



ENGINEERS

SURVEYORS

PLANNERS

May 25, 2017

**ADDENDUM NO. 1**

**UNC CHARLOTTE  
CONE SWITCHGEAR REPLACEMENT**

**SCO I.D. #16-14325-01A  
McKim & Creed Project No 05055-0021**

**NOTICE TO ALL BIDDERS AND HOLDERS OF CONTRACT  
DOCUMENTS**

The information contained herein is intended to modify and/or clarify the Contract Documents. The addendum shall and does become a part of the Contract Documents and shall be covered in the Contractor's proposal for the work.

It is the Contractor's responsibility to ascertain, prior to bid finalization, the addenda issued and to see that this bid includes any changes required. Prime Contractors shall see that their sub-contractors and suppliers are in receipt of information contained in all addenda.

Pre-bid meeting minutes are attached and are part of this addendum. All bidders shall acknowledge receipt of this Addendum by Email.

This Addendum consists of 6 pages, including attachments.

**Drawings:**

1. Drawing E101: Detail 1/E101, PARTIAL FIRST FLOOR DEMO PLAN: Clarifications were added for demolition of concrete equipment pads for the 15kv switch, MV transformer, and switchboard. Existing fence was added as information.
2. Drawing E101: Detail 2/E101, PARTIAL FIRST FLOOR NEW POWER PLAN: New handrail was added. Existing fence was added to coordinate location of new handrail. Directions were added to stripe hatched area (demo area) of floor to re-purpose as electric vehicle parking area.

8020 Tower Point Drive

Charlotte, NC 28227

704.841.2588

Fax 704.841.2567

www.mckimcreed.com

**Attachments included:**

1. Pre-bid meeting minutes – 2 pages
2. Pre-bid meeting sign in sheet – 1 page
3. Drawing E101 – 1 page



8020 TOWER POINT DRIVE, CHARLOTTE, NC 28227

TEL (704) 841-2588 • FAX (704) 841-2567

## MEETING MINUTES

Client:	University of North Carolina Charlotte
Project Name:	Cone Switchgear Replacement
Project Number:	SCO ID #16-14325-01A McKim & Creed Project No 05055-0021
Meeting Topic:	Pre-Bid Meeting
Date:	May 11, 2017
Time:	2:30 pm
Conducted by:	Davis Fitzgerald

### 1. Attendees:

- a. Brian Kugler – UNC Charlotte, Sr. Project Manager
- b. David Daignault – UNC Charlotte, Facilities Electrical Engineer
- c. Doug Walters – UNC Charlotte, Construction Manager
- d. Gene Darmer – Lake Electric Co.
- e. Buster Beaver – Watson Electric Group
- f. Joe Rouse – Boswell Group
- g. Davis Fitzgerald – McKim & Creed, Sr. Project Engineer

2. The contractors were advised to sign the attendance list; since only bids from contractors who attended the pre-bid meeting will be accepted.

3. Meeting was called to order and introductions were made.

4. General scope of the project was described by Davis Fitzgerald as outlined below.

- a. Project scope is replacement of the Cone switchgear lineup.
- b. Project involves installing new service equipment to connect to existing circuits.
- c. Demo of existing equipment including:

- i. MV switch / MV transformer / LV switchboard
- ii. MV cables
  1. Remove cables from S-23A to S-5
  2. Disconnect and cap cables from S-42B to S-5
  3. Alternate bid: Remove cables from S-42B to S-5

d. Insulation of new equipment including:

- i. New MV transformer and pad
- ii. New ductbank to MV transformer
- iii. New MV cables from S-23A to MV transformer
- iv. New LV switchboard
- v. New underground conduits to LV switchboard
- vi. Two new LV splice boxes
- vii. New overhead feeders in conduits to LV splice boxes
- viii. MV terminations and LV splices and terminations
- ix. New CMU wall

