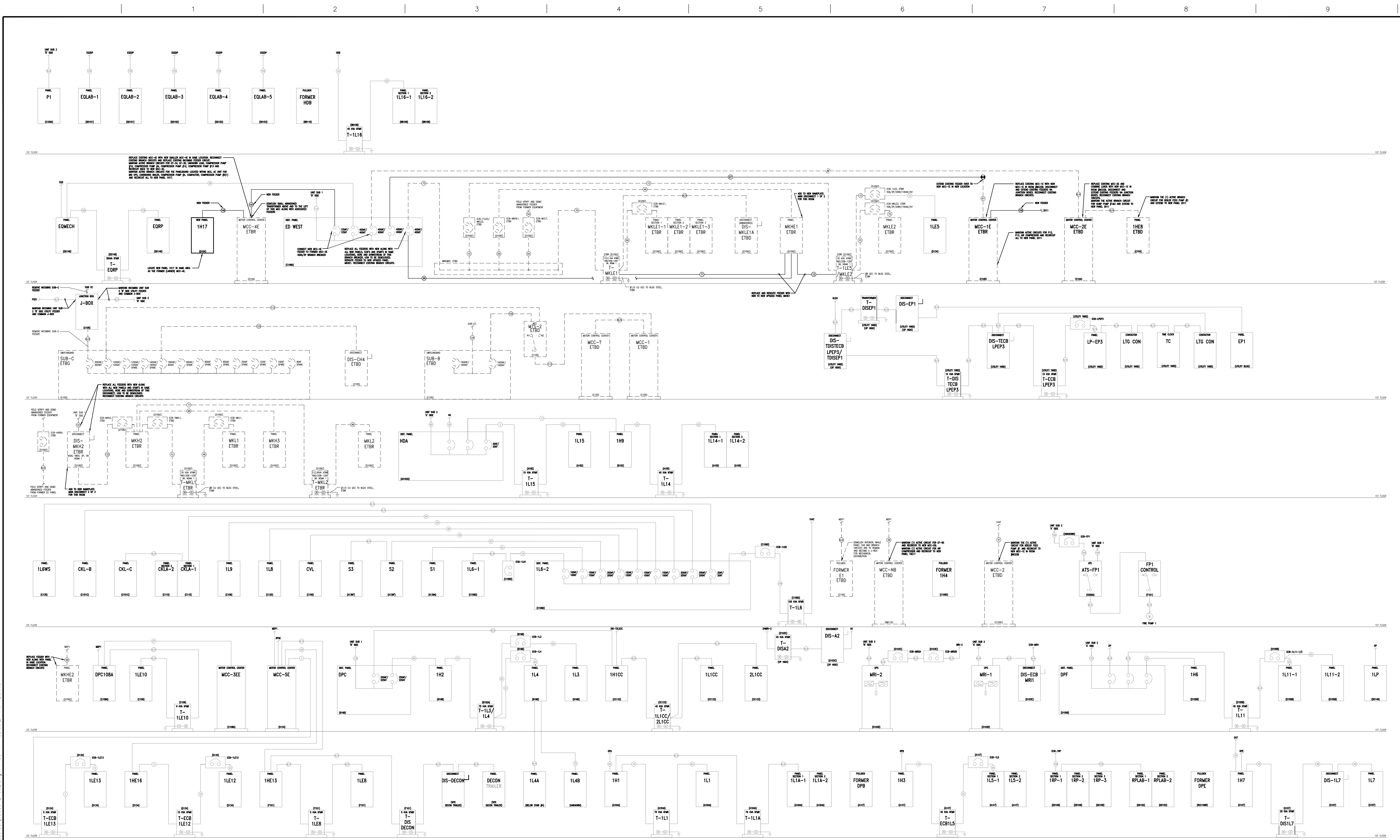


one eighth inch = one foot
one quarter inch = one foot
three eighths inch = one foot
one half inch = one foot
three quarters inch = one foot
one inch = one foot
one and one half inches = one foot
two inches = one foot
three inches = one foot



Construction Documents (CD2)
Construction Documents (CD1)
Design Development (DD)
Schematic (SI)
Revisions

04/10/2017
03/17/2017
10/05/2016
03/21/2016
Date

CONSULTANTS:

Quality Consulting Engineers, LLC
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803.207.5450
QCE ENGINEERING LICENSE #4298, QCE PROJ #15030

David A. Jones
No. 22589
Date: April 10, 2017

ARCHITECT/ENGINEERS:

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PO Box 1629, Hickory, NC 28603
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NC Engineering License No.: P-0214
NC Architectural License No.: 51254

Drawing Title

ELECTRICAL - PARTIAL POWER RISER
DIAGRAM FIRST FLOOR - NORMAL

Approved Project Manager
Reza Tabatabaei, P.E.

