



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

December 4, 2017

SUBJECT: ADDENDUM 1 FOR DE00206 - Replacement of Bridge #17 over Mud Creek in
Durham County
WBS Element: 17BP.5.R.54

MEMORANDUM TO PROSPECTIVE BIDDERS AND MEETING ATTENDEES

To Whom It May Concern:

The subject proposal is being revised by an addendum, referred to here as Addendum 1.

The following revisions have been made to the proposal:

Revision #1: Addition of Line Item to Proposal

<u>Line Item</u>	<u>Item Number</u>	<u>Description</u>	<u>New Quantity</u>
087	7060000000-E	Signal Cable	193 LF

Revision #2: Update to Plan Sheet Sig-1

Plan sheet Sig-1 was updated to reflect locations with existing 2" conduit and junction boxes. Please void the existing sheet SIG-1 and replace with the attached.

Please note that an .ebs amendment file has been provided and must be used with both electronic bidding and electronic bid preparation with manual delivery. This information will also be posted electronically.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION 5 OFFICE
2612 NORTH DUKE STREET
DURHAM, NC 27704

Telephone: (919) 220-4600
Fax: (919) 560-3371
Customer Service: 1-877-368-4968

Location:
2612 NORTH DUKE STREET
DURHAM, NC 27704

Website: www.ncdot.gov

If you have additional questions prior to bid opening, feel free to call me at (919) 220-4600.

Sincerely,

A handwritten signature in black ink, appearing to read 'Robbie Weisz', with a horizontal line extending to the right.

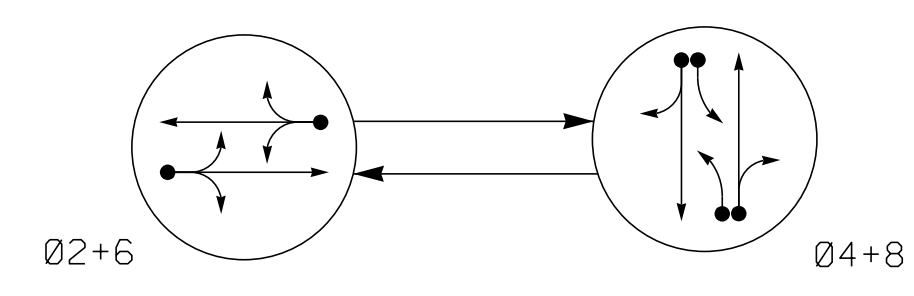
Robbie N. Weisz, PE
Division 5 Contract Engineer

RNW/sjl

cc: B. Tharrington
C. Richards
B. Sloan

M. Biedell
L. Gilchrist

PHASING DIAGRAM



EV PREEMPT PHASES

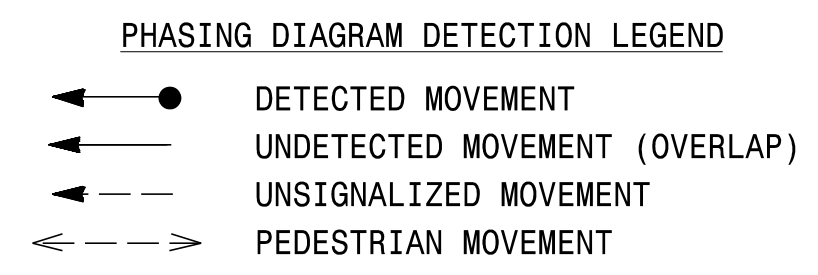
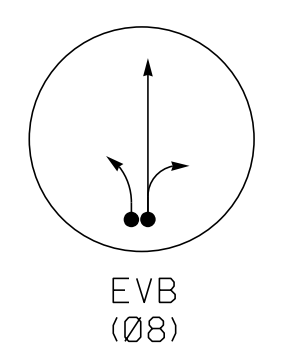