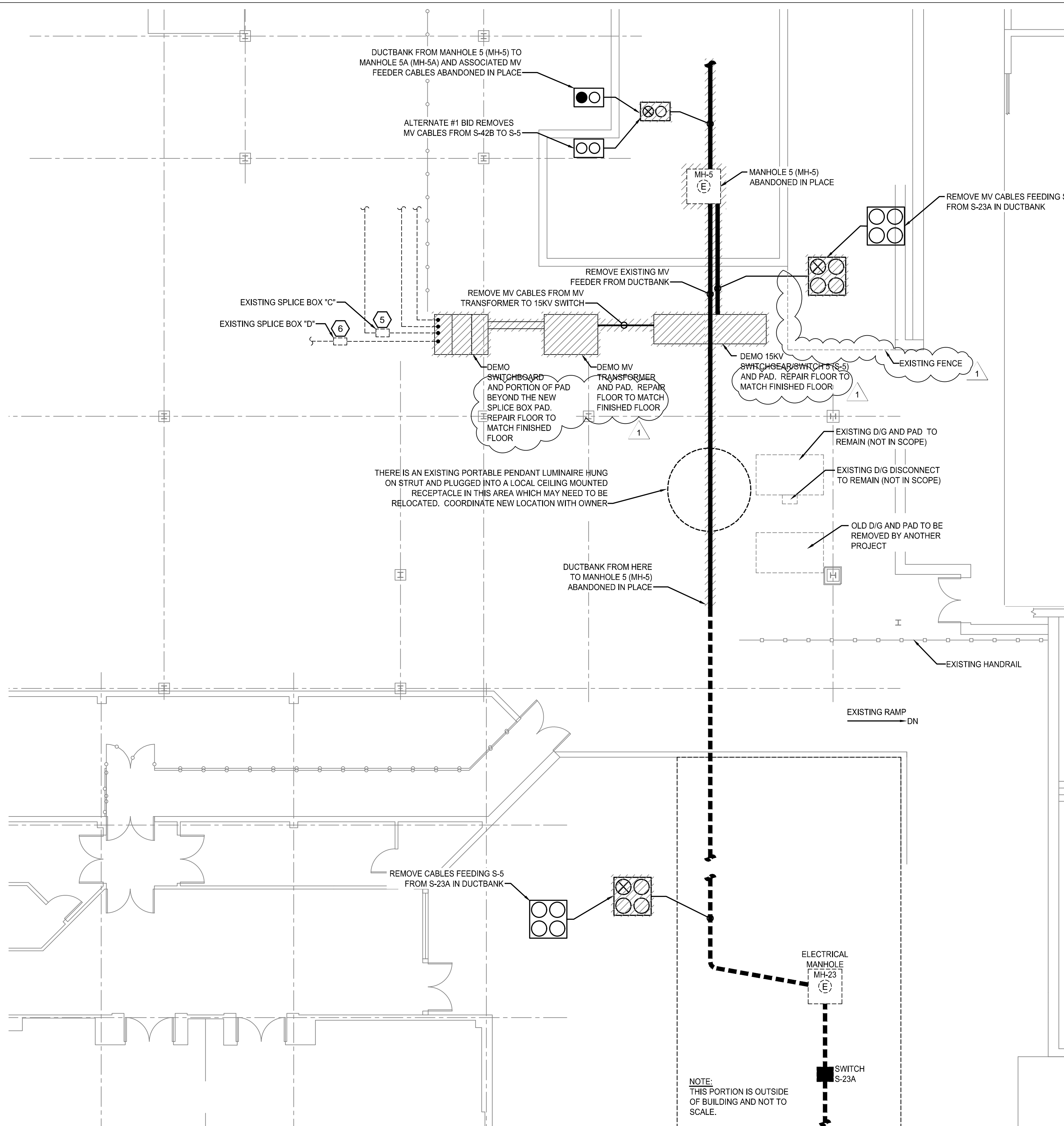
5. Bidding process was reviewed.
  - a. Details in Notice to Bidders was reviewed
  - b. Instructions for mailing or hand delivering bids was reviewed
  - c. Bids are due by 2:30pm on June 1, 2017
6. Work site walk through was conducted with all parties present.

