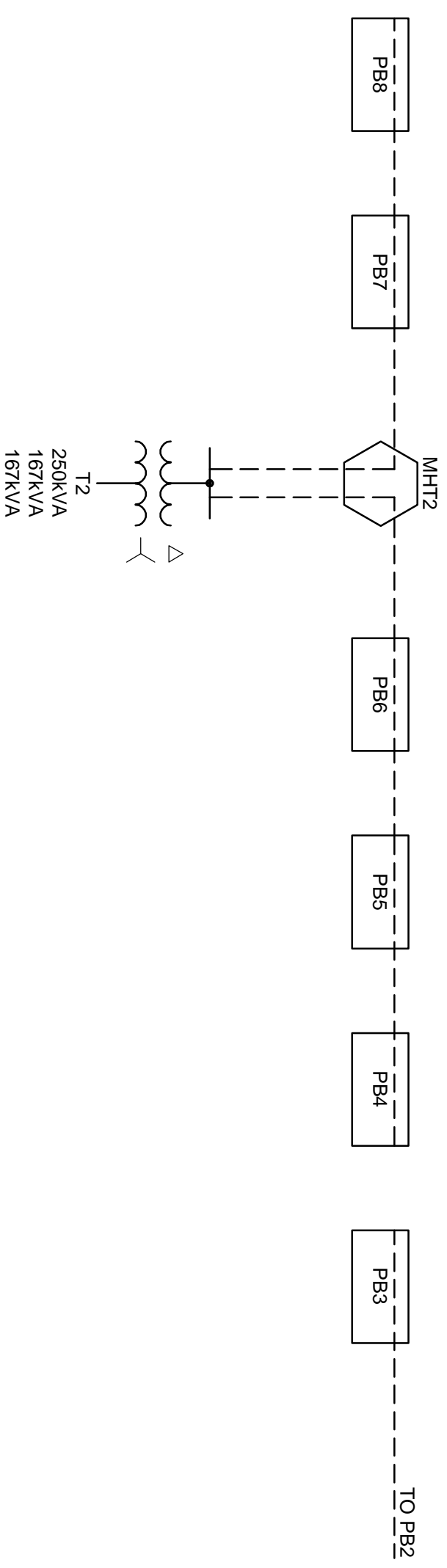
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ENGINEERS - CONSULTANTS

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SCALE: NONE

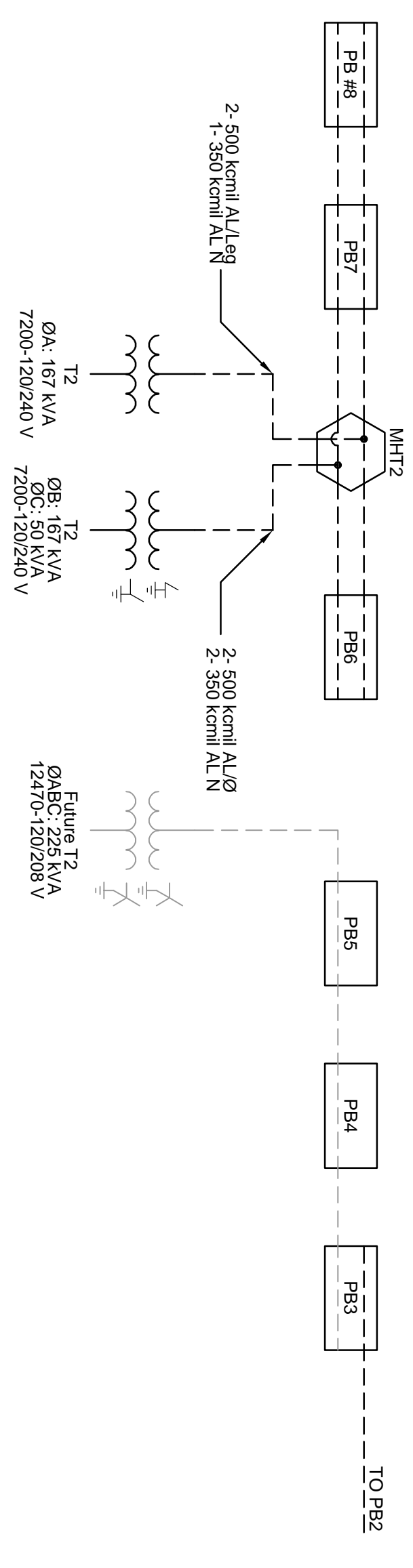
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SHEET NO. 1 OF 1



Existing Secondary



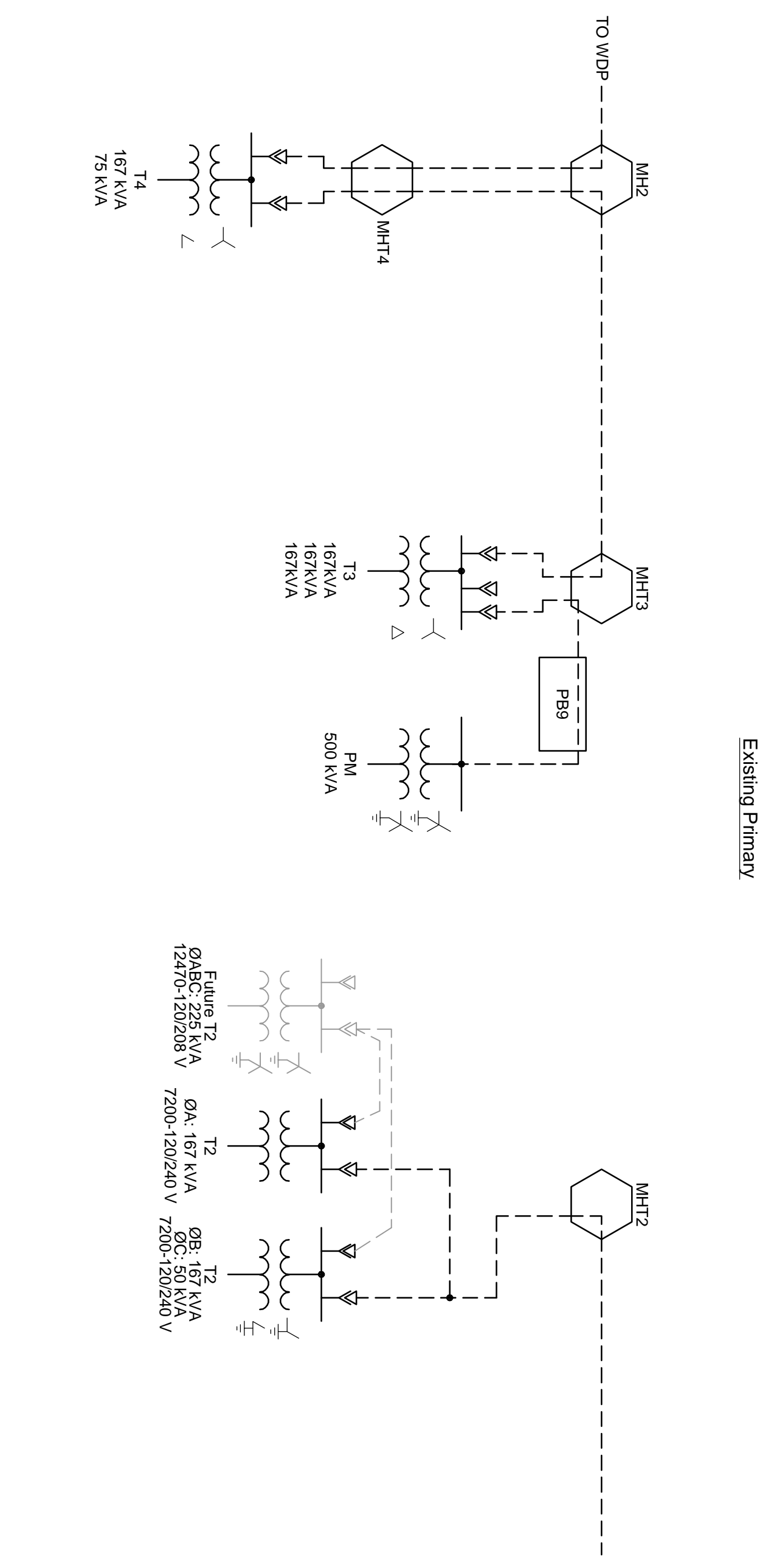
New Secondary



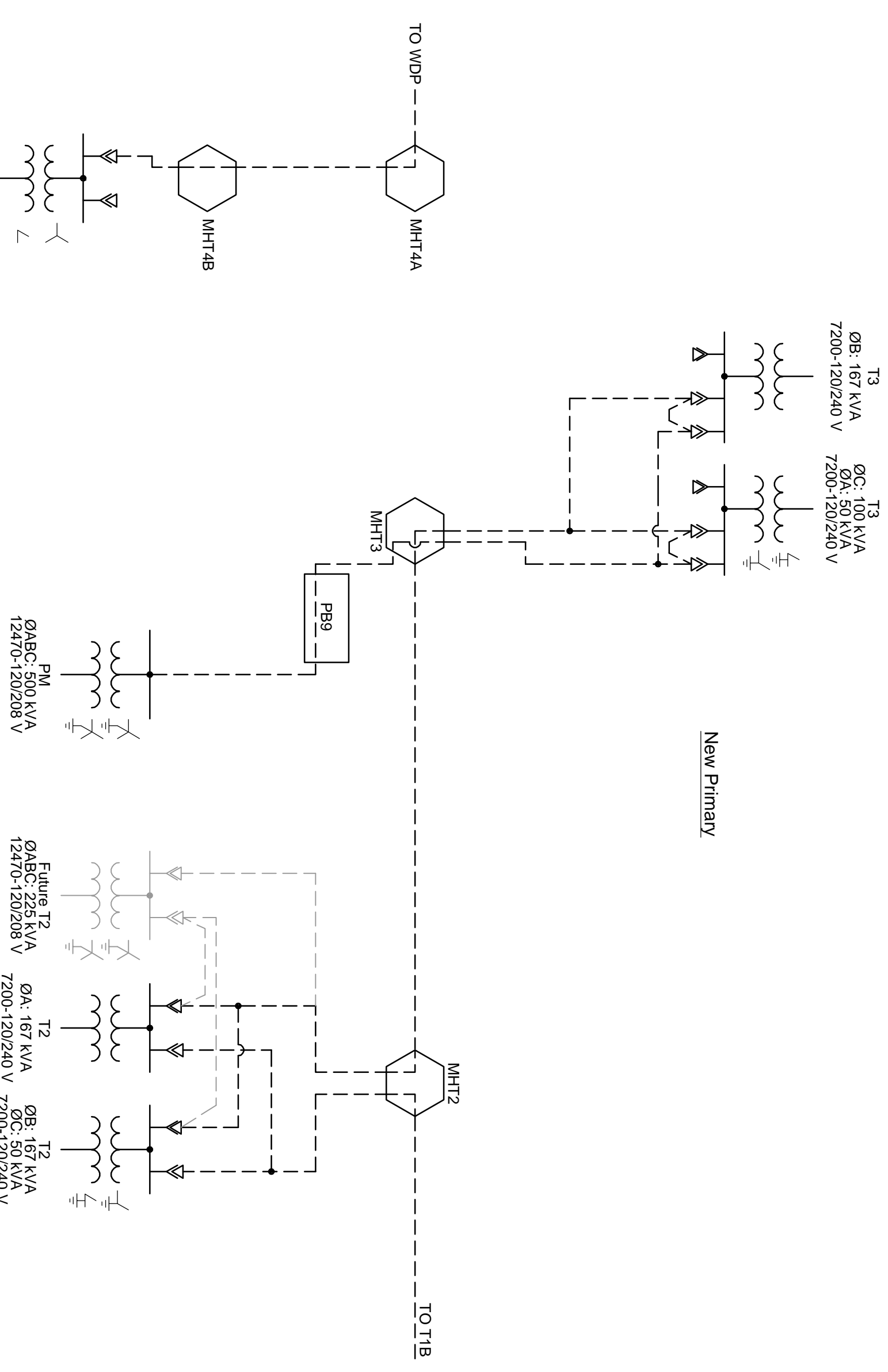
- PHASE 4 - TRANSFORMER T2**
1. INSTALL NEW T2 TRANSFORMERS.
 2. REMOVE EXISTING CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT2, PB4, PB5, PB6, PB7 AND PB8. LEAVE EXISTING CABLES IN MANHOLE/PULLBOXES.
 3. INSTALL NEW CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT2, PB4, PB5, PB6, PB7, AND PB8.
 4. INSTALL NEW PRIMARY CABLE FROM T1B TO T2.
 5. INSTALL NEW SECONDARY CABLE FROM MHT2 TO PB6, PB7 AND PB8 FOR THE OPEN-WYE/OPEN-DELTA TRANSFORMER ONLY.
 6. INSTALL NEW SECONDARY CABLE FROM MHT2 TO MHT2.
 7. DE-ENERGIZE EXISTING T2 TRANSFORMERS.
 8. SWAP ALL SERVICES IN MHT2 FROM EXISTING T2 TRANSFORMER SECONDARIES TO NEW T2 TRANSFORMER SECONDARIES. NEW SERVICE CABLE WILL NEED TO BE PULLED FOR THE HARBORWALK AND ROVER TOURS SERVICES. SWAP ALL SERVICES IN PB6, PB7, AND PB8 FROM EXISTING T2 TRANSFORMER SECONDARIES TO NEW T2 OPEN-WYE/OPEN-DELTA TRANSFORMER BANK SECONDARIES ONLY. NEW LARGER SERVICE CABLES TO BE INSTALLED FOR CUSTOMERS 801 AND 807 FRONT ST. REMOVE ALL PREVIOUS SECONDARY CABLES IN MHT2, PB4, PB5, PB6, PB7 AND PB8.
 9. ENERGIZE NEW T2 TRANSFORMERS FROM NEW T1B TRANSFORMERS.
 10. REMOVE PREVIOUS PRIMARY CABLES FROM T2 TO T3.
 11. INSTALL NEW SECONDARY CABLE FROM MHT2 THRU PB6, PB7 AND PB8 FOR THE NEW T2 SINGLE PHASE TRANSFORMER.
 12. DE-ENERGIZE NEW T2 TRANSFORMERS.
 13. SWAP SINGLE PHASE SERVICES IN PB6, PB7, AND PB8 TO NEW T2 SINGLE PHASE TRANSFORMER SECONDARY.
 14. ENERGIZE NEW T2 TRANSFORMERS FROM THE NEW T1B TRANSFORMERS.
 15. REMOVE EXISTING T2 TRANSFORMERS, ENCLOSURE, CABLES ASSOCIATED EQUIPMENT AND FOUNDATION. CUT CONDUITS TO BELOW GROUNDLINE.
 16. INSTALL DIRECT BORE CONDUIT FROM NEW T2 TRANSFORMERS TO PB5.
 17. FILL EXISTING T2 FOUNDATION AREA WITH TOPSOIL AND SEE WITH GRASS.

1. INSTALL NEW T2 TRANSFORMERS.
2. REMOVE EXISTING CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT2, PB4, PB5, PB6, PB7 AND PB8. LEAVE EXISTING CABLES IN MANHOLE/PULLBOXES.
3. INSTALL NEW CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT2, PB4, PB5, PB6, PB7, AND PB8.
4. INSTALL NEW PRIMARY CABLE FROM T1B TO T2.
5. INSTALL NEW SECONDARY CABLE FROM MHT2 TO MHT2.
6. INSTALL NEW SECONDARY CABLE FROM MHT2 TO PB6, PB7 AND PB8 FOR THE OPEN-WYE/OPEN-DELTA TRANSFORMER ONLY.
7. DE-ENERGIZE EXISTING T2 TRANSFORMERS.
8. SWAP ALL SERVICES IN MHT2 FROM EXISTING T2 TRANSFORMER SECONDARIES TO NEW T2 TRANSFORMER SECONDARIES. NEW SERVICE CABLE WILL NEED TO BE PULLED FOR THE HARBORWALK AND ROVER TOURS SERVICES. SWAP ALL SERVICES IN PB6, PB7, AND PB8 FROM EXISTING T2 TRANSFORMER SECONDARIES TO NEW T2 OPEN-WYE/OPEN-DELTA TRANSFORMER BANK SECONDARIES ONLY. NEW LARGER SERVICE CABLES TO BE INSTALLED FOR CUSTOMERS 801 AND 807 FRONT ST. REMOVE ALL PREVIOUS SECONDARY CABLES IN MHT2, PB4, PB5, PB6, PB7 AND PB8.
9. ENERGIZE NEW T2 TRANSFORMERS FROM NEW T1B TRANSFORMERS.
10. REMOVE PREVIOUS PRIMARY CABLES FROM T2 TO T3.
11. INSTALL NEW SECONDARY CABLE FROM MHT2 THRU PB6, PB7 AND PB8 FOR THE NEW T2 SINGLE PHASE TRANSFORMER.
12. DE-ENERGIZE NEW T2 TRANSFORMERS.

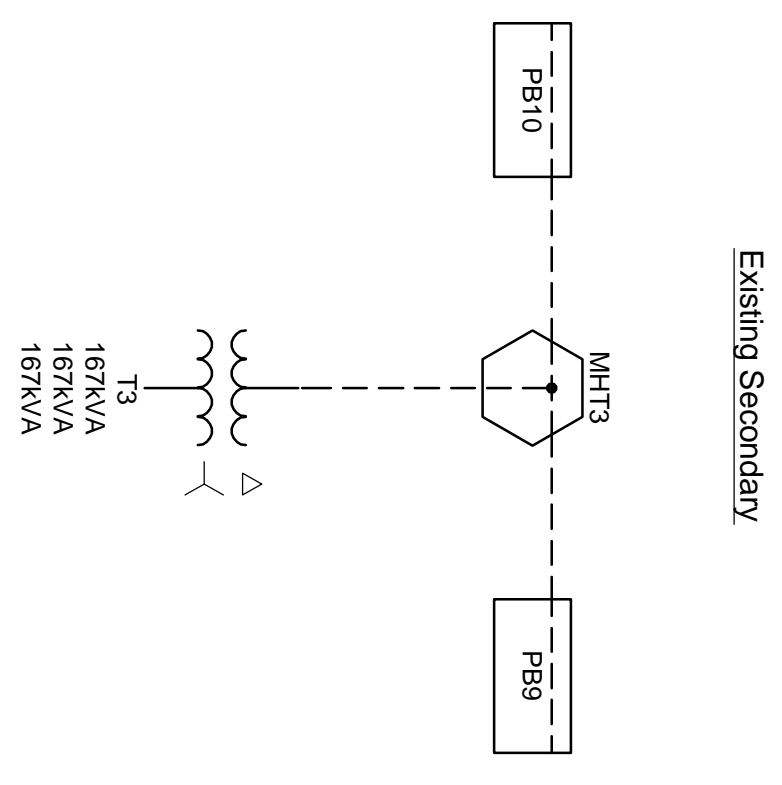
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CITY OF GEORGETOWN GEORGETOWN, SC		UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS	
FRONT STREET ELECTRICAL UPGRADE CONSTRUCTION SEQUENCE PHASE 4		P.O. Box 2829 • Ashboro, North Carolina • 27204	
DATE: 12/31/18	DWG. NO. E004-2	DATE: 12/31/18	DWG. NO. 1 OF 1
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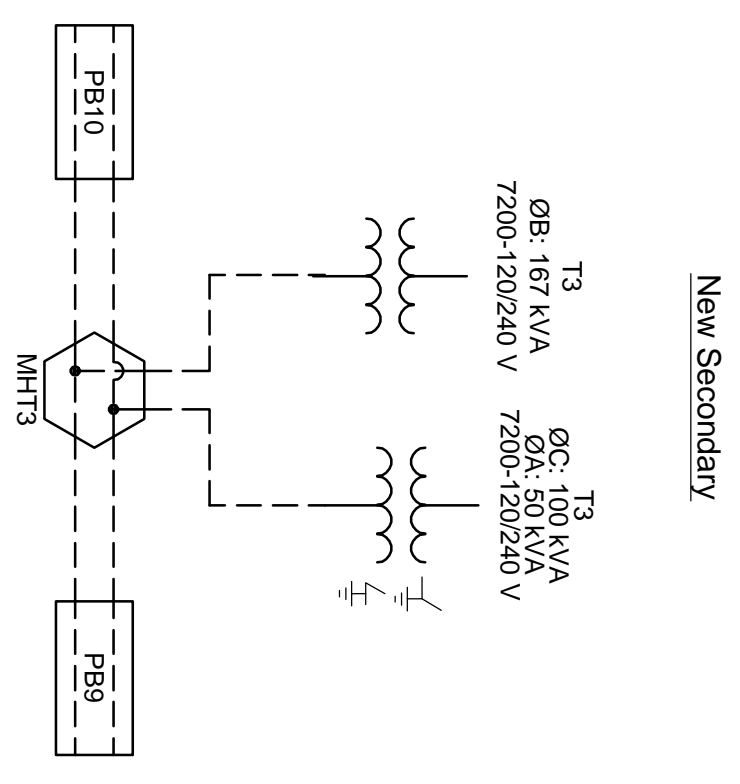
Existing Primary



New Primary



Existing Secondary



New Secondary

- PHASE 5 - TRANSFORMERS T3 AND TF
1. INSTALL NEW T3 TRANSFORMERS.
 2. REMOVE EXISTING CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT3, P89, AND P810. LEAVE EXISTING CABLES IN MANHOLE/PULLBOXES.
 3. INSTALL NEW CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT3, P89, AND P810.
 4. INSTALL NEW PRIMARY CABLE FROM T2 TO T3. INSTALL NEW PRIMARY CABLE FROM T3 TO MHT3 FOR EXISTING TF TRANSFORMER.
 5. INSTALL NEW SECONDARY CABLE FROM T3 TO MHT3.
 6. INSTALL NEW SECONDARY CABLE FROM MHT3 TO P89 FOR THE NEW T3 SINGLE PHASE TRANSFORMER ONLY.
 7. INSTALL NEW SECONDARY CABLE FROM MHT3 TO P810, FOR THE NEW T3 OPEN-WYE/OPEN-DELTA TRANSFORMER ONLY.
 8. DE-ENERGIZE EXISTING PADMOUNT AND T3 TRANSFORMERS.
 9. SWAP ALL SERVICES IN MHT3 FROM EXISTING T3 TRANSFORMER SECONDARIES TO NEW T3 TRANSFORMER SECONDARIES. SWAP ALL SERVICES IN P89 FROM EXISTING T3 TRANSFORMER SECONDARIES TO NEW T3 SINGLE PHASE TRANSFORMER ONLY. NEW LARGER SERVICE CABLE TO BE INSTALLED FOR CUSTOMER 829 FRONT ST. SWAP ALL SERVICES IN P810 FROM EXISTING T3 TRANSFORMER SECONDARIES TO NEW T3 OPEN-WYE/OPEN-DELTA TRANSFORMER BANK SECONDARIES ONLY. NEW SERVICE CABLES WILL NEED TO BE PULLED FOR CUSTOMERS AT 833 FRONT ST, 835 FRONT ST, 901 FRONT ST AND 903 FRONT ST. REMOVE ALL PREVIOUS SECONDARY CABLES.
 10. SPLICE EXISTING TF PRIMARY CABLE TO NEW PRIMARY CABLE FROM NEW T3 TRANSFORMERS IN MHT3. EXISTING PRIMARY CABLE IN P89 SHOULD BE SUPPORTED ON NEWLY INSTALLED CABLE SUPPORT BRACKETS.

11. ENERGIZE NEW T3 TRANSFORMERS AND EXISTING TF FROM NEW T2 TRANSFORMERS.
12. REMOVE PREVIOUS PRIMARY CABLES FROM T3 TO T4.
13. INSTALL NEW SECONDARY CABLE FROM MHT3 TO P810 FOR THE T1B SINGLE PHASE TRANSFORMER.
14. DE-ENERGIZE NEW T3 TRANSFORMERS.
15. SWAP SINGLE PHASE SERVICES IN P810 TO SINGLE PHASE TRANSFORMER SECONDARY.
16. ENERGIZE NEW T3 TRANSFORMERS.
17. REMOVE EXISTING T3 TRANSFORMERS ENCLOSURE CABLES, ASSOCIATED EQUIPMENT AND FOUNDATION. CUT CONDUITS BELOW GROUNDLINE. FILL T3 FOUNDATION AREA WITH TOPSOIL AND SEED WITH GRASS.

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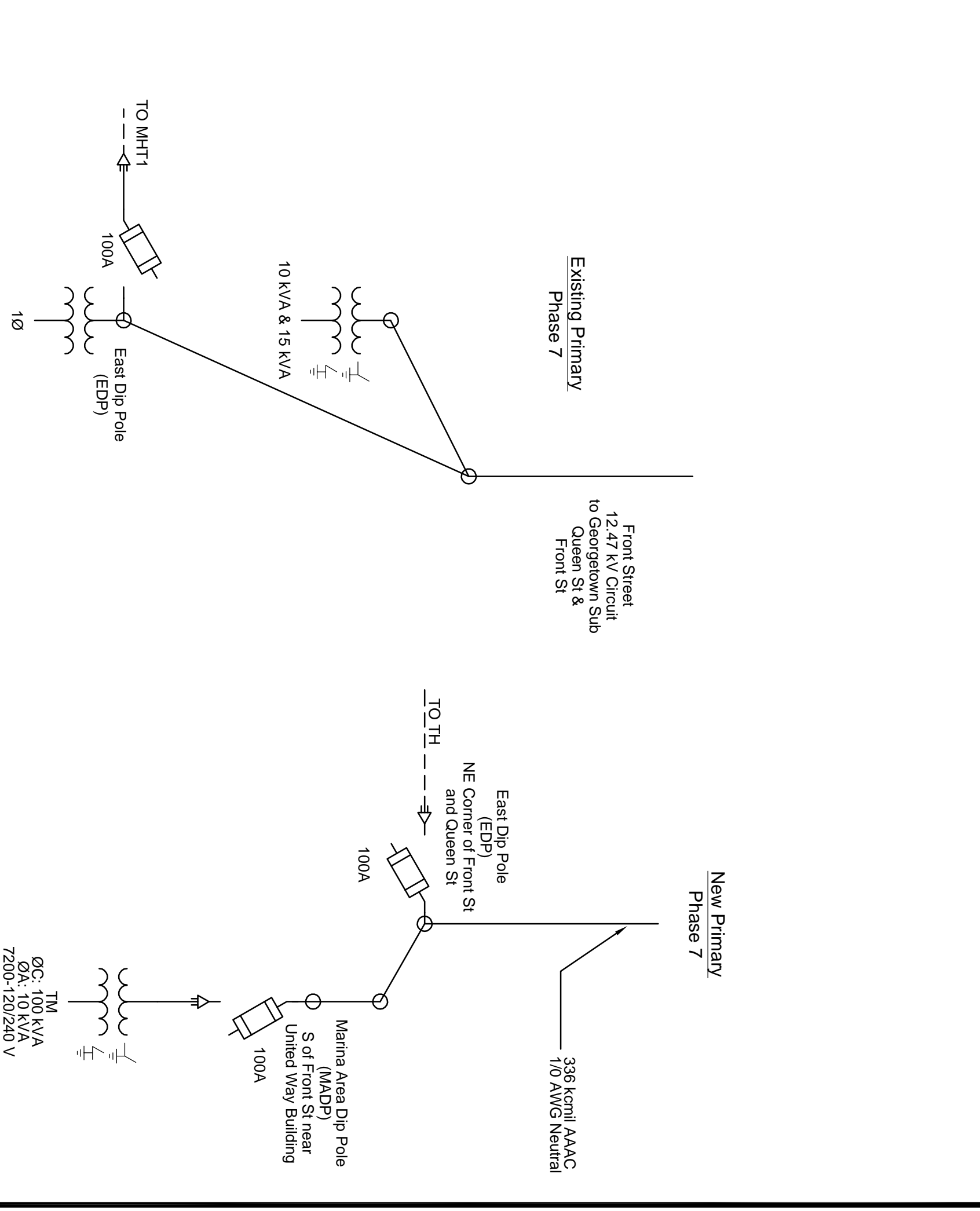
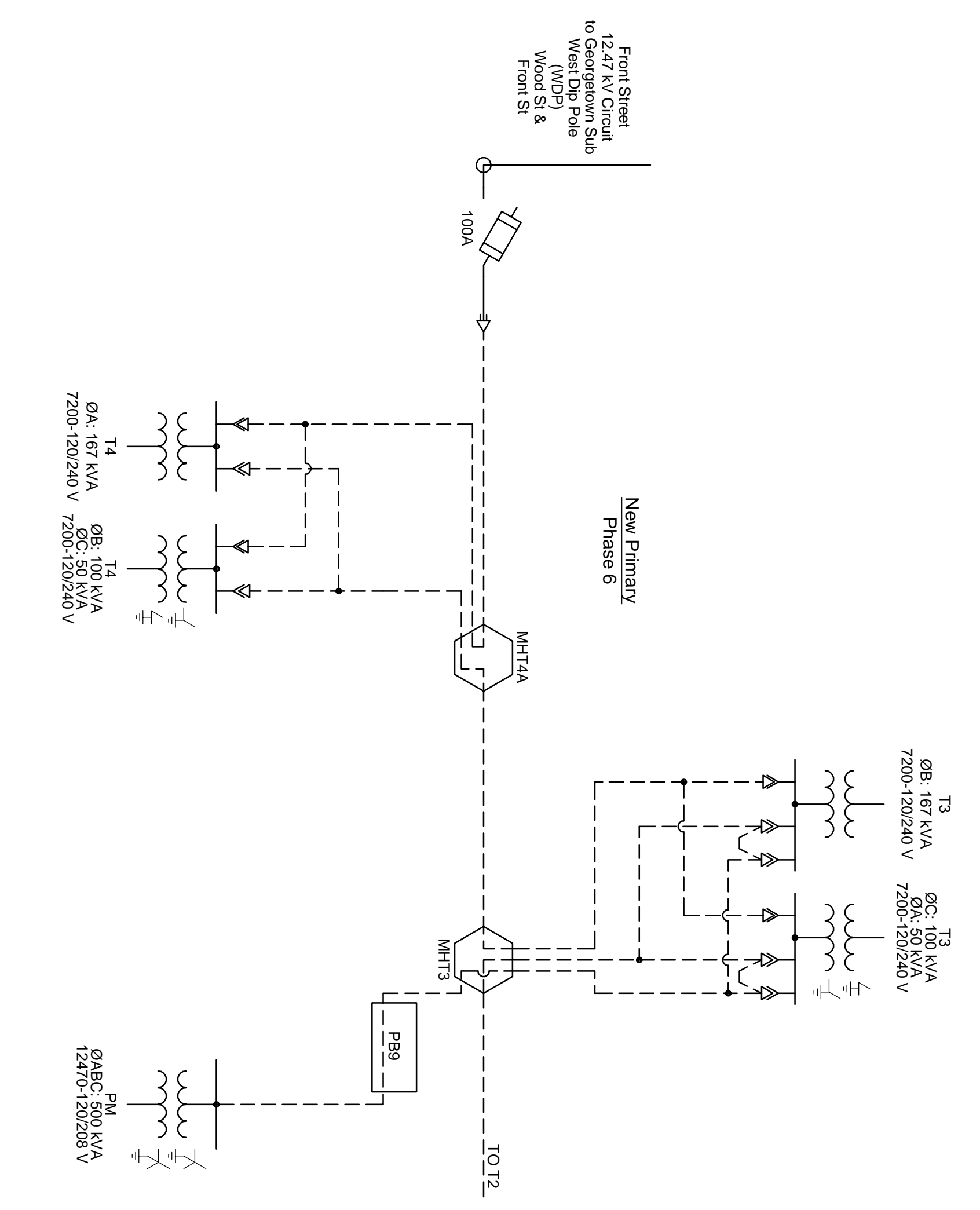
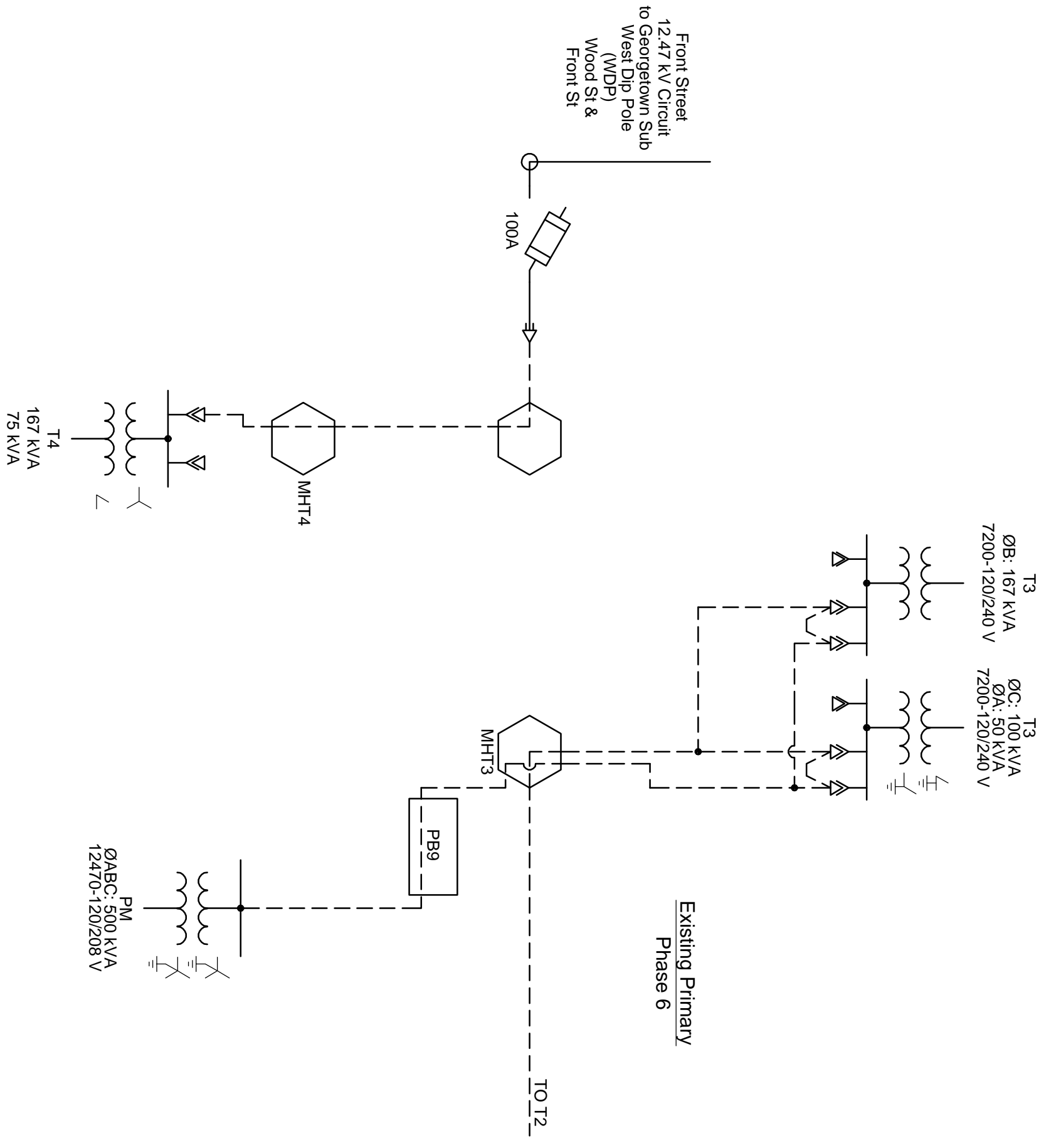
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CITY OF GEORGETOWN
GEORGETOWN, SC
FRONT STREET ELECTRICAL UPGRADE
CONSTRUCTION SEQUENCE
PHASE 5

