RIVERGATE IV ROADWAY PLANS

IMPROVEMENTS TO HWY 150–STEELE CREEK ROAD
RIGHT TURN LANE HWY 49 TO OLD STEELE CREEK ROAD
IMPROVEMENTS TO HAMILTON–STEELE CREEK ROAD INTERSECTION
IMPROVEMENTS TO OLD STEELE CREEK ROAD
LEFT TURN LANE MODIFICATIONS HWY 49

CHILDRESS KLEIN PROPERTIES
CHARLOTTE, NORTH CAROLINA

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C2.5	DRAINAGE AREA MAP
C3.1	SITE DETAILS
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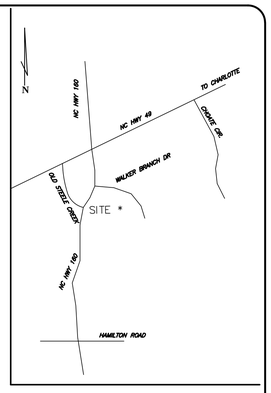

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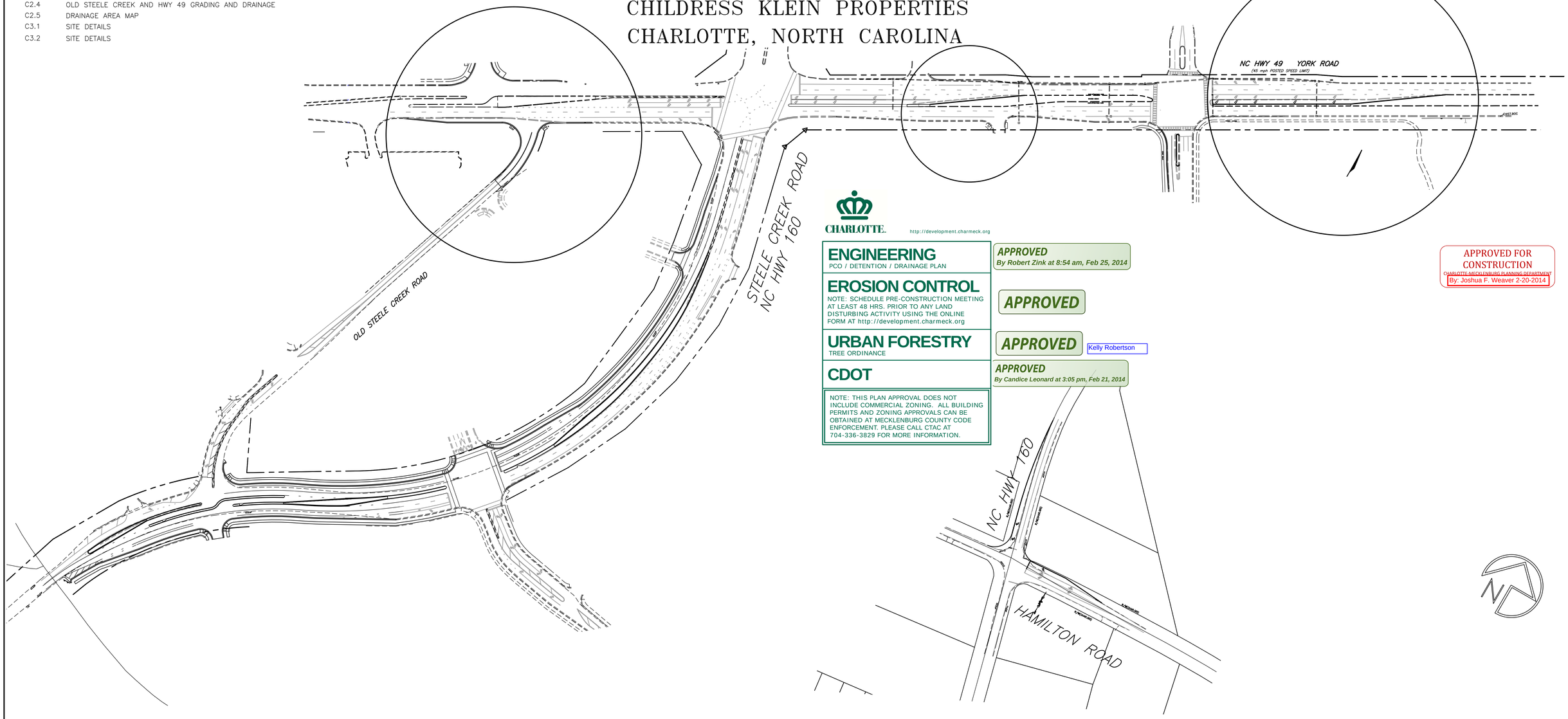

CHARLOTTE.
http://development.charmeck.org

ENGINEERING PCO / DETENTION / DRAINAGE PLAN	*APPROVED* *By Robert Zink at 8:54 am, Feb 25, 2014*
EROSION CONTROL NOTE: SCHEDULE PRE-CONSTRUCTION MEETING AT LEAST 48 HRS. PRIOR TO ANY LAND DISTURBING ACTIVITY USING THE ONLINE FORM AT http://development.charmeck.org	*APPROVED*
URBAN FORESTRY TREE ORDINANCE	*APPROVED* Kelly Robertson
CDOT	*APPROVED* *By Candice Leonard at 3:05 pm, Feb 21, 2014*

NOTE: THIS PLAN APPROVAL DOES NOT INCLUDE COMMERCIAL ZONING. ALL BUILDING PERMITS AND ZONING APPROVALS CAN BE OBTAINED AT MECKLENBURG COUNTY CODE ENFORCEMENT. PLEASE CALL CTAC AT 704-336-3829 FOR MORE INFORMATION.

APPROVED FOR CONSTRUCTION
CHARLOTTE-MECKLENBURG PLANNING DEPARTMENT
By: Joshua F. Weaver 2-20-2014

CHILDRESS KLEIN PROPERTIES

100 0 50 100 200 400
SCALE: 1" = 100'

GEOSCIENCE GROUP Incorporated
500-K Clanton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
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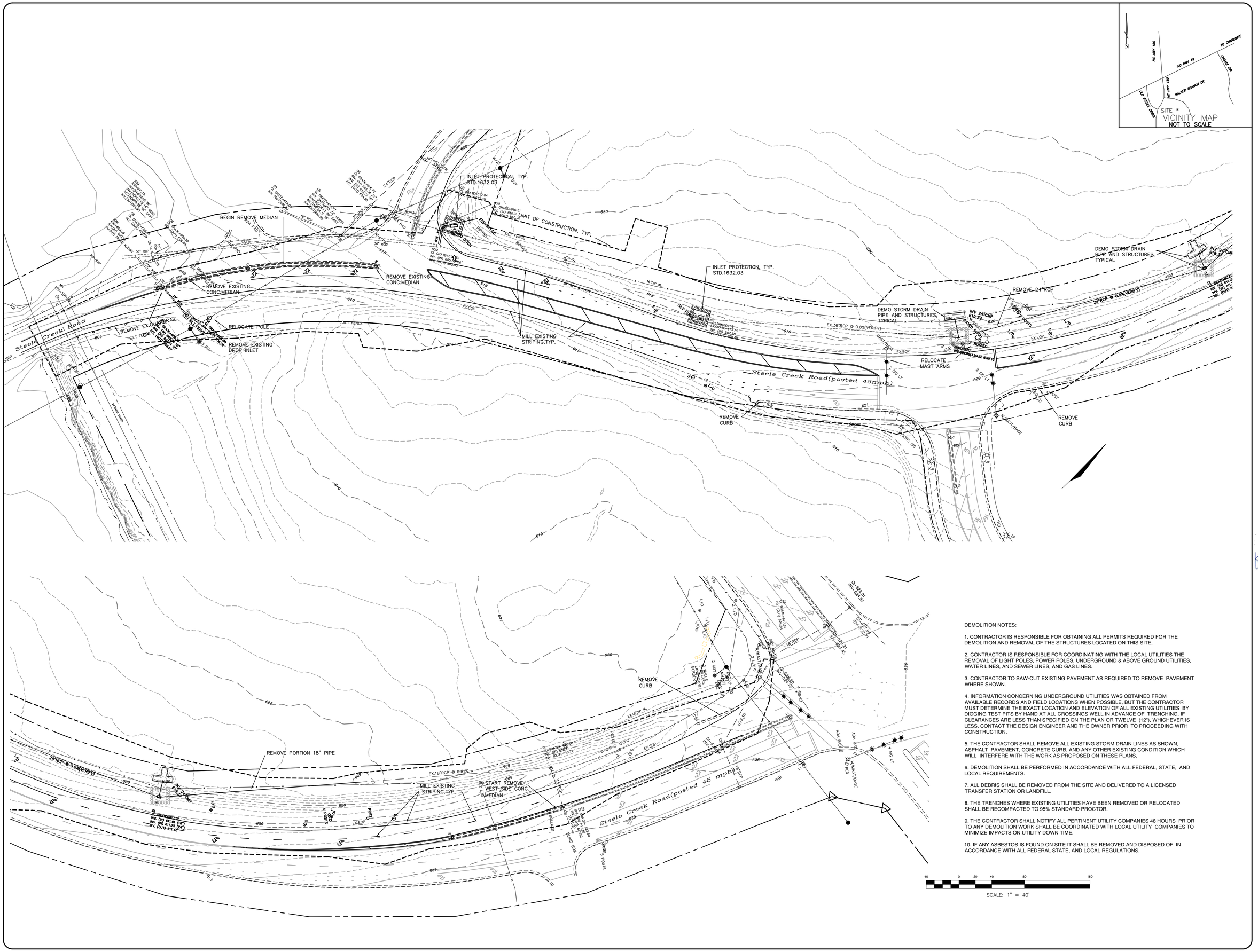

DEMOLITION NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR THE DEMOLITION AND REMOVAL OF THE STRUCTURES LOCATED ON THIS SITE.

2. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE LOCAL UTILITIES THE REMOVAL OF LIGHT POLES, POWER POLES, UNDERGROUND & ABOVE GROUND UTILITIES, WATER LINES, AND SEWER LINES, AND GAS LINES.

3. CONTRACTOR TO SAW-CUT EXISTING PAVEMENT AS REQUIRED TO REMOVE PAVEMENT WHERE SHOWN.

4. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD LOCATIONS WHEN POSSIBLE, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED ON THE PLAN OR TWELVE (12"), WHICHEVER IS LESS, CONTACT THE DESIGN ENGINEER AND THE OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.

5. THE CONTRACTOR SHALL REMOVE ALL EXISTING STORM DRAIN LINES AS SHOWN, ASPHALT PAVEMENT, CONCRETE CURB, AND ANY OTHER EXISTING CONDITION WHICH WILL INTERFERE WITH THE WORK AS PROPOSED ON THESE PLANS.

6. DEMOLITION SHALL BE PERFORMED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.

7. ALL DEBRIS SHALL BE REMOVED FROM THE SITE AND DELIVERED TO A LICENSED TRANSFER STATION OR LANDFILL.

8. THE TRENCHES WHERE EXISTING UTILITIES HAVE BEEN REMOVED OR RELOCATED SHALL BE RECOMPACTED TO 95% STANDARD PROCTOR.

9. THE CONTRACTOR SHALL NOTIFY ALL PERTINENT UTILITY COMPANIES 48 HOURS PRIOR TO ANY DEMOLITION WORK SHALL BE COORDINATED WITH LOCAL UTILITY COMPANIES TO MINIMIZE IMPACTS ON UTILITY DOWN TIME.

10. IF ANY ASBESTOS IS FOUND ON SITE IT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL STATE, AND LOCAL REGULATIONS.

40 0 20 40 80 160

SCALE: 1" = 40'

DRAWING SCALE	
PROJECT DATE	
PROJECT NUMBER	
PHASE	TASK
PLOT DATE	

REV.		DATE
1	CDOT/DOT & CITY COMMENTS	11.27.17

PROJECT MANAGER
DESIGN BY
APPROVED BY
FILE NAME

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Engineering
Consultants
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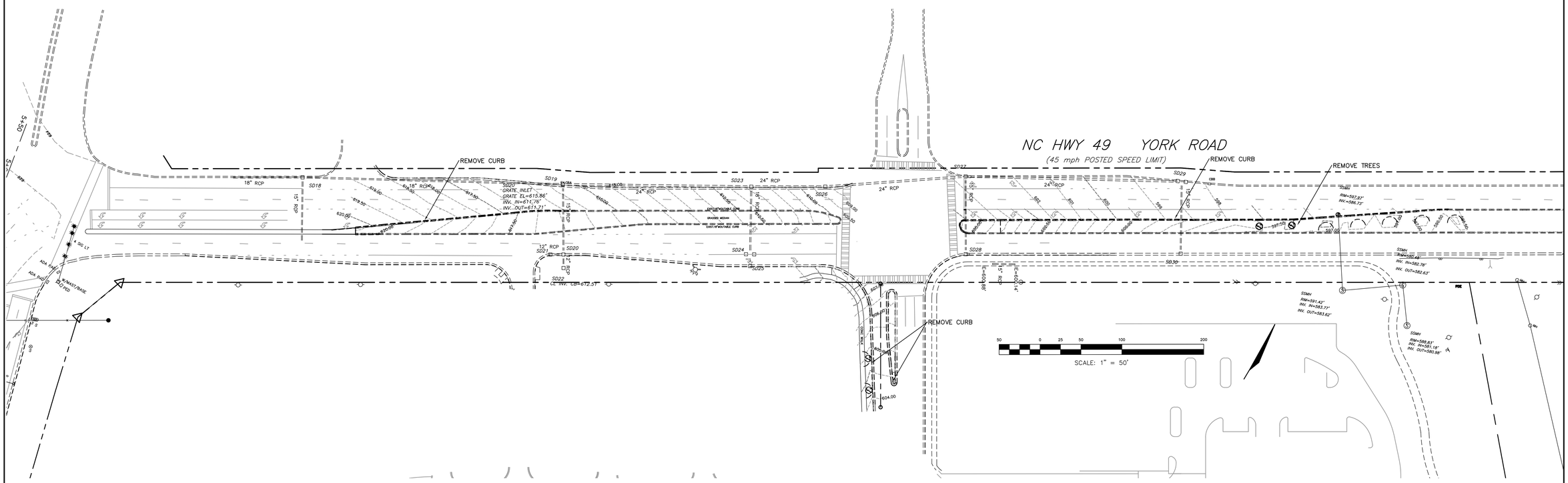
Phone: 704.525.3003
Fax: 704.525.2051
www.geoscienceengineering.com

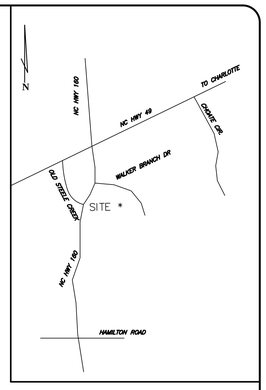
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10725 ENGINEER KEVIN G. CALDWELL 11.27.17

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

STEELE CREEK ROAD
DEMOLITION PLAN

C0.1





VICINITY MAP
NOT TO SCALE

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APPROVED BY	
FILE NAME	
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1	CODE/DOT & CITY COMMENTS	1.27.17

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Transportation Engineering
9800 Kincaid Park Road
Charlotte, NC 28217
Phone: 704.525.3083
Fax: 704.525.2051
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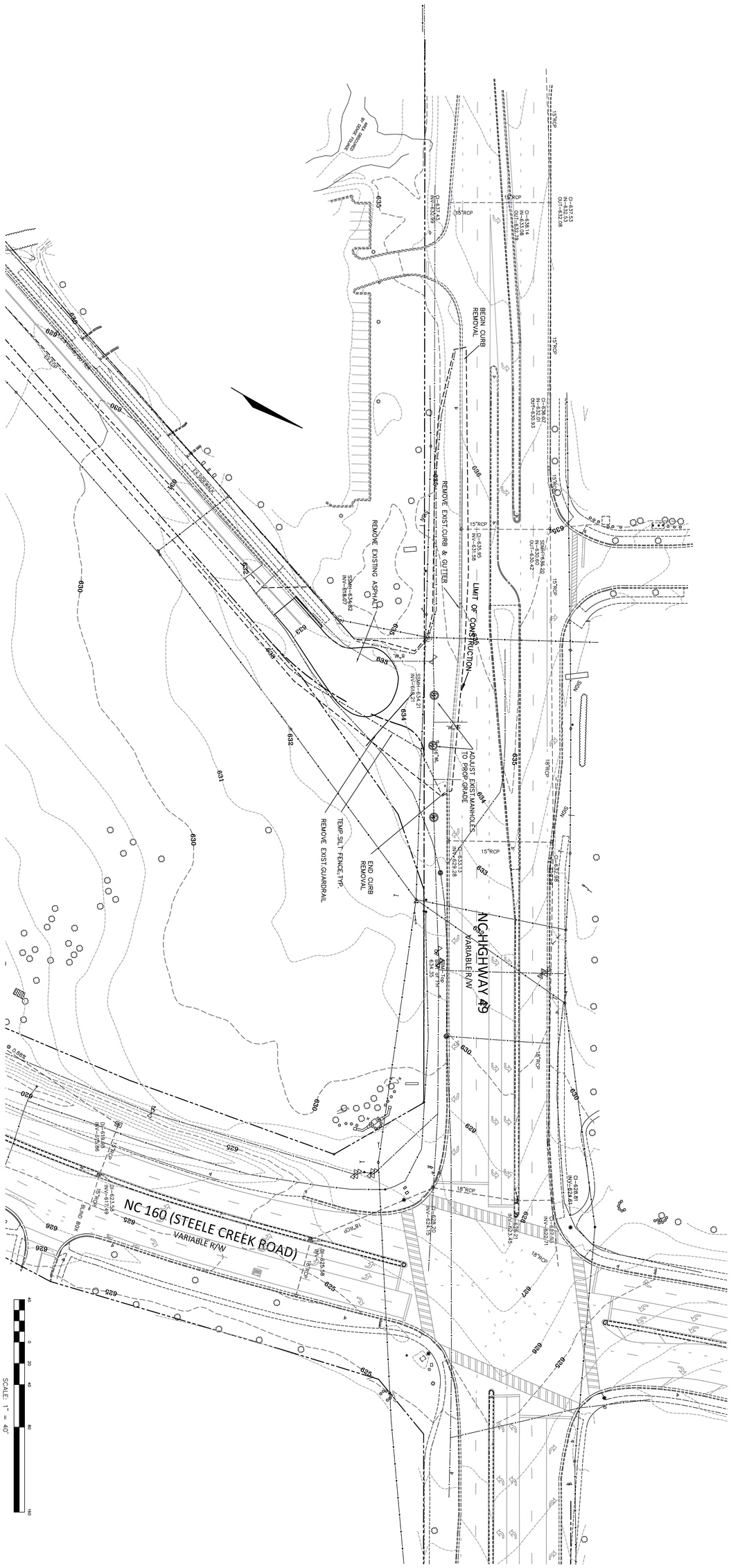
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
11.27.17

DEMOLITION PLAN

C0.2



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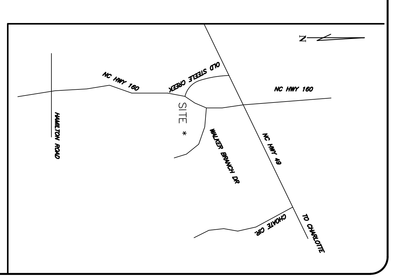

C0.3

DEMOLITION PLAN

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

GEOSCIENCE GROUP
Incorporated
5804-A Clanton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
www.geosciencegroup.com

PROJECT MANAGER	DRAWING SCALE	REV.		DATE
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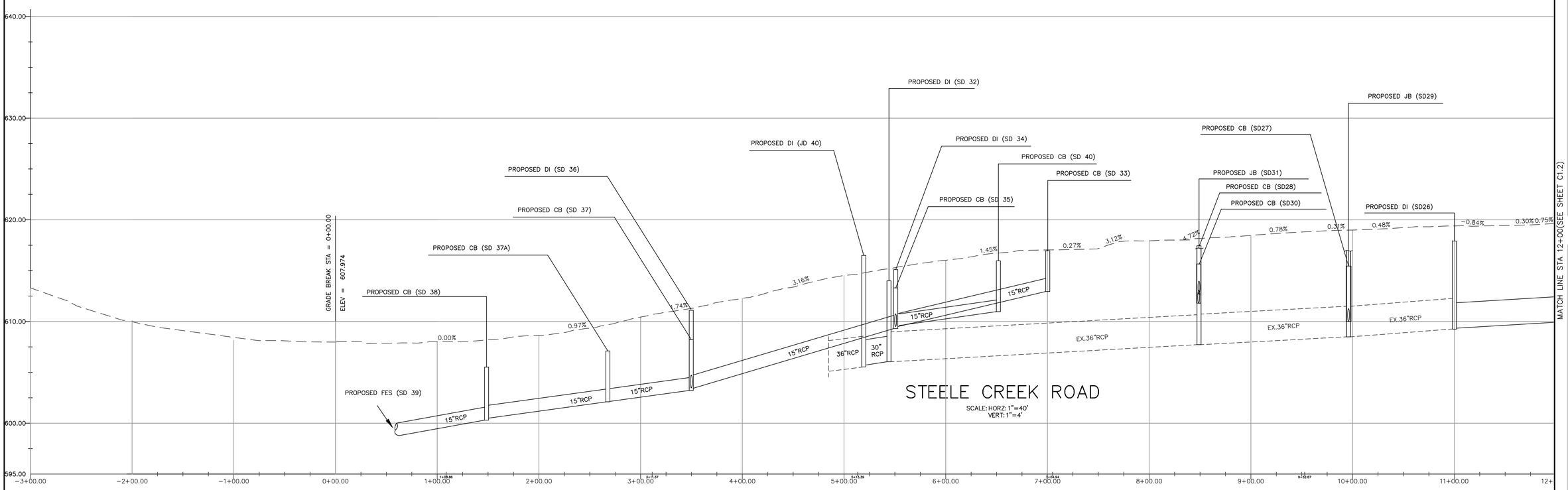

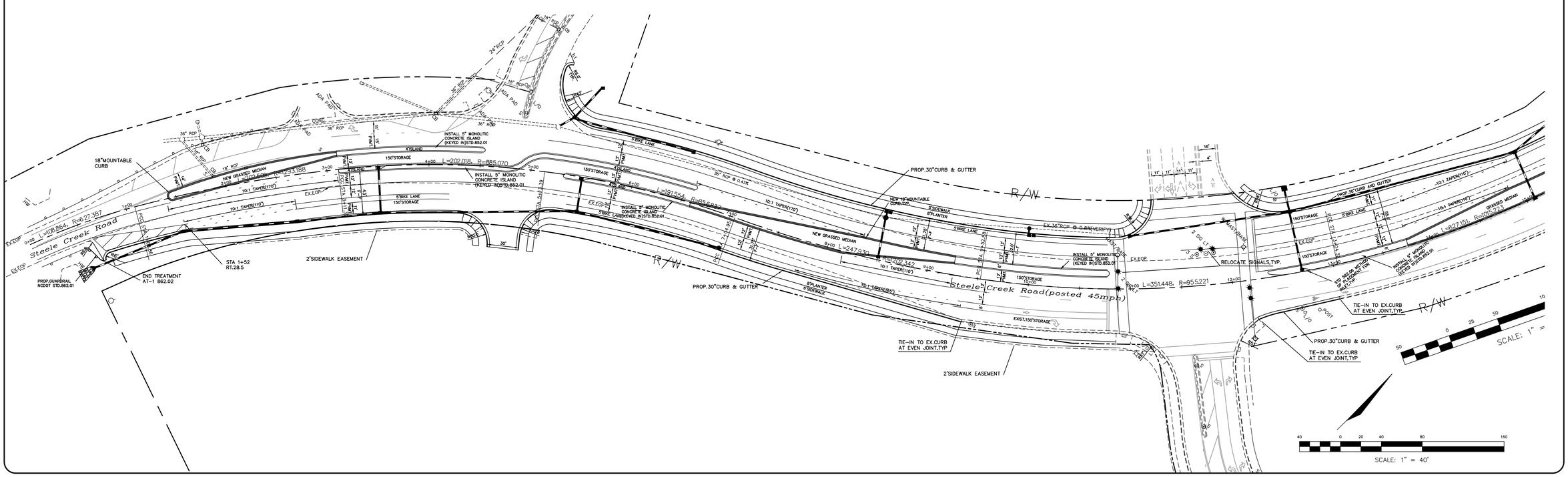

DATE	REV.	
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1-20-14	2	CDOT-NCDOT COMMENTS

PROJECT MANAGER
DRAWING SCALE
DESIGN BY
PROJECT DATE
APPROVED BY
PROJECT NUMBER
FILE NAME
PHASE
TEAM
PLOT DATE

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Charlotte, NC 28217
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Fax: 704.525.2051
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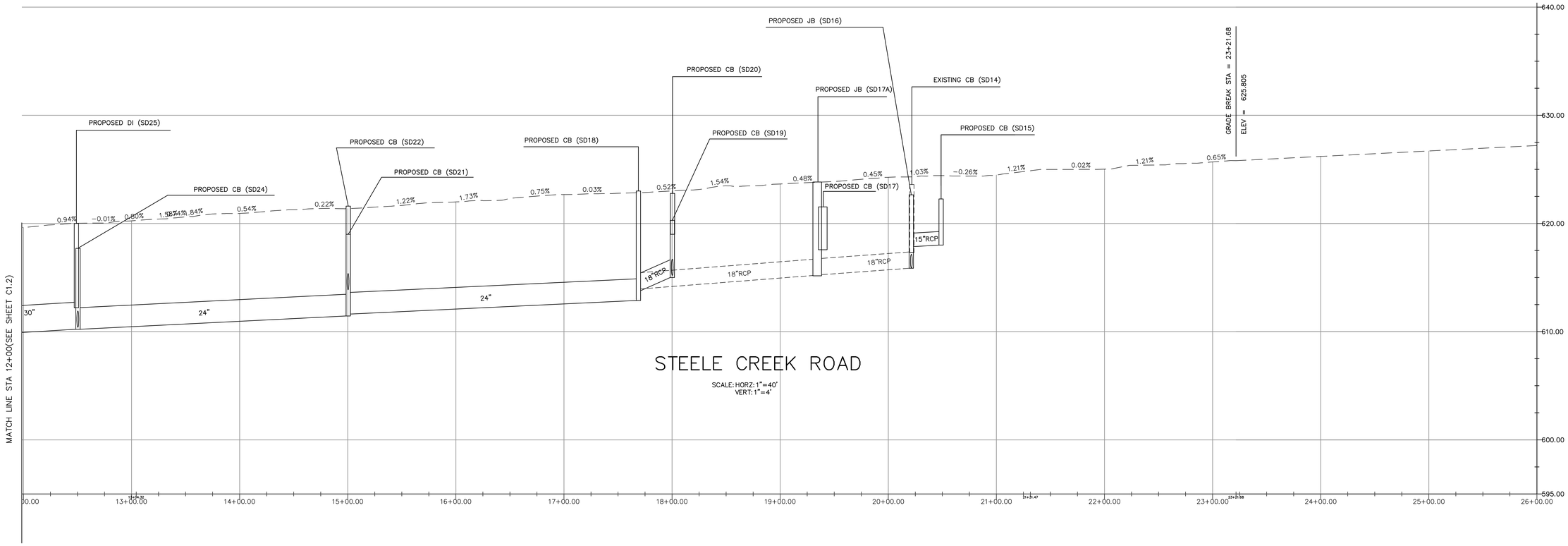
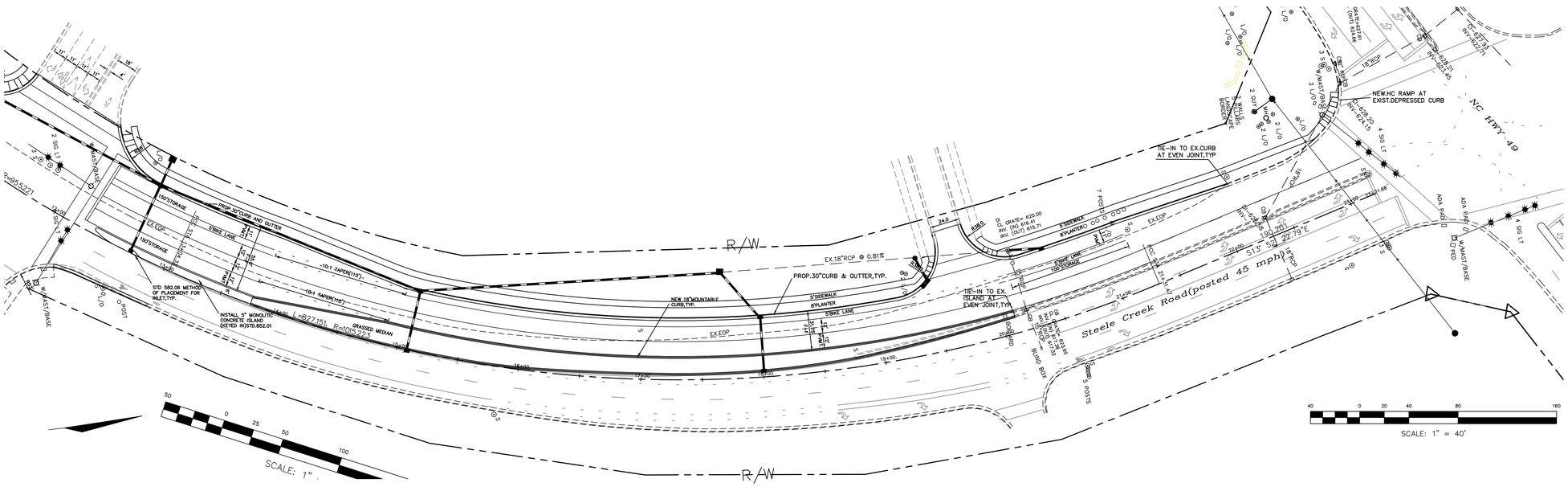
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10725 KEVIN S. CALDWELL
1-20-14

STEELE CREEK ROAD
PLAN & PROFILE

C1.1





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FILE NAME	CUT DATE		

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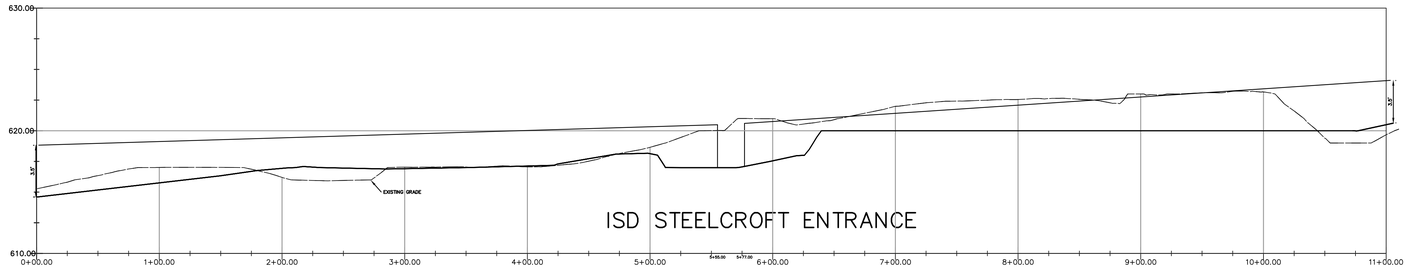
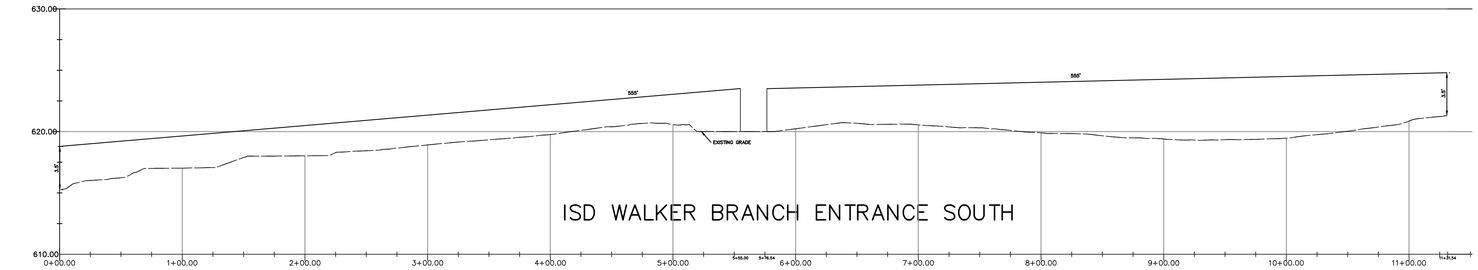
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

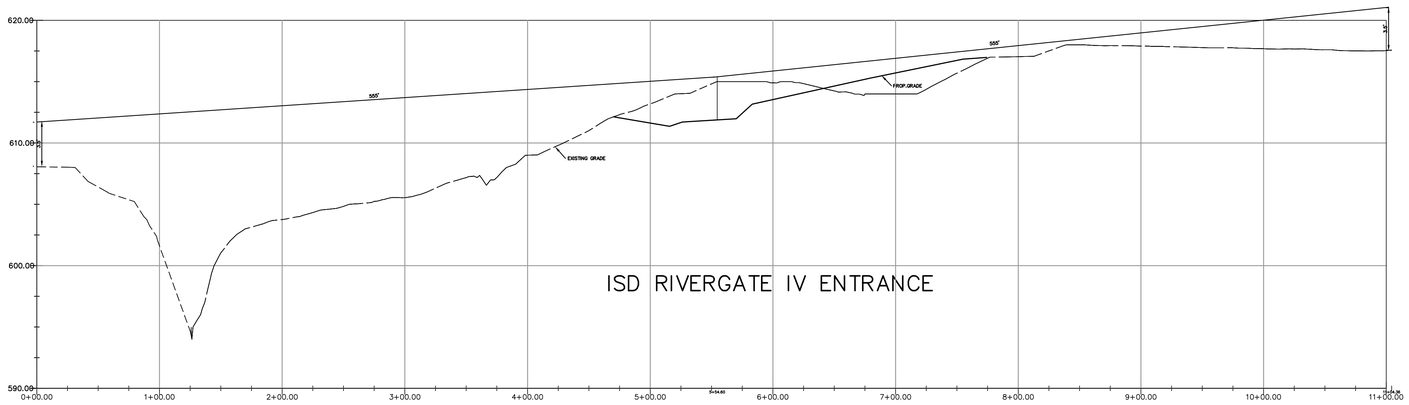
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10725 KEVIN S. CALDWELL 1.27.13

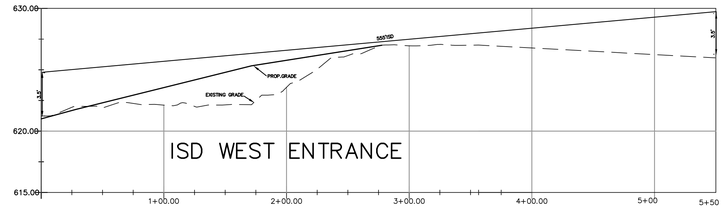
STEELE CREEK ROAD
PLAN AND PROFILE

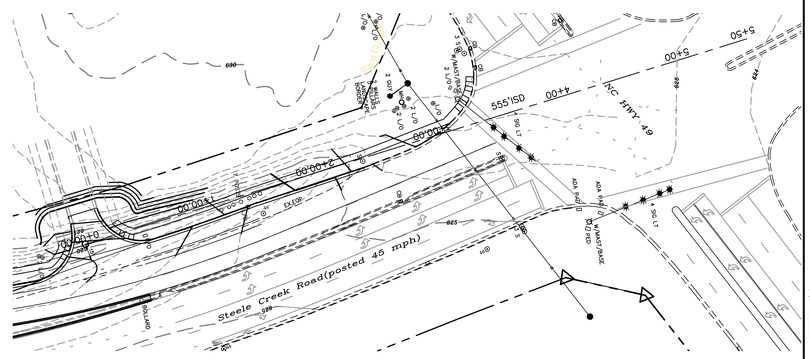
C1.2

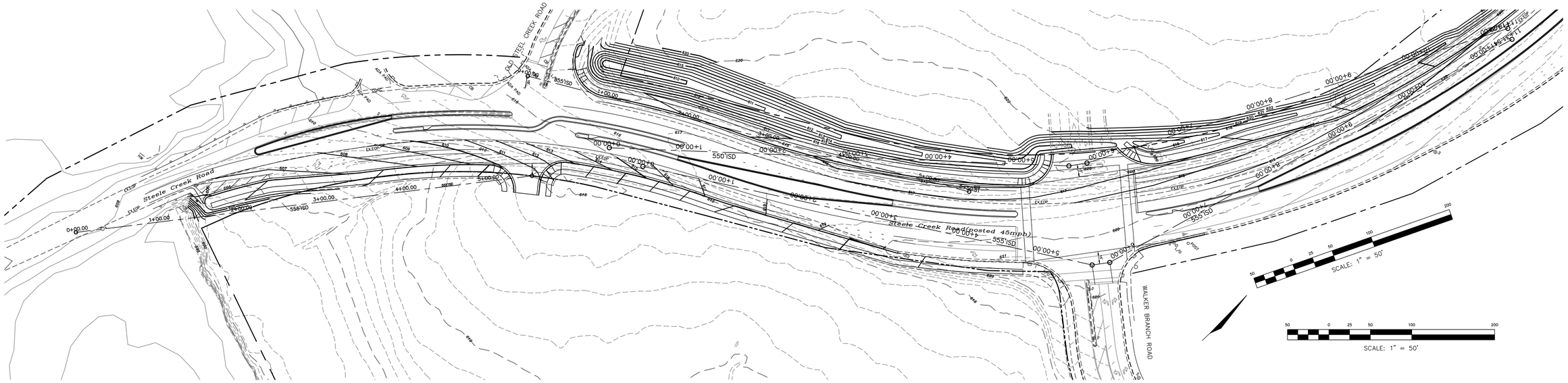












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PROJECT DATE		
PROJECT NUMBER		
PHASE / TASK		
PLOT DATE		

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Technical Center Road
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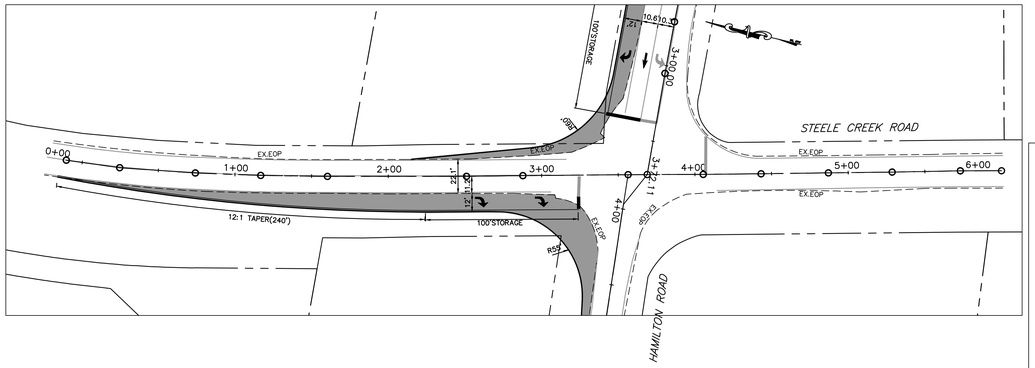
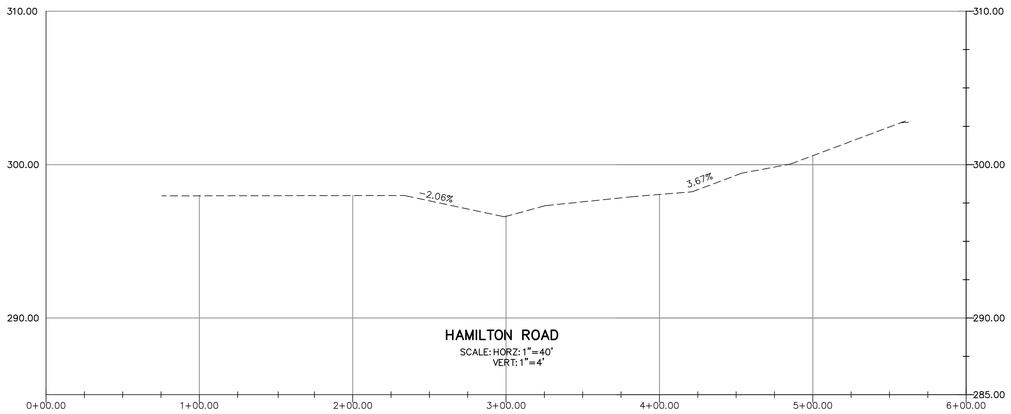
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

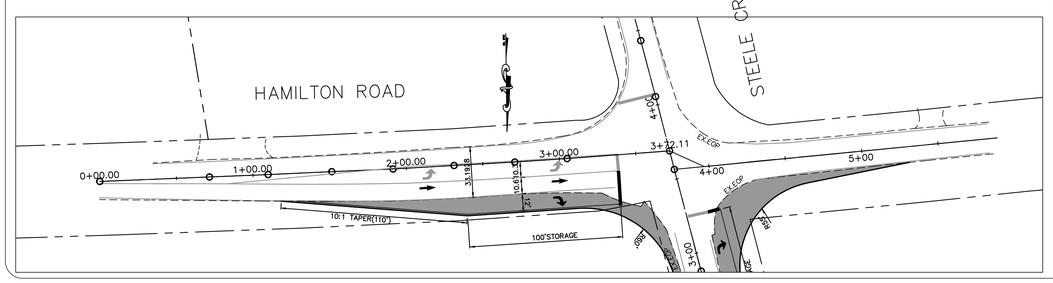
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
11.27.13

ISD PROFILES

C1.3







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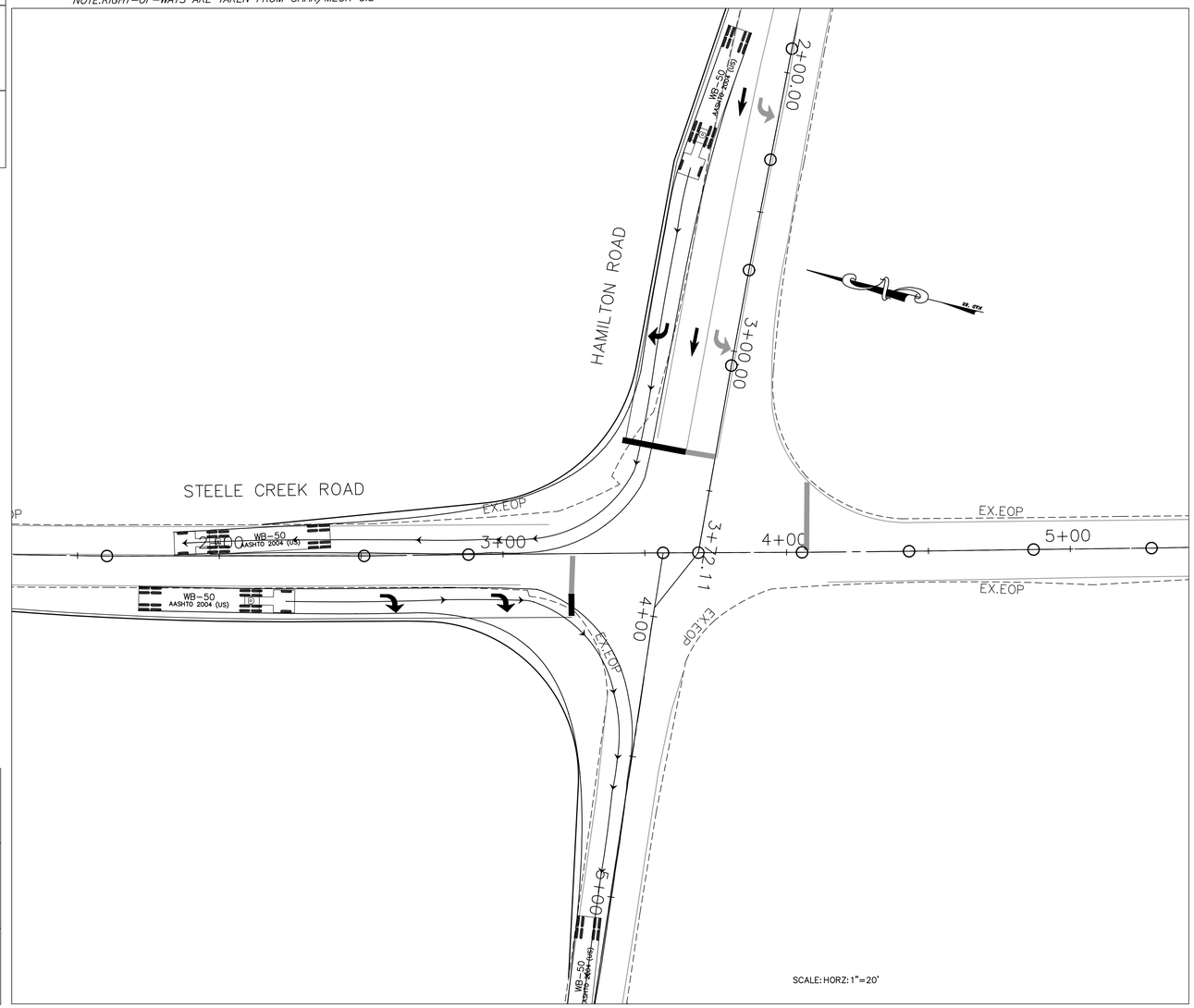

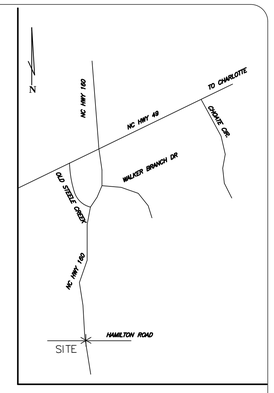

VICINITY MAP
NOT TO SCALE

SCALE: 1" = 40'

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APPROVED BY		PROJECT NUMBER		2	CDOT-NCDOT COMMENTS	4.25.14
FILE NAME		PHASE / TASK				
		PLOT DATE				

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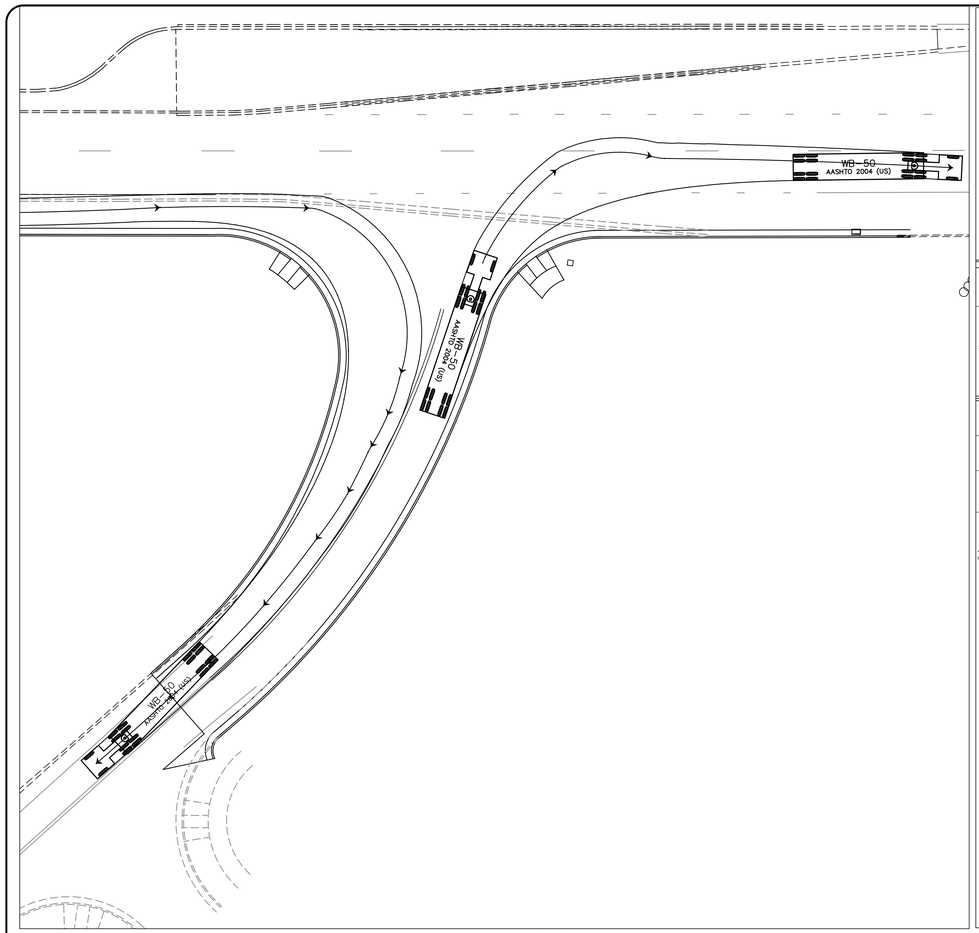
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
4.30.14

HAMILTON RD.-STEELE CREEK RD
PLAN AND PROFILES

C1.4



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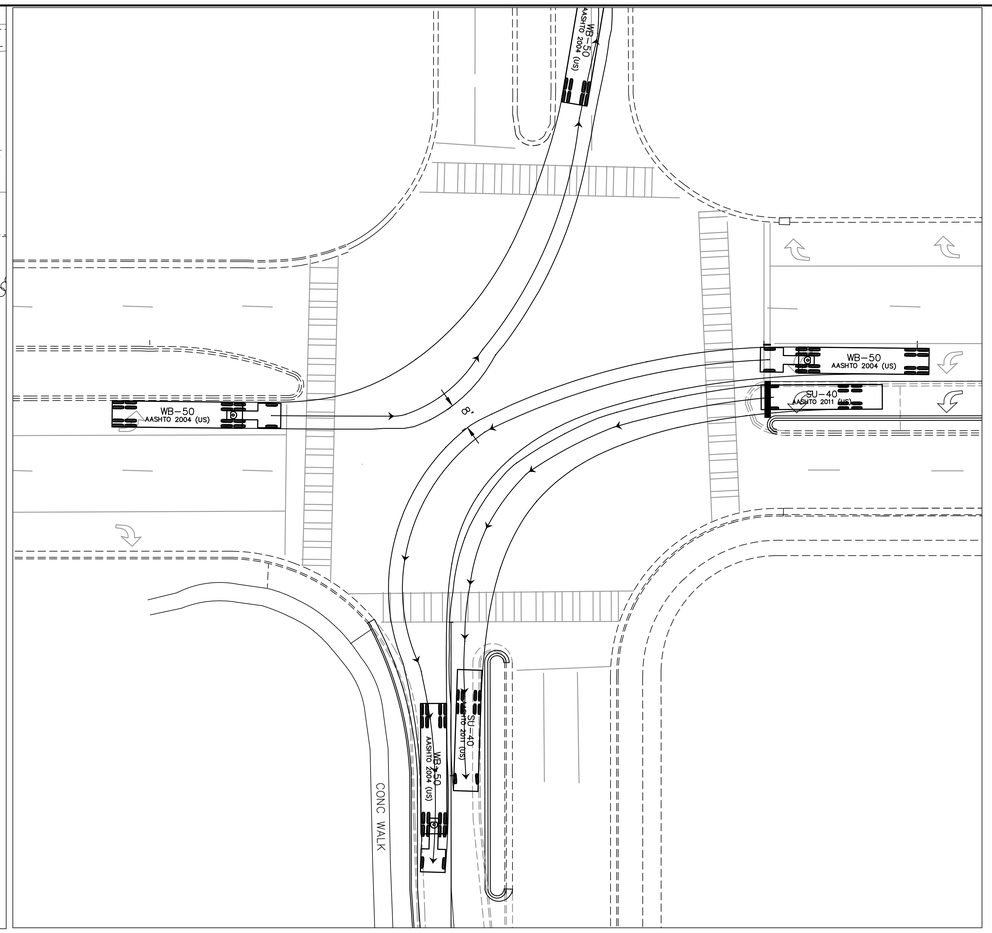

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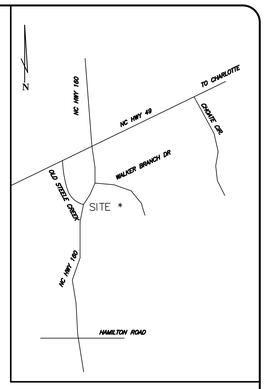