CC: All Attendees

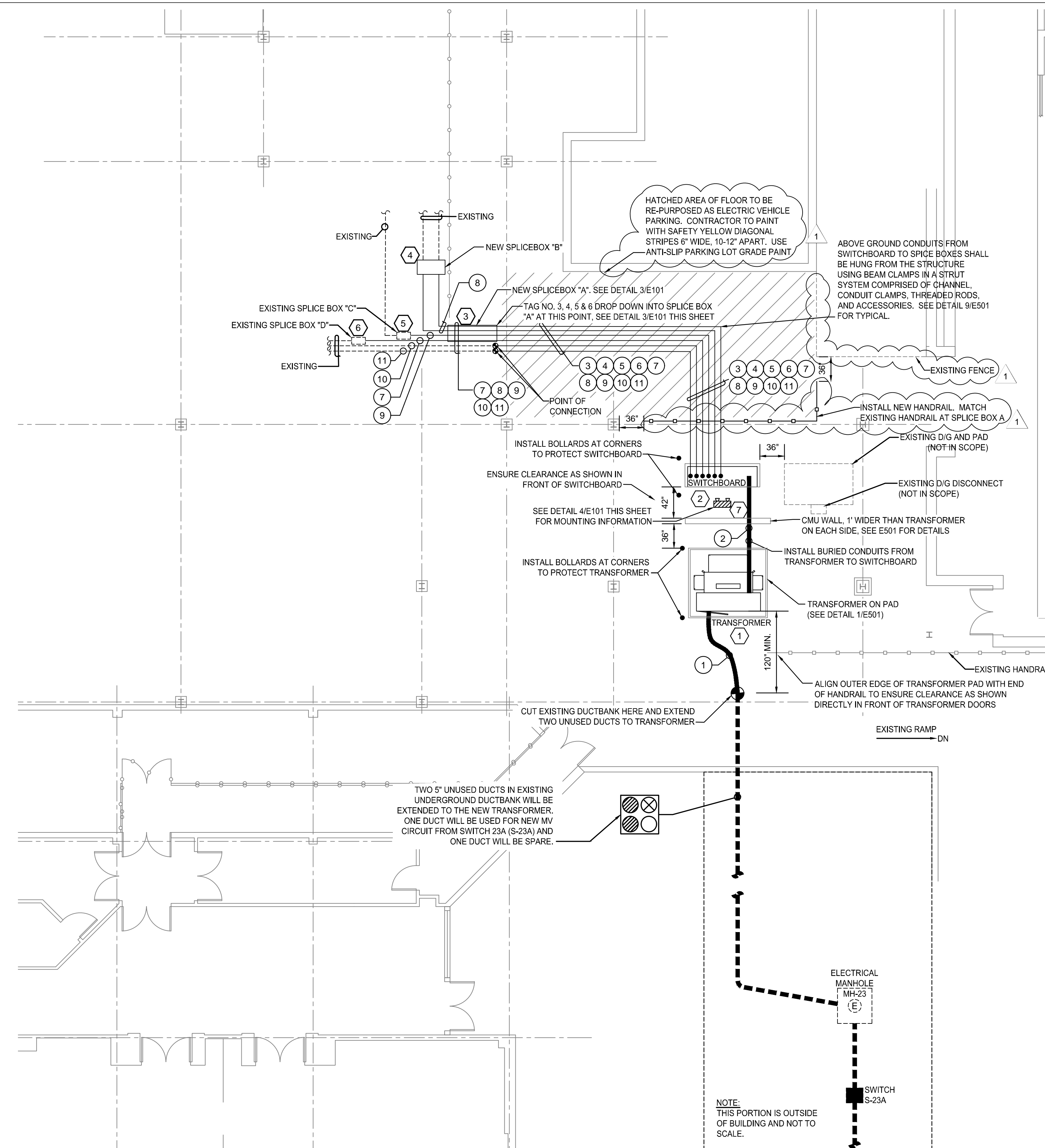
5/11/2017

# Cone Switchgear Relocation Project

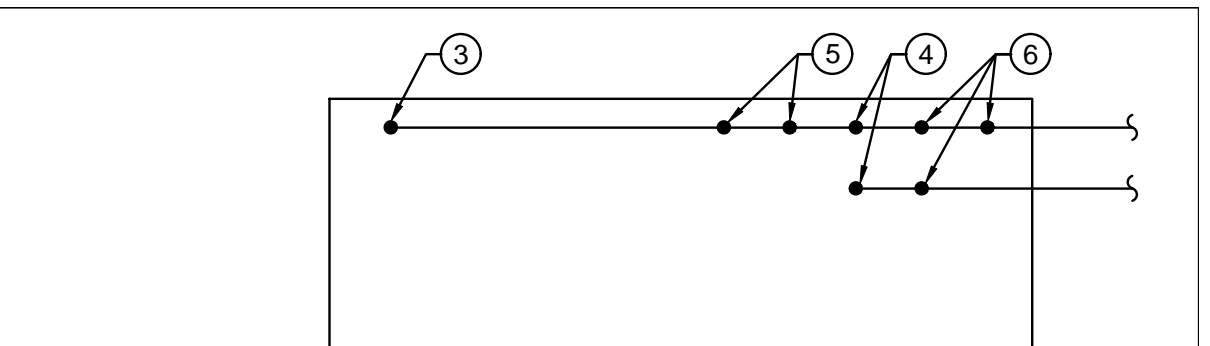
<u>Name</u>	<u>Organization</u>	<u>Email</u>
Brian Kugler GENE DARMER	UNC Charlotte LAKE ELECTRIC CO	bkugler@unccl.edu EDARMER@LAKEELECTRIC.COM
Doug WALTERS	UNC CHARLOTTE	dwalt22@unccl.edu
David Daignault	UNC Charlotte	drdaigna@unccl.edu
Buster Beaver	Watson Electric Co.	Buster@watsonelectric.com
Joe Rouse	Boswell Group	electrical@joe.rouse@boswellgroup.com