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E004-3
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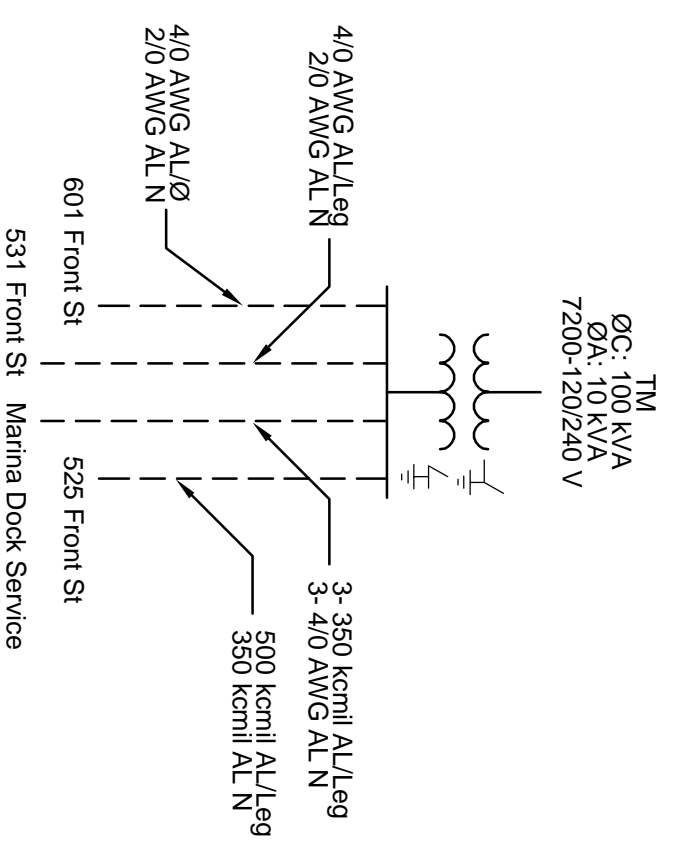
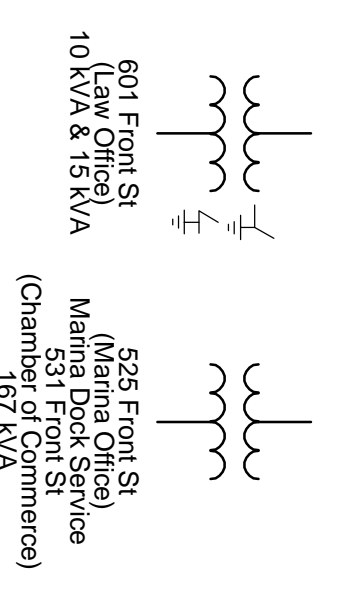
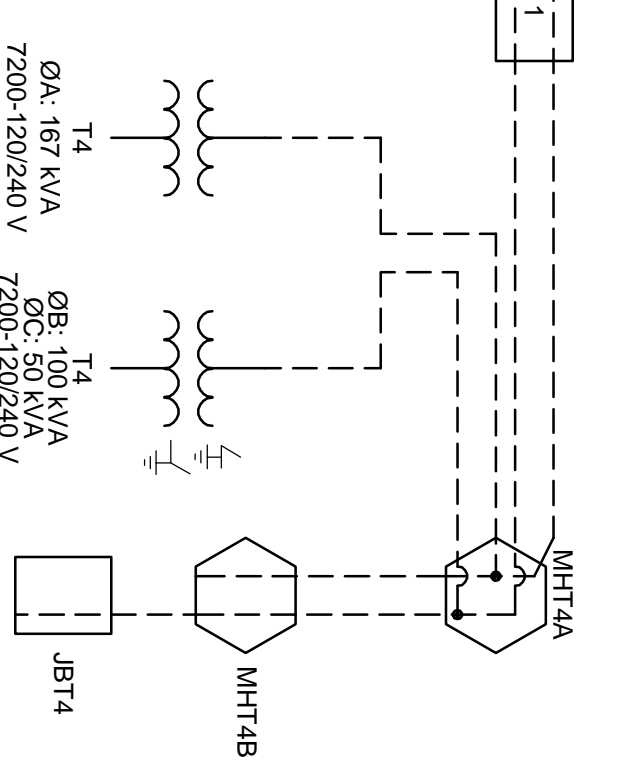
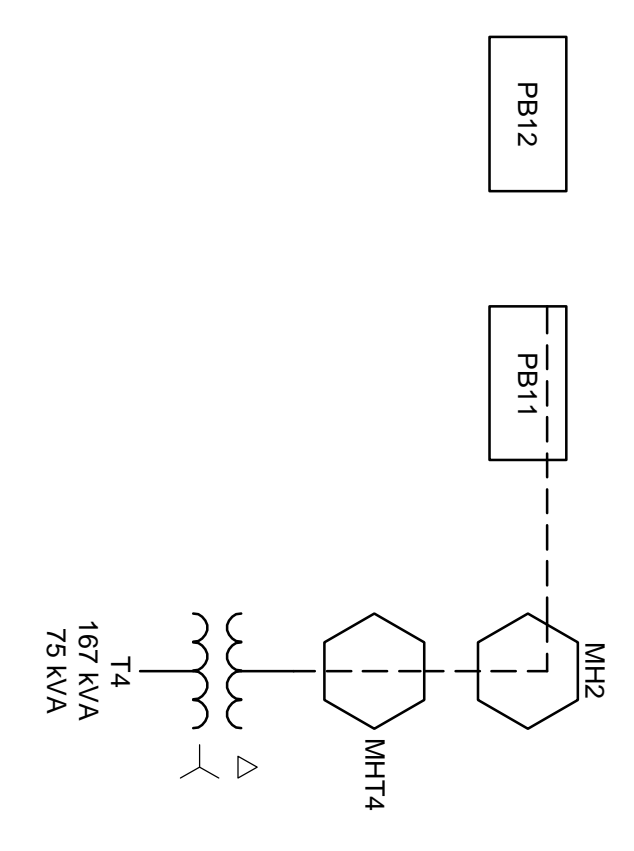


Existing Secondary Phase 6

New Secondary Phase 6

Existing Secondary Phase 7

New Secondary Phase 7



PHASE 6 - TRANSFORMER T4

1. INSTALL NEW T4 TRANSFORMERS.
2. REMOVE EXISTING CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT4A, MHT4B AND PB11. LEAVE EXISTING CABLES IN MANHOLE/PULLBOXES.
3. INSTALL NEW CABLE WALL CHANNELS AND CABLE SUPPORT BRACKETS IN MHT4A, MHT4B AND PB11.
4. INSTALL NEW PRIMARY CABLE FROM T3 TO T4.
5. INSTALL NEW SECONDARY CABLE FROM T4 TO MHT4A, MHT4B, AND PB11.
6. DE-ENERGIZE EXISTING T4 TRANSFORMERS.
7. SWAP ALL SERVICES IN MHT4 AND PB11 FROM EXISTING T4 TRANSFORMERS TO NEW T4 TRANSFORMERS. DISCONNECT ALL SERVICES IN EXISTING T4 TRANSFORMER ENCLOSURE. REMOVE ALL PREVIOUS SECONDARY CABLES.
8. REMOVE EXISTING T4 TRANSFORMERS, ENCLOSURE, CABLES AND ASSOCIATED EQUIPMENT.
9. INSTALL NEW SECONDARY CABLE FROM MHT4B TO NEW JB74 (EXISTING T4 ENCLOSURE AREA). RECONNECT ALL SERVICES IN JB74 TO NEW T4 TRANSFORMER SECONDARY.
10. ENERGIZE NEW T4 TRANSFORMERS FROM NEW T3 TRANSFORMERS.
11. INSTALL NEW JB74 ENCLOSURE ON EXISTING T4 FOUNDATION.
12. REMOVE PREVIOUS PRIMARY CABLES FROM T4 TO WEST DIP POLE (WDP).
13. INSTALL NEW PRIMARY CABLE FROM T4 TO WDP THROUGH MHT4A.

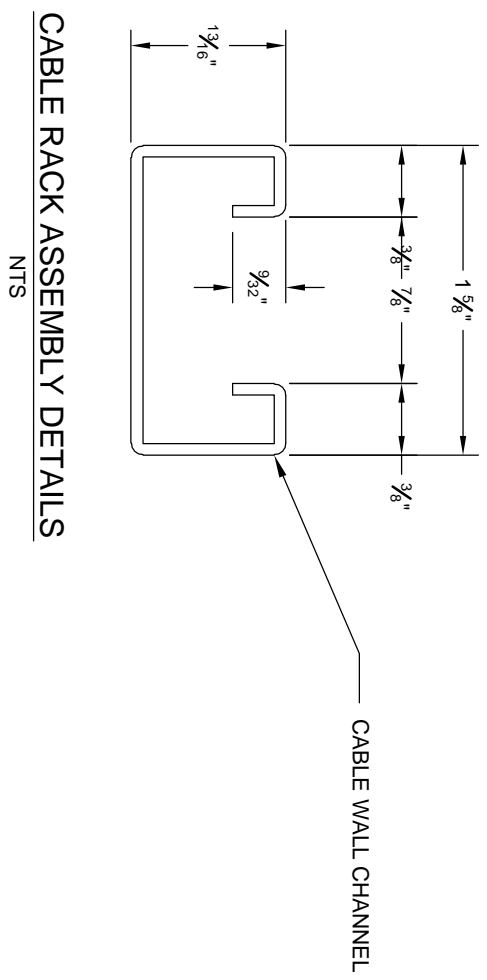
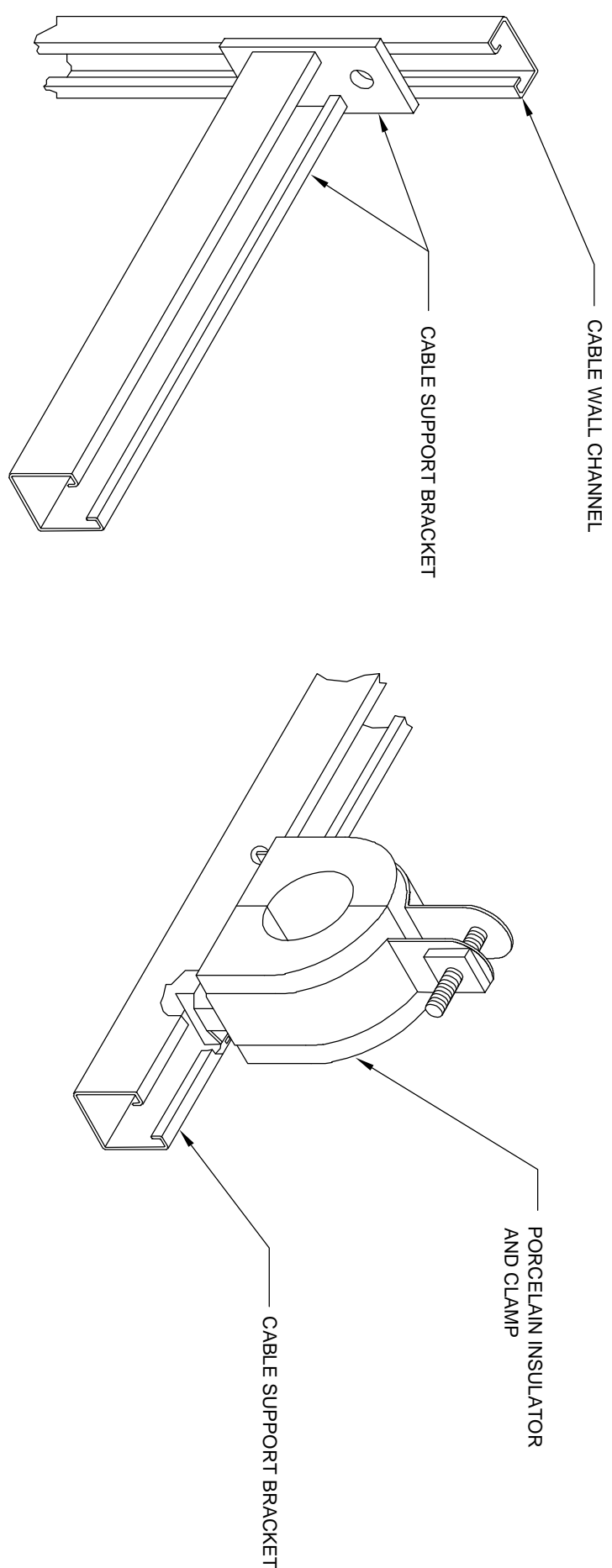
PHASE 7 - TM TRANSFORMER

1. INSTALL NEW TM TRANSFORMERS
2. INSTALL NEW PRIMARY CABLE FROM NEW MADD TO TM.
3. INSTALL NEW SERVICE CABLES FROM TM TO CUSTOMERS 525, 531, 601 FRONT ST AND MARINA DOCK SERVICE.
4. DE-ENERGIZE EXISTING TRANSFORMER SERVICES TO CUSTOMERS 525, 531, 601 FRONT ST AND MARINA DOCK SERVICE.
5. SWAP CUSTOMERS 525, 531, 601 FRONT ST AND MARINA DOCK SERVICE FROM EXISTING TRANSFORMERS TO NEW TM TRANSFORMER BANK. REMOVE ALL PREVIOUS SERVICE CABLES.
6. ENERGIZE NEW TM TRANSFORMER FROM NEW MADD.

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NO.	REVISIONS	DATE						
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<p>CITY OF GEORGETOWN GEORGETOWN, SC</p> <p>FRONT STREET ELECTRICAL UPGRADE CONSTRUCTION SEQUENCE PHASES 6 - 7</p>								
<p>UTEC UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS P.O. Box 2829 • Ashboro, North Carolina • 27204</p>		<p>DATE: 12/31/18</p> <p>SCALE: NONE</p> <p>DWG. NO.: E004-4</p> <p>SHEET NO.: 1 OF 1</p>						

Equipment Description	Manufacturer (or Equal)	Part Number (or Equal)	Quantity
10 KVA Single Phase Pad-Mounted Transformer (by Owner)			1
50 KVA Single Phase Pad-Mounted Transformer (by Owner)			5
100 KVA Single Phase Pad-Mounted Transformer (by Owner)			3
167 KVA Single Phase Pad-Mounted Transformer (by Owner)			8
750 KVA Three Phase Pad-Mounted Transformer (by Owner)			1
15 kV, 200 A Loadbreak Elbow			41
15 kV, 200 A Loadbreak Feed-Thru Insert			3
15 kV Cable Splice			3
15 kV OH to UG Terminator			6
Flood-Seal Multi-port Bus Connectors, 6 outlets; with rubber insulating sleeve covers	Homac	175 Series	106
Flood Seal Dual Adapter Kit	Homac	175 Series	28
Flood-Seal Multi-port Bus Connectors, 3 outlets; Y type, with rubber insulating sleeve covers	Homac	125 Series	41
Manhole Wall Support, stainless steel slotted channel, 72" long, 13/16" x 1 5/8", 12 GA			34
Pull Box Wall Support, stainless steel slotted channel, 38" long, 13/16" x 1 5/8", 12 GA			33
Cable Support Bracket, stainless steel slotted channel, 18" long, 1 5/8"x1 5/8", 12 GA			255
Cable Clamp, 1-7/8", polymer, with stainless steel strap	ZSI	Porce-a-Clamp	900
600 V Terminal Lug, 750 Kcmil AL, 2-hole NEMA			6
600 V Terminal Lug, 500 Kcmil AL, 2-hole NEMA			369
600 V Terminal Lug, 350 Kcmil AL, 2-hole NEMA			121
600 V Terminal Lug, # 4/0 AWG AL, 2-hole NEMA			45
600 V Terminal Lug, # 10 AWG AL, 2-hole NEMA			30
600 V Terminal Lug, # 2/0 AWG AL, 2-hole NEMA			13
600 V Terminal Lug, # 12 AWG AL, 2-hole NEMA			7
600 V Terminal Lug, 500 Kcmil AL, 1-hole NEMA			19
600 V Terminal Lug, 350 Kcmil AL, 1-hole NEMA			8
600 V Terminal Lug, # 4/0 AWG AL, 1-hole NEMA			27
600 V Terminal Lug, # 2/0 AWG AL, 1-hole NEMA			15
600 V Terminal Lug, # 10 AWG AL, 1-hole NEMA			20
600 V Terminal Lug, # 12 AWG AL, 1-hole NEMA			10
4-hole NEMA Stud Connector			41
6-hole NEMA Stud Connector			4
Fiberglass Enclosure w/ lockable lid, Min Inside Width 70", Min Depth 16", Min Height 40", w/ Stainless Steel Hardware			1

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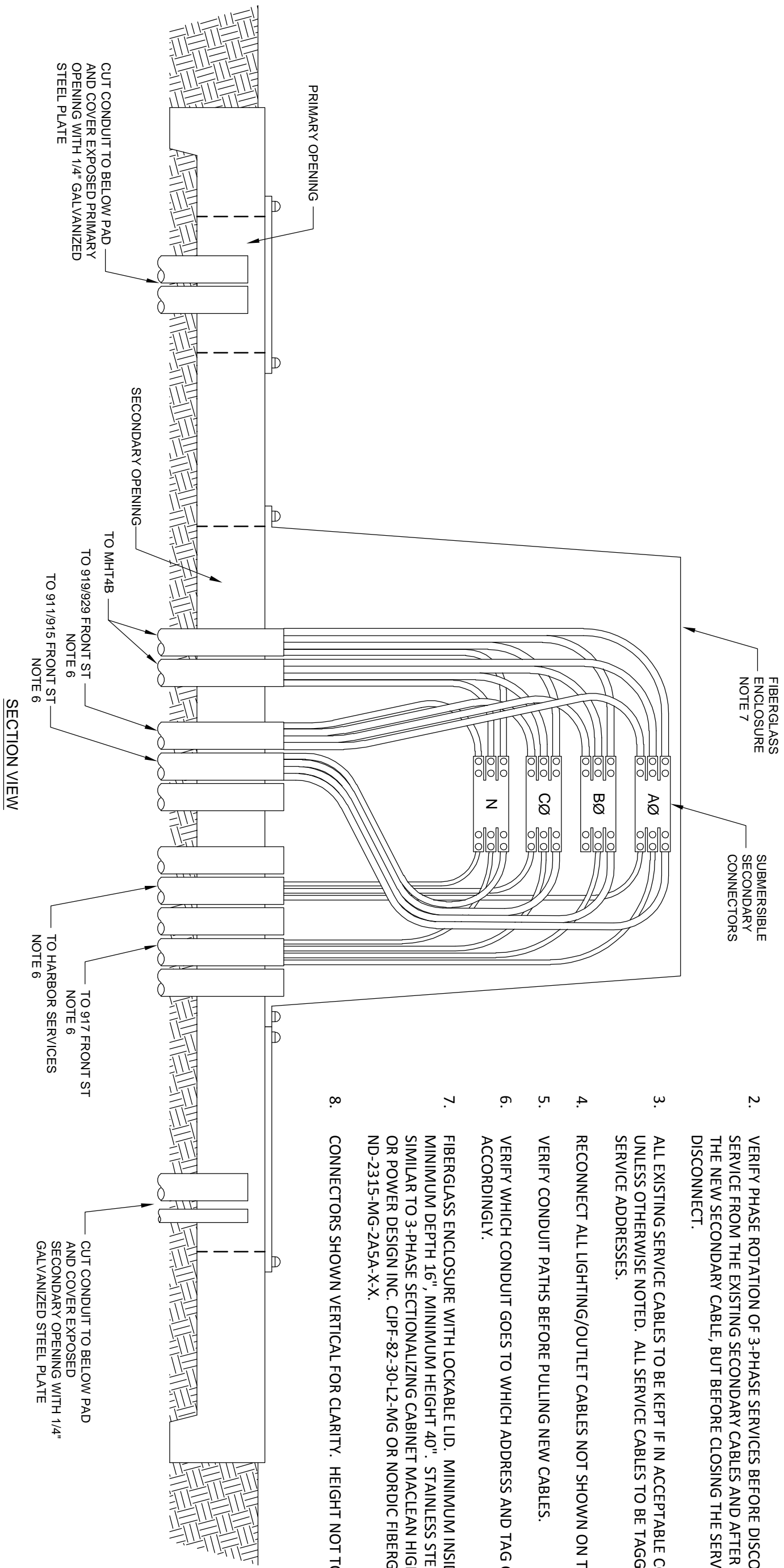


CABLE RACK ASSEMBLY DETAILS

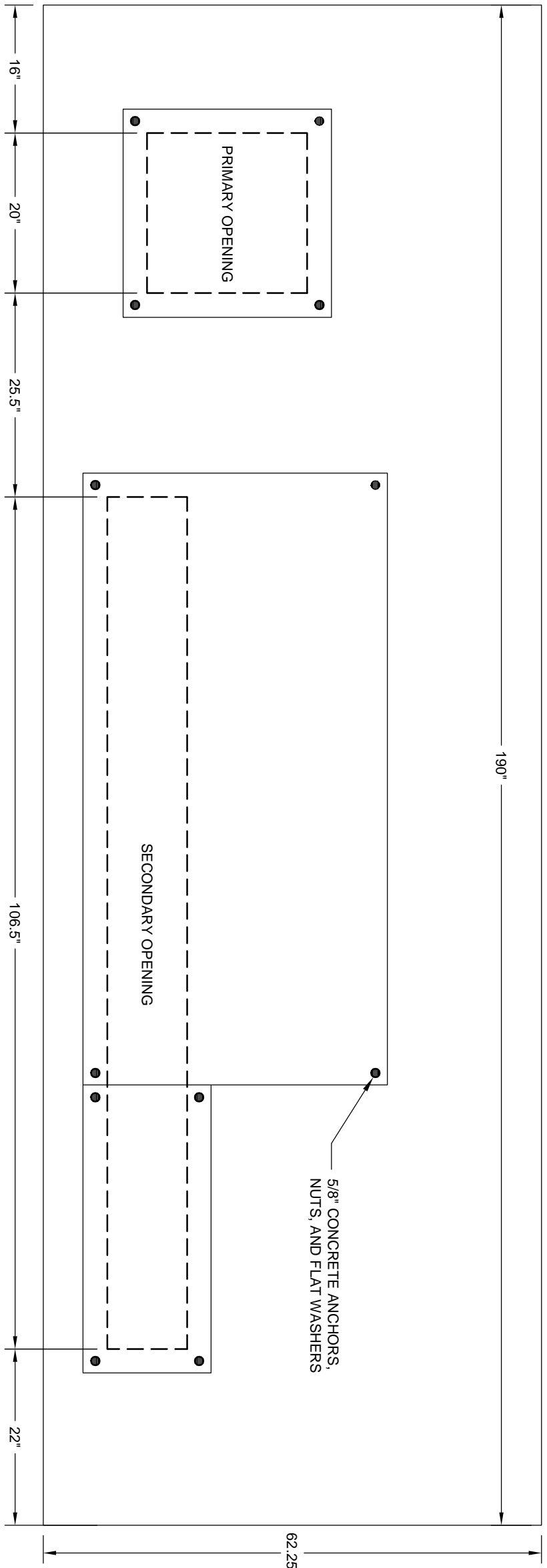
JB14 NOTES:

1. SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
2. VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.

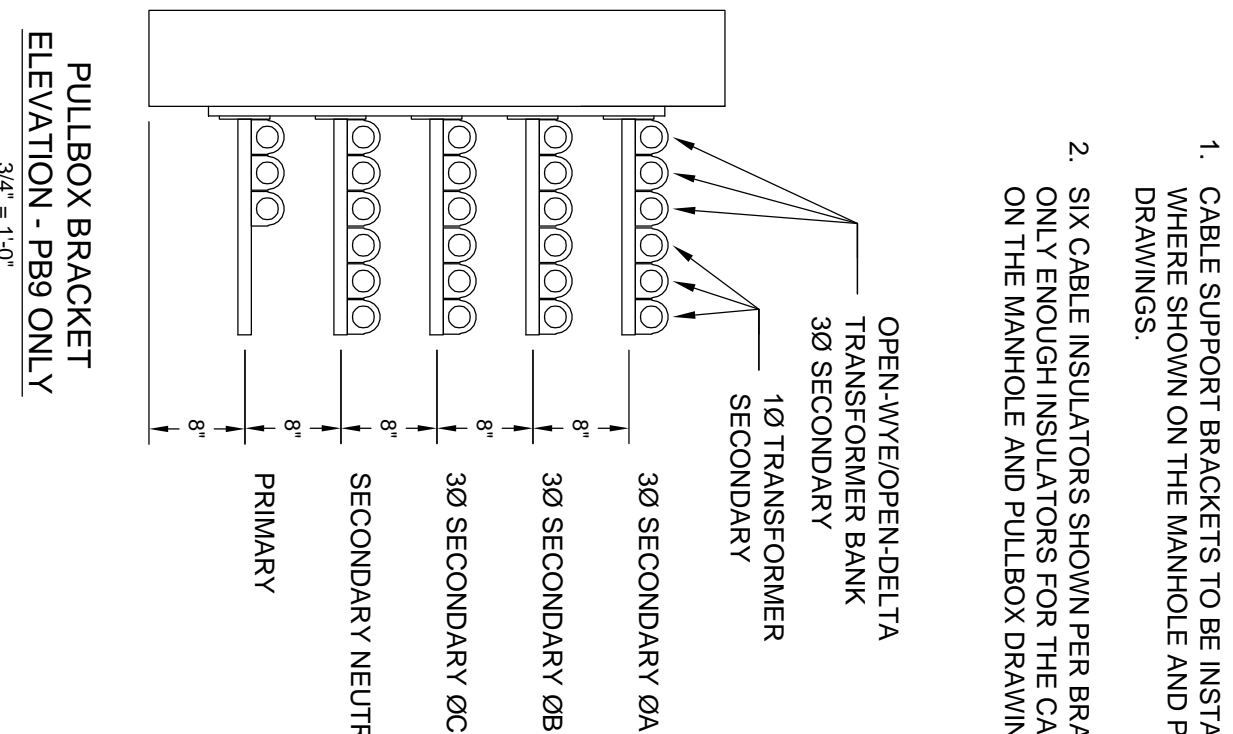
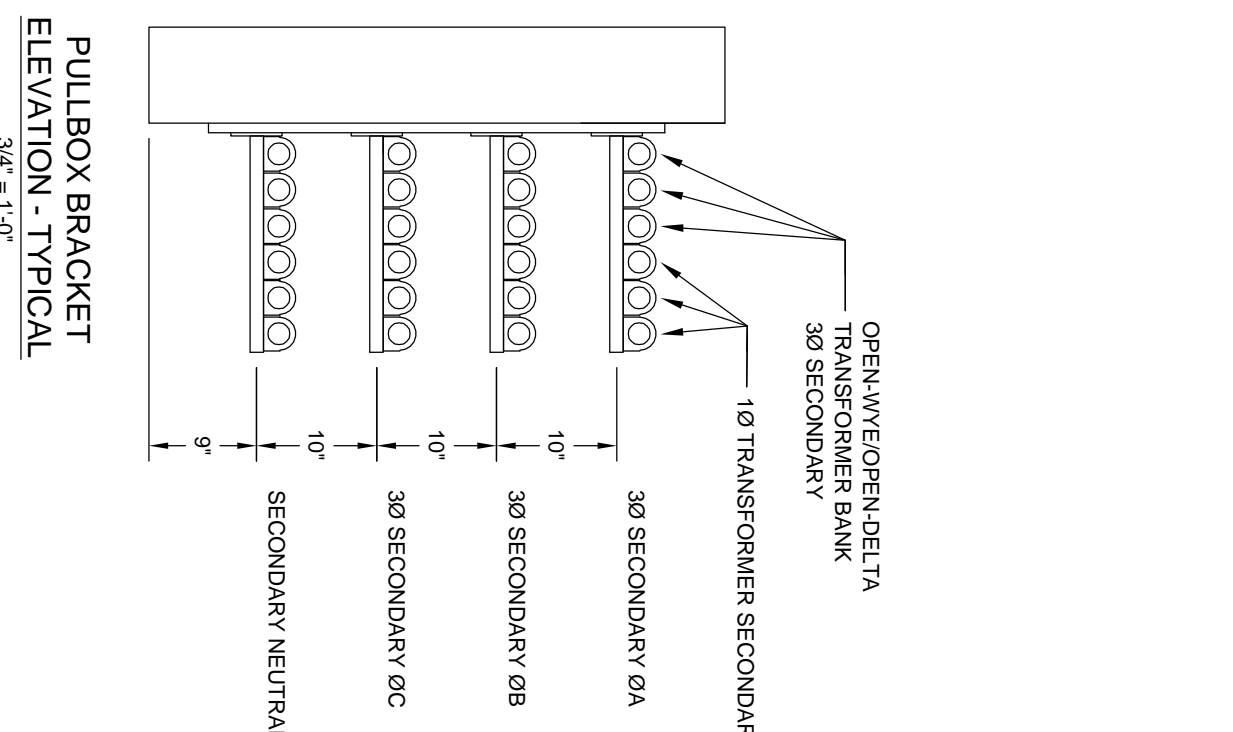
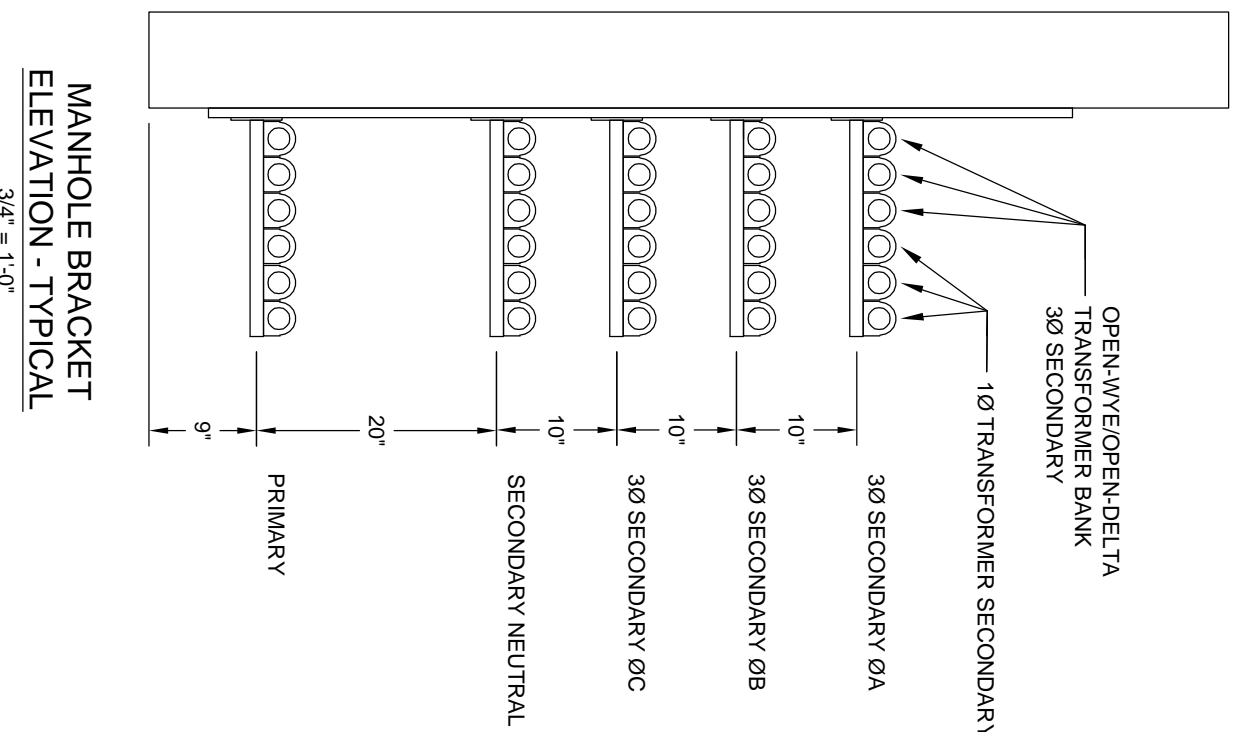
3. ALL EXISTING SERVICE CABLES TO BE KEPT IF IN ACCEPTABLE CONDITION UNLESS OTHERWISE NOTED. ALL SERVICE CABLES TO BE TAGGED WITH SERVICE ADDRESSES.
4. RECONNECT ALL LIGHTING/OUTLET CABLES NOT SHOWN ON THE DRAWING.
5. VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
6. VERIFY WHICH CONDUIT GOES TO WHICH ADDRESS AND TAG CABLES ACCORDINGLY.
7. FIBERGLASS ENCLOSURE WITH LOCKABLE LID. MINIMUM INSIDE WIDTH 70", MINIMUM DEPTH 16", MINIMUM HEIGHT 40". STAINLESS STEEL HARDWARE, SIMILAR TO 3-PHASE SECTIONALIZING CABINET MACLEAN HIGHLINE ES66641 OR POWER DESIGN INC. CIPF-42-30-12-MG OR NORDIC FIBERGLASS, INC. ND-2315-MG-2A5A-X-X.
8. CONNECTORS SHOWN VERTICAL FOR CLARITY. HEIGHT NOT TO SCALE.



SECTION VIEW



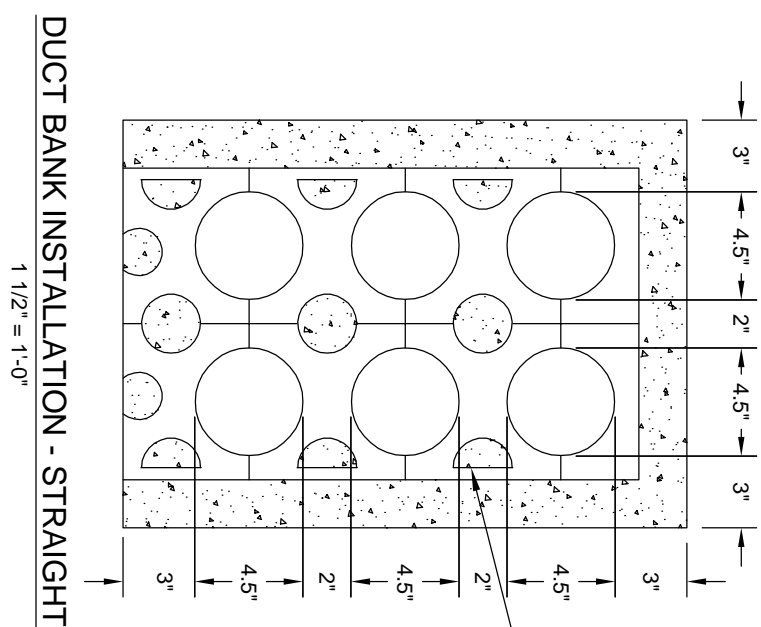
JB14 SECONDARY CONNECTIONS



NOTES: CABLE RACKING

1. CABLE SUPPORT BRACKETS TO BE INSTALLED ONLY WHERE SHOWN ON THE MANHOLE AND PULLBOX DRAWINGS.
2. SIX CABLE INSULATORS SHOWN PER BRACKET. INSTALL ONLY ENOUGH INSULATORS FOR THE CABLES AS SHOWN ON THE MANHOLE AND PULLBOX DRAWINGS.

PULLBOX BRACKET ELEVATION - PB99 ONLY



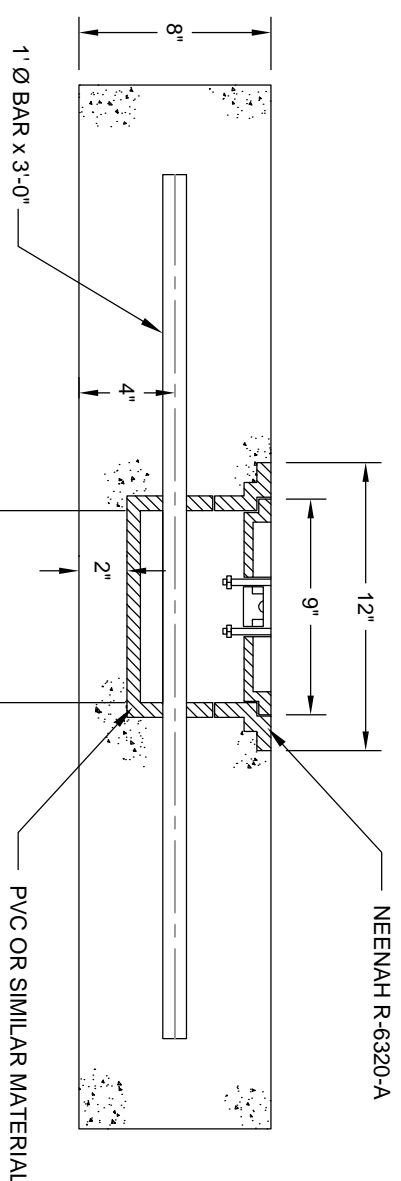
DUCT BANK INSTALLATION - STRAIGHT

NOTES: DUCT BANK INSTALLATION - STRAIGHT

1. DEPTHS TO THE TOP OF CONDUITS SHALL NOT BE LESS THAN 24" FOR CONDUITS WITH SECONDARY AND SERVICE CABLES AND NOT LESS THAN 30" FOR CONDUITS WITH PRIMARY CABLES.
2. USE 4" TYPE DB PVC CONDUIT FOR ALL DUCT BANK INSTALLATIONS.
3. BOTTOM OF TRENCH TO BE SMOOTH AND FREE OF ROCK AND DEBRIS. A 4" BED OF SAND SHOULD BE ADDED IF THE BOTTOM IS ROCKY.
4. DUCT SPACERS SHOULD BE LOCATED EVERY 5' - 8' ALONG LENGTH OF THE DUCT BANK.
5. DUCT BANK MUST HAVE A MINIMUM 3" ENVELOPE OF CONCRETE SURROUNDING THE PVC CONDUIT (3" AT TOP, BOTTOM, AND SIDES).
6. DUCT BANKS SHALL SLOPE TOWARD A MANHOLE OR PULLBOX.

NOTES: DUCT BANK INSTALLATION - FIELD BENDS

1. BENDS OF LESS THAN 35° RADIUS CAN BE ACCOMPLISHED USING FACTORY BENDS. BENDS GREATER THAN 150° GENERALLY REQUIRE NO SPECIAL TECHNIQUE.
2. JOINTS WHICH FALL WITHIN THE RADIUS OF THE CURVE ARE SUBJECTED TO THE SAME BENDING FORCES AS THE CONDUIT ITSELF. TO PREVENT THE TENSION SIDE (OUTSIDE OF CURVE) OF THE JOINT FROM FAILING, CAUTION MUST BE TAKEN TO ALLOW SUFFICIENT CURING TIME FOR ALL JOINTS IN THE RADIUS IN THE BEND. TWO HOURS CURING TIME IS REQUIRED AT 70°. SHORTER TIMES MAY BE ADEQUATE IN HOTTER WEATHER AND LONGER TIMES MAY BE REQUIRED IN COLDER WEATHER.
3. FOR THE BENDS WHERE THE RUNNING LENGTH OF DUCT REQUIRED IS 150' OR LESS, THE BENDING OPERATION IS SIMPLIFIED IF THE ENTIRE LENGTH IS PREASSEMBLED AND ALLOWED TO CURE PRIOR TO BENDING, PARTICULARLY IN INSTALLATIONS WHERE THE RADIUS OF CURVATURE IS LESS THAN 80'.
4. PLACE BOTTOM SPACERS AS NEEDED (REDUCE SPACING AS NECESSARY). INSTALL THE FIRST HORIZONTAL ROW OF DUCTS JOINED AND CURED. INTERMEDIATE SPACERS ARE THEN PLACED AND THE OPERATION REPEATED. CHECK FOR AND ENSURE ALIGNMENT. POUR CONCRETE.



EXISTING LIFT LUGS

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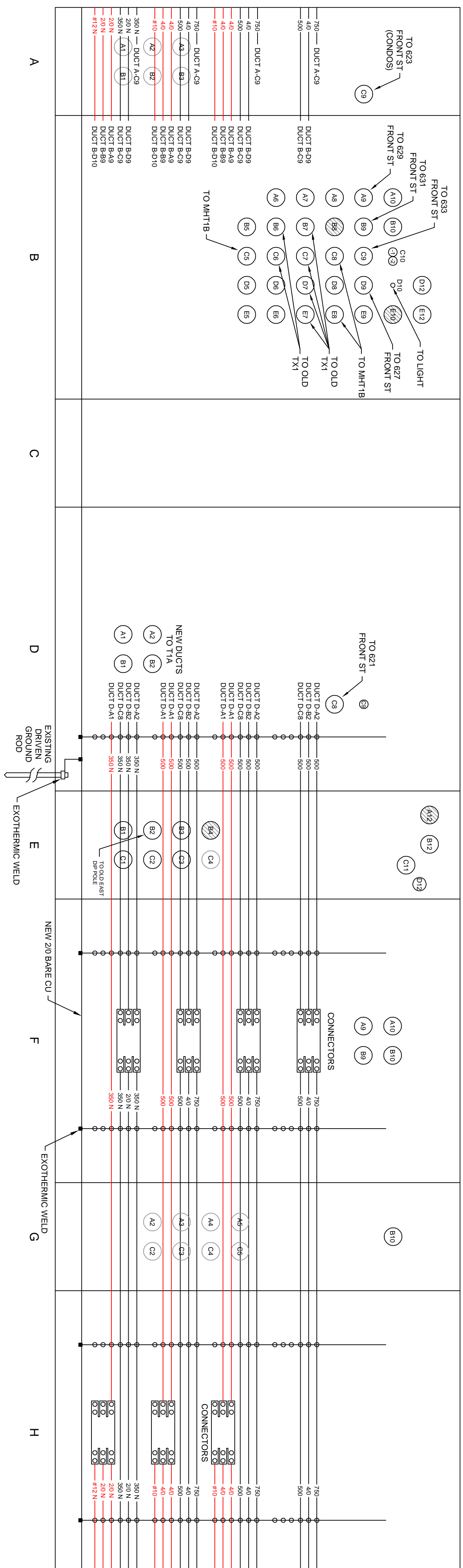
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION
REVISION 01/23/19

CITY OF GEORGETOWN
GEORGETOWN, SC

FRONT STREET ELECTRICAL UPGRADE
MISCELLANEOUS DETAILS

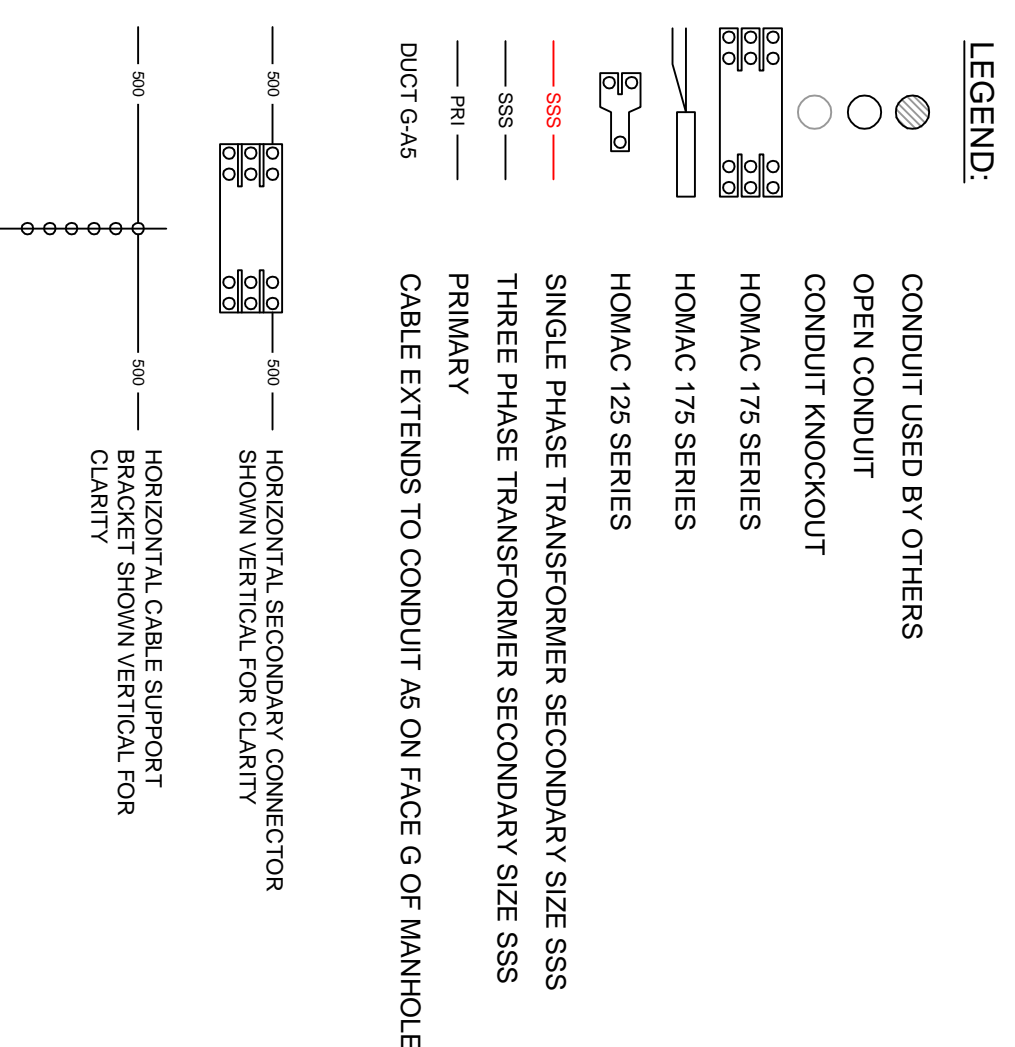
UTEC UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS
P.O. Box 2829 • Ashboro, North Carolina • 27204

DWG. NO. 120518 SHEET NO. E011
SCALE: NOTED 200 NO. 11/20/17 1 OF 1

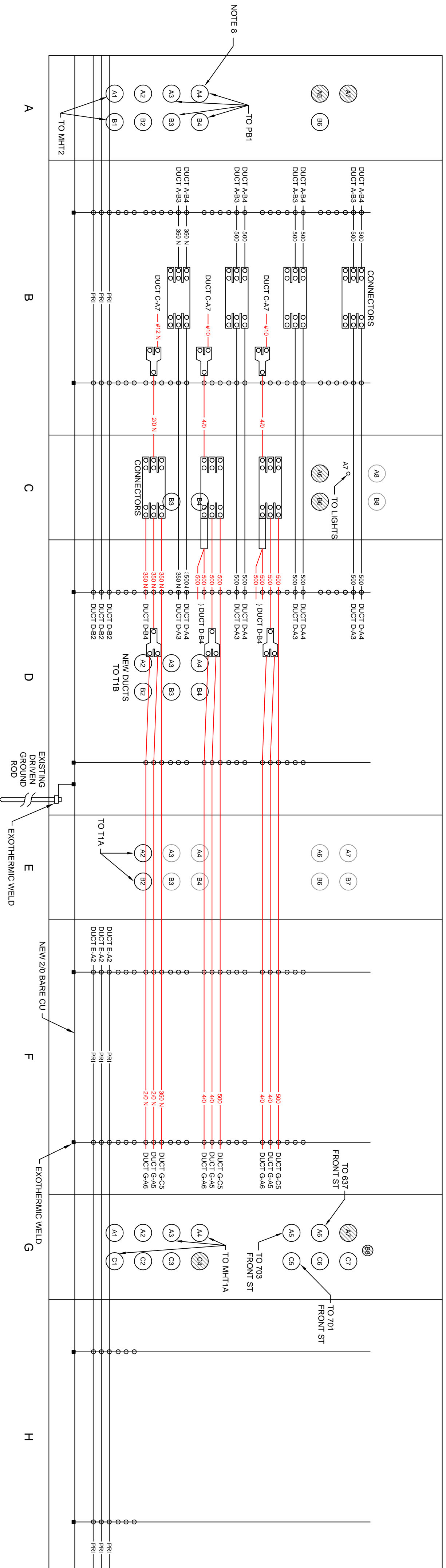


INSIDE WALL ELEVATION - MHT1A
FINAL LAYOUT

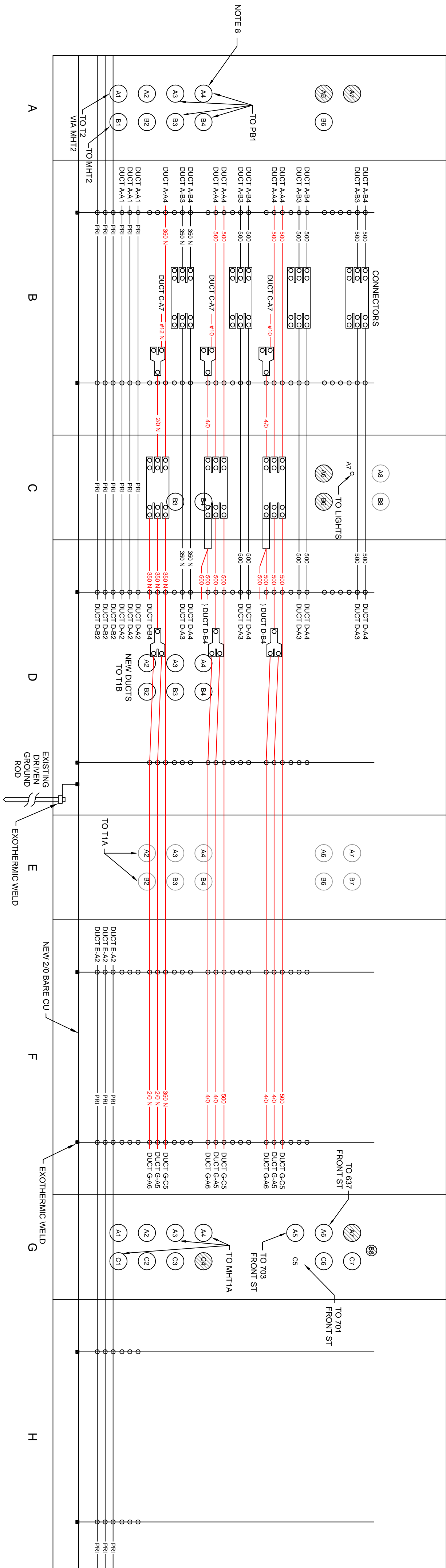
- NOTES:**
1. SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 2. VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
 3. ALL EXISTING SERVICE CABLES TO BE KEPT IF IN ACCEPTABLE CONDITION UNLESS OTHERWISE NOTED. ALL SERVICE CABLES TO BE TAGGED WITH SERVICE ADDRESSES.
 4. RECONNECT ALL LIGHTING/OUTLET CABLES NOT SHOWN ON THE DRAWING.
 5. VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
 6. ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.



<p>CITY OF GEORGETOWN GEORGETOWN, SC</p> <p>FRONT STREET ELECTRICAL UPGRADE CABLE RACKING DETAILS MANHOLE T1A</p>		<p>UTEC UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS P.O. Box 2829 • Ashboro, North Carolina • 27204</p>	
NO.	REVISIONS	DATE	BY
0.	BID ISSUE	01/23/19	
<p>PRELIMINARY NOT TO BE USED FOR CONSTRUCTION</p>			
DATE	DWG. NO.	DWG. NO.	DATE
SCALE: 3/4" = 1'-0"	289 NO. 173001	289 NO. 173001	01/23/19
<p>UTEC UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS P.O. Box 2829 • Ashboro, North Carolina • 27204</p>		<p>E012 1 OF 1</p>	



INSIDE WALL ELEVATION - MHT1B
TEMPORARY LAYOUT



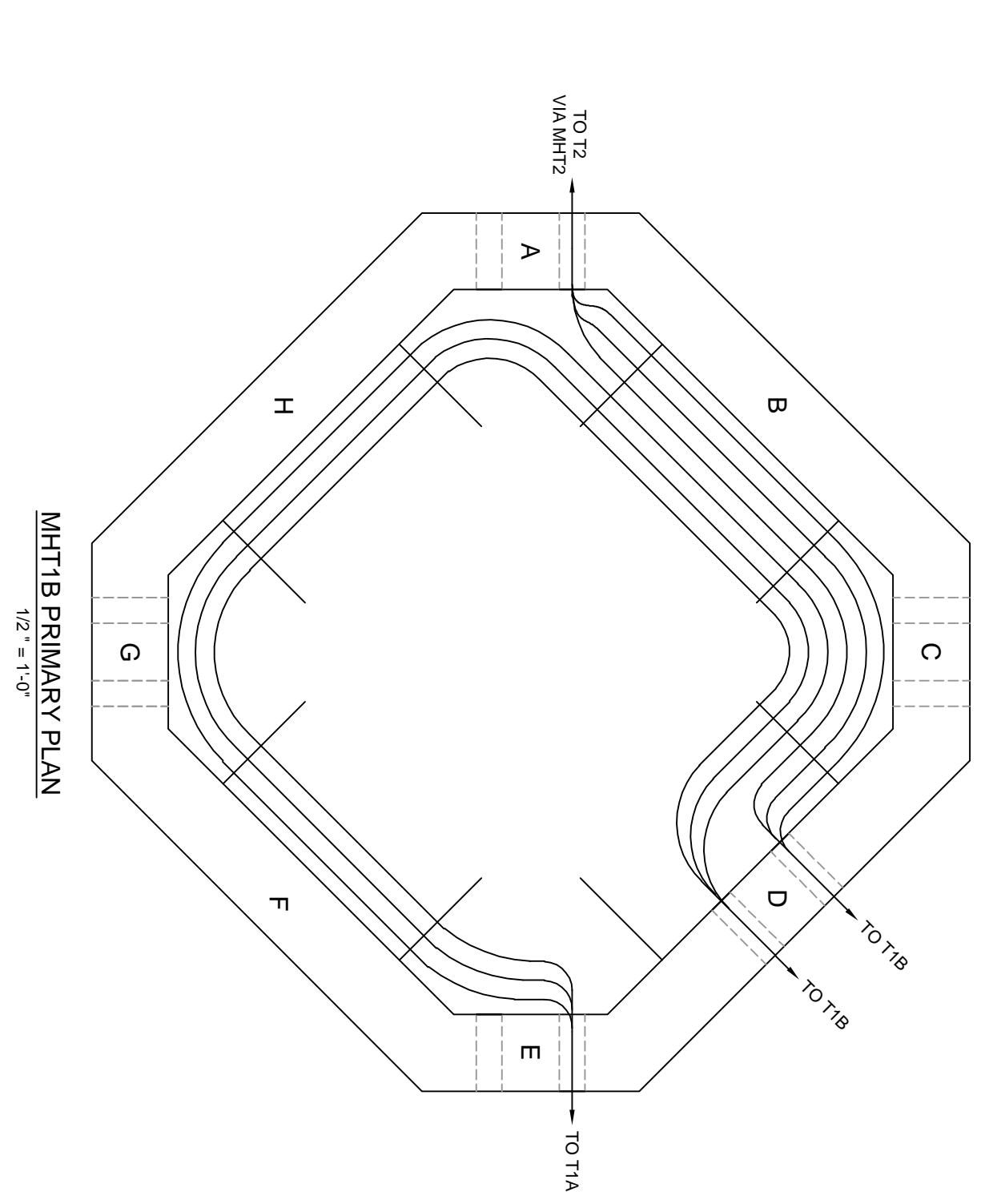
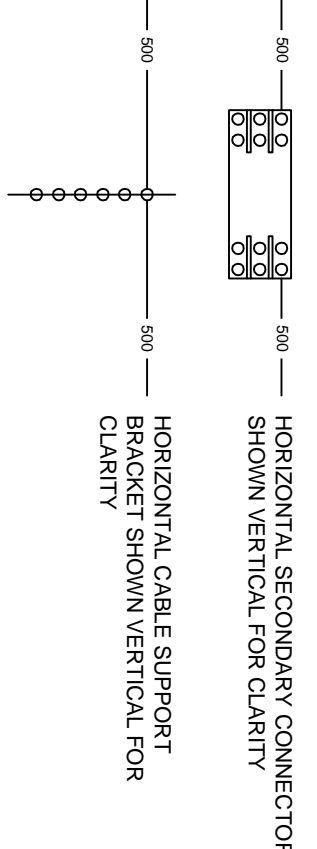
INSIDE WALL ELEVATION - MHT1B
FINAL LAYOUT

NOTES:

1. SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
2. VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
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7. FIREPROOFING TAPE SHALL BE INSTALLED ON PRIMARY CABLES WHERE ONE PRIMARY CIRCUIT IS ROUTED ADJACENT TO ANOTHER PRIMARY CIRCUIT. TIGHTLY WRAP STRIPS OF FIREPROOFING TAPE AROUND EACH CABLE SPARALLY IN HALF-LAPPED WRAPPING. INSTALL TAPE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. EXTEND TAPE TO THE END OF THE WALL WHERE THE CIRCUITS ARE ADJACENT.
8. EXISTING SECONDARY CABLE IS INSTALLED IN THIS CONDUIT. SERVICES IN PR1 AND PR2 MUST BE SWAPPED TO NEW T1B THREE PHASE SECONDARY BEFORE EXISTING CABLE IS REMOVED AND NEW CABLE IS PULLED.