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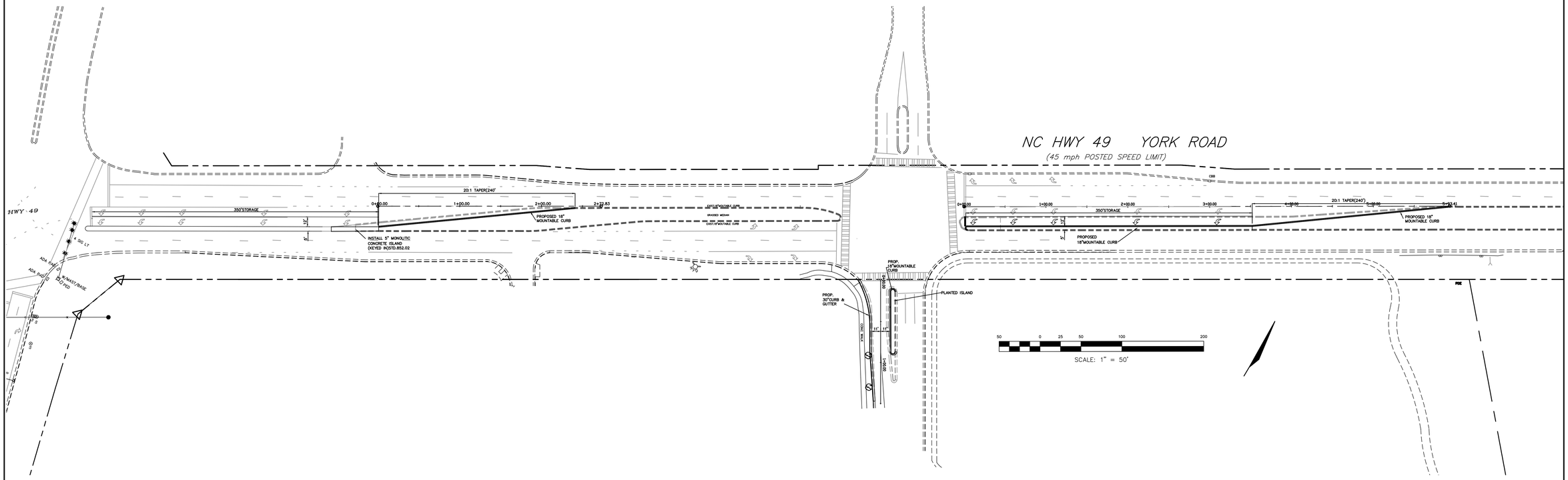

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REV.		DATE
1	CDOT-NCDOT COMMENTS	11.27.13
2	CDOT-NCDOT COMMENTS	1.20.14

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Transportation
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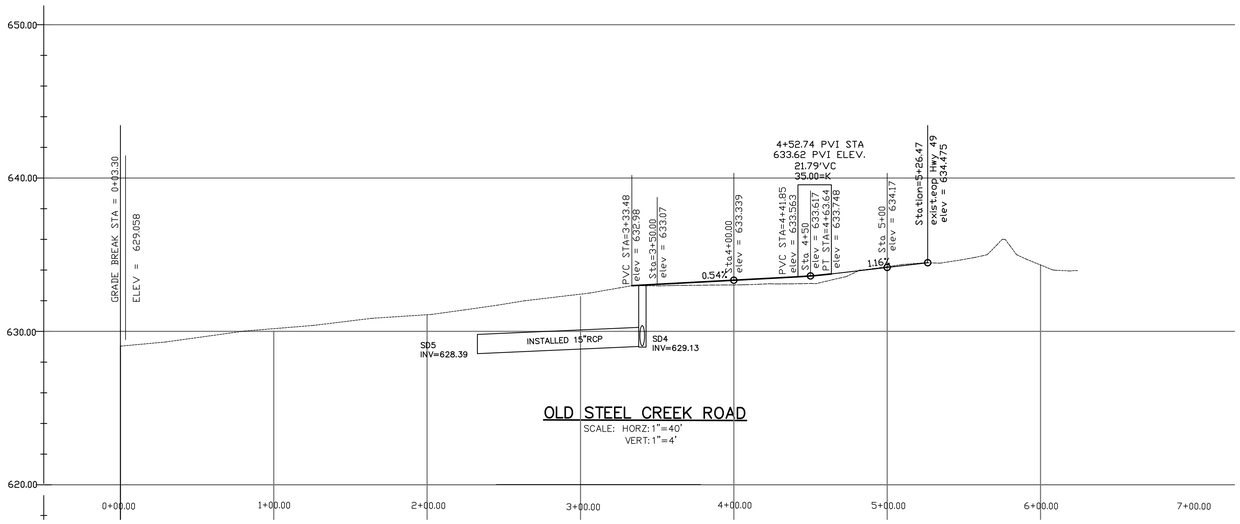
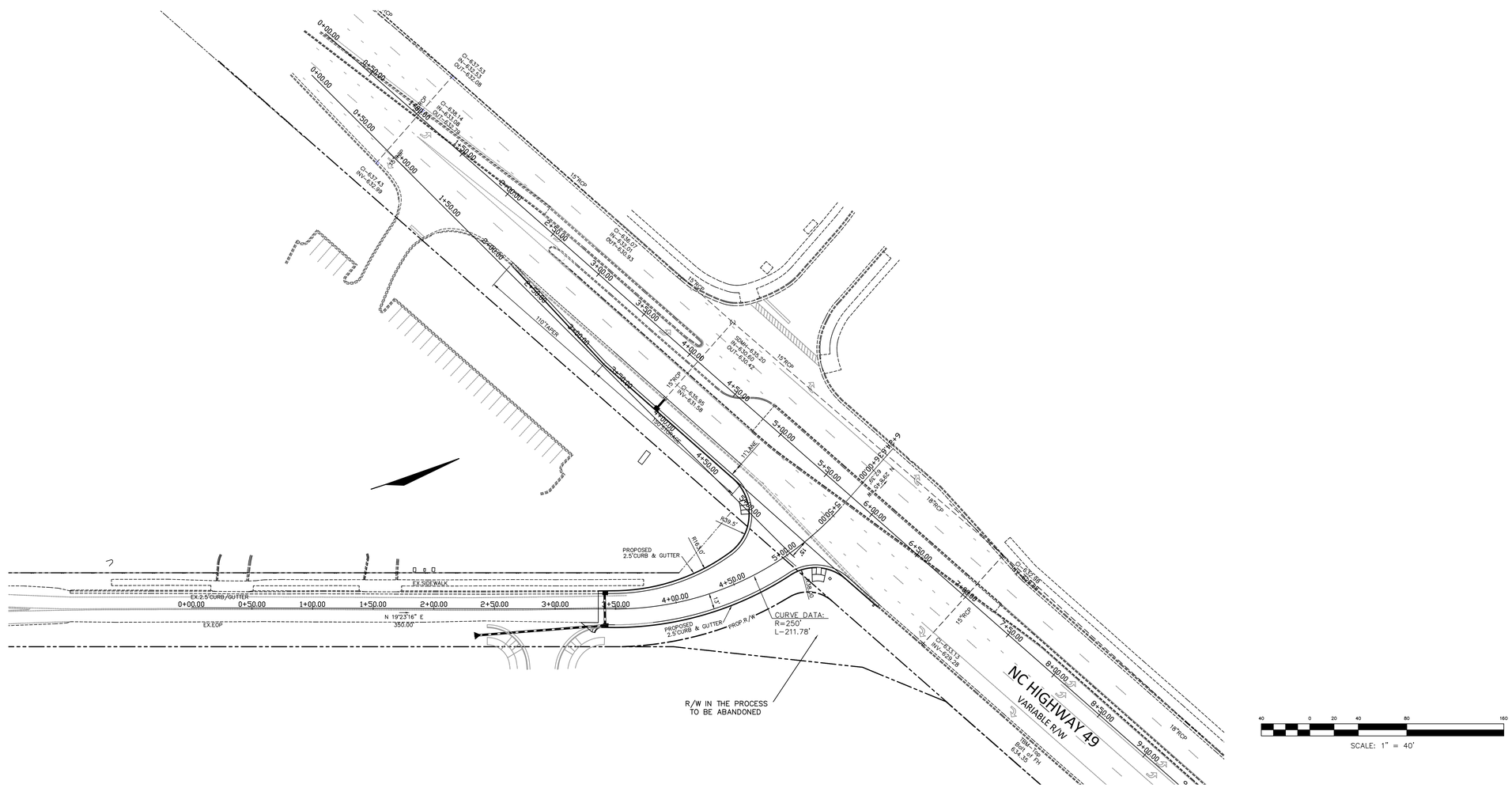
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
1.20.14

HWY 49–YORK ROAD
LEFT TURN LANE MODIFICATIONS

C1.5





PROJECT MANAGER	DRAWING SCALE	REV.	DATE
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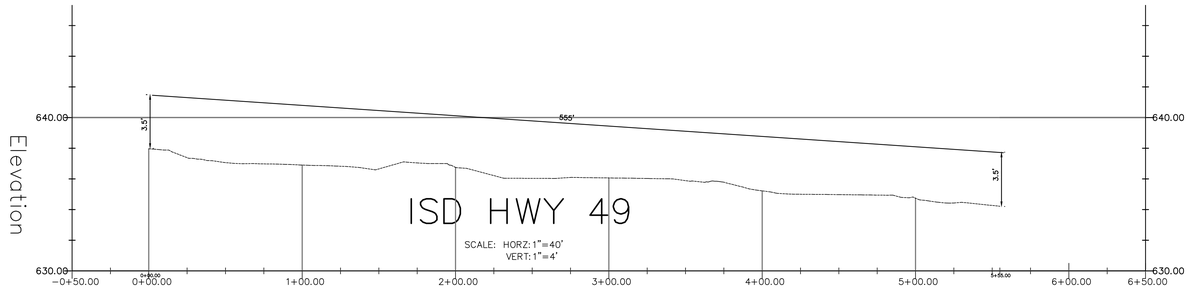
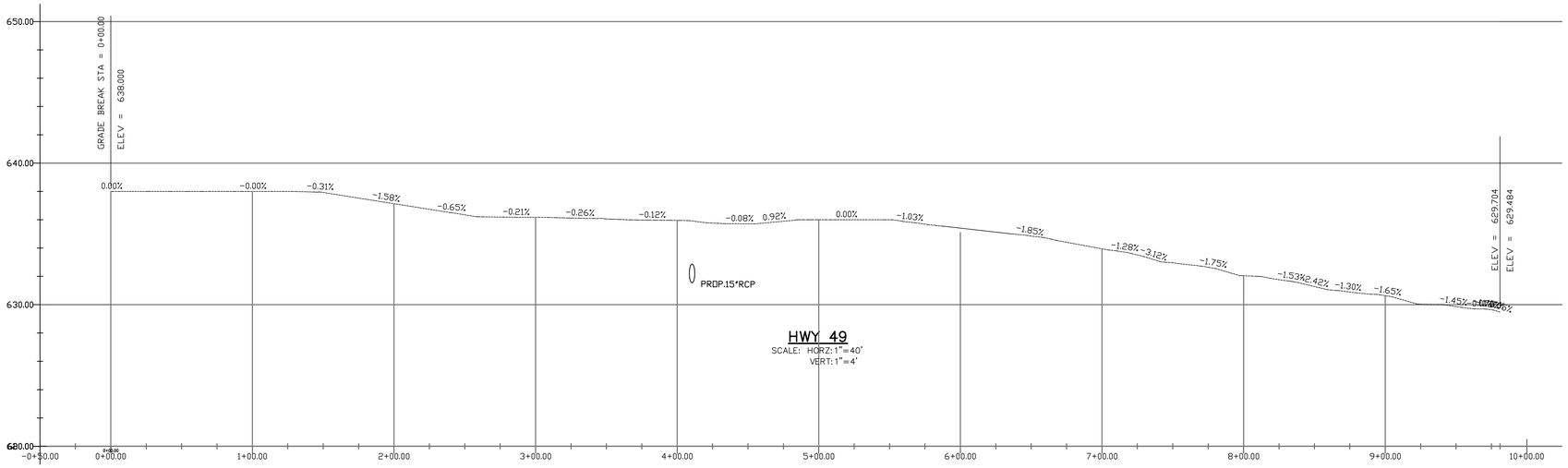
PROFESSIONAL ENGINEERS
9800 Kincaid Park Road
Charlotte, NC 28227
Phone: 704.535.5353
Fax: 704.535.5651
www.geoscienceengineering.com

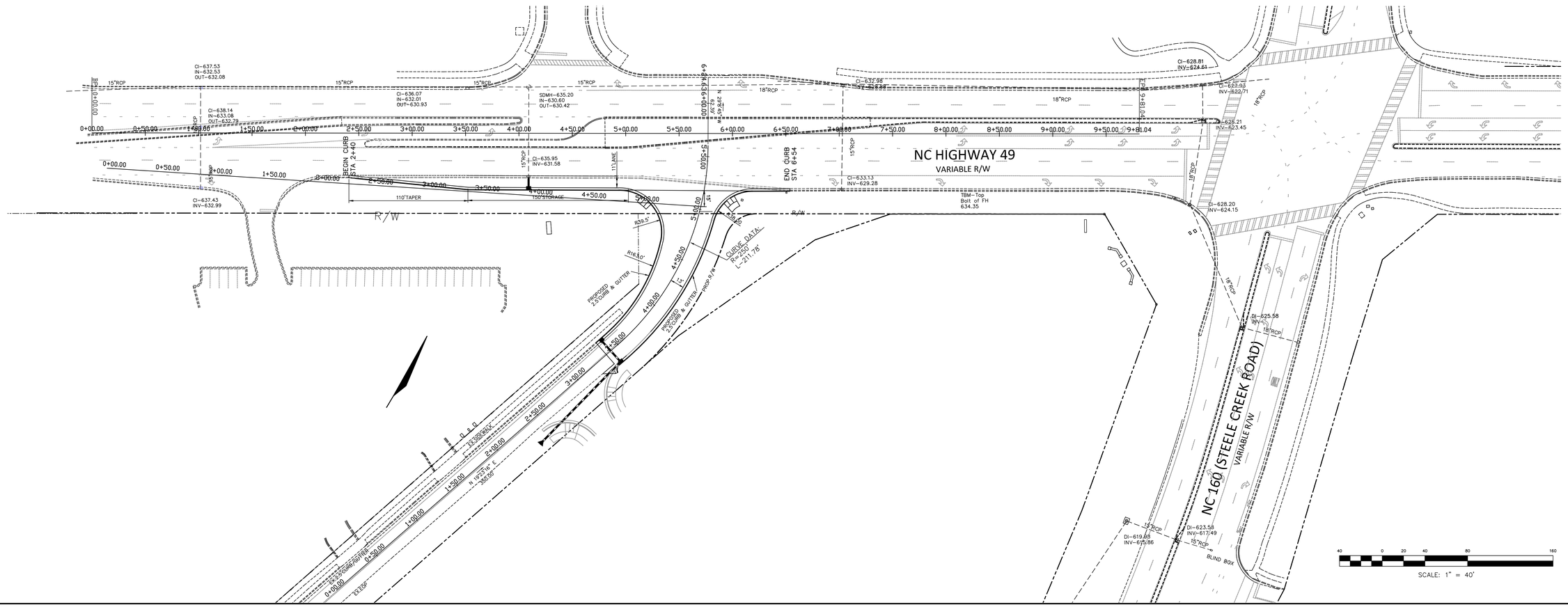
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

OLD STEELE CREEK ROAD
PLAN AND PROFILE

C1.6







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APPROVED BY	
FILE NAME	

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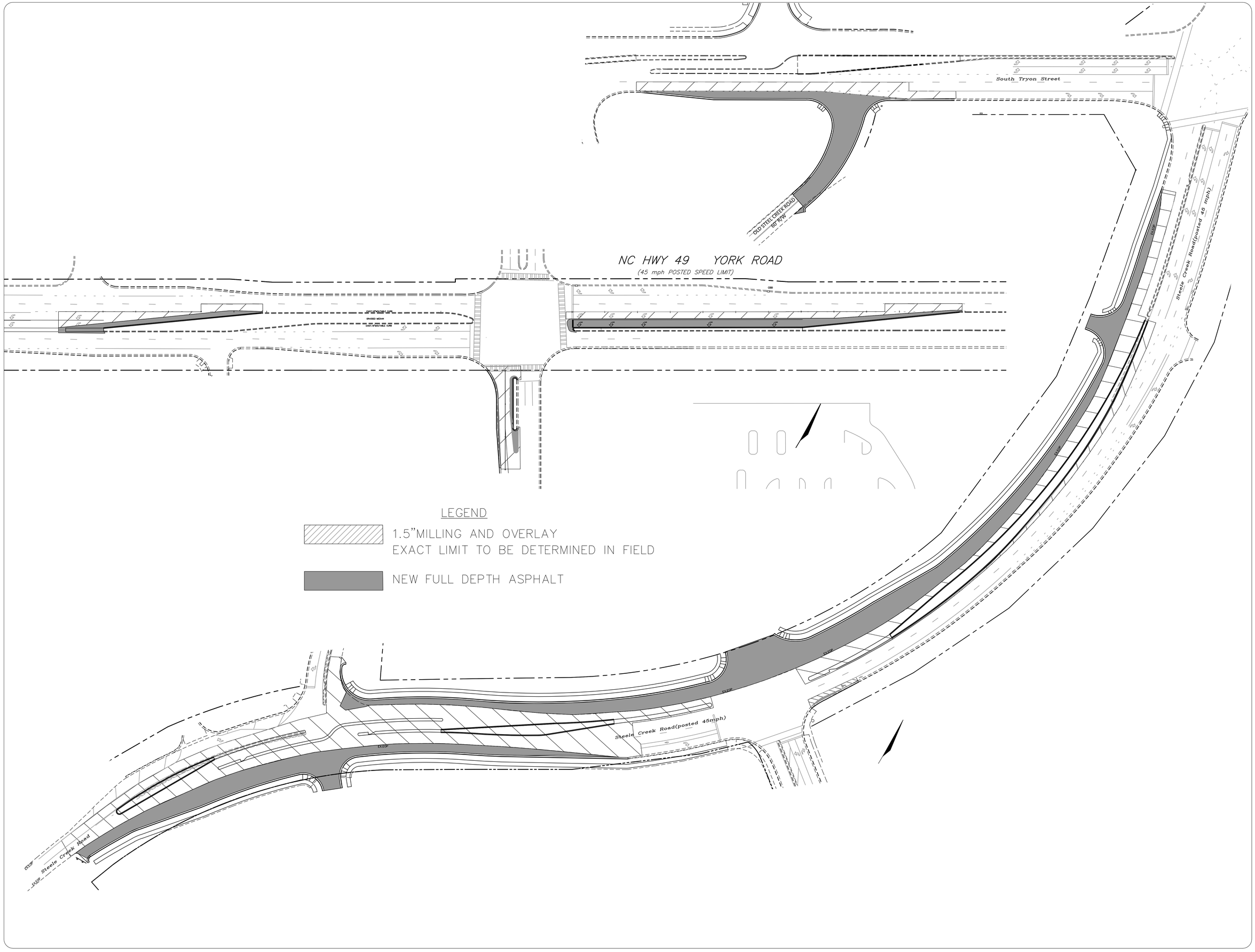
9800 Kincaid Station Road
Charlotte, NC 28217
Phone: 704.525.3003
Fax: 704.525.3003
www.geoscienceengineering.com

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

HWY 49 PLAN AND PROFILE
AND ISD PROFILE

C1.7



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FILE NAME	COST DATE

REV.		DATE
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2	CDOT-NDOT COMMENTS	1.25.14

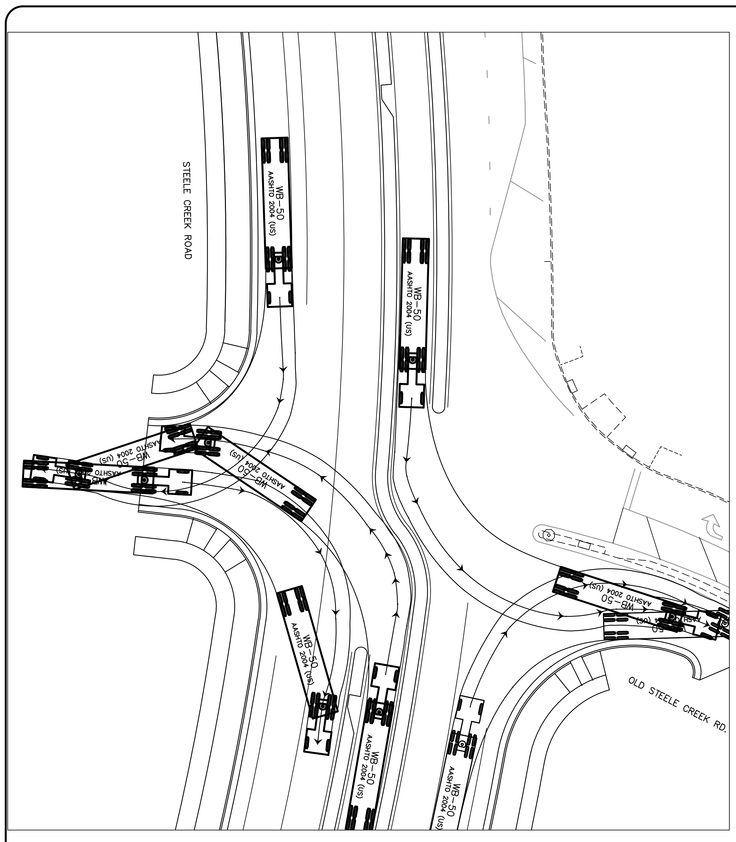
GEOSCIENCE GROUP
Corporate Office
10000 Coulwood Blue Road
Charlotte, NC 28237
Phone: 704.525.3000
Fax: 704.525.3051
www.geoscienceengineering.com

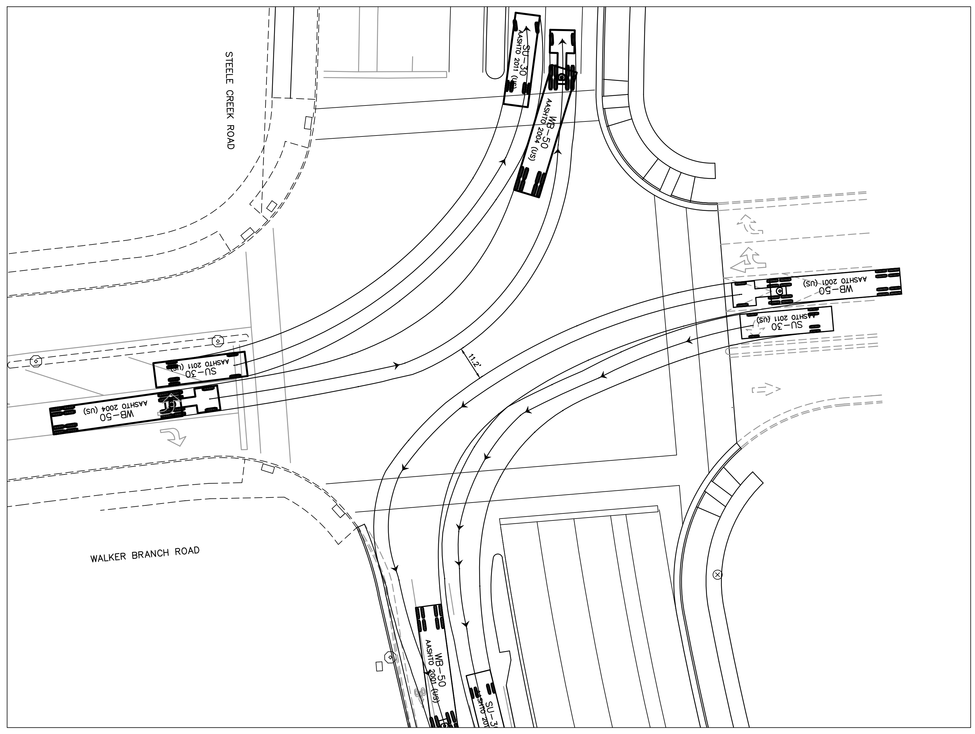
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

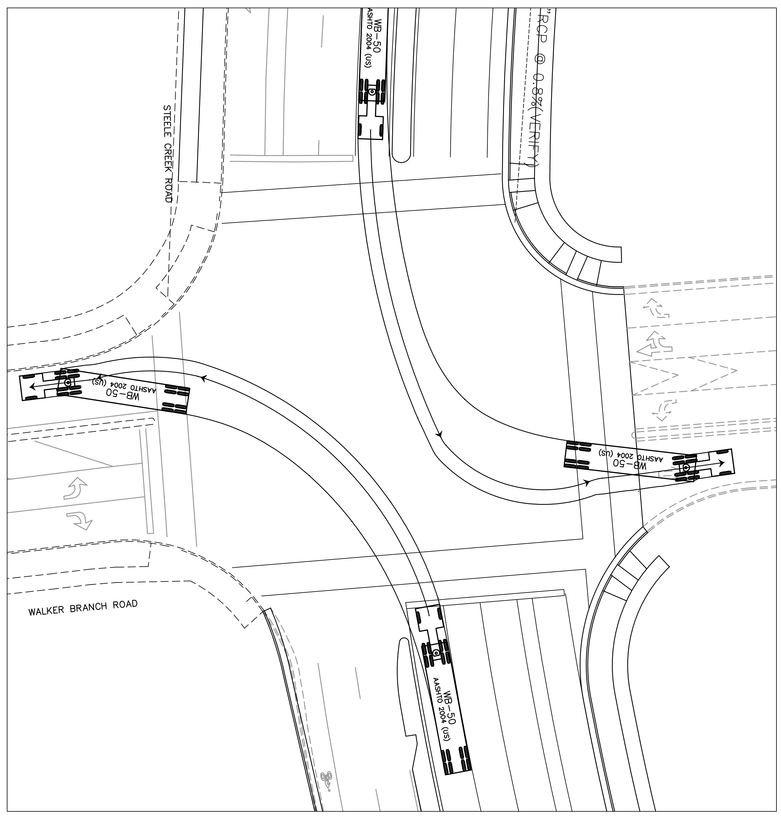
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL

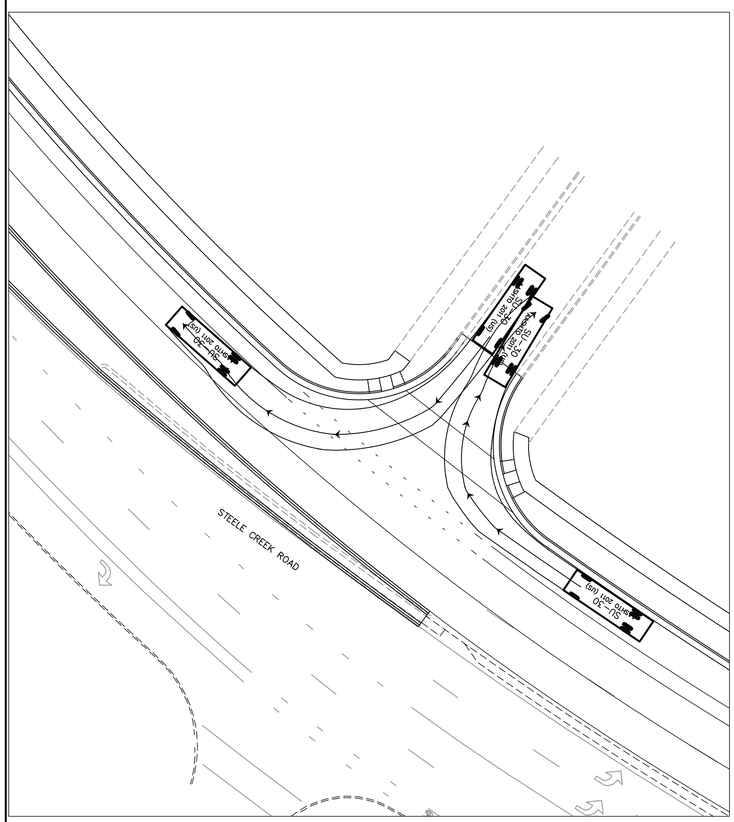
PAVEMENT MILL & OVERLAY AREAS
NEW PAVEMENT

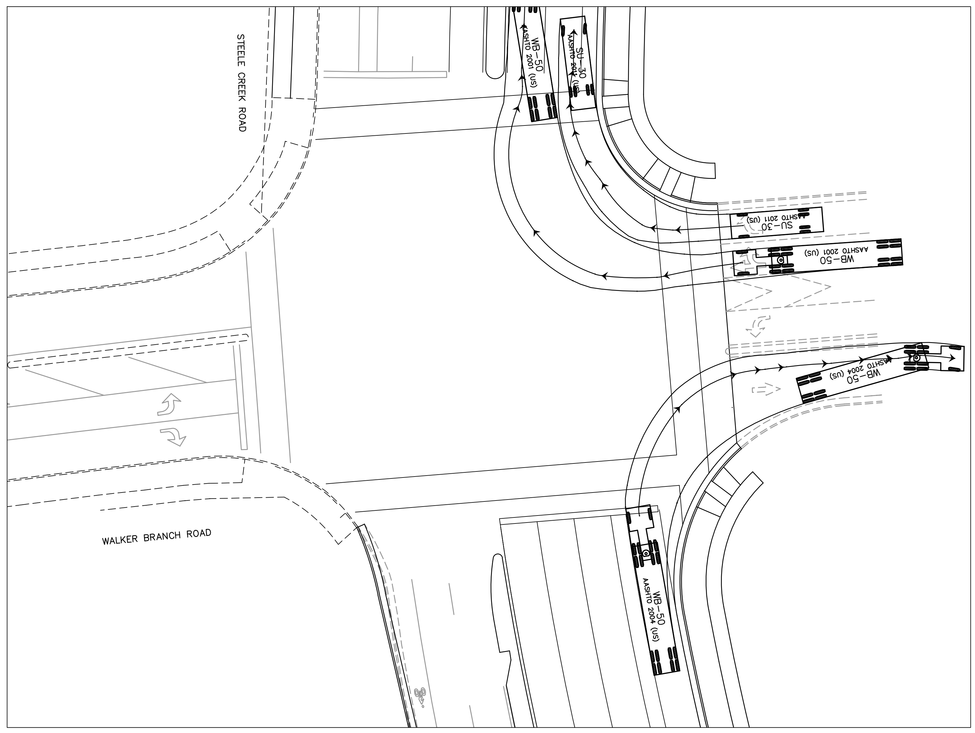
C1.8











C1.9

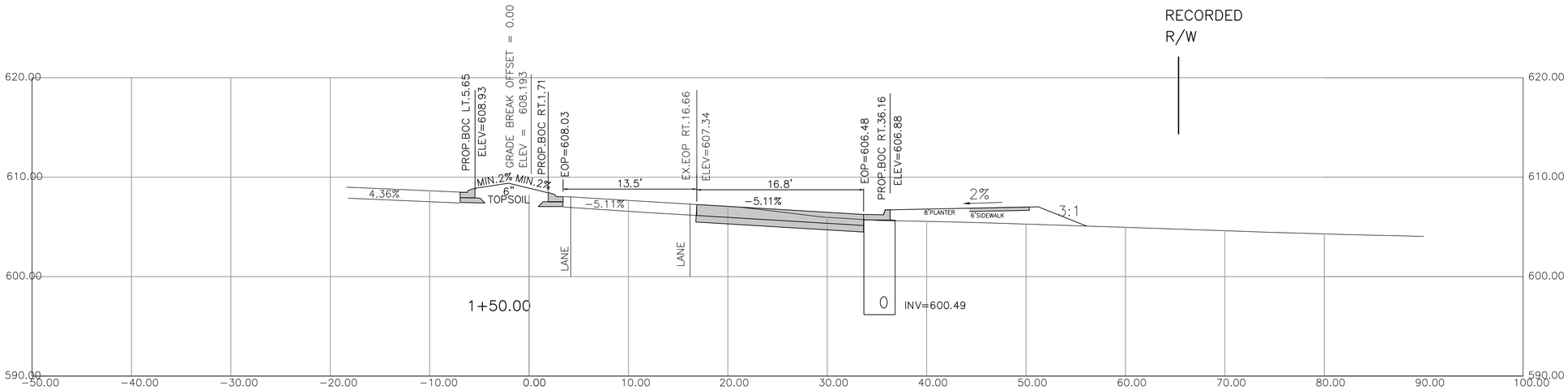
STEELE CREEK ROAD

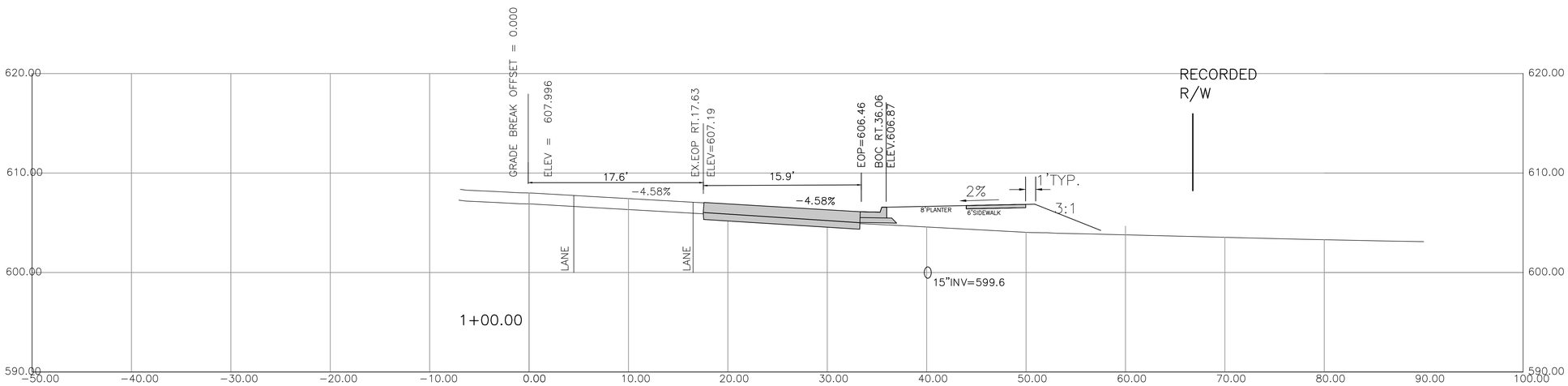
TRUCK TURNS

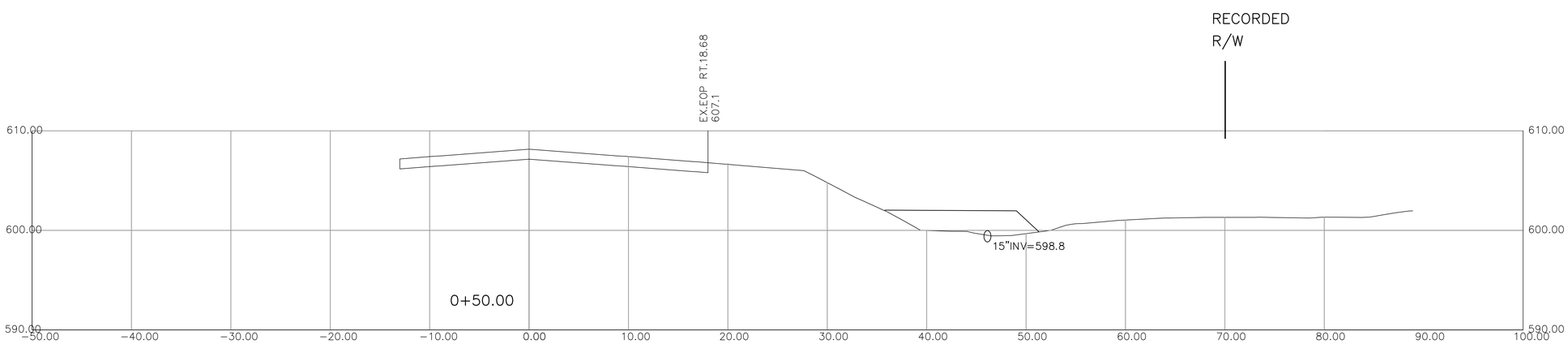
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

GEOSCIENCE GROUP
500-E Clanton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
www.geosciencegroup.com

PROJECT MANAGER	DRAWING SCALE 1"=20'	REV.		DATE
DESIGN BY	PROJECT DATE	1	CDOT-NCDOT COMMENTS	11.27.13
APPROVED BY	PROJECT NUMBER	2	CDOT-NCDOT COMMENTS	1.20.14
FILE NAME	PHASE TASK			
	PLOT DATE			







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REV.		DATE
1	CDOT/DOT & CITY COMMENTS	11.27.13
2	CDOT/DOT & CITY COMMENTS	1.20.14

DRAWING SCALE
PROJECT DATE
PROJECT NUMBER
PHASE TASK
ACCT DATE
PROJECT MANAGER
DESIGN BY
APPROVED BY
FILE NAME

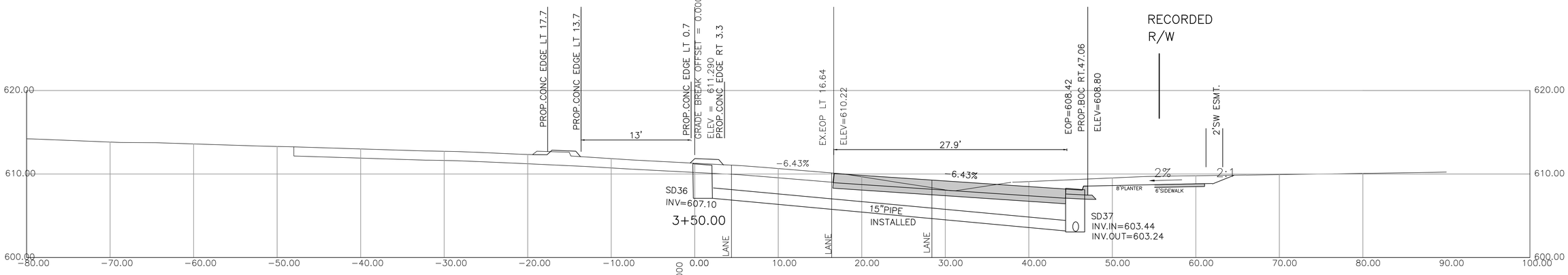
GEOSCIENCE GROUP
Transportation
10900 Harris Oaks Boulevard
Charlotte, NC 28269
Phone: 704.525.2003
Fax: 704.525.2001
www.geoscienceengineering.com

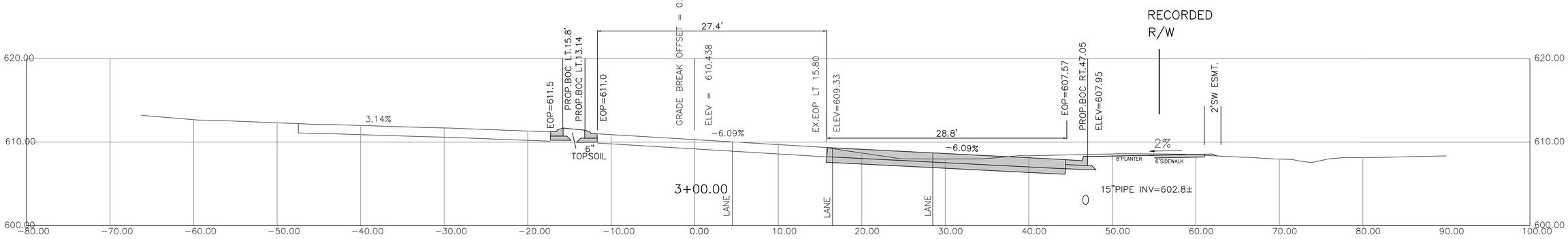
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

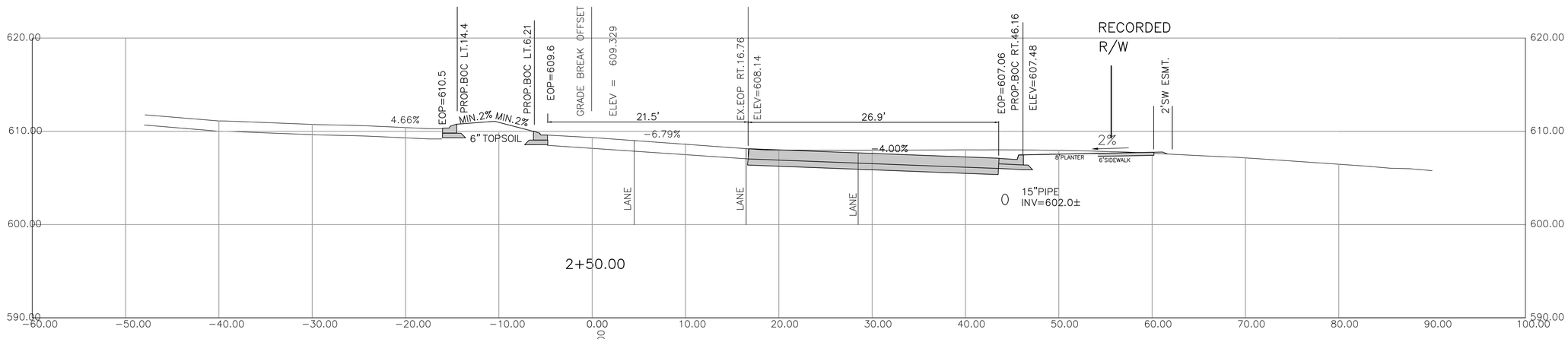
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL 1.20.14

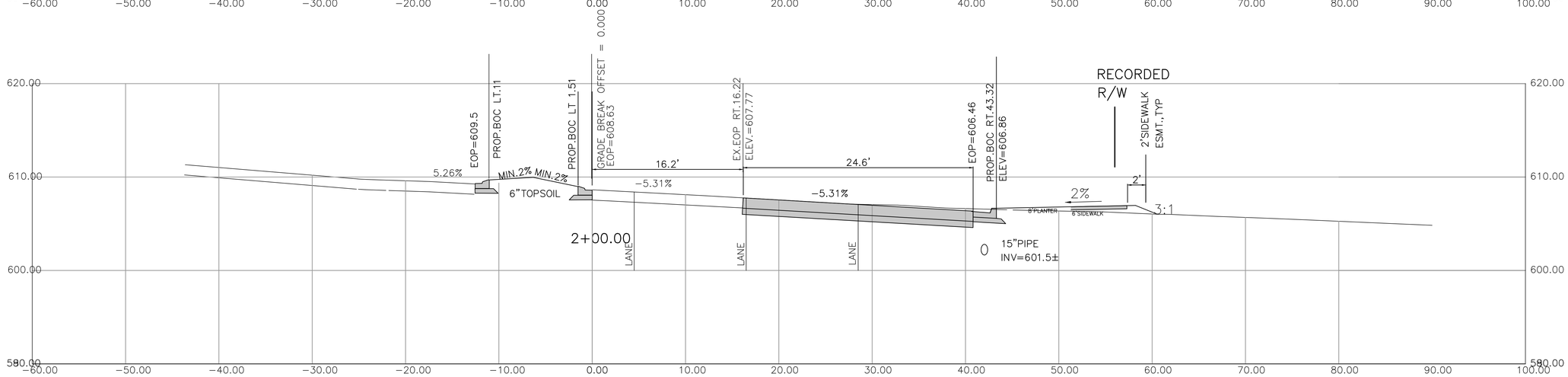
STEELE CREEK ROAD SECTIONS

X1









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PROJECT MANAGER	REV.	DATE
DESIGN BY		
APPROVED BY	2	02/07/2014 & CITY COMMENTS 1-20-14
FILE NAME		

DRAWING SCALE	
PROJECT DATE	
PROJECT NUMBER	
PHASE / TASK	
ACIP DATE	

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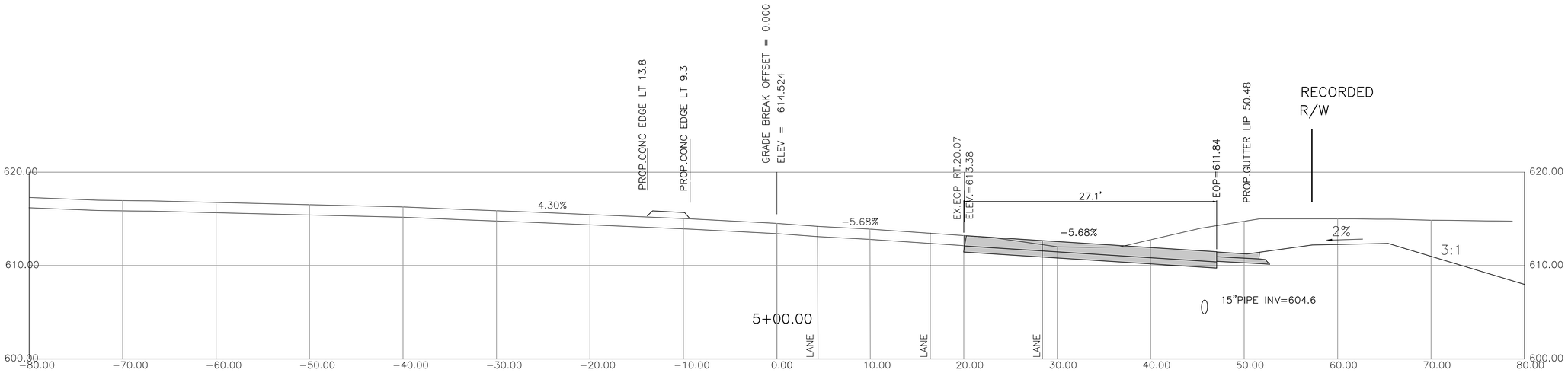
Terrance Thomson Road
Charlotte, NC 28213
Phone: 704.525.2000
Fax: 704.525.2001
www.geosciencegroup.com

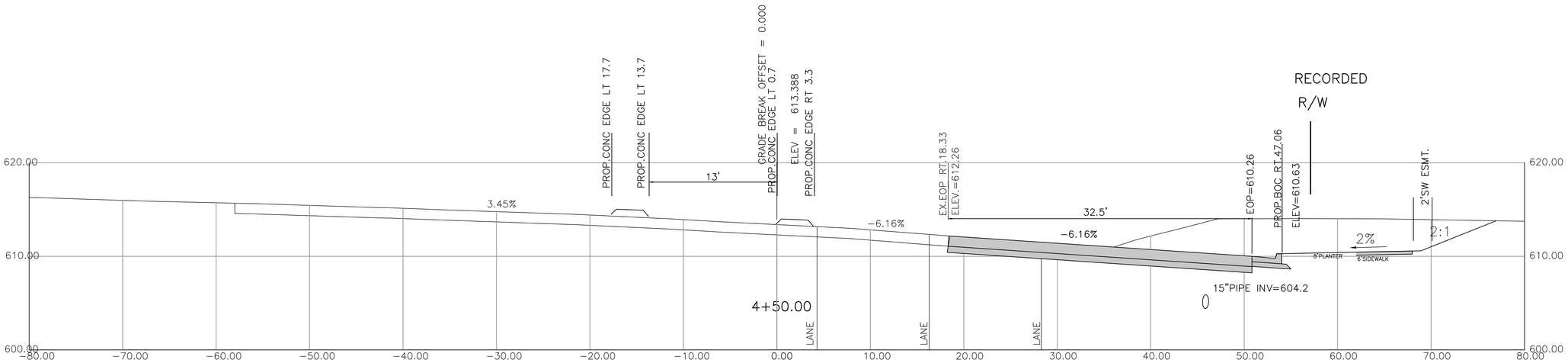
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

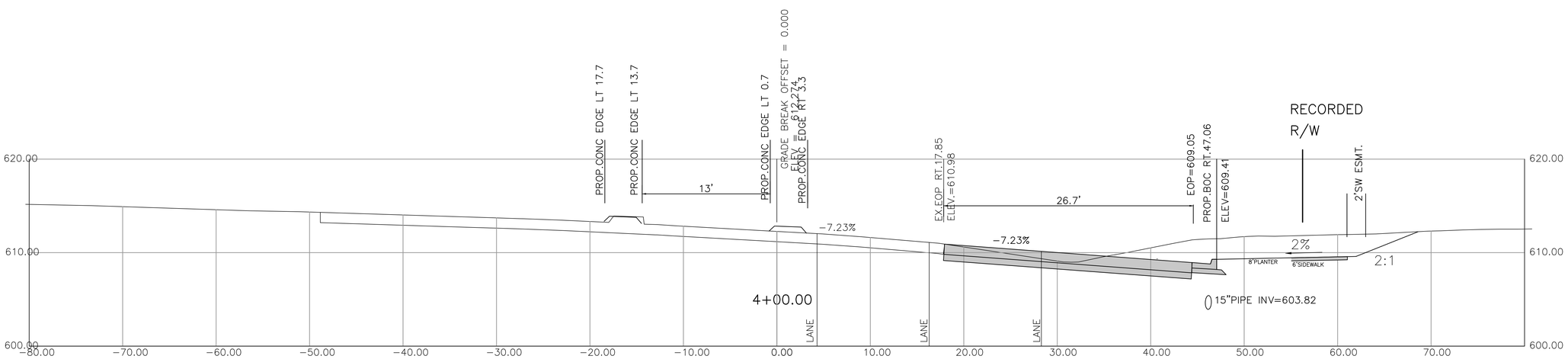
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
1-20-14

STEELE CREEK ROAD SECTIONS

X2







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GEOSCIENCE GROUP
Incorporated
500-K Clanton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
www.geosciencegroup.com

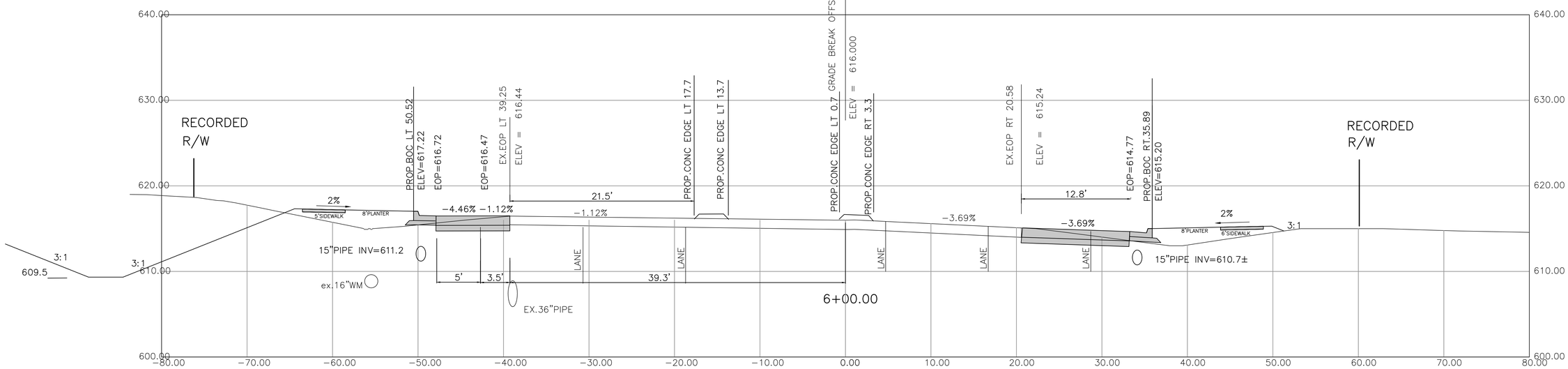
PROJECT MANAGER	DRAWING SCALE	REV.		DATE
DESIGN BY	PROJECT DATE	1	CDOT/DOT & CITY COMMENTS	11.27.13
APPROVED BY	PROJECT NUMBER	2	CDOT/DOT & CITY COMMENTS	1.20.14
FILE NAME	PHASE / TASK			
	PLOT DATE			

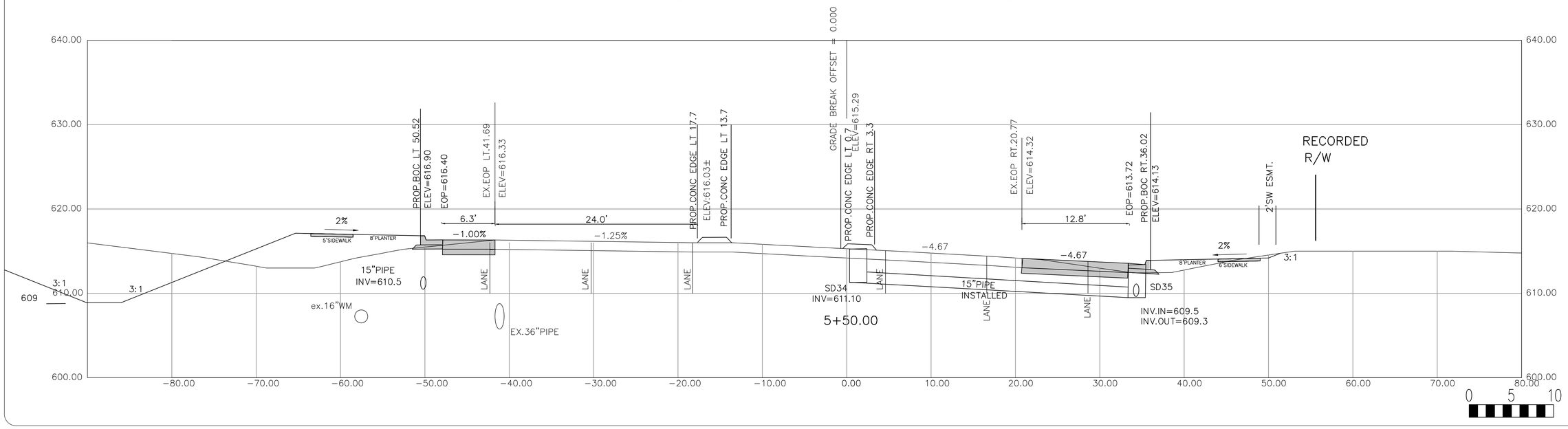
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