TABLE OF OPERATION

SIGNAL FACE	PHASE			
	02+6	04+8	EV B	FLASH
21,22	G	R	R	Y
41,42	R	G	R	R
61,62	G	R	R	Y
81	R	G	←	R
82	R	G	G	R

W - Walk
DW - Don't Walk
DRK - Dark

**2033 SOFTWARE w/ 2070 CONTROLLER
LOOP & DETECTOR UNIT INSTALLATION CHART**

LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW EXISTING	NEMA PHASE	DETECTOR PROGRAMMING												STATUS	
						TIMING		ATTRIBUTES								SYSTEM LOOPS	NEW EXISTING		
						DELAY	CARRY (STRETCH)	1	2	3	4	5	6	7	8				
2A	6X6	4	300	-X	2	- SEC.	- SEC.	-	-	-	-	-	-	-	-	-	-	X	
4A	6X6	4	300	-X	4	- SEC.	2.0 SEC.	-	-	-	-	X	-	-	-	-	-	X	
4B	6X50	2-4-2	+5	-X	4	5 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X	
4C	6X60	2-4-2	+5	-X	4	10 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X	
6A	6X6	4	300	-X	6	- SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X	
8A	6X6	4	300	-X	8	- SEC.	2.0 SEC.	-	-	-	-	X	-	-	-	-	-	X	
8B	6X40	2-4-2	+5	X	8	5 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X	
