

# BRIAR CHAPEL

## PHASE 16 SOUTH

### CONSTRUCTION DOCUMENTS

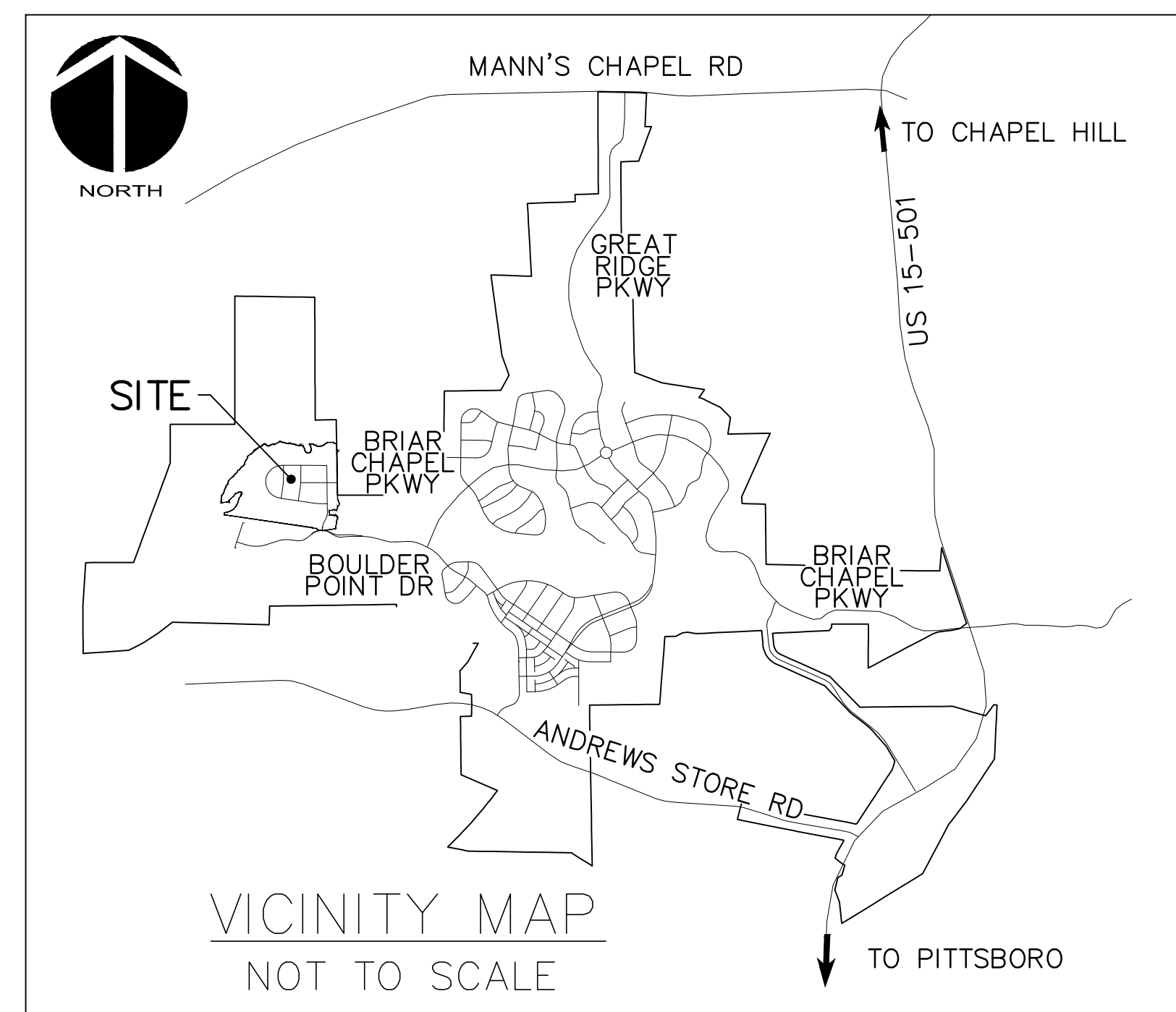
#### U.S. HWY 15-501 and MANN'S CHAPEL ROAD

#### CHATHAM COUNTY, NORTH CAROLINA

DATE: SEPTEMBER 30, 2015  
REVISED: DECEMBER 9, 2015

#### COUNTY AND AGENCY CONTACTS

- A. Chatham County  
Planning Department  
Dunlap Building  
80 East Street  
Pittsboro, NC 27312  
(919) 542-8204 phone  
Contact: Jason Sullivan  
Email: jason.sullivan@chathamnc.org
- B. Chatham County  
Environmental Services  
Dunlap Building  
80 East Street  
Pittsboro, NC 27312  
(919) 542-0945 phone  
Contact: Dan LaMontagne, PE  
Email: dan.lamontagne@chathamnc.org
- C. Chatham County  
Soil Erosion and Sedimentation Control  
Dunlap Building  
80 East Street  
Pittsboro, NC 27312  
(919) 545-8339 phone  
Contact: Rachael Thorn  
Email: rachael.thorn@chathamnc.org
- D. Chatham County  
Public Works  
964 East Street, 2nd Floor, Suite 205  
Pittsboro, NC 27312  
(919) 545-8530 phone  
Contact: Larry Bridges  
Email: larry.bridges@chathamnc.org
- E. NCDOT  
Division 8, District 1  
300 DOT Drive  
P.O. Box 1164  
Asheboro, NC 27204  
(336) 318-4000 phone  
Contact: Justin Richardson, PE  
Email: jrichardson@ncdot.gov
- F. NCDENR  
Division of Water Quality  
512 N. Salisbury St  
Archdale Building, 9th Floor  
Raleigh, NC 27604  
(919) 807-6373 phone  
Contact: Boyd Devane  
Email: boyd.devane@ncdenr.gov
- G. NCDENR  
Division of Environmental Health  
Public Water Supply Section  
1634 Mail Service Center  
Raleigh, NC 27699-1634  
(919) 707-9064 phone  
Contact: Shashi Bhatta  
Email: shashi.bhatta@ncdenr.gov
- H. NCDENR  
Division of Water Quality  
Surface Water Protection  
3800 Barrett Drive  
Raleigh, NC 27609  
(919) 791-4200 phone  
Contact: Danny Smith  
Email: danny.smith@ncdenr.gov



#### VICINITY MAP

NTS

#### PROJECT DATA

NAME OF PROJECT:  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA

#### OWNER:

NNP BRIAR CHAPEL, LLC  
16 WINDY KNOLL CIRCLE  
CHAPEL HILL, NC 27516  
PHONE: (919) 951-0700  
FAX: (919) 240-4963  
CONTACT: LEE BOWMAN  
EMAIL: lbowman@newlandco.com

#### PREPARED BY:

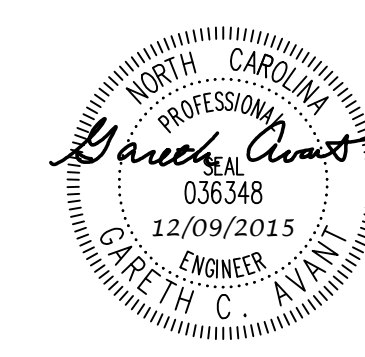
McKIM & CREED  
1730 VARSITY DRIVE, SUITE 500  
RALEIGH, NORTH CAROLINA 27606  
PHONE: (919) 233-8091  
FAX: (919) 233-8031  
CONTACT: GARETH AVANT, PE  
EMAIL: gavant@mckimcreed.com

PROJECT AREA: 45.50 ACRES

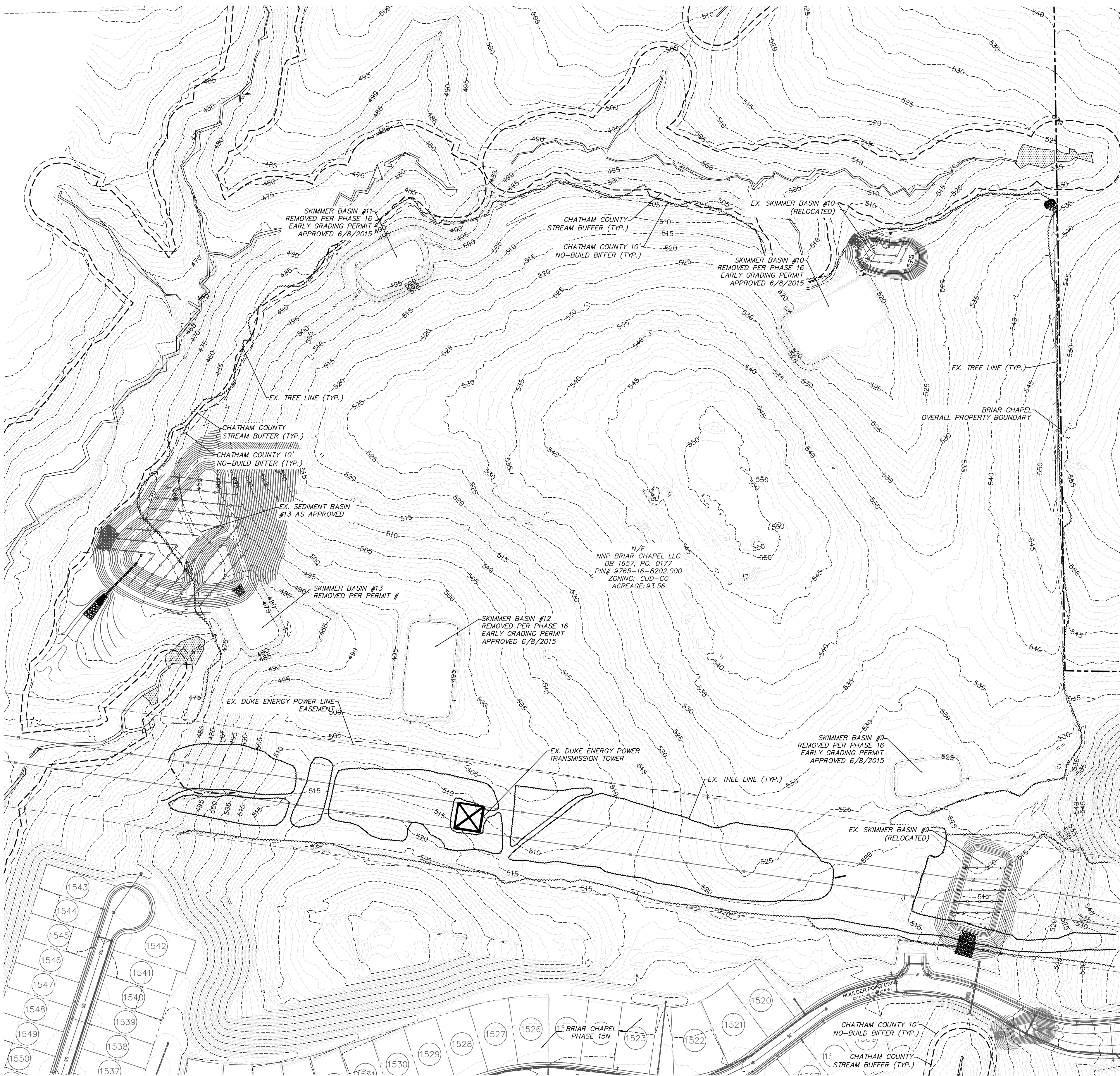
These improvements shall be constructed in accordance with the following plans, and the Standard Specifications of NCDOT and Chatham County.

#### SHEET INDEX

|      |                                                                                                                             |
|------|-----------------------------------------------------------------------------------------------------------------------------|
| C0.1 | COVER SHEET                                                                                                                 |
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FINAL DRAWINGS  
FOR REVIEW PURPOSES ONLY



#### GENERAL NOTES:

1. REFER TO THE FOLLOWING MCKIM & CREED, INC. CONSTRUCTION PLANS, AND ALL SUBSEQUENT CONSTRUCTION BULLETINS FOR INFORMATION ON EXISTING SITE INFRASTRUCTURE:
  - BRIAR CHAPEL – BOULDER POINT DRIVE EXTENSION CONSTRUCTION PLANS SEALED JULY 17, 2015.
  - US STEEL SECTION 1 CONSTRUCTION PLANS SEALED JULY 22, 2015.
  - BRIAR CHAPEL – PHASE 15N CONSTRUCTION PLANS SEALED AUGUST 13, 2015.
2. REFER TO THE FOLLOWING JOHN R. MCADAMS COMPANY, INC. CONSTRUCTION PLANS, AND ALL SUBSEQUENT CONSTRUCTION BULLETINS FOR INFORMATION ON EXISTING SITE INFRASTRUCTURE:
  - BRIAR CHAPEL – RECLAMATION FACILITY EROSION CONTROL PLAN SEALED JULY 29, 2005
  - BRIAR CHAPEL – PHASE 1 CONSTRUCTION PLANS SEALED OCTOBER 21, 2005.
3. THIS PROPERTY IS ZONED CUD-CC.
4. ALL DISTANCES SHOWN ARE HORIZONTAL GROUND MEASUREMENTS.
5. BEARINGS SHOWN HEREON ARE BASED ON NC GRID NAD83. THIS PROJECT IS LOCALIZED ABOUT NCGS MONUMENT "MEACHAM" HAVING NC GRID COORDINATES N: 768,395.12', E: 1,963,424.93' USING A COMBINED FACTOR OF 0.99999676.
6. EXISTING TOPOGRAPHIC DATA IS BASED ON AERIAL MAPPING PERFORMED BY AVOIDANCE MAPPING SERVICES IN FEBRUARY 2010. ELEVATIONS ARE BASED ON NAVD 88 NCGS MONUMENT "F-92" WITH AN ELEVATION OF 476.06'.
7. HORIZONTAL AND VERTICAL CONTROL FOR THIS SITE WAS INSTALLED BY GPA PROFESSIONAL LAND SURVEYORS OF NC.
8. PROJECT IS LOCATED IN THE CAPE FEAR RIVER BASIN.
9. STREAM AND WETLAND LOCATIONS ARE BASED ON DELINEATIONS PROVIDED BY SOIL AND ENVIRONMENTAL CONSULTANTS IN RALEIGH, NC – CONTACT NIKKI THOMSON AT 919-846-5900.
10. NO PORTION OF THIS PROPERTY IS LOCATED IN SPECIAL FLOOD HAZARD AREA "AE" AS SHOWN ON FEMA FIRM MAP #3710978500J DATED FEBRUARY 2, 2007.