SEAL
10725
KEVIN S. CALDWELL
1.20.14

STEELE CREEK ROAD SECTIONS

X3





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DRAWING SCALE	
PROJECT MANAGER	
PROJECT DATE	
DESIGN BY	
PROJECT NUMBER	
APPROVED BY	
PHASE	TASK
FILE NAME	
ACEP DATE	

REV.		DATE
2	CDOT/DOT & CITY COMMENTS	1.20.14

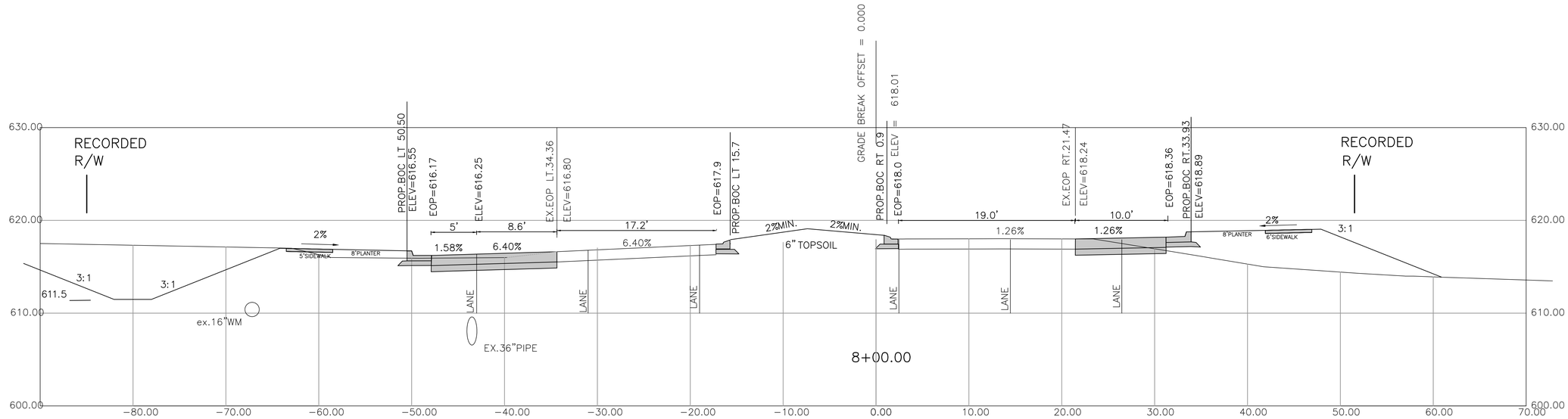
GEOSCIENCE GROUP
Corporate Headquarters
10900 Harris Oaks Boulevard
Charlotte, NC 28269
Phone: 704.525.3101
Fax: 704.525.2001
www.geoscienceengroup.com

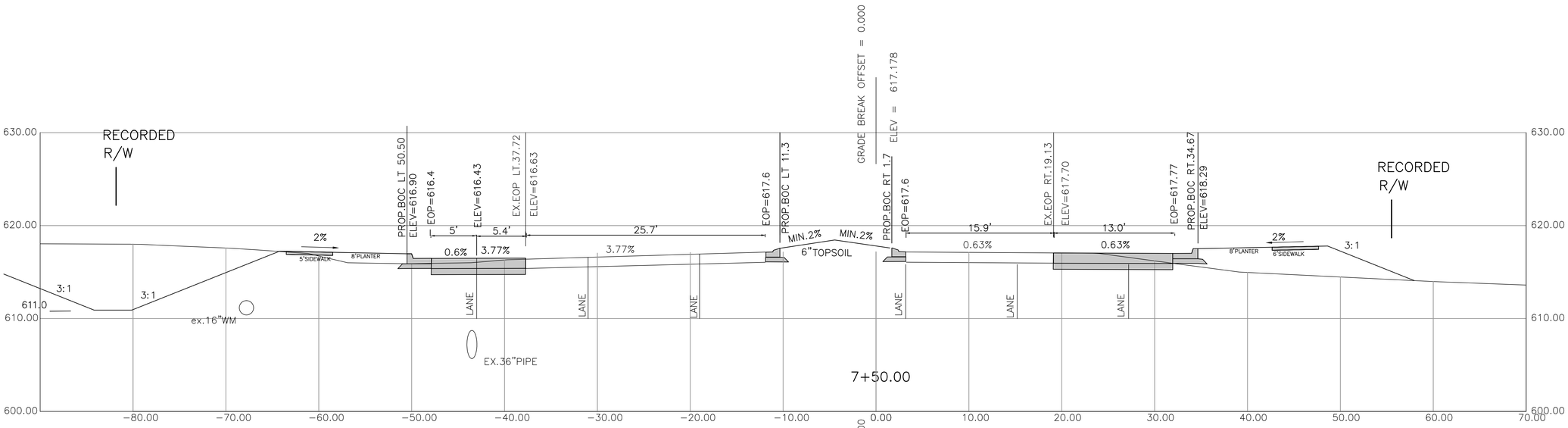
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

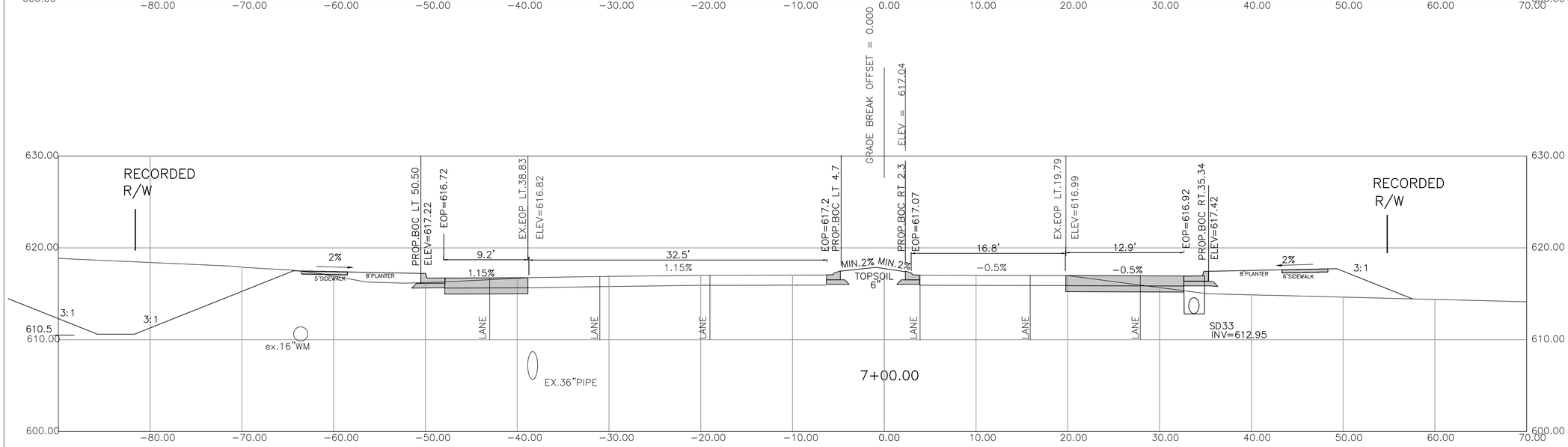
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
1.20.14

STEELE CREEK ROAD SECTIONS

X4







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PROJECT MANAGER	REV.		DATE
	1	CDOT/DOT & CITY COMMENTS	11.27.13
DRAWING SCALE	2	CDOT/DOT & CITY COMMENTS	1.20.14
PROJECT DATE			
DESIGN BY			
PROJECT NUMBER			
APPROVED BY			
PHASE TASK			
FILE NAME			
ACCP DATE			

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9800 Kincaid Station Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2001
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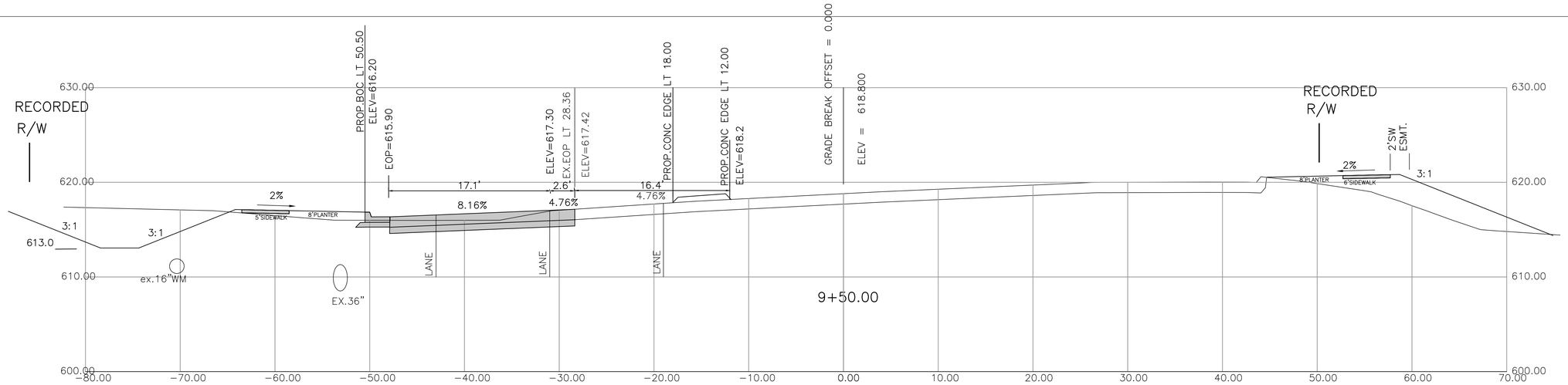
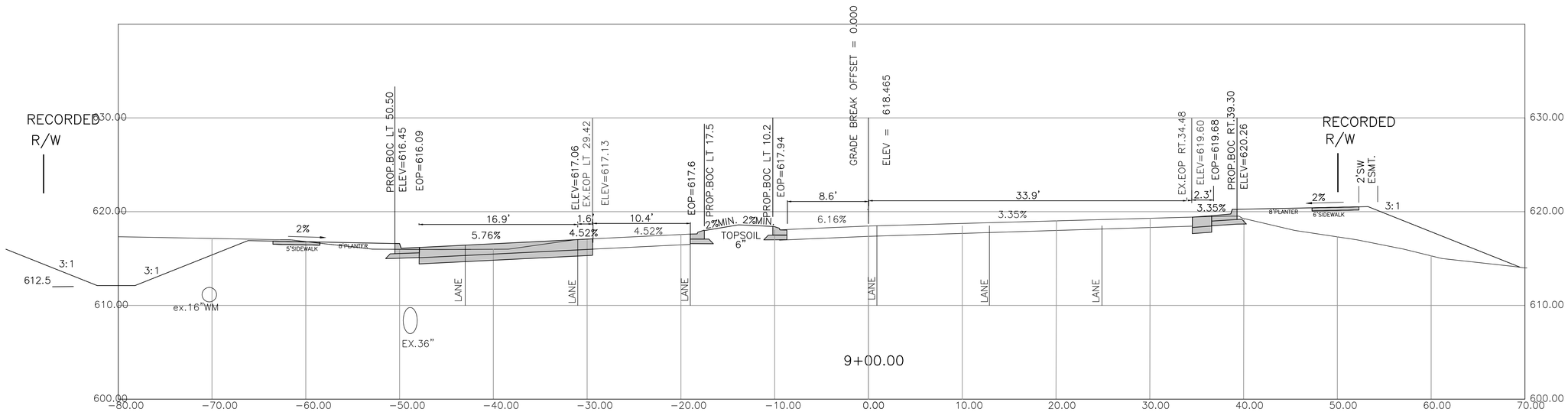
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

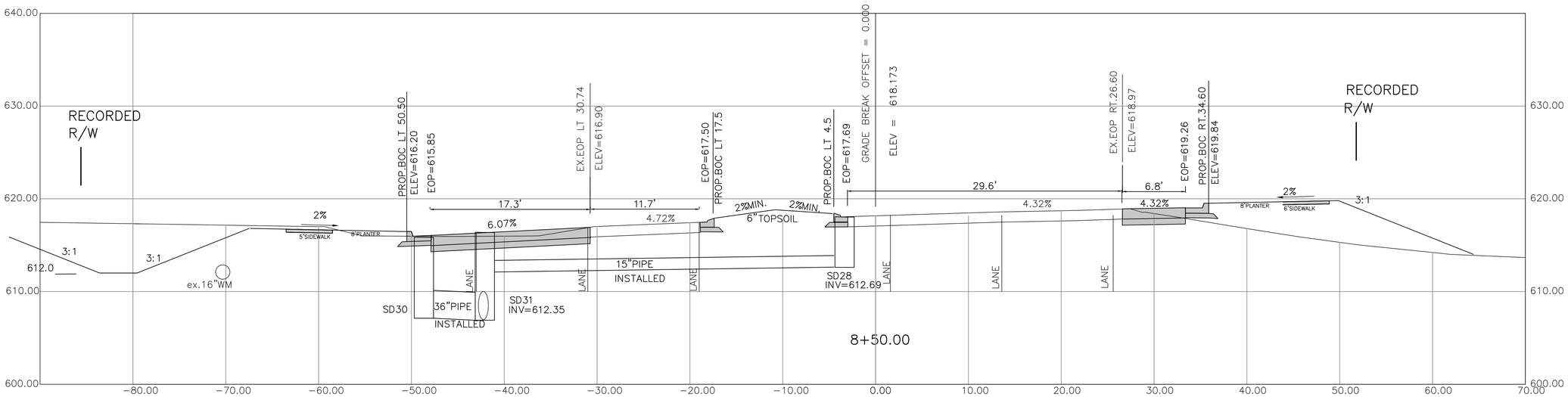
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
1.20.14

STEELE CREEK ROAD SECTIONS

X5







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REV.		DATE
1	CDOT/DOT & CITY COMMENTS	11.27.13
2	CDOT/DOT & CITY COMMENTS	1.20.14

DRAWING SCALE
PROJECT MANAGER
PROJECT DATE
PROJECT NUMBER
DESIGN BY
PHASE TEAM
APPROVED BY
FILE NAME
PLOT DATE

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Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2001
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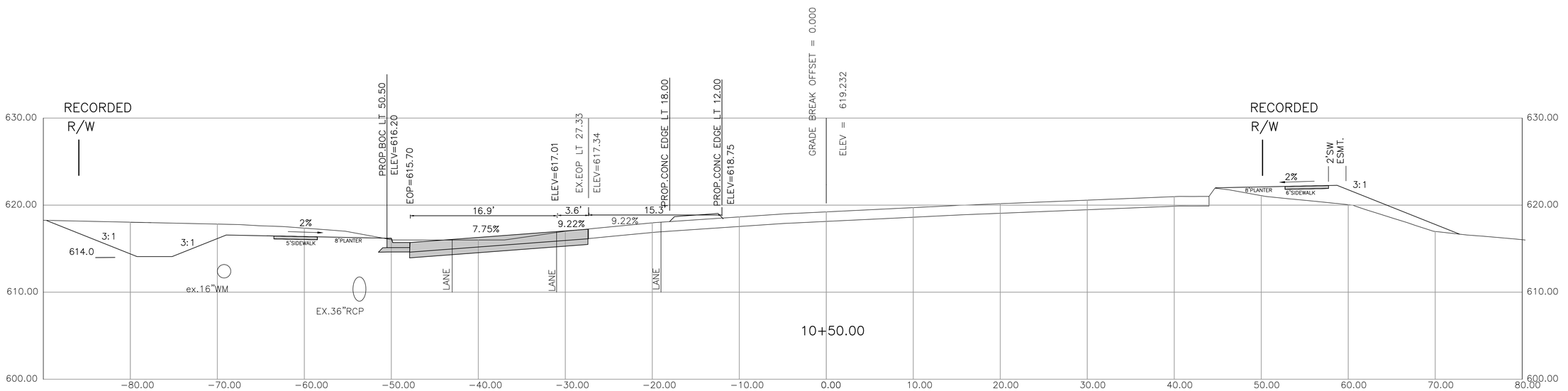
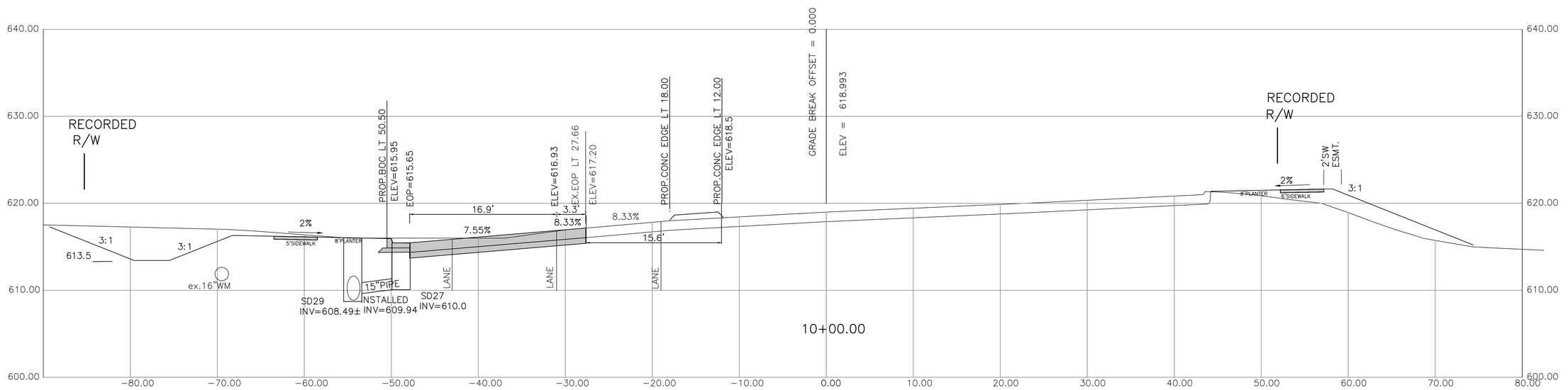
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL

STEELE CREEK ROAD SECTIONS

X6





PROJECT MANAGER	REV.		DATE
DESIGN BY	1	CDOT/DOT & CITY COMMENTS	11.27.13
PROJECT NUMBER	2	CDOT/DOT & CITY COMMENTS	1.20.14
APPROVED BY			
FILE NAME			

DRAWING SCALE
PROJECT DATE
PROJECT NUMBER
PHASE TASK
PLOT DATE

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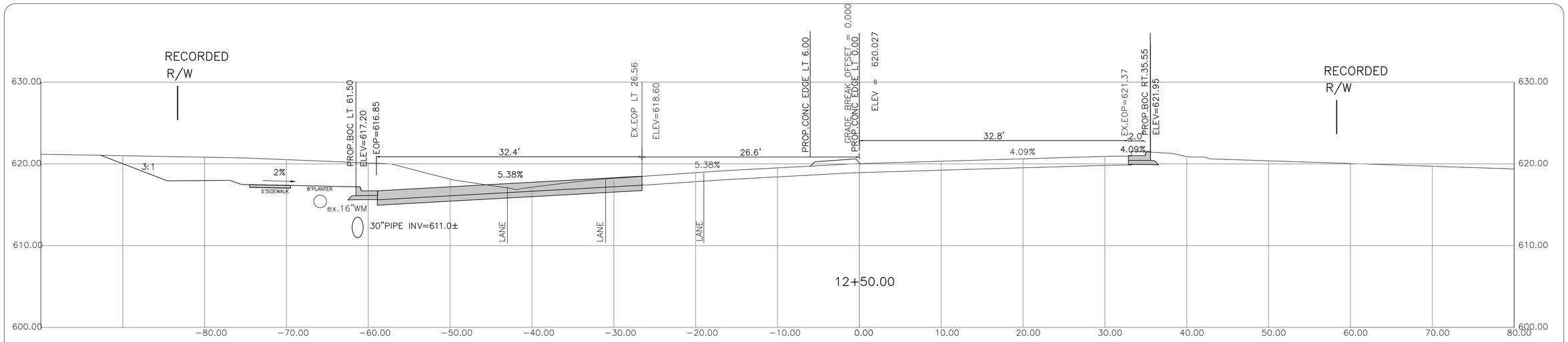
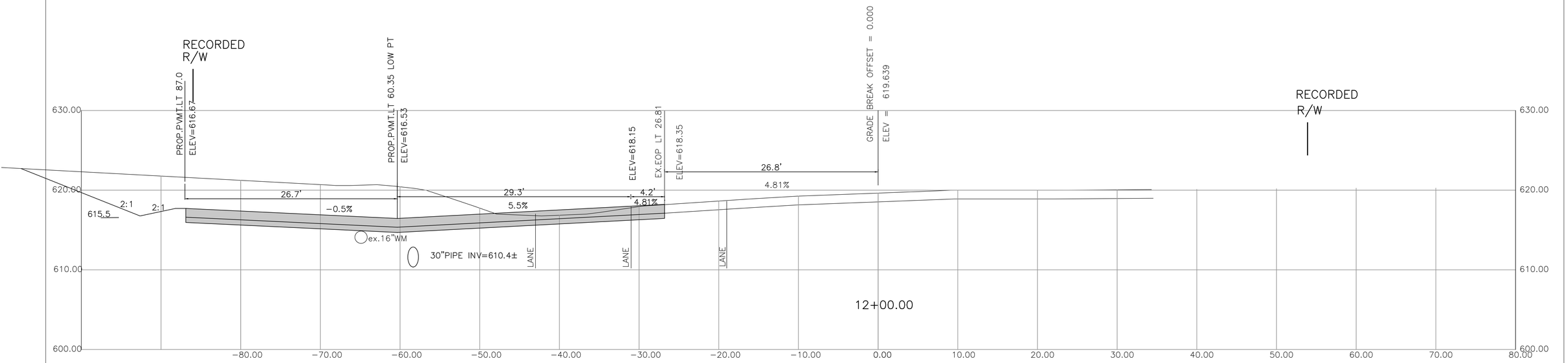
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

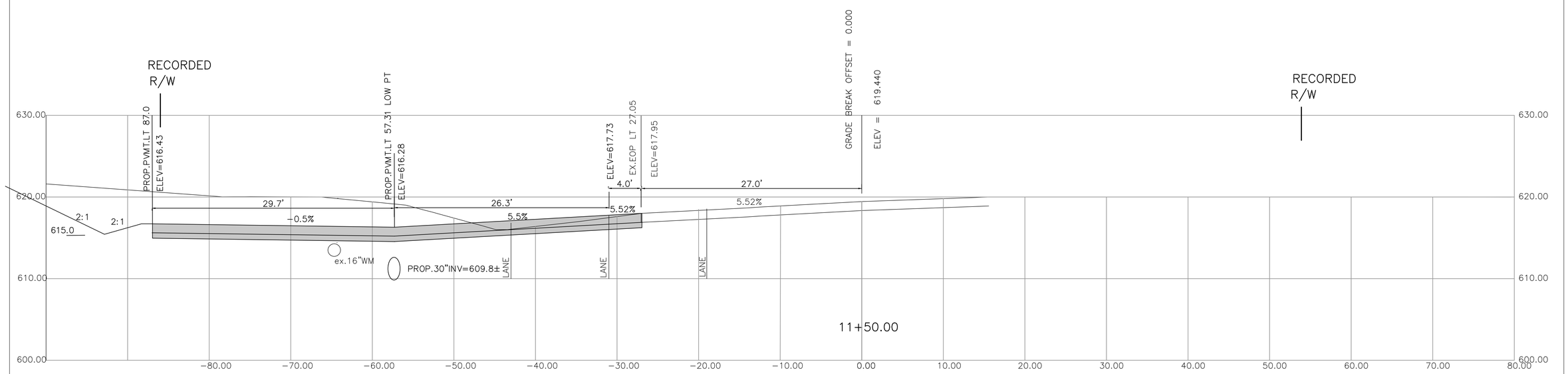
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
1.20.14

STEELE CREEK ROAD SECTIONS

X7







REV.	DATE
1 CDOT/DOT & CITY COMMENTS	11.27.13
2 CDOT/DOT & CITY COMMENTS	2.25.14

PROJECT MANAGER
DESIGN BY
APPROVED BY
FILE NAME
DRAWING SCALE
PROJECT DATE
PROJECT NUMBER
PHASE TASK
PLOT DATE

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Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2001
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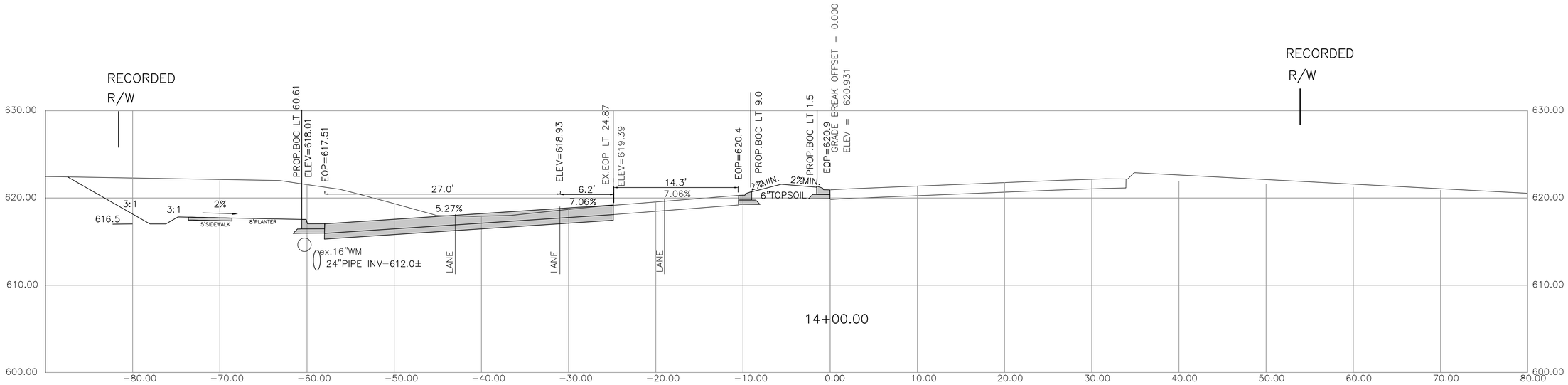
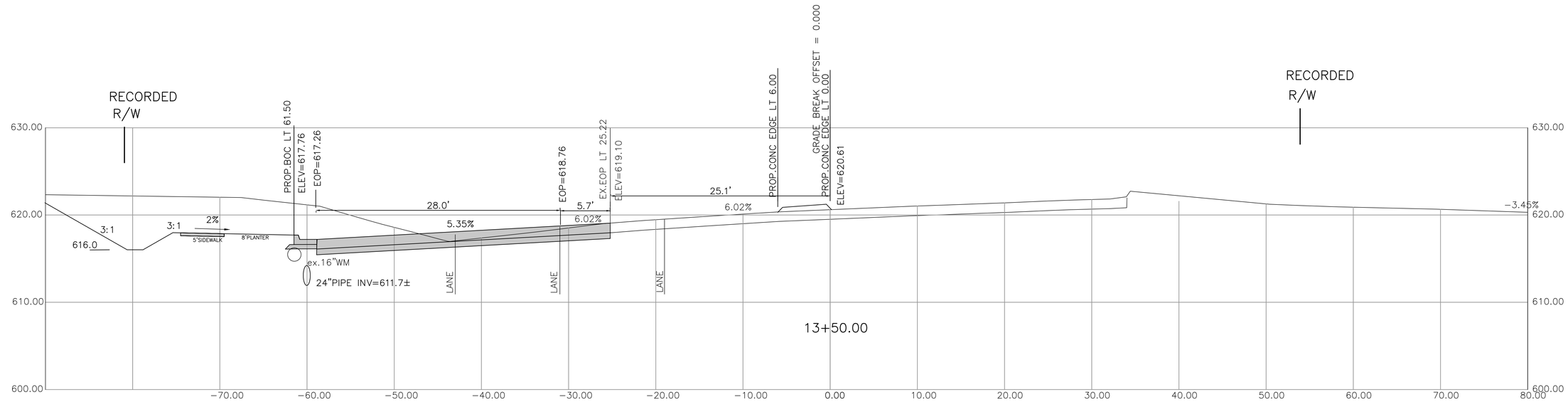
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

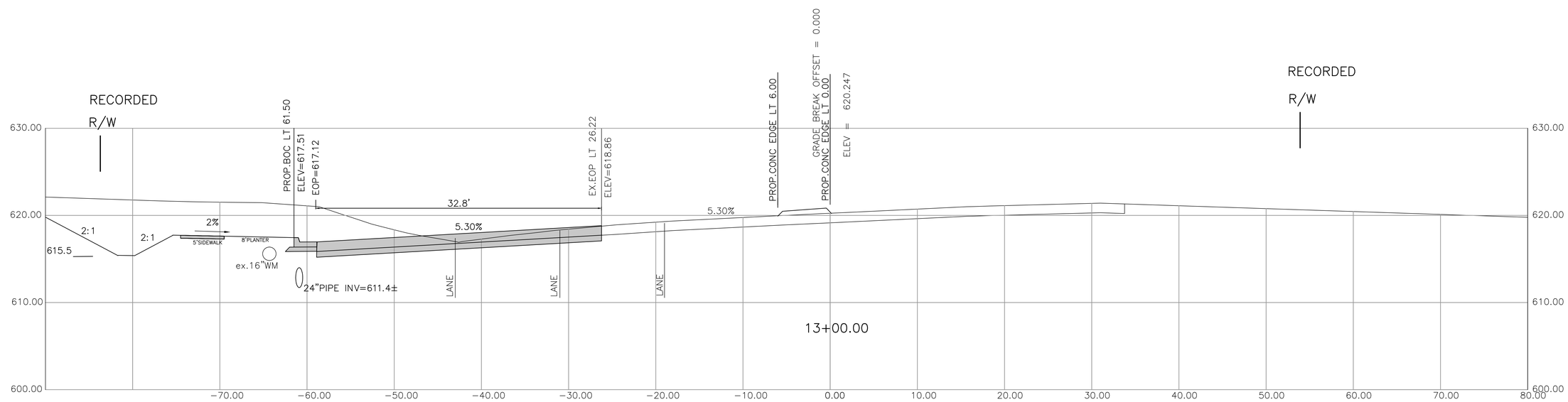
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
1.20.14

STEELE CREEK ROAD SECTIONS

X8







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REV.	DATE
1	11.27.13
2	1.30.14

DRAWING SCALE
PROJECT START DATE
PROJECT NUMBER
PHASE TASK
PROJECT MANAGER
DESIGN BY
APPROVED BY
FILE NAME
PLOT DATE

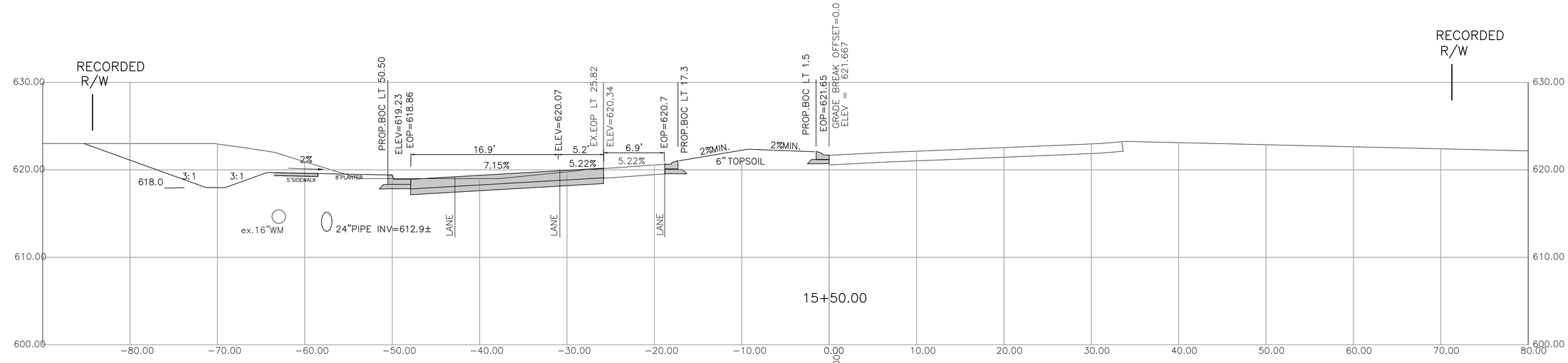
GEOSCIENCE GROUP
Tom Stockton Road
Charlotte, NC 28213
Phone: 704.525.2003
Fax: 704.525.2001
www.geoscienceengroup.com

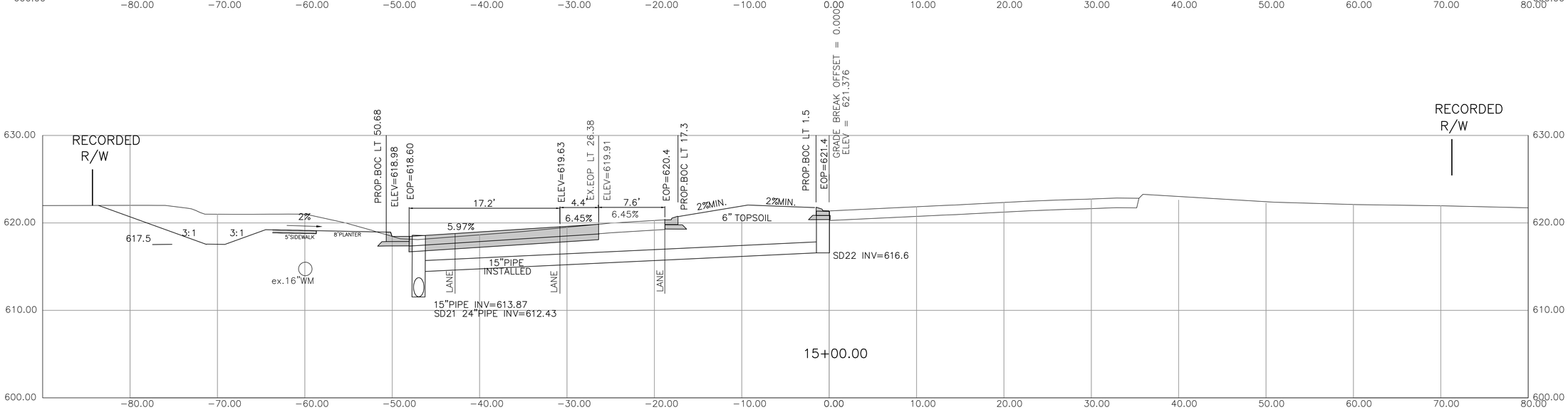
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

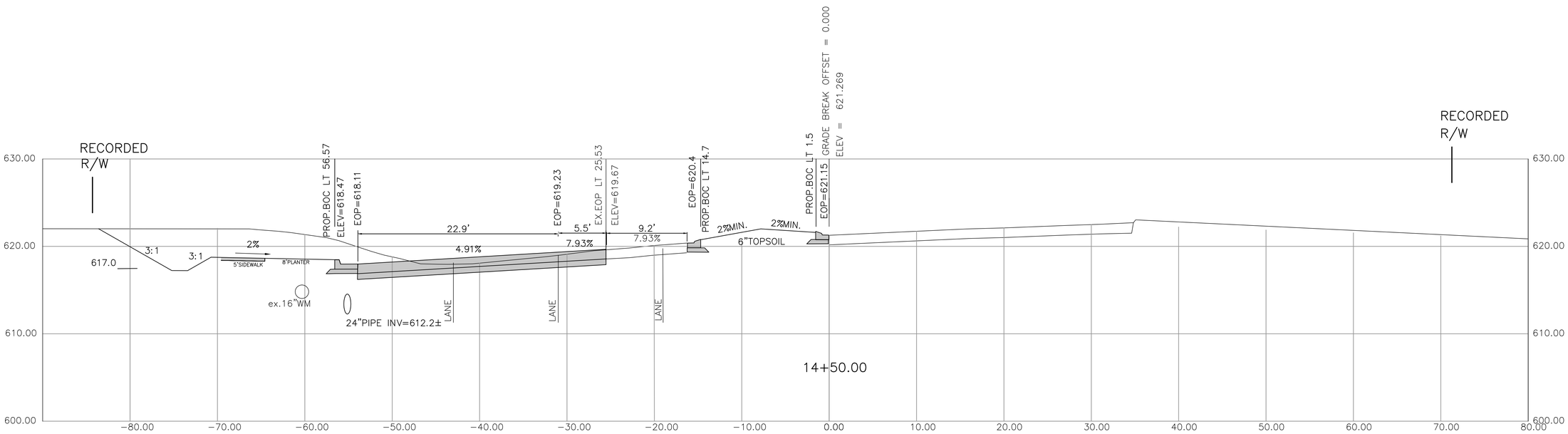
NORTH CAROLINA PROFESSIONAL SEAL 10726 ENGINEER KEVIN S. CALDWELL
1.20.14

STEELE CREEK ROAD SECTIONS

X9







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REV.		DATE
1	CDOT/DOT & CITY COMMENTS	11.27.13
2	CDOT/DOT & CITY COMMENTS	1.30.14

DRAWING SCALE
PROJECT MANAGER
PROJECT DATE
DESIGN BY
PROJECT NUMBER
APPROVED BY
PHASE TASK
FILE NAME
ACEP DATE

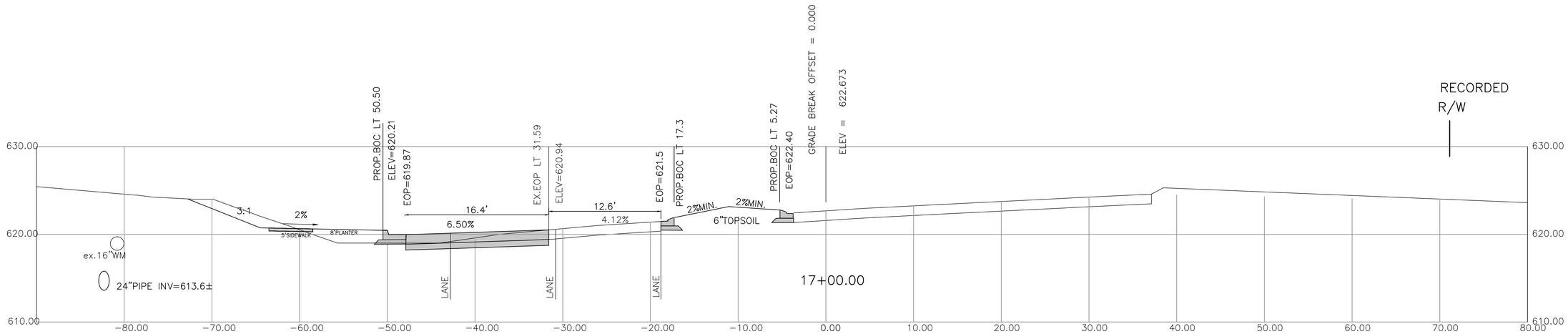
GEOSCIENCE GROUP
Transportation Services
9800 Kincaid Road
Charlotte, NC 28213
Phone: 704.525.2003
Fax: 704.525.2051
www.geoscienceengroup.com

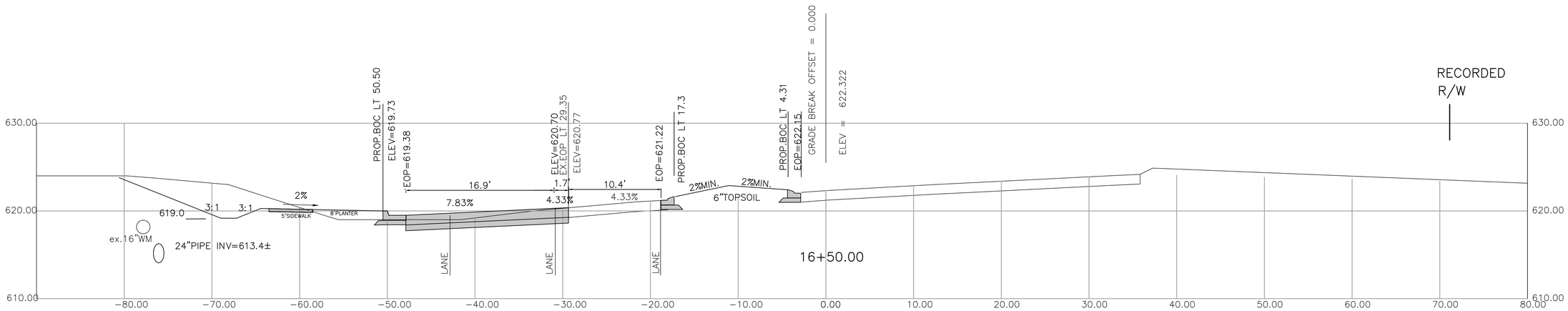
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

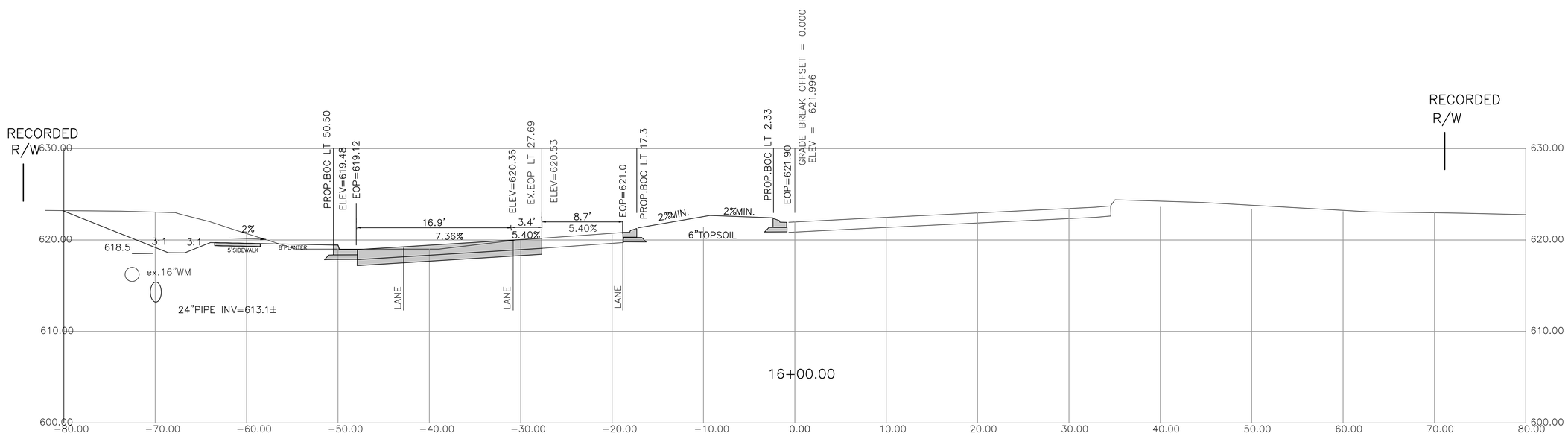
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10725 KEVIN S. CALDWELL 1.20.14

STEELE CREEK ROAD SECTIONS

X10







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REV.		DATE
1	CDOT/DOT & CITY COMMENTS	11.27.13
2	CDOT/DOT & CITY COMMENTS	1.20.14

PROJECT MANAGER
DESIGN BY
DRAWN BY
APPROVED BY
FILE NAME
DRAWING SCALE
PROJECT DATE
PROJECT NUMBER
PHASE TASK
PLOT DATE

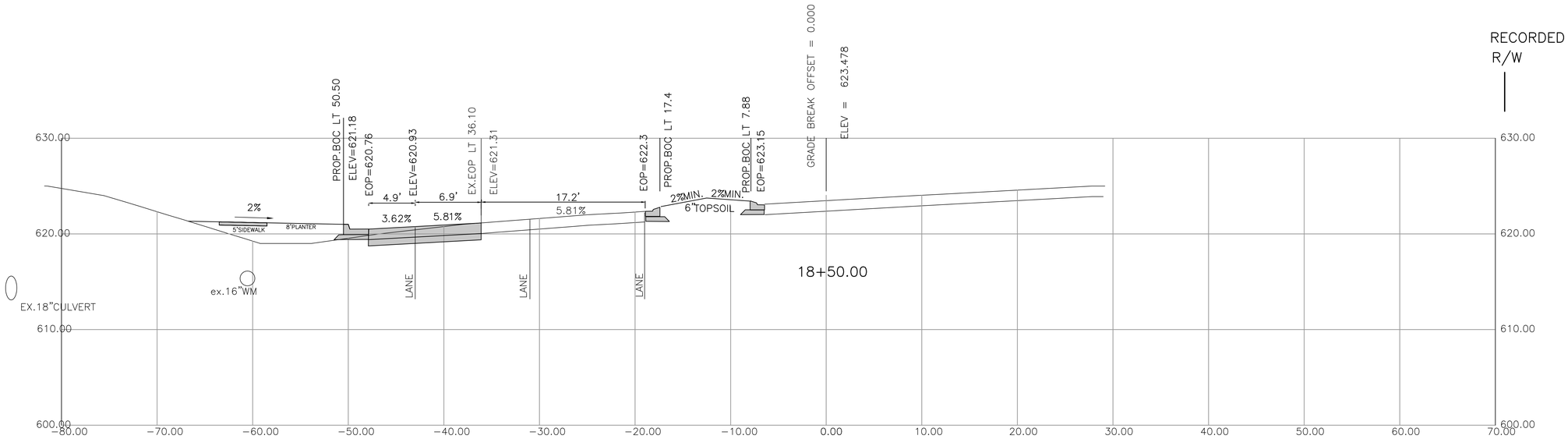
GEOSCIENCE GROUP
Transportation Division
9800 Kincaid Station Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2001
www.geoscienceengroup.com

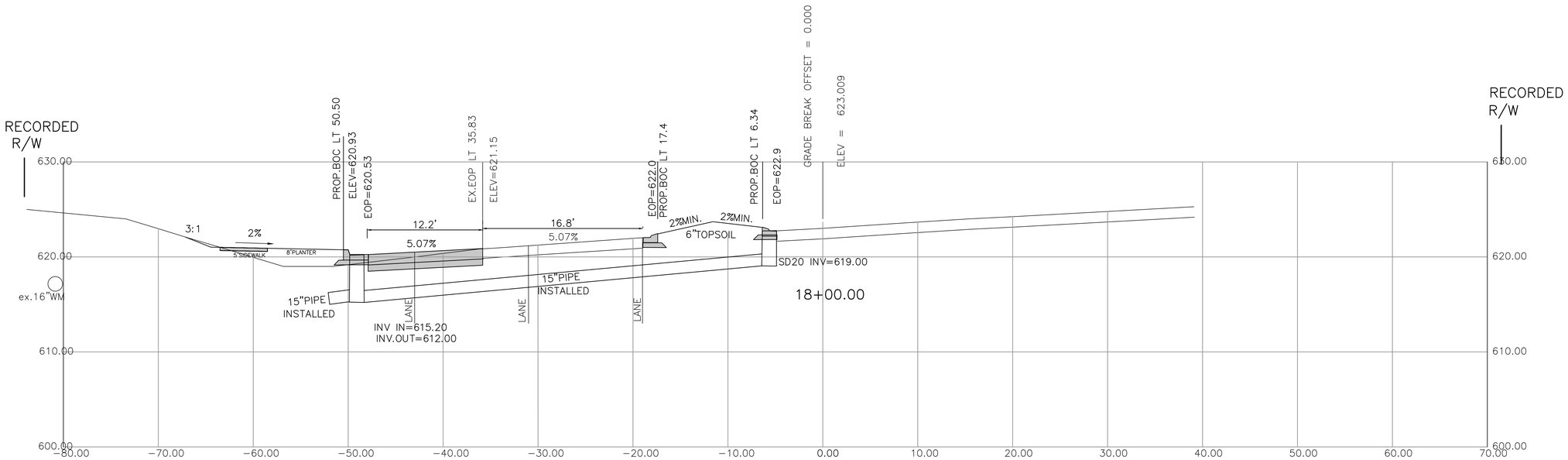
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

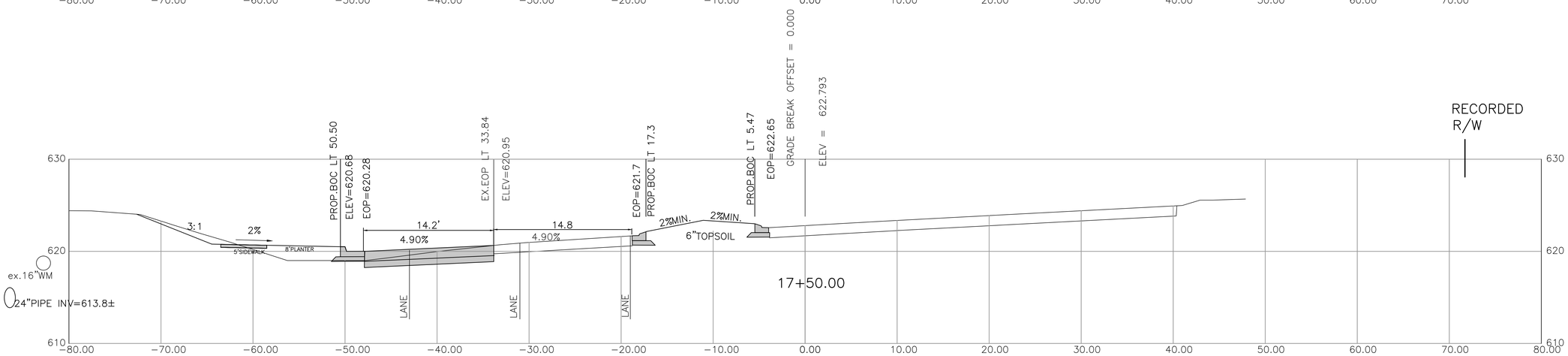
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10725 KEVIN S. CALDWELL 1.20.14

STEELE CREEK ROAD SECTIONS

X11







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REV.		DATE
1	CDOT/DOT & CITY COMMENTS	11.27.13
2	CDOT/DOT & CITY COMMENTS	1.20.14

DRAWING SCALE
PROJECT MANAGER
PROJECT DATE
DESIGN BY
PROJECT NUMBER
APPROVED BY
PHASE TEAM
FILE NAME
PLOT DATE

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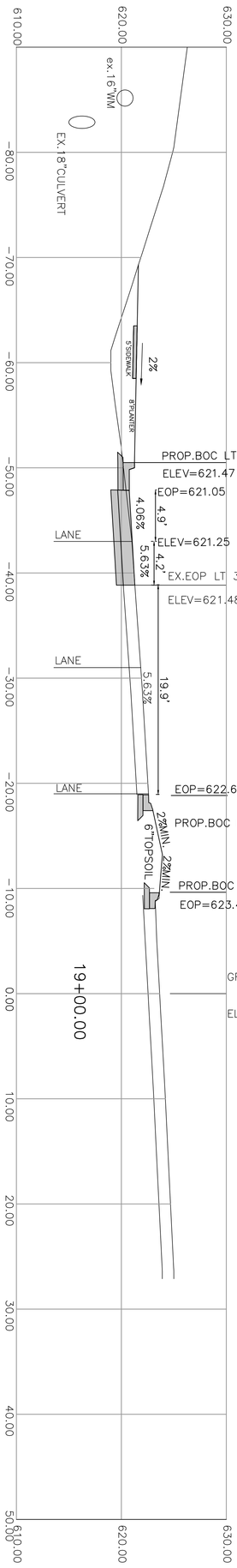
9800 Kincaid Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2001
www.geoscienceengroup.com

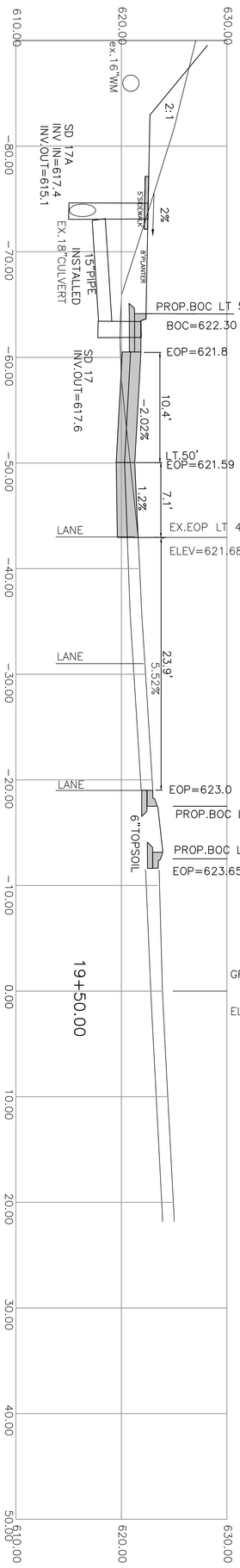
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