Approved Chief Engineer
Jeffrey A. Sage, CFM

Project Title

DESIGN FOR CORRECT
SECONDARY ELECTRICAL
DEFICIENCIES

Location
RALPH H. JOHNSON YAMC CHARLESTON, SC

Date
4/10/2017

Checked
DAJ

Drawn
DAJ

Project Number

534-16-101

Building Number

1

Drawing Number

E-602

Dwg. 13 of 20

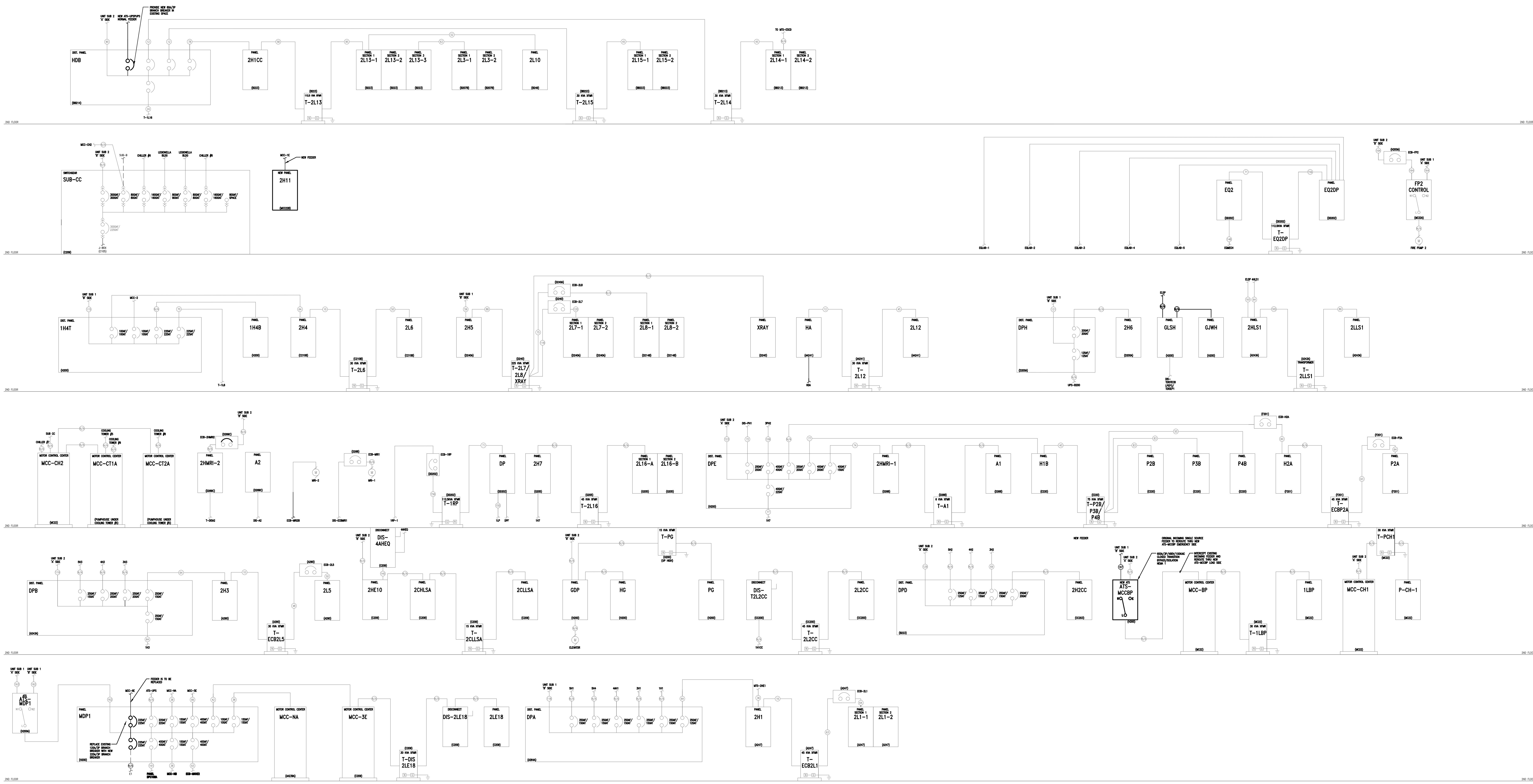
Office of
Construction
and Facilities
Management

Department of
Veterans Affairs

100% FINAL CONSTRUCTION DOCUMENTS


VA FORM 08-6231

one eighth inch = one foot
one quarter inch = one foot
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three quarters inch = one foot
one inch = one foot
one and one half inches = one foot
two inches = one foot
three inches = one foot
four inches = one foot
five inches = one foot
six inches = one foot
seven inches = one foot
eight inches = one foot
nine inches = one foot
ten inches = one foot
eleven inches = one foot
twelve inches = one foot
thirteen inches = one foot
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fifteen inches = one foot
sixteen inches = one foot
seventeen inches = one foot
eighteen inches = one foot
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twenty inches = one foot
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twenty three inches = one foot
twenty four inches = one foot
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thirty inches = one foot
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thirty six inches = one foot
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fifty four inches = one foot
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fifty seven inches = one foot
fifty eight inches = one foot
fifty nine inches = one foot
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sixty two inches = one foot
sixty three inches = one foot
sixty four inches = one foot
sixty five inches = one foot
sixty six inches = one foot
sixty seven inches = one foot
sixty eight inches = one foot
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seventy inches = one foot
seventy one inches = one foot
seventy two inches = one foot
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eighty one inches = one foot
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ninety inches = one foot
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ninety two inches = one foot
ninety three inches = one foot
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ninety nine inches = one foot
one hundred inches = one foot

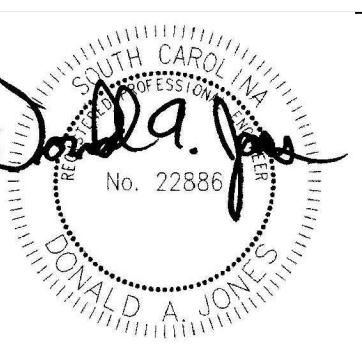


Construction Documents (CD2)	04/10/2017
Construction Documents (CD1)	03/17/2017
Design Development (DD)	10/05/2016
Schematic (SI)	03/21/2016
Revisions	Date

CONSULTANTS:

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QCE ENGINEERING LICENSE #4298, (QCE PROJ) #15030



Date: April 10, 2017

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NC Architectural License No.: 51254

www.atriaxgroup.com

Drawing Title

**ELECTRICAL - PARTIAL POWER RISER
DIAGRAM SECOND FLOOR - NORMAL**

Approved Project Manager
Reza Tabatabaei, P.E.