**1 PARTIAL FIRST FLOOR DEMO PLAN**  
E101 SCALE: 1/8"=1'-0"



**2 PARTIAL FIRST FLOOR NEW POWER PLAN**  
E101 SCALE: 1/8"=1'-0"



**3 SPICE BOX "A" (TOPVIEW)**  
E101 NO SCALE

NOTE THIS DETAIL:  
1. DETAIL ABOVE SHOWS CONDUIT AND CABLE ENTRIES FROM OVERHEAD INTO SPICE BOX "A" ONLY.



**4 EMERGENCY LIGHT DETAIL**  
E101 NO SCALE

NOTES THIS DETAIL:  
1. EMERGENCY LIGHT SHALL BE HUNG FROM THE CEILING OR STRUCTURAL STEEL USING RIGID HARDWARE/FITTINGS.  
2. CENTER FIXTURE ON FRONT CENTER OF SWITCHBOARD.  
3. INSTALL SO THAT HEADS FACE TOWARDS SWITCHBOARD AND POINT DOWN TO ILLUMINATE THE WORKING SPACE IN FRONT OF SWITCHBOARD.  
4. HARD WIRE EMERGENCY LIGHT TO LOCAL LIGHTING FIXTURE/CIRCUIT.

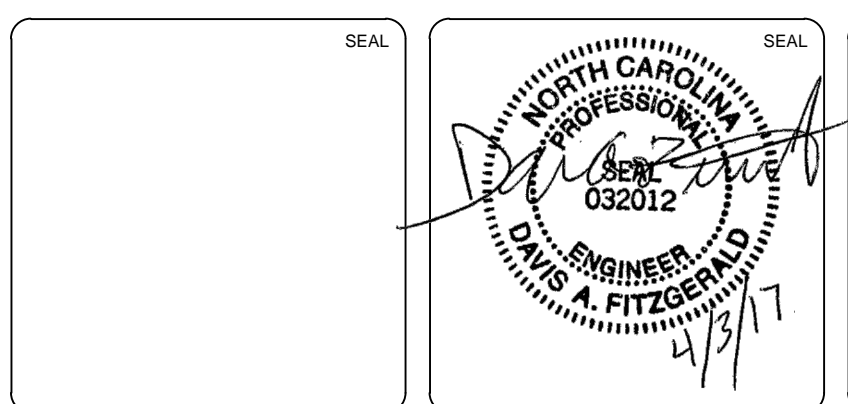
EQUIPMENT SCHEDULE		
TAG NO.	EQUIPMENT	NOTES AND REQUIREMENTS
1	MEDIUM VOLTAGE PAD-MOUNTED TRANSFORMER (NEW)	TRANSFORMER SHALL CONFORM TO SPECIFICATION SECTION 26 12 00.
2	LOW VOLTAGE SWITCHBOARD (NEW)	SWITCHBOARD SHALL CONFORM TO SPECIFICATION SECTION 26 24 13.
3	SPICE BOX A (NEW)	SPICE BOX A SHALL BE PAD MOUNTED, GALVANIZED AND NEMA 3R RATED. IT SHALL BE SIZED TO ACCOMMODATE CONNECTION OF NEW OVERHEAD FEEDERS TO EXISTING UNDERGROUND FEEDERS AS SHOWN ON E201. CONNECTION OF NEW OVERHEAD FEEDERS TO EXISTING UNDERGROUND FEEDERS SHALL BE MADE USING IRREVERSIBLE COPPER COMPRESSION SPLICES. SPICE BOX A SHALL CONTAIN A GROUND BUS TO ACCOMMODATE TERMINATIONS OF NEW AND EXISTING GROUND WIRES. NEW AND EXISTING CONDUITS SHALL BE BONDED TO THE GROUND BUS. SPICE BOX A SHALL BE POSITIONED TO COVER THE STUB UPS UNDER THE EXISTING SWITCHBOARD. DETAIL SHOWN ON E501.