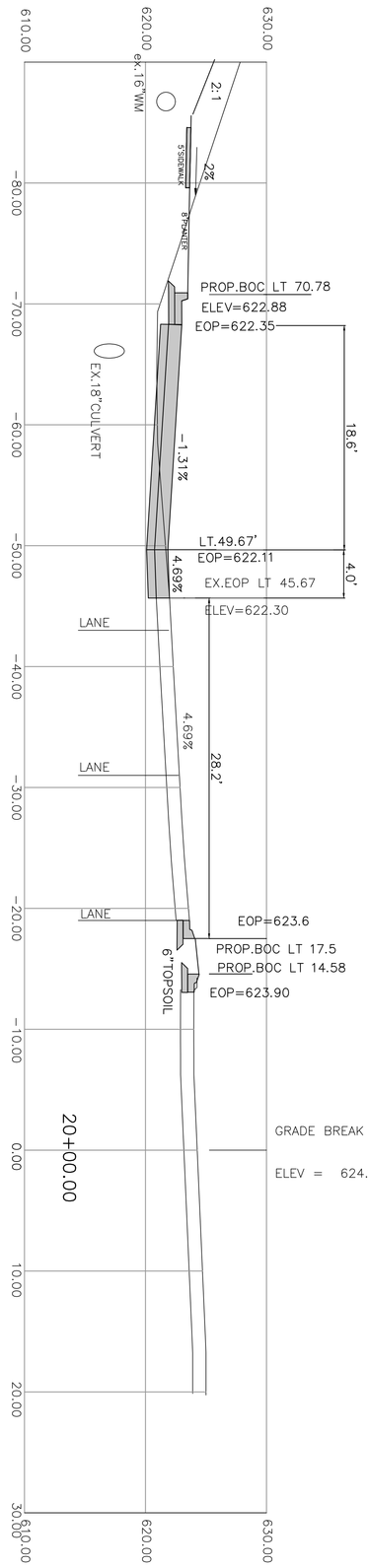
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10725 STEVIN S. CALDWELL
1.20.14

STEELE CREEK ROAD SECTIONS

X12







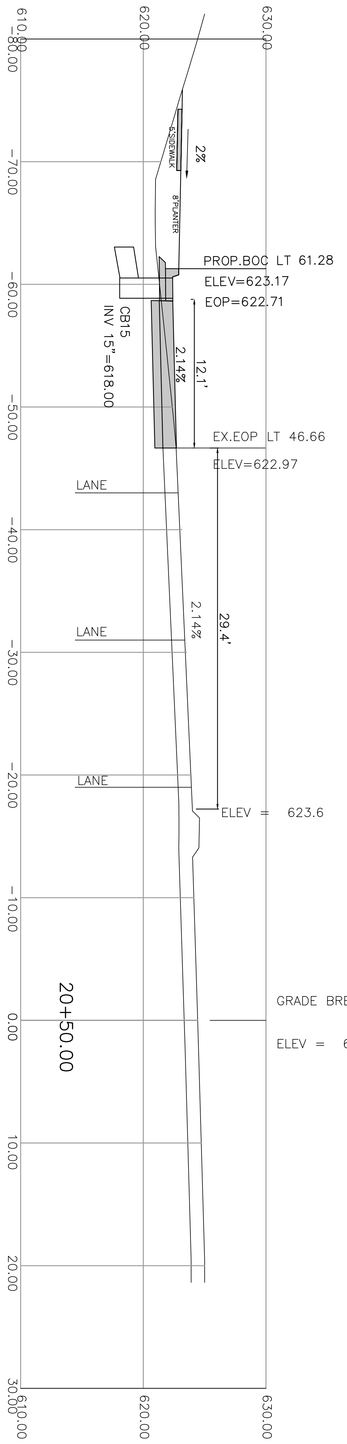
X13

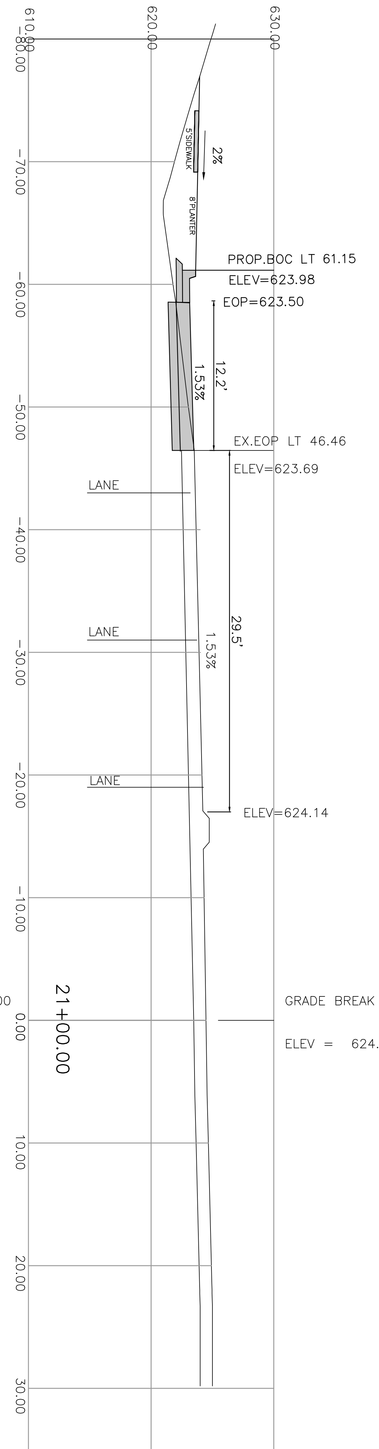
STEELE CREEK ROAD SECTIONS

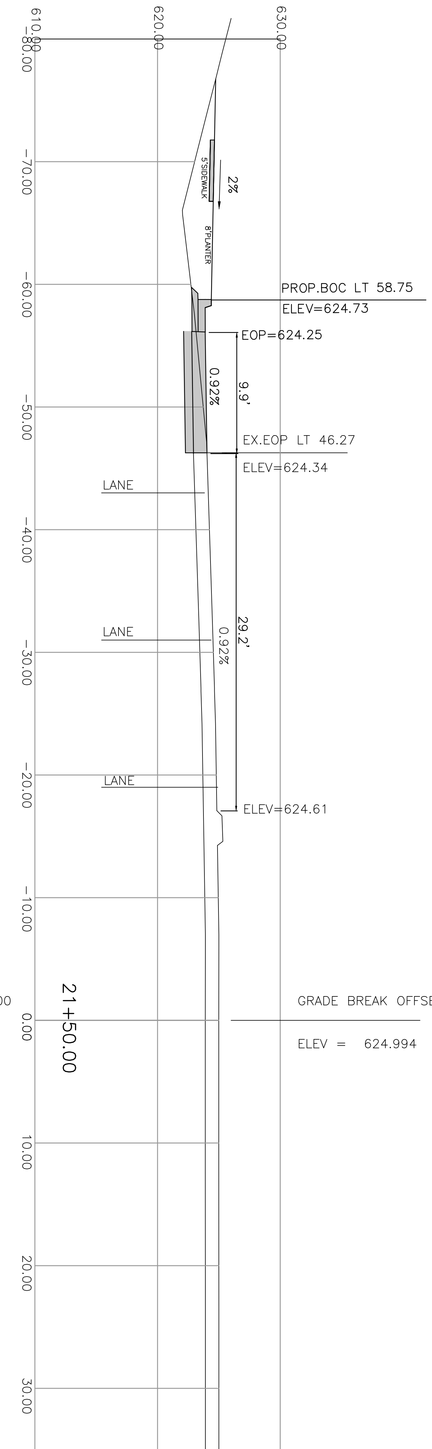
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

GEOSCIENCE GROUP
Incorporated
500-K Clanton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
www.geoscienceg roup.com

PROJECT MANAGER	DRAWING SCALE	REV.		DATE
DESIGN BY	PROJECT DATE	1	CDOT/DOT & CITY COMMENTS	11.27.13
APPROVED BY	PROJECT NUMBER	2	CDOT/DOT & CITY COMMENTS	1.20.14
FILE NAME	PHASE / TASK			
	PLOT DATE			







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X14

STEELE CREEK ROAD SECTIONS

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

GEOSCIENCE GROUP
5004 Clanton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
www.geoscincgroup.com

PROJECT MANAGER	DRAWING SCALE	REV.		DATE
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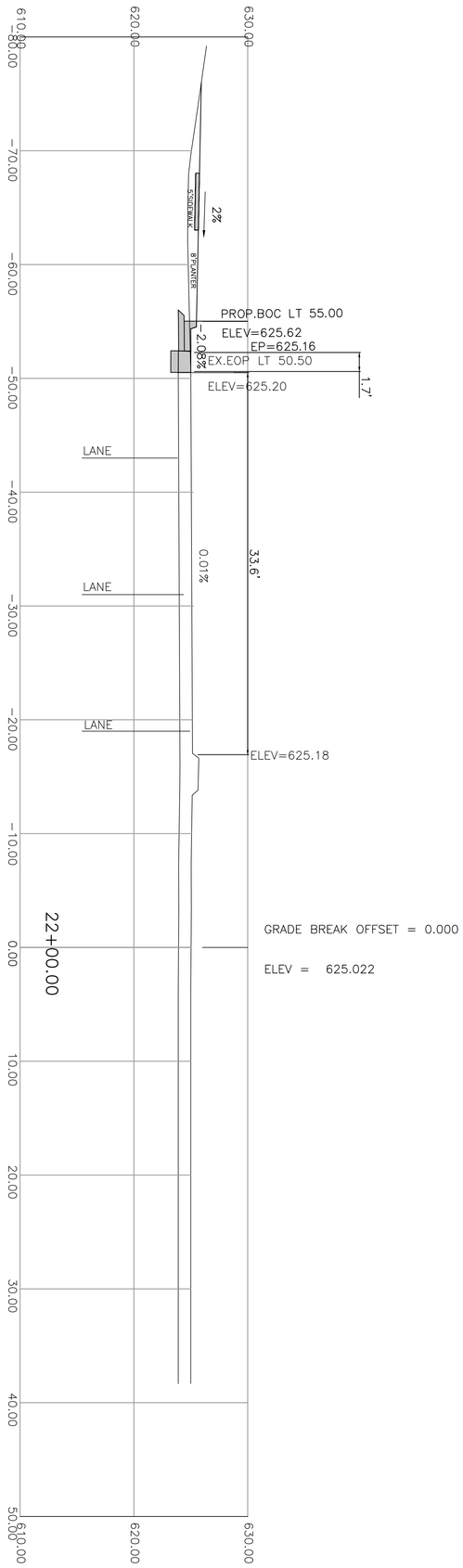
APPROVED BY	PROJECT NUMBER	2	CDOT/DOT & CITY COMMENTS	1.20.14
FILE NAME	PHASE / TASK			
	PLOT DATE			



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X15

STEELE CREEK ROAD SECTIONS

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

GEOSCIENCE GROUP
500-K Clanton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
www.geosciencegroup.com

PROJECT MANAGER	DRAWING SCALE	REV.		DATE
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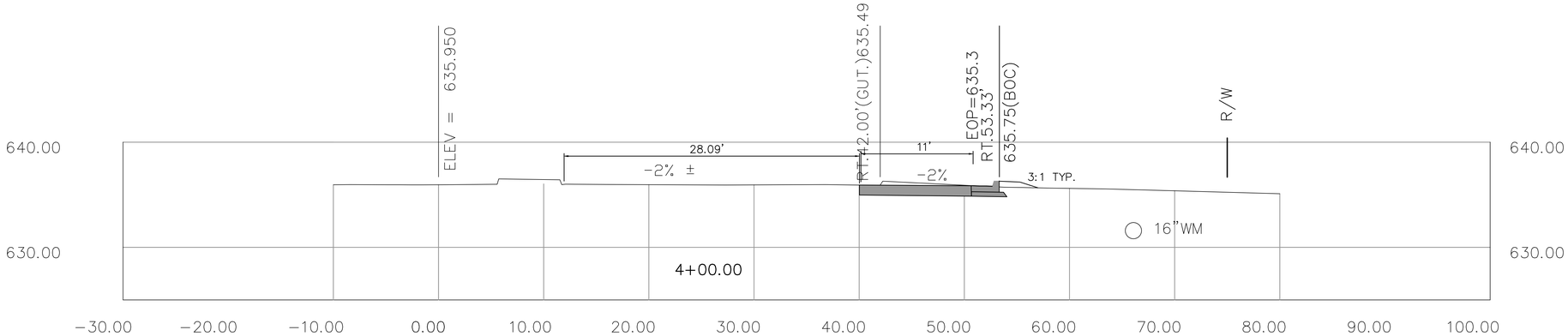
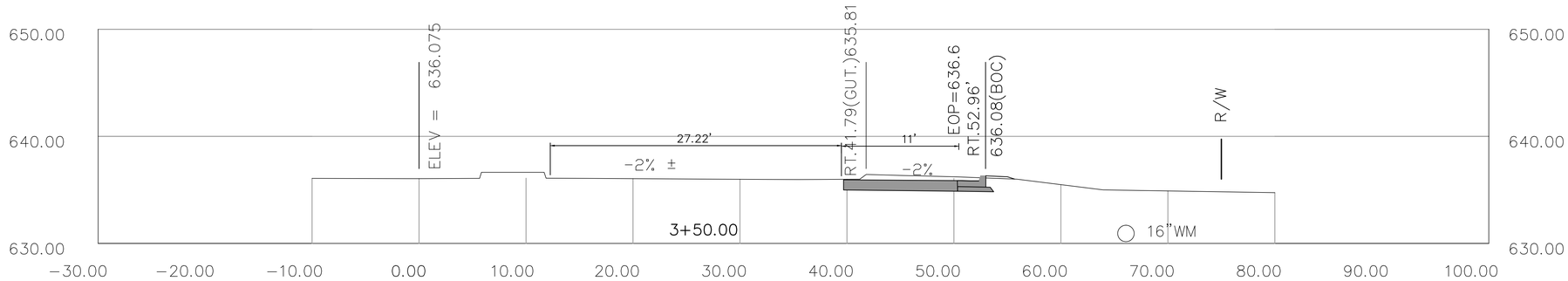
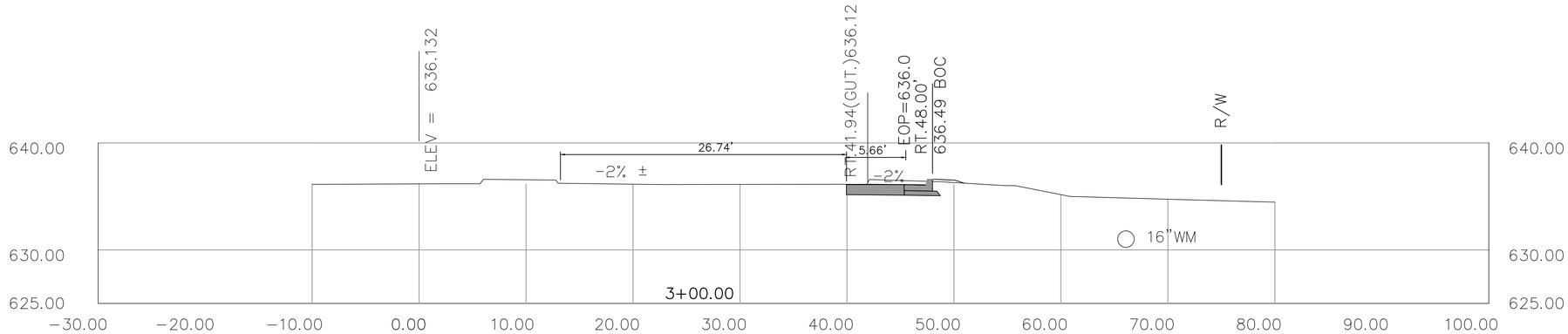
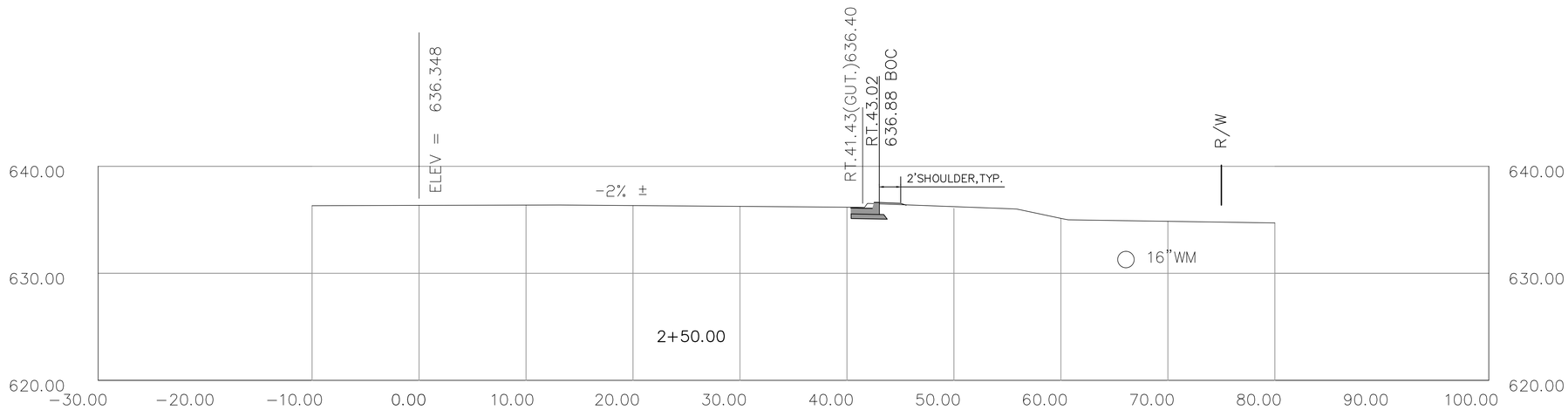
	PLOT DATE			









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PROJECT MANAGER	DRAWING SCALE	REV.		DATE
DRAWN BY	PROJECT DATE	1	CDOT/DOT & CITY COMMENTS	1.2.13
APPROVED BY	PROJECT NUMBER			
FILE NAME	PHASE / TASK			
	PLOT DATE			

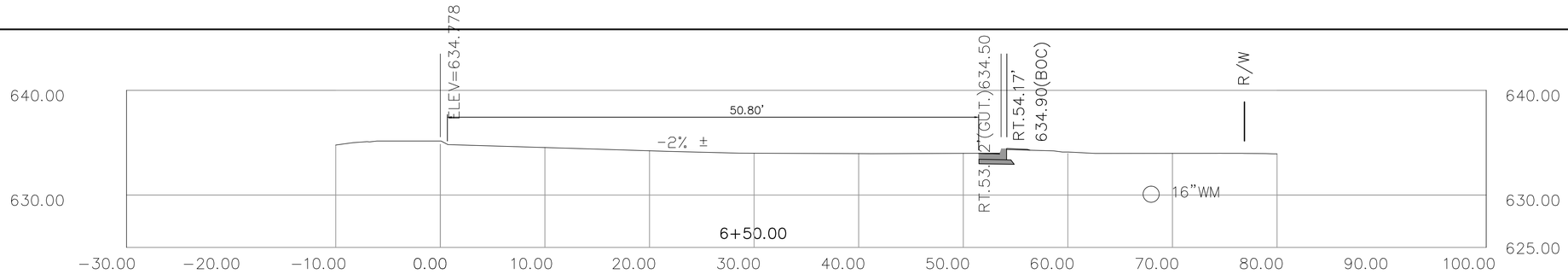
GEOSCIENCE GROUP
Geoscience Group
9000 Harris Corporation Road
Charlotte, NC 28269
Phone: 704.525.1193
Fax: 704.525.2051
www.geoscienceengineering.com

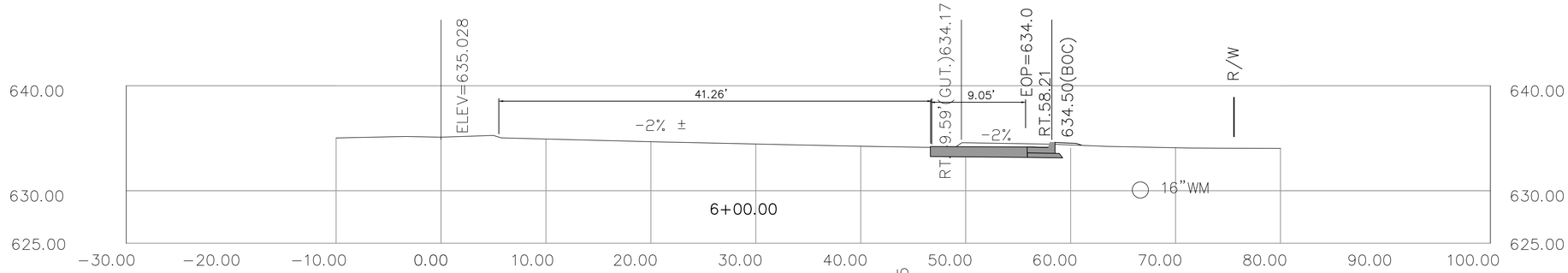
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

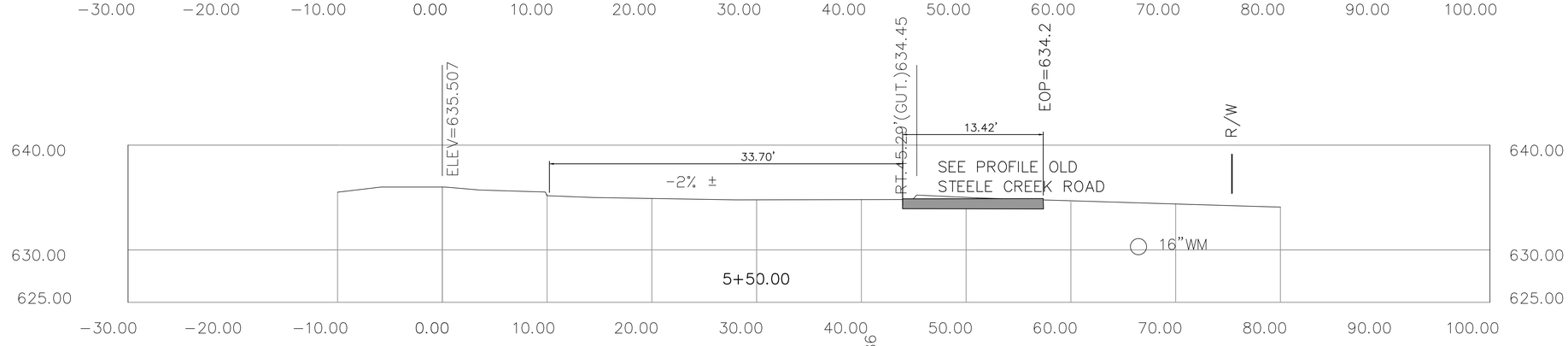
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL 1.2.13

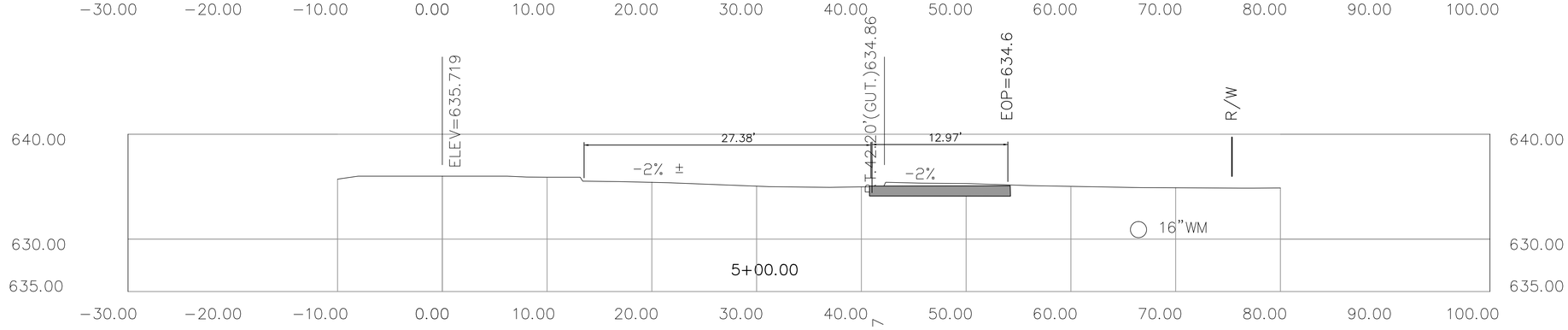
HWY 49 RIGHT TURN LANE
ROAD SECTIONS

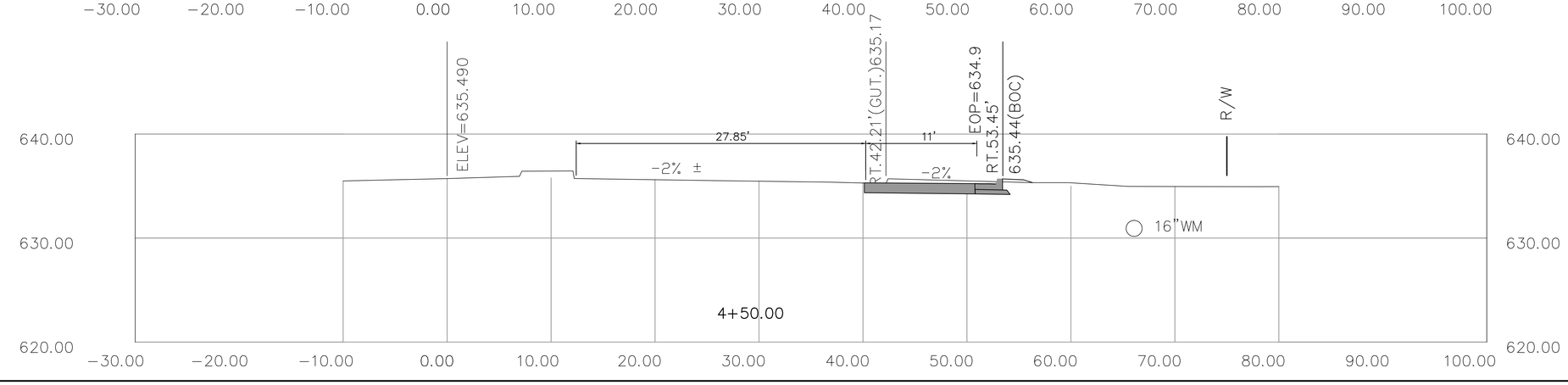
X16











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DATE	1.27.13
REV.	1
	02/07/2013 - CITY COMMENTS

DRAWING SCALE
PROJECT DATE
PROJECT NUMBER
PHASE TASK
CUT DATE
PROJECT MANAGER
DRAWN BY
APPROVED BY
FILE NAME

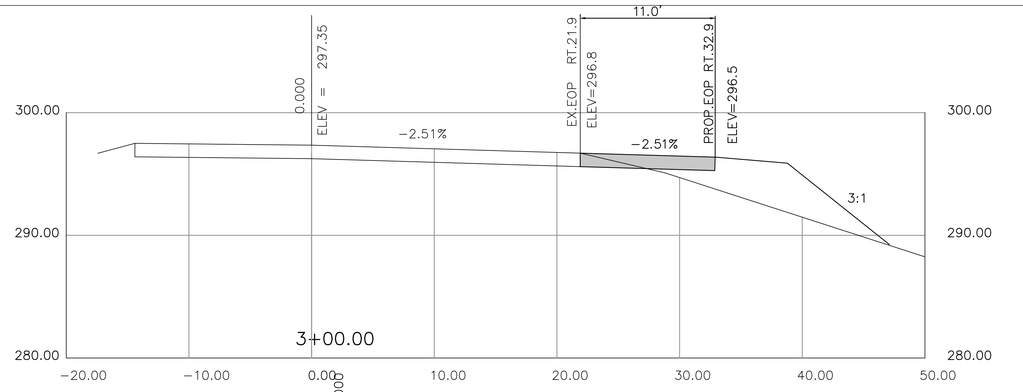
GEOSCIENCE GROUP
Corporate Headquarters
9800 Kincaid Station Road
Charlotte, NC 28273
Phone: 704.525.3003
Fax: 704.525.3051
www.geoscienceengineering.com

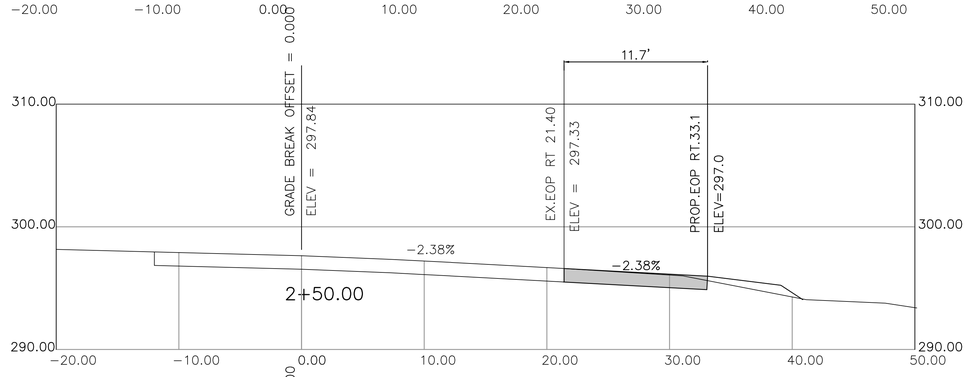
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

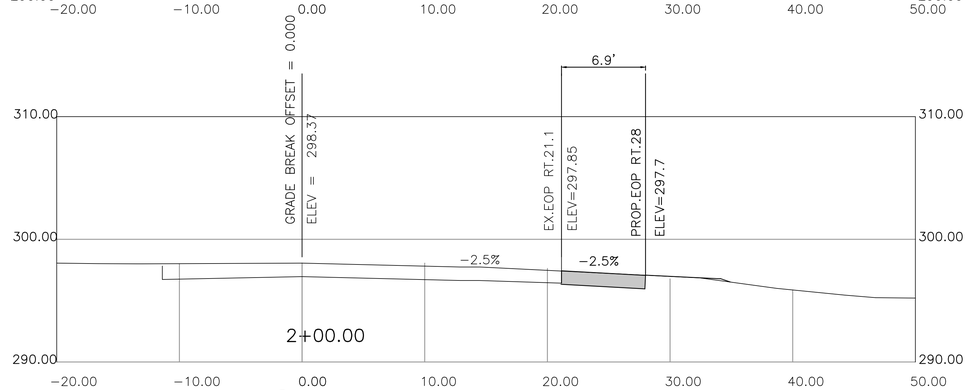
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
1.27.13

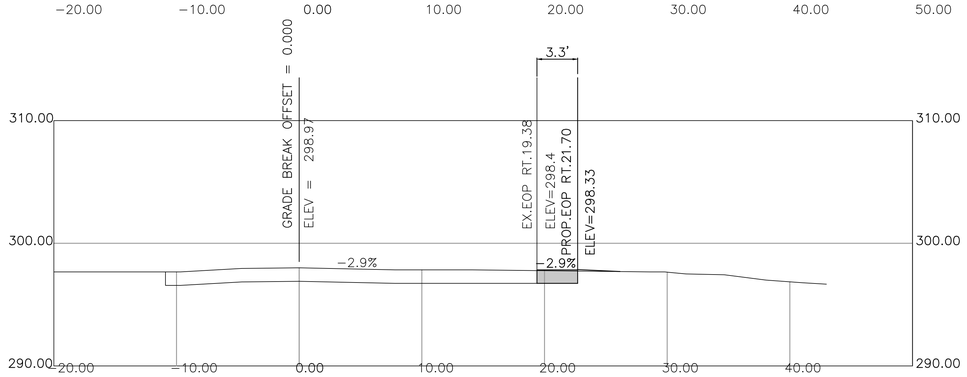
HWY 49 RIGHT TURN LANE
ROAD SECTIONS

X17









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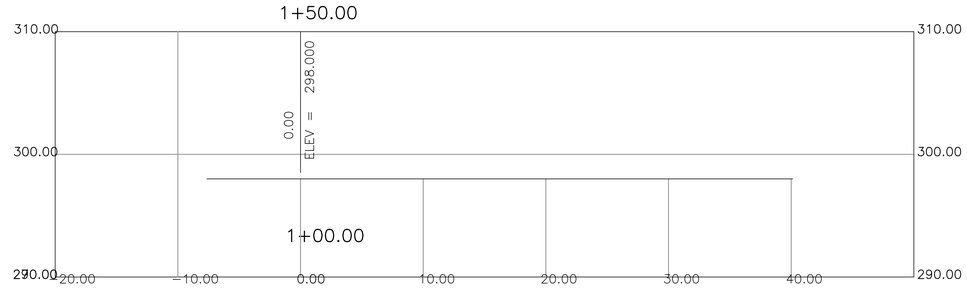

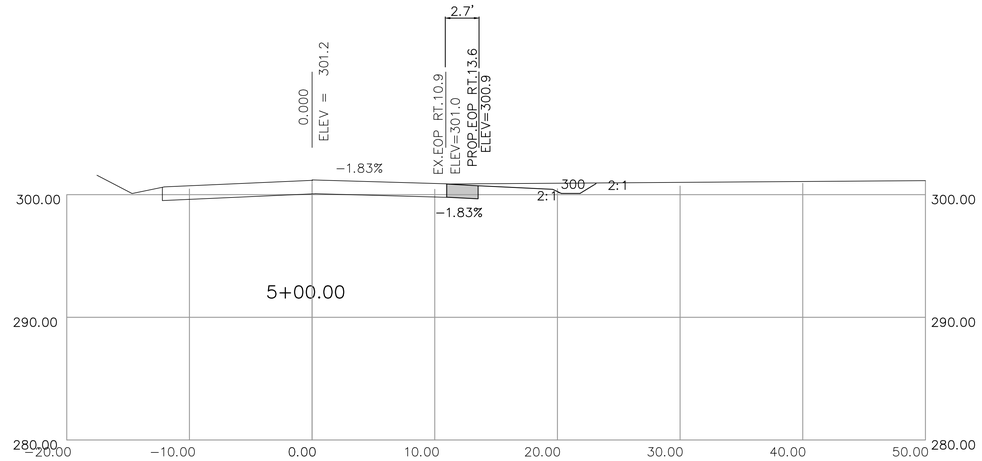

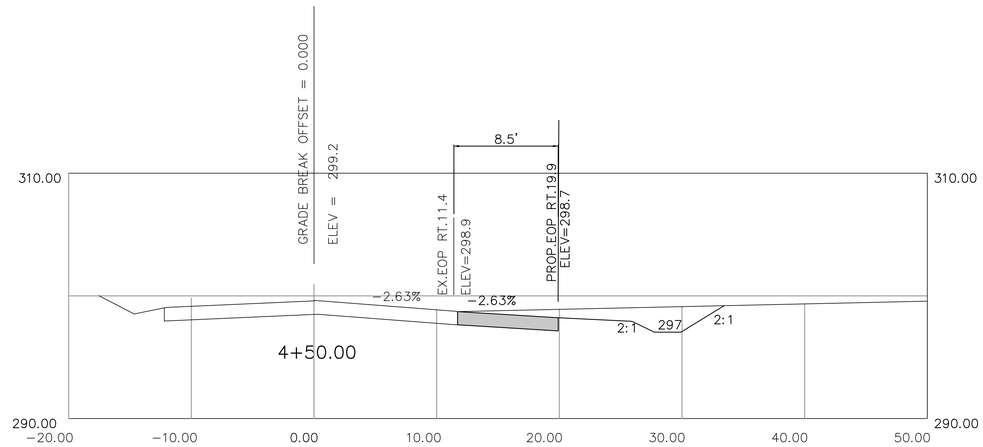

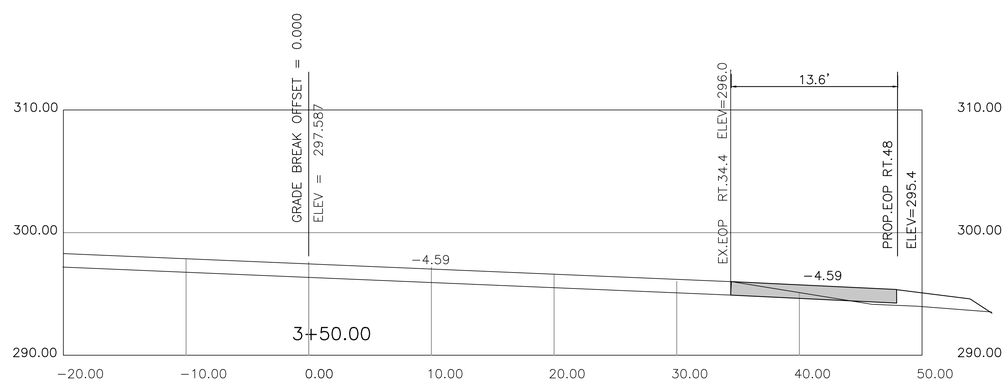

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REV.		DATE
1	CDOT/DOT & CITY COMMENTS	11.27.13
2	CDOT/DOT & CITY COMMENTS	1.30.14

PROJECT MANAGER
DESIGN BY
DRAWN BY
CHECKED BY
DRAWING SCALE
PROJECT DATE
PROJECT NUMBER
PHASE TASK
PDP DATE
FILE NAME

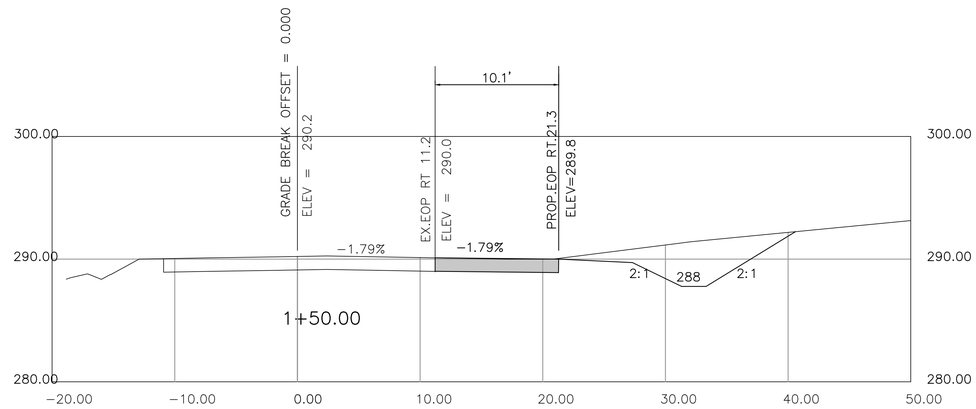
GEOSCIENCE GROUP
Headquarters
7000 Fairview Road
Charlotte, NC 28210
Phone: 704.525.2093
Fax: 704.525.2051
www.geoscienceengroup.com

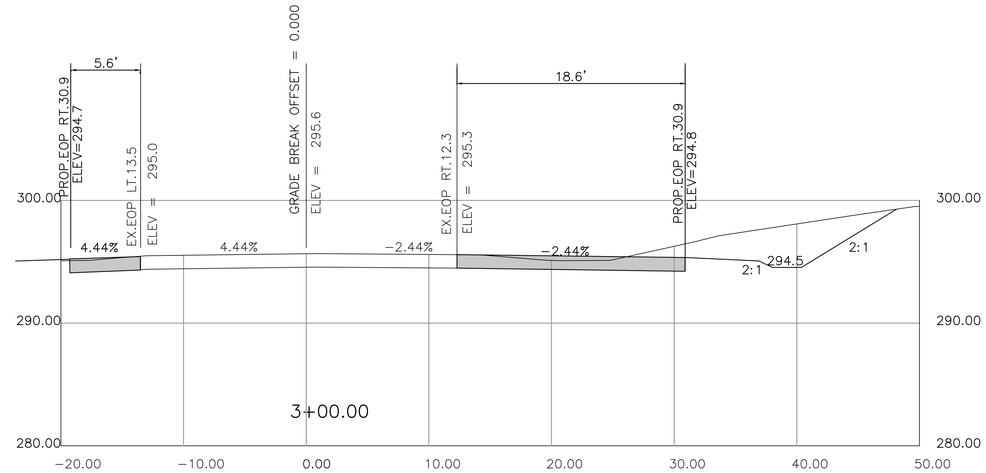
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

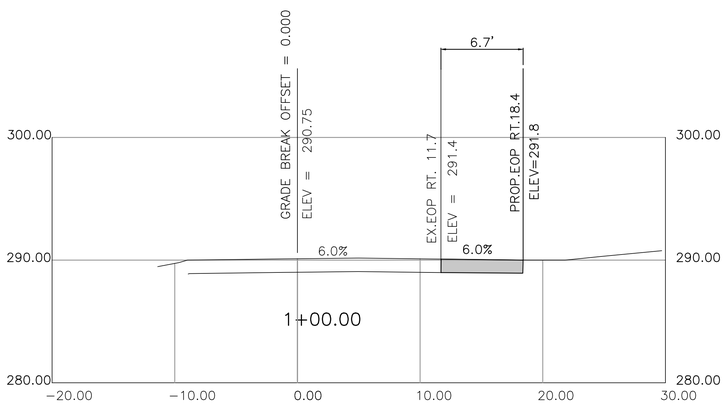
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
11.27.13
1.30.14

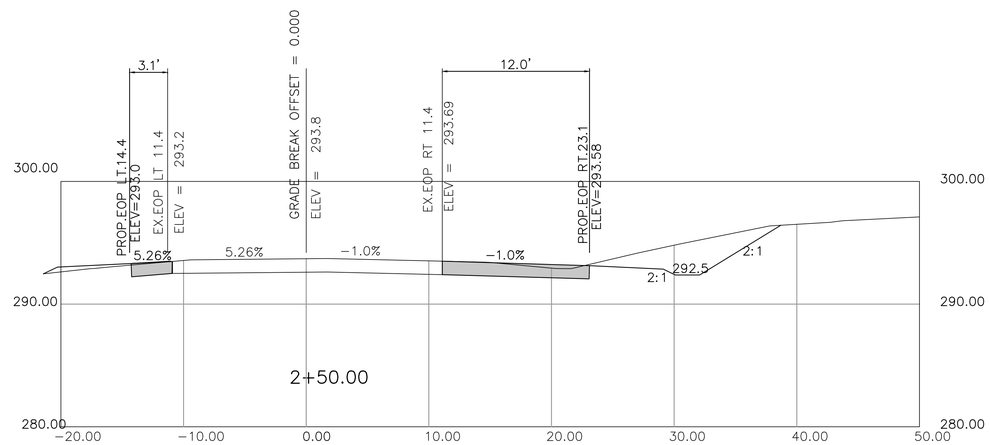
HAMILTON ROAD
ROAD SECTIONS

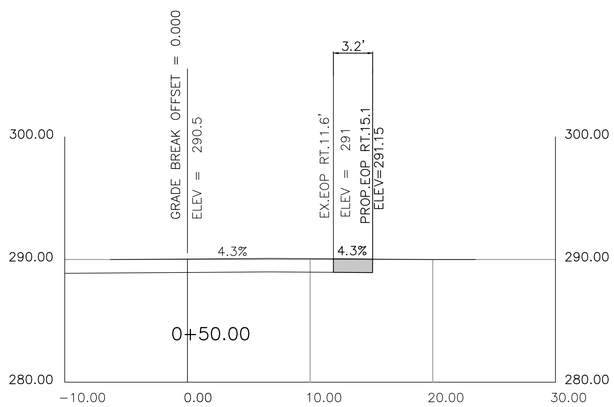
X18

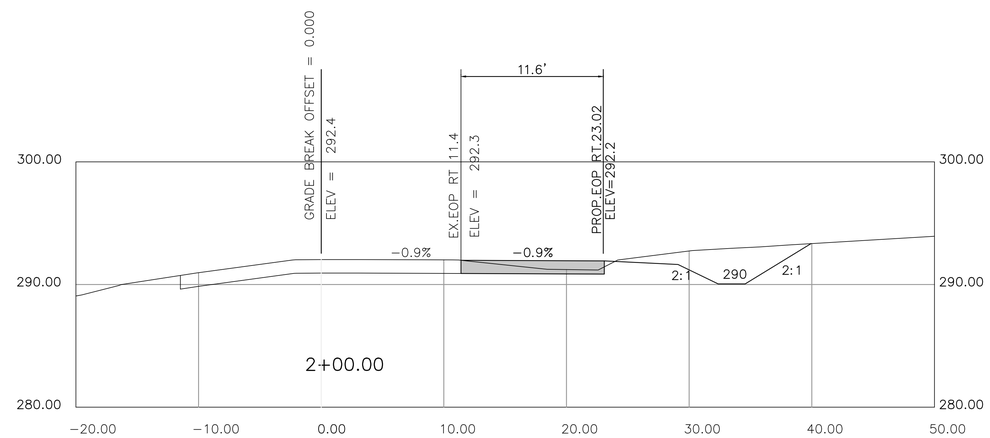












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PROJECT MANAGER	
DESIGN BY	
PROJECT NUMBER	
APPROVED BY	
FILE NAME	

DRAWING SCALE	
PROJECT DATE	
PHASE	TASK
PLOT DATE	

REV.		DATE
1	CDOT/DOT & CITY COMMENTS	11.27.13
2	CDOT/DOT & CITY COMMENTS	1.20.14

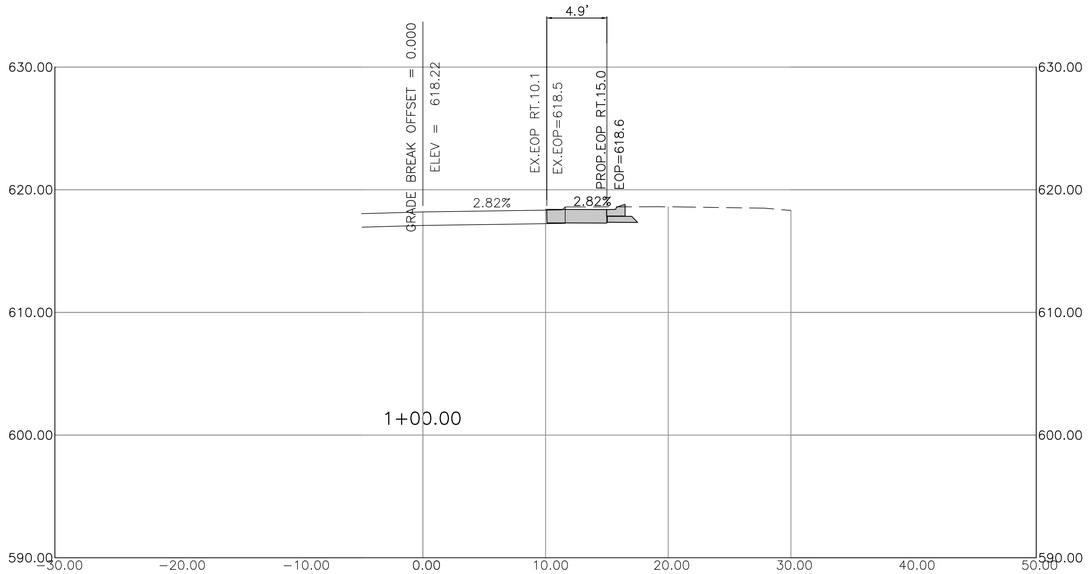
GEOSCIENCE GROUP
Corporate Headquarters
7000 Vanguard Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
www.geoscienceengroup.com

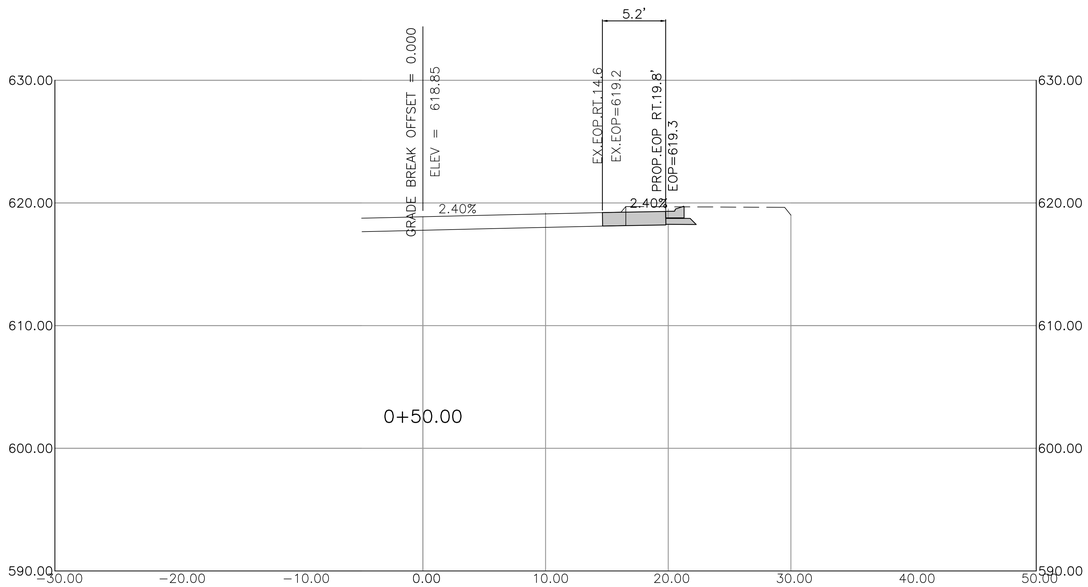
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

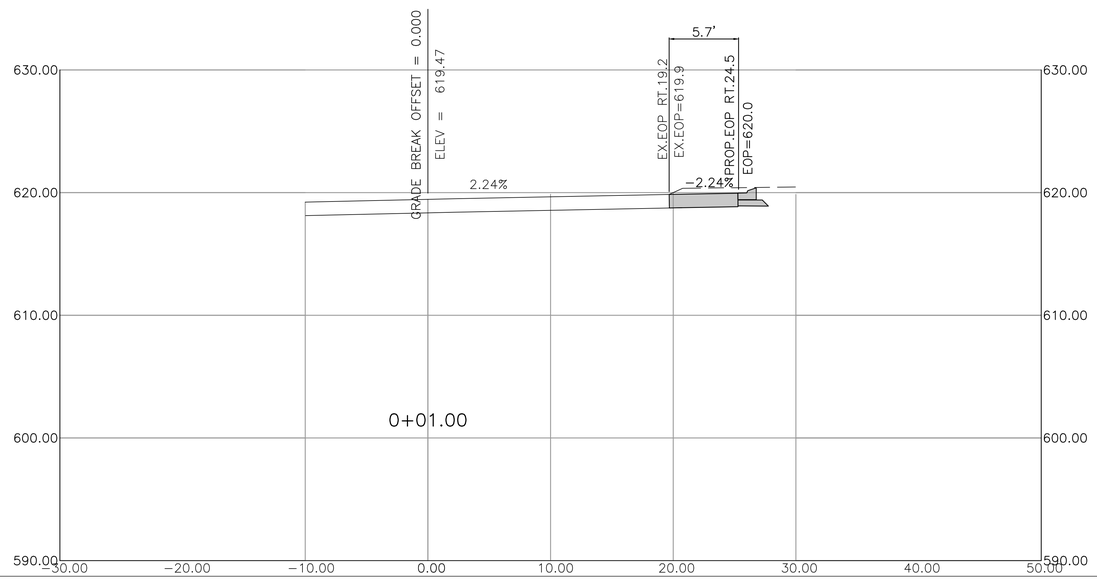
NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL

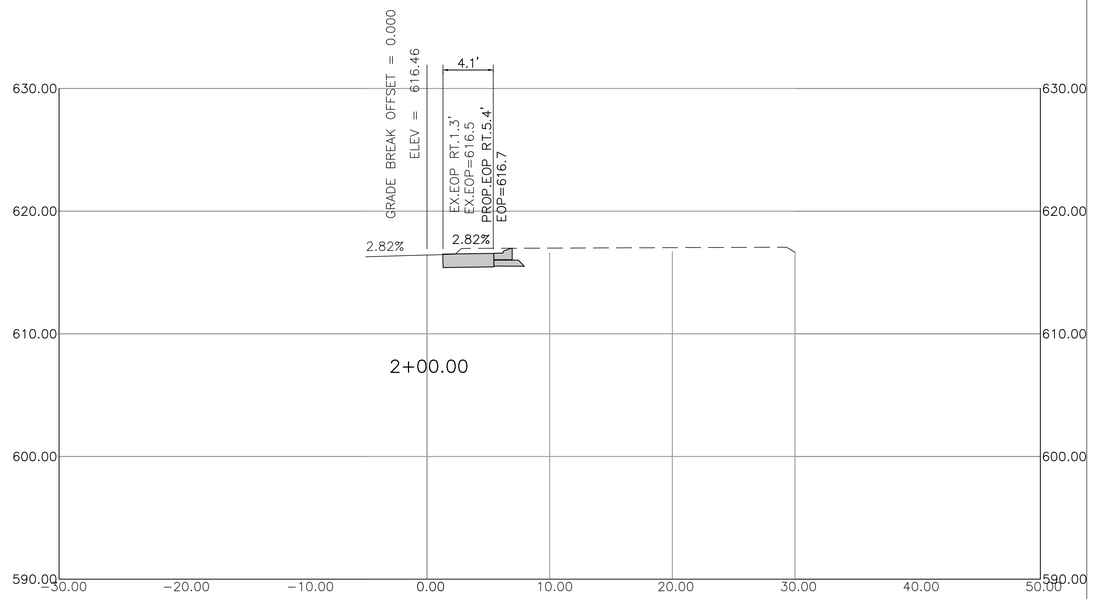
STEELE CREEK ROAD
ROAD SECTIONS

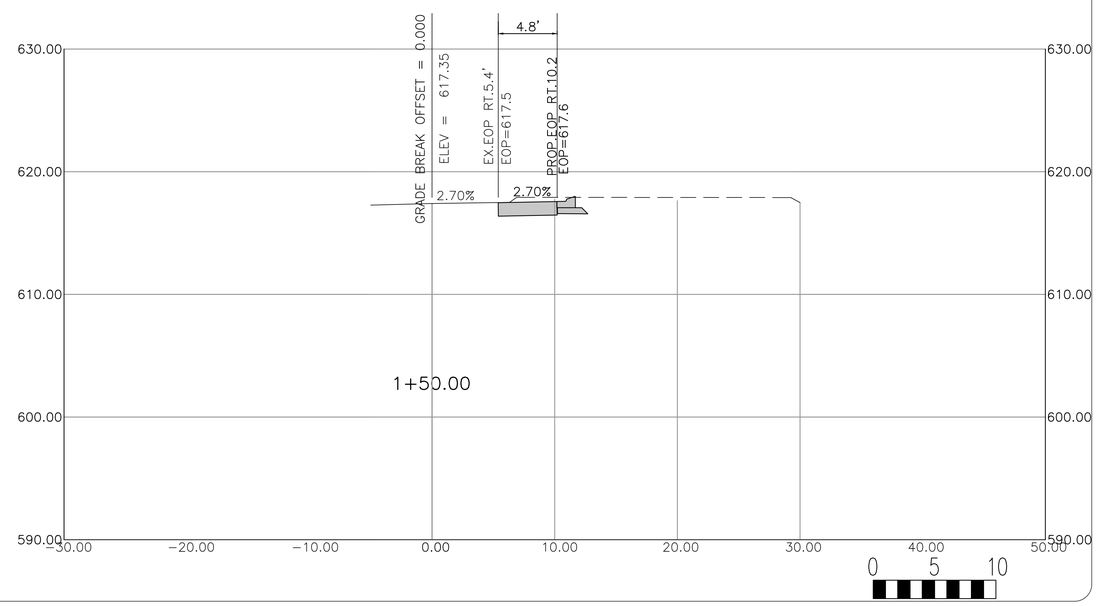
X19











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PROJECT MANAGER	SHARED SCALE	REV.		DATE
DESIGN BY	PROJECT DATE	1	CDOT/DOT & CITY COMMENTS	1.20.14
APPROVED BY	PROJECT NUMBER			
FILE NAME	PHASE / TASK			
	PLOT DATE			

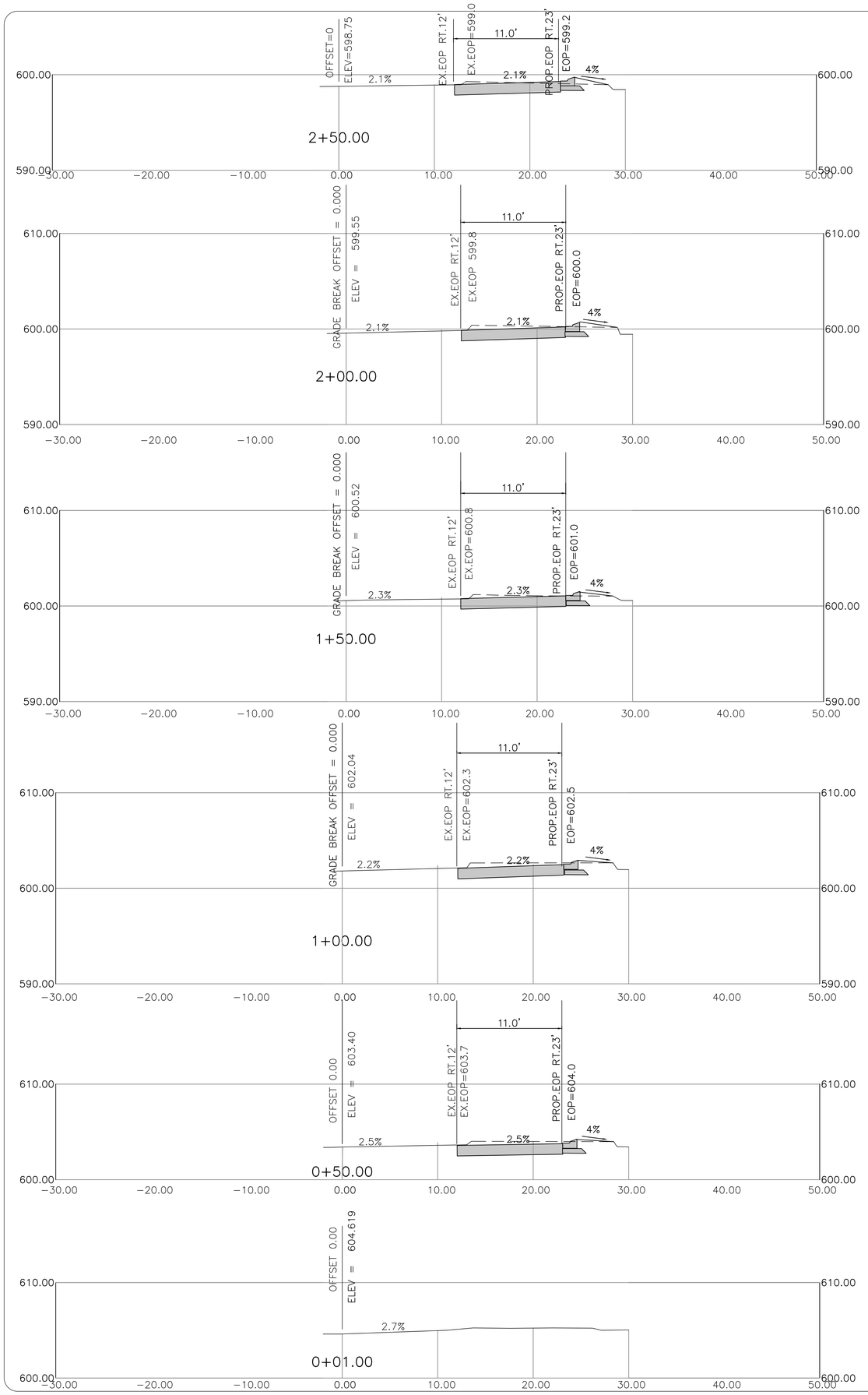
GEOSCIENCE GROUP
Corporate Headquarters
10900 Harris Oak Boulevard
Charlotte, NC 28269
Phone: 704.525.2003
Fax: 704.525.2001
www.geoscienceengroup.com

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL 1.20.14

LEFT TURN LANE TO STEELE CK ON HWY 49–ROAD SECTIONS

X20



PROJECT MANAGER		REV.		DATE
DESIGN BY		1	CDOT/DOT & CITY COMMENTS	11.27.13
APPROVED BY		2	CDOT/DOT & CITY COMMENTS	1.29.14
FILE NAME				

DRAWING SCALE
PROJECT DATE
PROJECT NUMBER
PHASE TASK
PLOT DATE

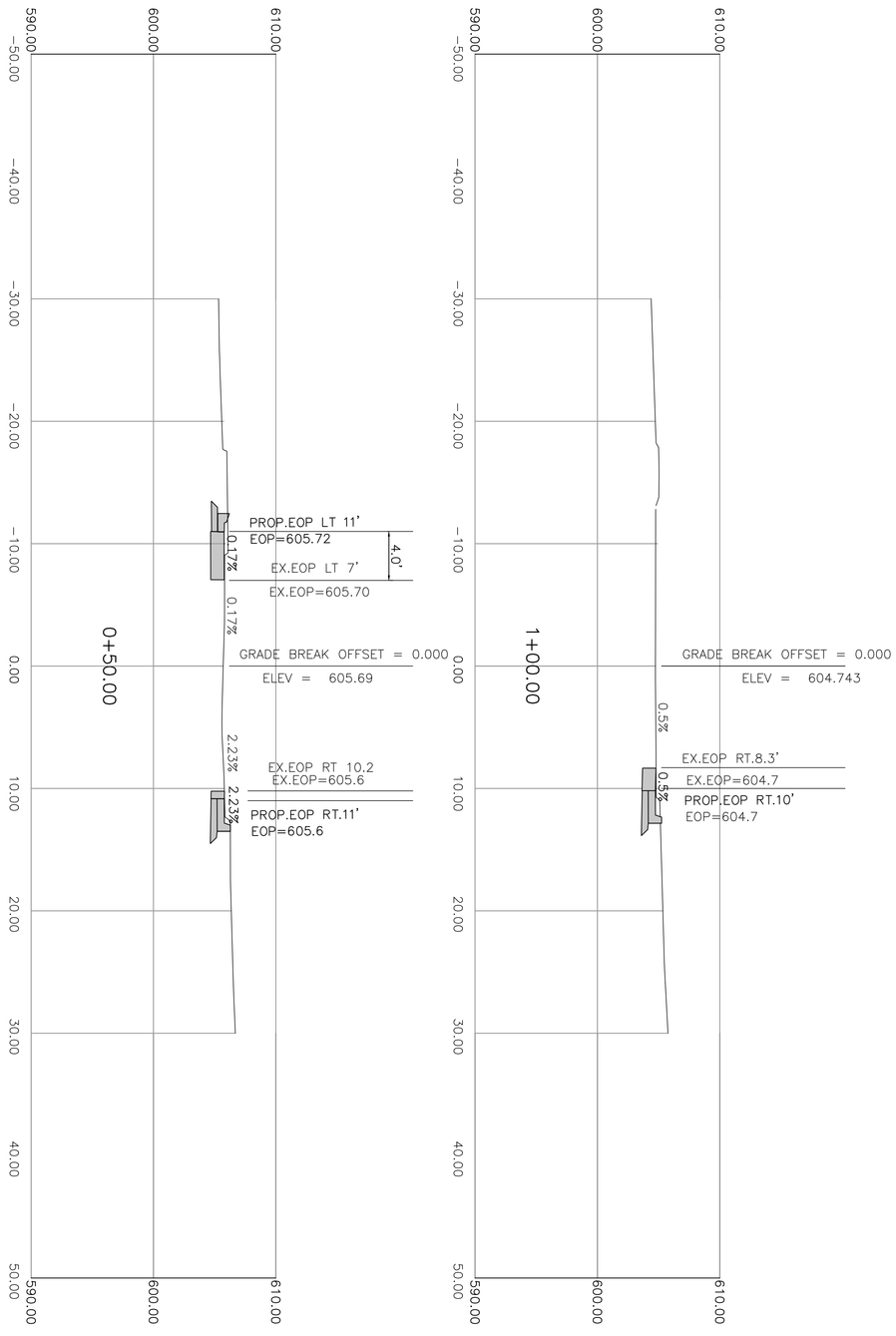
GEOSCIENCE GROUP
Geoscience Group
10000 Harris Oaks Boulevard
Charlotte, NC 28269
Phone: 704.525.2003
Fax: 704.525.2001
www.geoscienceengroup.com

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN S. CALDWELL
1.30.14

LEFT TURN TO RIVERGATE
PKWY ON HWY 49 SECTIONS

X21



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X22

RIVERGATE PARKWAY ENTRANCE

ROAD SECTIONS

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER 19845 TIMOTHY A. MCCONNELL

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

GEOSCIENCE GROUP
Incorporated
550-K Clinton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
www.geoscienceg roup.com

PROJECT MANAGER	DRAWING SCALE	REV.		DATE
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APPROVED BY	PROJECT NUMBER	2	CDOT/DOT & CITY COMMENTS	1.20.14
FILE NAME	PHASE / TASK			
	PLOT DATE			

GENERAL SITE NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

2. SITE BOUNDARY INFORMATION TAKEN FROM SURVEY BY GEOSCIENCE GROUP

3. OMIT

4. CONTRACTOR TO COORDINATE ALL UTILITY RELOCATIONS, WATER LINES, STORM DRAINAGE, LIGHT POLES, POWER POLES, ETC. WITH APPROPRIATE UTILITY COMPANIES WHO WILL VERIFY LOCATION, MATERIALS AND ADEQUACY OF PROPOSED COVER AND PLACEMENT.

5. CONTRACTOR TO COORDINATE WITH OWNER AND PROJECT ENGINEER FOR EXISTING BUILDING DEMOLISHING AND ANY OTHER STRUCTURES WHICH MAY BE ON PROJECT SITE.

6. CONTRACTOR TO COORDINATE ALL CONSTRUCTION IN R/W'S WITH N.C.D.O.T. AND CITY OF CHARLOTTE.

7. ALL CONSTRUCTION TO CONFORM TO THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL DETAILS AND SPECIFICATIONS.

8. ALL DRAINAGE FACILITIES, CURB CUTS AND CURB RAMPS MUST BE CONSTRUCTED IN COMPLIANCE WITH THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL AND COORDINATED WITH ENGINEERING AND PROPERTY MANAGEMENT.

9. OMIT
10. OMIT
11. A RIGHT OF WAY ENCROACHMENT AGREEMENT IS REQUIRED FOR THE INSTALLATION OF ALL NON-STANDARD ITEMS (IRRIGATION SYSTEMS, DECORATIVE CONCRETE PAVEMENT, BRICK PAVERS, ETC.) WITHIN A PROPOSED/EXISTING CITY MAINTAINED STREET RIGHT OF WAY BY A PRIVATE INDIVIDUAL, GROUP, BUSINESS, OR HOMEOWNER'S/BUSINESS ASSOCIATION. AN ENCROACHMENT AGREEMENT MUST BE APPROVED BY CDOT PRIOR TO THE CONSTRUCTION/INSTALLATION OF THE NON-STANDARD ITEMS. CONTACT CDOT FOR ADDITIONAL INFORMATION CONCERNING COST, SUBMITTAL AND LIABILITY INSURANCE COVERAGE REQUIREMENTS.
12. TREE PROTECTION BARRICADES MUST MEET OR EXCEED TREE ORDINANCE GUIDELINES STANDARDS.

13. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION/CLEARING/GRADING/CONSTRUCTION, AND NOT REMOVED UNTIL AFTER FINAL INSPECTION BY URBAN FORESTRY STAFF.

14. NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN TREE SAVE AREAS.

15. VIOLATIONS OF THE TREE PROTECTION REQUIREMENTS ARE SUBJECT TO FINES, AND/OR IMMEDIATE CORRECTIVE ACTION/MITIGATION.

16. URBAN FORESTER MUST BE NOTIFIED OF THE PRE-CONSTRUCTION MEETING.

17. COORDINATE ALL CURB AND STREET GRADES IN INTERSECTION WITH INSPECTOR.

18. ALL ROAD IMPROVEMENTS ARE TO BE COORDINATED WITH THE NCDOT PRIOR TO CONSTRUCTION

19. OMIT

20. SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED.

21. OMIT

22. IN ROLLING AND HILLY TERRAINS, SWEEPING OF THE STONE BASE AND/OR APPLICATION OF A TACK COAT MAY BE REQUIRED NEAR INTERSECTIONS. THESE REQUIREMENTS WILL BE ESTABLISHED BY THE INSPECTOR AND BASED ON FIELD CONDITIONS.

23. APPROVAL OF THIS SITE IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRENT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.

24. IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.5% SLOPE IN THE CURB.

25. SUBSURFACE DRAINAGE FACILITIES MAY BE REQUIRED IN THE STREET RIGHT-OF-WAY IF DEEMED NECESSARY BY THE INSPECTOR.

26. CURB AND GUTTER SHOWN ON PLANS CASCADE POINTE MAY BE ADJUSTED BASED UPON FIELD STAKING BY CITY ENGINEERING. ASSOCIATED STORM DRAINAGE MAY ALSO REQUIRE MODIFICATIONS BASED UPON FIELD CONDITIONS.

27. THE PURPOSE OF THE STORM DRAINAGE EASEMENT (SDE) IS TO PROVIDE STORM WATER CONVEYANCE AND ANY STRUCTURES AND/OR OBSTRUCTION TO STORM WATER FLOW IS PROHIBITED.

28. THE DEVELOPER SHALL MAINTAIN EACH STREAM, CREEK, OR BACKWASH CHANNEL IN AN UNOBSTRUCTED STATE AND SHALL REMOVE FROM THE CHANNEL AND BANKS OF THE STREAM ALL DEBRIS, LOGS, TIMBER, JUNK AND OTHER ACCUMULATIONS.

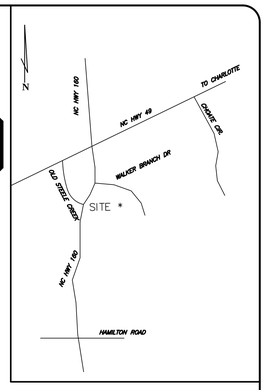
29. "AS-BUILT" DRAWINGS AND PLANS OF THE STORM DRAINAGE SYSTEM, INCLUDING DESIGNED DITCHES, MUST BE SUBMITTED PRIOR TO SUBDIVISION FINAL INSPECTION TO THE CITY/COUNTY ENGINEERING DEPARTMENT IN ACCORDANCE WITH THE CITY/COUNTY SUBDIVISION ORDINANCE.

30. THE DEVELOPER SHALL CONTACT THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (GUS JORDI, 704-336-7086) TO IDENTIFY ANY CONFLICTS WITH TRAFFIC SIGNALIZATION EQUIPMENT. 60-90 DAYS WILL BE REQUIRED TO COORDINATE RELOCATION. DEVELOPER SHALL BE RESPONSIBLE FOR ALL RELATED RELOCATION COST AND/OR ANY REPAIR COST CAUSED BY THE CONTRACTOR/DEVELOPER.

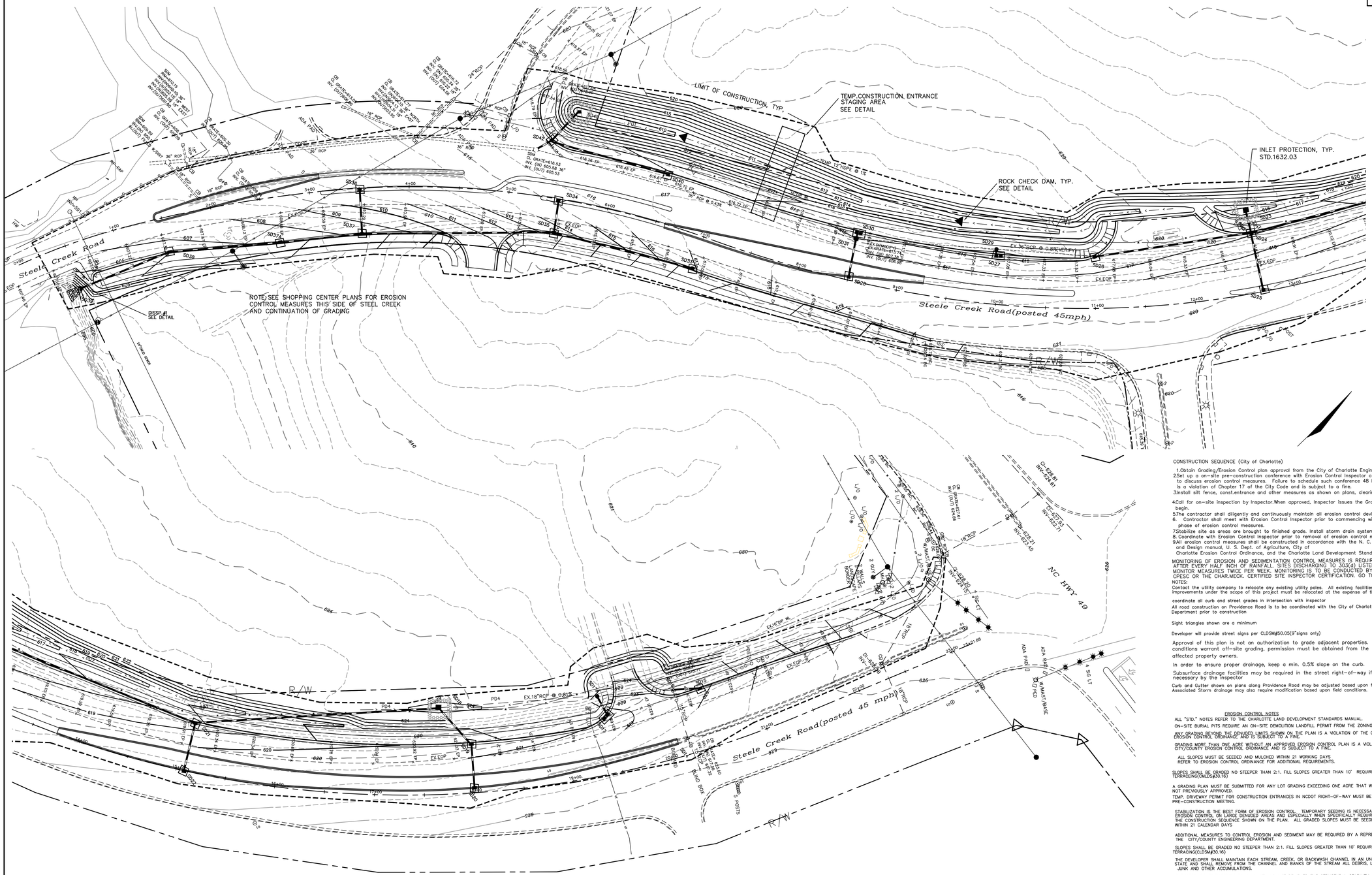
40 0 20 40 80 160
SCALE: 1" = 40'

CALL NC ONE CALL CENTER BEFORE YOU DIG
STOP
1-800-632-4949
AVOID UTILITY DAMAGE

DENUDED AREA=6.2 AC
SOILS:MECKLENBURG



VICINITY MAP
NOT TO SCALE



CONSTRUCTION SEQUENCE (City of Charlotte)

1.Obtain Grading/Erosion Control plan approval from the City of Charlotte Engineering Department.
2.Set up a on-site pre-construction conference with Erosion Control Inspector of the City Engineering Department to discuss erosion control measures. Failure to schedule such conference 48 hours prior to any land-disturbing activity is a violation of Chapter 17 of the City Code and is subject to a fine.
3.Install silt fence, const.entrance and other measures as shown on plans, clearing only as necessary to install these devices

4.Call for on-site inspection by Inspector.When approved, Inspector issues the Grading Permit and clearing and grubbing may begin.
5.The contractor shall diligently and continuously maintain all erosion control devices and structures.
6. Contractor shall meet with Erosion Control Inspector prior to commencing with each phase of erosion control measures.
7.Stabilize site as areas are brought to finished grade. Install storm drain system.
8. Coordinate with Erosion Control Inspector prior to removal of erosion control measures.
9.All erosion control measures shall be constructed in accordance with the N. C. Erosion and Sediment Control Planning and Design manual, U. S. Dept. of Agriculture, City of Charlotte Erosion Control Ordinance, and the Charlotte Land Development Standards.

MONITORING OF EROSION AND SEDIMENTATION CONTROL MEASURES IS REQUIRED AT LEAST ONCE A WEEK OR AFTER EVERY HALF INCH OF RAINFALL. SITES DISCHARGING TO 303(d) LISTED STREAMS ARE REQUIRED TO MONITOR MEASURES TWICE PER WEEK. MONITORING IS TO BE CONDUCTED BY A PERSON THAT HOLDS EITHER A CPESC OR THE CHAR.MECK. CERTIFIED SITE INSPECTOR CERTIFICATION. GO TO:CMCSI.CHARLOTTE.ORG FOR MORE DETAILS.

NOTES:

Contact the utility company to relocate any existing utility poles. All existing facilities which conflict with the improvements under the scope of this project must be relocated at the expense of the applicant.

coordinate all curb and street grades in intersection with inspector

All road construction on Providence Road is to be coordinated with the City of Charlotte Engineering Department prior to construction

Sight triangles shown are a minimum

Developer will provide street signs per CLDSM#50.05(9"signs only)

Approval of this plan is not an authorization to grade adjacent properties. When field conditions warrant off-site grading, permission must be obtained from the affected property owners.

In order to ensure proper drainage, keep a min. 0.5% slope on the curb.

Subsurface drainage facilities may be required in the street right-of-way if deemed necessary by the inspector

Curb and Gutter shown on plans along Providence Road may be adjusted based upon field staking by City Engineering. Associated Storm drainage may also require modification based upon field conditions.

EROSION CONTROL NOTES

ALL "STD." NOTES REFER TO THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.

ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.

ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY/COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE CITY/COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

ALL SLOPES MUST BE SEEDED AND MULCHED WITHIN 21 WORKING DAYS REFER TO EROSION CONTROL ORDINANCE FOR ADDITIONAL REQUIREMENTS.

SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADDITIONAL TERRACEING(CMLDS#30.16)

A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING EXCEEDING ONE ACRE THAT WAS NOT PREVIOUSLY APPROVED.

TEMP. DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NCDOT RIGHT-OF-WAY MUST BE PRESENTED AT THE PRE-CONSTRUCTION MEETING.

STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE SHOWN ON THE PLAN. ALL GRADED SLOPES MUST BE SEEDED AND MULCHED WITHIN 21 CALENDAR DAYS

ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY/COUNTY ENGINEERING DEPARTMENT.

SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADDITIONAL TERRACING(CLDSM#30.16)

THE DEVELOPER SHALL MAINTAIN EACH STREAM, CREEK, OR BACKWASH CHANNEL IN AN UNOBSTRUCTED STATE AND SHALL REMOVE FROM THE CHANNEL AND BANKS OF THE STREAM ALL DEBRIS, LOGS, TIMBER, JUNK AND OTHER ACCUMULATIONS.

THE MECK. CO. ENGINEERING DEPARTMENT HAS NOT REVIEWED THE STRUCTURAL STABILITY OF ANY RETAINING WALLS ON THE SITE AND DOES NOT ASSUME RESPONSIBILITY FOR THEM.

REV.		DATE
1	CDOT/CQLI & CITY COMMENTS	1.27.13
2	CDOT-NCDOT COMMENTS	1.20.14

DRAWING SCALE: 1" = 40'
PROJECT DATE: 1.27.13
PROJECT NUMBER: 12-0-0-0-0-0-0-0
PHASE: TEAM
PLOT DATE:
PROJECT MANAGER: KEVIN S. CALCHILL
DESIGN BY:
APPROVED BY:
PLT SCALE:

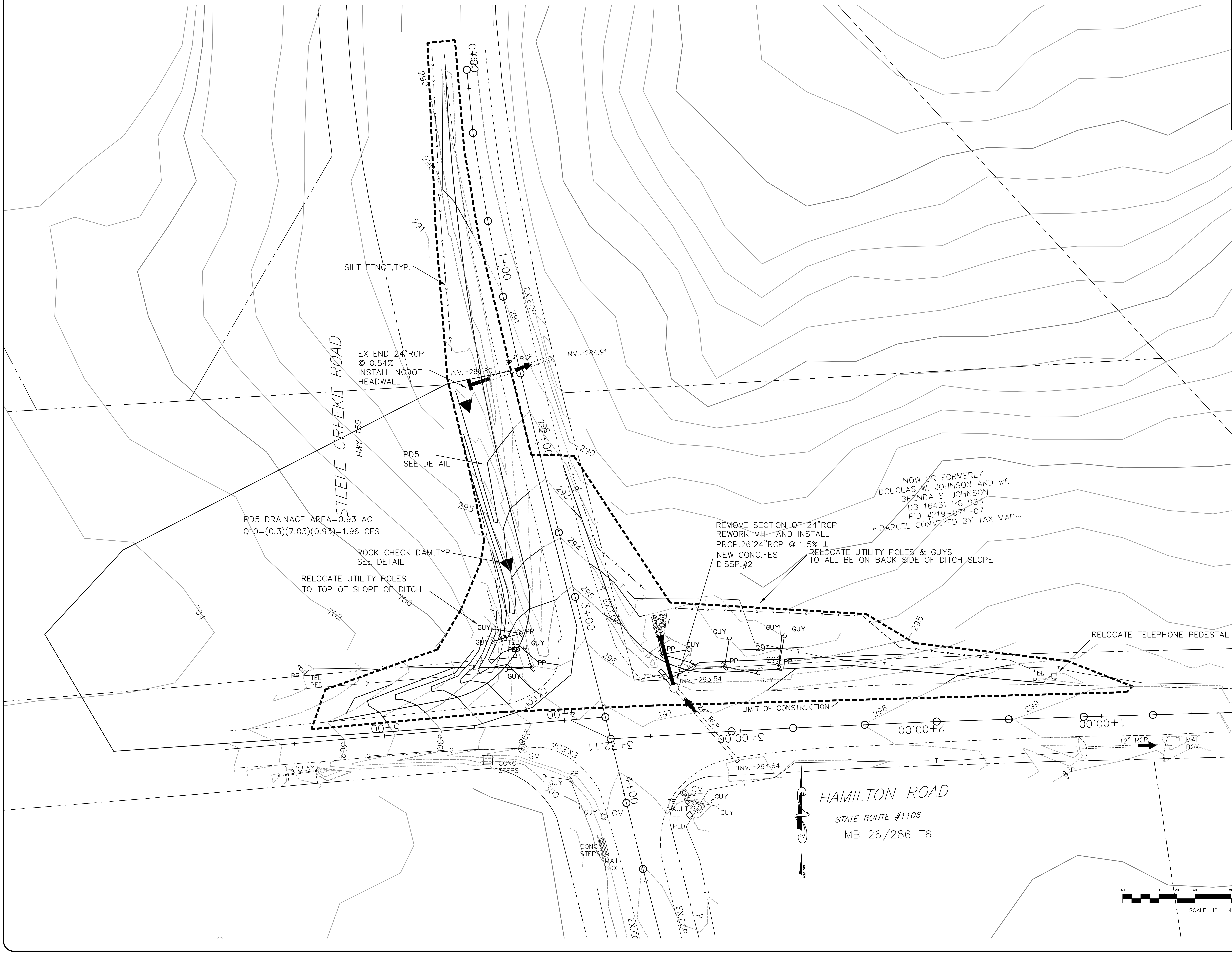
GEOSCIENCE GROUP
Transportation Engineering
Charlotte, NC 28217
Phone: 704.525.3093
Fax: 704.525.2051
www.geoscienceengineering.com

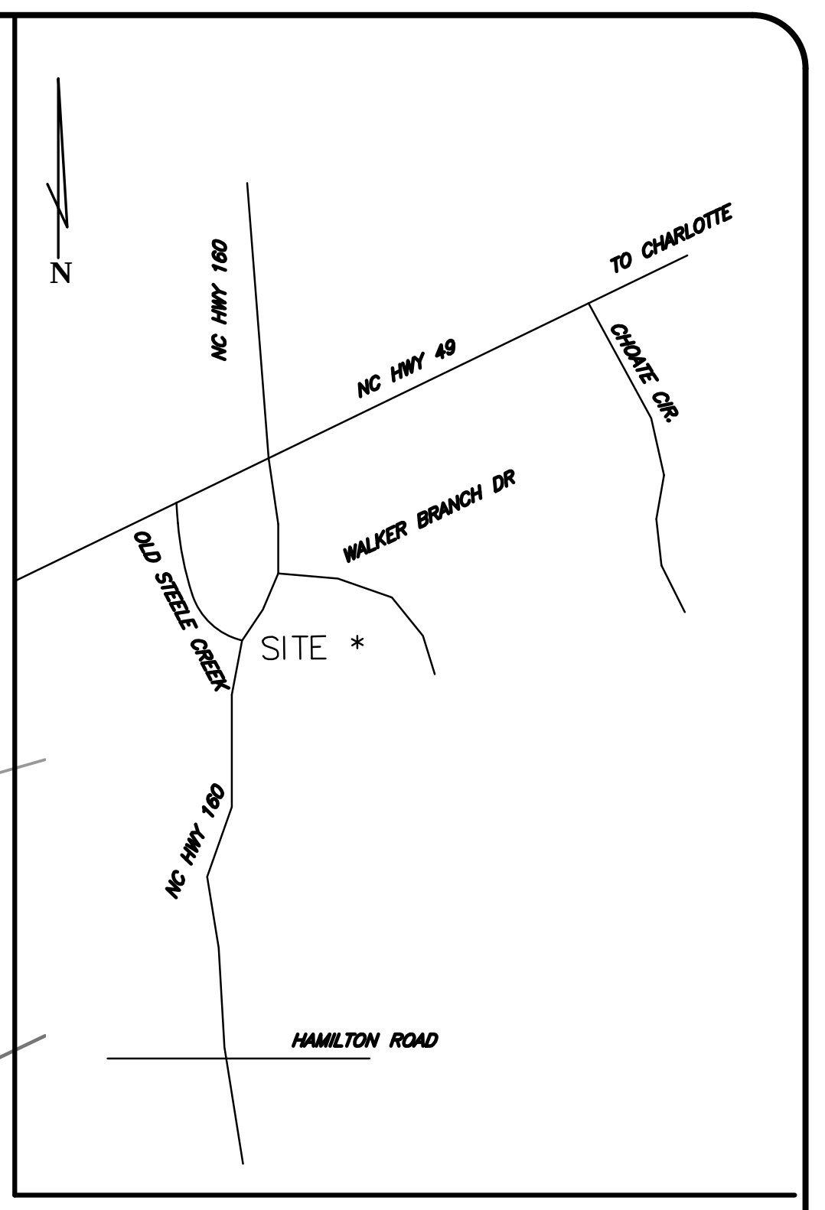
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10725 KEVIN S. CALCHILL
12-14

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

STEELE CREEK ROAD
GRADING, DRAINAGE AND EC

C2.1





VICINITY MAP
NOT TO SCALE

DEUNDED AREA = 0.4 AC

GEOSCIENCE GROUP
Incorporated
500-K Clanton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
www.geosciencegroup.com

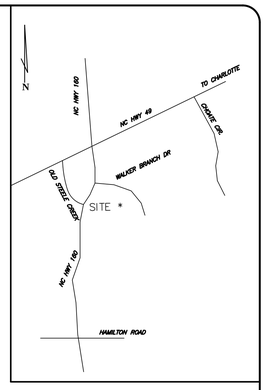
PROJECT MANAGER	DRAWING SCALE	REV.		DATE
DESIGN BY	PROJECT DATE	1	CDOT/DOT & CITY COMMENTS	11.27.13
APPROVED BY	PROJECT NUMBER	2	CDOT-NCDOT COMMENTS	1.20.14
FILE NAME	PHASE / TASK			
	PLOT DATE			

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

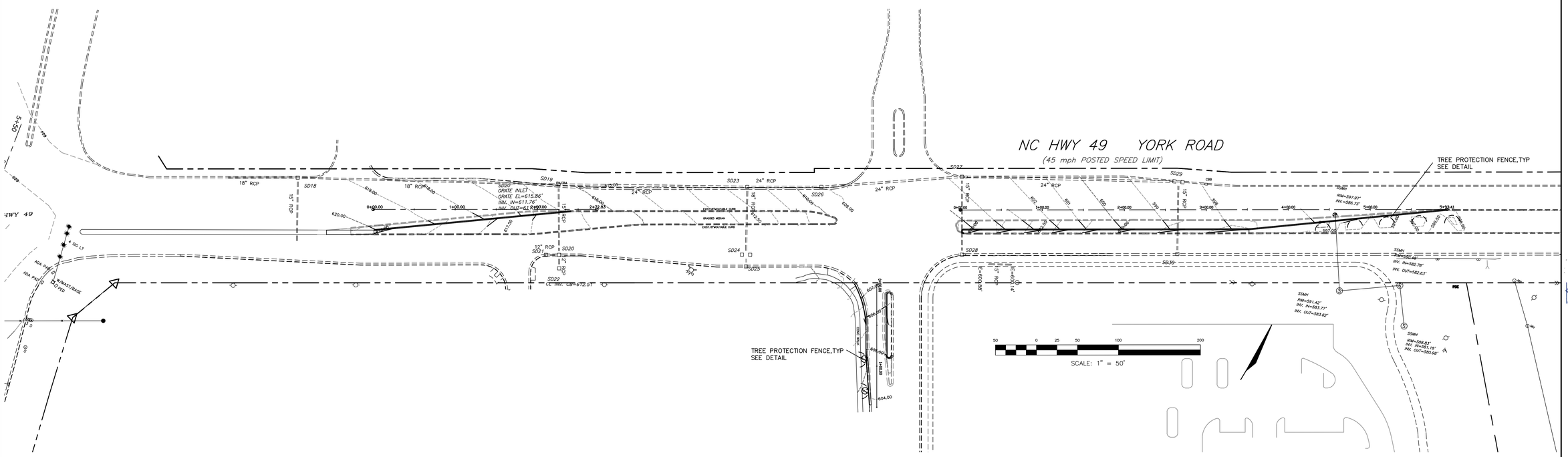
SEAL
10725
KEVIN S. CALDWELL
1.20.14

HAMILTON AND STEELE CREEK RD
GRADING, DRAINAGE AND EC

C2.2



VICINITY MAP
NOT TO SCALE



PROJECT MANAGER	DRAWING SCALE	REV.	
DESIGN BY	PROJECT DATE	1	CDOT/DOT & CITY COMMENTS
APPROVED BY	PROJECT NUMBER		
FILE NAME	PHASE / TASK		
	PLOT DATE		

DATE
11.27.17

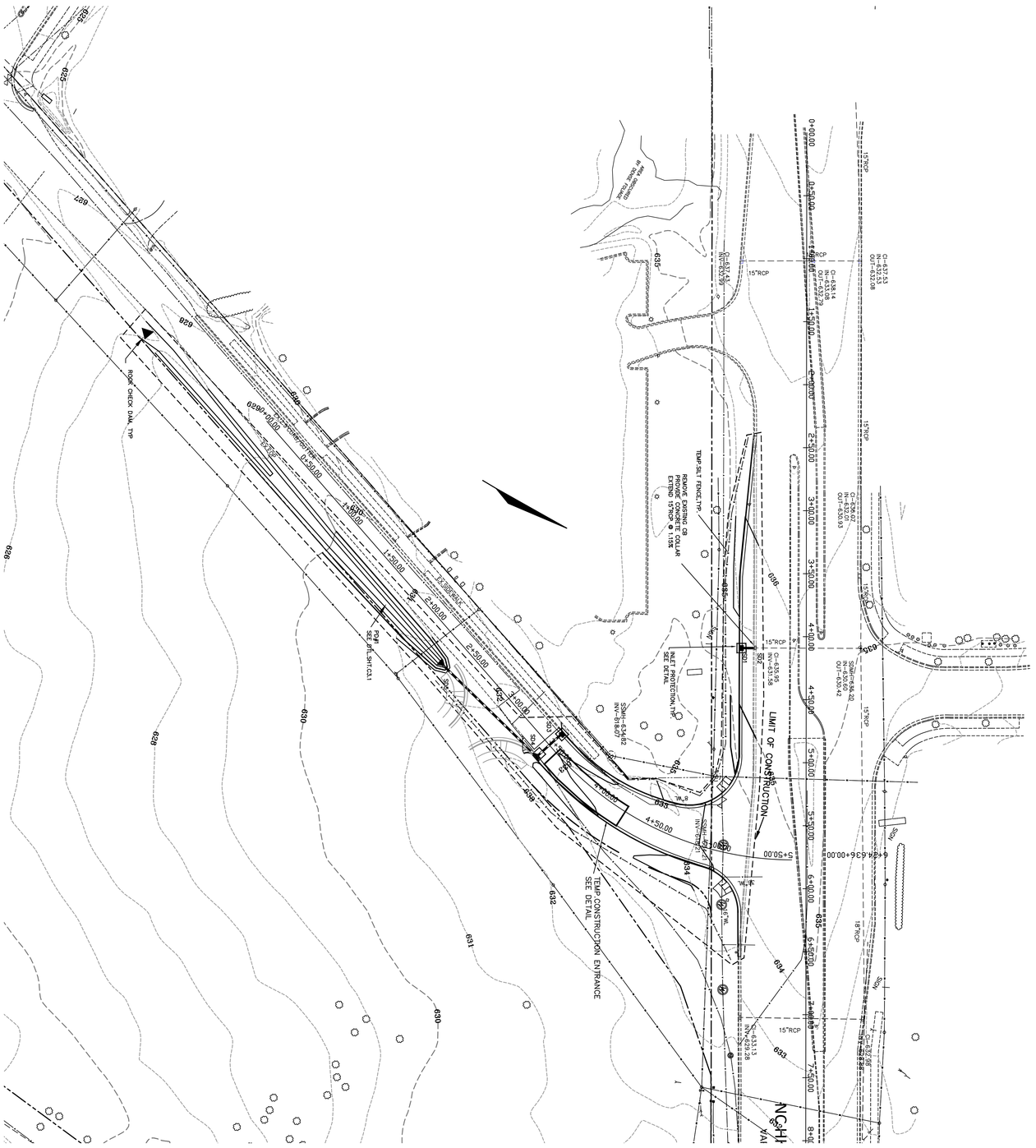
GEOSCIENCE GROUP
Transforming Technology
Charlotte, NC 28217
Phone: 704.525.3083
Fax: 704.525.2051
www.geosciencegroup.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10725 LEWIS S. CALDWELL
11.27.17

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

HWY 49 LEFT TURN LANES
GRADING AND DRAINAGE

C2.3



DENUDED AREA=1.0 AC

VICINITY MAP
NOT TO SCALE

SCALE: 1" = 40'

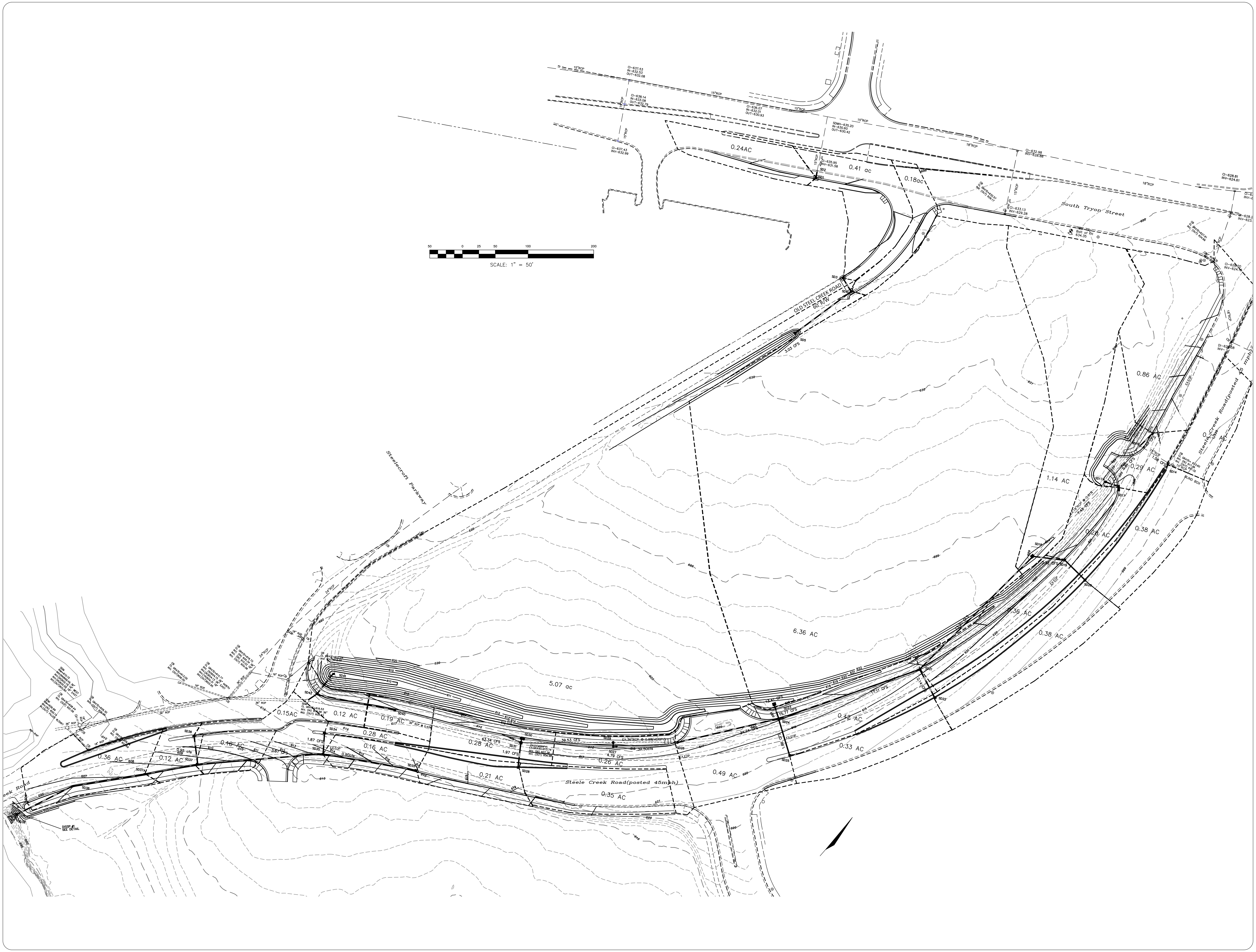
C2.4

OLD STEELE CREEK AND HWY 49
GRADING & DRAINAGE & EC

RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

GEOSCIENCE GROUP
Independent
15804 Clanton Road
Charlotte, NC 28217
Phone: 704.525.2003
Fax: 704.525.2051
www.geosciencegroup.com

PROJECT MANAGER	DRAWING SCALE	REV.		DATE
DESIGN BY	PROJECT DATE	1	CDOT/DOT & CITY COMMENTS	11.27.13
APPROVED BY	PROJECT NUMBER			
FILE NAME	PHASE / TASK			
	PLOT DATE			



PROJECT MANAGER	DRAWING SCALE	REV.		DATE
DESIGN BY	PROJECT DATE	1	CDOT-NCDOT COMMENTS	1.20.14
APPROVED BY	PROJECT NUMBER			
	PHASE / TASK			
FILE NAME	PLOT DATE			

GEOSCIENCE GROUP
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500-K Clanton Road
Charlotte, NC 28217
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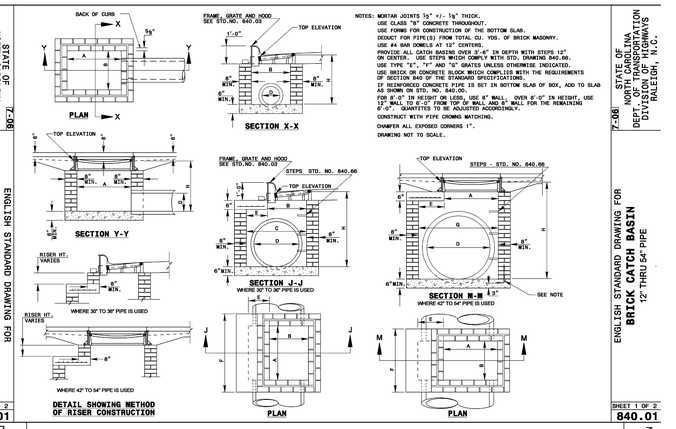
Fax: 704.525.2051
www.geosciencegroup.com

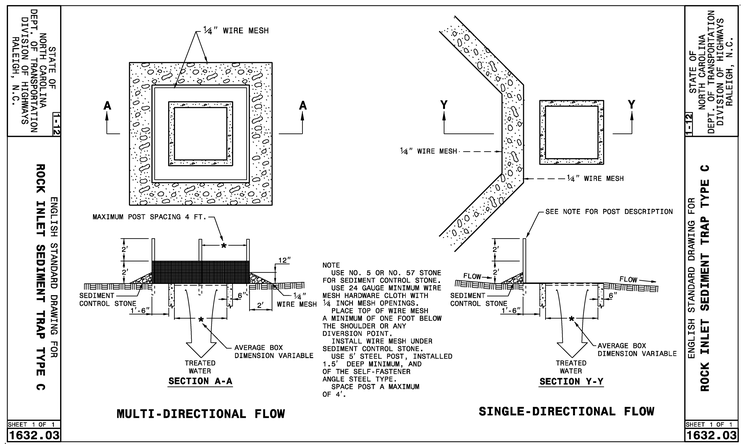
RIVERGATE IV ROADWAY PLANS
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

Kevin S. Caldwell 1.20.14
SEAL 10725
KEVIN S. CALDWELL

DRAINAGE AREAS

C2.5





UPSTREAM STR	DOWNSTREAM STR	DIAMETER INCHES	LENGTH FT.	SLOPE %	DRAINAGE AREA (AC)	RUNOFF COEFF "C"	INLET RUNOFF CFS	TOTAL FLOW CFS	FULL FLOW CAPACITY	UPSTREAM INVERT	DOWNSTREAM INVERT	STR. #	TYPE	STR ELEV.	GUT. FLOW*	SPREAD	Q PASS	COMMENT
												SD39	FES	598.78				
SD38	SD39	15	95	1.77	0.36	0.80	2.36	8.55	9.31	600.49	598.81	SD38	CB	605.51	1.15	3.48		
SD37A	SD38	15	110	1.39	0.12	0.80	0.67	6.19	8.25	602.22	600.69	SD37A	CB	607.28	0.38	2.52	0.00	
SD37	SD37A	15	82	1.00	0.16	0.80	0.90	5.52	7.00	603.24	602.42	SD37	CB	608.22	0.51	2.61	0.01	
SD36	SD37	15	42	8.71	0.15	0.90	0.95	0.10	20.65	607.10	603.44	SD36	DI	611.10	0.54	3.81	0.03	
SD35	SD37	15	190	0.76	0.16	0.80	0.90	3.67	12.28	609.30	603.44	SD35	CB	631.30	0.56	2.52	0.00	
SD34	SD35	15	30	5.33	0.28	0.95	1.87	1.87	16.16	611.10	609.50	SD34	DI	615.10	1.06	3.16	0.02	
SD33	SD35	15	145	2.38	0.16	0.80	0.90	0.90	10.80	612.95	609.50	SD33	CB	616.95	0.51	3.89	0.05	
SD42	EX.MH	30	14	1.00	0.12	0.80	0.67	15.64	44.43	605.74	605.60	SD42	CB	616.30	3.38	2.15		
SD41	SD42	30	36	1.00	5.07	0.30	10.69	14.97*	44.43	606.10	605.74	SD41	DI	609.00				*ADD 3.03(SD5)NOTE 1
SD40	SD42	15	118	1.00	0.19	0.80	1.25	1.25	7.00	611.45	610.27	SD40	CB	616.45	0.61	2.51		
												SD31	JB	616.00				
SD28	SD31	15	34	1.00	0.35	0.80	1.97	1.97	7.00	612.69	612.35	SD28	CB	617.69	1.12	2.88		
SD29	SD31	36	140	0.80	~	~	~	39.53	64.62	608.49+/-	607.38	SD29	JB	616.00				
SD30	SD31	36	4	0.50	0.28	0.80	1.84	41.39	51.09	611.70	611.68	SD30	CB	615.70	0.90	2.88		
SD27	SD29	15	6	1.00	0.73	0.80	4.79	4.79	39.74	610.00	609.94	SD27	CB	615.45	2.34	4.02	~	USE DBL-CB
SD26	SD29	36	98	0.80	0.49	0.80	2.76	37.50	64.62	609.26+/-	608.49+/-	SD26	CB	616.00	1.56	6.29	0.28	
SD24	SD26	30	158	1.16	0.42	0.80	2.36	34.47	47.88	611.10	609.26+/-	SD24	CB	617.70	1.48	5.36	0.20	
SD23	SD24	24	22	1.00	6.36	0.30	13.41	13.41	24.51	610.50	610.28	SD23	DI	615.00				NOTE 1
SD25	SD24	15	50	3.62	0.33	0.80	1.86	1.86	13.31	612.21	610.40	SD25	CB	620.00	1.28	5.84	0.20	
SD21	SD24	24	226	0.50	0.36	0.80	2.02	17.11	17.33	612.43	611.30	SD21	CB	618.44	1.03	5.38	0.14	
SD22	SD21	15	46	4.62	0.38	0.80	2.14	2.14	17.04	616.60	613.87	SD22	CB	621.60	1.36	5.97	0.22	
SD18	SD21	24	244	0.50	1.14	0.30	2.40	13.20	17.33	613.85+/-	612.63	SD18	DI	623.00				NOTE 1
SD19	SD18	15	38	3.18	0.28	0.60	1.18	3.32	12.48	615.00	613.79+/-	SD19	CB	620.29	0.67	3.56	0.03	
SD20	SD19	15	44	8.64	0.38	0.80	2.14	2.14	20.57	619.00	615.20	SD20	CB	622.78	1.43	4.72	0.14	
SD17A	SD18	18	154	0.81	~	~	~	7.48	10.24	615.1+/-	613.85+/-	SD17A	JB	624.00				
SD17	SD17A	15	20	1.00	0.29	0.70	1.67	1.67	7.00	617.60	617.40	SD17	CB	621.60	0.81	2.65	0.01	
SD16	SD17A	18	76	0.81	~	~	~	5.81	10.24	615.71	615.1+/-	SD16	JB	622.65				CONVERT TO JB
SD15	SD16	15	14	1.00	0.86	0.70	4.23	4.23	7.00	618.00	617.86	SD15	CB	622.27	1.72	7.93	0.61	
SD14	SD16	15	49	2.98	0.25	0.90	1.58	1.58	12.08	617.32	615.86	SD14	EXIST	623.60	0.90	5.12	0.11	
												SD5	FES					CONC.FES
SD4	SD5	15	108	0.50	0.18	0.80	1.01	3.03	4.95	628.93	628.39	SD4	CB	632.50	0.58	4.99	0.06	
SD3	SD4	15	24	0.50	0.41	0.70	2.02	2.02	4.95	629.25	629.13	SD3	CB	632.50	1.32	6.79	0.28	
SD1	SD2(EXCB)	15	8	1.00	0.24	0.80	1.35	1.35	7.00	631.66	631.58	SD1	CB	635.30	0.77	6.82	0.17	

I10=7.03 in/hr.