Approved Chief Engineer
Jeffrey A. Sage, CFM

Project Title

**DESIGN FOR CORRECT
SECONDARY ELECTRICAL
DEFICIENCIES**

Location
RALPH H. JOHNSON YAMC CHARLESTON, SC

Date
4/10/2017

Checked
DAJ

Drawn
DAJ

Project Number
534-16-101

Building Number
1

Drawing Number
E-603

Dwg. 14 of 20

**Office of
Construction
and Facilities
Management**

 Department of
Veterans Affairs

100% FINAL CONSTRUCTION DOCUMENTS



Construction Documents (CD2)	04/10/2017
Construction Documents (CD1)	03/17/2017
Design Development (DD)	10/05/2016
Schematic (S1)	03/21/2016
Revisions	Date

CONSULTANTS:



QCE ENGINEERING LICENSE #4298, QCE PROJ #15030



Date: April 10, 2017

ARCHITECT/ENGINEERS:



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F: 828.315.9964

NC Engineering License No.: P-021
NC Architectural License No.: 51254

	Drawing Title
--	---------------

**ELECTRICAL - PARTIAL POWER RISER
DIAGRAM UPPER FLOORS - NORMAL**

Approved Project Manager
Reza Tabatabai, P.E.

Approved: Chief Engineer
Jeffrey A. Sage, CFM

	Project Title
--	----------------------

SECONDARY ELECTRICAL DEFICIENCIES

Location	RALPH H. JOHNSON VAMC	CHARLESTON, SC
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Date	4/10/2017
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Checked	DAJ
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Drawn	DAJ
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Project Number

Building Number
1

	Drawing Number
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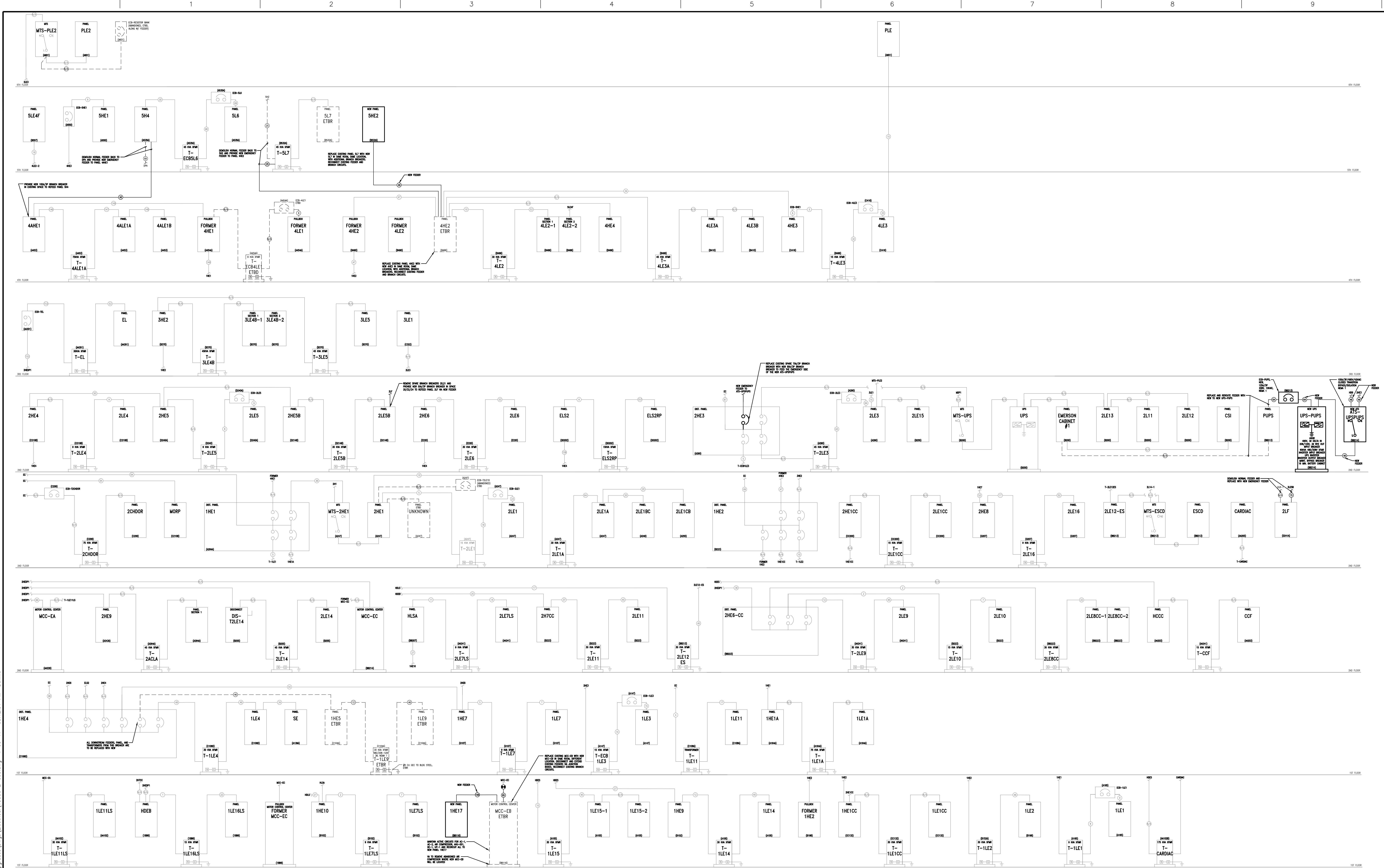
E-604