4	SPICE BOX B (NEW)	SPICE BOX B SHALL BE GALVANIZED, NEMA 3R RATED AND MOUNTED OVERHEAD. IT SHALL BE SIZED TO ACCOMMODATE TWO EXISTING 3" CONDUITS ON ONE SIDE AND TWO NEW 3 1/2" CONDUITS ON THE OPPOSITE SIDE. NEW OVERHEAD FEEDERS SHALL BE CONNECTED TO EXISTING OVERHEAD FEEDERS AS SHOWN ON E201 INSIDE THE SPICE BOX USING IRREVERSIBLE COPPER COMPRESSION SPLICES. SPICE BOX B SHALL BE LOCATED BY THE ELECTRICAL CONTRACTOR.
5	SPICE BOX C (EXISTING)	SPICE BOX C ACCOMMODATES ONE 2 1/2" CONDUIT ON EACH SIDE. FEEDERS AND CONDUIT FROM THE EXISTING SWITCHBOARD TO SPICE BOX C SHALL BE REPLACED WITH NEW OVERHEAD FEEDERS AND CONDUIT FROM THE NEW SWITCHBOARD AS SHOWN ON E201. NEW OVERHEAD FEEDERS SHALL BE CONNECTED TO EXISTING OVERHEAD FEEDERS INSIDE THE SPICE BOX USING IRREVERSIBLE COPPER COMPRESSION SPLICES.
6	SPICE BOX D (EXISTING)	SPICE BOX D ACCOMMODATES ONE 3 1/2" CONDUIT ON EACH SIDE. FEEDERS AND CONDUIT FROM THE EXISTING SWITCHBOARD TO SPICE BOX D SHALL BE REPLACED WITH NEW OVERHEAD FEEDERS AND CONDUIT FROM THE NEW SWITCHBOARD AS SHOWN ON E201. NEW OVERHEAD FEEDERS SHALL BE CONNECTED TO EXISTING OVERHEAD FEEDERS INSIDE THE SPICE BOX USING IRREVERSIBLE COPPER COMPRESSION SPLICES.
7	EMERGENCY LIGHT	SELF-CONTAINED BATTERY BACKED EMERGENCY LIGHT WITH TWO LED LAMP-HEADS. UNIT SHALL AUTOMATICALLY ACTIVATE UPON LOSS OF NORMAL POWER. RATED FOR OUTDOOR/WET APPLICATION AND COLD ENVIRONMENTS DOWN TO -13°F MIN. ACCEPTS DUAL-VOLTAGE INPUT OF 120 THROUGH 277VAC. 90 MINUTE RUN TIME. LISTED TO UL924. 300 LUMENS PER LAMP-HEAD MINIMUM.

NOTES:  
1. ALL COMPRESSION SPLICES SHALL BE ARC AND FIRE PROOFED WITH ONE HALF-LAPPED LAYER OF SCOTCH 77 TAPE COVERED BY TWO HALF-LAPPED LAYERS OF SCOTCH 33 TAPE EXTENDING 2"-3" BEYOND EDGE OF SPLICE.