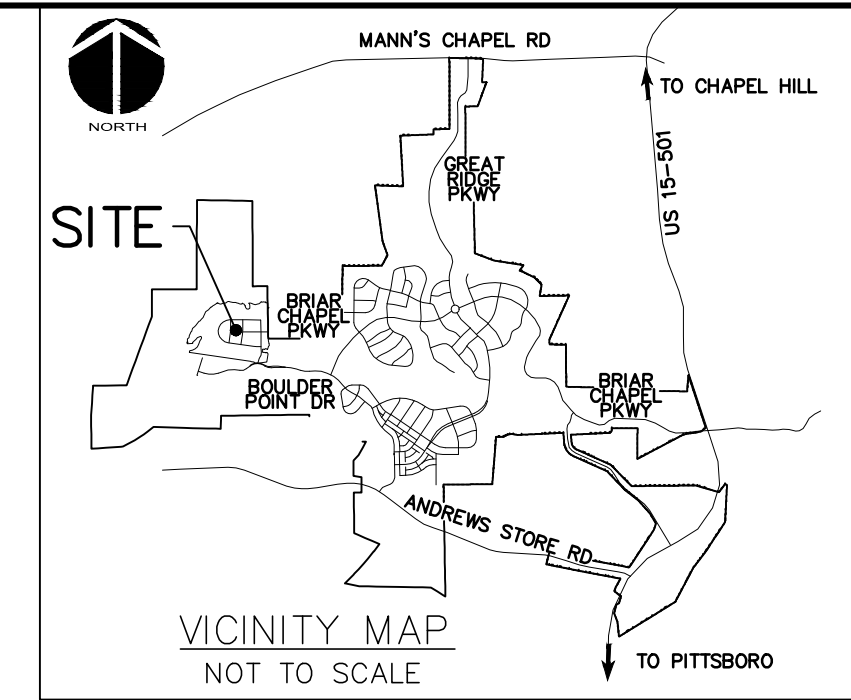
#### DEMOLITION NOTES:

1. NO EARTH-DISTURBING ACTIVITIES SHALL COMMENCE UNTIL ALL PERIMETER EROSION CONTROL MEASURES ARE IN PLACE IN ACCORDANCE WITH THE EROSION CONTROL SEQUENCE SHOWN IN THESE PLANS.
2. NO EARTH-DISTURBING ACTIVITY OR OTHER WORK SHALL TAKE PLACE WITHIN WETLAND AREAS NOTED ON SURVEY. CONTRACTOR SHALL FIELD VERIFY WETLAND LIMITS FLAGGING IS IN PLACE AND SHALL NOT ENTER WETLAND AREAS. IF WETLAND FLAGGING IS MISSING OR OTHERWISE DAMAGED, IT IS CONTRACTOR'S RESPONSIBILITY TO NOTE WETLAND LIMITS AND PREVENT DISTURBANCE OR OTHER ACTIVITY WITHIN WETLANDS.
3. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL PROPERTY CORNER MONUMENTS, AND SHALL HAVE, AT HIS EXPENSE, ALL CORNER MONUMENTS REPLACED WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES.
4. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS, AT HIS EXPENSE, DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE PUBLIC DURING CONSTRUCTION, WHICH INCLUDES, BUT IS NOT LIMITED TO, CONSTRUCTION FENCING, BARRICADES, SIGNAGE, ETC.
6. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH ALL REGULATIONS GOVERNING THE DEMOLITION, REMOVAL, TRANSPORTATION AND DISPOSAL OF ALL DEMOLITION DEBRIS.
7. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS FOR EXCAVATION AND TRENCHING PROCEDURES. CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, ETC. AS NECESSARY FOR THESE OPERATIONS, AND SHALL COMPLY WITH ALL OSHA PERFORMANCE CRITERIA.
8. CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ALL UTILITIES AND APPURTENANCES TO REMAIN.

#### \*\*\* NOTICE TO CONTRACTOR \*\*\*

THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, IN WRITING, OF ANY DISCREPANCIES OR OMISSIONS TO THE TOPOGRAPHIC INFORMATION. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION (HORIZONTAL AND VERTICAL) OF ANY BURIED CABLES, CONDUITS, PIPES, AND STRUCTURES (STORM SEWER, SANITARY SEWER, WATER, GAS, TELEVISION, TELEPHONE, ETC.) WHICH IMPACT THE CONSTRUCTION SITE. THE CONTRACTOR(S) SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE ACTUAL CONDITIONS VERSUS THE DATA CONTAINED IN THE CONSTRUCTION PLANS. ANY COSTS INCURRED AS THE RESULT OF NOT CONFIRMING THE CONDUITS, PIPES, AND STRUCTURES SHALL BE BORNE BY THE CONTRACTOR.

SURVEY REFERENCES:  
DEED BOOK 1492, PAGE 581  
DEED BOOK 1198, PAGE 510  
DEED BOOK 833, PAGE 752  
DEED BOOK 1461, PAGE 244

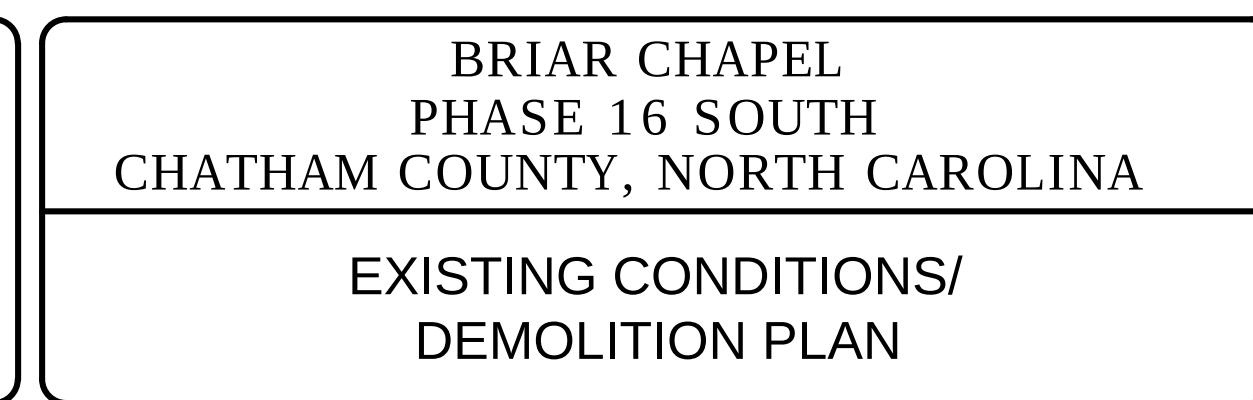
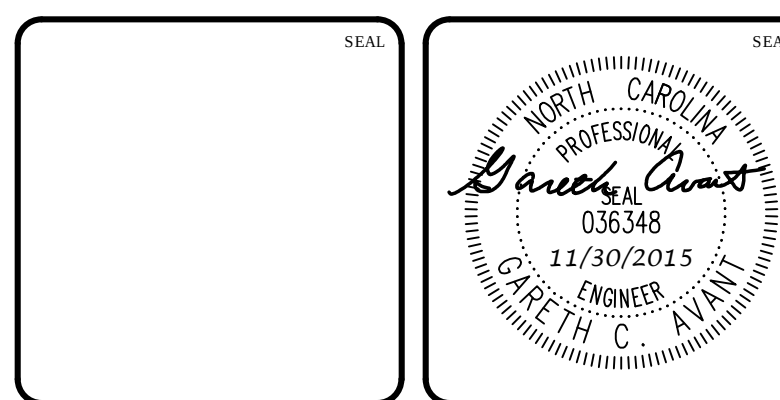


#### LEGEND:

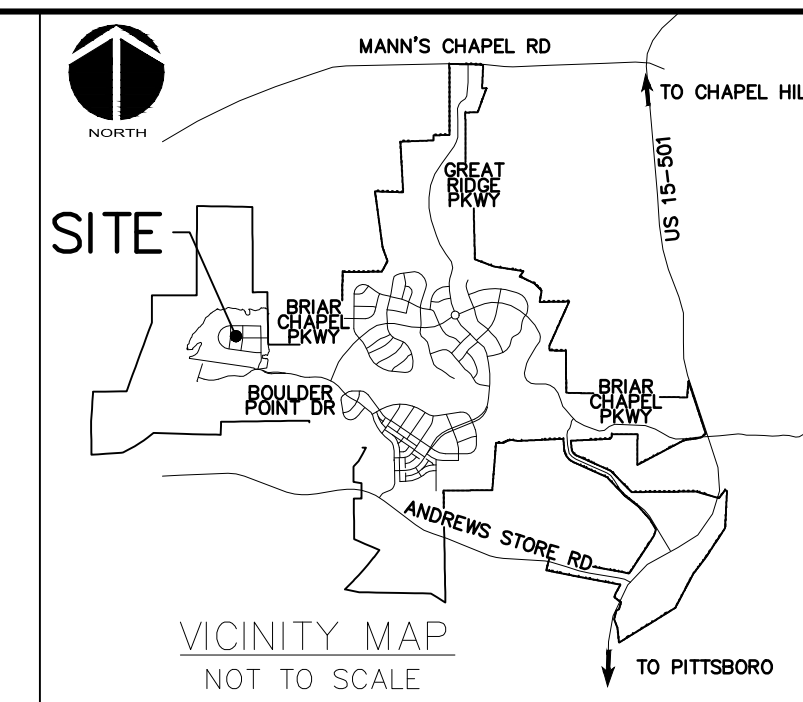
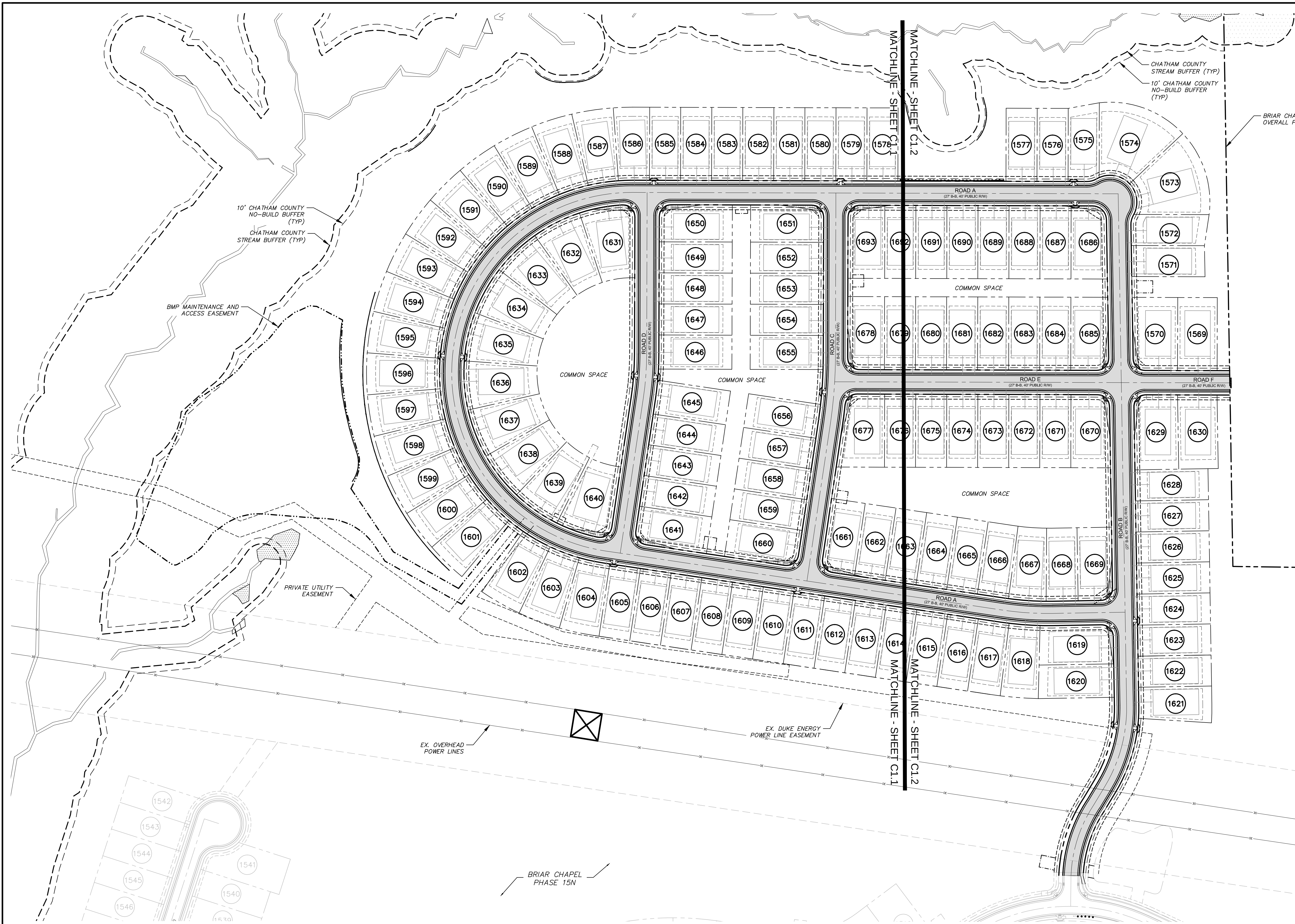
- 10' NO BUILD BUFFER LINE
- RIPARIAN BUFFER LINE
- EX. CONTOUR
- EX. POWER LINE EASEMENT
- OVERHEAD POWER LINE
- EX. FORCE MAIN EASEMENT
- EX. SANITARY SEWER FORCE MAIN
- EX. REUSE IRRIGATION MAIN
- EX. WATER MAIN
- EX. STORM DRAINAGE PIPE



| REV. NO. | DATE       | DESCRIPTIONS                                      | REVISIONS |
|----------|------------|---------------------------------------------------|-----------|
| 3        | 2015.11.30 | REVISED PER COMMENTS RECEIVED FROM MCDOT          |           |
| 2        | 2015.11.12 | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY |           |
| 1        | 2015.09.30 | ISSUED FOR PERMITTING                             |           |



|                                                 |                      |                       |
|-------------------------------------------------|----------------------|-----------------------|
| DATE: SEPTEMBER 30, 2015                        | SCALE: 1" = 50'      | M&C FILE NUMBER: C0.2 |
| M&C PROJ. # 02735-0149                          | HORIZONTAL: 1" = 50' | DRAWING NUMBER: C0.2  |
| DRAWN: BSS                                      | VERTICAL: N/A        |                       |
| DESIGNED: BSS                                   |                      |                       |
| CHECKED: GCA                                    |                      |                       |
| PROJ. MGR. CHS                                  |                      |                       |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION: 3          |                       |