8C	6X40	2-4-2	+5	X	8	10 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X	
8D	6X6	4	0	X	8	15 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	X	

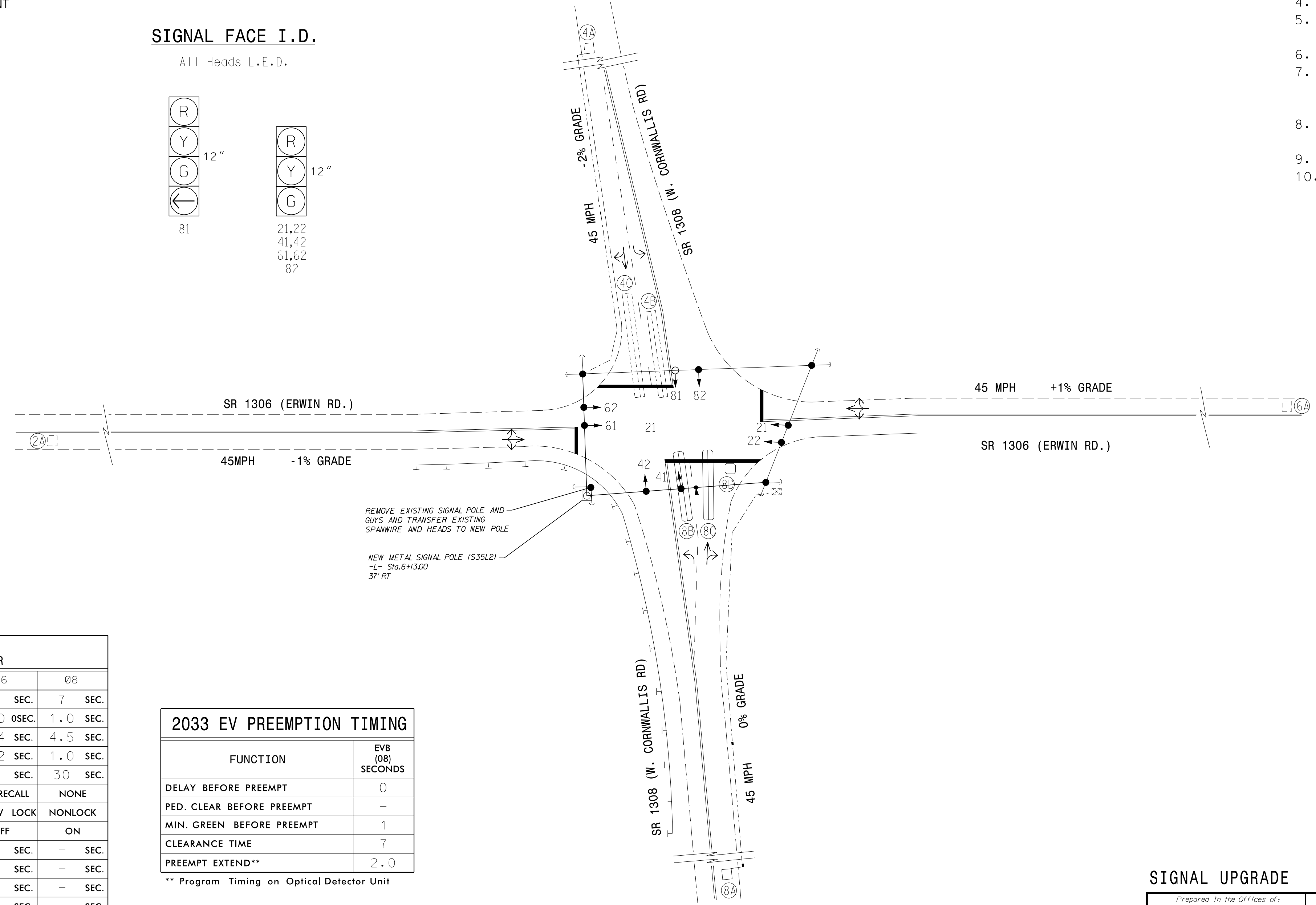
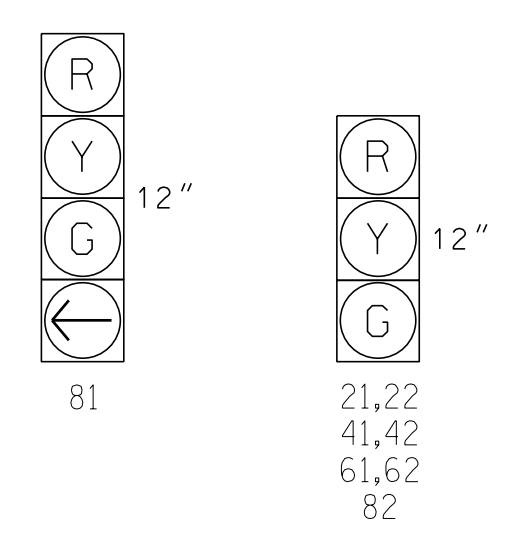
2 Phase Fully Actuated w/ Fire Preemption (Durham Signal System)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated July 2012 and "Standard Specifications for Roads and Structures" dated July 2012.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supercede these values.
- When in flashing mode, all signal heads for the same approach shall flash concurrently.
- Fire Preempt approach WB Route #111.
- Install 2070E controller into existing cabinet.
- Pavement markings are existing.
- Do not program signal for late night flashing operations unless otherwise directed by the Engineer.
- Reposition existing signal heads numbered #41 and 42.
- Set all detector units to presence mode.
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.