Office of
Construction
and Facilities
Management



100% FINAL CONSTRUCTION DOCUMENTS

one eighth inch = one foot
one quarter inch = one foot
three eighths inch = one foot
one half inch = one foot
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two inches = one foot
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Construction Documents (CD2)
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Schematic (S1)
Revisions

04/10/2017
03/17/2017
10/05/2016
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Date

CONSULTANTS:

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803.207.5450
QCE ENGINEERING LICENSE #4298, (QCE PROJ) #15030

Date: April 10, 2017

ARCHITECT/ENGINEERS:

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F: 828.315.9964
www.atriaxgroup.com
NC Engineering License No.: P-0214
NC Architectural License No.: 51254

Drawing Title

ELECTRICAL - POWER RISER
DIAGRAM - EMERGENCY

Approved Project Manager
Reza Tabatabaei, P.E.

Approved Chief Engineer
Jeffrey A. Sage, CFM

Project Title

DESIGN FOR CORRECT
SECONDARY ELECTRICAL
DEFICIENCIES

Location
RALPH H. JOHNSON YAMC CHARLESTON, SC

Date
4/10/2017

Checked
DAJ

Drawn
DAJ

Project Number

534-16-101

Building Number

1

Drawing Number

E-605

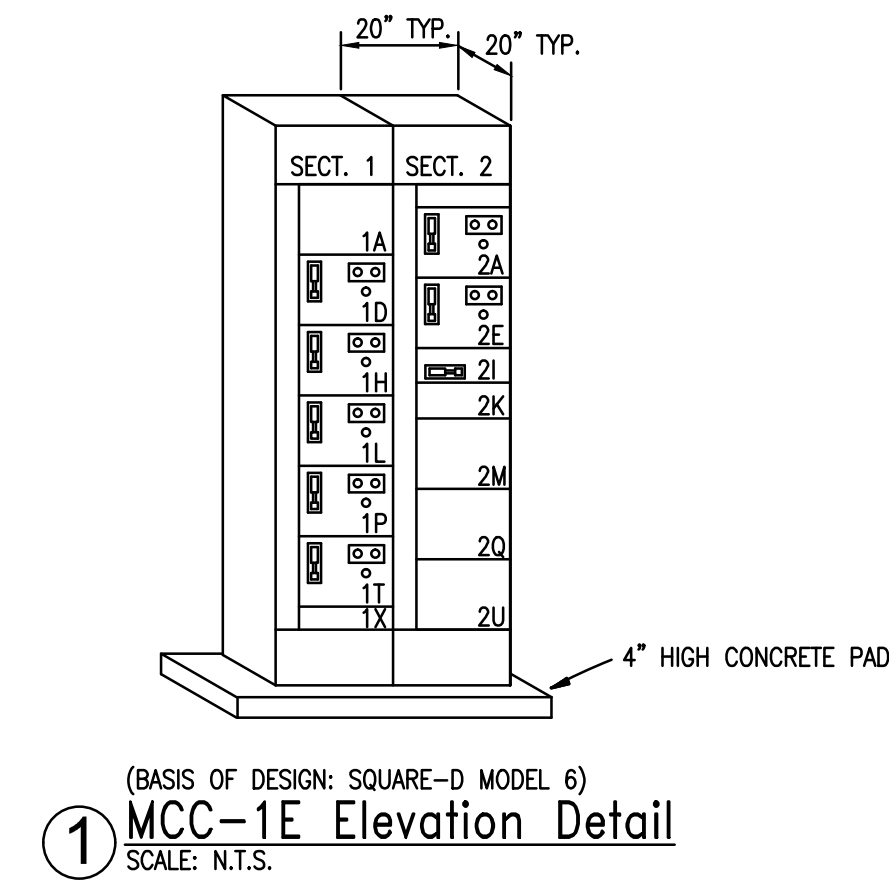
Dwg. 16 of 20

Office of
Construction
and Facilities