LEGEND:

- CONDUIT USED BY OTHERS
- OPEN CONDUIT
- CONDUIT KNOCKOUT
- HOMAC 175 SERIES
- HOMAC 175 SERIES
- HOMAC 125 SERIES
- SINGLE PHASE TRANSFORMER SECONDARY SIZE SSS
- THREE PHASE TRANSFORMER SECONDARY SIZE SSS
- PRIMARY
- CABLE EXTENDS TO CONDUIT AS ON FACE OF MANHOLE



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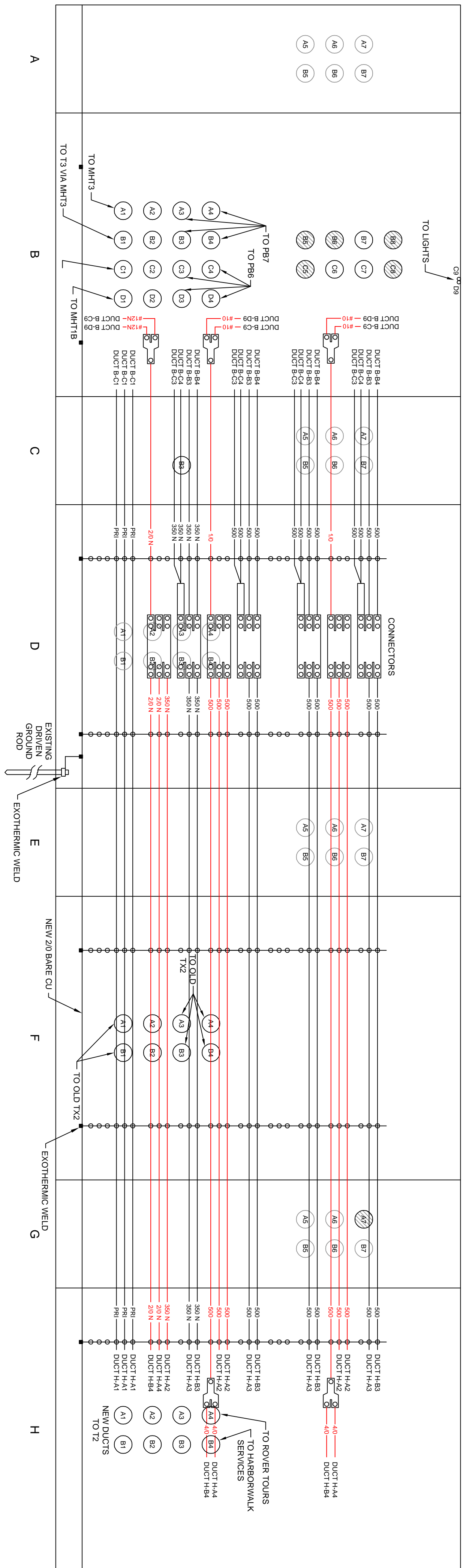
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GEORGETOWN, SC

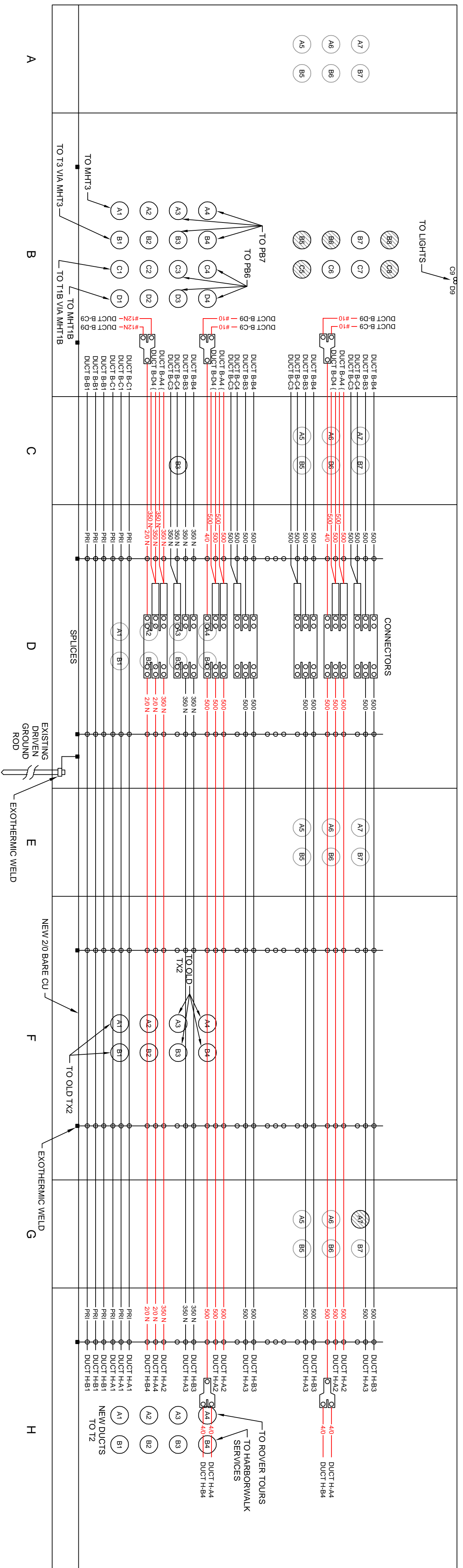
FRONT STREET ELECTRICAL UPGRADE
CABLE RACKING DETAILS
MANHOLE T1B

UTEC
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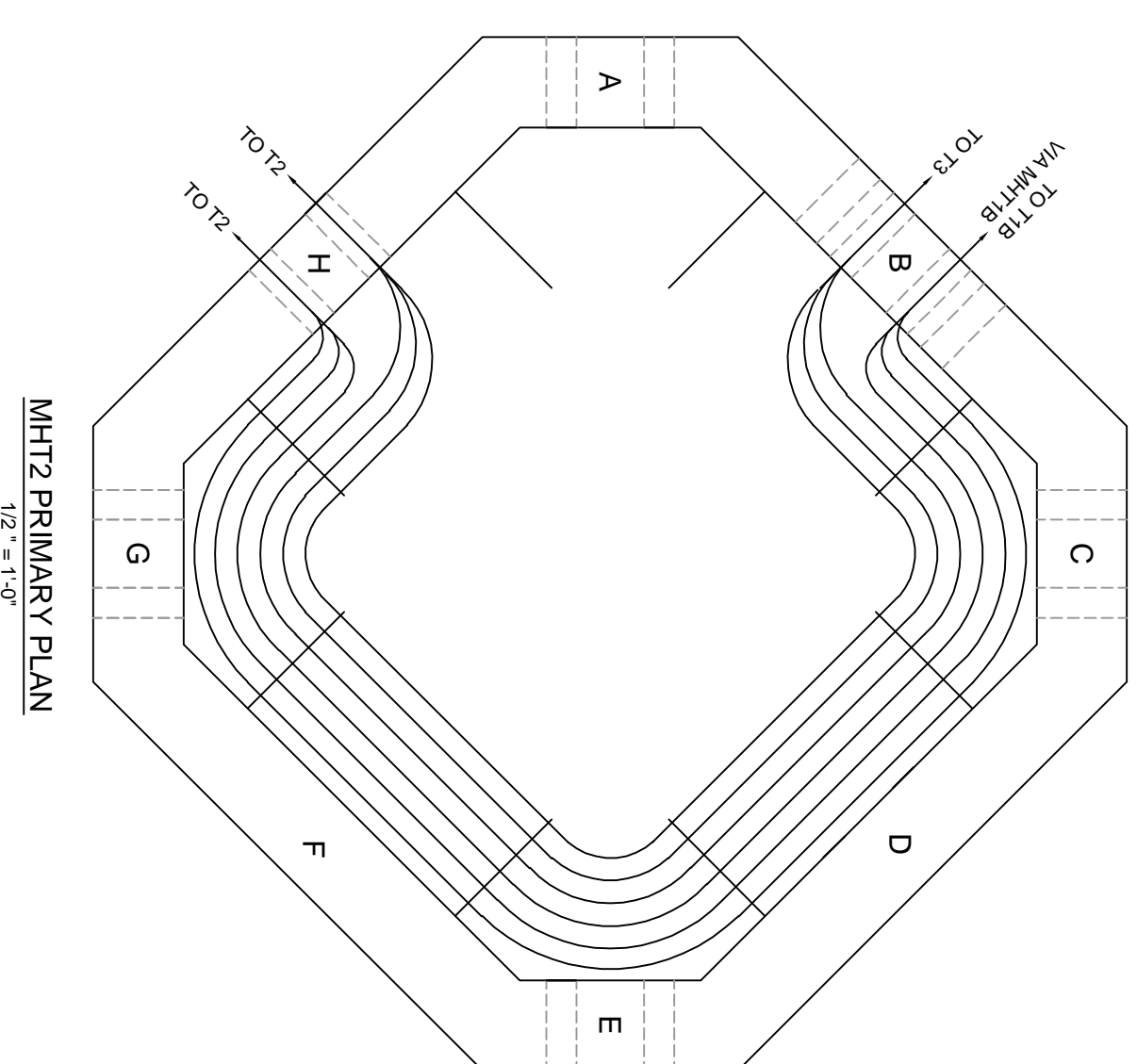
DATE: 03/21/18
DWG NO: E013
SCALE: 3/4\"/>



WALL ELEVATIONS - MHT2
TEMPORARY LAYOUT



WALL ELEVATIONS - MHT2
FINAL LAYOUT



MHT2 PRIMARY PLAN
1/2" = 1'-0"

NOTES:

1. SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
2. VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
3. ALL EXISTING SERVICE CABLES TO BE KEPT IF IN ACCEPTABLE CONDITION UNLESS OTHERWISE NOTED. ALL SERVICE CABLES TO BE TAGGED WITH SERVICE ADDRESSES.
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5. VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
6. ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.
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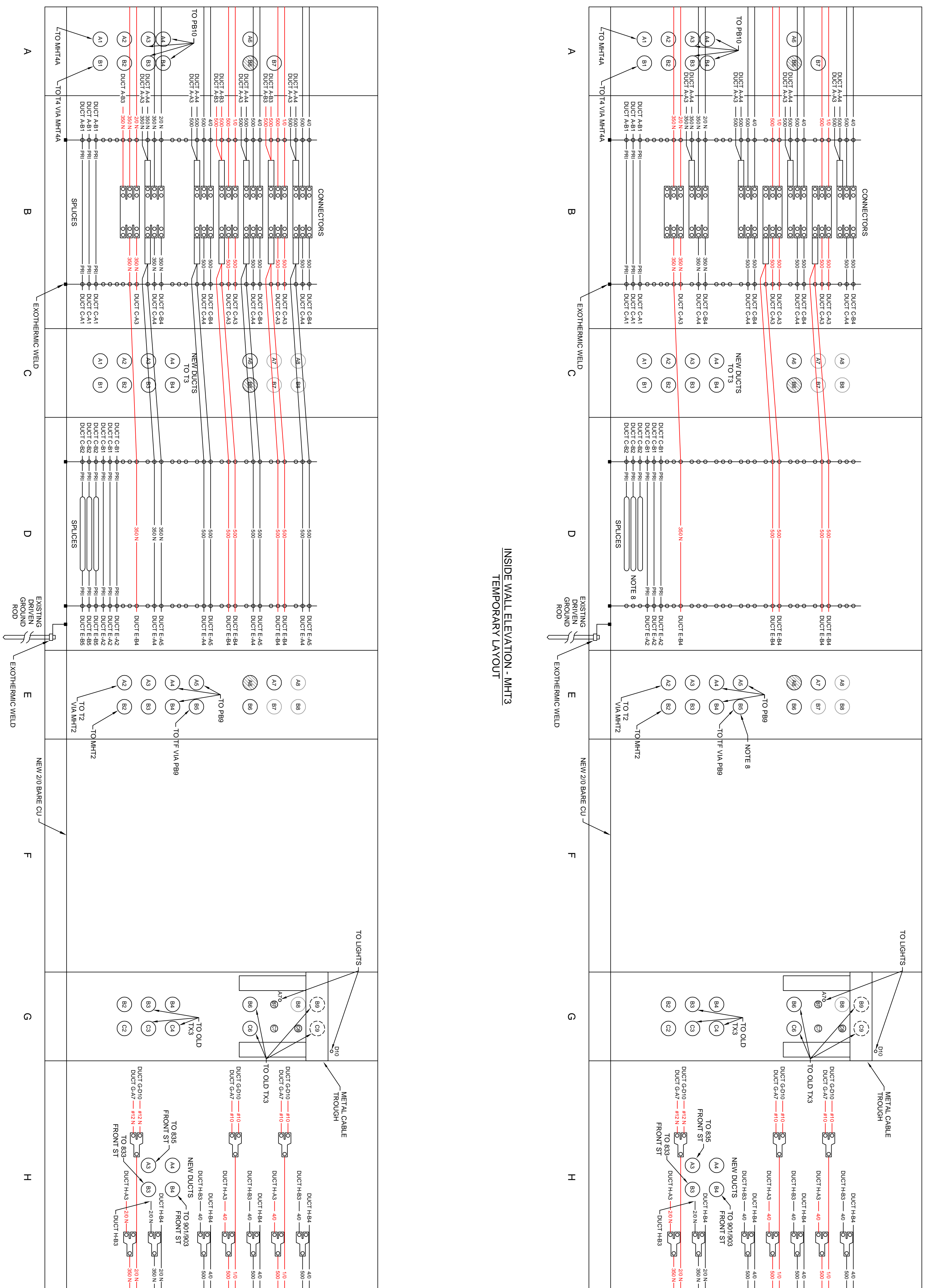
LEGEND:

- CONDUIT USED BY OTHERS
- OPEN CONDUIT
- CONDUIT KNOCKOUT
- HOMAC 175 SERIES
- HOMAC 175 SERIES
- HOMAC 125 SERIES
- SINGLE PHASE TRANSFORMER SECONDARY SIZE SSS
- THREE PHASE TRANSFORMER SECONDARY SIZE SSS
- PRIMARY
- CABLE EXTENDS TO CONDUIT AS ON FACE G OF MANHOLE

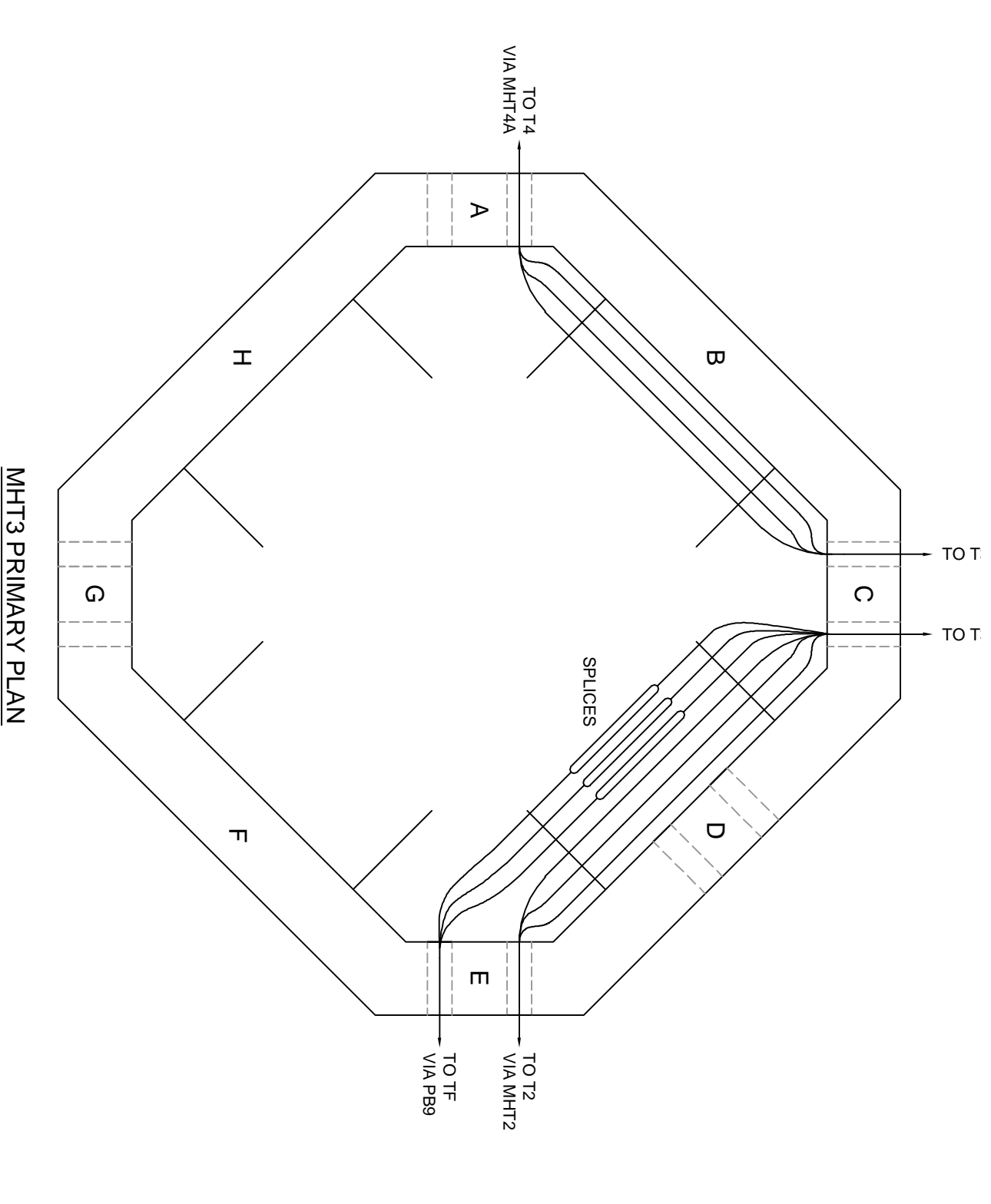
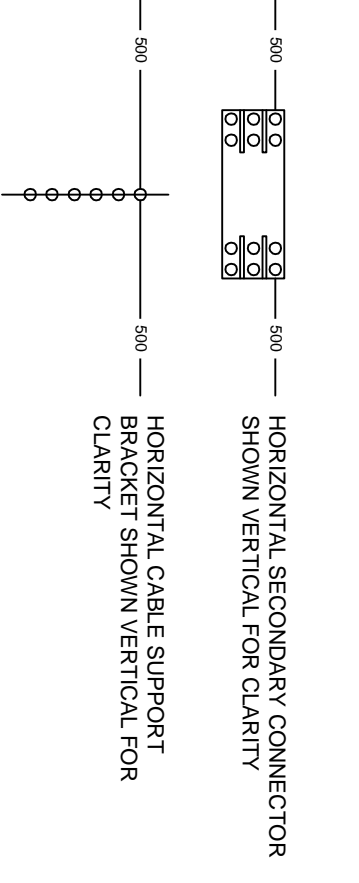
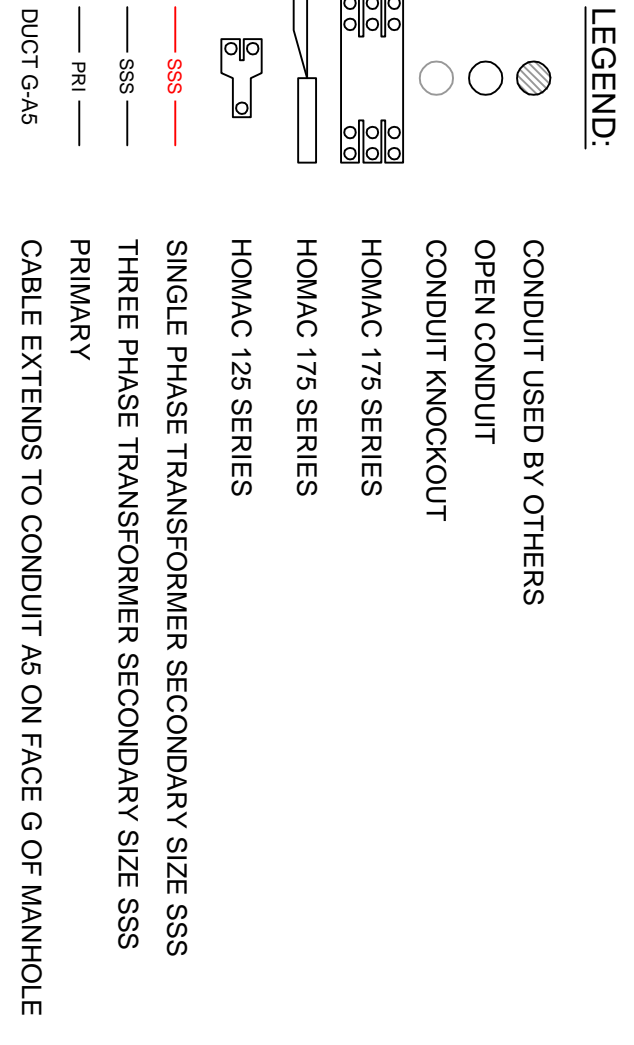
- HORIZONTAL SECONDARY CONNECTOR
- SHOW VERTICAL FOR CLARITY
- HORIZONTAL CABLE SUPPORT
- SHOW VERTICAL FOR CLARITY

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	REVISIONS	

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<p>CITY OF GEORGETOWN GEORGETOWN, SC</p>	<p>UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS P.O. Box 2829 • Ashboro, North Carolina • 27204</p>
<p>FRONT STREET ELECTRICAL UPGRADE CABLE RACKING DETAILS MANHOLE T2</p>	<p>DATE: 03/21/18 DWG NO: E014 SCALE: 3/4" = 1'-0" SHEET NO: 1 OF 1</p>

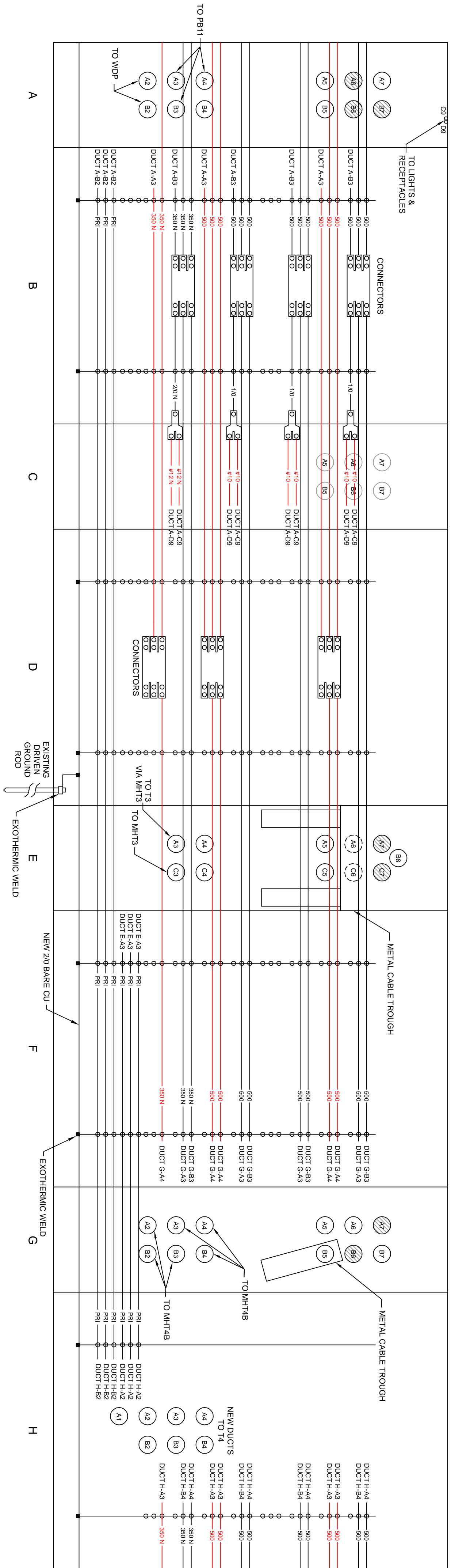


- NOTES:**
1. SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 2. VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
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 8. WHEN EXISTING T3 IS DEENERGIZED TO SWAP CUSTOMERS TO NEW T3, CONNECT EXISTING PADMOUNT PRIMARY CABLE TO NEW PADMOUNT PRIMARY SERVED FROM NEW T3 IN MHT3. EXISTING PRIMARY SHALL BE SUPPORTED ON NEW CABLE SUPPORT BRACKETS IN PB9.