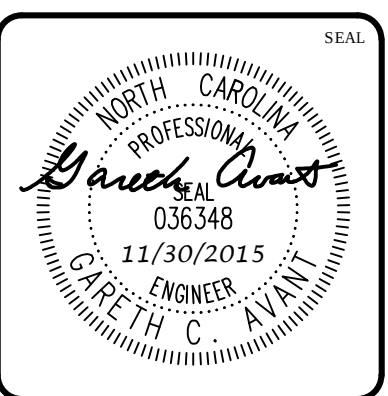
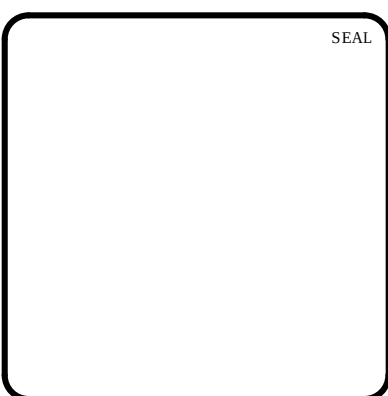


| LOT AREA TABLE |           |           | LOT AREA TABLE |           |           | LOT AREA TABLE |           |           |
|----------------|-----------|-----------|----------------|-----------|-----------|----------------|-----------|-----------|
| LOT #          | AREA (SF) | AREA (AC) | LOT #          | AREA (SF) | AREA (AC) | LOT #          | AREA (SF) | AREA (AC) |
| 1569           | 7799.98   | 0.18      | 1614           | 6120.00   | 0.14      | 1659           | 6120.00   | 0.14      |
| 1570           | 8775.74   | 0.20      | 1615           | 6120.00   | 0.14      | 1660           | 7234.16   | 0.17      |
| 1571           | 6135.58   | 0.14      | 1616           | 6120.00   | 0.14      | 1661           | 6634.16   | 0.15      |
| 1572           | 6320.05   | 0.15      | 1617           | 6304.85   | 0.14      | 1662           | 6120.00   | 0.14      |
| 1573           | 11911.68  | 0.27      | 1618           | 6828.89   | 0.16      | 1663           | 6120.00   | 0.14      |
| 1574           | 12333.38  | 0.28      | 1619           | 7744.99   | 0.18      | 1664           | 6120.00   | 0.14      |
| 1575           | 6314.95   | 0.14      | 1620           | 6800.49   | 0.16      | 1665           | 6120.00   | 0.14      |
| 1576           | 6120.00   | 0.14      | 1621           | 6694.83   | 0.15      | 1666           | 6078.14   | 0.14      |
| 1577           | 6120.00   | 0.14      | 1622           | 6120.00   | 0.14      | 1667           | 6545.38   | 0.15      |
| 1578           | 6120.00   | 0.14      | 1623           | 6120.00   | 0.14      | 1668           | 6143.10   | 0.14      |
| 1579           | 6120.00   | 0.14      | 1624           | 6120.00   | 0.14      | 1669           | 6723.71   | 0.15      |
| 1580           | 6120.00   | 0.14      | 1625           | 6120.00   | 0.14      | 1670           | 7610.93   | 0.17      |
| 1581           | 6120.00   | 0.14      | 1626           | 6120.00   | 0.14      | 1671           | 6120.00   | 0.14      |
| 1582           | 6120.00   | 0.14      | 1627           | 6120.00   | 0.14      | 1672           | 6120.00   | 0.14      |
| 1583           | 6120.00   | 0.14      | 1628           | 6120.00   | 0.14      | 1673           | 6120.00   | 0.14      |
| 1584           | 6120.00   | 0.14      | 1629           | 8735.80   | 0.20      | 1674           | 6120.00   | 0.14      |
| 1585           | 6120.00   | 0.14      | 1630           | 7868.53   | 0.18      | 1675           | 6120.00   | 0.14      |
| 1586           | 6649.33   | 0.15      | 1631           | 8702.99   | 0.20      | 1676           | 6120.00   | 0.14      |
| 1587           | 7146.71   | 0.16      | 1632           | 7757.30   | 0.18      | 1677           | 8411.88   | 0.19      |
| 1588           | 7146.71   | 0.16      | 1633           | 7634.52   | 0.18      | 1678           | 7165.58   | 0.16      |
| 1589           | 7146.71   | 0.16      | 1634           | 7634.52   | 0.18      | 1679           | 6120.00   | 0.14      |
| 1590           | 7146.71   | 0.16      | 1635           | 7634.52   | 0.18      | 1680           | 6120.00   | 0.14      |
| 1591           | 7146.71   | 0.16      | 1636           | 7634.52   | 0.18      | 1681           | 6120.00   | 0.14      |
| 1592           | 7146.71   | 0.16      | 1637           | 7634.52   | 0.18      | 1682           | 6120.00   | 0.14      |
| 1593           | 7146.71   | 0.16      | 1638           | 7634.52   | 0.18      | 1683           | 6120.00   | 0.14      |
| 1594           | 7146.71   | 0.16      | 1639           | 7634.52   | 0.18      | 1684           | 6120.00   | 0.14      |
| 1595           | 7146.71   | 0.16      | 1640           | 8628.81   | 0.20      | 1685           | 7300.77   | 0.17      |
| 1596           | 7146.71   | 0.16      | 1641           | 7234.16   | 0.17      | 1686           | 6934.22   | 0.16      |
| 1597           | 7146.71   | 0.16      | 1642           | 6120.00   | 0.14      | 1687           | 6120.00   | 0.14      |
| 1598           | 7146.71   | 0.16      | 1643           | 6120.00   | 0.14      | 1688           | 6120.00   | 0.14      |
| 1599           | 7146.71   | 0.16      | 1644           | 6120.00   | 0.14      | 1689           | 6120.00   | 0.14      |
| 1600           | 7146.71   | 0.16      | 1645           | 6730.73   | 0.15      | 1690           | 6120.00   | 0.14      |
| 1601           | 7146.71   | 0.16      | 1646           | 6724.92   | 0.15      | 1691           | 6120.00   | 0.14      |
| 1602           | 7289.95   | 0.17      | 1647           | 6120.00   | 0.14      | 1692           | 6120.00   | 0.14      |
| 1603           | 7289.95   | 0.17      | 1648           | 6120.00   | 0.14      | 1693           | 7165.58   | 0.16      |
| 1604           | 7065.30   | 0.16      | 1649           | 6120.00   | 0.14      |                |           |           |
| 1605           | 6111.79   | 0.14      | 1650           | 7234.16   | 0.17      |                |           |           |
| 1606           | 6120.00   | 0.14      | 1651           | 7234.16   | 0.17      |                |           |           |
| 1607           | 6120.00   | 0.14      | 1652           | 6120.00   | 0.14      |                |           |           |
| 1608           | 6120.00   | 0.14      | 1653           | 6120.00   | 0.14      |                |           |           |
| 1609           | 6120.00   | 0.14      | 1654           | 6120.00   | 0.14      |                |           |           |
| 1610           | 6120.00   | 0.14      | 1655           | 6718.03   | 0.15      |                |           |           |
| 1611           | 6120.00   | 0.14      | 1656           | 6715.06   | 0.15      |                |           |           |
| 1612           | 6120.00   | 0.14      | 1657           | 6120.00   | 0.14      |                |           |           |
| 1613           | 6120.00   | 0.14      | 1658           | 6120.00   | 0.14      |                |           |           |



SCALE: 1"=80' (Horiz.)

| REV. NO. | DESCRIPTIONS                                      | DATE       |
|----------|---------------------------------------------------|------------|
| 3        | REVISED PER COMMENTS RECEIVED FROM NCOT           | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |



**MCKIM & CREED**  
1730 Varsity Drive, Suite 500  
Raleigh, North Carolina 27606  
Phone: (919)233-8091, Fax: (919)233-8031  
F-1222  
www.mckimcreed.com

**BRIAR CHAPEL™**  
by  
**Newland COMMUNITIES**

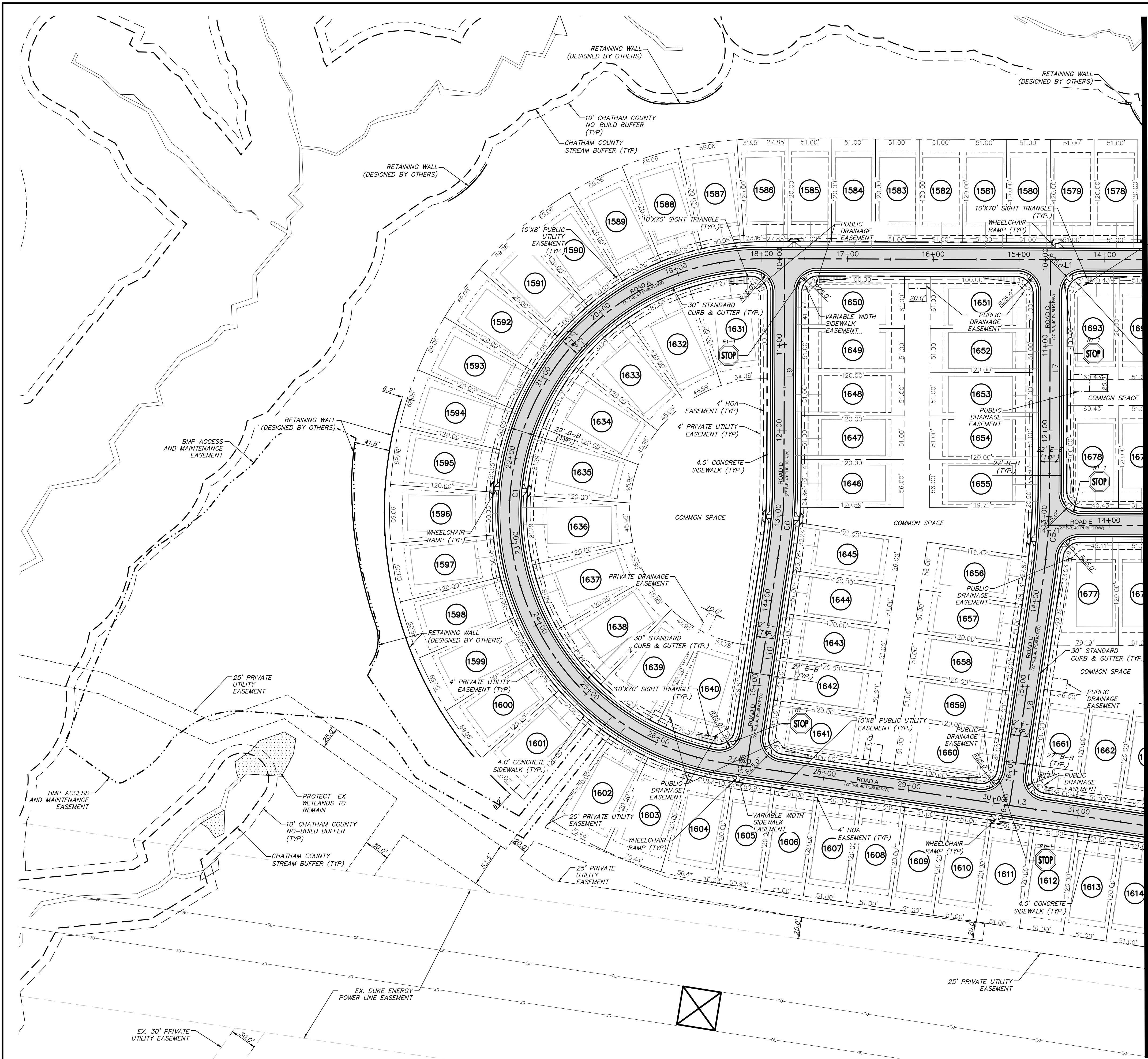
**BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA**

**OVERALL SITE PLAN**

DATE: SEPTEMBER 30, 2015  
MCE PROJ. # 02735-0149  
DRAWN: BSS  
DESIGNED: BSS  
CHECKED: GCA  
PROJ. MGR.: CHS

SCALE: HORIZONTAL: AS NOTED  
VERTICAL: N/A

STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY  
REVISION: 3



- LEGEND:**
- R/W LINE
  - FUTURE R/W LINE
  - EXISTING R/W LINE
  - HOA EASEMENT LINE
  - PUBLIC UTILITY EASEMENT LINE
  - PUBLIC DRAINAGE EASEMENT
  - EXISTING POWER LINE EASEMENT
  - OVERHEAD POWER LINE
  - 10' NO BUILD BUFFER LINE
  - RIPARIAN BUFFER LINE
  - BMP MAINTENANCE & ACCESS EASEMENT
  - ROADWAY CENTERLINE

- SITE GENERAL NOTES:**
- ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER IF ANY DISCREPANCIES EXIST PRIOR TO CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
  - REFER TO THE FOLLOWING MCKIM & CREED, INC. CONSTRUCTION PLANS, AND ALL SUBSEQUENT CONSTRUCTION BULLETINS FOR INFORMATION ON EXISTING SITE INFRASTRUCTURE:
    - BRIAR CHAPEL - BOULDER POINT DRIVE EXTENSION CONSTRUCTION PLANS SEALED JULY 17, 2014.
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  - STREAM AND WETLAND LOCATIONS ARE BASED ON DELINEATIONS PROVIDED BY SOIL AND ENVIRONMENTAL CONSULTANTS IN RALEIGH, NC - CONTACT NIKKI THOMSON AT 919-846-5900.
  - A PORTION OF THIS PROPERTY IS LOCATED IN SPECIAL FLOOD HAZARD AREA "AE" AS SHOWN ON FEMA FIRM MAP #3710976500J DATED FEBRUARY 2, 2007.
  - ALL PROPOSED ROADWAY DIMENSIONS AS SHOWN ARE MEASURED FROM BACK OF CURB TO BACK OF CURB, ALL PROPOSED ALLEY DIMENSIONS AS SHOWN ARE MEASURED FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.
  - BEFORE STARTING ANY CONSTRUCTION OF IMPROVEMENTS WITHIN ANY NCDOT STREET OR HIGHWAY RIGHT-OF-WAY, CONTACT NCDOT DISTRICT OFFICE AND OBTAIN ALL PERMITS AND ENCROACHMENTS. KEEP COPIES ON CONSTRUCTION SITE. ALSO CONTACT NCDOT DISTRICT OFFICE 24 HOURS IN ADVANCE BEFORE PLACING CURB AND GUTTER AT 336-629-1423.
  - REFER TO PLAN AND PROFILE SHEETS FOR DETAILED SANITARY SEWER AND STORM DRAINAGE INFORMATION WITHIN PUBLIC ROADS.