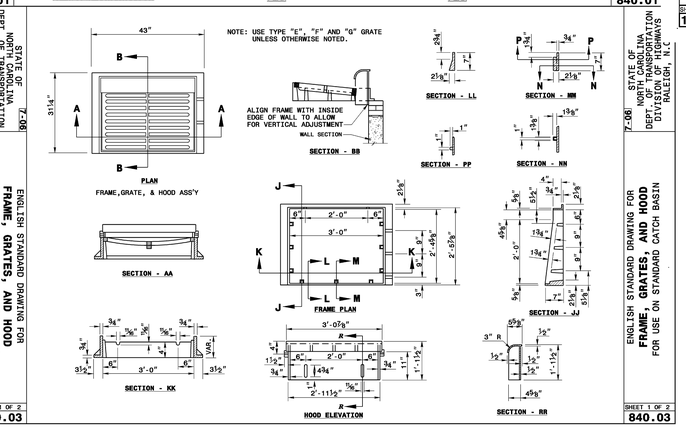
I25=8.21 in/hr.

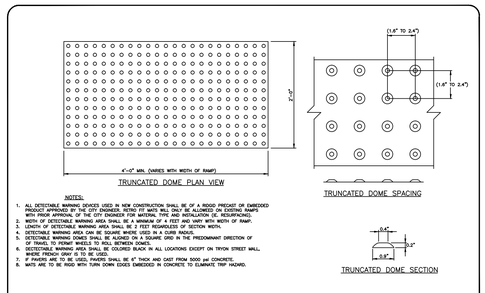
Gutter Flow is (C x 4in/hr x A) + Qpass

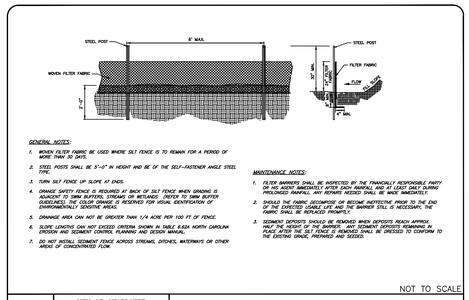
Mannings n=0.12

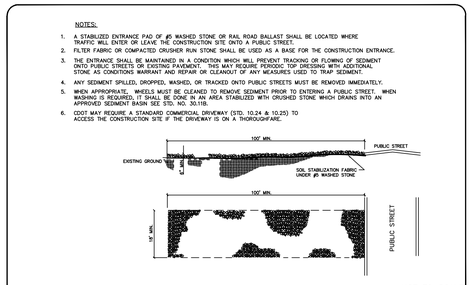
NOTE 1: NCDOT 840.05 OPEN ON TWO SIDES WITH 3000 PSI 6"CONCRETE APRON 5'WIDE ALL SIDES

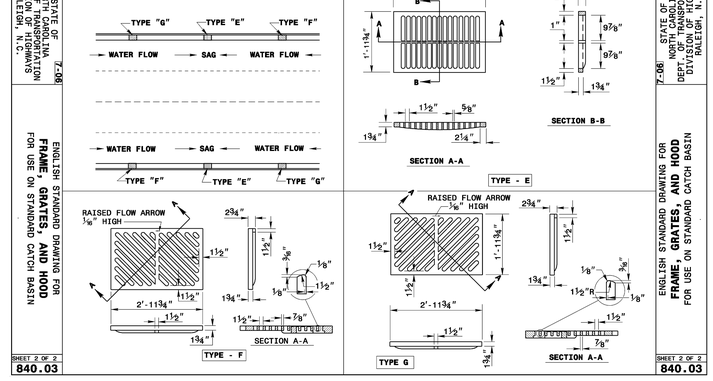
Denotes inverts to be field verified

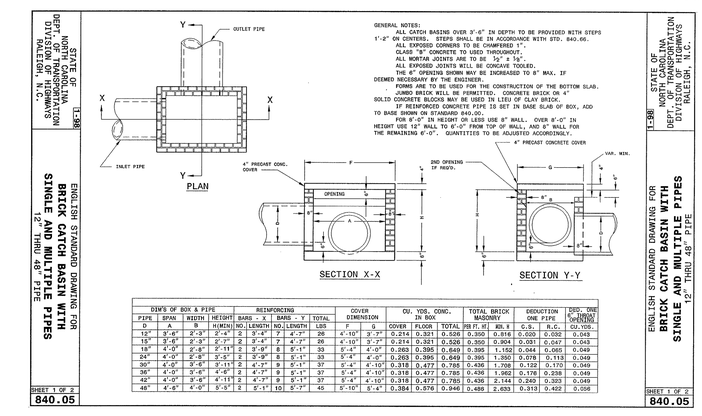




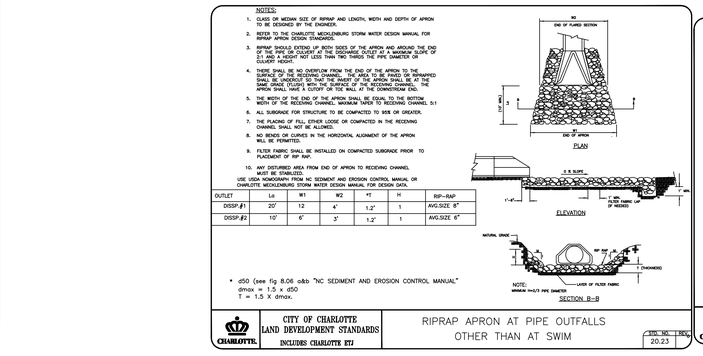








DIM'S OF BOX & PIPE				REINFORCING					COVER DIMENSION		CU. YDS. CONC. IN BOX			TOTAL BRICK MASONRY			DEDUCTION ONE PIPE		CPD. ONE PIPE (ADD TO BOX CU.YDS.)
PIPE	SPAN	WIDTH	HEIGHT	BARS - X		BARS - Y		TOTAL	F	G	COVER	FLOOR	TOTAL	PER FT.	#/	BDL #	C.D.	R.C.	CU.YDS.
D	A	B	H(MIN)	NO.	LENGTH	NO.	LENGTH												
12"	3'-6"	2'-3"	2'-4"	2	3'-4"	7	4'-2"	28	4'-10"	3'-7"	0.214	0.321	0.526	0.350	0.816	0.020	0.020	0.002	0.043
15"	3'-6"	2'-3"	2'-7"	2	3'-4"	7	4'-2"	28	4'-10"	3'-7"	0.214	0.321	0.526	0.350	0.904	0.031	0.047	0.047	0.043
18"	4'-0"	2'-8"	2'-11"	2	3'-9"	8	5'-1"	33	5'-4"	4'-0"	0.263	0.395	0.649	0.395	1.152	0.044	0.065	0.049	0.049
24"	4'-0"	2'-8"	3'-5"	2	3'-9"	8	5'-1"	33	5'-4"	4'-0"	0.263	0.395	0.649	0.395	1.350	0.078	0.113	0.049	
30"	4'-0"	3'-4"	3'-11"	2	4'-7"	9	5'-1"	37	5'-4"	4'-10"	0.318	0.477	0.795	0.436	1.708	0.122	0.170	0.049	
36"	4'-0"	3'-6"	4'-6"	2	4'-7"	9	5'-1"	37	5'-4"	4'-10"	0.318	0.477	0.795	0.436	1.962	0.176	0.238	0.049	
42"	4'-0"	3'-6"	4'-11"	2	4'-7"	9	5'-1"	37	5'-4"	4'-10"	0.318	0.477	0.795	0.436	2.144	0.240	0.303	0.049	
48"	4'-6"	4'-0"	5'-5"	2	5'-1"	10	5'-7"	45	5'-10"	5'-4"	0.384	0.576	0.946	0.488	2.633	0.313	0.422	0.056	



TEMPORARY SEEDING FOR WARM AND COOL SEASON

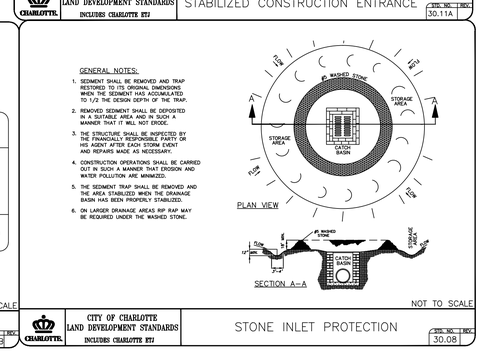
	EARLY SUMMER SEASON	STEEP SLOPES
SEEDING MIXTURE	40 lbs/acre of German millet 80 lbs/acre of tall fesue	120 lbs/acre Rye (grain) 80 lbs/acre tall fesue
SEEDING DATES	May 1 – August 15 Refertilize if growth is not fully adequate. Apply 4000 lbs/acre straw or equivalent hydroseeding.	October 25 – December 30 Between December 30 – February 15, add 50 lbs/acre of annual Kobe lespedeza. Apply 4000 lbs/acre straw or equivalent hydroseeding.
SEEDING AMENDMENTS	Apply lime and fertilizer per soil tests, or 2000 lbs/acre limestone and 750 lbs/acre 10–10–10 fertilizer.	Apply lime and fertilizer per soil tests, or 2000 lbs/acre limestone and 750 lbs/acre 10–10–10 fertilizer.

NOT TO SCALE

CITY OF CHARLOTTE LAND DEVELOPMENT STANDARDS INCLUDES CHARLOTTE ETJ

SEEDING SCHEDULE (SEASONAL)

STD. NO. 30.17B



	EARLY SUMMER SEASON	STEEP SLOPES
SEEDING MIXTURE	40 lbs/acre of German millet 80 lbs/acre of tall fesue	120 lbs/acre Rye (grain) 80 lbs/acre tall fesue
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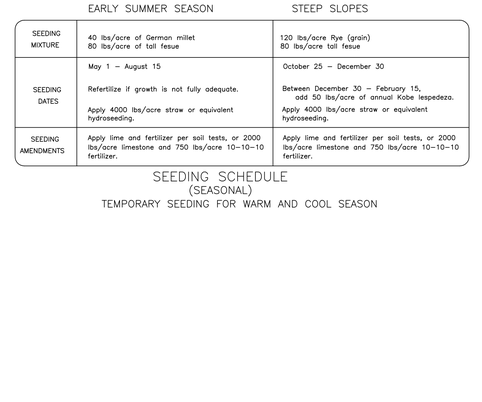
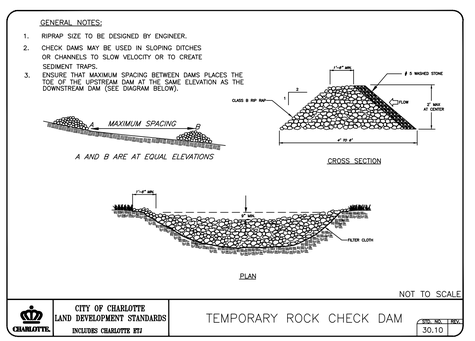
SEEDING AMENDMENTS	Apply lime and fertilizer per soil tests, or 2000 lbs/acre limestone and 750 lbs/acre 10–10–10 fertilizer.	Apply lime and fertilizer per soil tests, or 2000 lbs/acre limestone and 750 lbs/acre 10–10–10 fertilizer.

SEEDING SCHEDULE
(SEASONAL)
TEMPORARY SEEDING FOR WARM AND COOL SEASON





DATE	REV.	DESCRIPTION
1.27.13	1	CDOT/DOT & CITY COMMENTS
3.5.14	2	CDOT/HDOT COMMENTS

DRAWING SCALE: NTS
PROJECT DATE:
PROJECT NUMBER:
PHASE: TASK:
PLOT DATE:
PROJECT MANAGER:
DRAWN BY:
CHECKED BY:
FILE NAME:

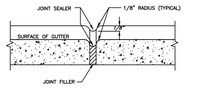
GEOSCIENCE GROUP
Geotechnical Consultants
9800 Kenton Road
Charlotte, NC 28227
Phone: 704.535.3033
Fax: 704.535.3051
www.geoscienceengineering.com

RIVERGATE IV ROADWAY PLAN
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

NORTH CAROLINA PROFESSIONAL SEAL 10725 ENGINEER KEVIN G. CALDWELL
2.20.14

SITE DETAILS

C3.1



TRANSVERSE EXPANSION JOINT

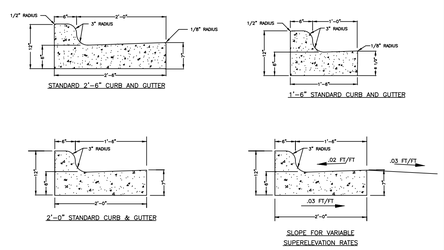
NOTES:

1. CONTRACTION JOINTS SHALL BE SPACED AT 10-FOOT INTERVALS. FOR VALLEY GUTTER, A 10-FOOT SPACING MAY BE USED WHEN A MACHINE IS USED. JOINT SPACING MAY BE ALTERED BY THE CITY ENGINEER TO PREVENT UNCONTROLLED CRACKING.
2. CONTRACTION JOINTS MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1 1/2" SHALL BE OBTAINED.
3. ALL EXPANSION JOINTS SHALL BE SPACED AT 90-FOOT INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS WITH JOINTS IN ABUTTING SIDEWALK.
4. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 P.S.I. IN 28 DAYS.
5. CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ACCESSIBLE RAMPS.
6. TOP 6" OF SUBGRADE BENEATH THE CURB AND GUTTER SHALL BE COMPACTED TO 100% STANDARD PROCTOR DENSITY.

NOT TO SCALE

CITY OF CHARLOTTE LAND DEVELOPMENT STANDARDS — INCLUDES CHARLOTTE ETJ

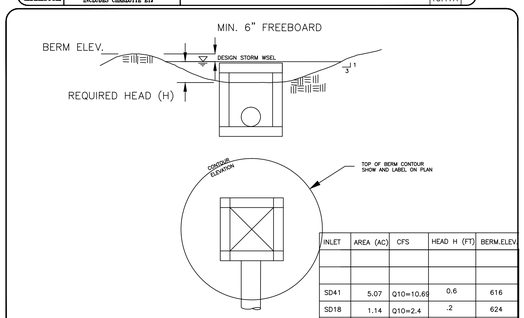
CURB AND GUTTER — STD. NO. 10.17C



NOT TO SCALE

CITY OF CHARLOTTE LAND DEVELOPMENT STANDARDS — INCLUDES CHARLOTTE ETJ

STANDARD CURB AND GUTTER — STD. NO. 10.17A

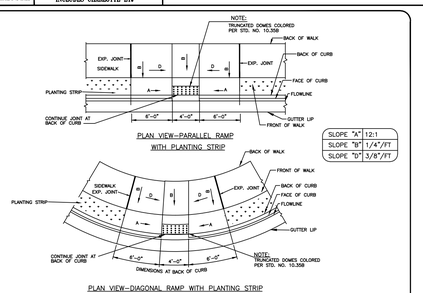


INLET	AREA (AC)	CFS	HEAD H (FT)	BERM.ELEV.
SD41	5.07	Q10=10.66	0.6	616
SD18	1.14	Q10=2.4	.2	624
SD23	6.36	Q10=13.44	0.6	618

NOT TO SCALE

CITY OF CHARLOTTE LAND DEVELOPMENT STANDARDS — INCLUDES CHARLOTTE ETJ

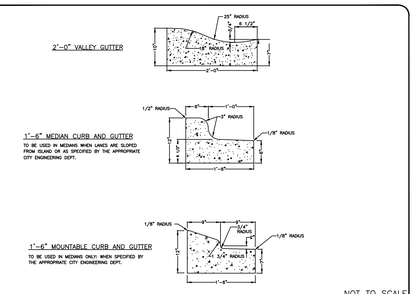
GRADING AT DROP INLET — STD. NO. 20.35



NOT TO SCALE

CITY OF CHARLOTTE LAND DEVELOPMENT STANDARDS — INCLUDES CHARLOTTE ETJ

ACCESSIBLE RAMP STANDARD WITH PLANTING STRIP 2'-6" CURB AND GUTTER — STD. NO. 10.31A



NOT TO SCALE

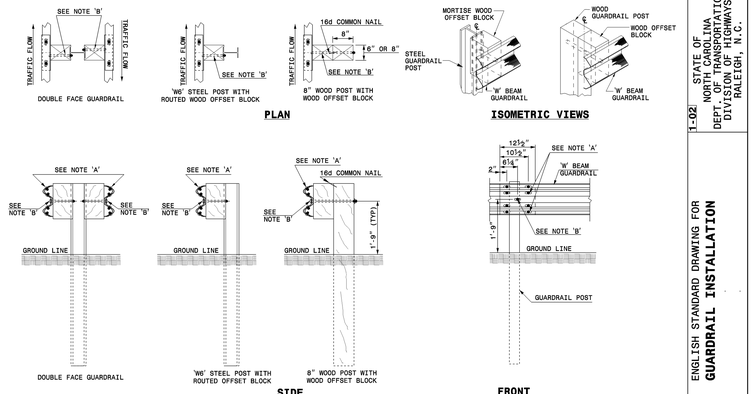
CITY OF CHARLOTTE LAND DEVELOPMENT STANDARDS — INCLUDES CHARLOTTE ETJ

CURB AND GUTTER — STD. NO. 10.17B

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-02

ENGLISH STANDARD DRAWING FOR **GUARDRAIL INSTALLATION**



NOTES:
A - 5/8" DIA. BUTTON HEAD SPLICE BOLT 1¼" LONG WITH STD. WASHER UNDER NUT (8 REQ. PER SPLICE JOINT).
B - 5/8" DIA. BUTTON HEAD BOLT 7½"/9" LONG WITH NUT FOR BOLTING 6"/8" ROUTED OFFSET BLOCK TO STEEL POSTS OR 5/8" DIA. BUTTON HEAD BOLT 18" LONG WITH STD. WASHER UNDER NUT FOR BOLTING TO WOOD POSTS (1 REQ. PER LOCATION)
C - FIELD PUNCHING OF HOLES INTO GUARDRAIL SHALL BE AS DIRECTED BY THE ENGINEER.

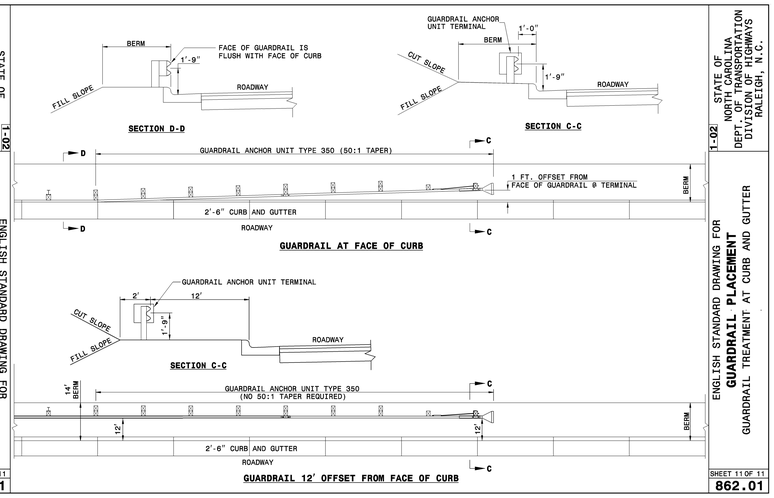
TYPICAL GUARDRAIL AND GUARDRAIL POST ALTERNATIVES

SHEET 3 OF 7 — 862.02

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-02

ENGLISH STANDARD DRAWING FOR **GUARDRAIL PLACEMENT** GUARDRAIL TREATMENT AT CURB AND GUTTER

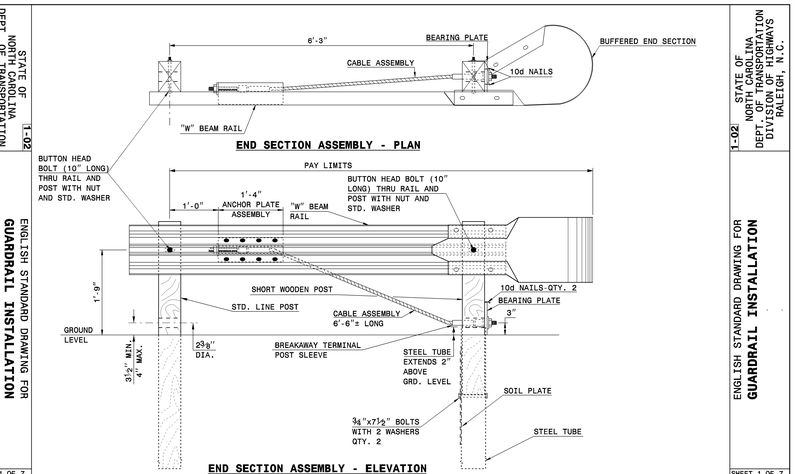


SHEET 11 OF 11 — 862.01

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-02

ENGLISH STANDARD DRAWING FOR **GUARDRAIL INSTALLATION**

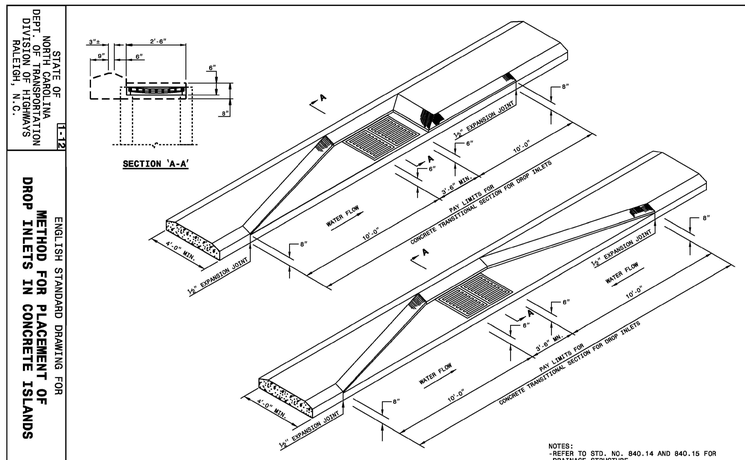


SHEET 1 OF 7 — 862.02

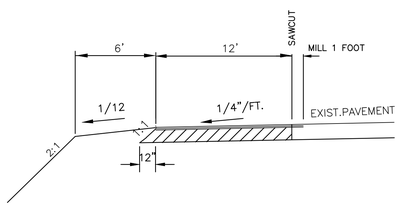
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-12

ENGLISH STANDARD DRAWING FOR **METHOD FOR PLACEMENT OF DROP INLETS IN CONCRETE ISLANDS**

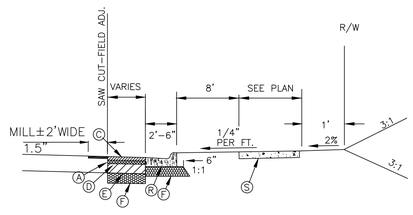


SHEET 1 OF 1 — 852.06



PAVEMENT SECTION HAMILTON ROAD AND STEELE CREEK

2.5" SUPERPAVE SURFACE COURSE, TYPE S-9.5C(PLACED IN 2 LIFTS)
3" SUPERPAVE INTERMEDIATE COURSE, TYPE I-19.0C
8" SUPERPAVE BASE COURSE, TYPE B-25.0C OR 16"CABC IN 2 LIFTS



GENERAL NOTES:

1. THE INTERMIDIATE COURSE IS TO BE PLACED IMMEDIATELY FOLLOWING PREPARATION OF BASE COURSE PLANT MIX TO MEET NCDOT SPECIFICATIONS.
2. THE SURFACE COURSE IS TO BE PLACED FOLLOWING INTERMEDIATE COURSE.
3. DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT SCHEDULE. ALL PERTINENT INFORMATION MAY BE SUBMITTED TO THE APPROPRIATE CITY/COUNTY ENGINEERING DEPT./NCDOT
4. THE CROWN (TRANSVERSE SLOPE) FOR THE TYPICAL SECTION ON THE ROAD IS 1/4" PER FOOT
5. SUBJECT TO NCDOT APPROVAL, OVERLAY MAY BE ALLOWED TO THE EDGE OF TRAVEL LANE. PAVEMENT SHALL BE MILLED TO PROVIDE A SMOOTH PAVEMENT SURFACE TRANSISTION.

PAVEMENT SECTION NC160

- (A) SAWCUT EXISTING PAVEMENT
- (C) 3"/60mm 2 LIFTS Asphalt surface course S9.5B
- (E) 4"/120mm Asphalt Intermediate Course I19.0B
- (E) 7.5"/180mm Asphalt Base Course B25.0B
- (F) 15"ABC
- (R) 2'-6" CURB AND GUTTER
- (S) 4" THICK CONCRETE SIDEWALK

PAVEMENT SECTION NC49

- (A) SAWCUT EXISTING PAVEMENT
- (C) 3"/60mm 2 LIFTS Asphalt surface course S9.5B
- (D) 4"/120mm Asphalt Intermediate Course I19.0B
- (E) 7.5"/180mm Asphalt Base Course B25.0B
- (F) 15"ABC
- (R) 2'-6" CURB AND GUTTER

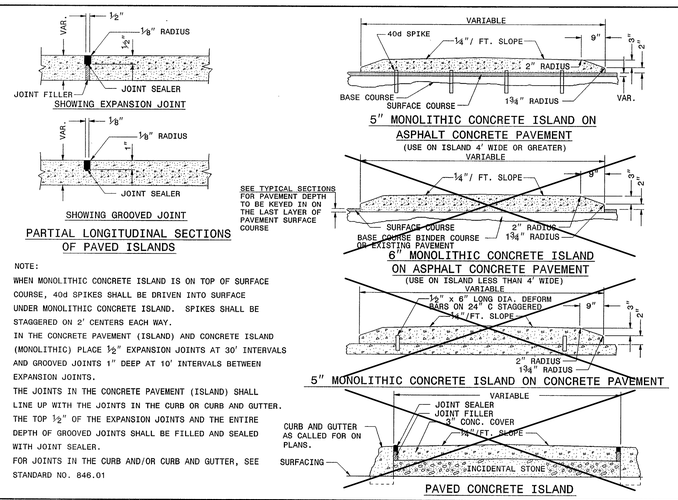
ROAD WIDENING

NOT TO SCALE

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-98

ENGLISH STANDARD DRAWING FOR **CONCRETE ISLANDS**



NOTE:
WHEN MONOLITHIC CONCRETE ISLAND IS ON TOP OF SURFACE COURSE, 40d SPIKES SHALL BE DRIVEN INTO SURFACE UNDER MONOLITHIC CONCRETE ISLAND. SPIKES SHALL BE STAGGERED ON 2' CENTERS EACH WAY.
IN THE CONCRETE PAVEMENT (ISLAND) AND CONCRETE ISLAND (MONOLITHIC) PLACE ½" EXPANSION JOINTS AT 30' INTERVALS AND GROOVED JOINTS 1" DEEP AT 10' INTERVALS BETWEEN EXPANSION JOINTS.
THE JOINTS IN THE CONCRETE PAVEMENT (ISLAND) SHALL LINE UP WITH THE JOINTS IN THE CURB OR CURB AND GUTTER.
THE TOP ½" OF THE EXPANSION JOINTS AND THE ENTIRE DEPTH OF GROOVED JOINTS SHALL BE FILLED AND SEALED WITH JOINT SEALER.
FOR JOINTS IN THE CURB AND/OR CURB AND GUTTER, SEE STANDARD NO. 846.01

SHEET 1 OF 1 — 852.01

REV.	DATE
1	7.23.13
1	1.25.14

DRAWING SCALE: NONE
PROJECT DATE: 7/23/13
PROJECT NUMBER: 2013-0
PHASE: 1.50
PLOT DATE: 1/20/14
PROJECT MANAGER
DESIGN BY
DRAWN BY
CHECKED BY
FILE NAME

GEOSCIENCE GROUP
9000 Harris Corners Parkway, Suite 350
Charlotte, NC 28277
Phone: 704.523.7539
Fax: 704.525.3051
www.geoscienceengineering.com

RIVERGATE IV ROADWAY PLAN
CHARLOTTE, NORTH CAROLINA
CHILDRESS KLEIN PROPERTIES

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16725 — ERWIN S. CALDWELL — 1.20.14

SITE DETAILS

C3.2

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL	THERMOPLASTIC	RAISED PERMANENT

B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

E) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON THE CONCRETE SURFACES PRIOR TO PLACING THERMO PAVEMENT MARKING MATERIAL.

F) ON ASPHALT SURFACES, USE HEATED-IN-PLACE THERMOPLASTIC OR EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS.

G) ON CONCRETE SURFACES, USE HEATED-IN-PLACE THERMOPLASTIC OR COLD APPLIED PLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS.

H) MARKERS SHALL BE INSTALLED ACCORDING TO THE NCDOT ROADWAY STANDARD DRAWING 1250.01.

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
	THERMOPLASTIC (4", 90 MILS)
TA	WHITE EDGELINE
TB	YELLOW EDGELINE
	THERMOPLASTIC (4", 120 MILS)
TC	10 FT. WHITE SKIP
TD	3 FT. - 9 FT./SP WHITE MINISKIP
TE	WHITE SOLID LANE LINE
TH	YELLOW SINGLE CENTER
TI	YELLOW DOUBLE CENTER
T8	2 FT. - 6 FT./SP WHITE MINISKIP
T9	2 FT. - 6 FT./SP YELLOW MINISKIP
	THERMOPLASTIC (8", 90 MILS)
TN	WHITE GORELINE
TO	WHITE DIAGONAL
TP	YELLOW DIAGONAL
	THERMOPLASTIC (8", 120 MILS)
T13	3 FT. - 9 FT./SP WHITE MINISKIP
TQ	WHITE CROSSWALK LINE
TR	WHITE SOLID LANE LINE
	THERMOPLASTIC (24", 120 MILS)
T2	WHITE STOPBAR
	THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS)
UA	LEFT TURN ARROW
UB	RIGHT TURN ARROW
UC	STRAIGHT ARROW
	THERMOPLASTIC PAVEMENT MARKING SYMBOLS (120 MILS)
UI	ALPHA-NUMERIC CHARACTER
	PERMANENT RAISED PAVEMENT MARKERS
▬	CRYSTAL AND RED
◆	YELLOW AND YELLOW

(401) QUANTITY REQ'D 1

36 X 30
R2-1

ONE "U" POST PER SIGN

(402) QUANTITY REQ'D 2

36 X 36
R1-1

ONE "U" POST PER SIGN

(403) QUANTITY REQ'D 7

24 X 30
R4-7

ONE "U" POST PER SIGN

(404) QUANTITY REQ'D 7

18 X 18
OM-1

MOUNT BELOW SIGN 403
IN 7 INSTALLATIONS

(405) QUANTITY REQ'D 6

36 X 36
R5-1

ONE "U" POST PER SIGN

(406) QUANTITY REQ'D 3

36 X 30
R4-4

ONE "U" POST PER SIGN

(407) QUANTITY REQ'D 2

30 X 36
R3-5R

MOUNT BELOW SIGN 402
IN 2 INSTALLATIONS

(408) QUANTITY REQ'D 4

54 x 18
R6-1R

TWO "U" POSTS PER SIGN
MOUNT BACK TO BACK WITH
SIGN 408 IN 1 INSTALLATION

(409) QUANTITY REQ'D 2

30 X 30
W12-1

ONE "U" POST PER SIGN

(410) QUANTITY REQ'D 5

36 X 36
R3-7R

ONE "U" POST PER SIGN

(411) QUANTITY REQ'D 1

24 X 18
R3-17

ONE "U" POST PER SIGN

(412) QUANTITY REQ'D 1

24 X 8
R3-17B

MOUNT BELOW SIGN 411
IN 1 INSTALLATION

(413) QUANTITY REQ'D 1

30 X 36
R6-2

ONE "U" POST PER SIGN

(414) QUANTITY REQ'D 2

36 x 12
R6-1R

MOUNT ABOVE SIGN 405
IN 2 INSTALLATIONS

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM ARE

Jim Are 1/20/2014

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS
9736 Bartlett Road
Charlotte, NC 28227
704 573 3003
License C-3176

REV.	DATE

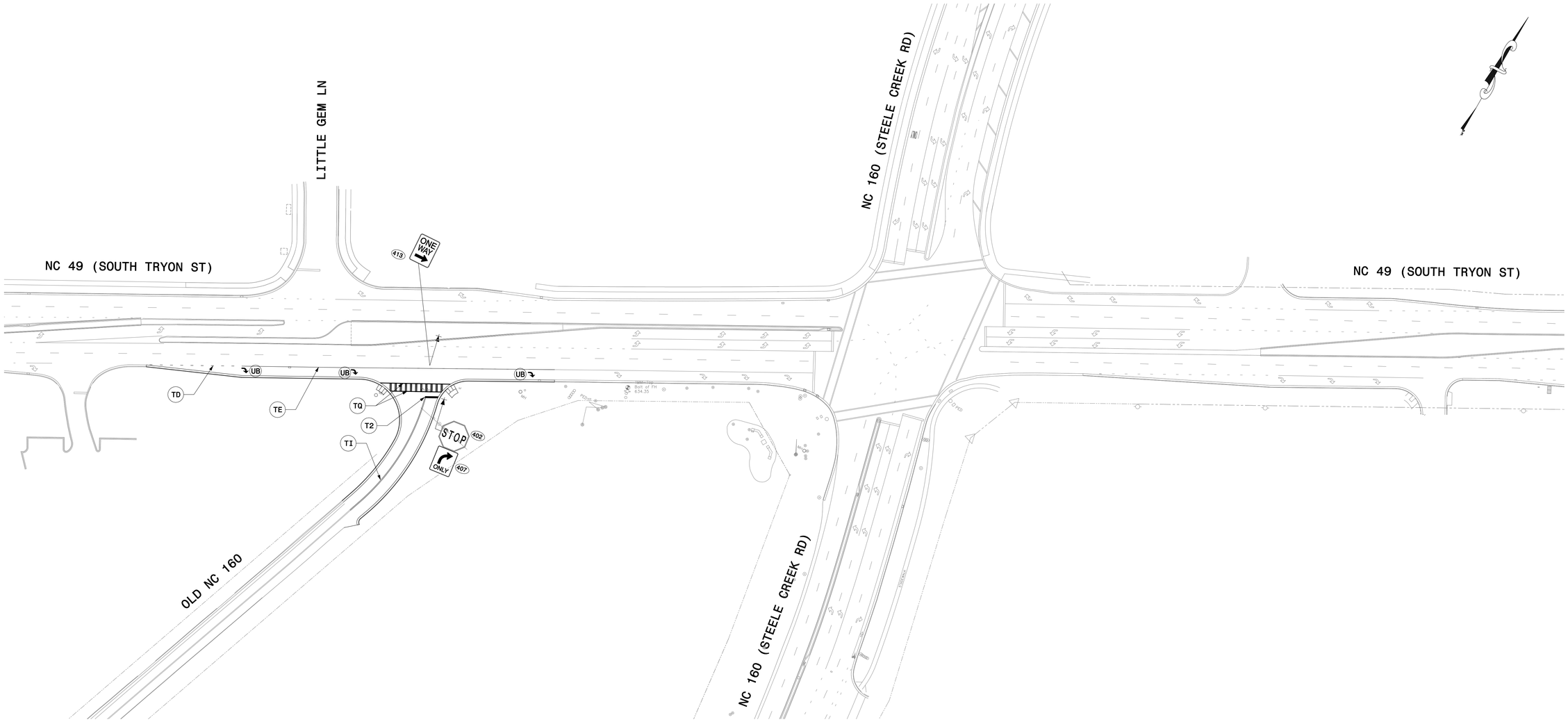
DRAWING SCALE: N/A
PROJECT DATE: 1/20/14
PROJECT MANAGER: JCW
PROJECT NUMBER: 13-0
PHASE: 1
TASK: 100
DRAWN BY: JCW
PLOT DATE: 1/20/14
CHECKED BY: JCW
FILE NAME: PMP 1.0

GEOSCIENCE GROUP
5024 Bentwood Road
Charlotte, NC 28210
Phone: 704.525.3031
Fax: 704.525.3051
www.geosciencegroup.com

PAVEMENT MARKING
NOTES AND SCHEDULE

RIVERGATE
CHARLOTTE, NC

PMP 1.0



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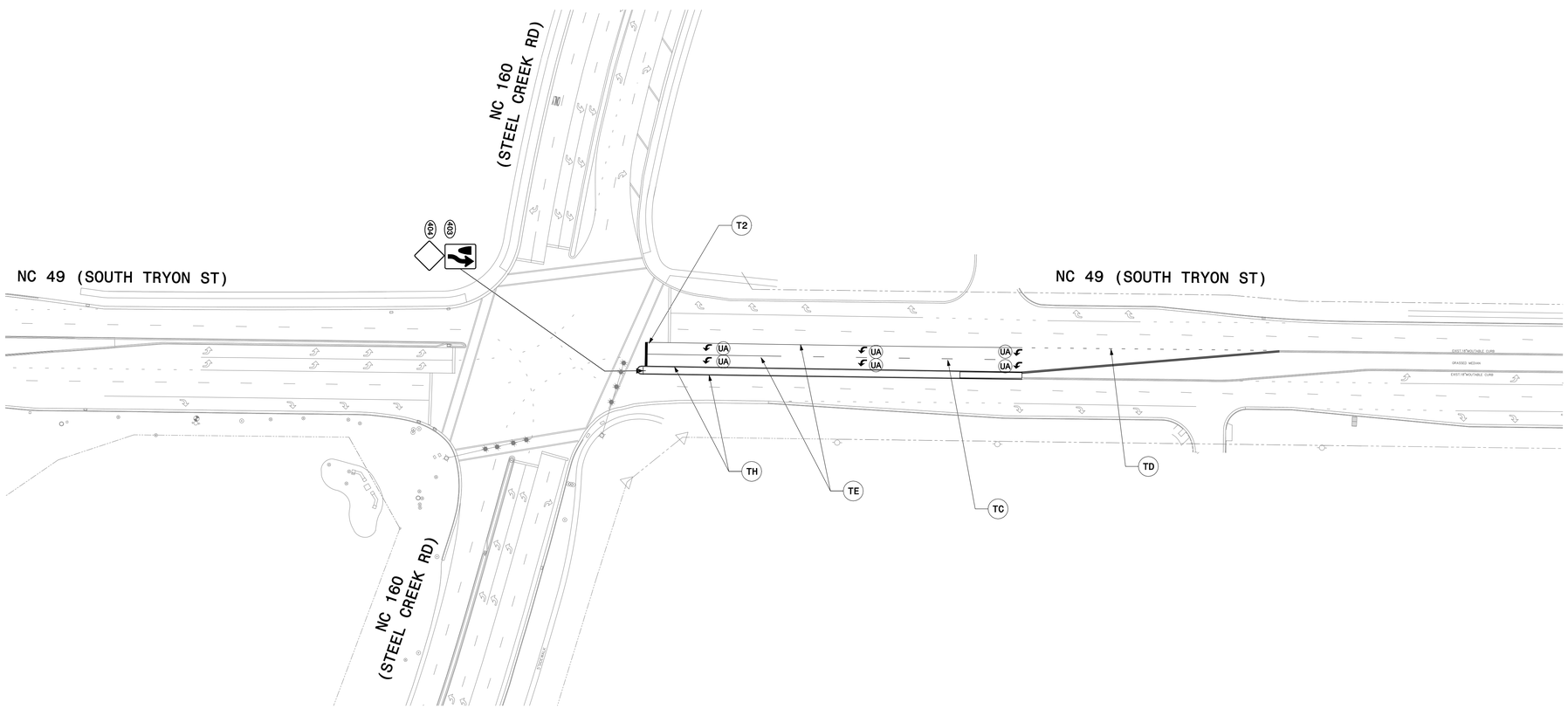
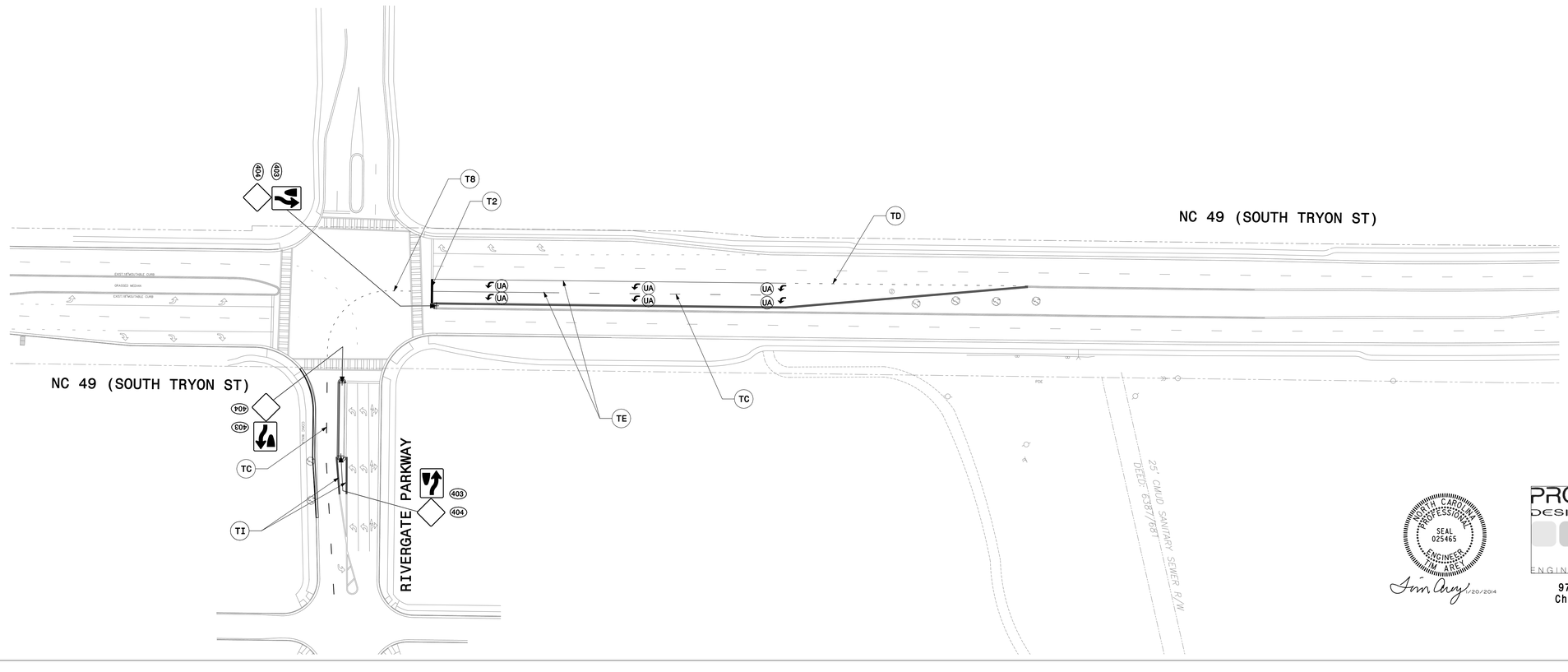
9736 Bartlett Road
Charlotte, NC 28227
704 573 3003
License C-3176

PAVEMENT MARKING AND SIGNING
NC 49 (SOUTH TRYON ST)

RIVERGATE
CHARLOTTE, NC

PMP 1.1





NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM ABEL

Tim Abel 1/20/2014

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

9736 Bartlett Road
Charlotte, NC 28227
704 573 3003
License C-3176

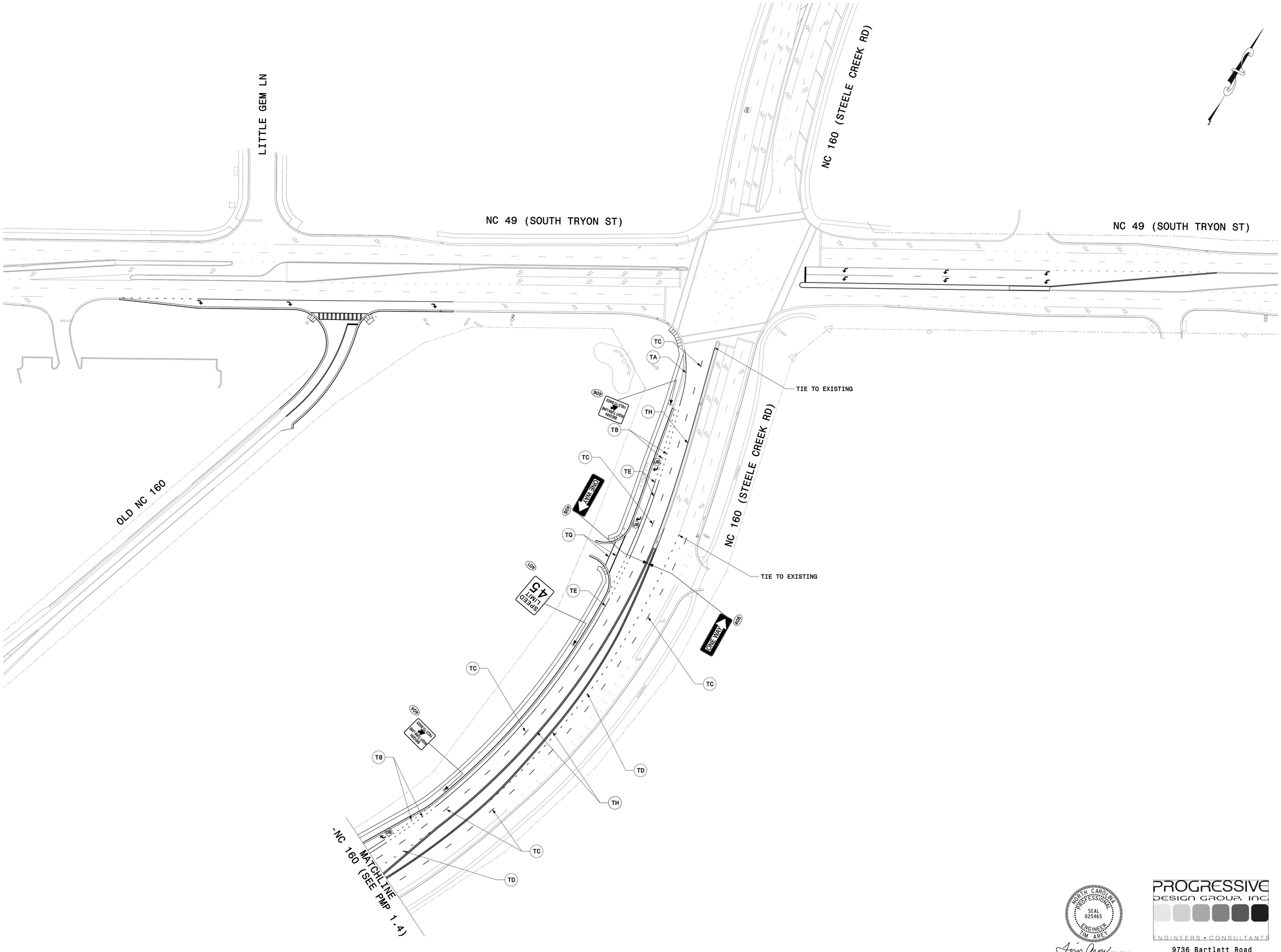
PROJECT MANAGER	DRAWING SCALE	REV.	DATE
DRAWN BY	PROJECT DATE		
CHECKED BY	PROJECT NUMBER		
FILE NAME	PHASE / TASK		
	PLOT DATE		

GEOSCIENCE GROUP
5024 Chesson Road
Charlotte, NC 28213
Phone: 704.525.3051
Fax: 704.525.3051
www.geosciencegroup.com

PAVEMENT MARKING AND SIGNING
NC 49 (SOUTH TRYON ST)

RIVERGATE
CHARLOTTE, NC

PMP 1.2



PROJECT MANAGER	DRAWING SCALE	REV.	DATE
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GEOSCIENCE GROUP
5024 Cheston Road
Charlotte, NC 28210
Tel: 704.525.3051
www.geosciencegroup.com

PAVEMENT MARKING PLAN
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

PMP 1.3

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY

Jim Arey 1/20/2014

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

9736 Bartlett Road
Charlotte, NC 28227
704 573 3003
License C-3176

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY

Jim Arey 1/20/2014

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

9736 Bartlett Road
Charlotte, NC 28227
704 573 3003
License C-3176

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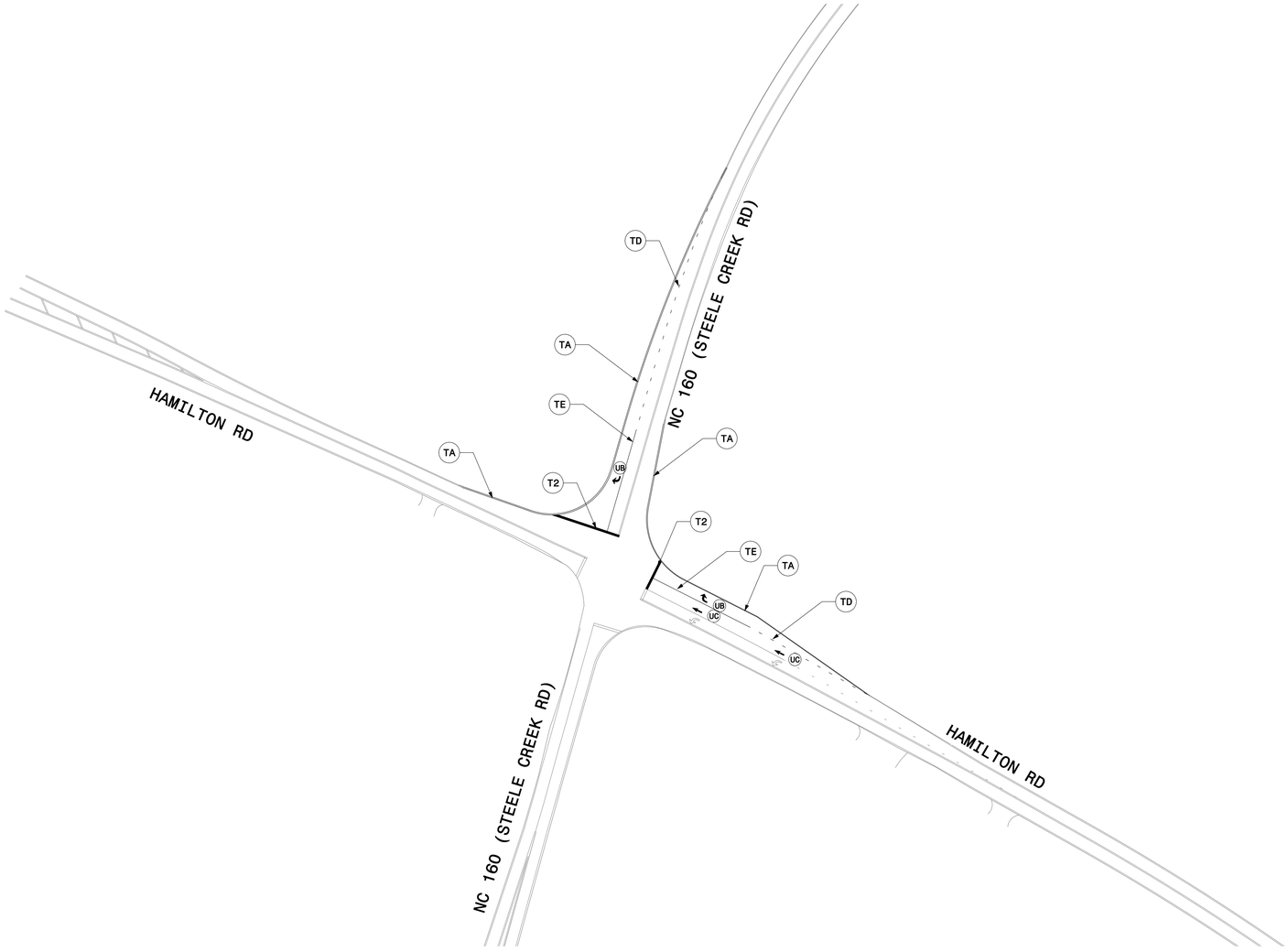
5024 Cheston Road
Charlotte, NC 28210
Tel: 704.525.3051
www.geosciencegroup.com

TRAFFIC CONTROL PLAN
PHASE 4 - STEP 3
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

PMP 1.4



PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

9736 Bartlett Road
Charlotte, NC 28227
704 573 3003
License C-3176

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY

Jim Arey 12/20/2014

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GEOSCIENCE GROUP
5024 Chamberlain Road
Charlotte, NC 28273
Phone: 704.525.3051
www.geoscienceengineering.com

PAVEMENT MARKING AND SIGNING
NC 160 - HAMILTON ROAD

RIVERGATE
CHARLOTTE, NC

PMP 1.5

GENERAL NOTES

A. STREET SPACE IS AT A MINIMUM SO NO MORE SPACE SHOULD BE USED FOR CONSTRUCTION OR MAINTENANCE WORK THAN IS ABSOLUTELY NECESSARY. THROUGH BARRICADING AND CHANNELIZATION, THE REMAINING STREET SPACE IS TO BE USED TO CARRY THE TRAFFIC AROUND THE WORK AREA IN THE BEST WAY POSSIBLE UNDER PREVAILING CONDITIONS.