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<p>NO. 01</p> <p>BID ISSUE</p> <p>DATE 01/23/19</p>	<p>DATE 03/21/18</p> <p>DWG. NO. E015</p>	<p>SCALE 3/4" = 1'-0"</p> <p>DATE 03/21/18</p> <p>SHEET NO. 1 OF 1</p>

FRONT STREET ELECTRICAL UPGRADE
CABLE RACKING DETAILS
MANHOLE T3

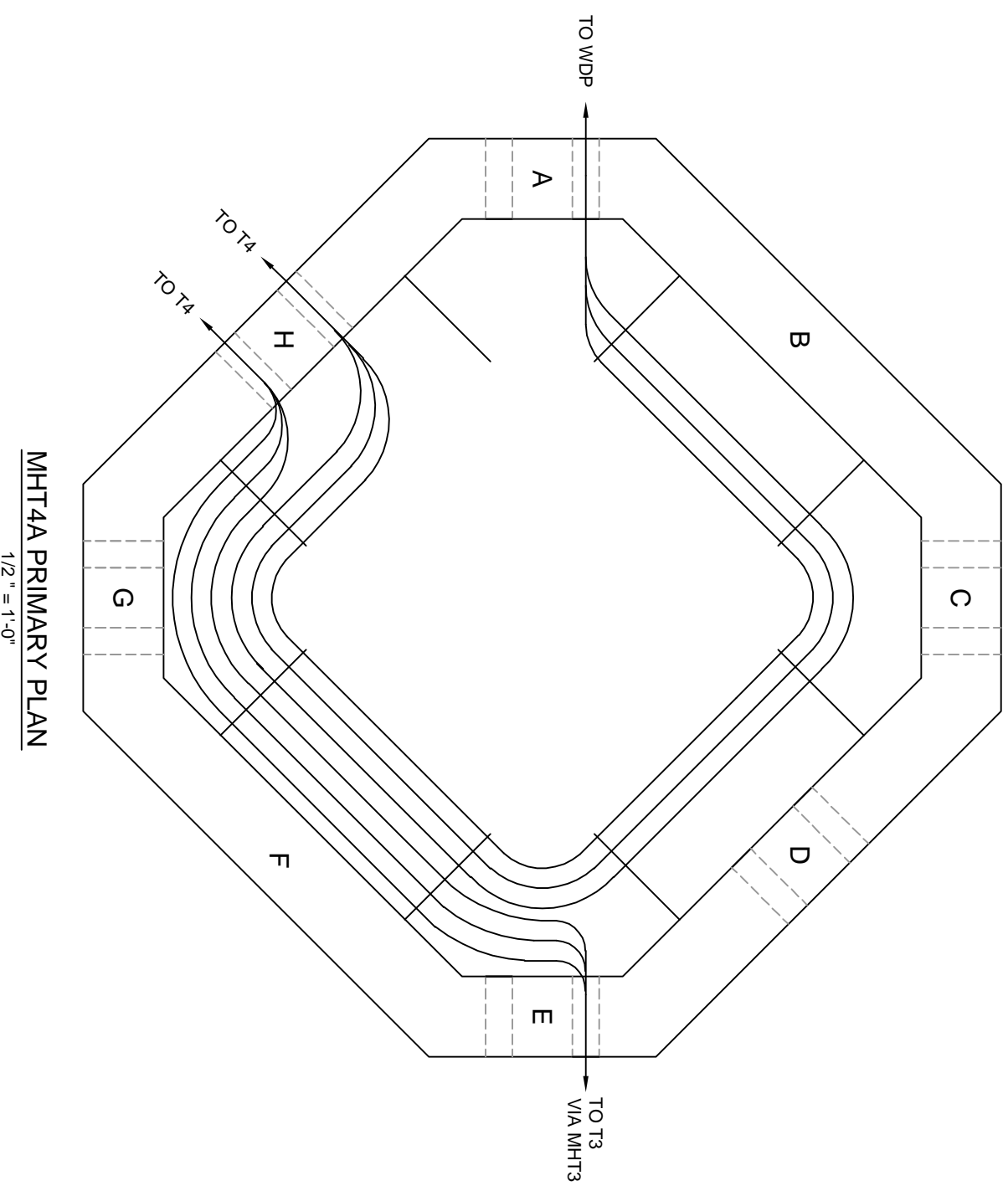
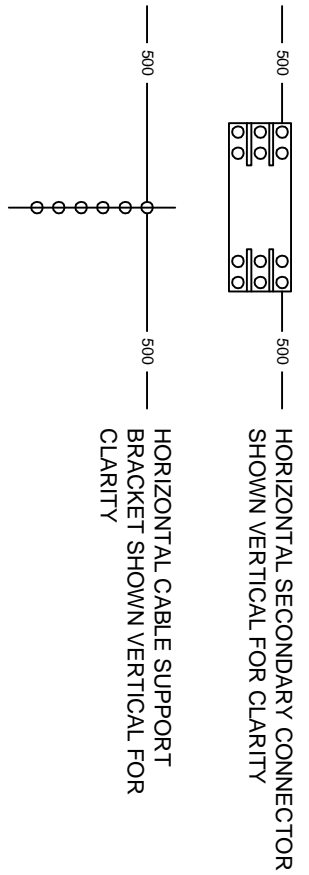


INSIDE WALL ELEVATION - MHT4A
FINAL LAYOUT

- NOTES:**
1. SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 2. VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
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 4. RECONNECT ALL LIGHTING/OUTLET CABLES NOT SHOWN ON THE DRAWING.
 5. VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
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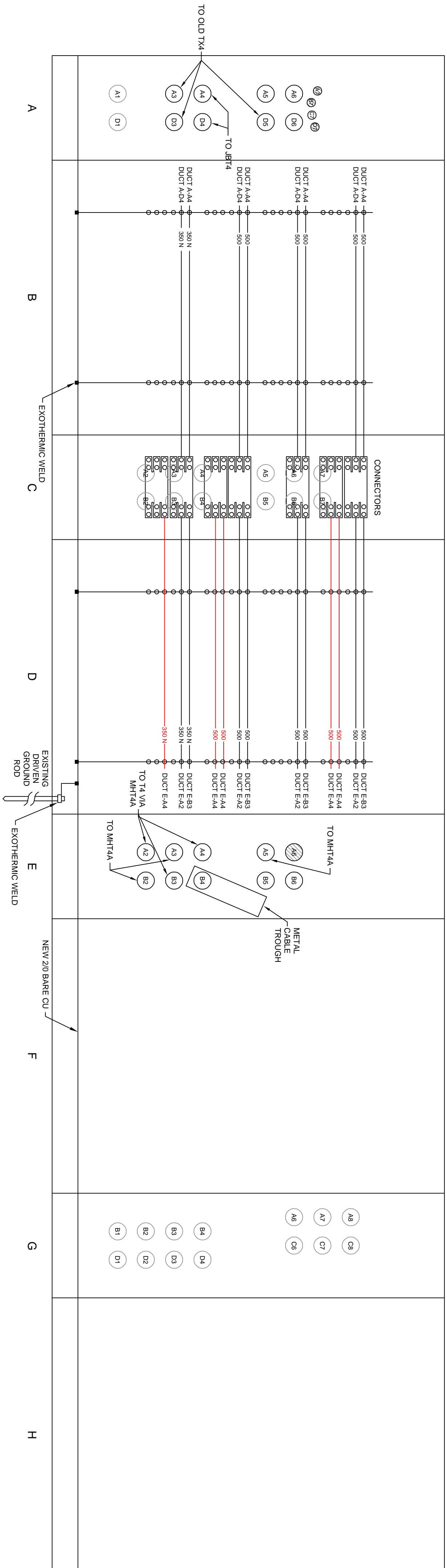
LEGEND:

- CONDUIT USED BY OTHERS
- OPEN CONDUIT
- CONDUIT KNOCKOUT
- HOMAC 175 SERIES
- HOMAC 175 SERIES
- HOMAC 128 SERIES
- SINGLE PHASE TRANSFORMER SECONDARY SIZE SSS
- THREE PHASE TRANSFORMER SECONDARY SIZE SSS
- PRIMARY
- CABLE EXTENDS TO CONDUIT AS ON FACE G OF MANHOLE



MHT4A PRIMARY PLAN
1/2" = 1'-0"

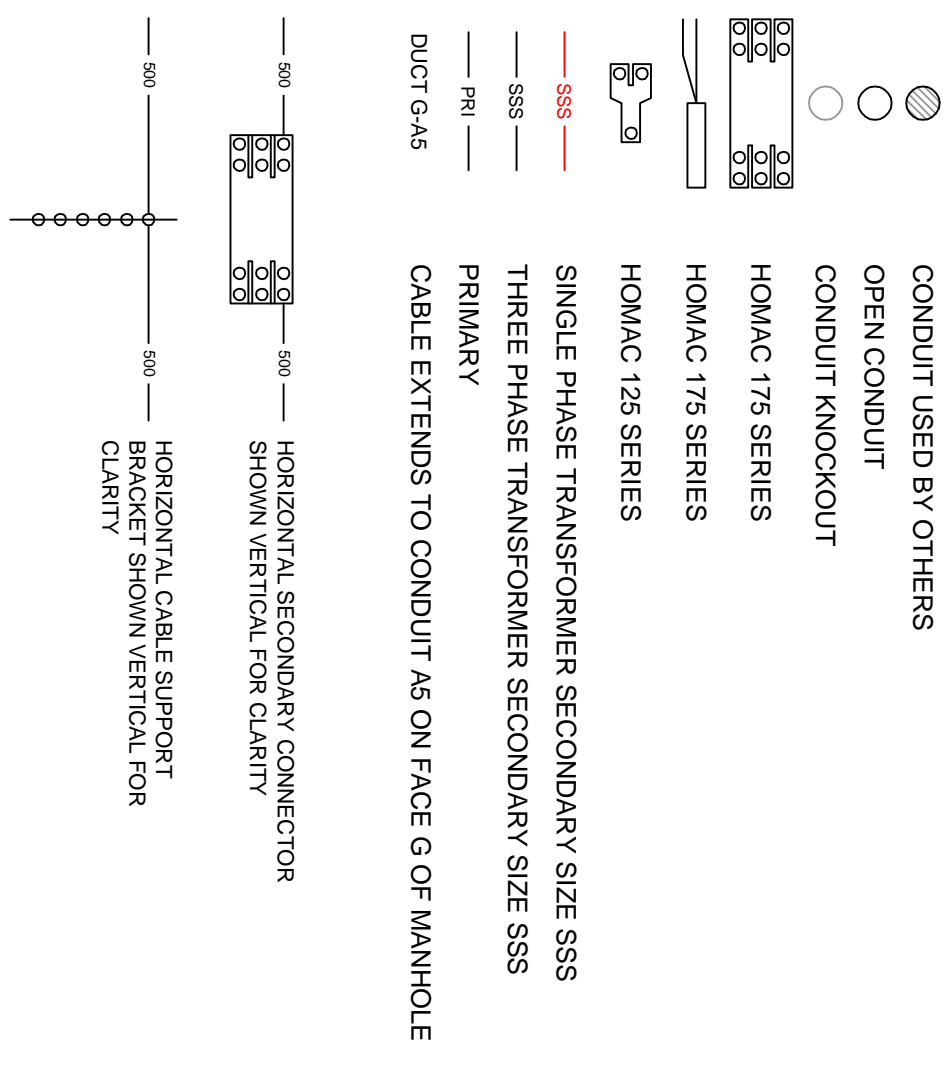
<p>CITY OF GEORGETOWN GEORGETOWN, SC</p> <p>FRONT STREET ELECTRICAL UPGRADE CABLE RACKING DETAILS MANHOLE T4A</p>		<p>UTEC UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS P.O. Box 2829 • Ashboro, North Carolina • 27204</p>	
NO.	REVISIONS	DATE	BY
0.	BID ISSUE	01/23/19	
<p>PRELIMINARY NOT TO BE USED FOR CONSTRUCTION</p>			
DATE	DWG. NO.	DWG. NO.	DATE
SCALE: 3/4" = 1'-0"	289	171001	1/23/19
<p>E016</p>			<p>1 OF 1</p>



INSIDE WALL ELEVATION - MHT4B
FINAL LAYOUT

- NOTES:
1. SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 2. RECONNECT ALL LIGHTING/OUTLET CABLES NOT SHOWN ON THE DRAWING.
 3. VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
 4. ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.

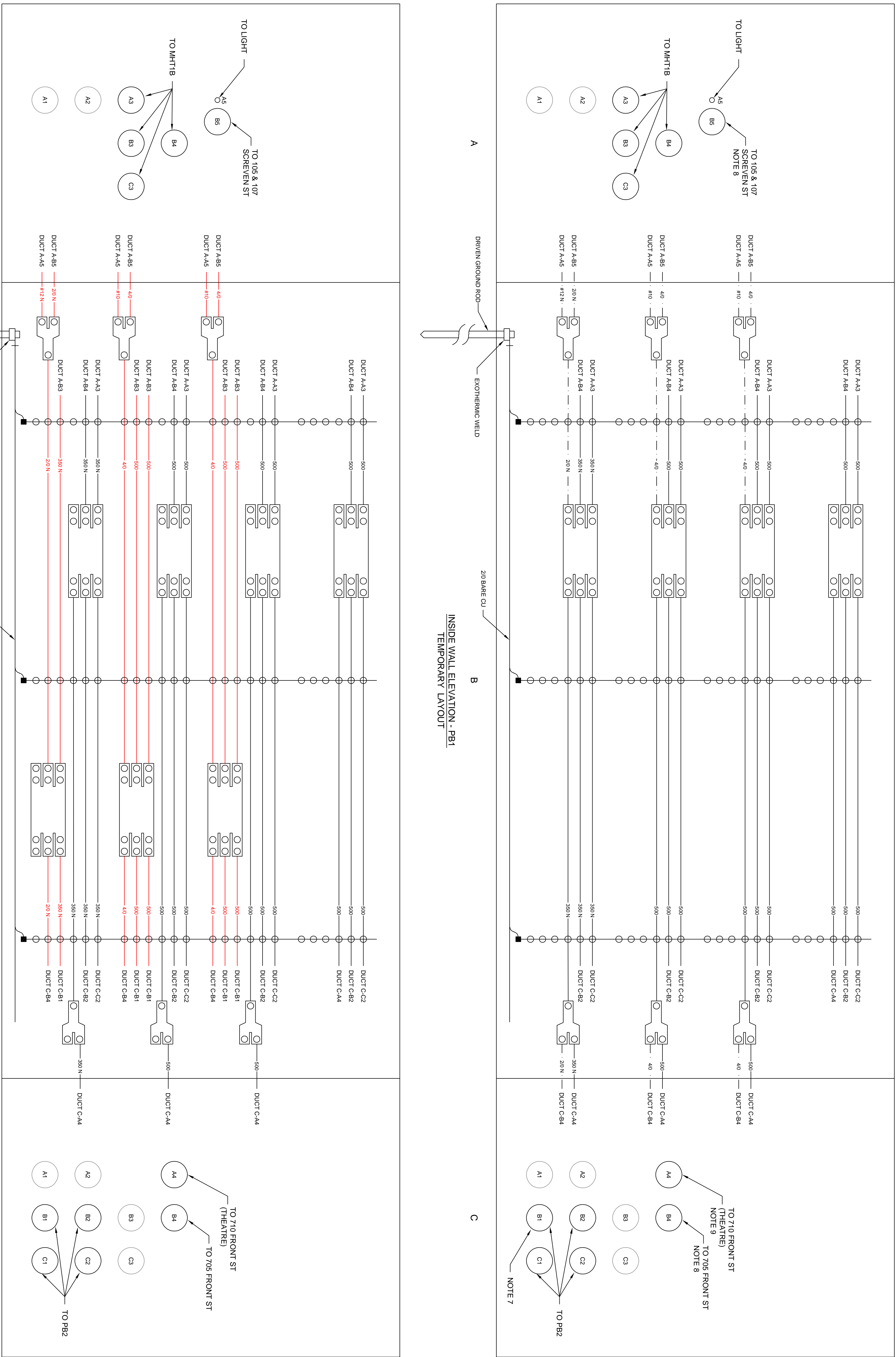
LEGEND:



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	REVISIONS	

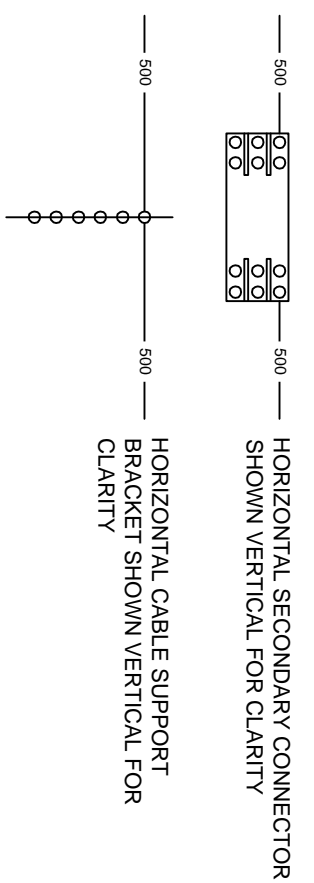
PRELIMINARY
NOT TO BE USED
FOR CONSTRUCTION

CITY OF GEORGETOWN GEORGETOWN, SC	UTEC UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS
FRONT STREET ELECTRICAL UPGRADE CABLE RACKING DETAILS MANHOLE T4B	
DATE: 09/2018	DWG. NO.: E017
P.O. Box 2829 • Ashboro, North Carolina • 27204	SHEET NO.: 1 OF 1



- NOTES:**
- SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 - VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
 - ALL EXISTING SERVICE CABLES TO BE KEPT IF IN ACCEPTABLE CONDITION UNLESS OTHERWISE NOTED. ALL SERVICE CABLES TO BE TAGGED WITH SERVICE ADDRESSES.
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 - CONDUCTOR TO BE PULLED AFTER EXISTING T1 SECONDARY CABLES REMOVED.
 - CUSTOMER MUST BE TEMPORARILY CONNECTED TO T1B OPEN-WIRE/OPEN-DELTA SECONDARY WHILE T1B SINGLE PHASE TRANSFORMER SECONDARY CABLE IS PULLED THROUGH CONDUIT WHERE EXISTING SECONDARY CABLE MUST BE REMOVED.
 - REPLACE EXISTING SERVICE CABLE WITH 500 KCMIL PHASE, 350 KCMIL NEUTRAL.

- LEGEND:**
- CONDUIT USED BY OTHERS
 - OPEN CONDUIT
 - CONDUIT KNOCKOUT
 - HOMAC 175 SERIES
 - HOMAC 125 SERIES
 - SINGLE PHASE TRANSFORMER SECONDARY SIZE SSS
 - THREE PHASE TRANSFORMER SECONDARY SIZE SSS
 - TEMPORARY SECONDARY SERVICES SIZE SSS
 - PRIMARY
 - CABLE EXTENDS TO CONDUIT AS ON FACE OF PULLBOX



NO.	REVISIONS	DATE
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**PRELIMINARY
NOT TO BE USED
FOR CONSTRUCTION**

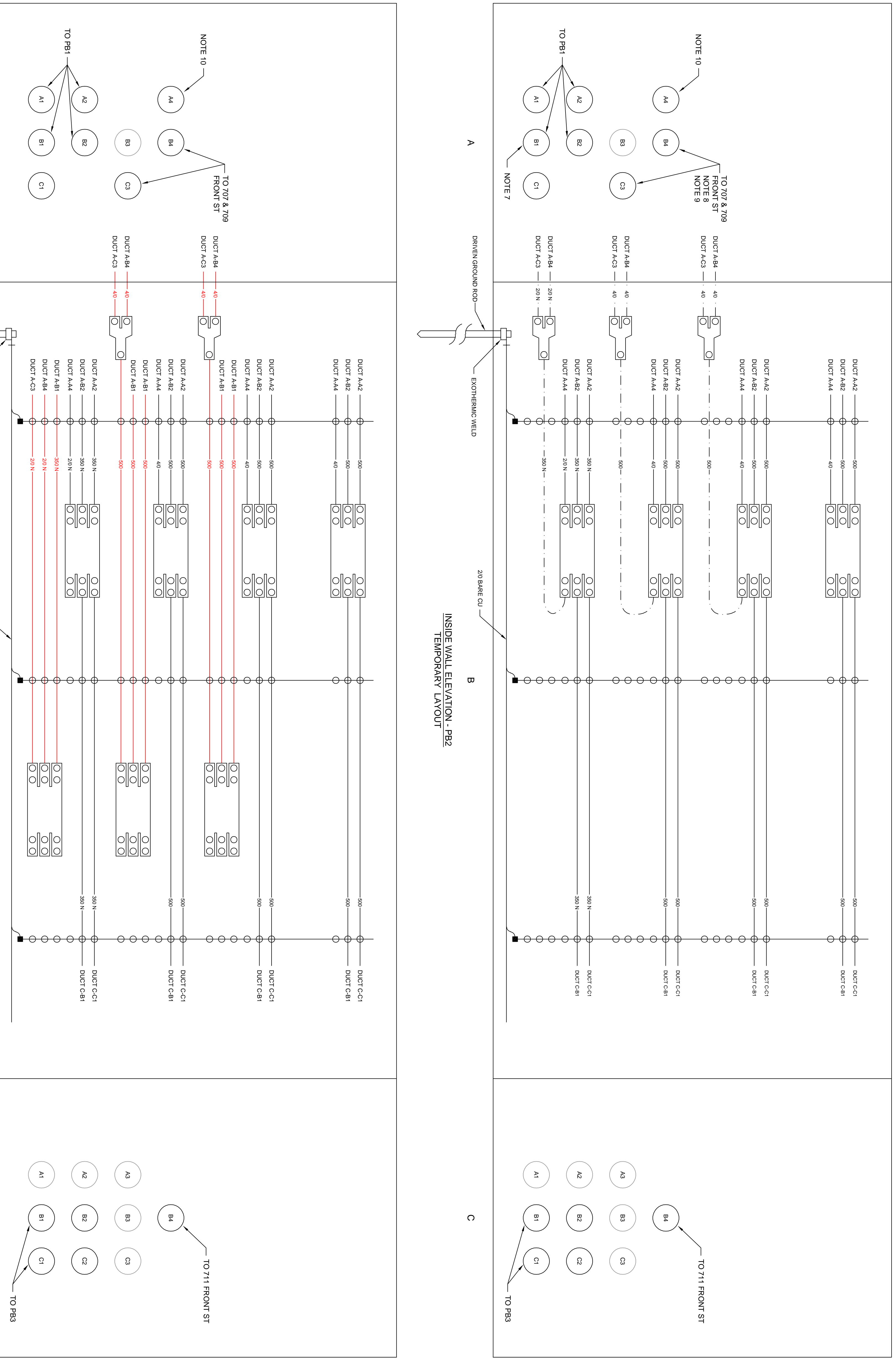
REVISION 01/23/19

CITY OF GEORGETOWN
GEORGETOWN, SC

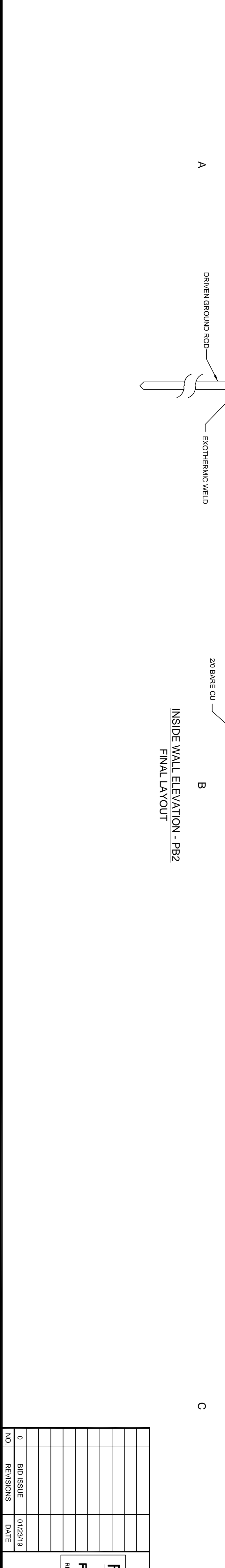
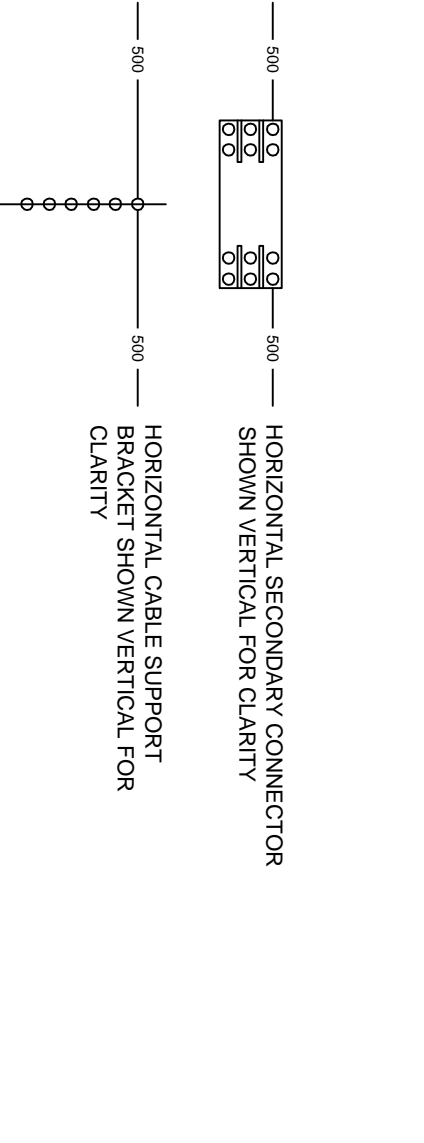
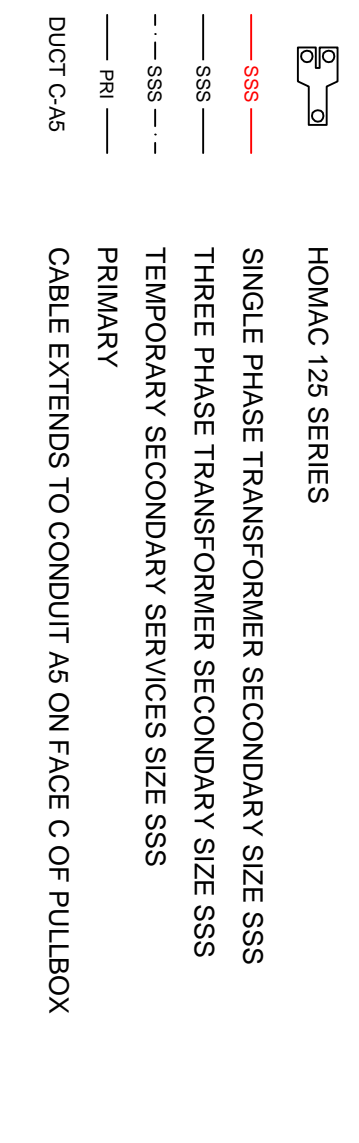
UTILITY TECHNOLOGY
ENGINEERS - CONSULTANTS
P.O. Box 2829 • Ashboro, North Carolina • 27204

UTEC
DATE: 03/21/18 DWG NO: E021
SCALE: 1/4" = 1'-0" SHEET NO: 1 OF 1

**FRONT STREET ELECTRICAL UPGRADE
CABLE RACKING DETAILS
PULLBOX 1**



- NOTES:**
- SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 - VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
 - ALL EXISTING SERVICE CABLES TO BE KEPT IF IN ACCEPTABLE CONDITION UNLESS OTHERWISE NOTED. ALL SERVICE CABLES TO BE TAGGED WITH SERVICE ADDRESSES.
 - RECONNECT ALL LIGHTING/OUTLET CABLES NOT SHOWN ON THE DRAWING.
 - VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
 - ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.
 - CONDUCTOR TO BE PULLED AFTER EXISTING T1 SECONDARY CABLES REMOVED.
 - CUSTOMER MUST BE TEMPORARILY CONNECTED TO T1B OPEN-WIRE/OPEN-DELTA SECONDARY WHILE T1B SINGLE PHASE TRANSFORMER SECONDARY CABLE IS PULLED THROUGH CONDUIT WHERE EXISTING SECONDARY CABLE MUST BE REMOVED.
 - VERIFY WHICH CONDUIT GOES TO WHICH ADDRESS AND TAG CABLES ACCORDINGLY.
 - DETERMINE WHAT THIS CONDUIT SERVES AND TAG ACCORDINGLY.



CITY OF GEORGETOWN
 GEORGETOWN, SC

FRONT STREET ELECTRICAL UPGRADE
 CABLE RACKING DETAILS
 PULLBOX 2

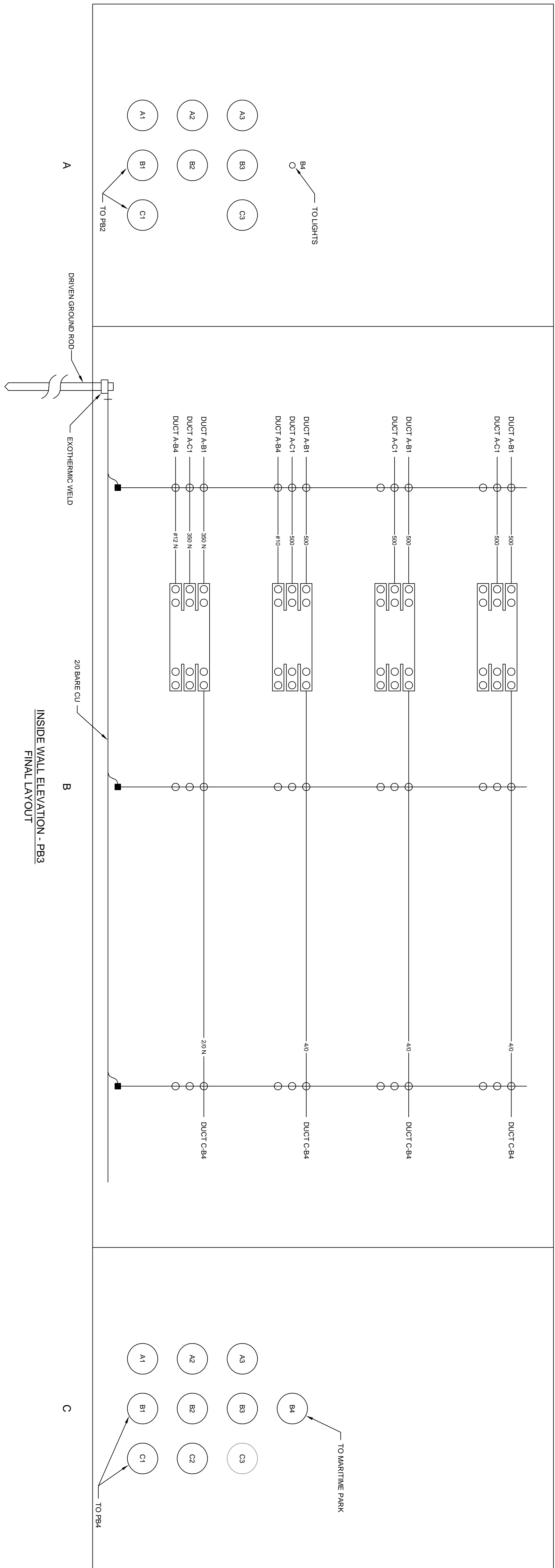
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 UTILITY TECHNOLOGY
 ENGINEERS - CONSULTANTS
 P.O. Box 2829 • Ashboro, North Carolina • 27204

DATE: 03/21/18 DWG NO: E022
 SCALE: 3/4" = 1'-0" SHEET NO: 1 OF 1

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REVISION: 01/23/19

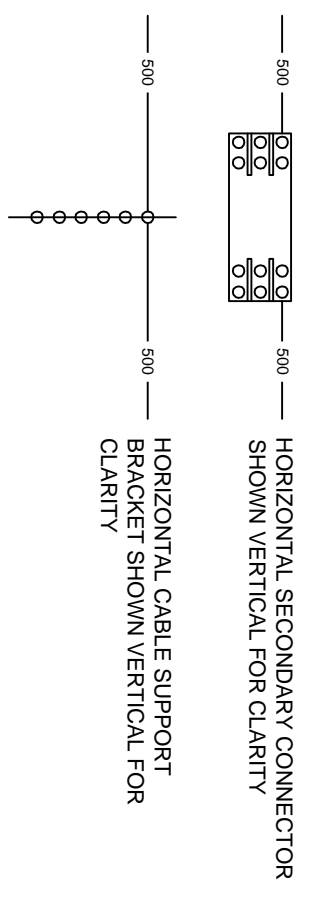


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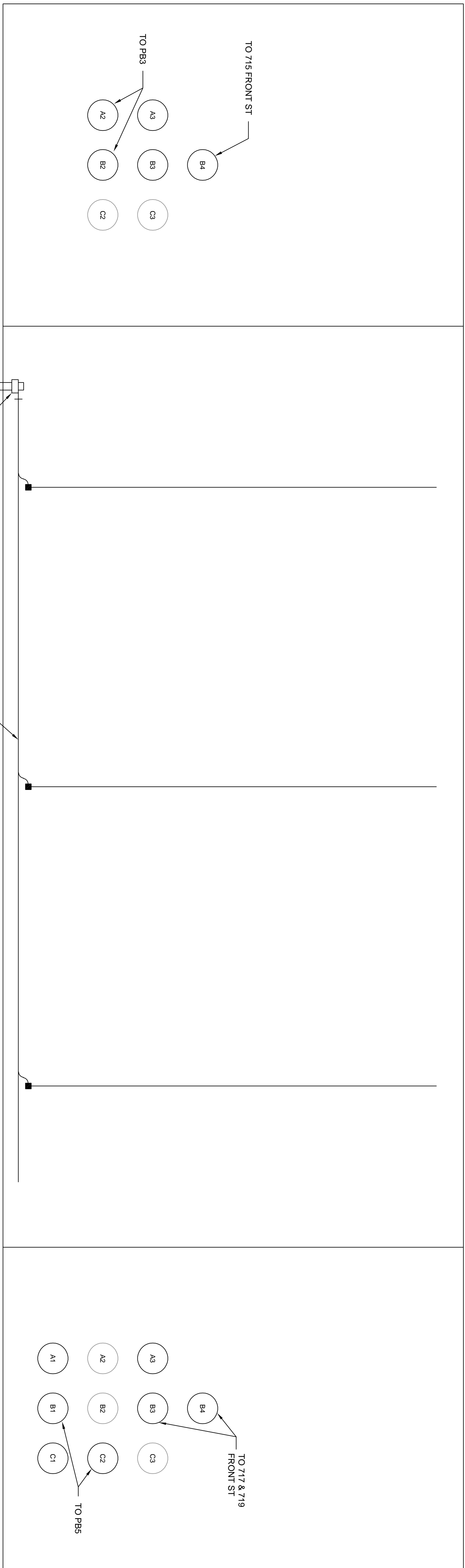
1. SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
2. VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
3. ALL EXISTING SERVICE CABLES TO BE KEPT IF IN ACCEPTABLE CONDITION UNLESS OTHERWISE NOTED. ALL SERVICE CABLES TO BE TAGGED WITH SERVICE ADDRESSES.
4. RECONNECT ALL LIGHTING/OUTLET CABLES NOT SHOWN ON THE DRAWING.
5. VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
6. ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.