**CHATHAM COUNTY REQUIRED SITE NOTES**

- PROPERTY OWNER/DEVELOPER:  
NNP BRIAR CHAPEL, LLC  
16 WINDY KNOLL CIRCLE  
CHAPEL HILL, NC 27516  
PHONE: (919) 951-0700
- SITE AKPAR #: 82829

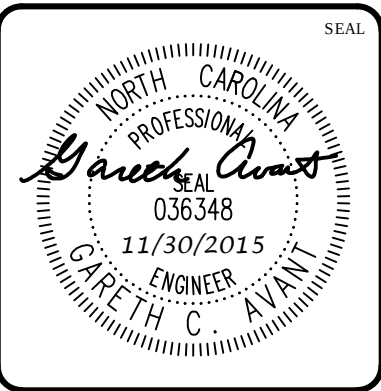
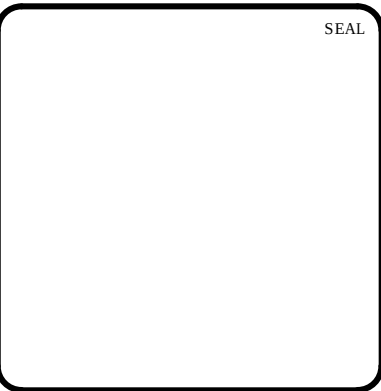
| ALIGNMENT LINE DATA |         |             |
|---------------------|---------|-------------|
| LINE #              | LENGTH  | BEARING     |
| L1                  | 653.20' | N89°50'21"W |
| L2                  | 144.46' | N89°50'21"W |
| L3                  | 659.82' | S81°31'57"E |
| L4                  | 118.93' | N89°03'14"E |
| L5                  | 840.27' | S0°56'46"E  |
| L6                  | 34.61'  | S31°03'36"W |
| L7                  | 269.50' | S0°09'39"W  |
| L8                  | 262.13' | S8°28'03"W  |
| L9                  | 265.14' | S0°09'39"W  |
| L10                 | 257.78' | S8°28'03"W  |
| L11                 | 470.66' | N89°50'21"W |
| L12                 | 176.40' | S89°50'21"E |

| ALIGNMENT CURVE DATA |             |         |               |              |            |
|----------------------|-------------|---------|---------------|--------------|------------|
| CURVE #              | ARCH LENGTH | RADIUS  | CHORD BEARING | CHORD LENGTH | DELTA      |
| C1                   | 887.00'     | 296.00' | S47°8'51"W    | 590.45'      | 171°41'36" |
| C2                   | 82.15'      | 500.00' | S86°14'22"E   | 82.06'       | 9°24'49"   |
| C3                   | 139.65'     | 250.00' | S15°03'25"W   | 137.84'      | 32°00'23"  |
| C4                   | 124.20'     | 230.00' | S17°54'05"W   | 122.70'      | 30°56'26"  |
| C5                   | 108.73'     | 750.00' | S47°8'51"W    | 108.64'      | 8°18'24"   |
| C6                   | 72.49'      | 500.00' | S47°8'51"W    | 72.42'       | 8°18'24"   |
| C7                   | 1.81'       | 300.00' | S89°39'59"E   | 1.81'        | 0°20'44"   |



SCALE: 1"=60' (Horiz.)

| REV. NO. | DATE       | DESCRIPTION                                       |
|----------|------------|---------------------------------------------------|
| 3        | 2015.11.30 | REVISED PER COMMENTS RECEIVED FROM NCDOT          |
| 2        | 2015.11.12 | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY |
| 1        | 2015.09.30 | ISSUED FOR PERMITTING                             |



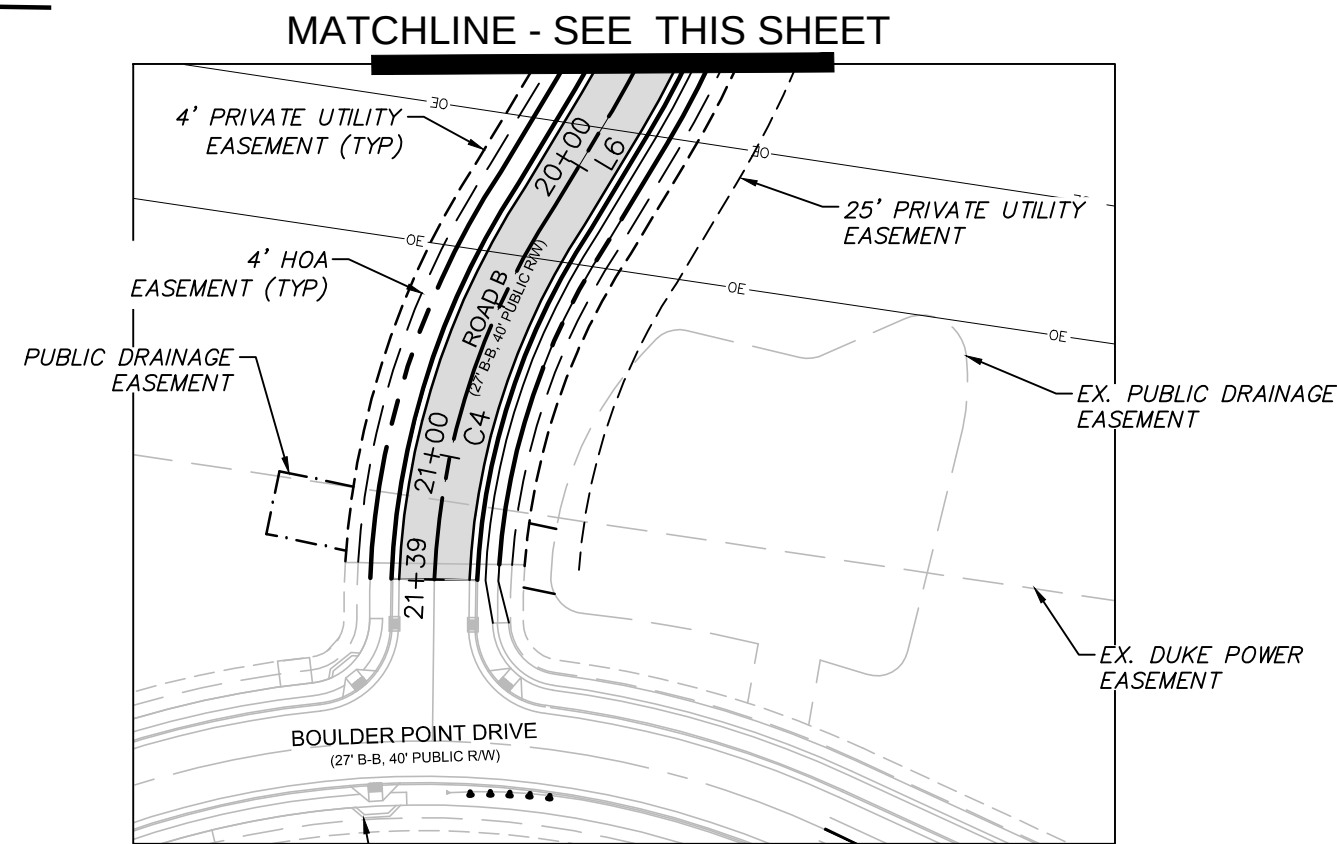
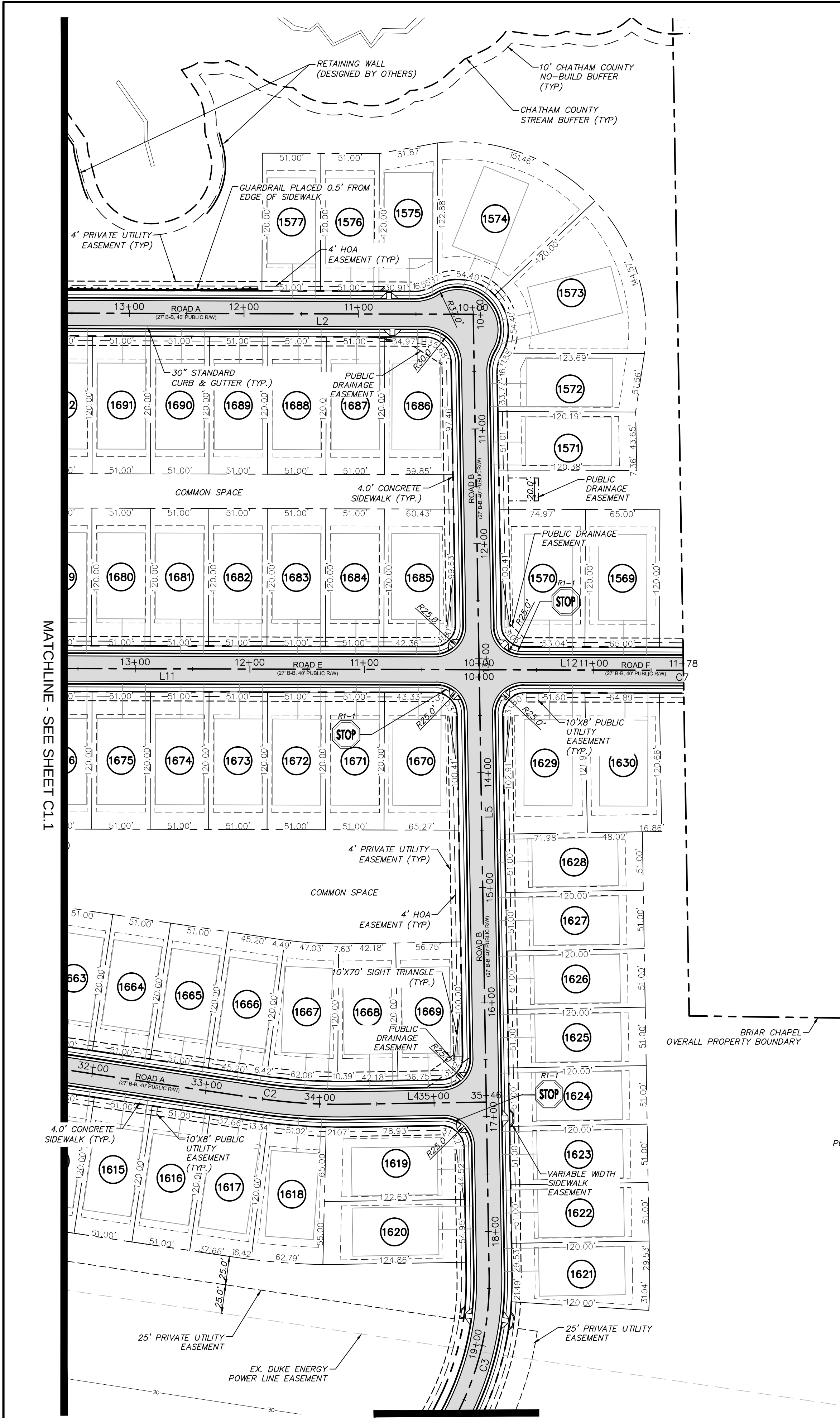
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by  
**Newland COMMUNITIES**

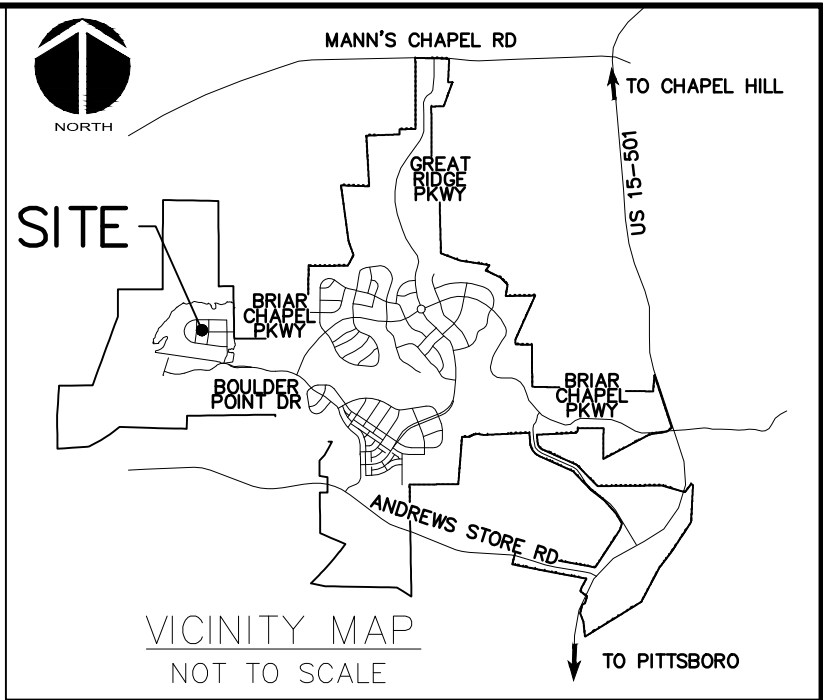
**BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA**

**SITE PLAN**

|                                                 |                                              |                                               |
|-------------------------------------------------|----------------------------------------------|-----------------------------------------------|
| DATE: SEPTEMBER 30, 2015                        | SCALE: HORIZONTAL: AS NOTED<br>VERTICAL: N/A | M&C FILE NUMBER: C1.X<br>DRAWING NUMBER: C1.1 |
| M&C PROJ. # 02735-0149                          | DESIGNED: BSS                                |                                               |
| DRAWN: BSS                                      | CHECKED: GCA                                 |                                               |
| PROJ. MGR. CHS                                  |                                              |                                               |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION: 3                                  |                                               |