Management

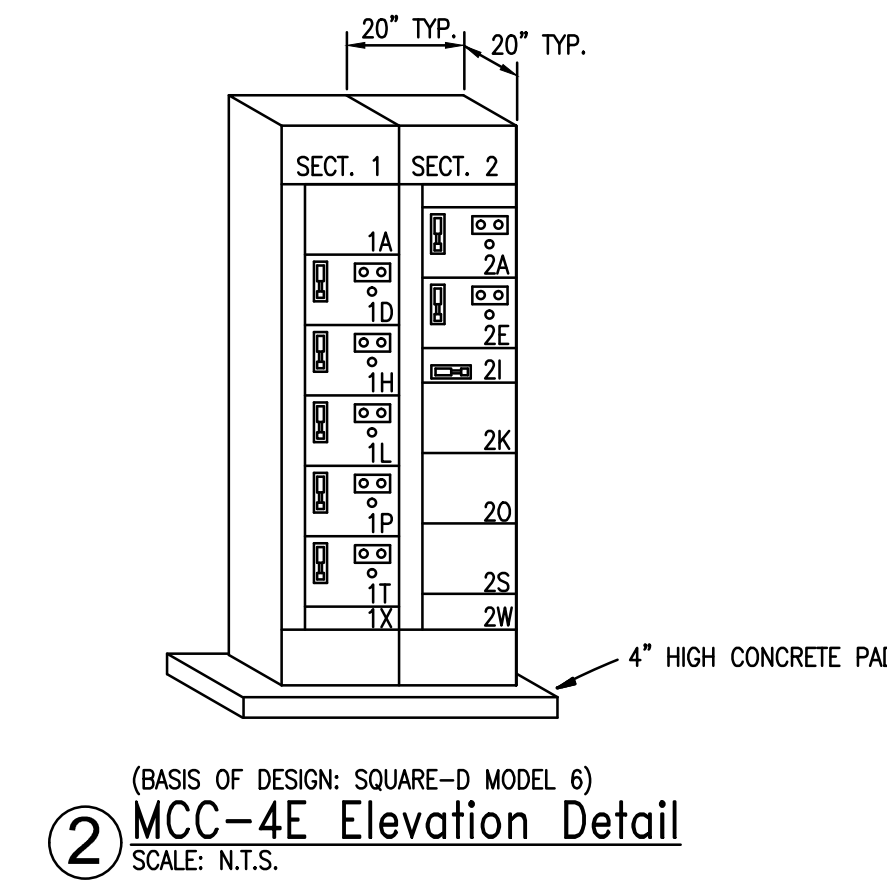
Department of
Veterans Affairs

100% FINAL CONSTRUCTION DOCUMENTS

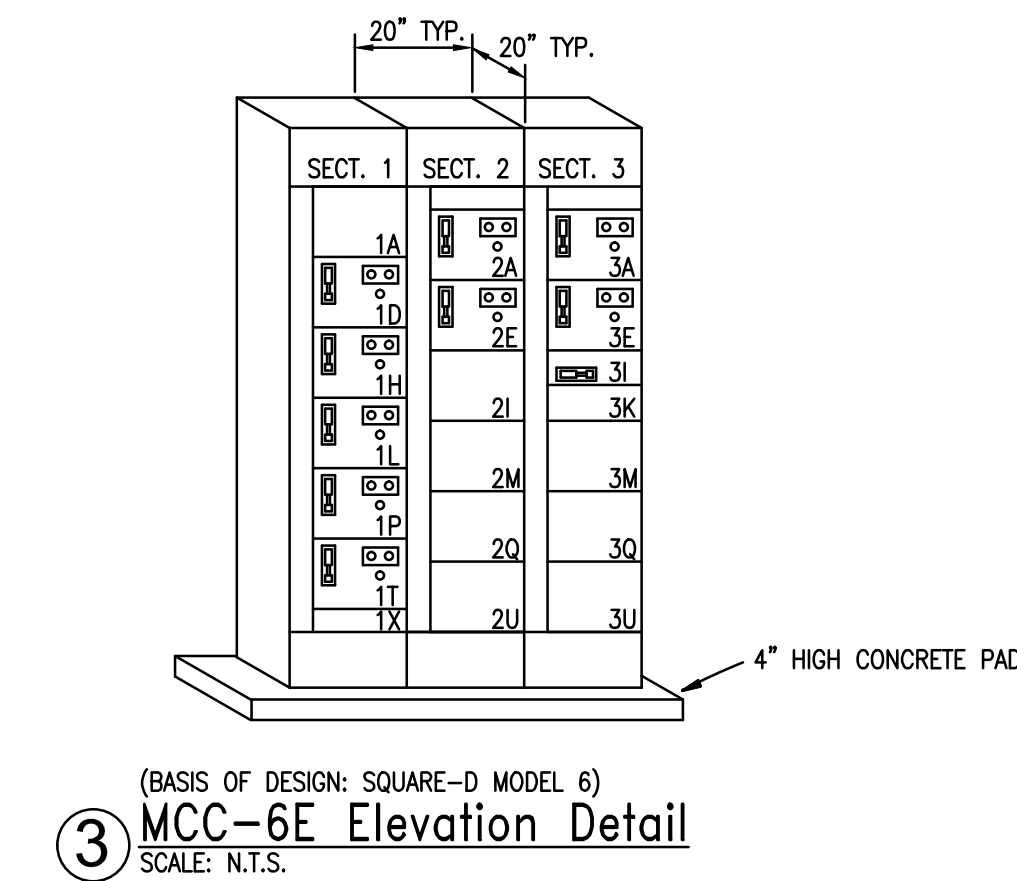
MOTOR CONTROL CENTER MCC-1E					
NEMA CLASS 1B, 480 VOLT, 3 PHASE, 3 WIRE, 600 AMP MAIN LUG ONLY, 600 AMP HORIZONTAL BUSS, 300 AMP VERTICAL BUSS AND FULL LENGTH COPPER GROUND BUSS. BUS SHALL BE BRACED FOR 42,000 AMP RMS SYMMETRICAL. PROVIDE COMBINATION STARTER FOR EACH MOTOR LOAD AND THERMAL MAGNETIC BREAKER ONLY FOR EACH PANEL LOAD. EACH STARTER UNIT SHALL BE COMBINATION TYPE, 3A, FVAR, AND MCP WITH ELECTRONIC OVERLOADS SIZED PER NAMEPLATE. EQUIP STARTERS WITH 120V CONTROL POWER TRANSFORMER, H-O-A SELECTOR SWITCH AND PILOT LIGHTS. PROVIDE PHENOLIC ENGRAVED NAMEPLATE FOR EACH COMPARTMENT. MOTOR CONTROL SECTIONS SHALL BE ARRANGED SO THAT VERTICAL BUS RATING IS NOT EXCEEDED. REFER TO MCC ELEVATION FOR LAYOUT. PREP SPACES FOR FUTURE MOTOR STARTERS.					
NO	ITEM	HP	SIZE	OCPD	
1A	INCOMING - MAIN LUGS	-	-	-	
1D	ZONE PUMP #1	10	1	25A MCP	
1H	ZONE PUMP #2	10	1	25A MCP	
1L	BOILER FEED PUMP #1	5	1	15A MCP	
1P	CONDENSATE PUMP #1	3	1	15A MCP	
1T	CONDENSATE PUMP #2	3	1	15A MCP	
1X	SPACE	-	-	-	
2A	BOILER FEED PUMP #2	3	1	15A MCP	
2E	BOILER FEED PUMP #3	5	1	15A MCP	
2I	PANEL 2H11	-	-	250A CB	
2K	SPACE	-	-	-	
2M	SPACE	-	-	-	
2Q	SPACE	-	-	-	
2U	SPACE	-	-	-	