LEGEND:

- CONDUIT USED BY OTHERS
- OPEN CONDUIT
- CONDUIT KNOCKOUT
- HOMAC 175 SERIES
- HOMAC 175 SERIES
- HOMAC 175 SERIES
- HOMAC 125 SERIES
- SSS — SINGLE PHASE TRANSFORMER SECONDARY SIZE SSS
- SSS — — — THREE PHASE TRANSFORMER SECONDARY SIZE SSS
- SSS — — — TEMPORARY SECONDARY SERVICES SIZE SSS
- PRI — PRIMARY
- DUCT C-45 — CABLE EXTENDS TO CONDUIT AS ON FACE C OF PULLBOX



<p>PRELIMINARY NOT TO BE USED FOR CONSTRUCTION</p> <p>REVISION: 01/23/18</p>	<p>CITY OF GEORGETOWN GEORGETOWN, SC</p> <p>FRONT STREET ELECTRICAL UPGRADE CABLE RACKING DETAILS PULLBOX 3</p>						
<p>UTEC UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS</p> <p>P.O. Box 2829 • Ashboro, North Carolina • 27204</p>	<p>E023</p> <p>DATE: 03/21/18 DIMS NO. SHEET NO. 1 OF 1</p> <p>SCALE: 3/4" = 1'-0"</p>						
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0.	BID ISSUE	01/23/18					

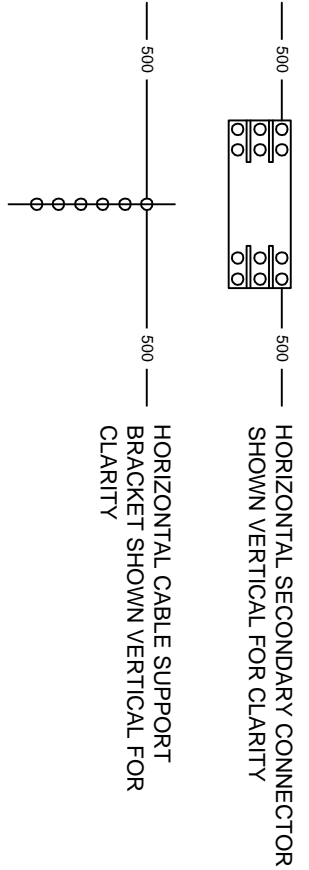


INSIDE WALL ELEVATION - PB4
FINAL LAYOUT

- NOTES:**
- SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 - ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.

LEGEND:

- CONDUIT USED BY OTHERS
- OPEN CONDUIT
- CONDUIT KNOCKOUT
- HOMAC 175 SERIES
- HOMAC 175 SERIES
- HOMAC 125 SERIES
- SINGLE PHASE TRANSFORMER SECONDARY SIZE SSS
- THREE PHASE TRANSFORMER SECONDARY SIZE SSS
- TEMPORARY SECONDARY SERVICES SIZE SSS
- PRIMARY
- CABLE EXTENDS TO CONDUIT AS ON FACE OF PULLBOX



NO.	REVISIONS	DATE
0.	BID ISSUE	01/23/19
	REVISIONS	

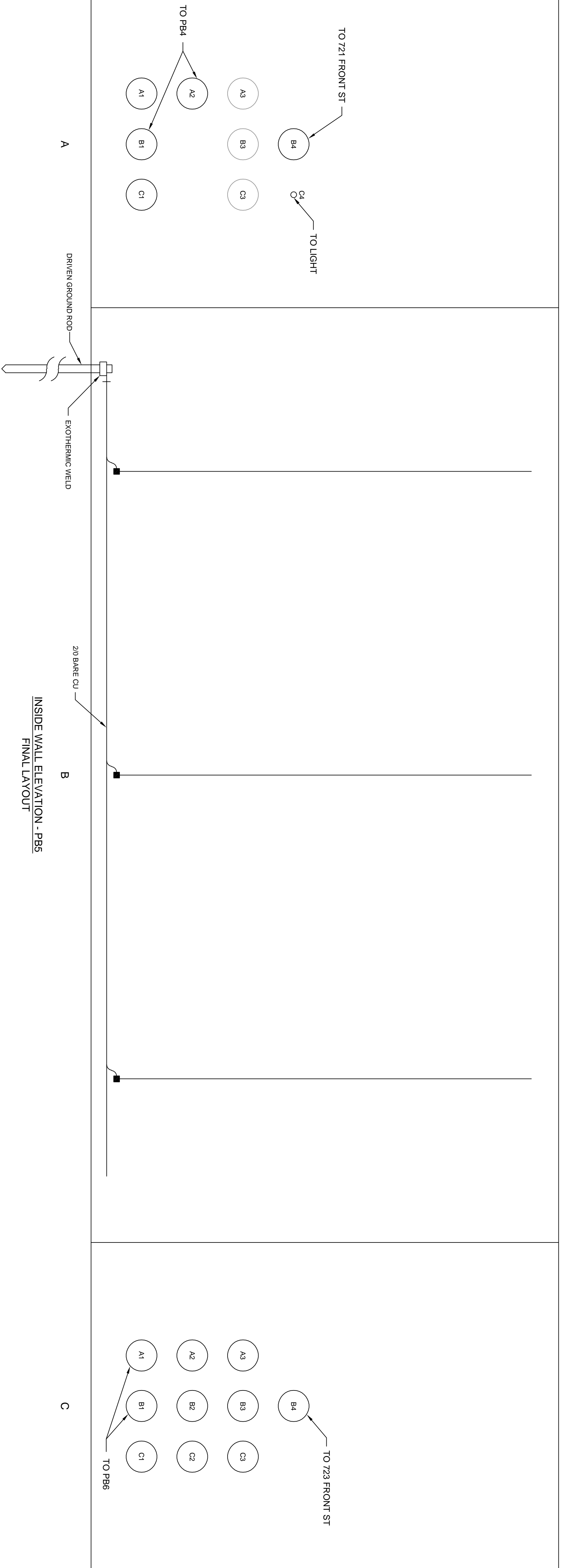
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REVISION _____ 01/23/19

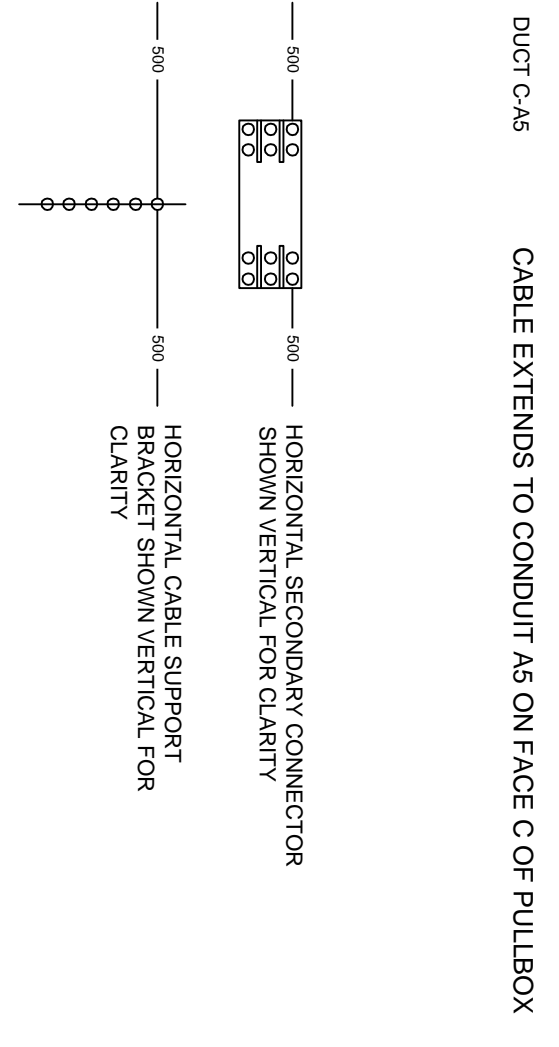
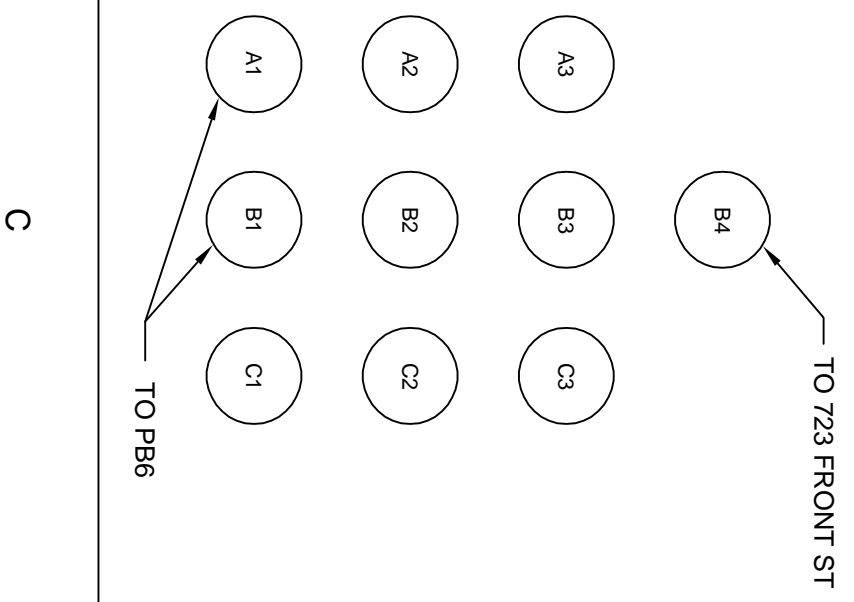
CITY OF GEORGETOWN
GEORGETOWN, SC
FRONT STREET ELECTRICAL UPGRADE
CABLE RACKING DETAILS
PULLBOX 4

UTEC UTILITY TECHNOLOGY
ENGINEERS - CONSULTANTS
P.O. Box 2829 • Ashboro, North Carolina • 27204

DATE: 03/21/18 DWG NO: E024
SCALE: 3/4" = 1'-0" SHEET NO: 1 OF 1



INSIDE WALL ELEVATION - PB5
FINAL LAYOUT



- LEGEND:**
- CONDUIT USED BY OTHERS
 - OPEN CONDUIT
 - CONDUIT KNOCKOUT
 - HOMAC 775 SERIES
 - HOMAC 775 SERIES
 - HOMAC 125 SERIES
 - HOMAC 125 SERIES
 - SSS — SINGLE PHASE TRANSFORMER SECONDARY SIZE SSS
 - SSS — THREE PHASE TRANSFORMER SECONDARY SIZE SSS
 - - - SSS - - - TEMPORARY SECONDARY SERVICES SIZE SSS
 - - - PRI - - - PRIMARY
 - - - DUOT C-45 - - - CABLE EXTENDS TO CONDUIT AS ON FACE OF PULLBOX

- NOTES:**
1. SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 2. ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.

NO.	BID ISSUE REVISIONS	DATE
0.	BID ISSUE	01/23/19

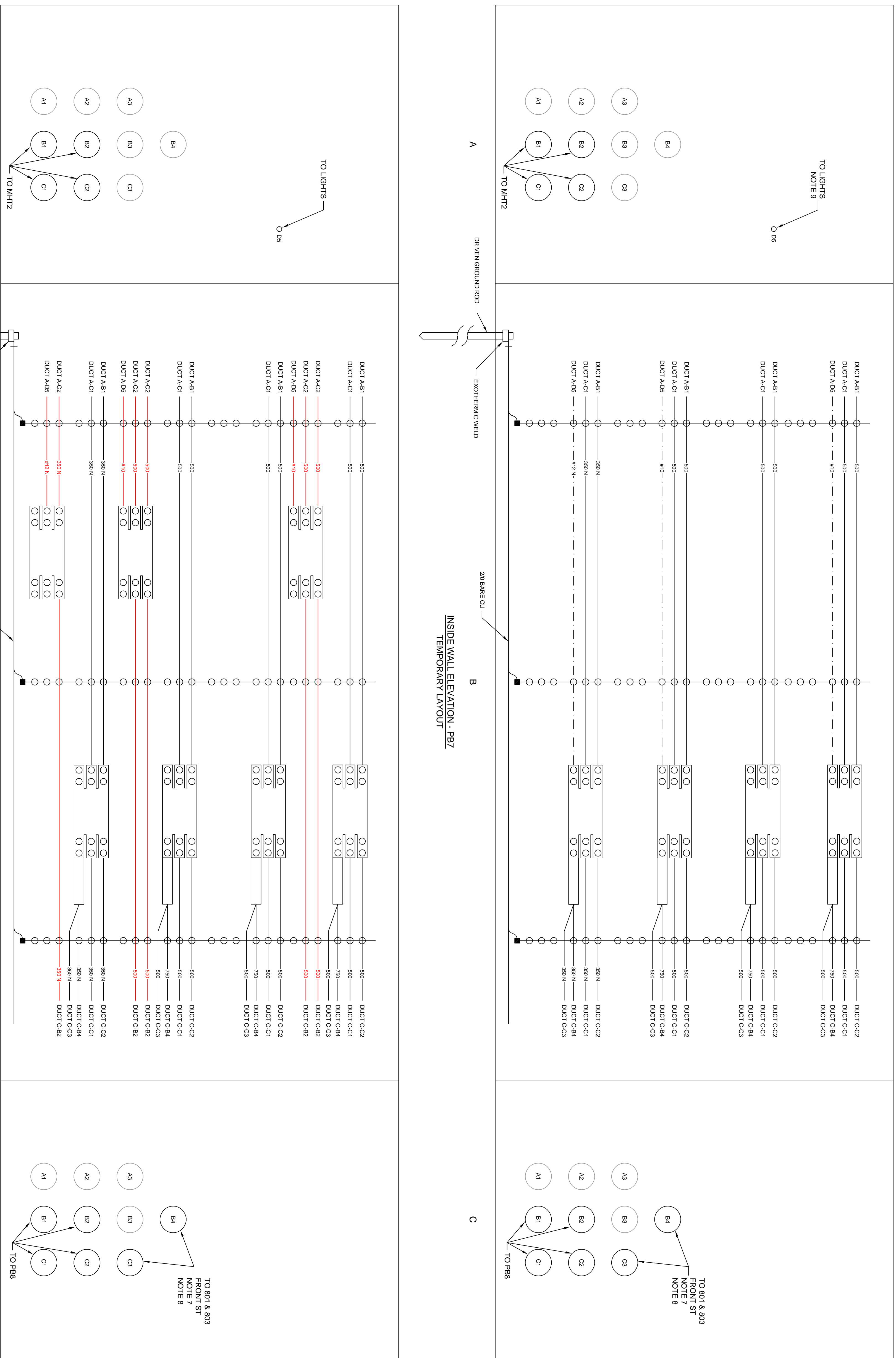
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REVISION 01/23/19

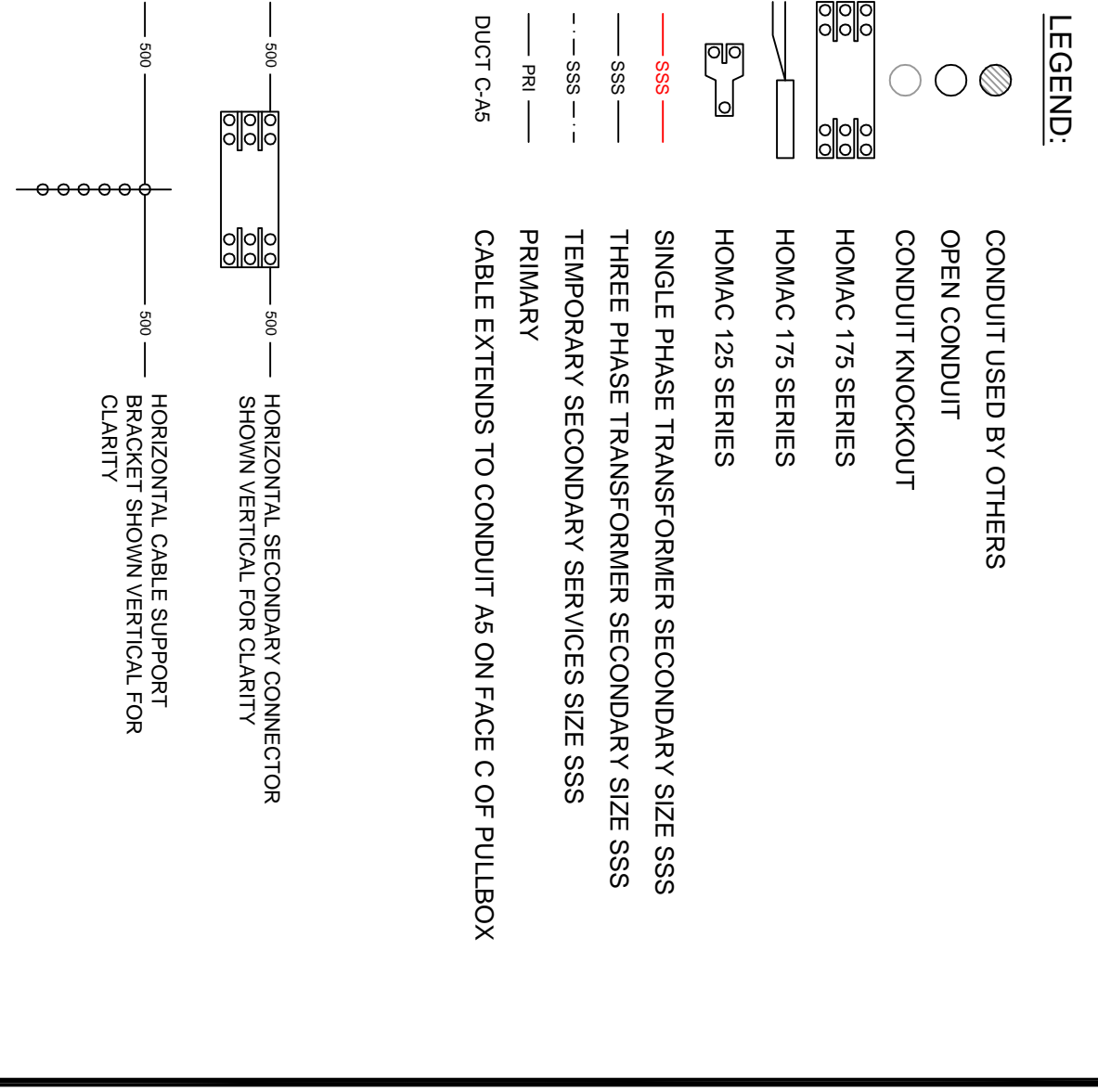
CITY OF GEORGETOWN
GEORGETOWN, SC
FRONT STREET ELECTRICAL UPGRADE
CABLE RACKING DETAILS
PULLBOX 5

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DATE	DATE	DATE	DATE
01/23/19	01/23/19	01/23/19	01/23/19
SCALE: 3/4" = 1'-0"	DWG. NO. E025	SHEET NO. 1 OF 1	



- NOTES:**
- SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 - VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
 - ALL EXISTING SERVICE CABLES TO BE KEPT IF IN ACCEPTABLE CONDITION UNLESS OTHERWISE NOTED. ALL SERVICE CABLES TO BE TAGGED WITH SERVICE ADDRESSES.
 - RECONNECT ALL LIGHTING/OUTLET CABLES NOT SHOWN ON THE DRAWING.
 - VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
 - ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.
 - VERIFY WHICH CONDUIT GOES TO WHICH ADDRESS AND TAG CABLES ACCORDINGLY.
 - REPLACE 801 FRONT STREET'S EXISTING SERVICE CABLE WITH 750 KCMIL PHASE, 350 KCMIL NEUTRAL.
 - LIGHTS MUST BE TEMPORARILY CONNECTED TO T2 OPEN-WYE/OPEN-DELTA SECONDARY WHILE T2 SINGLE PHASE TRANSFORMER SECONDARY CABLE IS PULLED THROUGH CONDUIT WHERE EXISTING SECONDARY CABLE MUST BE REMOVED.



NO.	REVISIONS	DATE
0.	BID ISSUE	01/23/19

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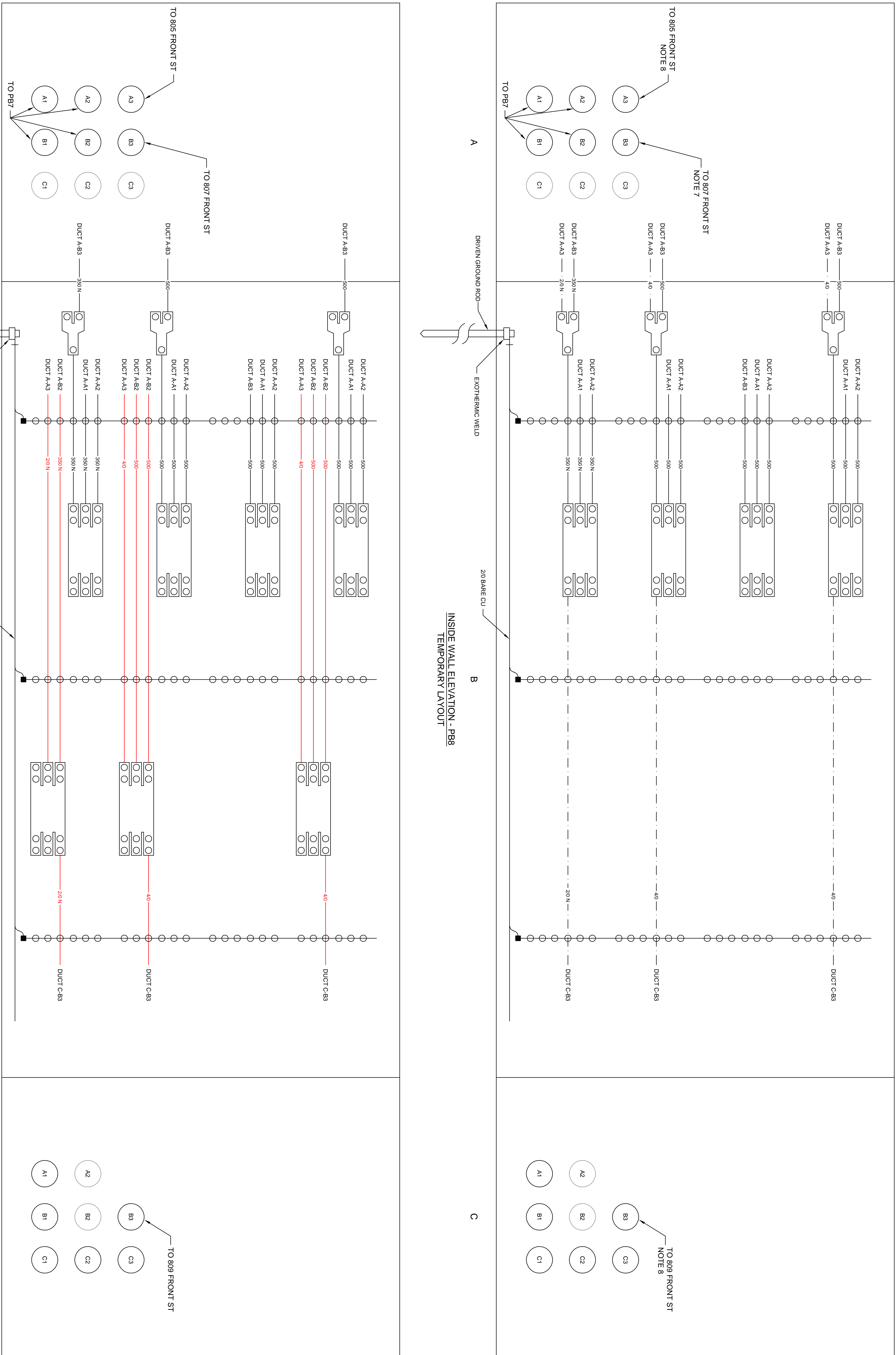
REVISION: 01/23/19

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GEORGETOWN, SC

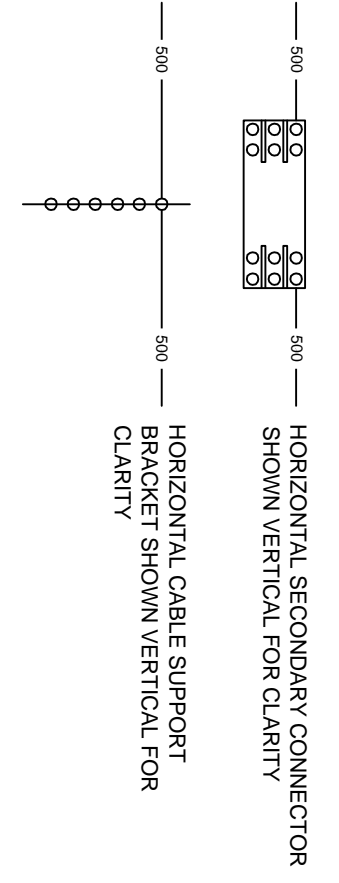
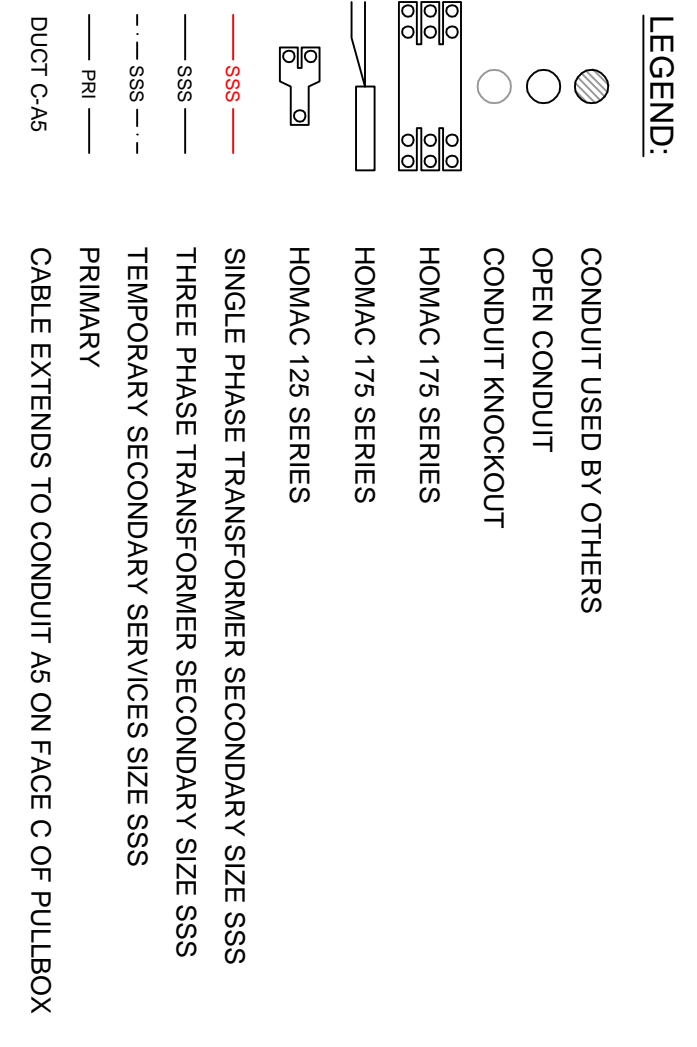
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UTEC
DATE: 03/21/18 DWG NO: E027
SCALE: 3/4" = 1'-0" SHEET NO: 1 OF 1

FRONT STREET ELECTRICAL UPGRADE
CABLE RACKING DETAILS
PULLBOX 7



- NOTES:**
- SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 - VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
 - ALL EXISTING SERVICE CABLES TO BE KEPT IF IN ACCEPTABLE CONDITION UNLESS OTHERWISE NOTED. ALL SERVICE CABLES TO BE TAGGED WITH SERVICE ADDRESSES.
 - RECONNECT ALL LIGHTING/OUTLET CABLES NOT SHOWN ON THE DRAWING.
 - VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
 - ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.
 - REPLACE EXISTING SERVICE CABLE WITH 500 KCMIL PHASE, 350 KCMIL NEUTRAL.
 - CUSTOMER MUST BE TEMPORARILY CONNECTED TO T2 OPEN WIRE/OPEN DELTA SECONDARY WHILE T2 SINGLE PHASE TRANSFORMER SECONDARY CABLE IS PULLED THROUGH CONDUIT WHERE EXISTING SECONDARY CABLE MUST BE REMOVED.