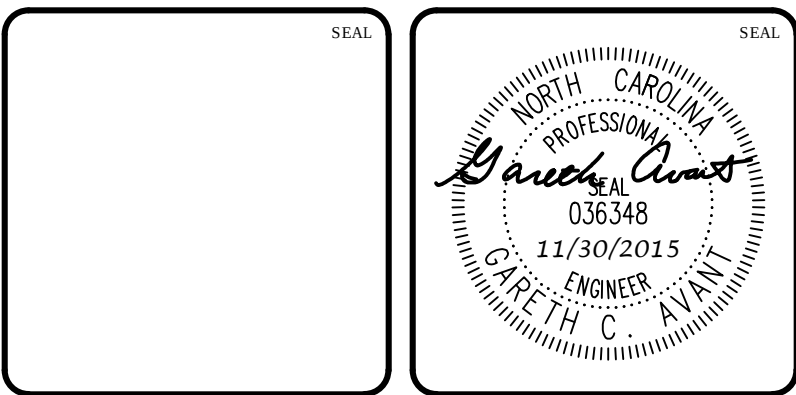
- LEGEND:**
- R/W LINE
  - FUTURE R/W LINE
  - EXISTING R/W LINE
  - HOA EASEMENT LINE
  - PUBLIC UTILITY EASEMENT LINE
  - PUBLIC DRAINAGE EASEMENT
  - EXISTING POWER LINE EASEMENT
  - OVERHEAD POWER LINE
  - 10' NO BUILD BUFFER LINE
  - RIPARIAN BUFFER LINE
  - BMP MAINTENANCE & ACCESS EASEMENT
  - ROADWAY CENTERLINE



| ALIGNMENT LINE DATA |         |              |
|---------------------|---------|--------------|
| LINE #              | LENGTH  | BEARING      |
| L1                  | 653.20' | N89°50'21\"W |
| L2                  | 144.46' | N89°50'21\"W |
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| C7                   | 1.81'       | 300.00' | S89°39'59\"E  | 1.81'        | 0°20'44\"   |

| REV. NO. | DESCRIPTIONS                                      | DATE       |
|----------|---------------------------------------------------|------------|
| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |



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CHATHAM COUNTY, NORTH CAROLINA**

**SITE PLAN**

**STOP**  
CALL N.C. ONE  
CALL CENTER  
BEFORE YOU DIG  
1-800-632-4949  
AVOID UTILITY  
DAMAGE

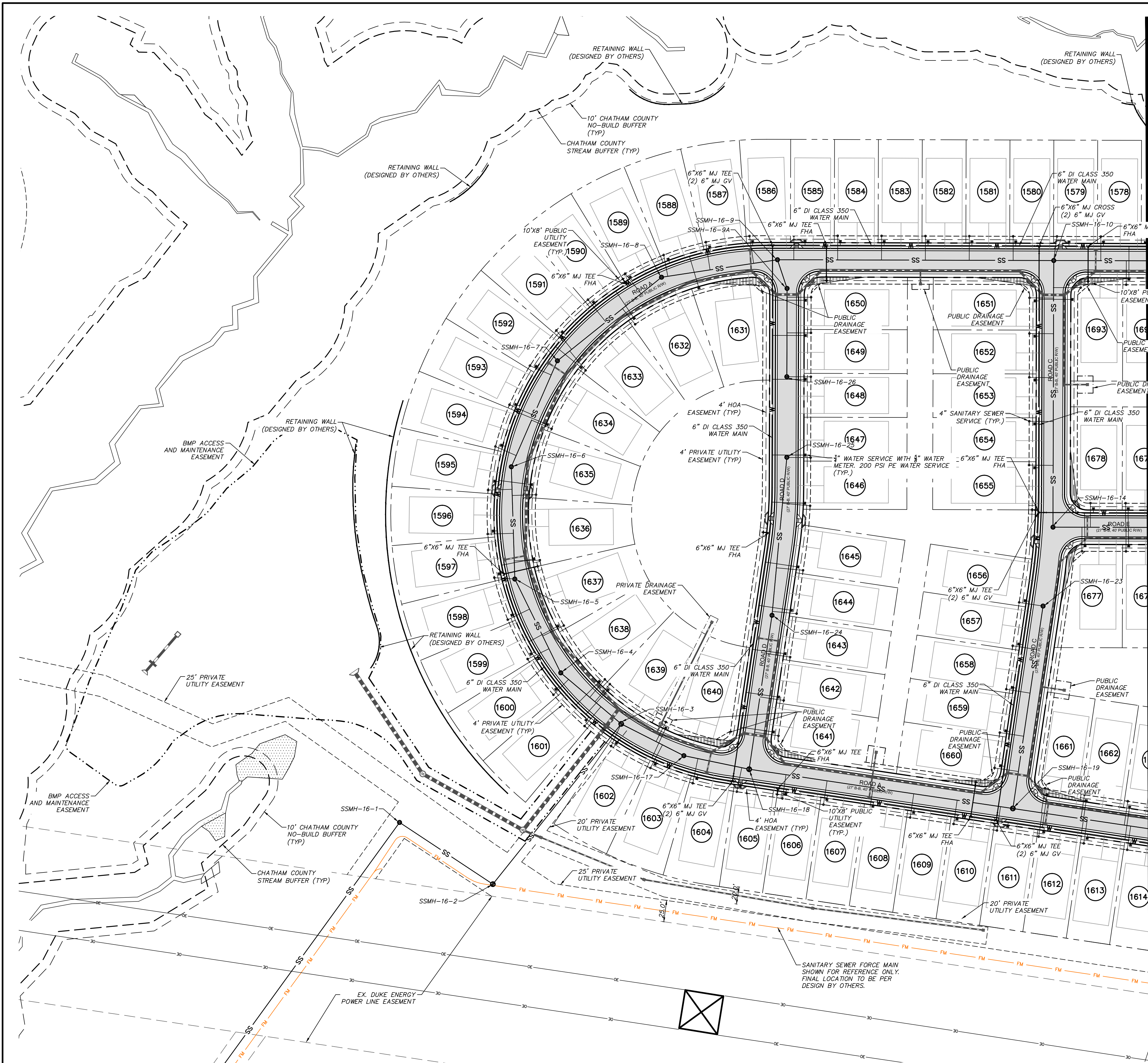
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**DATE:** SEPTEMBER 30, 2015  
**MCE PROJ. #** 02735-0149  
**DRAWN:** BSS  
**DESIGNED:** BSS  
**CHECKED:** GCA  
**PROJ. MGR.:** CHS

**SCALE:** AS NOTED  
**HORIZONTAL:** AS NOTED  
**VERTICAL:** N/A

**M&C FILE NUMBER:** C1.X  
**DRAWING NUMBER:** C1.2

**STATUS:** FINAL DRAWINGS  
FOR REVIEW PURPOSES ONLY  
**REVISION:** 3



UTILITY NOTES:

1. ALL SANITARY SEWER CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH CURRENT NCDNR & CHATHAM COUNTY STANDARDS, SPECIFICATIONS & DETAILS.
2. ALL WATER MAIN CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH CURRENT CHATHAM COUNTY STANDARDS, SPECIFICATIONS & DETAILS.
3. ALL PERMITS RELATING TO THIS PROJECT MUST BE OBTAINED PRIOR TO CONSTRUCTION.
4. ALL WATER MAINS SHALL HAVE A MIN. OF 3'-6" OF COVER AS MEASURED FROM FINISHED GRADE TO TOP OF PIPE AT THE LOCATION WHERE INSTALLED.
5. WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT LATERAL SEPARATION, IN WHICH CASE:

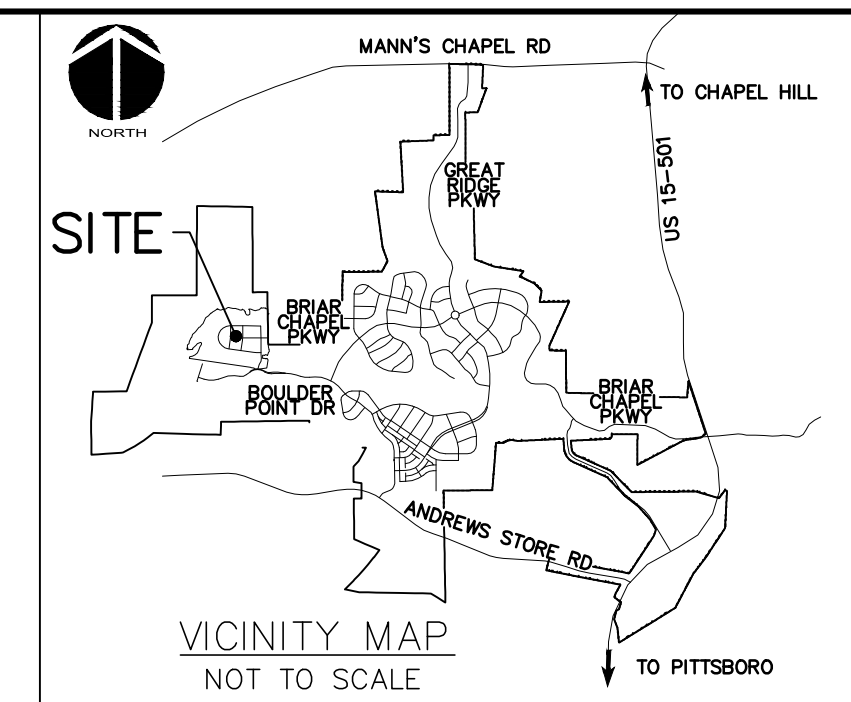
(1) THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER; OR

(2) THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

WHERE A WATER MAIN CROSSES OVER A SANITARY SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18-INCH VERTICAL SEPARATION. IN WHICH CASE BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.

WHERE A WATER MAIN CROSSES UNDER A SANITARY SEWER, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

6. CONTRACTOR SHALL USE A MIN. 20' SECTION DIP CLASS 350 CENTERED UNDER STORMWATER PIPE WHERE 18" MIN. VERTICAL CLEARANCE CANNOT BE MET BETWEEN STORMWATER AND WATER.
7. TRACER WIRE AND TRACER WIRE TEST STATIONS ARE TO BE INSTALLED ON ALL WATER MAINS. TRACER WIRE TEST STATIONS ARE TO BE LOCATED AT ALL FIRE HYDRANTS WITHIN A 3 FOOT RADIUS OF THE HYDRANT AND PREFERABLY TO THE REAR OF THE HYDRANT.
8. WATER SERVICES SHALL BE EXTENDED FROM THE MAIN TO A METER BOX LOCATED WITHIN THE RIGHT OF WAY. THE METER SHALL BE PLACED AT THE EDGE OF THE SERVICED LOT'S RIGHT OF WAY LINE OR EASEMENT. SERVICE LINE SHALL BE RUN ON A TRUE LINE FROM THE WATER MAIN TO THE METER BOX, AND WHERE POSSIBLE, SERVICE LINE SHALL BE PERPENDICULAR TO THE MAIN LINE. NO WATER BOXES OR VAULTS SHALL BE PLACED IN STREETS, SIDEWALKS, PARKING AREAS, OR DRIVEWAYS.
9. MANHOLES SHALL BE SPACED A MAXIMUM DISTANCE OF 400 FEET APART.
10. MANHOLES SHALL BE INSTALLED AT EACH DEFLECTION OF LINE AND/OR GRADE, WITH A MINIMUM DROP OF 0.2 FEET. MANHOLES FOR SEWERS GREATER THAN 21 INCHES IN DIAMETER SHALL BE 5 FOOT MANHOLES. MANHOLES FOR SEWERS 12 FEET OR DEEPER SHALL BE MINIMUM 5 FOOT DIAMETER. MANHOLE TOPS SHALL BE SET FLUSH WITH PAVEMENT WHERE INSTALLED IN A STREET.
11. SERVICE CONNECTIONS FOR THE SANITARY SEWER LINES SHOULD BE PERPENDICULAR FROM THE MAIN LINE TO THE EDGE OF THE SERVICED LOT'S RIGHT OF WAY LINE OR EASEMENT WITH A MINIMUM GRADE OF 1/4 INCH/FOOT FOR 4 INCH AND .6 FOOT/100 FOOT FOR 6 INCH. ALL CLEANOUTS SHALL EXTEND A MINIMUM OF 6 INCHES ABOVE THE FINISHED GRADE. WHERE A SERVICE LINE IS CONNECTED TO A MANHOLE, THE LINE SHALL TERMINATE AT THE EDGE OF THE INVERT IN THE MANHOLE. NO CLEANOUTS SHALL BE PLACED IN STREETS, SIDEWALKS, PARKING AREAS, OR DRIVEWAYS.
12. ALL SANITARY SEWER LINES ARE 8" PVC SDR 35 UNLESS OTHERWISE NOTED AND ALL WATER MAIN LINES ARE 6" DI CLASS 350 UNLESS OTHERWISE NOTED. ALL SANITARY SEWER SERVICES ARE 4" SCHEDULE 40 PVC AND ALL WATER MAIN SERVICES ARE 3/4".
13. MINIMUM COVER OF 5 FEET IN TRAFFIC AREAS TO BE PROVIDED FOR ALL COLLECTOR LINES 4 INCHES AND LARGER. IF LESS THAN 5 FEET, DUCTILE IRON PIPE SHALL BE REQUIRED.
14. USE WATERTIGHT RIMS FOR SANITARY SEWER MANHOLES LOCATED IN PAVED ALLEYS.
15. SANITARY SEWER WITHIN PRIVATE EASEMENTS TO BE OWNED, OPERATED AND MAINTAINED BY HOME OWNERS ASSOCIATION OR AGENT THEREOF.
16. WATER MAINS WILL BE 3.5' OFF CURB AND GUTTER UNLESS SHOWN OTHERWISE.
17. ALL WATER MAINS WITHIN PUBLIC EASEMENTS AND PUBLIC RIGHT-OF-WAY TO BE OWNED, OPERATED AND MAINTAINED BY CHATHAM COUNTY, AND WILL BE CONTAINED WITHIN 20' WIDE PUBLIC WATER LINE EASEMENT (MINIMUM) CENTERED ON THE PROPOSED WATER MAIN.
18. CONTRACTOR TO COORDINATE WITH CHATHAM COUNTY PUBLIC WORKS FOR ALL IRRIGATION SLEEVE SIZING.