B. TRAFFIC CONTROL DEVICES SHALL BE SET UP PRIOR TO THE START OF CONSTRUCTION OR MAINTENANCE OPERATIONS, AND SHALL BE REMOVED OR RELOCATED AS THE WORK IS FINISHED OR WORK CONDITIONS CHANGE. THE AGENCY DOING THE WORK SHALL PATROL THE WORK SITE AS REQUIRED TO ENSURE THAT ALL TRAFFIC CONTROL DEVICES ARE IN PLACE AND OPERATING AT ALL TIMES.

C. ALL TRAFFIC CONTROL SIGNS FOR THE WORK AREA SHALL BE REFLECTORIZED. THE REFLECTIVE MATERIALS USED SHALL BE EQUAL TO OR BETTER THAN THE TYPE I, LEVEL A REFLECTIVE SHEETING REQUIREMENTS IN SECTION 633 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-74).

D. AT NIGHT, ADEQUATE BARRICADES WITH REFLECTORIZED MATERIAL AND LIGHTS ARE REQUIRED TO CALL ATTENTION TO AND TO INDICATE THE ACTUAL LOCATION OF OBSTRUCTIONS AND HAZARDS.

E. WHEN NOT IN USE DURING WORK HOURS OR CONSTRUCTION INACTIVITY, EQUIPMENT SHALL BE PARKED A MINIMUM OF 10' AWAY FROM THE TRAVEL LANE IN SUCH A MANNER AS TO NOT CREATE A SIGHT DISTANCE PROBLEM FOR MOTORISTS.

F. THE MINIMUM WIDTH FOR TEMPORARY TRAVEL LANES IS 11'; HOWEVER, A 12' LANE IS ADVISABLE AND SHOULD BE PROVIDED WHENEVER POSSIBLE.

G. WHENEVER TRAFFIC MUST BE ROUTED ACROSS THE CENTERLINE, THE TWO DIRECTIONS OF TRAFFIC MUST BE PHYSICALLY SEPARATED. TRAFFIC CONES CAN BE EFFECTIVELY USED FOR THIS PURPOSE DURING DAYLIGHT HOURS; REFLECTORIZED DRUMS MUST BE USED AT NIGHT.

H. TRAFFIC SHALL NOT BE ROUTED ACROSS CENTERLINE WITH CONES OR DRUMS DURING NON-WORKING HOURS. CONTRACTOR MUST BE ON SITE OR CHANGE PAVEMENT MARKINGS APPROPRIATELY.

I. GENERALLY, THE PEAK FLOW OF TRAFFIC OCCURS IN CHARLOTTE BETWEEN THE HOURS OF 7-9 A.M. AND 4:30-6:30 P.M., (4-6 P.M. IN THE CBD) MONDAY THROUGH FRIDAY. DURING THESE HOURS CONSTRUCTION ACTIVITY THAT INVOLVES A LANE CLOSURE WILL NOT BE ALLOWED ON THOROUGHFARE STREETS EXCEPT IN EMERGENCY SITUATIONS OR WITH APPROVAL FROM NCDOT/CHARLOTTE DEPARTMENT OF TRANSPORTATION.

J. THE AGENCY DOING THE WORK SHALL PROVIDE FLAGGERS AND/OR POLICE CONTROL WHEN REQUIRED. CONTRACTOR MAY ALSO BE REQUIRED TO PROVIDE A UNIFORMED OFFICER TO CONTROL TRAFFIC WHEN WORKING IN AND AROUND A SIGNALIZED INTERSECTION/NON SIGNALIZED INTERSECTION.

K. EVERY ATTEMPT SHALL BE MADE TO SCHEDULE AND EXPEDITE THE WORK TO CAUSE THE LEAST INCONVENIENCE TO THE TRAVELING PUBLIC.

L. IN SITUATIONS NOT COVERED IN THIS DESIGN, THE PROTECTION OF THE TRAVELING PUBLIC AND THE PROTECTION OF THE WORKERS ON SITE WILL DICTATE THE MEASURES TO BE TAKEN CONSISTENT WITH THE CITY OF CHARLOTTE WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH)/ MUTCD NCDOT ROAD STANDARD DRAWING.

M. THE CONTRACTOR, UTILITY COMPANY, OR GOVERNMENTAL AGENCY INVOLVED IN THE WORK SHALL NOTIFY THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (JIMMY RHYNE AT 704-336-3905) OF THE CONSTRUCTION START DATE AND ANY MAJOR WORK WHERE THE NUMBER OF TRAVEL LANES ARE REDUCED FROM NORMAL CONDITIONS OR THE STREET IS REQUIRED TO BE CLOSED. EXCEPT IN EMERGENCIES, THE FOLLOWING NOTIFICATION IS REQUIRED:

*CONSTRUCTION START DATE - FIVE (5) WORKING DAYS IN ADVANCE;
*CLOSING 1 OR MORE TRAVEL LANES DURING PEAK TRAVEL TIMES - FIVE (5) WORKING DAYS PRIOR TO THE SCHEDULED WORK;
*CLOSING A STREET - TEN (10) WORKING DAYS PRIOR TO THE SCHEDULED WORK.

THIS LEAD-TIME IS NECESSARY FOR PLANNING AND NOTIFYING THE PUBLIC OF EXPECTED CHANGES IN THE NORMAL TRAFFIC CONDITIONS.

N. WHERE COMPLETE STREET CLOSURE IS NECESSARY, THE DEPARTMENT OF TRANSPORTATION WILL COORDINATE CLOSURE OF THE STREET AND, IF NECESSARY, FULLY SIGN A DETOUR ROUTE WITH NCDOT.

O. THE NCDOT/THE CITY ENGINEER OR DIRECTOR OF THE DEPARTMENT OF TRANSPORTATION OR THEIR REPRESENTATIVES ARE AUTHORIZED TO STOP ANY CONSTRUCTION OR MAINTENANCE ACTIVITY WHICH IS NOT PROPERLY SIGNED AND BARRICADED AS REQUIRED BY THIS STANDARD, THE "WATCH", AND/OR THE MUTCD UNTIL SUCH REQUIREMENTS ARE MET.

P. THIS DESIGN STANDARD CANNOT BE USED FOR ALL ROADWAY CONSTRUCTION SITUATIONS. IT IS INTENDED ONLY TO BE USED AS A GUIDELINE. SPECIFIC SITUATIONS MAY REQUIRE ENGINEERING JUDGMENT IN THE PLACEMENT OF TRAFFIC CONTROL DEVICES BECAUSE OF LIMITED VERTICAL AND/OR HORIZONTAL SIGHT DISTANCE.

Q. WHEN PERSONNEL AND/OR EQUIPMENT ARE WITHIN 5 FEET OF THE EDGE OF AN OPEN TRAVEL LANE, THE CONTRACTOR SHALL REFER TO THE "WATCH"/MUTCD, NCDOT STANDARDS FOR PROPER LANE CLOSURE.

R. OPERATIONAL SIGNS ARE GENERALLY MOUNTED ON PORTABLE SUPPORTS. THESE ARE USUALLY USED FOR SHORT-TERM OPERATIONS TO WARN AND GUIDE TRAFFIC. ADVANCED WARNING SIGNS (CONSTRUCTION AHEAD) SHALL BE MOUNTED ON STATIONARY SUPPORTS SEVEN (7) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION OF THE ROADWAY.

S. ALL DRUMS SHALL BE BALLASTED IN SUCH A MANNER THAT THEY WILL BE STABLE UNDER WIND AND VEHICLE ACTION. BALLASTING SHALL BE DONE WITH SANDBAGS OR OTHER YIELDING MATERIAL SITUATED IN THE BASE OF THE DRUMS.

T. CONSTRUCTION WORK SHALL NOT BE ALLOWED ON BOTH SIDES OF THE ROAD SIMULTANEOUSLY WITHIN THE SAME AREA, UNLESS THE ROADWAY IS MEDIAN DIVIDED.

U. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL BACKFILL UP TO THE EDGE AND ELEVATION OF THE EXISTING PAVEMENT AREAS WITHIN 2 FEET OF AN OPEN TRAVEL LANE THAT INCLUDE A DROP-OFF OF MORE THAN 3 INCHES IN ACCORDANCE WITH THE "WATCH"/MUTCD, NCDOT.

V. PAVEMENT MARKINGS ARE TO BE INSTALLED BY THE CONTRACTOR. PRE-LINES MUST BE APPROVED BY NCDOT/CDOT PRIOR TO PLACEMENT OF THE PAVEMENT MARKINGS. THE CONTRACTOR SHALL NOTIFY JIMMY RHYNE (704-336-3905) OF CDOT FIVE (5) WORKING DAYS IN ADVANCE OF PLACING THE PRE-LINES. SEE APPROVED SPECIAL PROVISIONS WITH NCDOT APPROVED PERMIT.

W. TRAFFIC SIGNAL WORK IS TO BE PERFORMED BY CDOT. THE CONTRACTOR SHALL NOTIFY JIMMY RHYNE (704-336-3905) OF CDOT AT LEAST 60 DAYS IN ADVANCE OF NEEDED SIGNAL WORK. IF A TRAFFIC SIGNAL USES STEEL POLES AND/OR MAST ARMS, AT LEAST 90 DAYS ADVANCE NOTICE IS REQUIRED.

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES - TYPE III
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION - REFLECTIVE END TREATMENT
1170.01	POSITIVE PROTECTION
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION
	TEMPORARY PAVEMENT MARKINGS
	PAINT(24")
P2	WHITE STOPBAR
	COLD APPLIED PLASTIC (4") TYPE 4 - REMOVABLE TAPE
CA	WHITE EDGELINE
CI	YELLOW DOUBLE CENTER
	PAINT(4")
P8	2 FT. - 6 FT./SP WHITE MINISKIP
P9	2 FT. - 6 FT./SP YELLOW MINISKIP
PA	WHITE EDGELINE
PB	YELLOW EDGELINE
PC	10 FT. WHITE SKIP
PD	3 FT. - 9 FT./SP WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PI	YELLOW DOUBLE CENTER
	PAINT(8")
PN	WHITE GORELINE
PO	WHITE DIAGONAL
	PAINTMARKING SYMBOLS
QA	LEFT TURN ARROW
QB	RIGHT TURN ARROW
QC	STRAIGHT ARROW
QT	U-TURN ARROW
	MARKERS
	TEMPORARY RAISED PAVEMENT MARKERS
MH	YELLOW & YELLOW
MI	CRYSTAL & RED

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- WORK COMPLETED PREVIOUS PHASE

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

EXISTING PROPOSED TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY

Jim Arey 1/20/2014

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

9736 Bartlett Road
Charlotte, NC 28227
704 573 3003
License C-3176

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GEOSCIENCE GROUP
5924 Fairview Road
Charlotte, NC 28210
Tel: 704.525.3031
Fax: 704.525.3051
www.geosciencegroup.com

TRAFFIC CONTROL PLAN
NOTES AND LEGEND

RIVERGATE
CHARLOTTE, NC

TCN 1.1

PROJECT PHASING

PHASE 1 – NC 49 NORTHBOUND – DAY WORK ONLY.

STEP 1 – PERFORM ROADWAY WIDENING AND RIGHT TURN LANE CONSTRUCTION ON NC 49 NORTHBOUND

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL AND SHEET TCP 1.1.
2: INSTALL TRAFFIC CHANNELIZING DEVICES TO IMPLEMENT LANE CLOSURES AND PHASE 1 TRAFFIC PATTERN.
3: REMOVE EXISTING LANDSCAPING, TREES, SIDEWALK, ETC.
4: RELOCATE ALL UTILITIES WITHIN WORK ZONE OR COORDINATE THE RELOCATION OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.
5: INSTALL DRAINAGE IMPROVEMENTS.
6: CONSTRUCT NEW CURB AND GUTTER, AND SIDEWALK.
7: REMOVE EXISTING CURB AND GUTTER.
8: CONSTRUCT ROADWAY TO INTERMEDIATE COURSE.

AT END OF WORKDAY, RESTORE ALL TRAVEL LANES AND PLACE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH TCP 1.2.

STEP 2 – PERFORM ROADWAY MILLING AND OVERLAY ON NC 49 NORTHBOUND.

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL.
2: MILL NC 49 NORTHBOUND TO LIMITS SHOWN ON THE PLANS.
3: PLACE FINAL PAVEMENT COURSE AND PAVEMENT MARKINGS ON NC 49 NORTHBOUND.

PHASE 2 – NC 49 SOUTHBOUND – DAY WORK ONLY.

STEP 1 –PERFORM ROADWAY WIDENING AND LEFT TURN LANE CONSTRUCTION ON NC 49 SOUTHBOUND.

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL AND SHEET TCP 2.1.
2: INSTALL TRAFFIC CHANNELIZING DEVICES TO IMPLEMENT LANE CLOSURES AND PHASE 2 TRAFFIC PATTERN.
3: REMOVE EXISTING LANDSCAPING, TREES, SIDEWALK, ETC.
4: CONSTRUCT NEW CURB AND GUTTER.
5: REMOVE EXISTING CURB AND GUTTER.
6: CONSTRUCT ROADWAY TO INTERMEDIATE COURSE.
7: INSTALL NEW MONOLITHIC ISLAND,

AT END OF WORKDAY, RESTORE ALL TRAVEL LANES AND PLACE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH TCP 2.2.

STEP 2 – PERFORM ROADWAY MILLING AND OVERLAY ON NC 49 SOUTHBOUND.

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL.
2: MILL NC 49 SOUTHBOUND TO LIMITS SHOWN ON THE PLANS.
3: PLACE FINAL PAVEMENT COURSE AND PAVEMENT MARKINGS ON NC 49 SOUTHBOUND.

PHASE 3 – RIVERGATE PARKWAY – DAY WORK ONLY.

STEP 1 – PERFORM ROADWAY WIDENING AND CONSTRUCTION ON RIVERGATE PARKWAY MEDIAN.

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL AND SHEET TCP 3.1.
2: INSTALL TRAFFIC CHANNELIZING DEVICES TO IMPLEMENT LANE CLOSURES AND PHASE 3 – STEP 1 TRAFFIC PATTERN.
3: REMOVE EXISTING LANDSCAPING, TREES, SIDEWALK, ETC.
4: CONSTRUCT NEW CURB AND GUTTER.
5: REMOVE EXISTING CURB AND GUTTER.
6: CONSTRUCT ROADWAY TO INTERMEDIATE COURSE.

AT END OF WORKDAY, RESTORE ALL TRAVEL LANES AND PLACE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH TCP 3.1 (END OF DAY CONDITION)

STEP 2 – PERFORM ROADWAY WIDENING AND CONSTRUCTION ON RIVERGATE PARKWAY EDGE OF ROADWAY.

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL AND SHEET TCP 3.2.
2: INSTALL TRAFFIC CHANNELIZING DEVICES TO IMPLEMENT LANE CLOSURES AND PHASE 3 – STEP 2 TRAFFIC PATTERN.
3: REMOVE EXISTING LANDSCAPING, TREES, SIDEWALK, ETC.
4: CONSTRUCT NEW CURB AND GUTTER.
5: REMOVE EXISTING CURB AND GUTTER.
6: CONSTRUCT ROADWAY TO INTERMEDIATE COURSE.

AT END OF WORKDAY, RESTORE ALL TRAVEL LANES AND PLACE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH TCP 3.2 (END OF DAY CONDITION).

STEP 3 – PERFORM ROADWAY MILLING AND OVERLAY ON RIVERGATE PARKWAY.

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL.
2: MILL RIVERGATE PARKWAY TO LIMITS SHOWN ON THE PLANS.
3: PLACE FINAL PAVEMENT COURSE AND PAVEMENT MARKINGS.

PHASE 4 – DAY WORK ONLY. PERFORM ROADWAY WIDENING AND CONSTRUCTION ON NC 160.

BEGIN PHASE 4 ONLY AFTER ALL WORK ON NC 49 AND RIVERGATE PARKWAY HAVE BEEN COMLTED AND ALL TRAVEL/TURN LANES ARE FULLY OPENED TOTRAFFIC.

STEP 1 – NC 160 EASTBOUND

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL AND SHEETS TCP 4.1. AND 4.2
2: REMOVE EXISTING PAVEMENT MARKINGS AND INSTALL TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH SHEETS TCP 4.1 AND TCP 4.2.
3: INSTALL TRAFFIC CHANNELIZING DEVICES TO IMPLEMENT LANE CLOSURES AND PHASE 4 – STEP 1 TRAFFIC PATTERN.
4: REMOVE EXISTING LANDSCAPING, TREES, SIDEWALK, ETC.
5: CONSTRUCT NEW CURB AND GUTTER.
6: REMOVE EXISTING CURB AND GUTTER.
7: CONSTRUCT ROADWAY TO INTERMEDIATE COURSE.

STEP 2 – NC 160 WESTBOUND

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL AND SHEETS TCP 4.3. AND 4.4.
2: INSTALL TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH SHEETS TCP 4.3 AND TCP 4.4.
3: INSTALL TRAFFIC CHANNELIZING DEVICES TO IMPLEMENT LANE CLOSURES AND PHASE 4 – STEP 2 TRAFFIC PATTERN.
4: REMOVE EXISTING LANDSCAPING, TREES, SIDEWALK, ETC.
5: CONSTRUCT NEW CURB AND GUTTER.
6: REMOVE EXISTING CURB AND GUTTER.
7: CONSTRUCT ROADWAY TO INTERMEDIATE COURSE.

AT END OF WORKDAY, RESTORE ALL TRAVEL LANES AND PLACE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH SHEETS TCP 4.5 AND TCP 4.6 (END OF DAY CONDITION)

STEP 3 – NC 160 MEDIAN CONSTRUCTION

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL AND SHEETS TCP 4.7. AND 4.8.
2: INSTALL TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH SHEETS TCP 4.7 AND TCP 4.8.
3: INSTALL TRAFFIC CHANNELIZING DEVICES TO IMPLEMENT LANE CLOSURES AND PHASE 4 – STEP 3 TRAFFIC PATTERN.
4: REMOVE EXISTING CURB AND GUTTER AND MONOLITHIC ISLANDS.
5: CONSTRUCT NEW CURB AND GUTTER AND MONOLITHIC ISLANDS.

AT END OF WORKDAY, RESTORE ALL TRAVEL LANES AND PLACE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH SHEETS TCP 4.9 AND TCP 4.10 (END OF DAY CONDITION)

STEP 3 – PERFORM ROADWAY MILLING AND OVERLAY ON NC 160.

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL.
2: MILL NC 160 NORTHBOUND TO LIMITS SHOWN ON THE PLANS.
3: PLACE FINAL PAVEMENT COURSE AND PAVEMENT MARKINGS ON NC 160.

PHASE 5 – WALKER BRANCH ROAD

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL.
2: INSTALL TRAFFIC CHANNELIZING DEVICES TO IMPLEMENT ONE LANE TWO WAY TRAFFIC PATTERN USING FLAGGERS.
3: REMOVE EXISTING LANDSCAPING, TREES, SIDEWALK, ETC.
5: CONSTRUCT NEW CURB AND GUTTER AND SIDEWALK.
6: REMOVE EXISTING CURB AND GUTTER.
7: CONSTRUCT ROADWAY TO FINAL COURSE.
8: PLACE FINAL PAVEMENT MARKINGS.

PHASE 6 – HAMILTON ROAD

1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ACCORDING TO THE MUTCD/NCDOT SUPPLEMENTS AND THE CDOT "WATCH" MANUAL.
2: INSTALL TRAFFIC CHANNELIZING DEVICES TO IMPLEMENT ONE LANE TWO WAY TRAFFIC PATTERN USING FLAGGERS.
3: REMOVE EXISTING LANDSCAPING, TREES, SIDEWALK, ETC.
5: CONSTRUCT NEW CURB AND GUTTER AND SIDEWALK.
6: REMOVE EXISTING CURB AND GUTTER.
7: CONSTRUCT ROADWAY TO FINAL COURSE.
8: PLACE FINAL PAVEMENT MARKINGS.

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JAMES W. ABEL

Jim Abel 1/20/2014

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS
9736 Bartlett Road
Charlotte, NC 28227
704 573 3003
License C-3176

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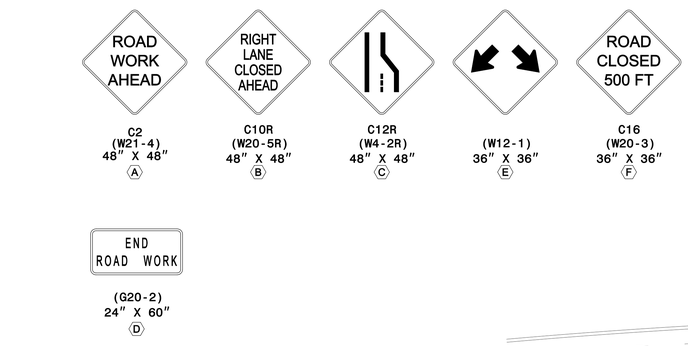
GEOSCIENCE GROUP
5024 Bentwood Road
Charlotte, NC 28210
Phone: 704-525-3031
Fax: 704-525-3051
www.geoscienceengineering.com

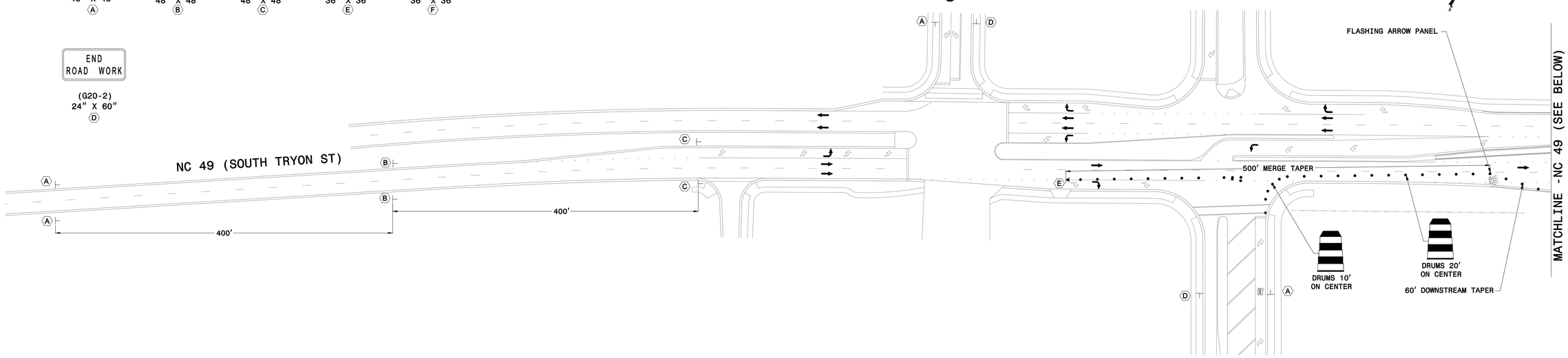
TRAFFIC CONTROL PLAN
PROJECT PHASING

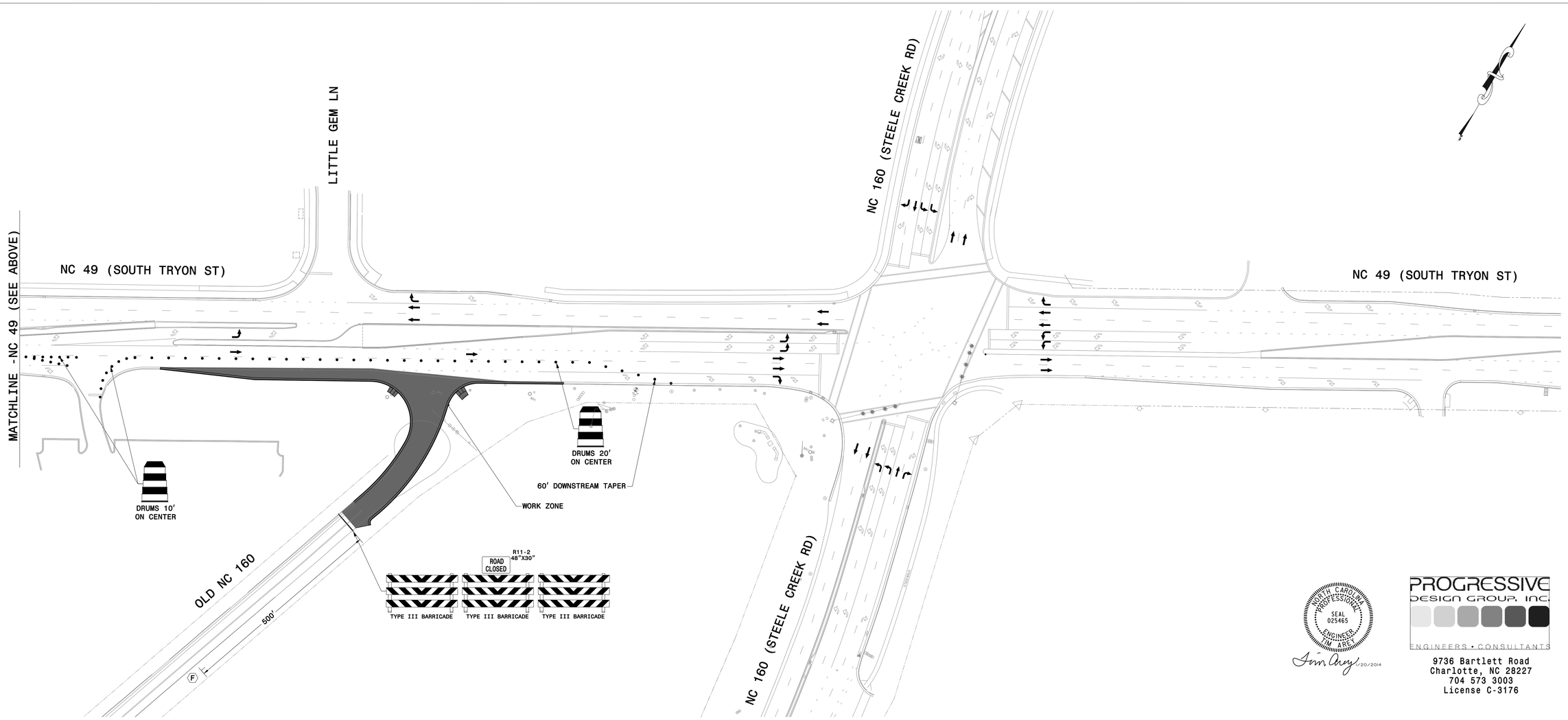
RIVERGATE
CHARLOTTE, NC

TCN 1.2

PHASE 1
NC 49 (SOUTH TRYON ST)
NORTHBOUND RIGHT TURN LANE
CONSTRUCTION AT OLD NC 160







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ENGINEERS • CONSULTANTS

9736 Bartlett Road
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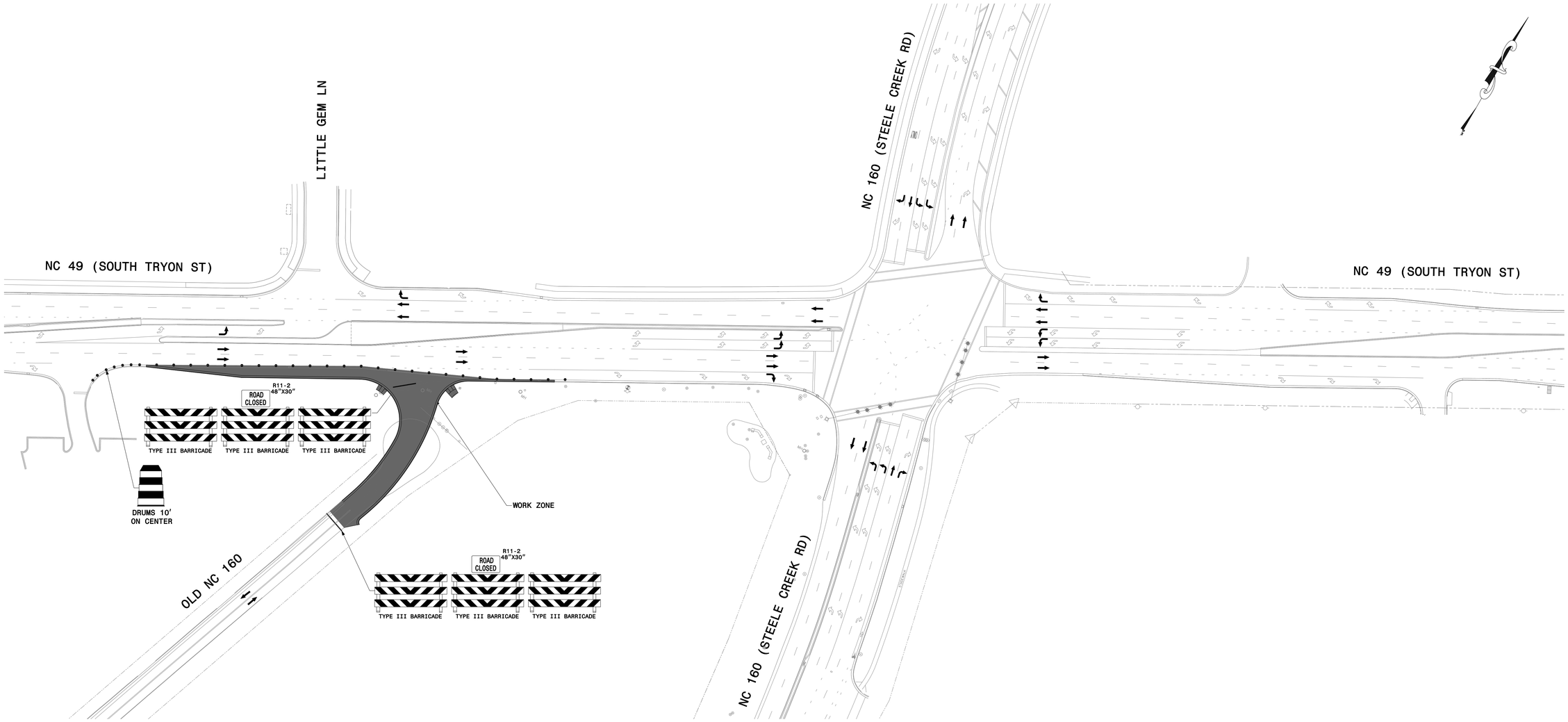
GEOSCIENCE GROUP
5024 Cheston Road
Charlotte, NC 28210
Phone: 704.525.3031
Fax: 704.525.3051
www.geosciencegroup.com

TRAFFIC CONTROL PLAN - PHASE 1
NC 49 (SOUTH TRYON ST)

RIVERGATE
CHARLOTTE, NC

TCP 1.1



PHASE 1
NC 49 (SOUTH TRYON ST) NORTHBOUND
RIGHT TURN LANE CONSTRUCTION AT OLD NC 160
END OF DAY CONDITION

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY

Jim Arey 12/20/2014

PROGRESSIVE DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

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License C-3176

PROJECT MANAGER	
DRAWN BY	
CHECKED BY	
DRAWING SCALE	
PROJECT DATE	
PROJECT NUMBER	
PHASE	TASK
FILE NAME	PLOT DATE

REV.	DATE

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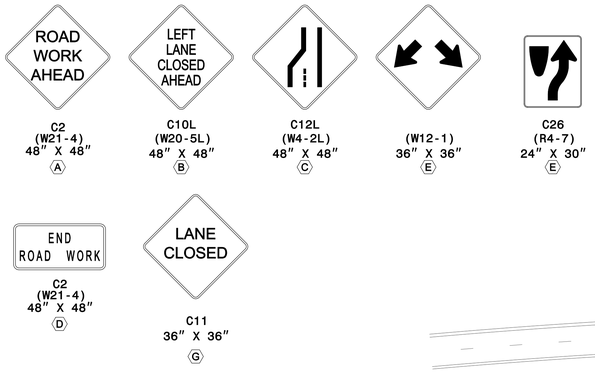
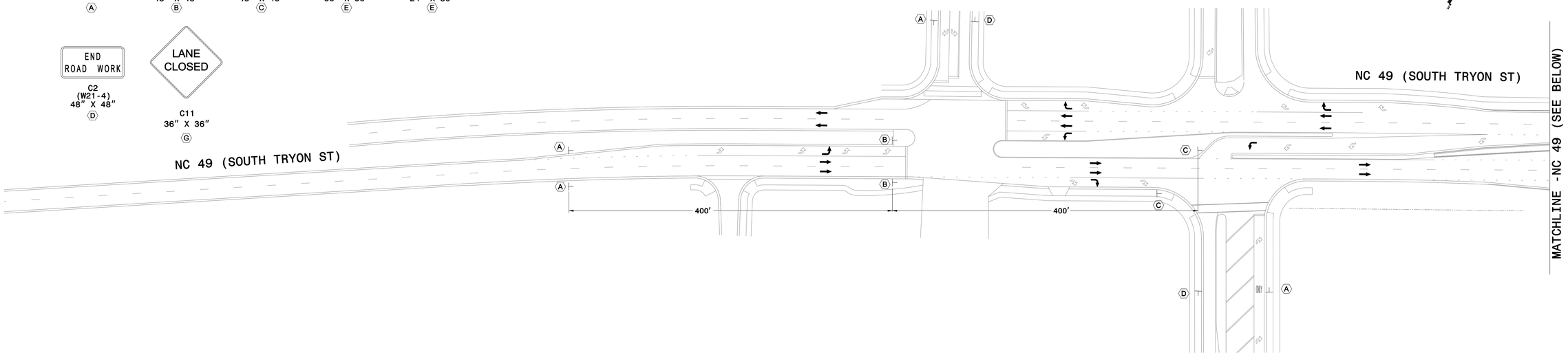
TRAFFIC CONTROL PLAN - PHASE 1
NC 49 (SOUTH TRYON ST)

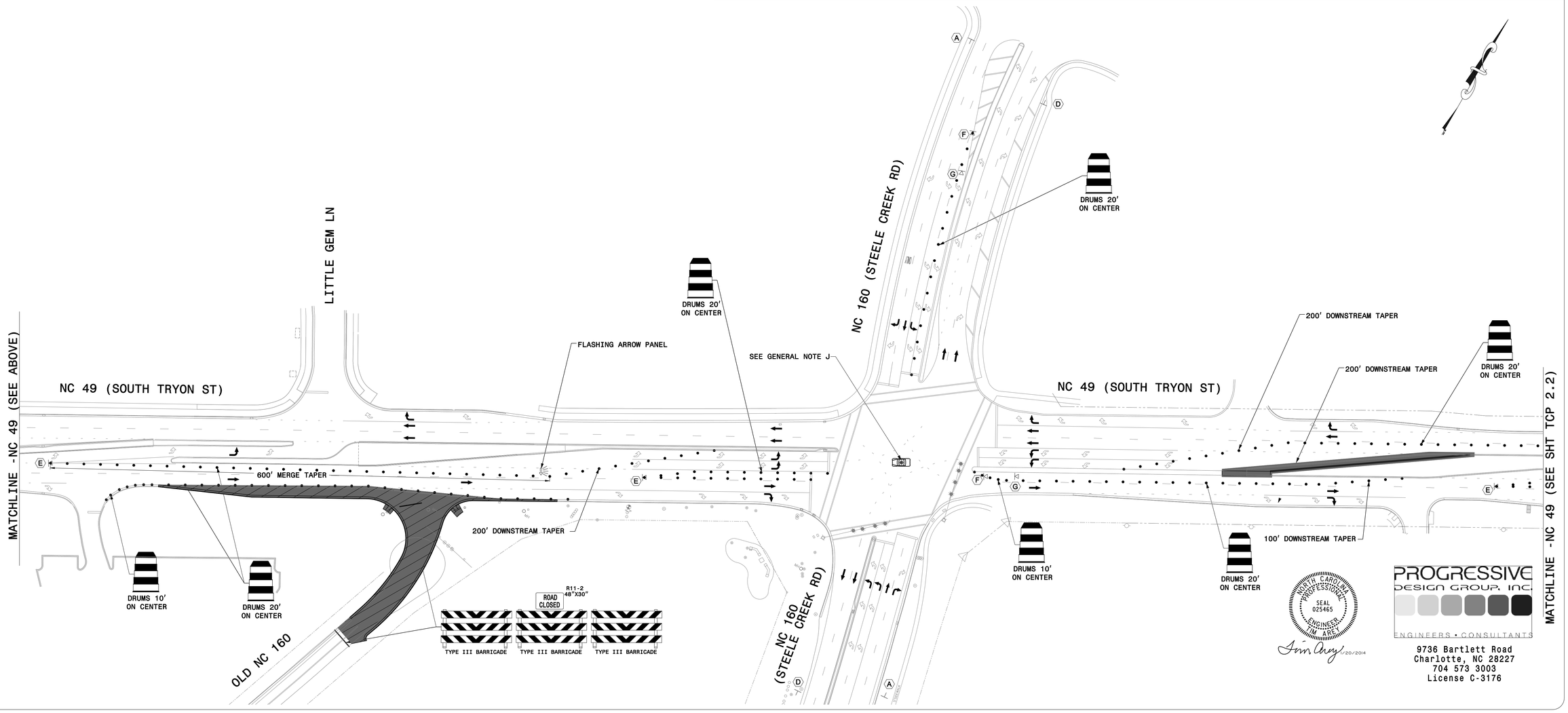
RIVERGATE
CHARLOTTE, NC

TCP 1.2

PHASE 2
NC 49 (SOUTH TRYON ST) SOUTHBOUND LEFT TURN LANE CONSTRUCTION AT NC 160 AND RIVERGATE PARKWAY







NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM ABEL
Jim Abel 1/20/2014

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REV.	DATE

PROJECT MANAGER
DRAWN BY
CHECKED BY
DRAWING SCALE
PROJECT DATE
PROJECT NUMBER
PHASE
TASK
PLOT DATE
FILE NAME

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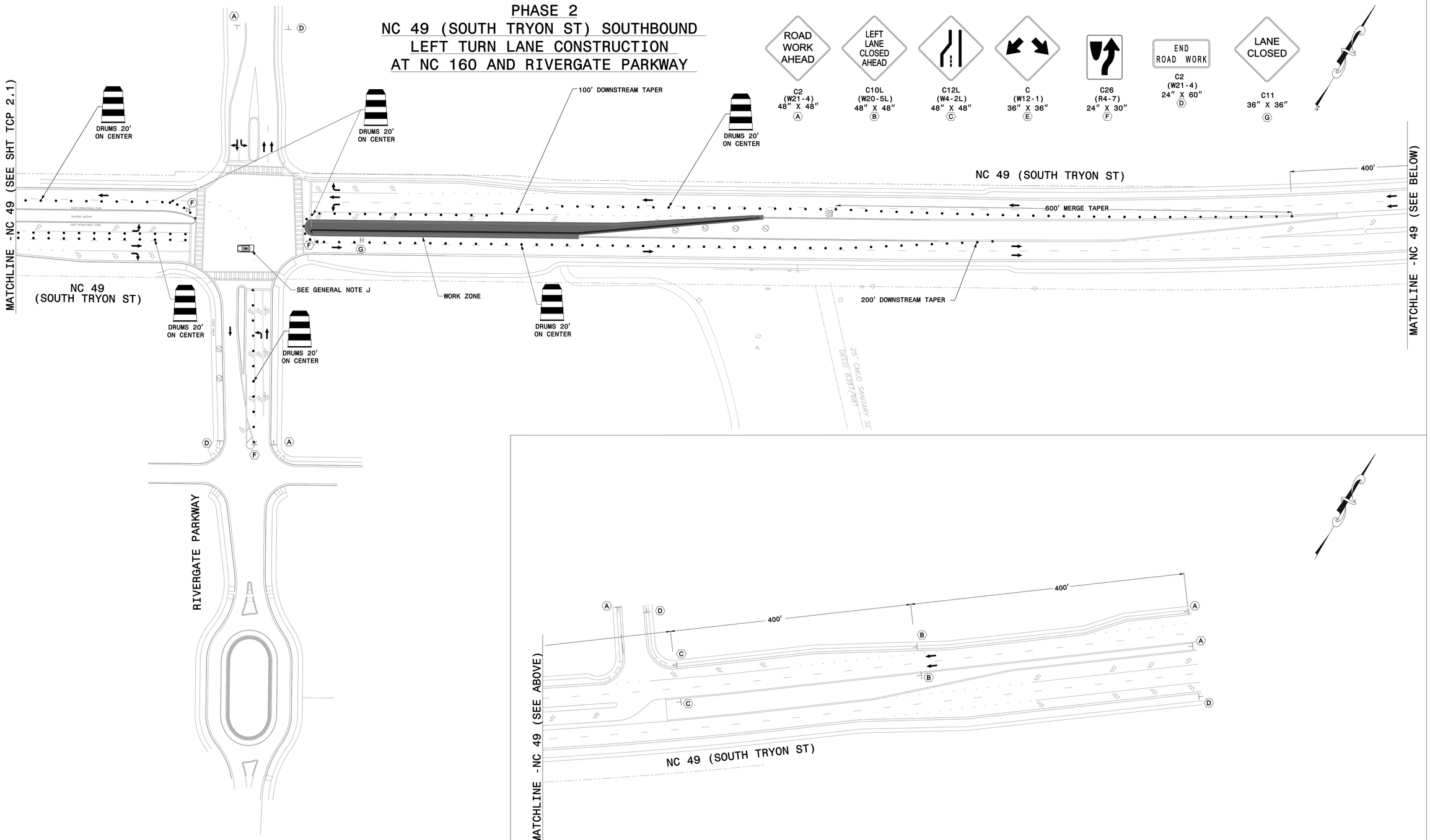
TRAFFIC CONTROL PLAN - PHASE 2
NC 49 (SOUTH TRYON ST)

RIVERGATE
CHARLOTTE, NC

TCP 2.1

PHASE 2
NC 49 (SOUTH TRYON ST) SOUTHBOUND
LEFT TURN LANE CONSTRUCTION
AT NC 160 AND RIVERGATE PARKWAY



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TRAFFIC CONTROL PLAN - PHASE 2
NC 49 (SOUTH TRYON ST)

RIVERGATE
CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JAMES W. ARY

1/20/2014

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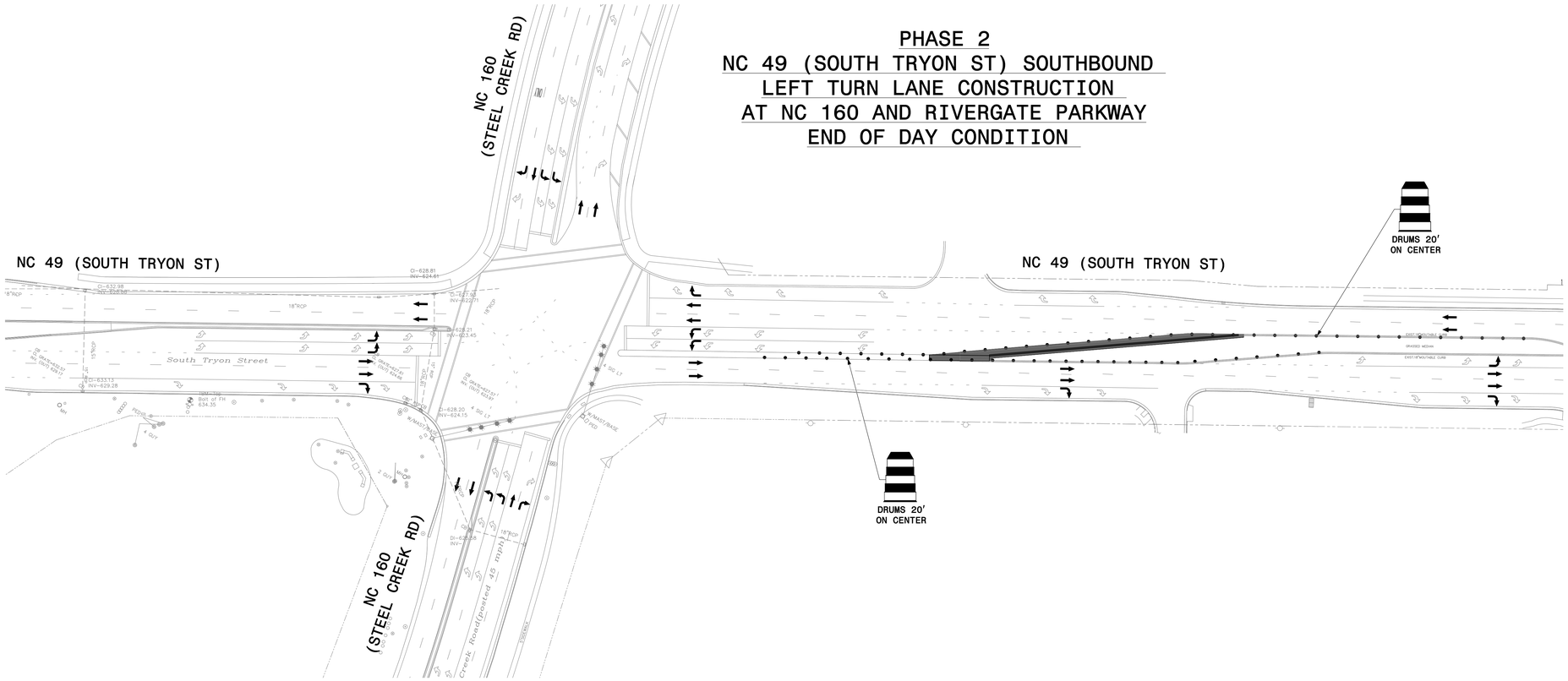
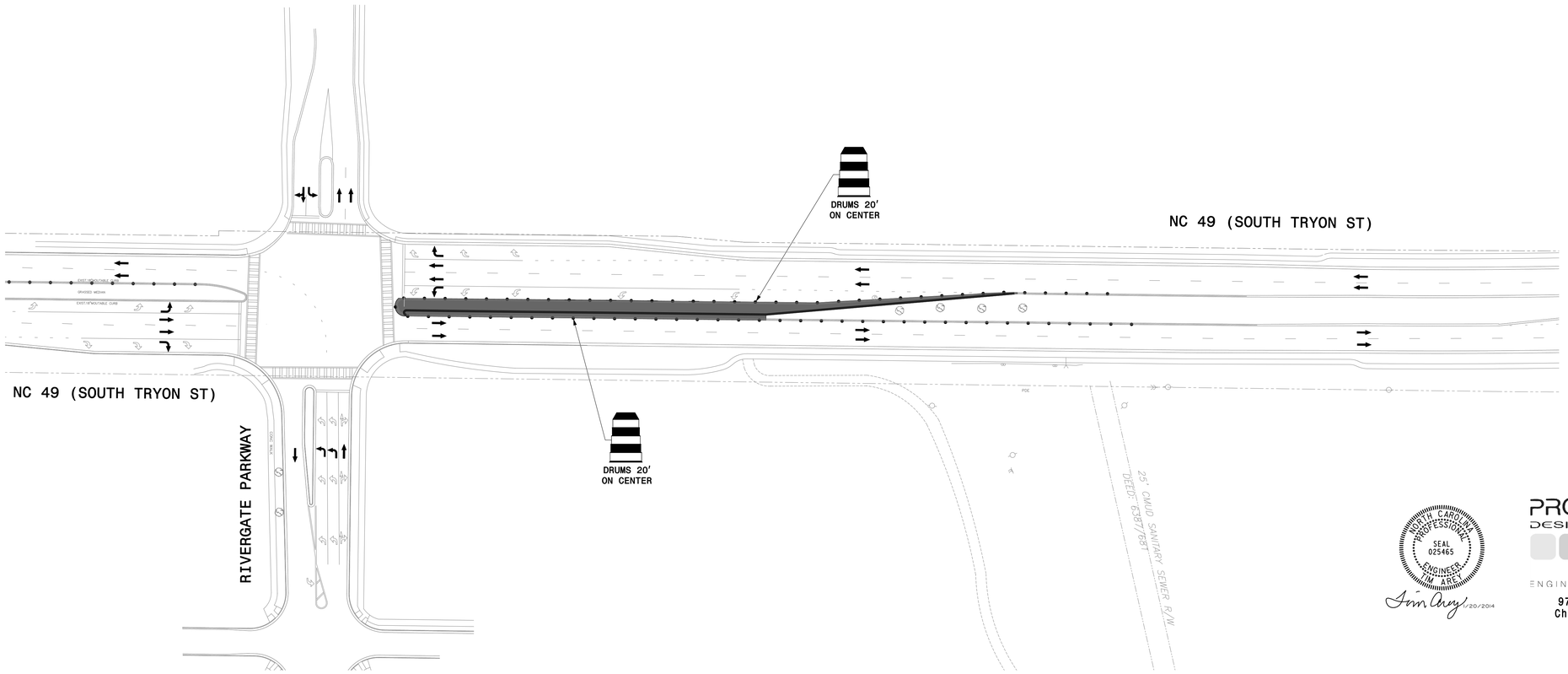
TCP 2.2

PHASE 2
NC 49 (SOUTH TRYON ST) SOUTHBOUND
LEFT TURN LANE CONSTRUCTION
AT NC 160 AND RIVERGATE PARKWAY
END OF DAY CONDITION





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DATE	REV.