NO.	REVISIONS	DATE
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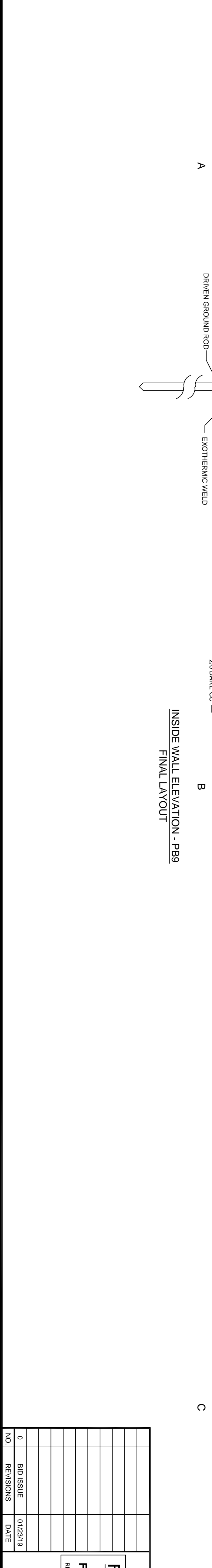
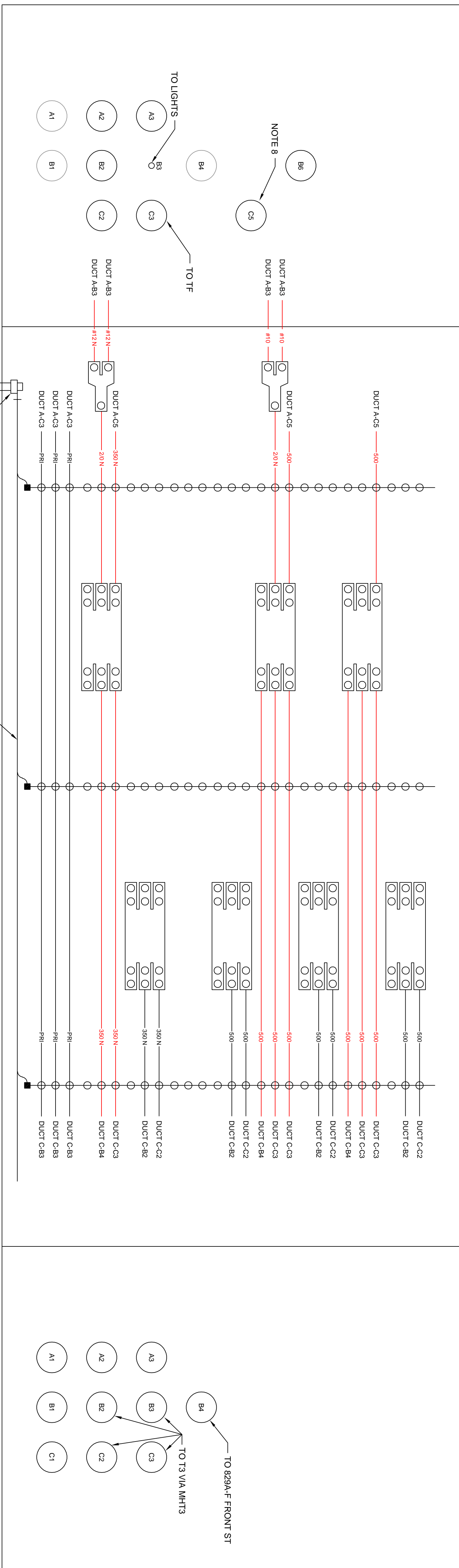
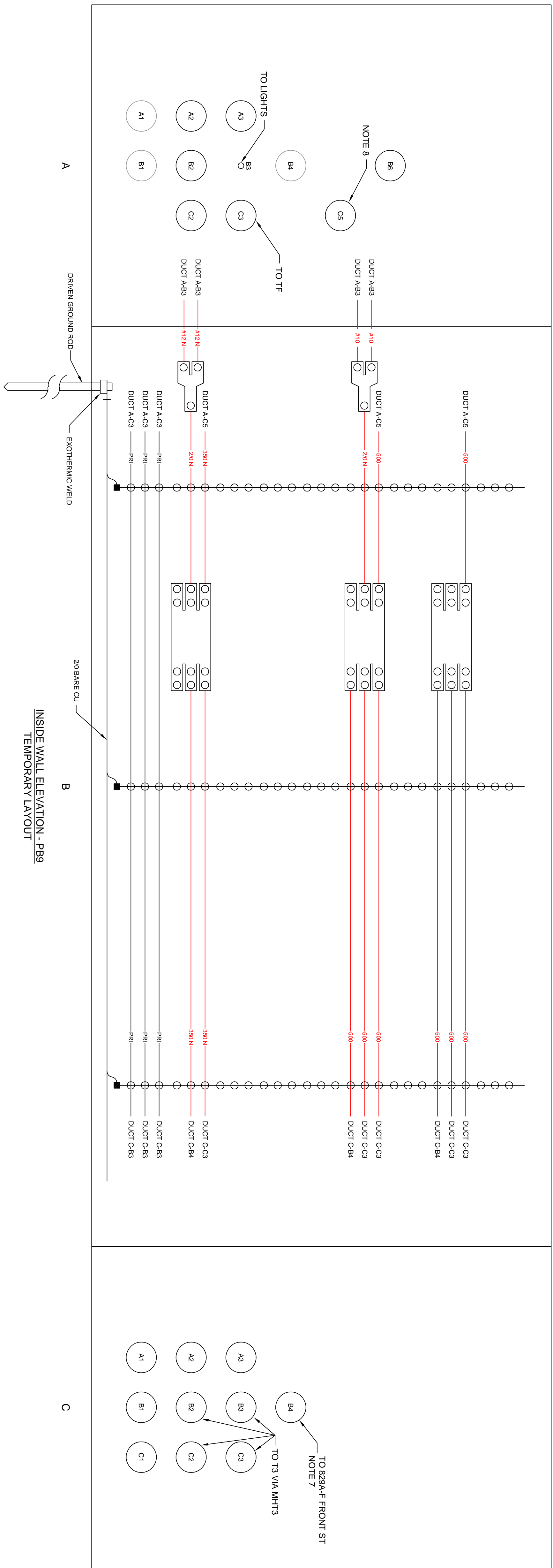
REVISION: 01/23/19

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GEORGETOWN, SC

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UTEC
DATE: 03/21/18 DWG. NO. E028
SCALE: 3/4" = 1'-0" SHEET NO. 1 OF 1

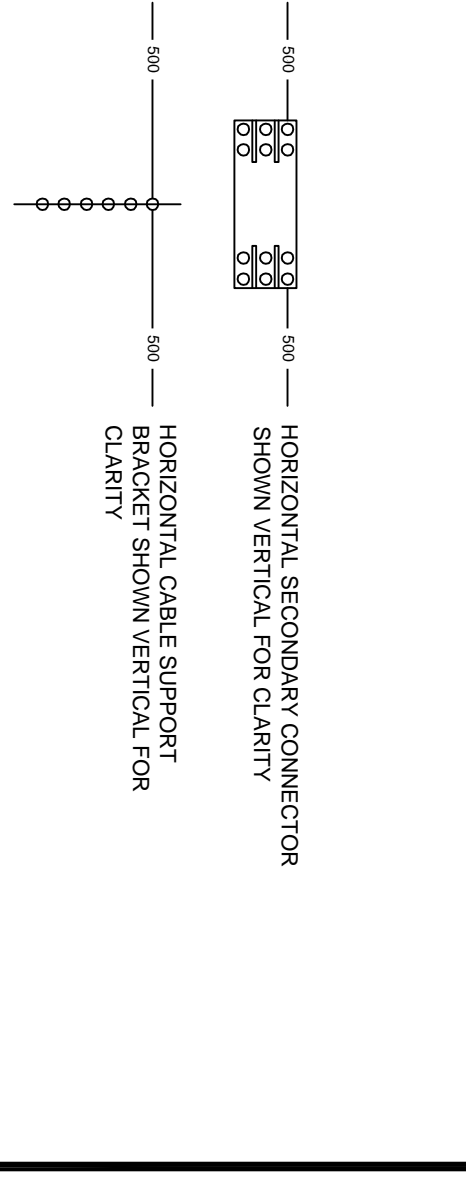
FRONT STREET ELECTRICAL UPGRADE CABLE RACKING DETAILS PULLBOX 8



- NOTES:**
- SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
 - VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
 - ALL EXISTING SERVICE CABLES TO BE KEPT IF IN ACCEPTABLE CONDITION UNLESS OTHERWISE NOTED. ALL SERVICE CABLES TO BE TAGGED WITH SERVICE ADDRESSES.
 - RECONNECT ALL LIGHTING/OUTLET CABLES NOT SHOWN ON THE DRAWING.
 - VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
 - ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.
 - REPLACE EXISTING SERVICE CABLE WITH 500 KCMIL PHASE, 350 KCMIL NEUTRAL.
 - DETERMINE WHAT THIS CONDUIT SERVES AND TAG ACCORDINGLY.

LEGEND:

- CONDUIT USED BY OTHERS
- OPEN CONDUIT
- CONDUIT KNOCKOUT
- HOMAC 175 SERIES
- HOMAC 175 SERIES
- HOMAC 125 SERIES
- SINGLE PHASE TRANSFORMER SECONDARY SIZE SSS
- THREE PHASE TRANSFORMER SECONDARY SIZE SSS
- TEMPORARY SECONDARY SERVICES SIZE SSS
- PRIMARY
- CABLE EXTENDS TO CONDUIT AS ON FACE C OF PULLBOX



CITY OF GEORGETOWN
 GEORGETOWN, SC
FRONT STREET ELECTRICAL UPGRADE
 CABLE RACKING DETAILS
 PULLBOX 9

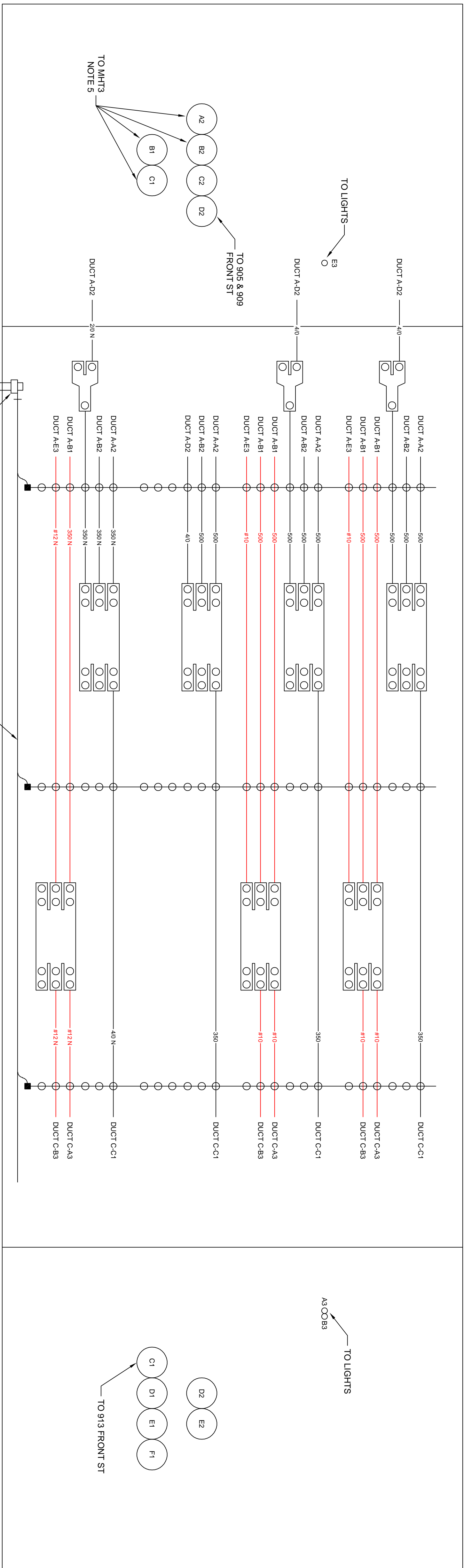
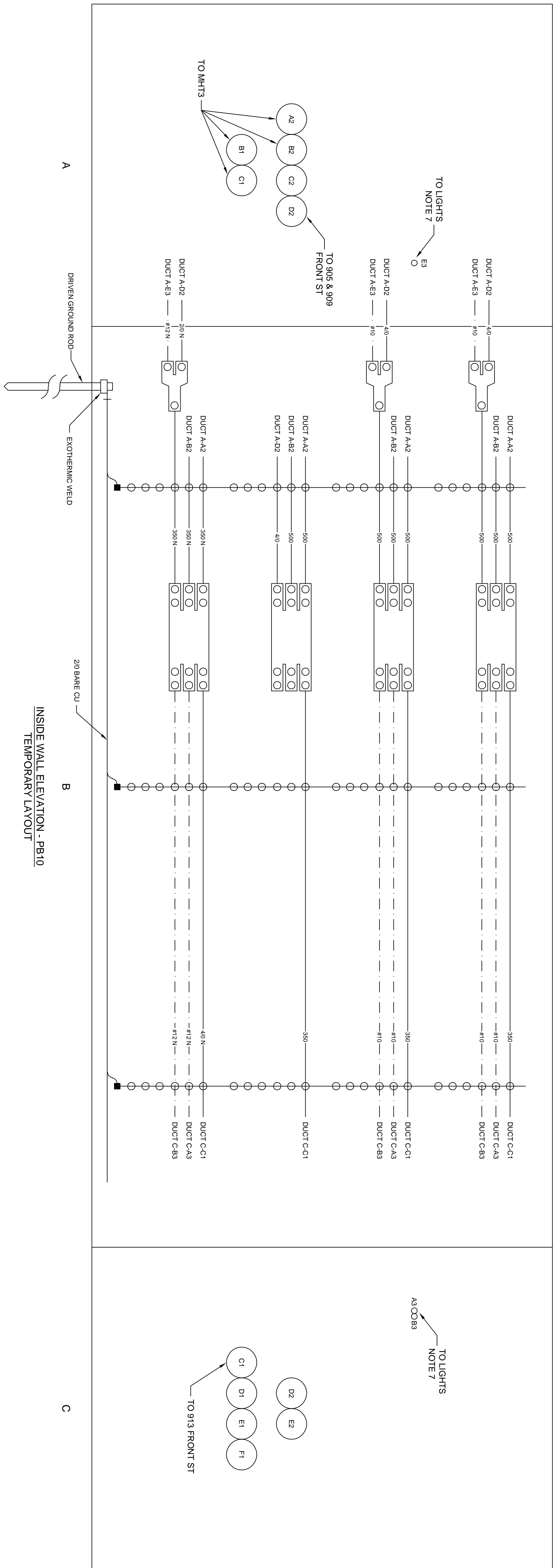
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DATE: 03/21/18 DWG. NO.: E029
 SCALE: 3/4" = 1'-0" SHEET NO.: 1 OF 1

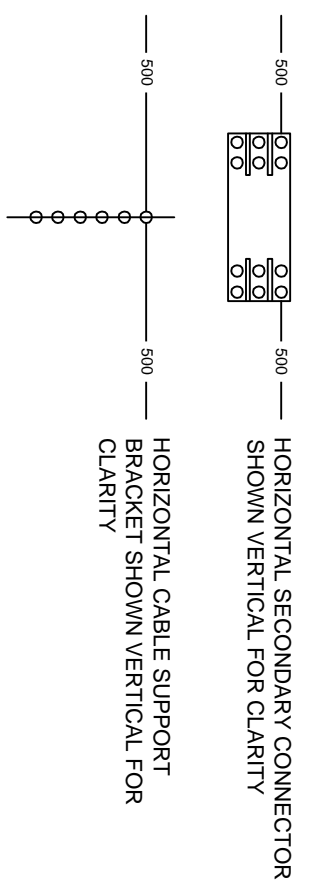


NOTES:

1. SEE DWG E004 FOR DETAILED CONSTRUCTION SEQUENCE.
2. VERIFY PHASE ROTATION OF 3-PHASE SERVICES BEFORE DISCONNECTING THE SERVICE FROM THE EXISTING SECONDARY CABLES AND AFTER CONNECTING TO THE NEW SECONDARY CABLE, BUT BEFORE CLOSING THE SERVICE DISCONNECT.
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4. RECONNECT ALL LIGHTING/OUTLET CABLES NOT SHOWN ON THE DRAWING.
5. VERIFY CONDUIT PATHS BEFORE PULLING NEW CABLES.
6. ALL EXISTING CABLE WALL SUPPORTS SHALL BE REMOVED AND REPLACED. ALL EXISTING CABLE SUPPORT BRACKETS SHALL BE REMOVED AND NEW BRACKETS INSTALLED AS SHOWN. NEW GROUND CABLE SHOULD BE INSTALLED FROM EXISTING GROUND ROD TO NEW CHANNELS.
7. LIGHTS MUST BE TEMPORARILY CONNECTED TO T3 OPEN-WYE/OPEN-DELTA SECONDARY WHILE T3 SINGLE PHASE TRANSFORMER SECONDARY CABLE IS PULLED THROUGH CONDUIT WHERE EXISTING SECONDARY CABLE MUST BE REMOVED.

LEGEND:

- CONDUIT USED BY OTHERS
- OPEN CONDUIT
- CONDUIT KNOCKOUT
- HOMAC 175 SERIES
- HOMAC 175 SERIES
- HOMAC 125 SERIES
- SSS — SINGLE PHASE TRANSFORMER SECONDARY SIZE SSS
- SSS — THREE PHASE TRANSFORMER SECONDARY SIZE SSS
- - - SSS - - - TEMPORARY SECONDARY SERVICES SIZE SSS
- PR — PRIMARY
- DUCT C-A6 — CABLE EXTENDS TO CONDUIT AS ON FACE C OF PULLBOX



NO.	REVISIONS	DATE
0.	BID ISSUE	01/23/19
	REVISIONS	

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REVISION 01/23/19

CITY OF GEORGETOWN
GEORGETOWN, SC

FRONT STREET ELECTRICAL UPGRADE
CABLE RACKING DETAILS
PULLBOX 10

UTEC UTILITY TECHNOLOGY
ENGINEERS - CONSULTANTS
P.O. Box 2829 • Ashboro, North Carolina • 27204

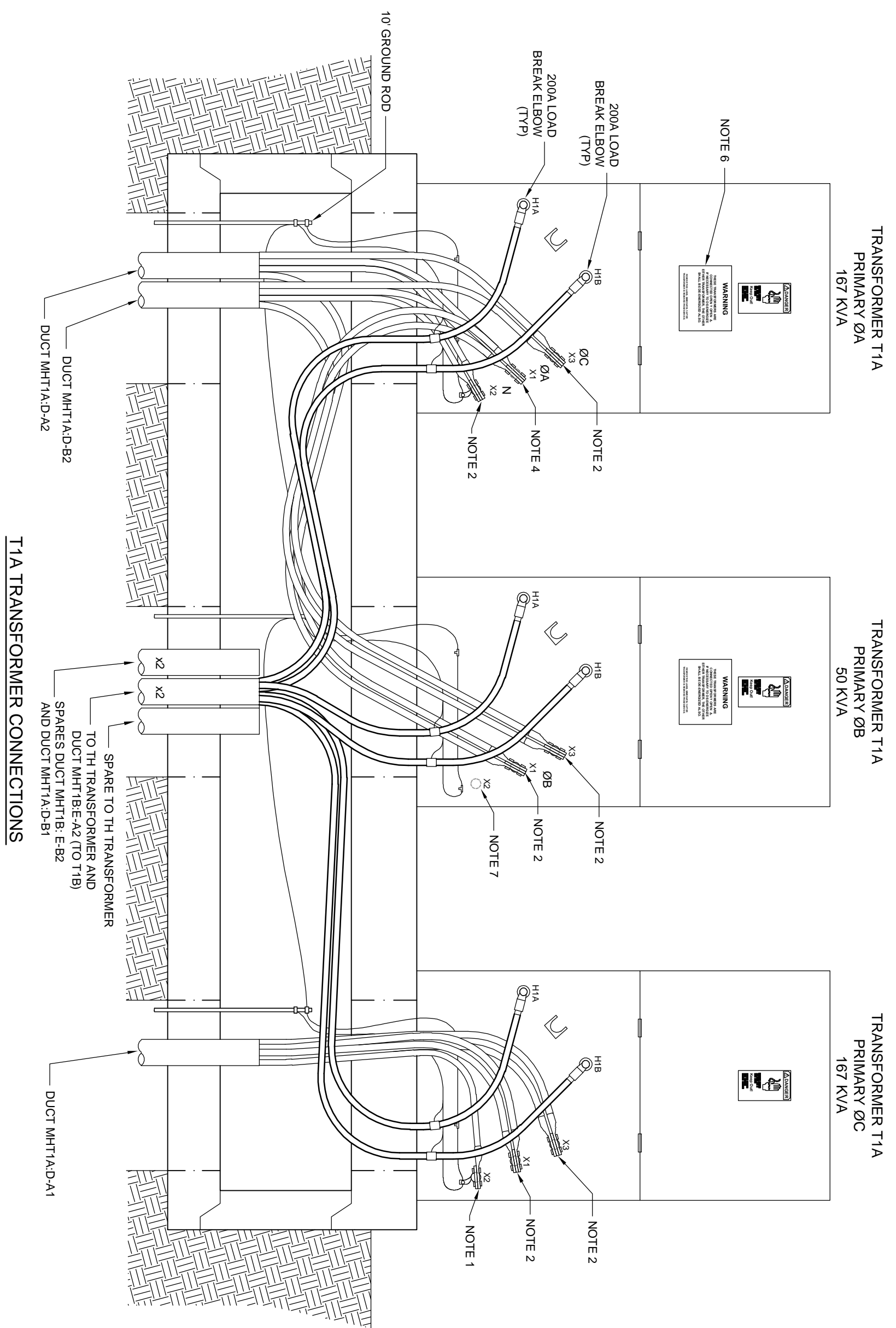
DATE: 03/21/18 DWG. NO. E030
SCALE: 3/4" = 1'-0" SHEET NO. 1 OF 1

CONDUIT SCHEDULE					
Conduit No.	Installation Type	From	To	Length	Cables
1	Direct Bore	Marina Area Dip Pole (MADP)	Transformer TM	125	P1
2	Direct Bore	Transformer TM	525 Front St	80	Spare
3	Direct Bore	Transformer TM	531 Front St	10	S1
4	Direct Bore	Transformer TM	601 Front St	155	S2
5	Direct Bore	Transformer TM	Marina Dock	180	S3
6	Direct Bore	Transformer TM	Marina Dock	180	S4
7	Direct Bore	Transformer TM	Marina Dock	180	S4
8	Direct Bore	Transformer TM	Marina Dock	180	S4
9	Direct Bore	East Dip Pole (EDP)	Transformer TH	335	P2
10	Direct Bore	Transformer TH	Transformer TH	335	Spare
11	Direct Bore	Transformer TH	Transformer TH	150	P3
12	Direct Bore	Transformer TH	Transformer TH	150	Spare
13	Direct Bore	Transformer TH	Transformer TH	150	Spare
14	Direct Bore	Transformer TH	Transformer TH	150	Spare
15	Direct Bore	Transformer TH	Transformer TH	150	Spare
16	Direct Bore	Transformer TH	Transformer TH	150	Spare
17	Direct Bore	Transformer TH	Transformer TH	150	Spare
18	Direct Bore	Transformer TH	Transformer TH	150	Spare
19	Direct Bore	Transformer TH	Transformer TH	150	Spare
20	Direct Bore	Transformer TH	Transformer TH	150	Spare
21	Direct Bore	Transformer TH	Transformer TH	150	Spare
22	Direct Bore	Transformer TH	Transformer TH	150	Spare
23	Direct Bore	Transformer TH	Transformer TH	150	Spare
24	Direct Bore	Transformer TH	Transformer TH	150	Spare
25	Direct Bore	Transformer TH	Transformer TH	150	Spare
26	Direct Bore	Transformer TH	Transformer TH	150	Spare
27	Direct Bore	Transformer TH	Transformer TH	150	Spare
28	Direct Bore	Transformer TH	Transformer TH	150	Spare
29	Direct Bore	Transformer TH	Transformer TH	150	Spare
30	Direct Bore	Transformer TH	Transformer TH	150	Spare
31	Direct Bore	Transformer TH	Transformer TH	150	Spare
32	Direct Bore	Transformer TH	Transformer TH	150	Spare
33	Direct Bore	Transformer TH	Transformer TH	150	Spare
34	Direct Bore	Transformer TH	Transformer TH	150	Spare
35	Direct Bore	Transformer TH	Transformer TH	150	Spare
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40	Direct Bore	Transformer TH	Transformer TH	150	Spare
41	Direct Bore	Transformer TH	Transformer TH	150	Spare
42	Direct Bore	Transformer TH	Transformer TH	150	Spare
43	Direct Bore	Transformer TH	Transformer TH	150	Spare
44	Direct Bore	Transformer TH	Transformer TH	150	Spare
45	Direct Bore	Transformer TH	Transformer TH	150	Spare
46	Direct Bore	Transformer TH	Transformer TH	150	Spare
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48	Direct Bore	Transformer TH	Transformer TH	150	Spare
49	Direct Bore	Transformer TH	Transformer TH	150	Spare
50	Direct Bore	Transformer TH	Transformer TH	150	Spare
51	Direct Bore	Transformer TH	Transformer TH	150	Spare
52	Direct Bore	Transformer TH	Transformer TH	150	Spare
53	Direct Bore	Transformer TH	Transformer TH	150	Spare
54	Direct Bore	Transformer TH	Transformer TH	150	Spare
55	Direct Bore	Transformer TH	Transformer TH	150	Spare
56	Direct Bore	Transformer TH	Transformer TH	150	Spare
57	Direct Bore	Transformer TH	Transformer TH	150	Spare
58	Direct Bore	Transformer TH	Transformer TH	150	Spare
59	Direct Bore	Transformer TH	Transformer TH	150	Spare