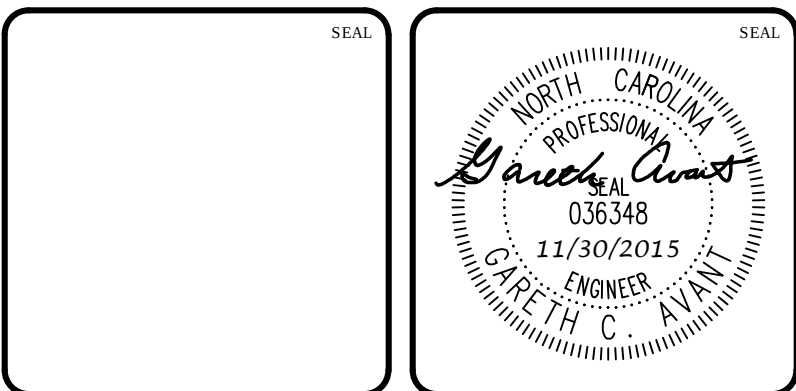
LEGEND:

- R/W LINE
- - - - - EXISTING R/W LINE
- - - - - HOA EASEMENT LINE
- - - - - PUBLIC UTILITY EASEMENT LINE
- - - - - PUBLIC DRAINAGE EASEMENT
- - - - - EX. POWER LINE EASEMENT
- - - - - OVERHEAD POWER LINE
- - - - - BMP MAINTENANCE & ACCESS EASEMENT
- - - - - 10' NO BUILD BUFFER LINE
- - - - - RIPARIAN BUFFER LINE
- - - - - FM EX. SANITARY SEWER FORCE MAIN
- - - - - IRR EX. REUSE IRRIGATION MAIN
- - - - - W EX. WATER MAIN
- - - - - NEW STORM DRAINAGE PIPE



60' 0 60' 120'  
SCALE: 1"=60' (Horiz.)

| REV. NO. | DESCRIPTIONS                                      | DATE       |
|----------|---------------------------------------------------|------------|
| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |

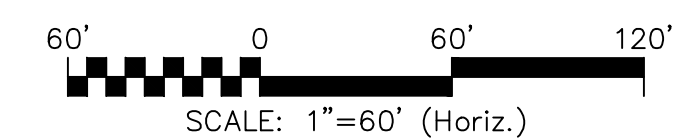
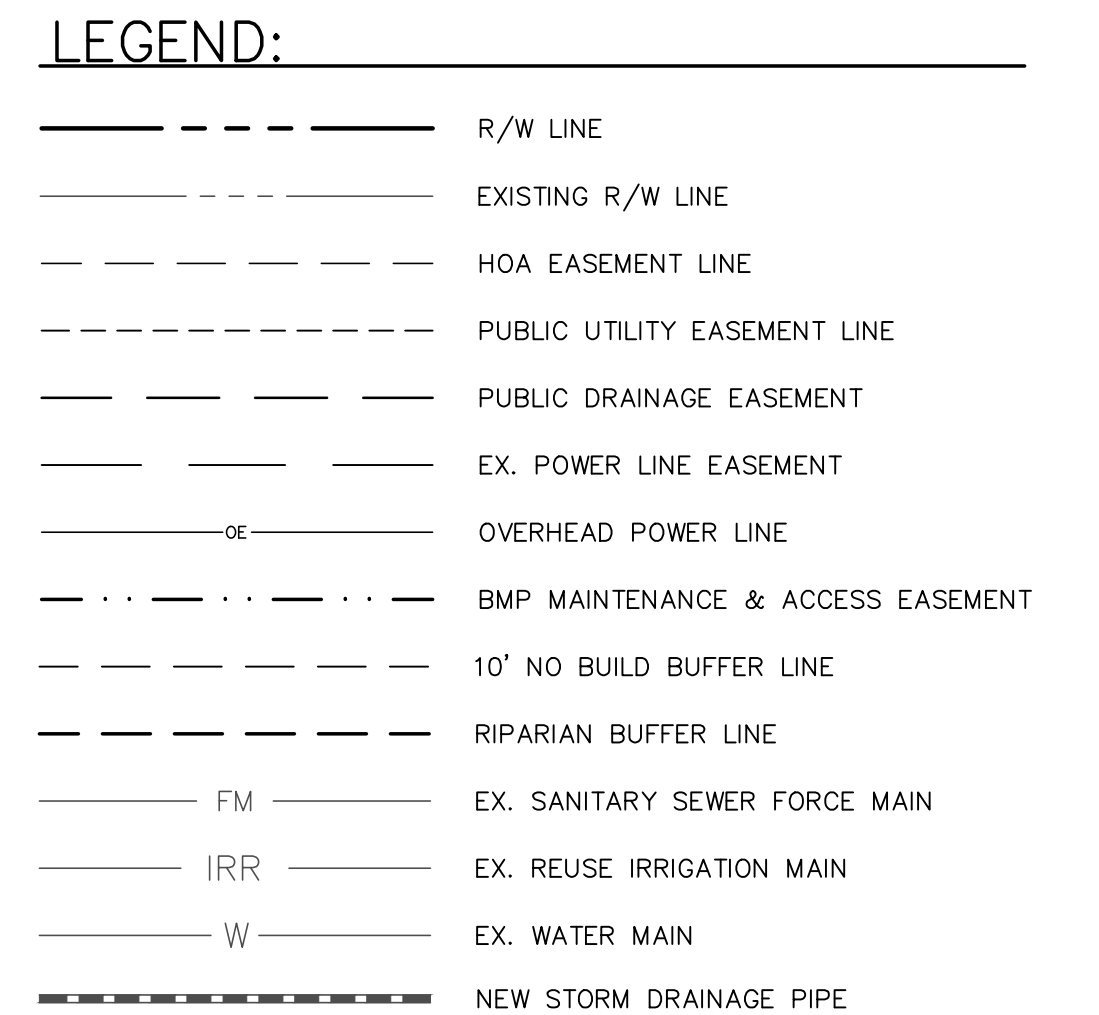
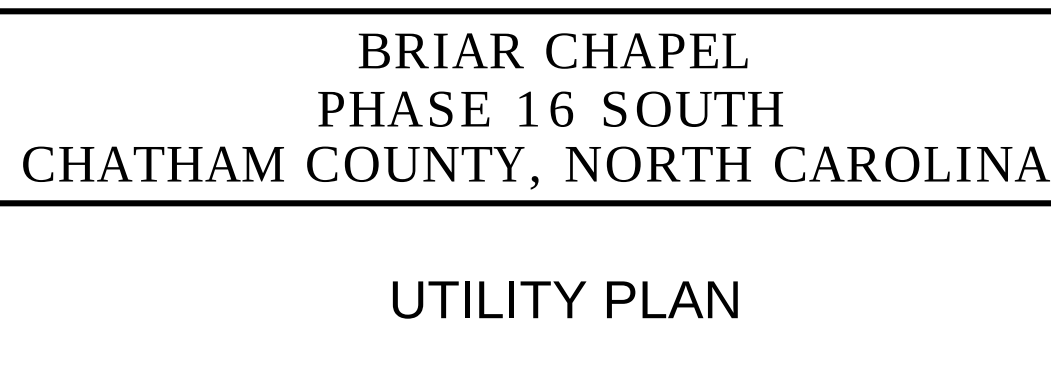
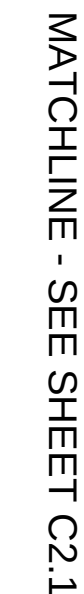


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CHATHAM COUNTY, NORTH CAROLINA**  
  
**UTILITY PLAN**

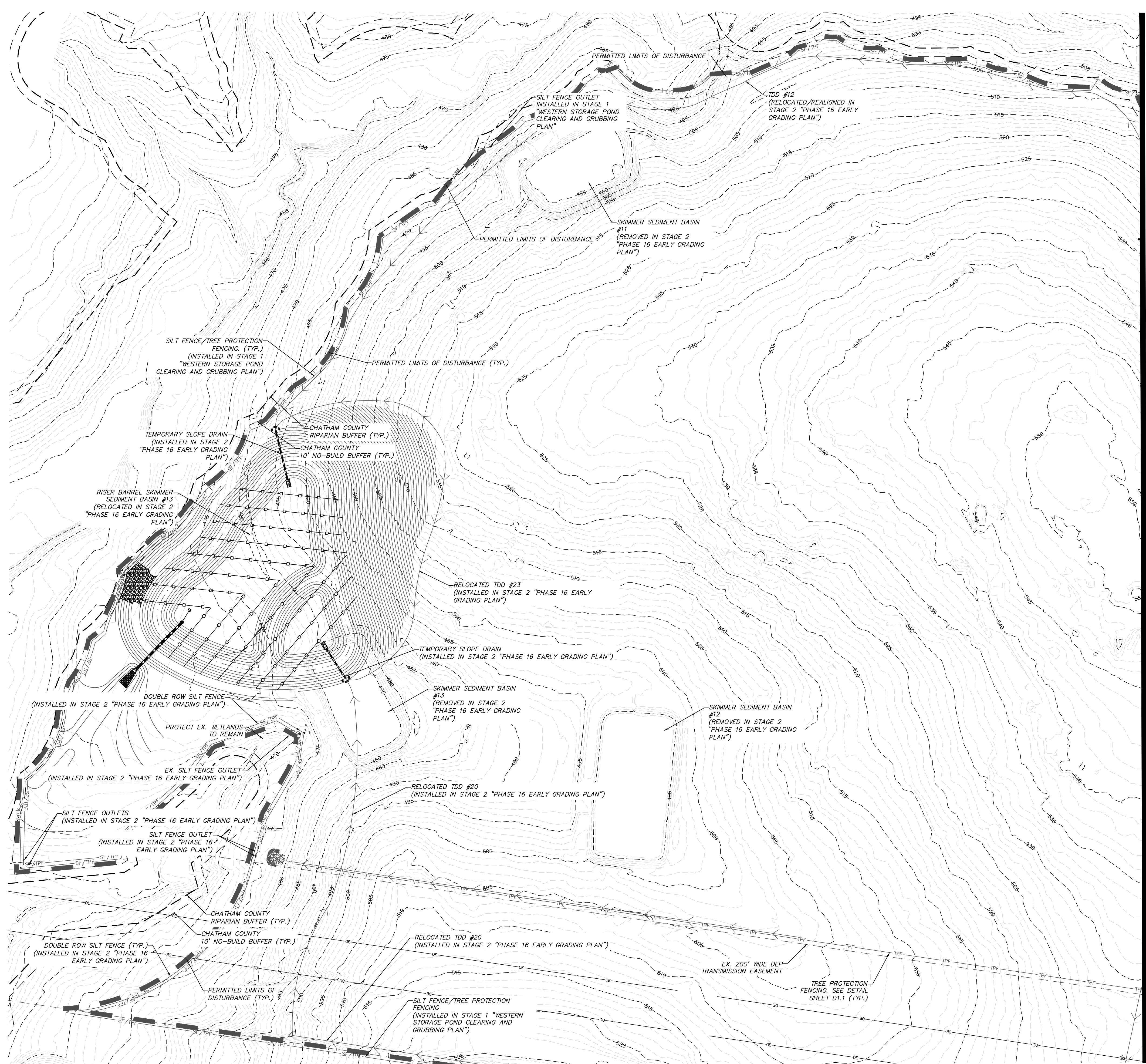
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|-------------------------------------------------|----------------------|-----------------------|
| DATE: SEPTEMBER 30, 2015                        | SCALE: 1" = 50'      | M&C FILE NUMBER: C2.X |
| M&C PROJ. # 02735-0149                          | HORIZONTAL: 1" = 50' | DRAWING NUMBER: C2.1  |
| DRAWN: BSS                                      | VERTICAL: N/A        |                       |
| DESIGNED: BSS                                   |                      |                       |
| CHECKED: GCA                                    |                      |                       |
| PROJ. MGR: CHS                                  |                      |                       |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION: 3          |                       |



|                                 |             |                                                                                                                         |
|---------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------|
| DATE: <u>SEPTEMBER 30, 2015</u> | SCALE:      | MAC FILE NUMBER<br><div style="border: 1px solid black; padding: 5px; text-align: center; font-size: 1.2em;">C2.X</div> |
| MCE PROJ. # <u>02735-0149</u>   | HORIZONTAL: | <div style="border: 1px solid black; padding: 5px; text-align: center; font-size: 1.5em;">C2.2</div>                    |
| DRAWN <u>BSS</u>                | 1" = 50'    |                                                                                                                         |
| DESIGNED <u>BSS</u>             | VERTICAL:   |                                                                                                                         |
| CHECKED <u>GCA</u>              | N/A         |                                                                                                                         |
| PROJ. MGR. <u>CHS</u>           |             |                                                                                                                         |

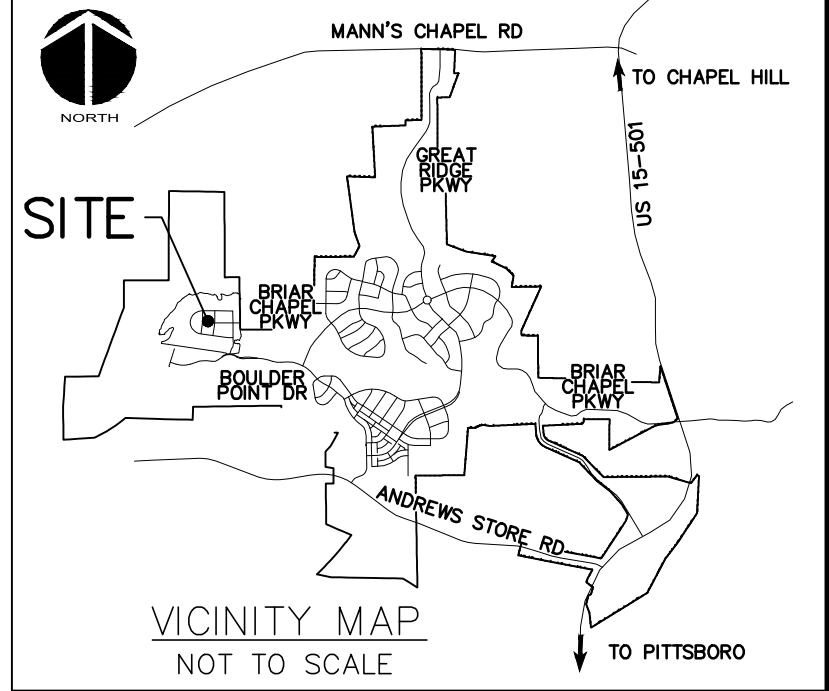
STATUS: FINAL DRAWINGS  
 FOR REVIEW PURPOSES ONLY

REVISION  
3



**LEGEND:**

- TEMPORARY CONSTRUCTION ENTRANCE
- RIPRAP OUTLET PROTECTION
- ADDITIONAL DISTURBED AREA
- COMBINATION SILT/TREE PROTECTION FENCE
- TEMPORARY DIVERSION DITCH
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EX. LIMITS OF DISTURBANCE
- SEDIMENT BASIN BAFFLE
- HARDWARE CLOTH & GRAVEL INLET PROT.
- ARC PIPE INLET PROTECTION
- CHECK DAM



CALL N.C. ONE  
CALL CENTER  
**STOP**  
1-800-632-4949  
AVOID UTILITY  
DAMAGE

**NORTH**

60' 0 60' 120'

SCALE: 1"=60' (Horiz.)