SIGNAL FACE I.D.

All Heads L.E.D.



**TIMING CHART
2033 SOFTWARE w/ 2070 CONTROLLER**

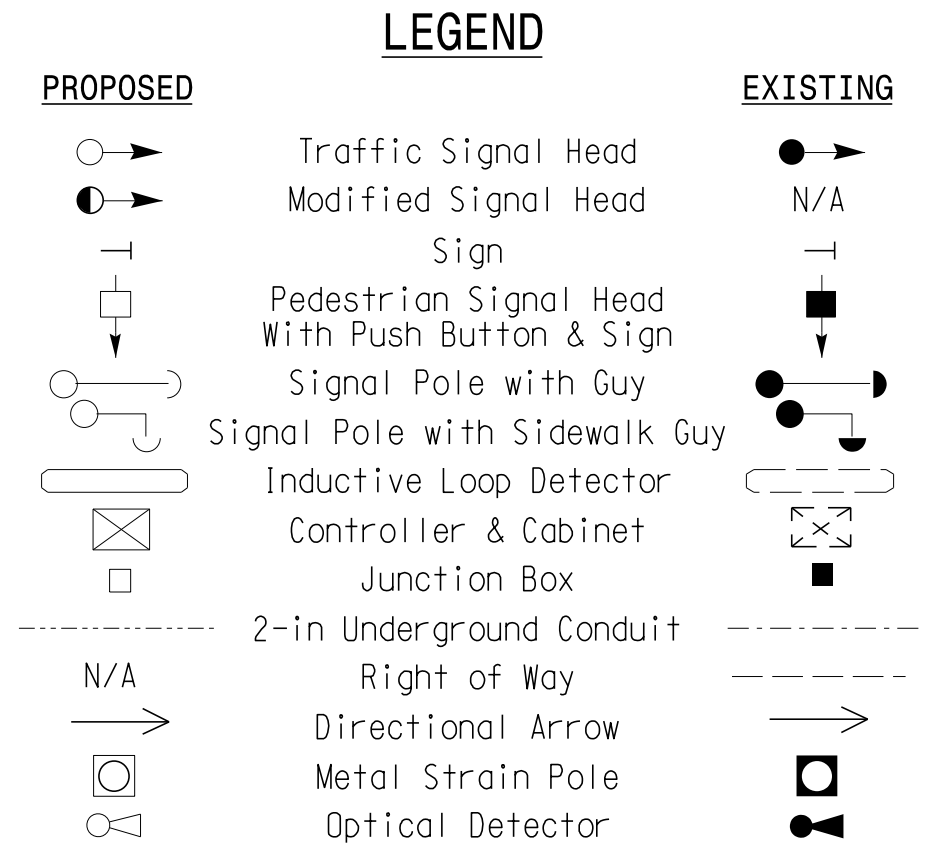
PHASE	02	04	06	08
MINIMUM INITIAL *	15 SEC.	7 SEC.	15 SEC.	7 SEC.
VEHICLE EXTENSION *	2.0 SEC.	1.0 SEC.	2.0 SEC.	1.0 SEC.
YELLOW CHANGE INT.	4.6 SEC.	4.7 SEC.	4.4 SEC.	4.5 SEC.
RED CLEARANCE	1.3 SEC.	1.0 SEC.	1.2 SEC.	1.0 SEC.
MAXIMUM LIMIT *	60 SEC.	30 SEC.	60 SEC.	30 SEC.
RECALL POSITION	VEH. RECALL	NONE	VEH. RECALL	NONE
VEHICLE CALL MEMORY	YELLOW LOCK	NONLOCK	YELLOW LOCK	NONLOCK
DOUBLE ENTRY	OFF	ON	OFF	ON
WALK *	- SEC.	- SEC.	- SEC.	- SEC.
FLASHING DON'T WALK	- SEC.	- SEC.	- SEC.	- SEC.
TYPE 3 LIMIT	- SEC.	- SEC.	- SEC.	- SEC.
ALTERNATE EXTENSION	- SEC.	- SEC.	- SEC.	- SEC.
ADD PER VEHICLE *	- SEC.	- SEC.	- SEC.	- SEC.
MAXIMUM INITIAL *	- SEC.	- SEC.	- SEC.	- SEC.
MAXIMUM GAP*	7.0 SEC.	1.0 SEC.	7.0 SEC.	1.0 SEC.
REDUCE 0.1 SEC EVERY *	1.5 SEC.	- SEC.	1.5 SEC.	- SEC.
MINIMUM GAP	- SEC.	1.0 SEC.	- SEC.	1.0 SEC.

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

2033 EV PREEMPTION TIMING

FUNCTION	EV B (08) SECONDS
DELAY BEFORE PREEMPT	0
PED. CLEAR BEFORE PREEMPT	-
MIN. GREEN BEFORE PREEMPT	1
CLEARANCE TIME	7
PREEMPT EXTEND**	2.0

** Program Timing on Optical Detector Unit



SIGNAL UPGRADE

MOTT MACDONALD
 P.O. Box 700
 Fuquay-Varina, NC 27526
 P: (919) 552-2253
 F: (919) 552-2254
 www.mottmac.com/america
 License No. F-0669

Prepared in the Offices of:

 TRANSPORTATION MOBILITY AND SAFETY DIVISION
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 Signal Design Section
 750 N. Greenfield Pkwy, Garner, NC 27529

**SR 1306 (Erwin Rd)
at
SR 1308 (W. Cornwallis Rd)**

Division 5 Durham County Durham

PLAN DATE: SEPTEMBER 2017 REVIEWED BY: RWT

PREPARED BY: RTP REVIEWED BY:

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEERS
 SEAL 032711
 RUSSELL W. THOMPSON

DocuSigned by:
 Russell W. Thompson
 11/30/2017

SIG. INVENTORY NO. 05-1438

1:31:37 PM
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