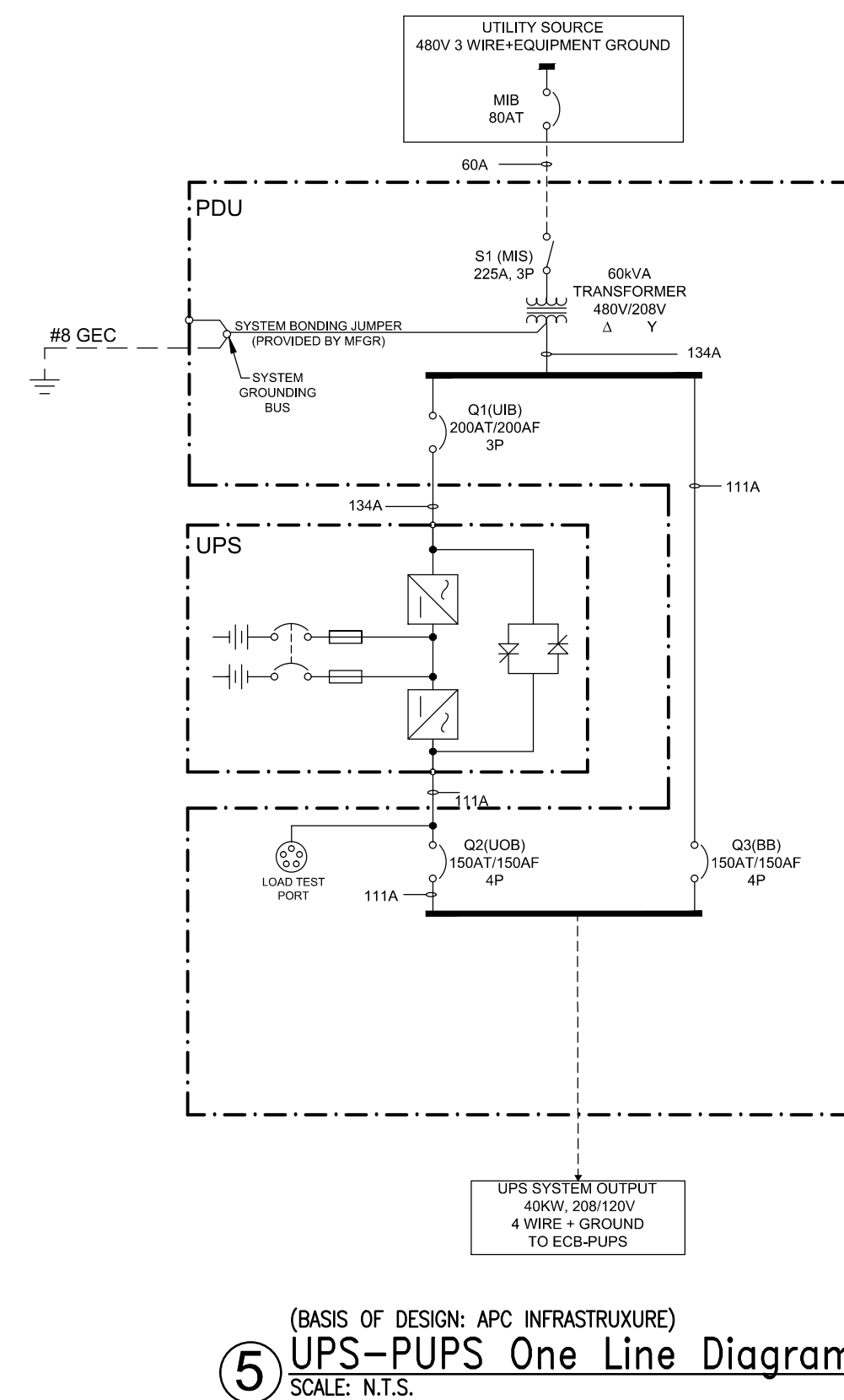
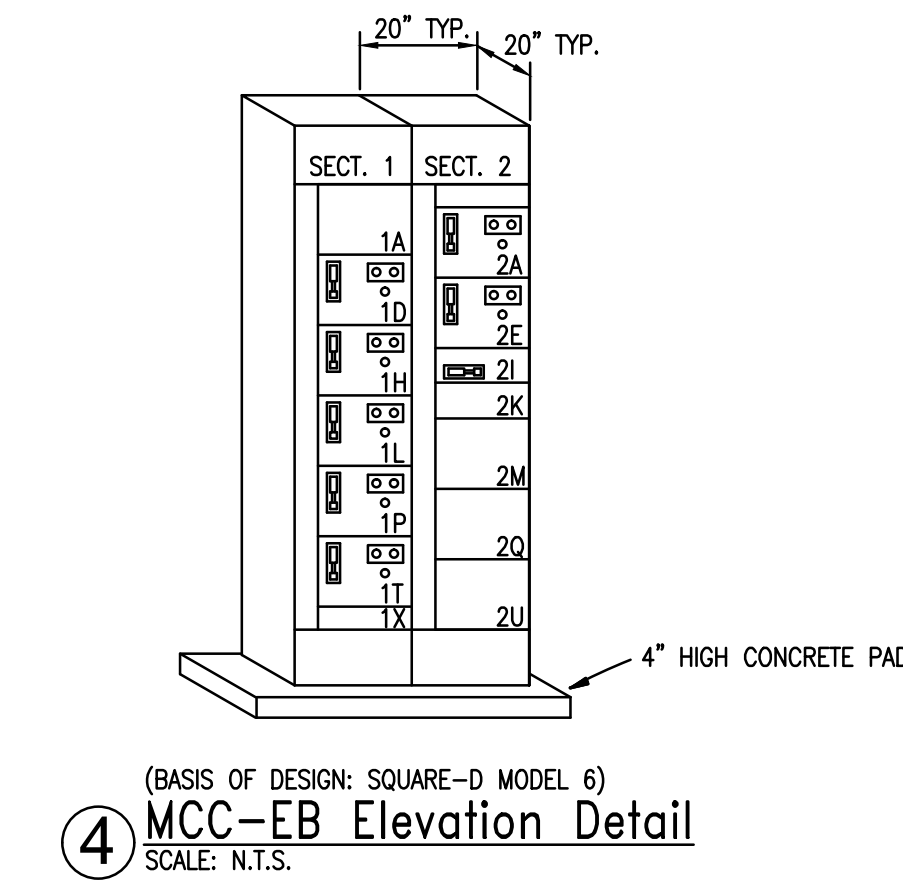
MOTOR CONTROL CENTER MCC-4E					
NEMA CLASS 1B, 480 VOLT, 3 PHASE, 3 WIRE, 600 AMP MAIN LUG ONLY, 600 AMP HORIZONTAL BUSS, 300 AMP VERTICAL BUSS AND FULL LENGTH COPPER GROUND BUSS. BUS SHALL BE BRACED FOR 42,000 AMP RMS SYMMETRICAL. PROVIDE COMBINATION STARTER FOR EACH MOTOR LOAD AND THERMAL MAGNETIC BREAKER ONLY FOR EACH PANEL LOAD. EACH STARTER UNIT SHALL BE COMBINATION TYPE, 3A, FVAR, AND MCP WITH ELECTRONIC OVERLOADS SIZED PER NAMEPLATE. EQUIP STARTERS WITH 120V CONTROL POWER TRANSFORMER, H-O-A SELECTOR SWITCH AND PILOT LIGHTS. PROVIDE PHENOLIC ENGRAVED NAMEPLATE FOR EACH COMPARTMENT. MOTOR CONTROL SECTIONS SHALL BE ARRANGED SO THAT VERTICAL BUS RATING IS NOT EXCEEDED. REFER TO MCC ELEVATION FOR LAYOUT. PREP SPACES FOR FUTURE MOTOR STARTERS.					
NO	ITEM	HP	SIZE	OCPD	
1A	INCOMING - MAIN LUGS	-	-	-	
1D	EF-34	N/A	1	20A MCP	
1H	EF-35	N/A	1	20A MCP	
1L	COMPRESSOR PUMP #5(2)	N/A	1	20A MCP	
1P	UNKNOWN LOAD	N/A	1	20A MCP	
1T	COMPRESSOR PUMP #10	N/A	1	20A MCP	
1X	SPACE	-	-	-	
2A	COMPRESSOR PUMP #12	N/A	1	20A MCP	
2E	COMPRESSOR PUMP #13	N/A	1	20A MCP	
2I	PANEL 1H17	-	-	250A CB	
2K	SPACE	-	-	-	
2O	SPACE	-	-	-	
2S	SPACE	-	-	-	
2W	SPACE	-	-	-	