PLAN FOR REFERENCE ONLY

| REV. NO. | DESCRIPTIONS                                      | DATE       |
|----------|---------------------------------------------------|------------|
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |

| SEAL |
|------|
|      |

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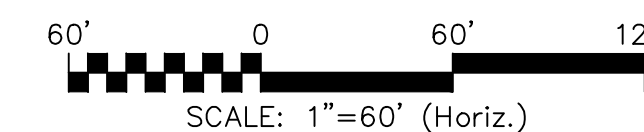
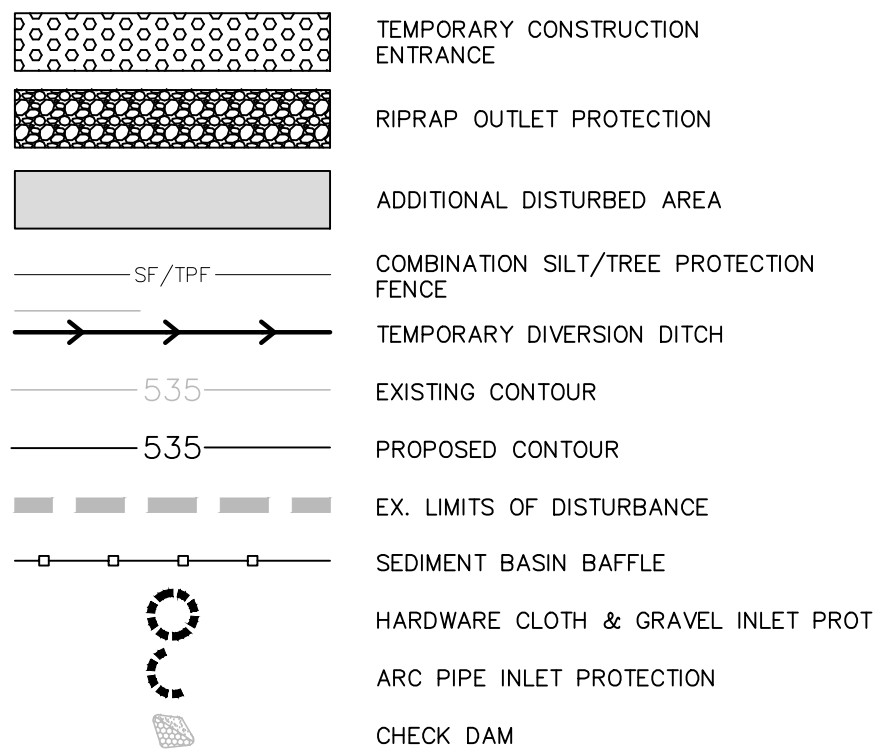
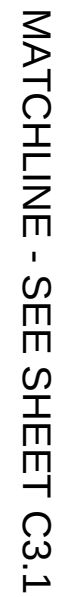
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**CHATHAM COUNTY, NORTH CAROLINA**  
**STAGE 3**  
**GRADING, DRAINAGE & EROSION**  
**CONTROL PLAN**

|                                                 |                      |                 |
|-------------------------------------------------|----------------------|-----------------|
| DATE: SEPTEMBER 30, 2015                        | SCALE                | M&C FILE NUMBER |
| M&C PROJ. # 02735-0149                          | C3.X                 | DRAWING NUMBER  |
| DRAWN: BSS                                      | HORIZONTAL: 1" = 50' | C3.1            |
| DESIGNED: BSS                                   | VERTICAL: N/A        |                 |
| CHECKED: GCA                                    |                      |                 |
| PROJ. MGR.: CHS                                 |                      |                 |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION             | 2               |



SEAL



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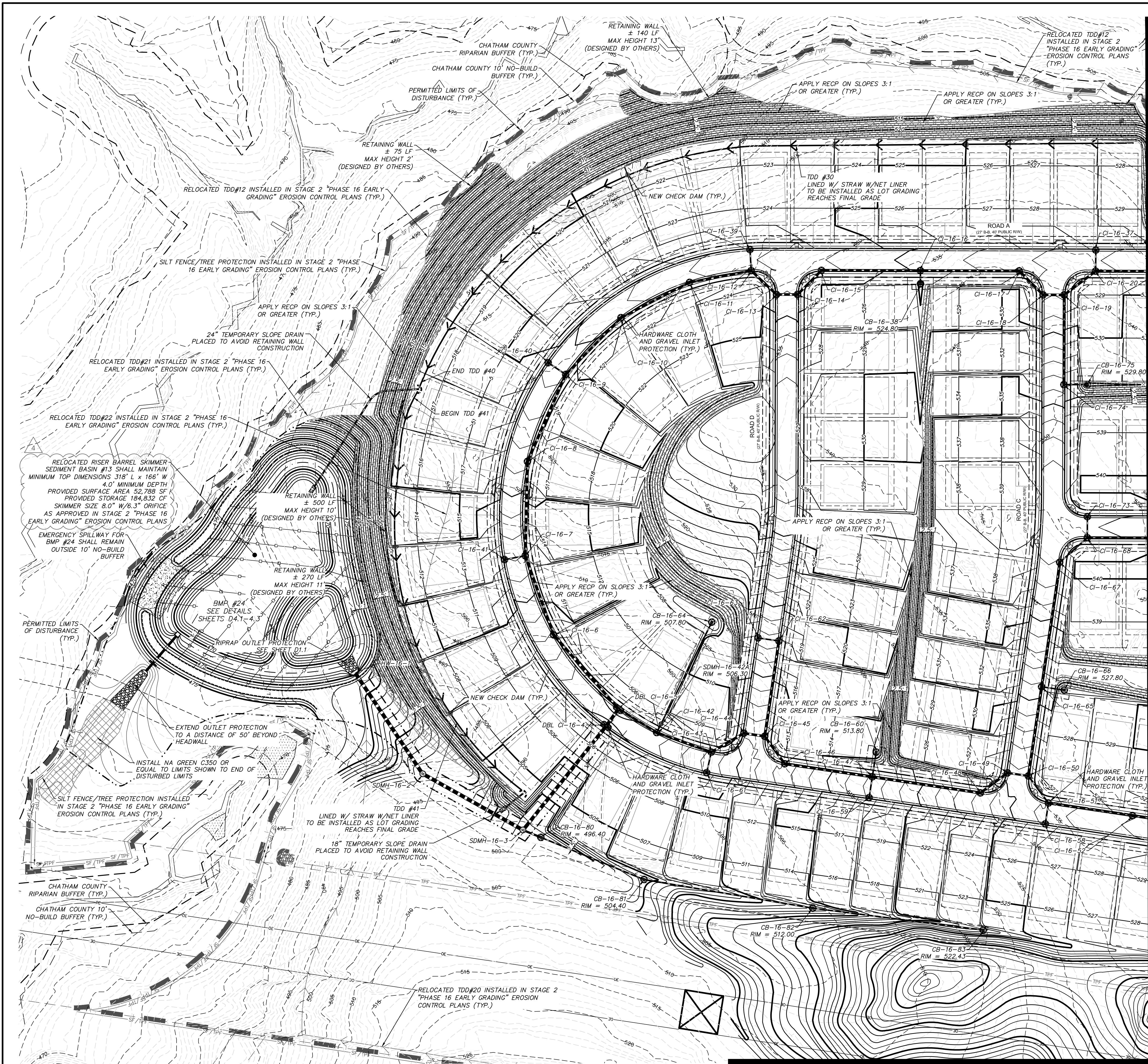
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CHATHAM COUNTY, NORTH CAROLINA

---

STAGE 3  
GRADING, DRAINAGE & EROSION  
CONTROL PLAN

|                                                                                                                  |                                                          |                                                       |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|
| DATE: SEPTEMBER 30, 2015<br>MCE PROJ. # 02735-0149<br>DRAWN BSS<br>DESIGNED BSS<br>CHECKED GCA<br>PROJ. MGR. CHS | SCALE<br><br>HORIZONTAL:<br>1" = 50'<br>VERTICAL:<br>N/A | H&C FILE NUMBER<br>C3.X<br><br>DRAWING NUMBER<br>C3.2 |
| STATUS: FINAL DRAWINGS<br>FOR REVIEW PURPOSES ONLY                                                               |                                                          |                                                       |
|                                                                                                                  |                                                          | REVISION<br>2                                         |



MATCHLINE - SEE SHEET C3.4

**LEGEND:**

- TEMPORARY CONSTRUCTION ENTRANCE
- RIPRAP OUTLET PROTECTION
- ADDITIONAL DISTURBED AREA
- COMBINATION SILT/TREE PROTECTION FENCE
- TEMPORARY DIVERSION DITCH
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EX. LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE
- SEDIMENT BASIN BAFFLE
- HARDWARE CLOTH & GRAVEL INLET PROT.
- ARC PIPE INLET PROTECTION
- CHECK DAM

**SITE**

**VICINITY MAP**  
NOT TO SCALE

CALL N.C. ONE CALL CENTER BEFORE YOU DIG  
1-800-632-4949  
AVOID UTILITY DAMAGE

**NORTH**

60' 0 60' 120'  
SCALE: 1"=60' (Horiz.)

**STAGE 4 CONSTRUCTION SEQUENCE:**

- THE INTENT OF THE CONSTRUCTION SEQUENCE IS TO PROVIDE THE CONTRACTOR WITH A GENERAL GUIDE FOR CONSTRUCTION PURPOSES. THIS SEQUENCE IS NOT INTENDED TO OUTLINE ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CHATHAM COUNTY SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE.
- ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER RAINFALL EVENTS. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
- IF IT IS DETERMINED DURING CONSTRUCTION THAT SIGNIFICANT SEDIMENT IS LEAVING THE SITE, DESPITE PROPER IMPLEMENTATION AND MAINTENANCE, THE CONTRACTOR IS OBLIGATED TO TAKE ADDITIONAL CORRECTIVE ACTION. CONTACT CHATHAM COUNTY ENVIRONMENTAL QUALITY DEPARTMENT, OWNERS' REPRESENTATIVE AND ENGINEER WITH ANY ADDITIONAL MEASURES NEEDED.
- CONTRACTOR SHALL ESTABLISH GROUND COVER ON DISTURBED AREAS WITHIN THE NUMBER OF CALENDAR DAYS AFTER COMPLETION OF GRADING PER THE SCHEDULE BELOW:
  - GRADUAL SLOPES: (14) CALENDAR DAYS
  - MODERATE SLOPES: (10) CALENDAR DAYS
  - STEEP SLOPES: (7) CALENDAR DAYS
- SLOPES ARE AS DEFINED IN THE CHATHAM COUNTY SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE.
- CONTRACTOR TO POST EROSION CONTROL PERMIT PROMINENTLY ON SITE AT ALL TIMES.
- CONTRACTOR SHALL ENSURE THAT ALL EROSION CONTROL MEASURES INSTALLED IN STAGES 1, 2, & 3 ARE OPERATING AS INTENDED PRIOR TO FINAL GRADING OPERATIONS. ANY MEASURES THAT ARE TO BE REMOVED SHALL BE APPROVED BY CHATHAM COUNTY.
- BEGIN FINAL GRADING OPERATIONS FOR ROADWAY.
- AS ELEVATIONS ARE BROUGHT TO FINAL GRADES AND STORM PIPING IS INSTALLED IN ROADWAY SECTIONS, CONTRACTOR SHALL INSTALL HARDWARE CLOTH AND GRAVEL INLET PROTECTION AS SHOWN ON PLANS.
- DRAINAGE AT THE REAR OF LOTS 1579-1602 SHALL BE DIRECTED INTO NEW TODS #40 AND #41. SLOPE DRAINS SHALL BE PLACED SUCH THAT THEY DO NOT INTERFERE WITH RETAINING WALL CONSTRUCTION.
- CONTRACTOR SHALL ENSURE THAT ALL SEDIMENT LADEN RUNOFF IS DIRECTED TO ROADWAY INLET PROTECTION PRIOR TO REMOVAL OF ANY SKIMMER SEDIMENT BASINS. NO BASINS SHALL BE REMOVED UNTIL INSPECTED AND APPROVED BY CHATHAM COUNTY SESC STAFF.
- PERFORM SEEDING AND MULCHING AS REQUIRED IN ACCORDANCE WITH THE TEMPORARY AND PERMANENT SEEDING SCHEDULES LOCATED ON SHEET D1.1 AND NOTE #5 OF THIS SEQUENCE.
- ONCE GROUND COVER HAS BEEN ESTABLISHED AND OTHER CONSTRUCTION IS COMPLETE, CONTACT CHATHAM COUNTY SOIL EROSION AND SEDIMENTATION AND ENGINEER FOR SITE INSPECTION BEFORE REMOVING ANY TEMPORARY EROSION CONTROL MEASURES OR CONVERTING BASINS TO PERMANENT BMPs.