WIRE AND CONDUIT SCHEDULE							
TAG NO.	FROM	TO	NEW WIRE AND CONDUIT	CONNECT TO EXISTING CIRCUITS FEEDING	WIRE TYPE	WIRE	INSTALLATION
1	SWITCH 23-A	TRANSFORMER	#3/2 (15KV), #2G (600V), 5"C AND 1-5"C SPARE	N/A	15KV, MV-105, EPR, 133% INS.	CU	UNDERGROUND DUCTBANK. SEE DETAIL 6/E501.
2	TRANSFORMER	SWITCHBOARD	7(4-500KCML, 4"C) AND 1-4"C SPARE	N/A	THWN	CU	DIRECT BURIAL IN CONDUIT. SEE DETAIL 8/E501.
3	SWITCHBOARD BREAKER NO. 2	SPICE BOX A	3-400KCML, #3G, 3"C	MOTOR CONTROL CENTER	THWN	CU	OVERHEAD CONDUITS AS SHOWN ON E101 AND E201. BOND NEW AND EXISTING GROUND WIRES TO CONDUITS AND GROUND BUS IN SPICE BOX A.
4	SWITCHBOARD BREAKER NO. 3	SPICE BOX A	2(3-350KCML, #3/0N, #1/0G 3"C)	PANEL PDP	THWN	CU	OVERHEAD CONDUITS AS SHOWN ON E101 AND E201. BOND NEW AND EXISTING GROUND WIRES TO CONDUITS AND GROUND BUS IN SPICE BOX A.
5	SWITCHBOARD BREAKER NO. 4	SPICE BOX A	2(3-500KCML, #1/0N, #1/0G, 3 1/2"C)	KING BUILDING MAIN	THWN	CU	OVERHEAD CONDUITS AS SHOWN ON E101 AND E201. BOND NEW AND EXISTING GROUND WIRES TO CONDUITS AND GROUND BUS IN SPICE BOX A.
6	SWITCHBOARD BREAKER NO. 5	SPICE BOX A	3(3-500KCML, #1/0N, #1/0G, 3 1/2"C)	CONE CENTER B BUILDING	THWN	CU	OVERHEAD CONDUITS AS SHOWN ON E101 AND E201. BOND NEW AND EXISTING GROUND WIRES TO CONDUITS AND GROUND BUS IN SPICE BOX A.
7	SWITCHBOARD BREAKER NO. 6	SPICE BOX D	4-500KCML, #3G, 3 1/2"C	PANEL LC	THWN	CU	OVERHEAD CONDUITS AS SHOWN ON E101 AND E201. ENSURE NEW GROUND WIRES ARE BONDED TO CONDUITS AND THE SPICE BOX.
8	SWITCHBOARD BREAKER NO. 7	SPICE BOX B	2(3-500KCML, #1/0G, 3 1/2"C)	CAFÉ EQUIPMENT ROOM	THWN	CU	OVERHEAD CONDUITS AS SHOWN ON E101 AND E201. ENSURE NEW GROUND WIRES ARE BONDED TO CONDUITS AND THE SPICE BOX.
9	SWITCHBOARD BREAKER NO. 8	SPICE BOX C	3-250KCML, #1/0G, 2 1/2"C	COMB. CHILLER STARTER	THWN	CU	OVERHEAD CONDUITS AS SHOWN ON E101 AND E201. ENSURE NEW GROUND WIRES ARE BONDED TO CONDUITS AND THE SPICE BOX.
10	SPICE BOX A GROUND BUS	EXISTING GROUND WIRE	#1/0G, 1"C	N/A	THWN	CU	EXTEND EXISTING CONDUIT AND EXISTING GROUND WIRE (APPROX. 50 FT) TO SWITCHBOARD AND CONNECT EXISTING GROUND WIRE TO SWITCHBOARD GROUND BUS. USE AN IRREVERSIBLE COPPER COMPRESSION SPLICE AND FOLLOW NOTE 1 ON THE EQUIPMENT SCHEDULE.
11	SWITCHBOARD POWER METER INTERFACE	JACE PANEL	RS-485, 3/4"C	N/A	RS-485	CU	REMOVE EXISTING RS-485 CABLE FROM CONDUIT. EXTEND EXISTING CONDUIT TO SWITCHBOARD (APPROX. 80 FT). PULL NEW RS-485 CABLE TO JACE PANEL (APPROX. 200 FT) IN CONE BOILER ROOM.

REV. NO.	DESCRIPTIONS	DATE

REV. NO.	DESCRIPTIONS	DATE
1	ADDENDUM 1 - ADDED CLARIFICATIONS AND ADDITIONAL SCOPE	05/25/2017



**MCKIM & CREED**  
8020 Tower Point Drive  
Charlotte, North Carolina 28227  
Phone: (704)841-2588, Fax: (704)841-2567  
NC License # F-1222  
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UNC CHARLOTTE  
CONE SWITCHGEAR REPLACEMENT  
SCO No. 16-14325-01A  
FIRST FLOOR DEMO & NEW  
POWER PLAN

GRAPHIC SCALES		DATE: 03/22/2017	
MCE PROJ. #	5055-0021	SCALE	M&C FILE NUMBER
DRAWN	DJF	HORIZONTAL:	05055
DESIGNED	DAF	VERTICAL:	E101
CHECKED	DEP	STATUS:	BID SET
PROJ. MGR.	DEP	REVISION	