MOTOR CONTROL CENTER MCC-6E					
NEMA CLASS 1B, 480 VOLT, 3 PHASE, 3 WIRE, 300 AMP MAIN LUG ONLY, 300 AMP HORIZONTAL BUSS, 300 AMP VERTICAL BUSS AND FULL LENGTH COPPER GROUND BUSS. BUS SHALL BE BRACED FOR 42,000 AMP RMS SYMMETRICAL. PROVIDE COMBINATION STARTER FOR EACH MOTOR LOAD AND THERMAL MAGNETIC BREAKER ONLY FOR EACH PANEL LOAD. EACH STARTER UNIT SHALL BE COMBINATION TYPE, 3A, FVAR, AND MCP WITH ELECTRONIC OVERLOADS SIZED PER NAMEPLATE. EQUIP STARTERS WITH 120V CONTROL POWER TRANSFORMER, H-O-A SELECTOR SWITCH AND PILOT LIGHTS. PROVIDE PHENOLIC ENGRAVED NAMEPLATE FOR EACH COMPARTMENT. MOTOR CONTROL SECTIONS SHALL BE ARRANGED SO THAT VERTICAL BUS RATING IS NOT EXCEEDED. REFER TO MCC ELEVATION FOR LAYOUT. PREP SPACES FOR FUTURE MOTOR STARTERS.					
NO	ITEM	HP	SIZE	OCPD	
1A	INCOMING - MAIN LUGS	-	-	-	
1D	FHF-28	N/A	1	20A MCP	
1H	UNKNOWN LOAD	N/A	1	20A MCP	
1L	FHF-29	N/A	1	20A MCP	
1P	EF-1	10	1	25A MCP	
1T	EF-2	10	1	25A MCP	
1X	SPACE	-	-	-	
2A	EF-3	10	1	25A MCP	
2E	EF-4	10	1	25A MCP	
2I	HVAC-8	N/A	1	20A MCP	
2M	EF-8	N/A	1	20A MCP	
2Q	EF-36	N/A	1	20A MCP	
2U	EF-6 (2 SPEED STARTER)	N/A	1	20A MCP	
3A	EF-42	N/A	1	20A MCP	
3E	EF-38	N/A	1	20A MCP	
3I	SPACE	N/A	1	20A MCP	
3M	SPACE	N/A	1	20A MCP	
3Q	SPACE	N/A	1	20A MCP	
3U	SPACE	N/A	1	20A MCP	