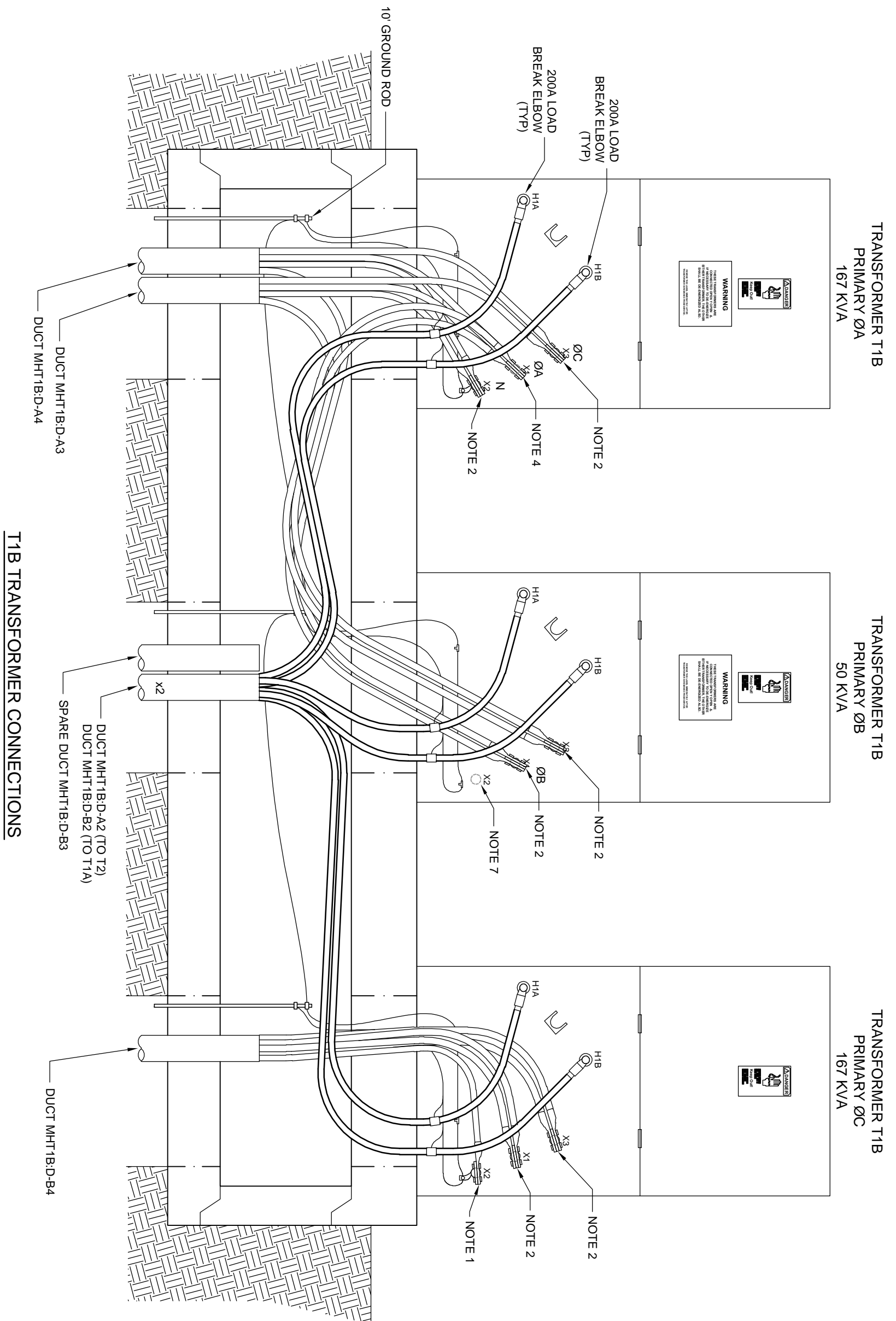
CABLE SCHEDULE							
Cable No.	Cable Type	Cable Size	Cable Length	From	To	MH / PB	
P1	A	2 - 1/0 AWG AL	175	MADP	TM		
P2	A	3 - 1/0 AWG AL	385	EDP	TH		
P3	A	3 - 1/0 AWG AL	160	TH	T1A - H1A		
P4	A	3 - 1/0 AWG AL	380	T1A - H1B	T1B - H1A	MHT1B	
P5	A	3 - 1/0 AWG AL	635	T1B - H1B	T2 - H1A	MHT1B	MHT2
P6	A	3 - 1/0 AWG AL	790	T2 - H1B	T3 - H1A	MHT2	MHT3
P7	A	3 - 1/0 AWG AL	160	T3 - H1A	MHT3		
P8	A	3 - 1/0 AWG AL	650	T3 - H1B	T4 - H1A	MHT3	MHT4
P9	A	3 - 1/0 AWG AL	995	T4 - H1B	WDP	MHT4	
S1	C	1-500 kcmil AL/leg 1-350 kcmil AL/N	100	TM	525 Front St		
S2	C	1-4/0 AWG AL/leg 1-2/0 AWG AL/N	30	TM	531 Front St		
S3	C	1-4/0 AWG AL/leg 1-2/0 AWG AL/N	175	TM	601 Front St		
S4	C	1-350 kcmil AL/leg 1-4/0 AWG AL/N	200	TM	Marina Dock		
S5	B	2-500 kcmil AL	15	T1A - 3Ø 167 kVA X1	T1A - 3Ø 50 kVA X3		
S6	B	2-500 kcmil AL/leg 2-350 kcmil AL/N	220	T1A - 3Ø Secondary	MHT1A		
S7	B	2-500 kcmil AL/leg 1-350 kcmil AL/N	220	T1A - 1Ø Secondary	MHT1A		
S8	B	2-500 kcmil AL	15	T1B - 3Ø 167 kVA X1	T1B - 3Ø 50 kVA X3		
S9	B	2-500 kcmil AL/leg 2-350 kcmil AL/N	330	T1B - 3Ø Secondary	PB3	MHT1B	PB1
S10	B	2-500 kcmil AL/leg 1-350 kcmil AL/N	285	T1B - 1Ø Secondary	PB2	MHT1B	PB2
S11	C	1-500 kcmil AL/leg 1-350 kcmil AL/N	125	PB1	Theatre		PB1
S12	B	2-500 kcmil AL	15	T2 - 3Ø 167 kVA X1	T2 - 3Ø 50 kVA X3		
S13	B	2-500 kcmil AL/leg 2-350 kcmil AL/N	175	T2 - 3Ø Secondary	PB6	MHT2	
S14	B	2-500 kcmil AL/leg 1-350 kcmil AL/N	175	T2 - 1Ø Secondary	PB6	MHT2	
S15	B	2-500 kcmil AL/leg 2-350 kcmil AL/N	210	MHT2	PB8		PB7
S16	B	2-500 kcmil AL/leg 1-350 kcmil AL/N	215	MHT2	PB8		PB7
S17	B	1-750 kcmil AL/leg 1-350 kcmil AL/N	65	PB7	801 Front St		
S18	C	1-500 kcmil AL/leg 1-350 kcmil AL/N	60	PB8	807 Front St		
S19	B	2-500 kcmil AL	15	T3 - 3Ø 100 kVA X1	T3 - 3Ø 50 kVA X3		
S20	B	2-500 kcmil AL/leg 2-350 kcmil AL/N	290	T3 - 3Ø Secondary	PB9	MHT3	
S21	B	2-500 kcmil AL/leg 1-350 kcmil AL/N	295	T3 - 1Ø Secondary	PB9	MHT3	
S22	B	2-500 kcmil AL/leg 2-350 kcmil AL/N	180	MHT3	PB10		
S23	B	2-500 kcmil AL/leg 1-350 kcmil AL/N	180	MHT3	PB10		
S24	C	1-500 kcmil AL/leg 1-350 kcmil AL/N	65	PB9	829 Front St		
S25	B	2-500 kcmil AL	15	T4 - 3Ø 100 kVA X1	T4 - 3Ø 50 kVA X3		
S26	B	2-500 kcmil AL/leg 2-350 kcmil AL/N	465	T4 - 3Ø Secondary	PB14	MHT4A	MHT4B
S27	B	2-500 kcmil AL/leg 1-350 kcmil AL/N	450	T4 - 1Ø Secondary	MHT4B		MHT4A
S28	B	2-500 kcmil AL/leg 2-350 kcmil AL/N	255	MHT4A	PB11		
S29	B	2-500 kcmil AL/leg 1-350 kcmil AL/N	265	MHT4A	PB11		
S30	C	1-4/0 AWG AL/leg 1-2/0 AWG AL/N	185	MHT3	833 Front St		
S31	C	1-4/0 AWG AL/leg 1-2/0 AWG AL/N	175	MHT3	835 Front St		
S32	C	1-4/0 AWG AL/leg 1-2/0 AWG AL/N	85	MHT3	901/903 Front St		
S33	C	1-4/0 AWG AL/leg 1-2/0 AWG AL/N	50	MHT2	Rover Tours		
S34	C	1-4/0 AWG AL/leg 1-2/0 AWG AL/N	105	MHT2	Harborwalk Service		
S35	B	1-500 kcmil AL	15	TM - 100 kVA X1	TM - 10 kVA X3		

Cable Type	Description	Phase Conductor	Neutral Conductor				
		Size	Stranding	Insulation Thickness	Size	Stranding	Insulation Thickness
A	15 kV underground primary distribution cable. #1/0 AWG aluminum filled strand conductor. 19 strand, 5 x #14 AWG wire copper concentric neutral, 105°C rating, 175 mil EPR insulation, 90 mil low density PE jacket.	#1/0 AWG	18	80 mils	#2/0 AWG	11	80 mils
		350 kcmil	37	95 mils	#4/0 AWG	18	80 mils
		500 kcmil	37	95 mils	350 kcmil	37	95 mils
		750 kcmil	61	110 mils			
B	600 volt single conductor secondary. UD. Stranded compressed aluminum conductor. XLPE insulation.	#1/0 AWG	9	80 mils			
		#4/0 AWG	18	80 mils			
		350 kcmil	37	95 mils			
		500 kcmil	37	95 mils			
		750 kcmil	61	110 mils			
C	600 volt service conductor, triplex and quadruplex. Stranded compressed aluminum conductor. XLPE insulation.						
D	600 volt single conductor power cable, copper conductor, XLPE insulation, for use in streetlight or outlet services.	#12 AWG	7	45 mils			
		#10 AWG	7	45 mils			

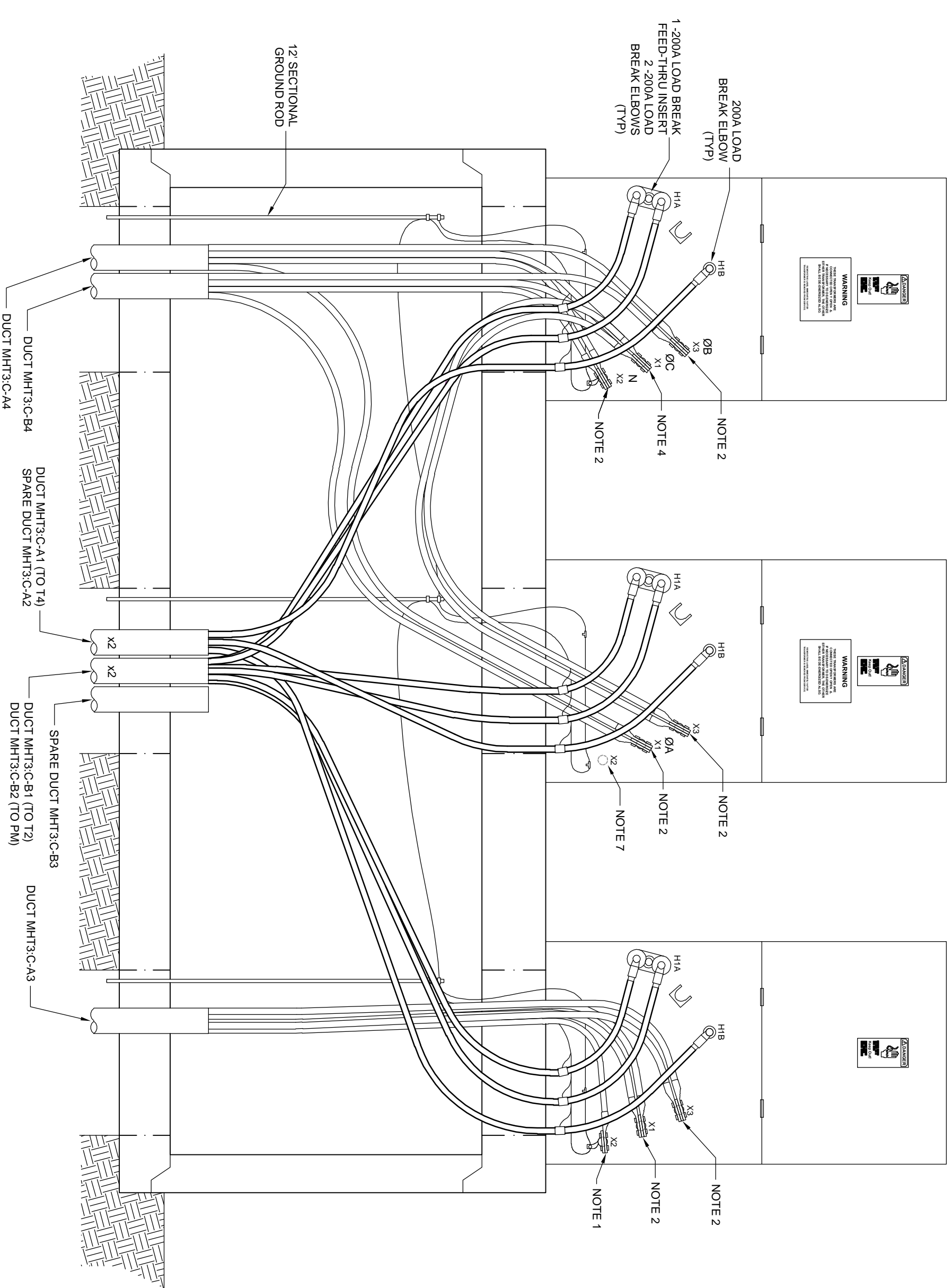
<p>PRELIMINARY NOT TO BE USED FOR CONSTRUCTION</p>		<p>CITY OF GEORGETOWN GEORGETOWN, SC</p>	
<p>DATE: 01/23/19</p>	<p>SCALE: NONE</p>	<p>DATE: 01/23/19</p>	<p>SHEET NO: 1 OF 1</p>
<p>UTEC ENGINEERS - CONSULTANTS P.O. Box 2829 • Asheville, North Carolina • 27204</p>		<p>UTEC ENGINEERS - CONSULTANTS P.O. Box 2829 • Asheville, North Carolina • 27204</p>	



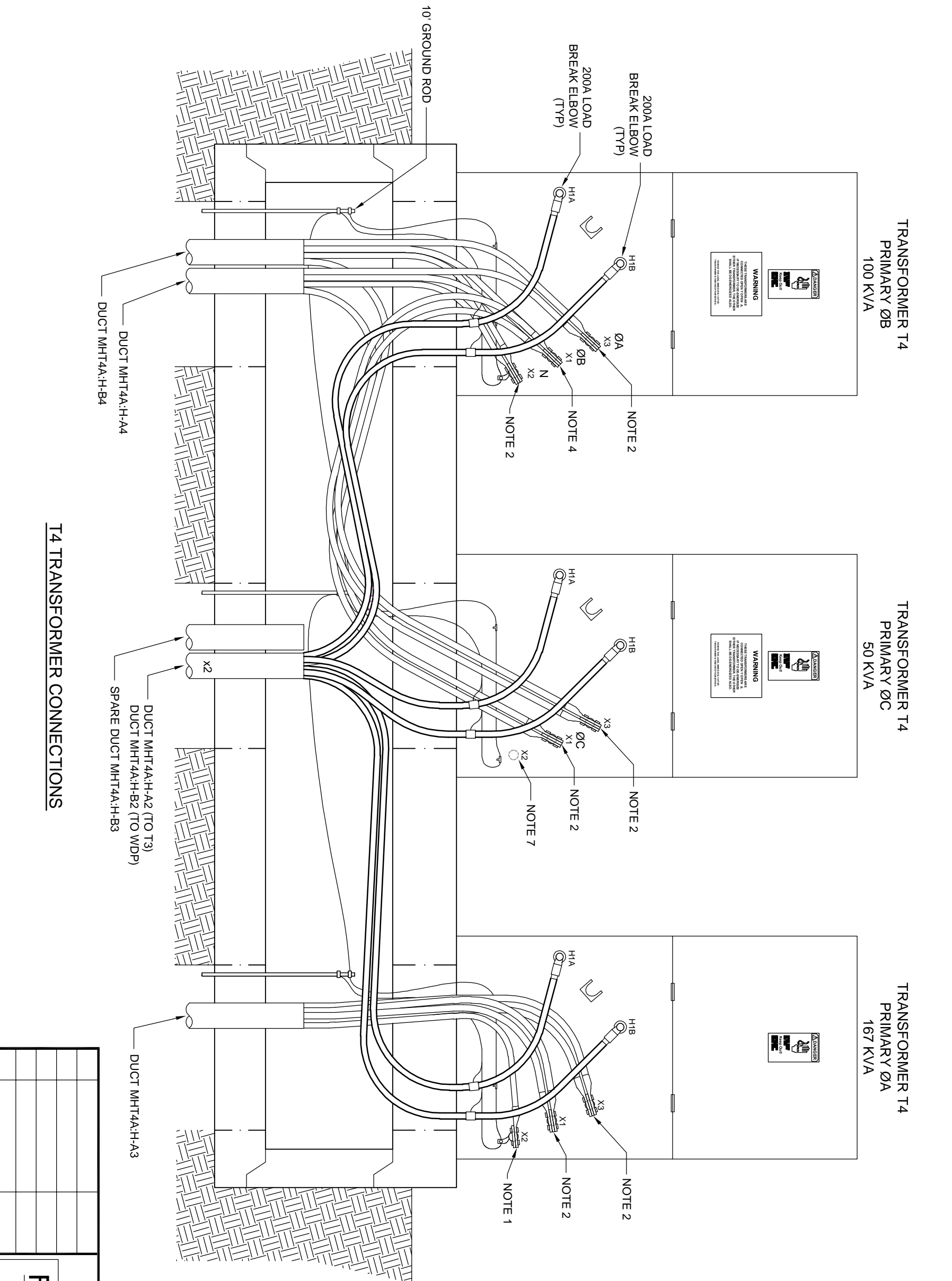
T1A TRANSFORMER CONNECTIONS



T1B TRANSFORMER CONNECTIONS



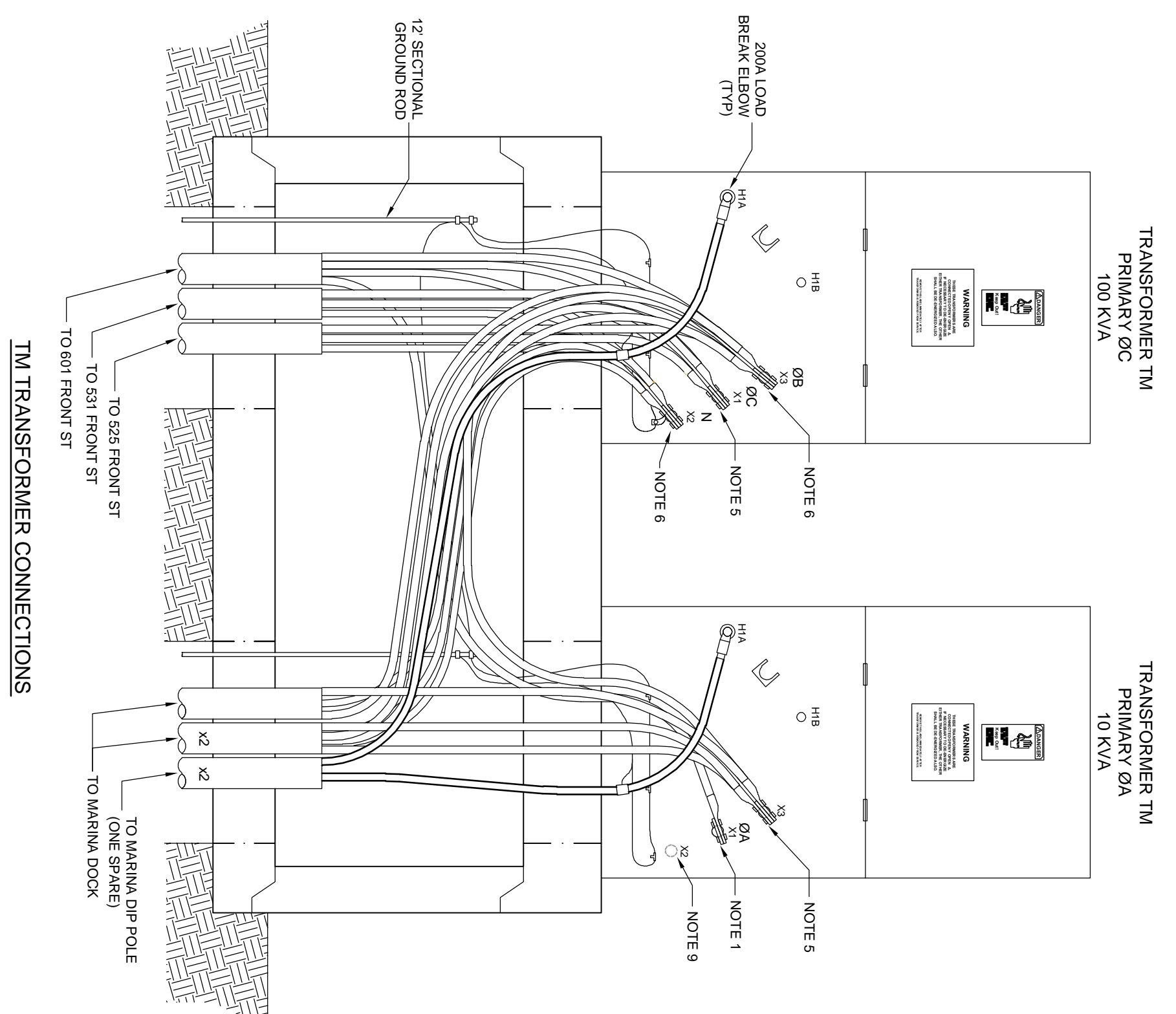
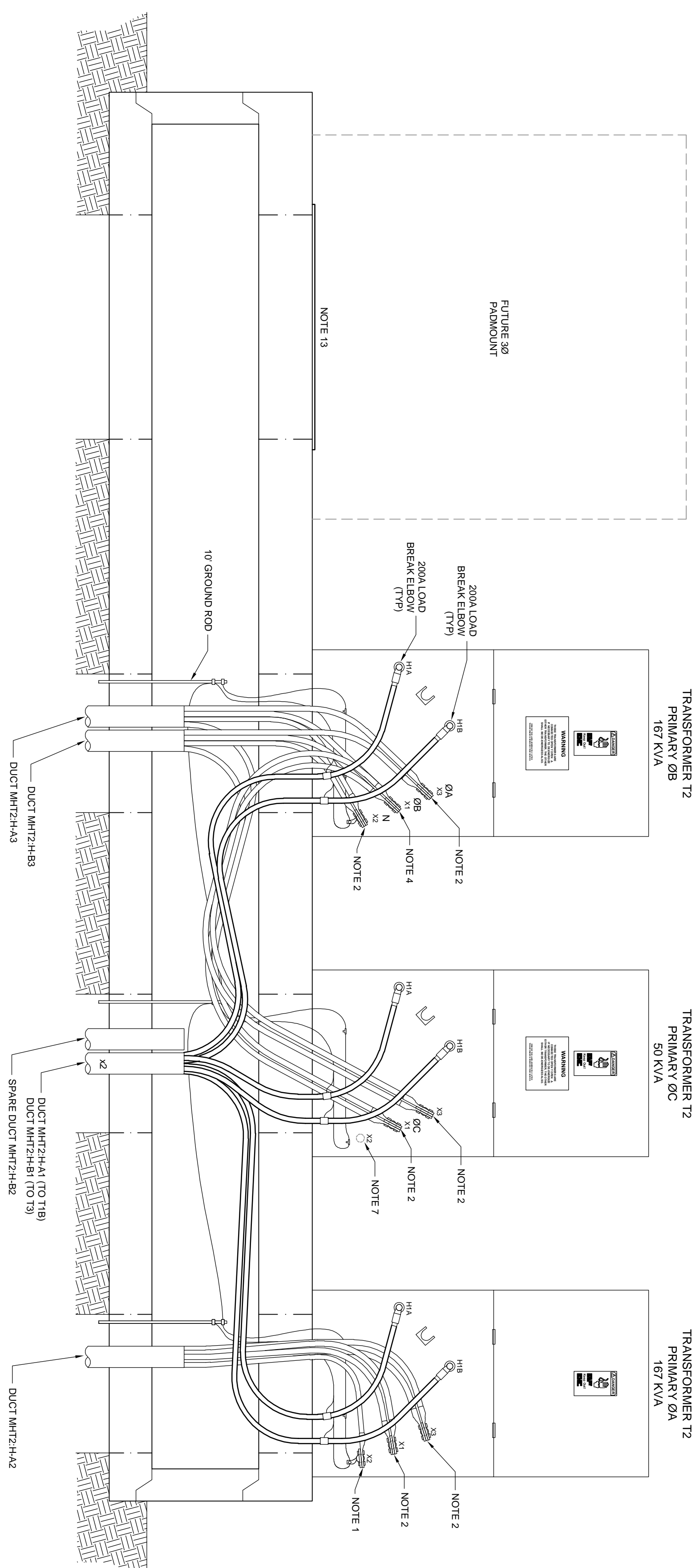
T3 TRANSFORMER CONNECTIONS



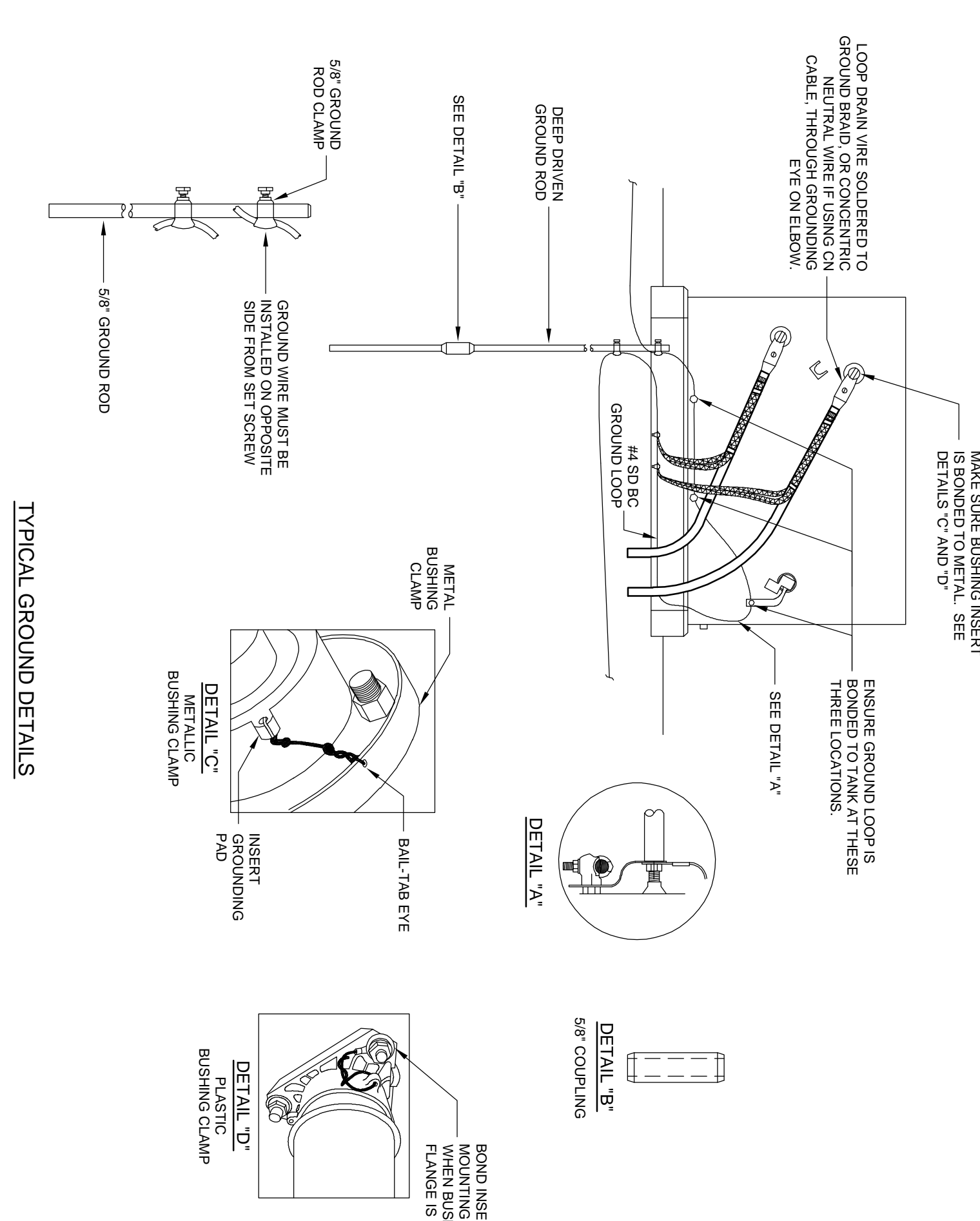
T4 TRANSFORMER CONNECTIONS

- NOTES:
1. PROVIDE 1 4-HOLE NEMA STUD CONNECTOR AND 1 2-HOLE NEMA TERMINAL CONNECTOR.
 2. PROVIDE 1 4-HOLE NEMA STUD CONNECTOR AND 2 2-HOLE NEMA TERMINAL CONNECTORS.
 3. PROVIDE 1 4-HOLE NEMA STUD CONNECTOR AND 3 2-HOLE NEMA TERMINAL CONNECTORS.
 4. PROVIDE 1 4-HOLE NEMA STUD CONNECTOR AND 4 2-HOLE NEMA TERMINAL CONNECTORS.
 5. SEE IEEE STANDARD C57.12.38 FIGURE 4 DETAIL C FOR STUD SIZE.
 6. CONTRACTOR TO PROVIDE OPEN-WYE/OPEN-DELTA TRANSFORMER BANK WARNING SIGNS AS SHOWN.
 7. REMOVE GROUND STRAP. TAPE BUSHING WITH VINYL TAPE.
 8. LABEL ALL CABLES.
 9. CONDUIT TO EXTEND TO WITHIN 14" OF BOTTOM OF FOUNDATION LID.
 10. GROUND ROD TO EXTEND TO WITHIN 6" OF BOTTOM OF FOUNDATION LID.

<p>PRELIMINARY NOT TO BE USED FOR CONSTRUCTION</p>	
<p>REVISION _____ DATE 01/23/19</p>	<p>DATE 11/15/18</p>
<p>NO. 0</p>	<p>BID ISSUE 01/23/19</p>
<p>REVISIONS</p>	<p>DATE</p>
<p>CITY OF GEORGETOWN GEORGETOWN, SC</p>	
<p>FRONT STREET ELECTRICAL UPGRADE TRANSFORMER DETAILS</p>	
<p>UTEC UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS P.O. Box 2829 • Ashboro, North Carolina • 27204</p>	
<p>SCALE: 1/2" = 1'-0"</p>	<p>SHEET NO. 1 OF 2</p>



- NOTES:
1. PROVIDE 1-4-HOLE NEMA STUD CONNECTOR AND 1-2-HOLE NEMA TERMINAL CONNECTORS.
 2. PROVIDE 1-4-HOLE NEMA STUD CONNECTOR AND 2-2-HOLE NEMA TERMINAL CONNECTORS.
 3. PROVIDE 1-4-HOLE NEMA STUD CONNECTOR AND 3-2-HOLE NEMA TERMINAL CONNECTORS.
 4. PROVIDE 1-4-HOLE NEMA STUD CONNECTOR AND 4-2-HOLE NEMA TERMINAL CONNECTORS.
 5. PROVIDE 1-6-HOLE NEMA STUD CONNECTOR AND 4-2-HOLE NEMA TERMINAL CONNECTORS.
 6. PROVIDE 1-6-HOLE NEMA STUD CONNECTOR AND 6-2-HOLE NEMA TERMINAL CONNECTORS.
 7. SEE IEEE STANDARD C57.12.38 FIGURE 4 DETAIL C FOR STUD SIZE.
 8. CONTRACTOR TO PROVIDE OPEN-WYE/OPEN-DELTA TRANSFORMER BANK WARNING SIGNS AS SHOWN.
 9. REMOVE GROUND STRAP. TAPE BUSHING WITH VINYL TAPE.
 10. LABEL ALL CABLES.
 11. CONDUIT TO EXTEND TO WITHIN 14" OF BOTTOM OF FOUNDATION LID.
 12. GROUND ROD TO EXTEND TO WITHIN 6" OF BOTTOM OF FOUNDATION LID.
 13. PROVIDE PLATE TO COVER CONDUIT OPENING FOR FUTURE 30' PADMOUNT TRANSFORMER. PLATE MUST BE ABLE TO BE SECURED TO FOUNDATION TO PREVENT UNAUTHORIZED ACCESS.



CITY OF GEORGETOWN GEORGETOWN, SC		UTEC UTILITY TECHNOLOGY ENGINEERS - CONSULTANTS P.O. Box 2829 • Ashboro, North Carolina • 27204	
FRONT STREET ELECTRICAL UPGRADE TRANSFORMER DETAILS		DATE: 12/19/18	DWG. NO. E050-2
PRELIMINARY NOT TO BE USED FOR CONSTRUCTION		DATE: 01/23/19	SHEET NO. 2 OF 2
NO.	REVISIONS	DATE	
0.	BID ISSUE	01/23/19	