PROJECT MANAGER
DRAWN BY
CHECKED BY
DRAWING SCALE
PROJECT DATE
PROJECT NUMBER
PHASE
TASK
FILE NAME
PLOT DATE

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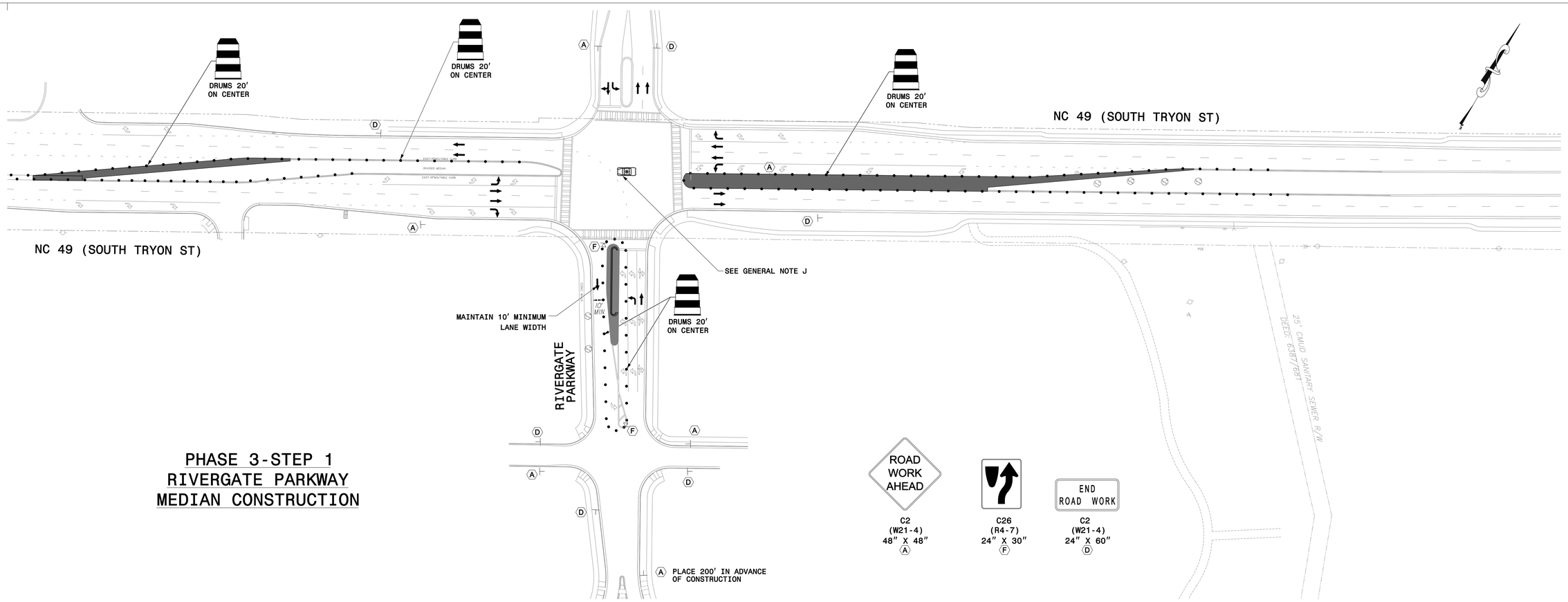
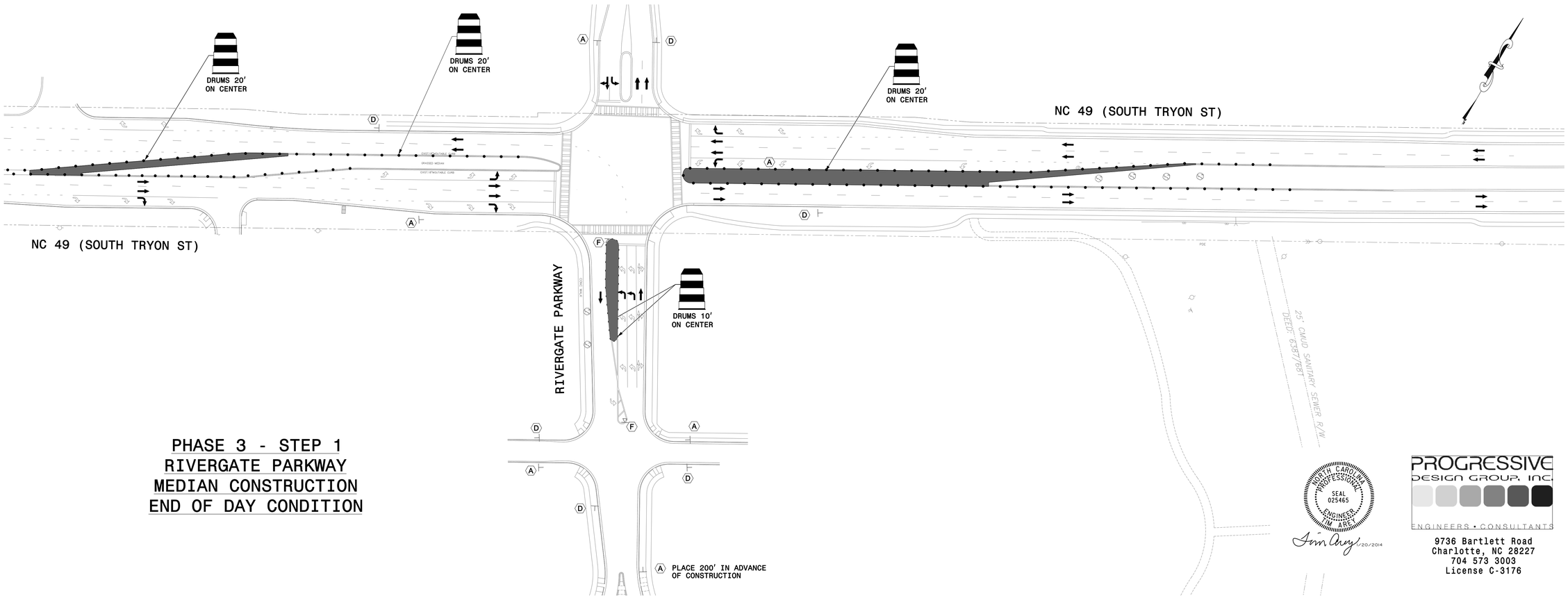
TRAFFIC CONTROL PLAN - PHASE 2
NC 49 (SOUTH TRYON ST)

RIVERGATE
CHARLOTTE, NC

TCP 2.3



PHASE 3-STEP 1
RIVERGATE PARKWAY
MEDIAN CONSTRUCTION



PHASE 3 - STEP 1
RIVERGATE PARKWAY
MEDIAN CONSTRUCTION
END OF DAY CONDITION

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY
Jim Arey 1/20/2014

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DRAWING SCALE	
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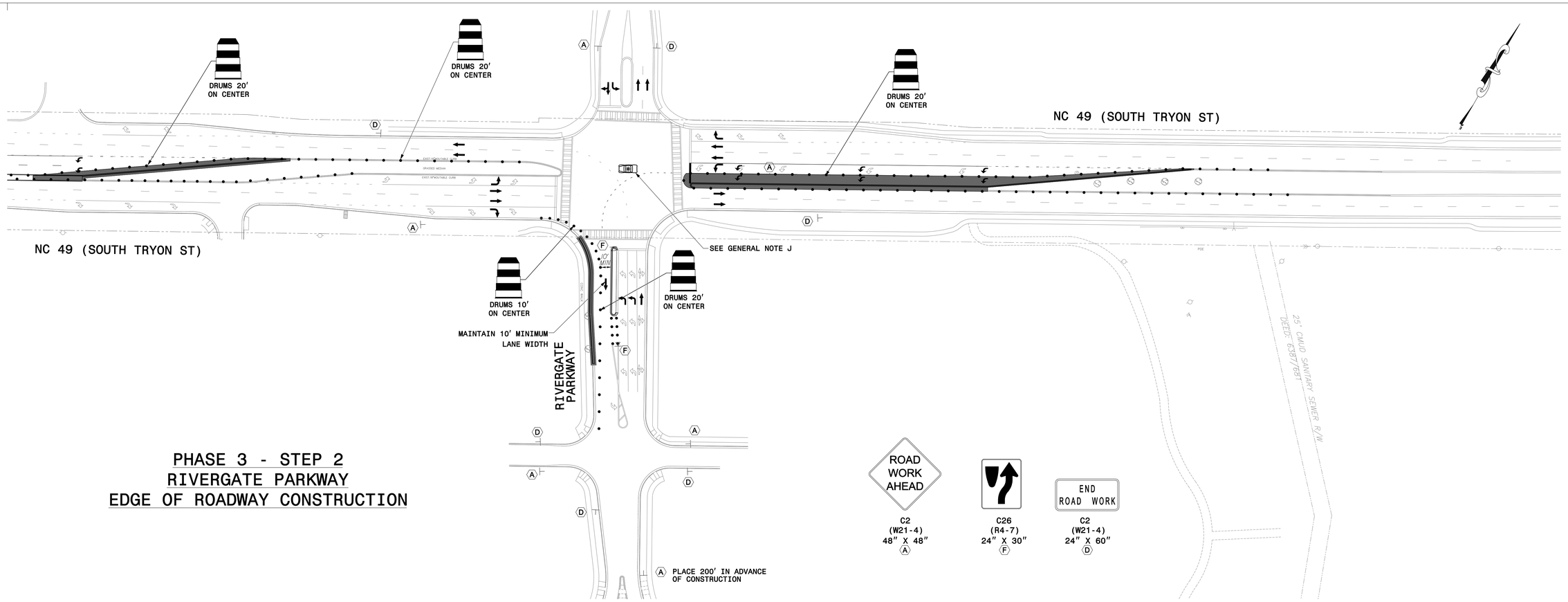
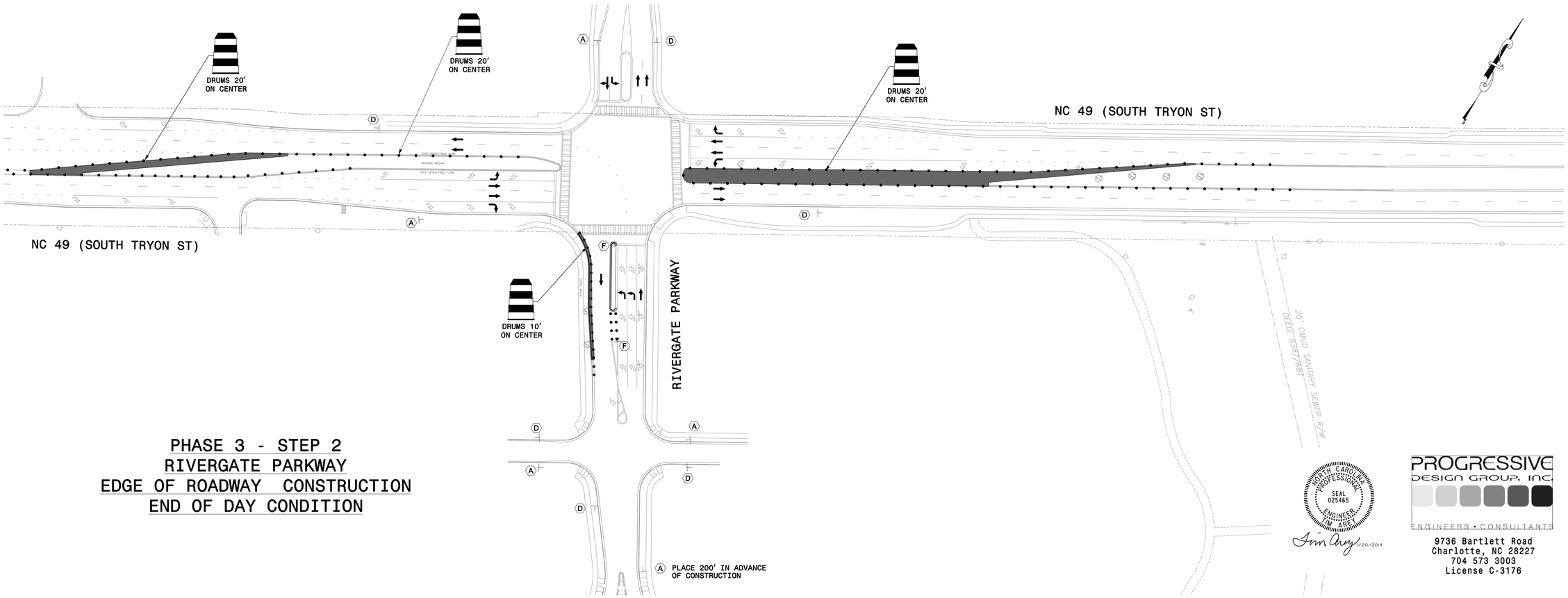
TRAFFIC CONTROL PLAN
PHASE 3 - STEP 1
NC 49 (SOUTH TRYON ST)

RIVERGATE
CHARLOTTE, NC

TCP 3.1



PHASE 3 - STEP 2
RIVERGATE PARKWAY
EDGE OF ROADWAY CONSTRUCTION



PHASE 3 - STEP 2
RIVERGATE PARKWAY
EDGE OF ROADWAY CONSTRUCTION
END OF DAY CONDITION

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY
1/20/2014

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DRAWING SCALE	
PROJECT DATE	
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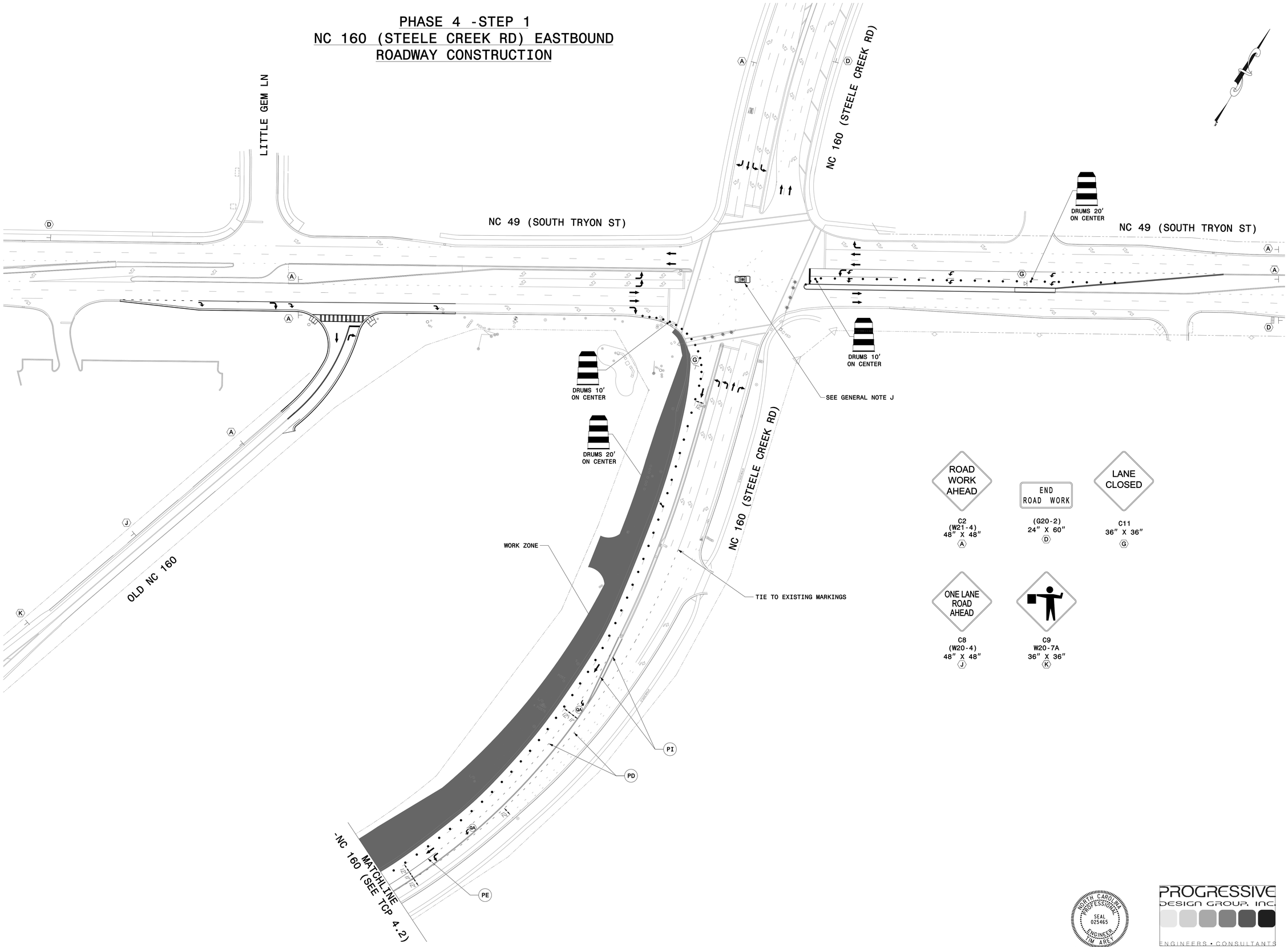
TRAFFIC CONTROL PLAN
PHASE 3 - STEP 2
NC 49 (SOUTH TRYON ST)

RIVERGATE
CHARLOTTE, NC

TCP 3.2

PHASE 4 -STEP 1
NC 160 (STEELE CREEK RD) EASTBOUND
ROADWAY CONSTRUCTION



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1/20/2014

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PROJECT MANAGER	
DRAWN BY	
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DRAWING SCALE	
PROJECT DATE	
PROJECT NUMBER	
PHASE	TASK
FILE NAME	PLOT DATE

REV.	DATE

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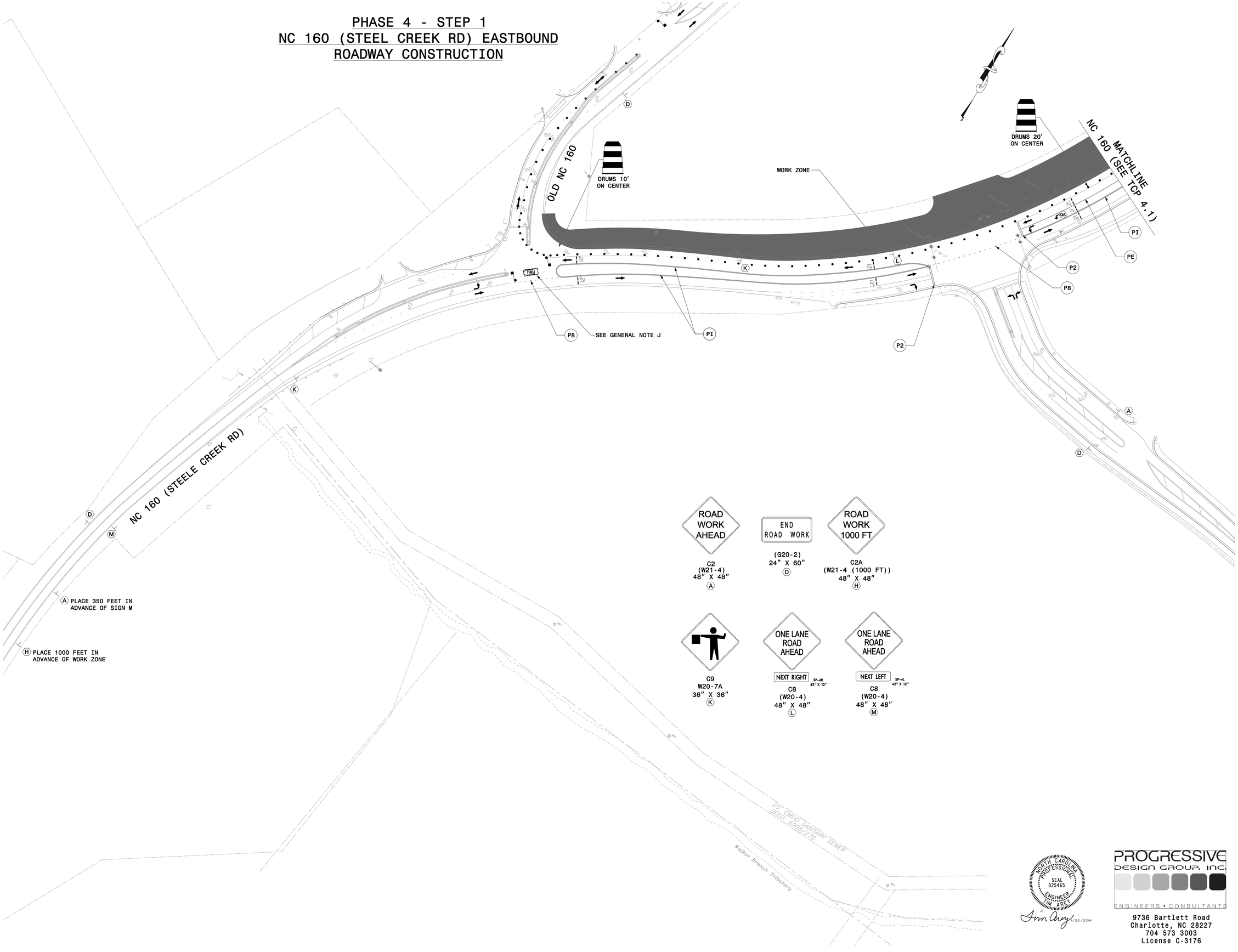
TRAFFIC CONTROL PLAN
PHASE 4 - STEP 1
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

TCP 4.1

PHASE 4 - STEP 1
NC 160 (STEEL CREEK RD) EASTBOUND
ROADWAY CONSTRUCTION



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PROJECT MANAGER	
DRAWN BY	
CHECKED BY	
DRAWING SCALE	1" =
PROJECT DATE	
PROJECT NUMBER	
PHASE	TCP
PLOT DATE	
FILE NAME	

REV.	DATE

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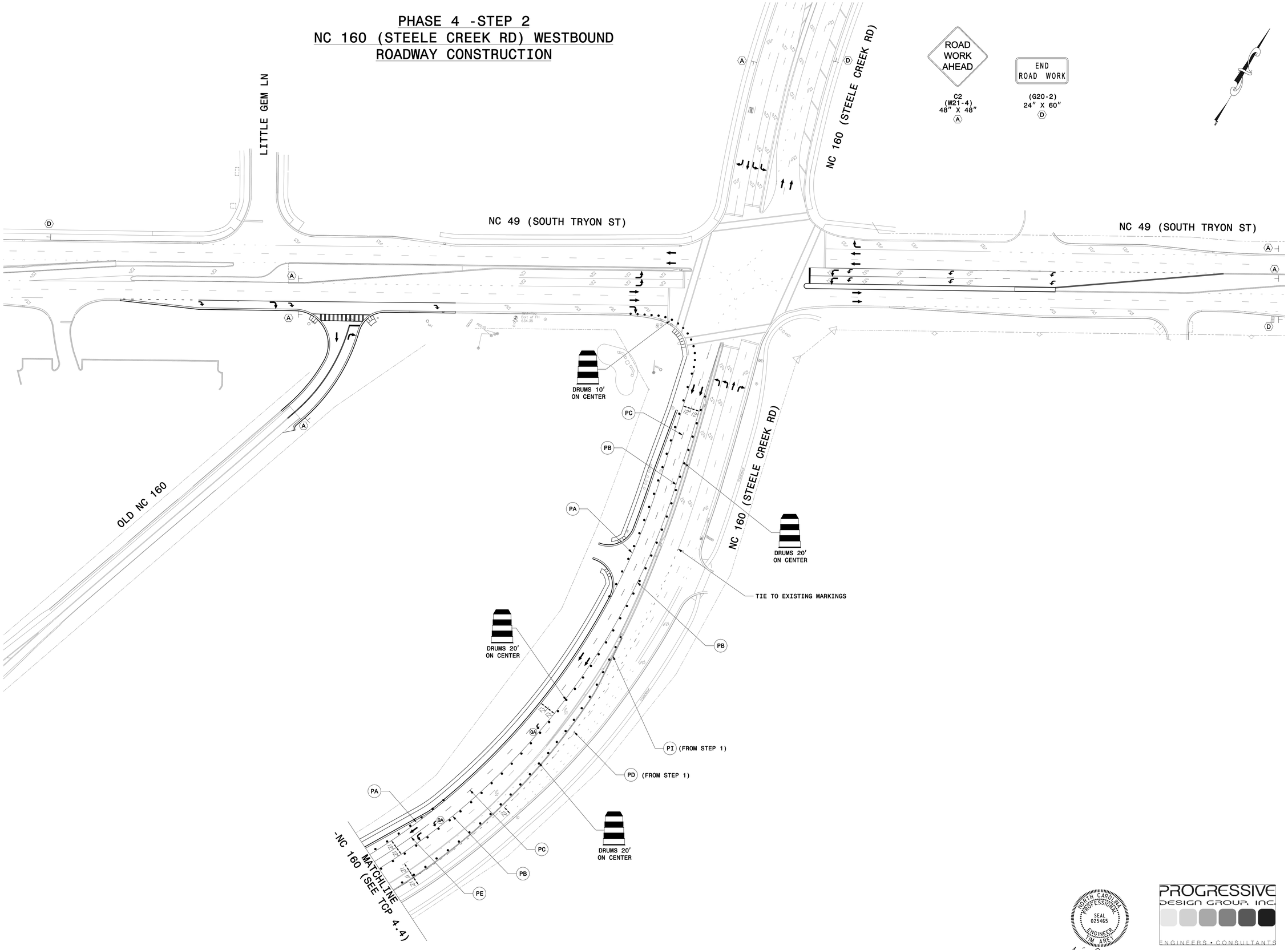
TRAFFIC CONTROL PLAN
PHASE 4 - STEP 2
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

TCP 4.2

PHASE 4 -STEP 2
NC 160 (STEELE CREEK RD) WESTBOUND
ROADWAY CONSTRUCTION



PROJECT MANAGER	
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DRAWING SCALE	
PROJECT DATE	
PROJECT NUMBER	
PHASE	TASK
FILE NAME	PLOT DATE

REV.	DATE

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TRAFFIC CONTROL PLAN
PHASE 4 - STEP 2
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY

Jim Arey 1/20/2014

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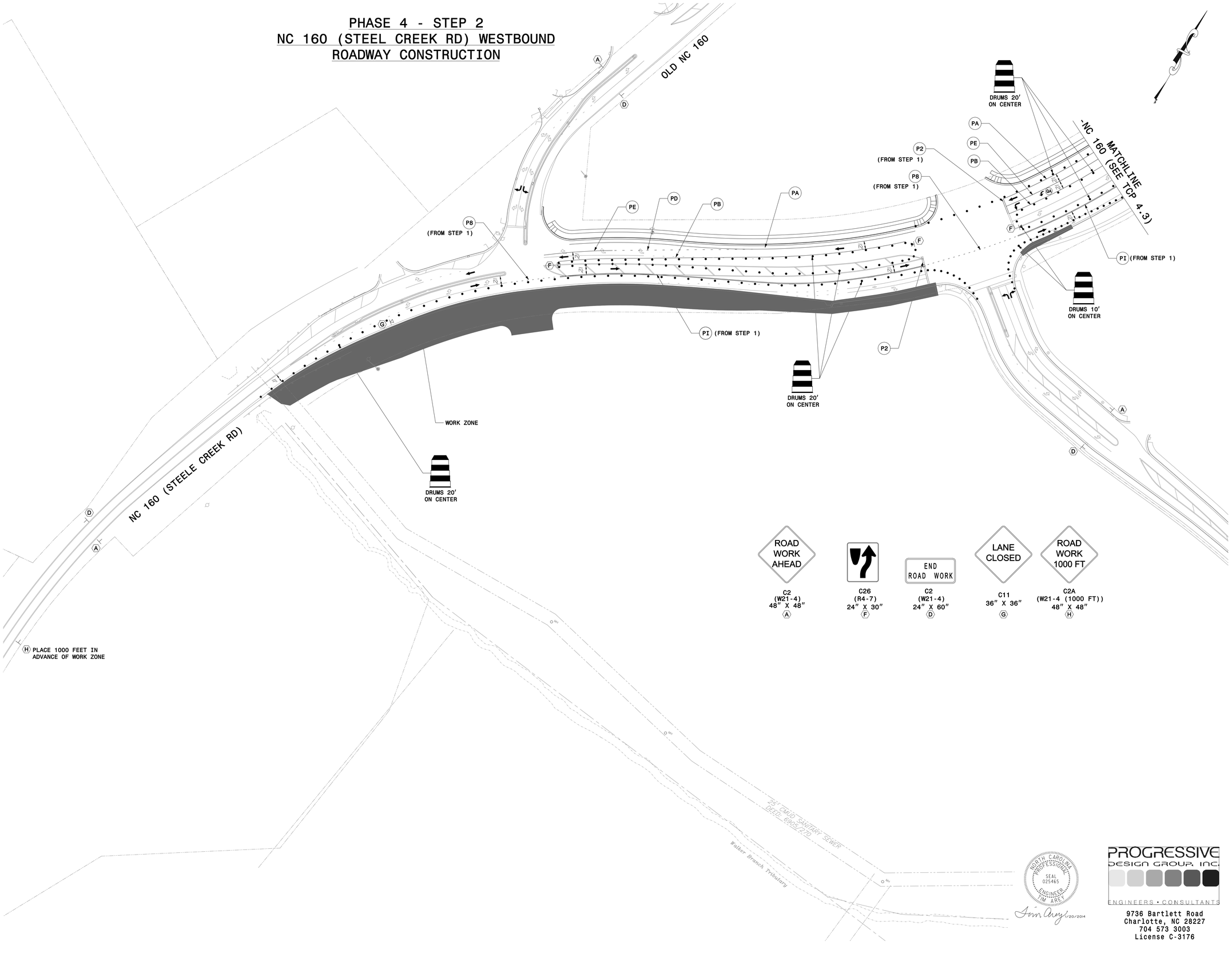
TCP 4.3

PHASE 4 - STEP 2
NC 160 (STEEL CREEK RD) WESTBOUND
ROADWAY CONSTRUCTION



NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER TIM AREY

Tim Arey 12/20/2014

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PROJECT MANAGER	DATE
DRAWN BY	REV.
CHECKED BY	
DRAWING SCALE	
PROJECT DATE	
PROJECT NUMBER	
PHASE	TCP
FILE NAME	
PLOT DATE	
1" =	

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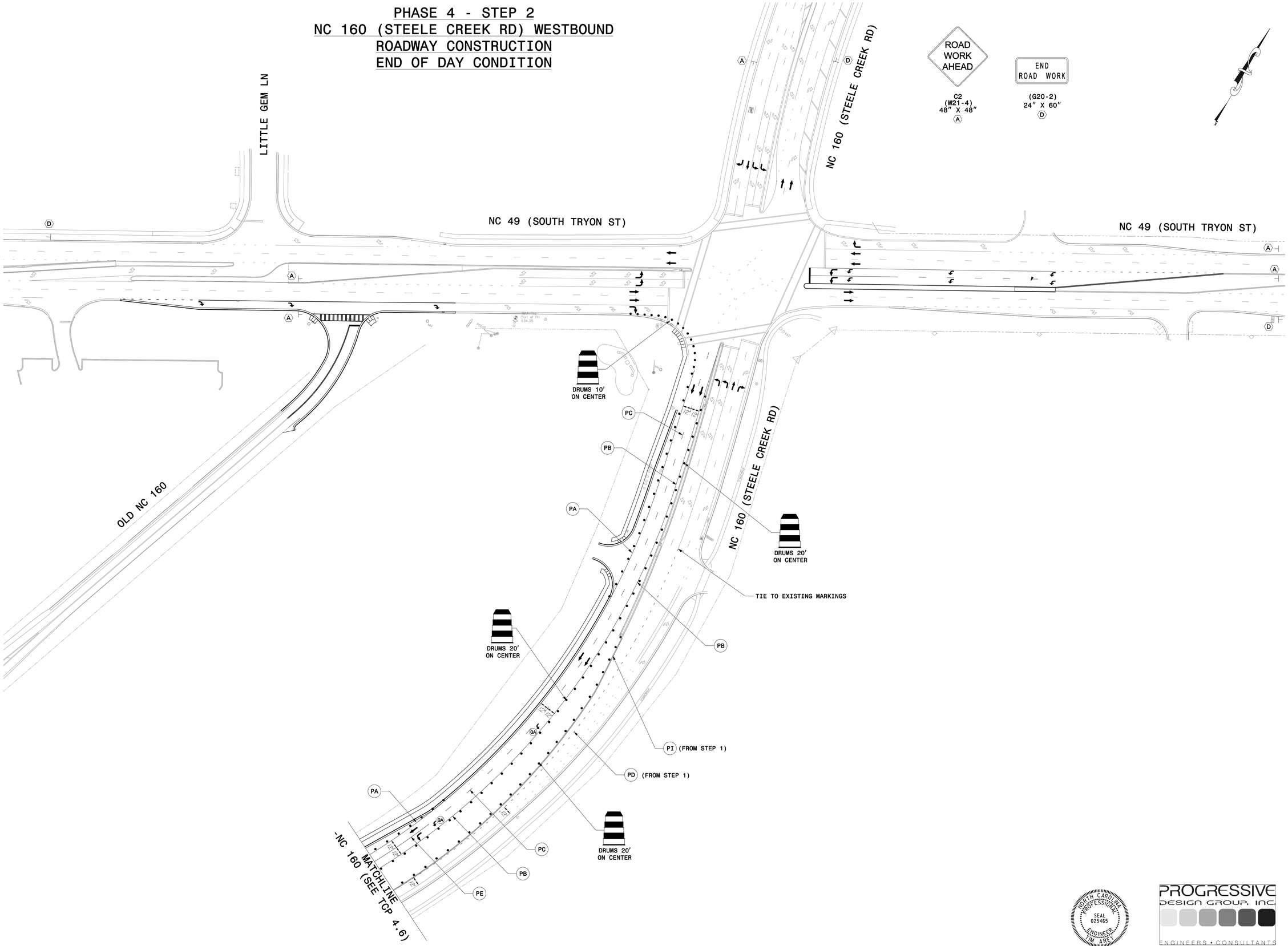
TRAFFIC CONTROL PLAN
PHASE 4 - STEP 2
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

TCP 4.4

PHASE 4 - STEP 2
NC 160 (STEELE CREEK RD) WESTBOUND
ROADWAY CONSTRUCTION
END OF DAY CONDITION



PROJECT MANAGER	
DRAWN BY	
CHECKED BY	
DRAWING SCALE	1" = 50'
PROJECT DATE	
PROJECT NUMBER	
PHASE	TCP
FILE NAME	
PLOT DATE	

REV.	DATE

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TRAFFIC CONTROL PLAN
PHASE 4 - STEP 2
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

TCP 4.5

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY

Jim Arey 1/20/2014

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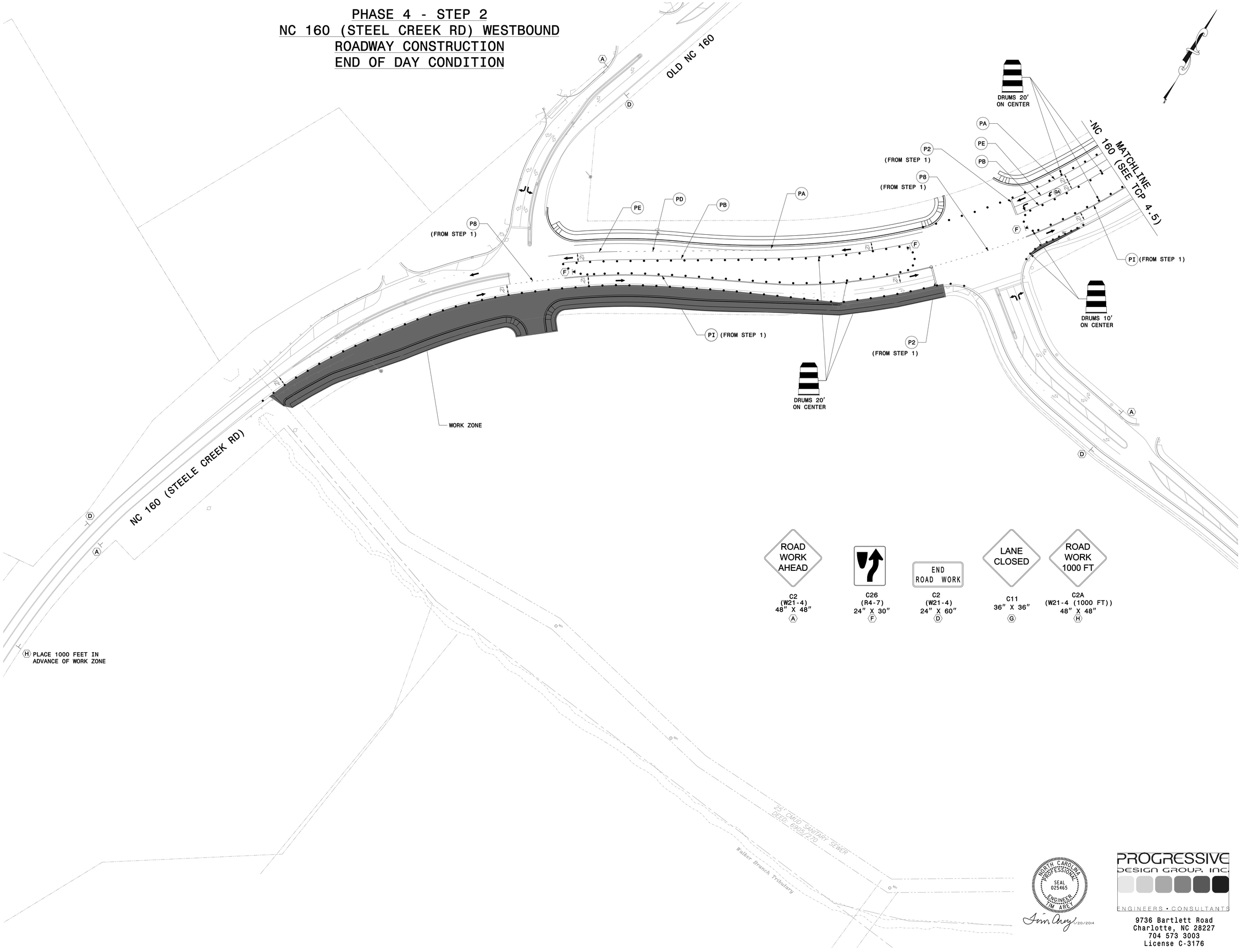
License C-3176

PHASE 4 - STEP 2
NC 160 (STEEL CREEK RD) WESTBOUND
ROADWAY CONSTRUCTION
END OF DAY CONDITION



NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM ARE

Jim Are 1/20/2014

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DATE	REV.

DRAWING SCALE: 1" = 1'
PROJECT DATE: 1/20/14
PROJECT NUMBER: 1
PHASE: 1
TASK: 1
PLOT DATE: 1/20/14
PROJECT MANAGER: JIM ARE
DESIGNED BY: JIM ARE
DRAWN BY: JIM ARE
CHECKED BY: JIM ARE

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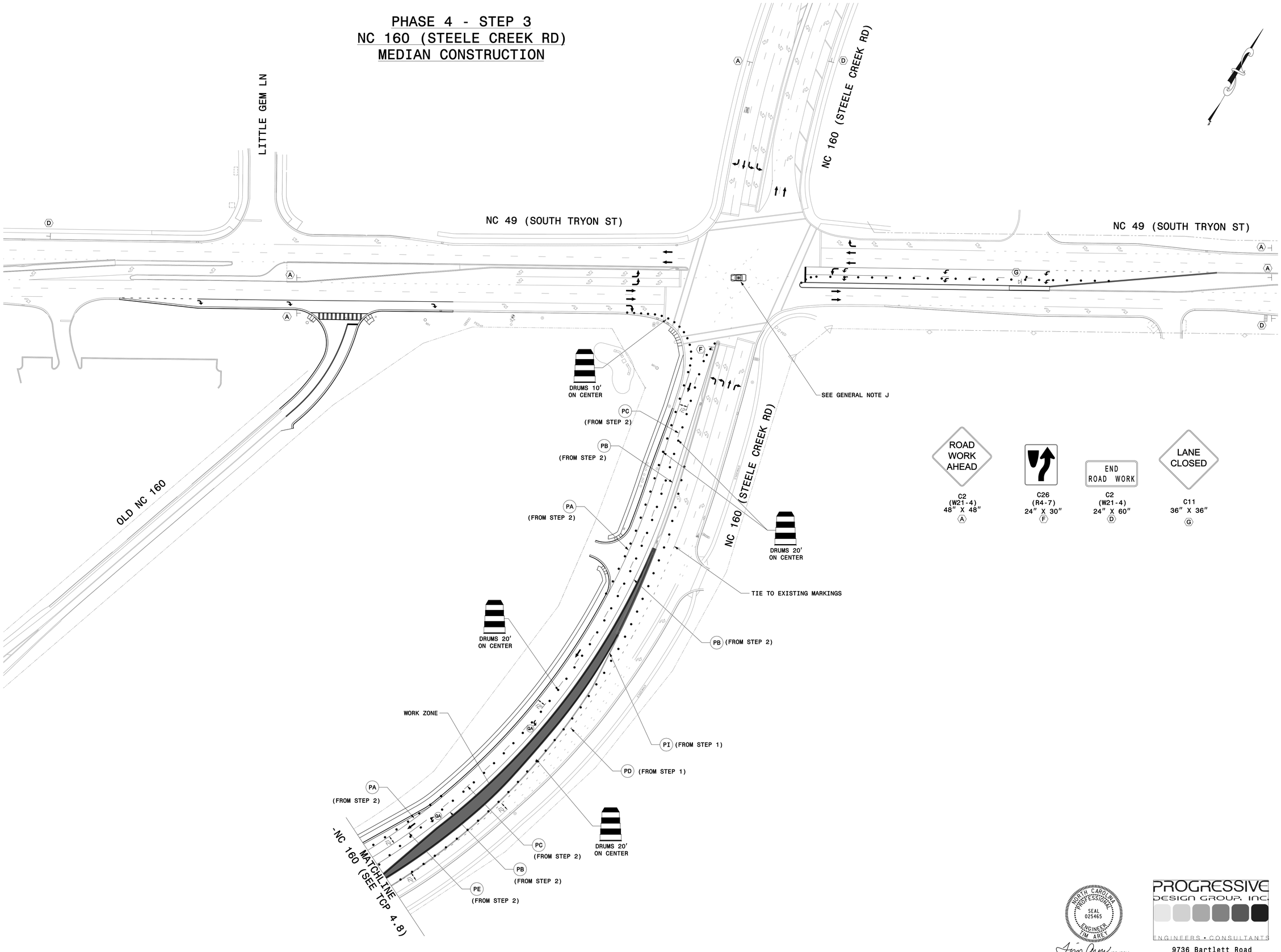
TRAFFIC CONTROL PLAN
PHASE 4 - STEP 2
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

TCP 4.6

PHASE 4 - STEP 3
NC 160 (STEELE CREEK RD)
MEDIAN CONSTRUCTION



PROJECT MANAGER		DRAWING SCALE	REV.	DATE
DRAWN BY		PROJECT DATE		
CHECKED BY		PROJECT NUMBER		
		PHASE / TASK		
		FILE NAME		
		PLOT DATE		

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TRAFFIC CONTROL PLAN
PHASE 4 - STEP 3
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY

Jim Arey 1/20/2014

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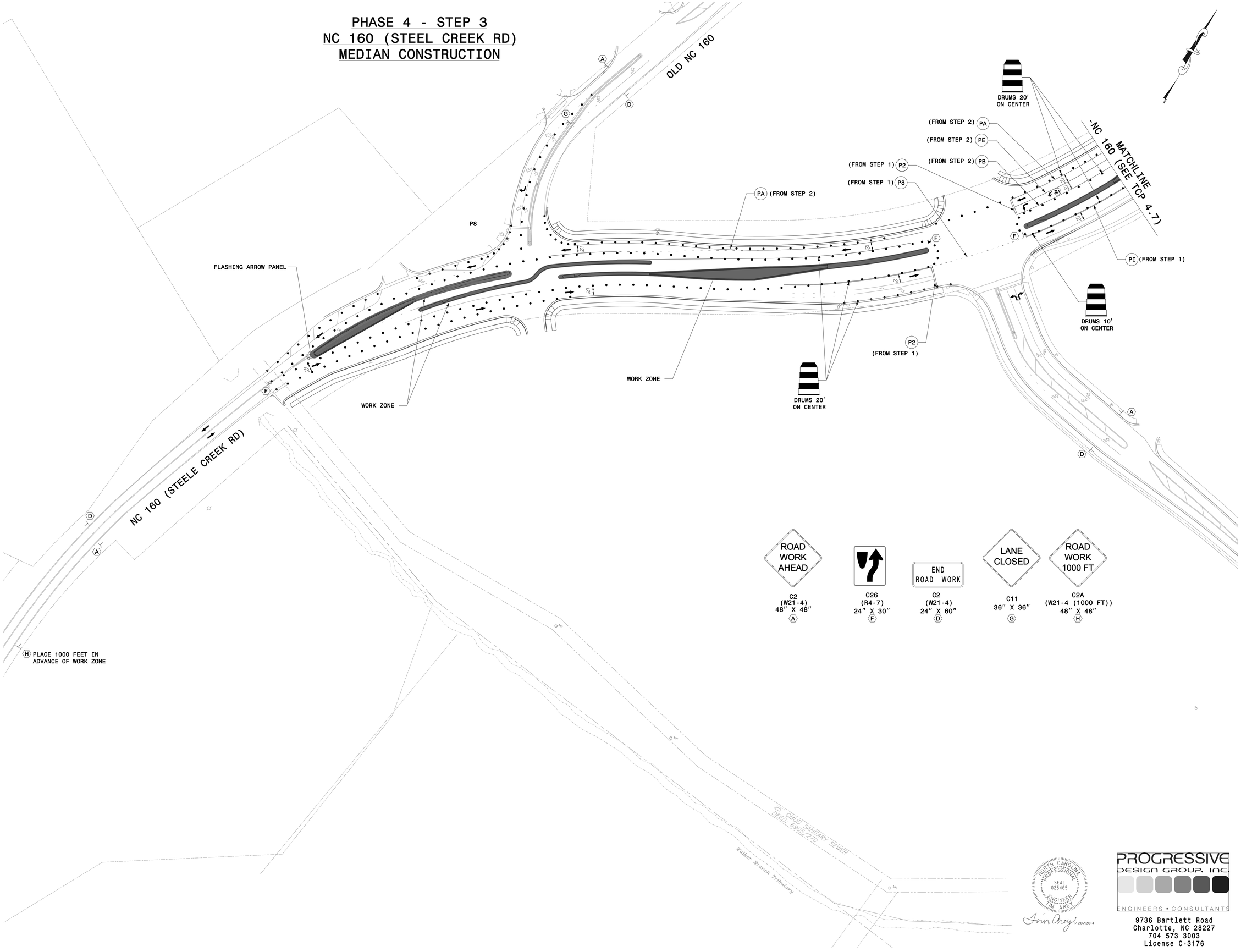
TCP 4.7

PHASE 4 - STEP 3
NC 160 (STEEL CREEK RD)
MEDIAN CONSTRUCTION



NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM ARey
Jim Arey 10/20/2014

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REV.	DATE

DRAWING SCALE: 1" = 50'
PROJECT DATE: 10/20/2014
PROJECT NUMBER: 2013-0000
PHASE: 1 TASK: 1
PLOT DATE: 10/20/2014
PROJECT MANAGER: JIM ARey
SCALE BY: JIM ARey
DRAWN BY: JIM ARey
CHECKED BY: JIM ARey

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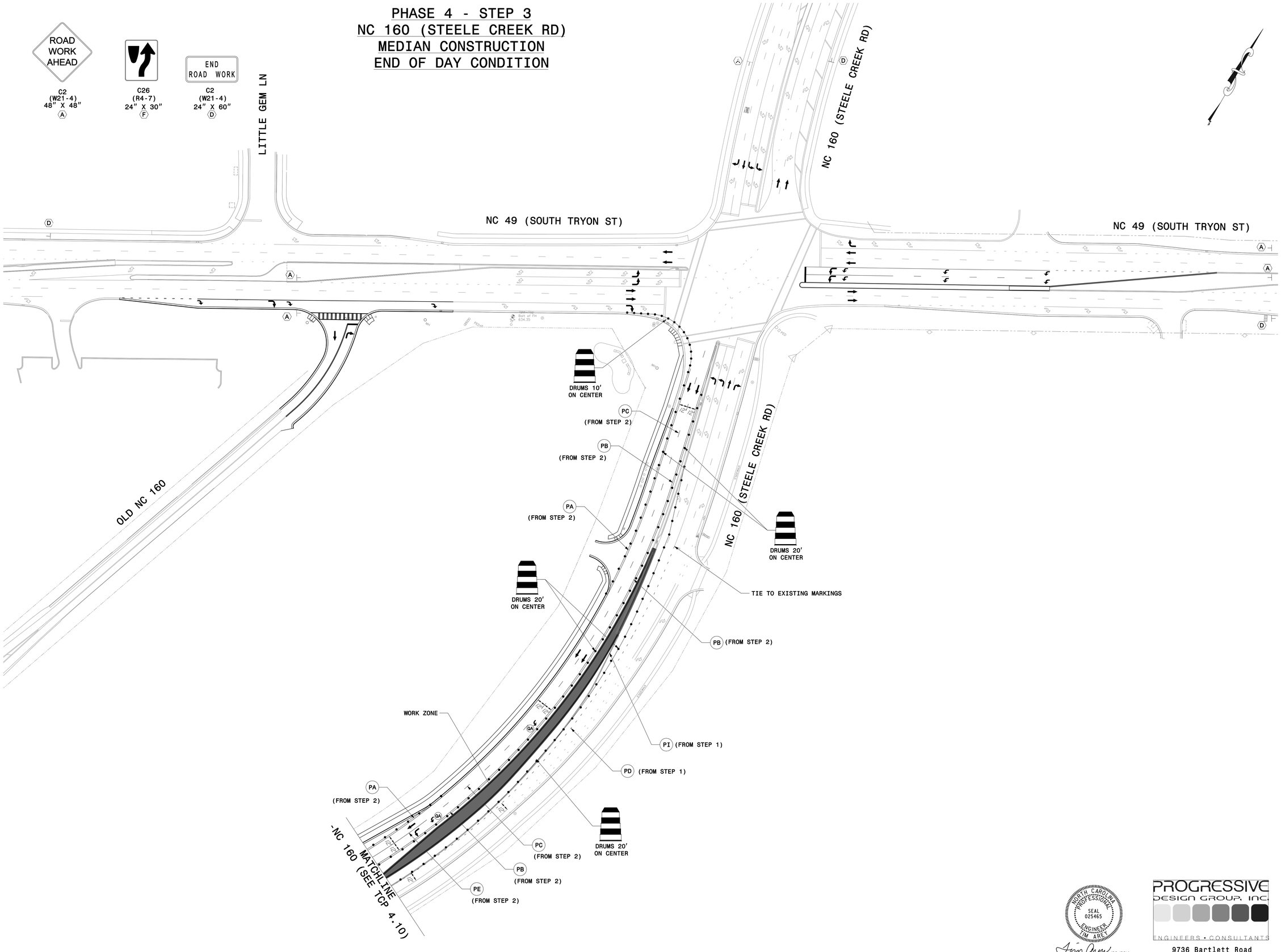
TRAFFIC CONTROL PLAN
PHASE 4 - STEP 3
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

TCP 4.8

PHASE 4 - STEP 3
NC 160 (STEELE CREEK RD)
MEDIAN CONSTRUCTION
END OF DAY CONDITION



PROJECT MANAGER	
DRAWN BY	
CHECKED BY	
DRAWING SCALE	
PROJECT DATE	
PROJECT NUMBER	
PHASE	TASK
FILE NAME	PLOT DATE

REV.	DATE

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TRAFFIC CONTROL PLAN
PHASE 4 -STEP 3
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM ARY

Jim Ary 1/20/2014

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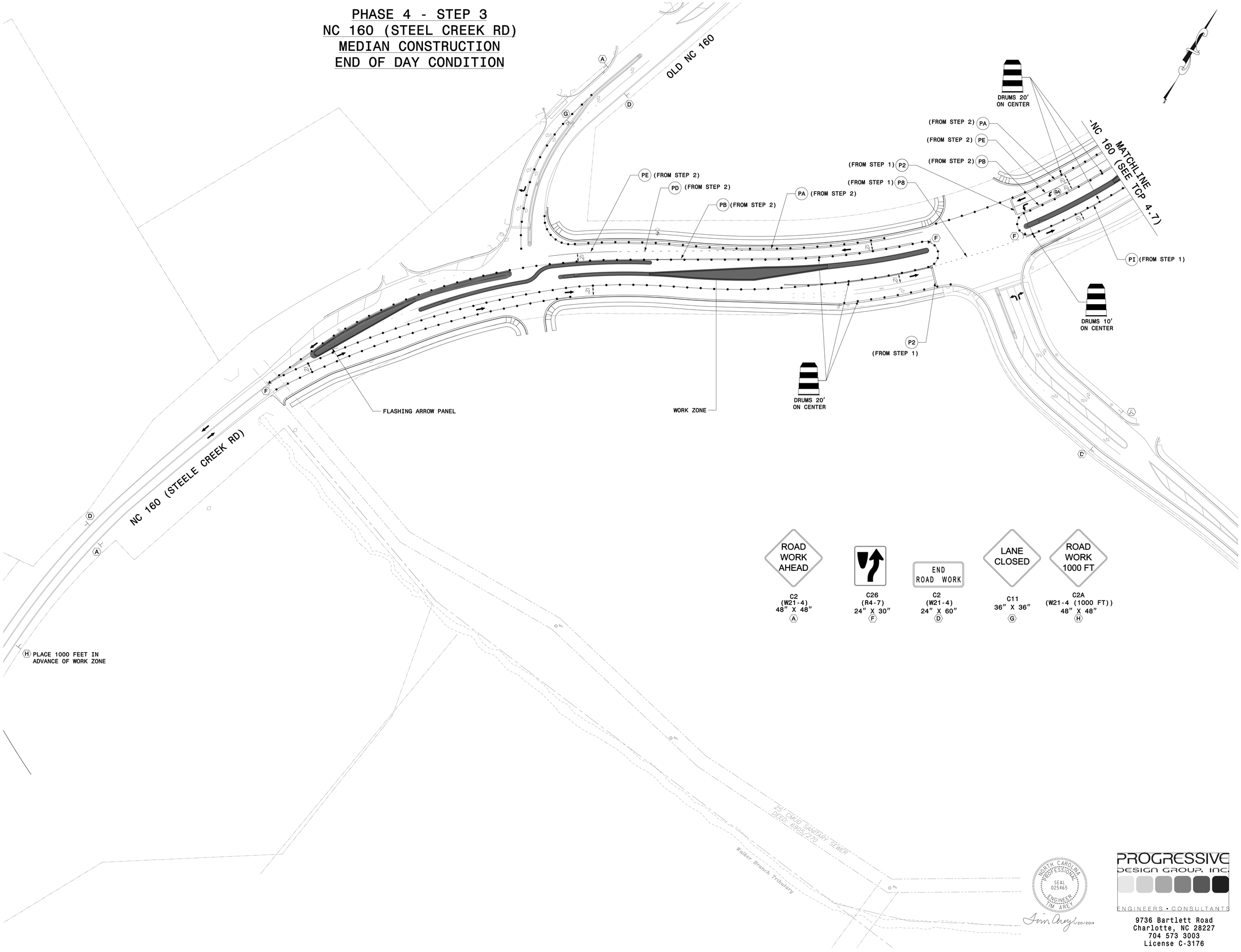
TCP 4.9

PHASE 4 - STEP 3
NC 160 (STEEL CREEK RD)
MEDIAN CONSTRUCTION
END OF DAY CONDITION



NORTH CAROLINA PROFESSIONAL SEAL 025465 ENGINEER JIM AREY

Jim Arey 10/20/2014

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DRAWING SCALE	1" = 50'
PROJECT DATE	10/20/2014
PROJECT NUMBER	2013-0-0-0
PHASE	TCP
PLOT DATE	10/20/2014
PROJECT MANAGER	
SCALE BY	
DRAWN BY	
CHECKED BY	
FILE NAME	

REV. | DATE

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TRAFFIC CONTROL PLAN
PHASE 4 - STEP 3
NC 160 (STEELE CREEK RD)

RIVERGATE
CHARLOTTE, NC

TCP 4.10