MOTOR CONTROL CENTER MCC-EB					
NEMA CLASS 1B, 480 VOLT, 3 PHASE, 3 WIRE, 600 AMP MAIN LUG ONLY, 600 AMP HORIZONTAL BUSS, 300 AMP VERTICAL BUSS AND FULL LENGTH COPPER GROUND BUSS. BUS SHALL BE BRACED FOR 42,000 AMP RMS SYMMETRICAL. PROVIDE COMBINATION STARTER FOR EACH MOTOR LOAD AND THERMAL MAGNETIC BREAKER ONLY FOR EACH PANEL LOAD. EACH STARTER UNIT SHALL BE COMBINATION TYPE, 3A, FVAR, AND MCP WITH ELECTRONIC OVERLOADS SIZED PER NAMEPLATE. EQUIP STARTERS WITH 120V CONTROL POWER TRANSFORMER, H-O-A SELECTOR SWITCH AND PILOT LIGHTS. PROVIDE PHENOLIC ENGRAVED NAMEPLATE FOR EACH COMPARTMENT. MOTOR CONTROL SECTIONS SHALL BE ARRANGED SO THAT VERTICAL BUS RATING IS NOT EXCEEDED. REFER TO MCC ELEVATION FOR LAYOUT. PREP SPACES FOR FUTURE MOTOR STARTERS.					
NO	ITEM	HP	SIZE	OCPD	
1A	INCOMING - MAIN LUGS	-	-	-	
1D	EF-95	N/A	1	15A MCP	
1H	AHU-20	N/A	2	50A MCP	
1L	RF-20	N/A	1	15A MCP	
1P	UNKNOWN LOAD	N/A	1	15A MCP	
1T	HOT WATER PUMP P-20	N/A	1	15A MCP	
1X	SPACE	-	-	-	
2A	HOT WATER PUMP P-21	N/A	1	15A MCP	
2E	HOT WATER PUMP P-22	N/A	1	15A MCP	
2I	PANEL 1HE17	-	-	250A CB	
2K	SPACE	-	-	-	
2M	SPACE	-	-	-	
2Q	SPACE	-	-	-	
2U	SPACE	-	-	-	



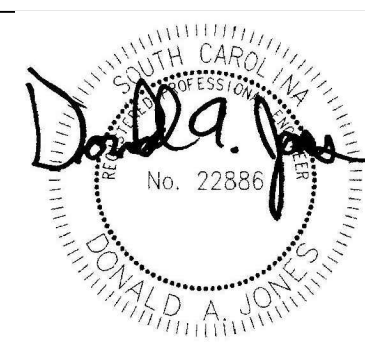
(BASIS OF DESIGN: APC INFRASTRUXURE)
⑤ UPS-PUPS One Line Diagram
SCALE: N.T.S.

Construction Documents (CD2)	04/10/2017
Construction Documents (CD1)	03/17/2017
Design Development (DD)	10/05/2016
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Revisions	Date

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QCE ENGINEERING LICENSE #4298, (QCE PROJ) #15030



Date: April 10, 2017

ARCHITECT/ENGINEERS:

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NC Architectural License No.: 51254

Drawing Title

ELECTRICAL - SCHEDULES

Approved Project Manager
Reza Tabatabaei, P.E.

Approved Chief Engineer
Jeffrey A. Sage, CFM

Project Title

DESIGN FOR CORRECT
SECONDARY ELECTRICAL
DEFICIENCIES

Location
RALPH H. JOHNSON YAMC CHARLESTON, SC

Date
4/10/2017

Checked
DAJ

Drawn
DAJ

Project Number

534-16-101

Building Number

1

Drawing Number

E-701

Dwg. 17 of 20

**Office of
Construction
and Facilities
Management**

 Department of
Veterans Affairs

100% FINAL CONSTRUCTION DOCUMENTS