**RETAINING WALL NOTES:**

- RETAINING WALL DESIGN IS BY OTHERS. OWNER SHALL PROCURE A QUALIFIED RETAINING WALL DESIGNER FOR THE PROJECT. RETAINING WALL INFORMATION SHOWN ON THESE PLANS ARE FOR LOCATION AND GRADE INFORMATION ONLY. OWNER RESPONSIBLE FOR PROVIDING NECESSARY INFORMATION TO WALL DESIGNER AS REQUIRED FOR PROPER DESIGN OF RETAINING WALLS.
- TOP GRADE OF WALL AND BOTTOM GRADE OF WALL SPECIFIED IN PLANS ARE INTENDED TO BE THE FINISHED PAVEMENT OR EARTH GRADE. THE WALL DESIGNER SHALL ADJUST SHOP DRAWING WALL ELEVATIONS FOR THE TOP AND BOTTOM OF WALL TO MEET SPECIFIC PRODUCT DESIGN CRITERIA AND WALL GEOMETRY AS NECESSARY TO ACHIEVE DESIRED FINISHED GRADES. THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS MUST BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED IN ACCORDANCE WITH NCOS 15.3A-54.1 AND 15.4 NCAC 48.0131. THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS AN EXCEL SPREADSHEET FROM [HTTP://WWW.DNR.STATE.NC.US/PAGES/SEDIMENTATION\\_NEW.HTML](http://www.dnr.state.nc.us/pages/sedimentation_new.html). IF YOU HAVE QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CONTACT THIS OFFICE AT (919) 791-4200.
- IT IS THE RESPONSIBILITY OF THE OWNER AND WALL DESIGNER TO ASSURE THAT THE REQUIRED SOIL BEARING PRESSURE, SUBSURFACE DRAINAGE AND SURFACE DRAINAGE ARE ACHIEVED AS RELATED TO THE RETAINING WALL DESIGN. THIS SHOULD BE VERIFIED BY A GEOTECHNICAL ENGINEER. SPECIAL ATTENTION IS REQUIRED TO ENSURE BEARING CAPACITY HAS BEEN ACHIEVED AT LOCATIONS WHERE PIPE PENETRATIONS ARE TO OCCUR. IT SHALL BE THE RESPONSIBILITY OF THE CLIENT TO PROVIDE QUALITY CONTROL / QUALITY ASSURANCE TESTING ASSOCIATED WITH THE WALL CONSTRUCTION. THE GEOTECHNICAL ENGINEER OR WALL DESIGNER SHALL PROVIDE ANY CERTIFICATIONS AS MAY BE REQUIRED TO SHOW COMPLIANCE WITH ORIGINAL DESIGN DOCUMENTS AS RELATED TO THE WALL DESIGN AND CONSTRUCTION.

**STORM DRAINAGE NOTES:**

- STORM DRAINAGE PIPES SHALL BE:
  - RCP/CLASS III FOR STORM DRAINAGE INSIDE PUBLIC RIGHT-OF-WAY OR CONNECTING INTO STRUCTURE INSIDE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH NCDOT STANDARDS UNLESS NOTED OTHERWISE.
- ALL CONCRETE SHALL MEET A MINIMUM 3,000 PSI COMPRESSIVE STRENGTH.
- ALL PIPE IN STORM DRAIN STRUCTURES SHALL BE STRUCK EVEN WITH INSIDE WALL.
- THE INTERIOR SURFACES OF ALL STORM DRAINAGE STRUCTURES SHALL BE POINTED UP AND SMOOTHED TO AN ACCEPTABLE STANDARD USING MORTAR MIXED TO MANUFACTURER'S SPECIFICATIONS.
- ALL BACKFILL SHALL BE NON-PLASTIC IN NATURE, FREE FROM ROOTS, VEGETATION MATTER, WASTE CONSTRUCTION MATERIAL OR OTHER OBJECTIONABLE MATERIAL. UTILIZED MATERIAL SHALL BE CAPABLE OF BEING COMPACTED BY MECHANICAL MEANS AND SHALL HAVE NO TENDENCY TO FLOW OR BEHAVE IN A PLASTIC MANNER UNDER THE TAMPING BLOWS OR PROOF ROLLING.
- MATERIALS DEEMED AS UNSUITABLE FOR BACKFILL PURPOSES BY THE OWNER'S REPRESENTATIVE SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.
- BACKFILLING OF TRENCHES SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PIPE IS LAID. THE FILL AROUND THE PIPE SHALL BE THOROUGHLY COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY OBTAINABLE WITH THE STANDARD PROCTOR TEST. THE TOP EIGHT (8) INCHES SHALL BE COMPACTED TO 100% STANDARD PROCTOR.
- UNDER NO CIRCUMSTANCES SHALL WATER BE ALLOWED TO RISE IN UNBACKFILLED TRENCHES AFTER PIPE HAS BEEN PLACED.
- ALL FLARED END SECTIONS POURING UNDER INTO WATER QUALITY PONDS WILL HAVE A CONCRETE PAD FLOURED UNDER THE FLARED END SECTION IN ACCORDANCE WITH PROVIDED CONSTRUCTION DETAILS.
- RIM ELEVATIONS OF STORM DRAIN STRUCTURES SHALL BE FIELD VERIFIED.
- STORM DRAINAGE WITHIN PRIVATE EASEMENTS TO BE OWNED, OPERATED AND MAINTAINED BY HOME OWNER'S ASSOCIATION OR AGENT THEREOF.
- LENGTHS SHOWN FOR STORM DRAINAGE PIPES ARE MEASURED FROM CENTER OF STORM STRUCTURES AND TO ENDS OF FLARED END SECTIONS. SLOPES CALCULATED ARE BASED ON THIS LENGTH.
- CB DENOTES CATCH BASINS TO BE INSTALLED IN THE CENTERS OF PAVED ALLEYS AND NON-PAVED AREAS. REFER TO NCDOT DETAILS 840.19 AND 840.24 ON SHEET D-2.2.
- CI DENOTES CURB INLETS TO BE INSTALLED IN THE CURB LINES OF ROADWAYS. REFER TO NCDOT DETAILS 840.02 AND 840.03 ON SHEET D-2.2.

**SELF INSPECTION NOTICE:**

**NOTIFICATION OF LAND RESOURCES SEDIMENT AND EROSION CONTROL SELF-INSPECTION PROGRAM.**

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010. THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS MUST BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED IN ACCORDANCE WITH NCOS 15.3A-54.1 AND 15.4 NCAC 48.0131. THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS AN EXCEL SPREADSHEET FROM [HTTP://WWW.DNR.STATE.NC.US/PAGES/SEDIMENTATION\\_NEW.HTML](http://www.dnr.state.nc.us/pages/sedimentation_new.html). IF YOU HAVE QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CONTACT THIS OFFICE AT (919) 791-4200.

|          |                                                   |            |
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| 4        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.12.09 |
| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |
| REV. NO. | DESCRIPTIONS                                      | DATE       |

SEAL

**NORTH CAROLINA**  
*David A. Cox*  
036348  
12/09/2015  
ENGINEER  
GARETH C. AVANT

**MCKIM & CREED**

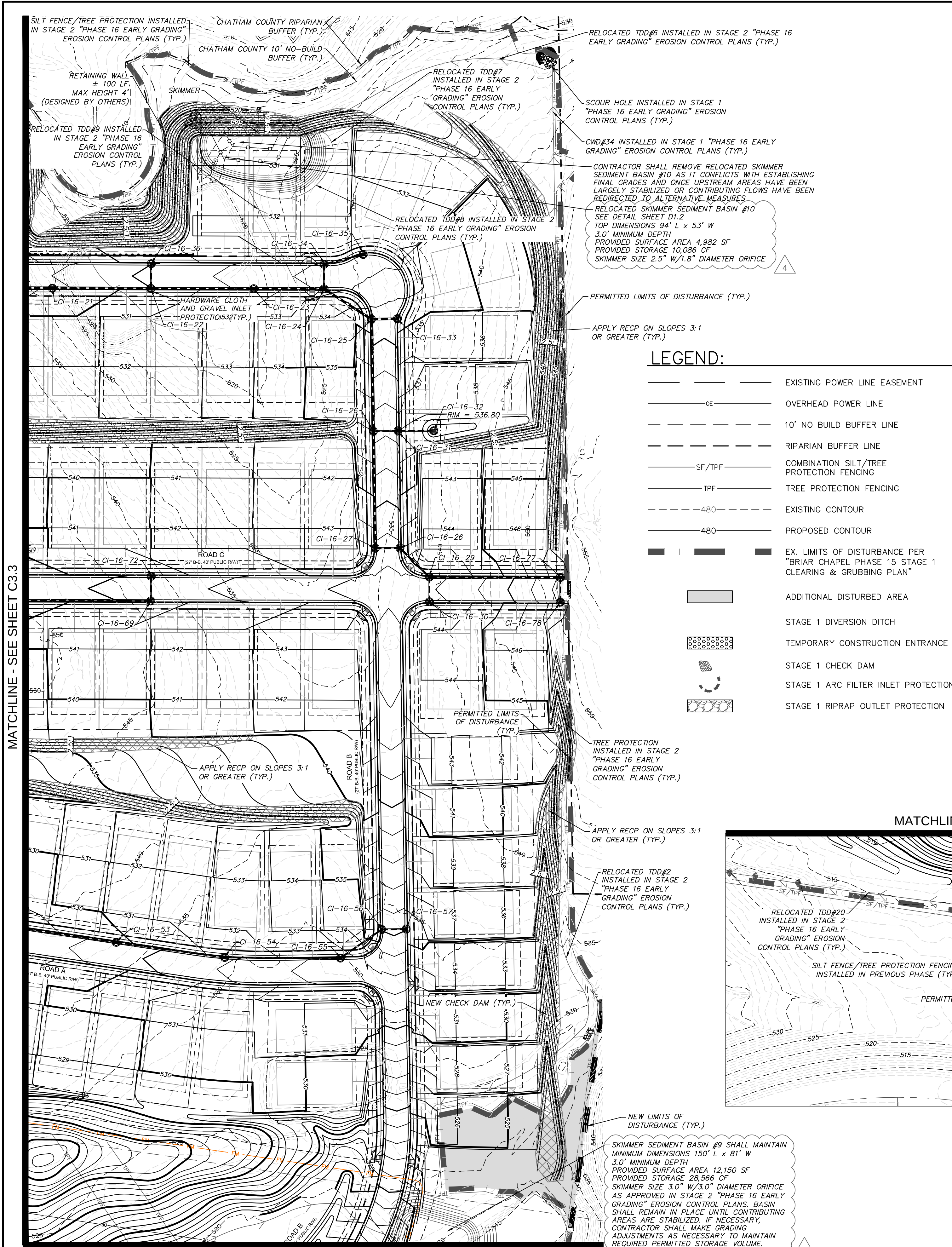
1730 Varsity Drive, Suite 500  
Raleigh, North Carolina 27606  
Phone: (919)233-8091, Fax: (919)233-8031  
F-1222

[www.mckimcreed.com](http://www.mckimcreed.com)

**BRIAR CHAPEL™**  
by  
**Newland COMMUNITIES**

**BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA  
STAGE 4  
GRADING, DRAINAGE & EROSION  
CONTROL PLAN**

|                                                 |                      |                       |
|-------------------------------------------------|----------------------|-----------------------|
| DATE: SEPTEMBER 30, 2015                        | SCALE: 1" = 50'      | MFC FILE NUMBER: C3.X |
| MCE PROJ. # 02735-0149                          | HORIZONTAL: 1" = 50' | DRAWING NUMBER: C3.3  |
| DRAWN: BSS                                      | VERTICAL: N/A        |                       |
| DESIGNED: BSS                                   |                      |                       |
| CHECKED: GCA                                    |                      |                       |
| PROJ. MGR. CHS                                  |                      |                       |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION: 4          |                       |



EROSION CONTROL GENERAL NOTES:

- ALL PREVIOUSLY APPROVED EROSION CONTROL MEASURES ARE TO BE MAINTAINED AT ALL TIMES.
- HYDROSEED WITH GRASS SEED ON ALL DISTURBED AREAS. SEE SEEDING SCHEDULE FOR SPECIFIC GRASS SEED TYPE. SEEDING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER SEEDBED PREPARATION. HYDROSEED MIXTURE SHALL CONTAIN CELLULOSE MULCH APPLIED AT A RATE OF 2,000 LBS./ACRE, WITH A MAXIMUM OF 50 LBS./100 GAL. OF WATER. IF SEEDING IS DELAYED AFTER MIXING 1/2-2 HOURS ADD AN ADDITIONAL 50% OF SEED MIX. IF DELAY IS LONGER THAN 2 HOURS, BEGIN WITH NEW MIXTURE. ALL SLOPES 2:1 OR GREATER SHALL BE COVERED WITH "CURLEX" BLANKETS. SEE SPECIFICATIONS FOR SEED ESTABLISHMENT REQUIREMENTS.
- FOLLOWING INITIAL SOIL DISTURANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED ACCORDING TO THE NPDES GROUNDCOVER STABILIZATION TIMEFRAME TABLE PROVIDED ON THIS SHEET.
- THE CONTRACTOR SHALL INSPECT, REPAIR AND ADD STONE TO THE EXISTING ACCESS ROADS WHEN IT BECOMES SATURATED WITH MUD TO INSURE IT FUNCTIONS AS IT WAS INTENDED.
- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AFTER EACH RAIN EVENT AND AT LEAST ONCE PER WEEK. IF REPAIRS ARE NECESSARY, DEVICES SHOULD BE REBUILT TO MEET PLAN, DETAIL AND SPECIFICATION REQUIREMENTS.
- ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY NEED TO BE INSTALLED IF DEEMED NECESSARY BY EITHER ENGINEER OR WATERSHED MANAGER.
- TEMPORARY SEDIMENT CONTROL MEASURES (SILT FENCE, CONSTRUCTION ENTRANCE, ETC.) SHALL BE MAINTAINED UNTIL ALL CONTRIBUTING AREAS ARE GRADED AND STABILIZED.
- DUST CONTROL ON SITE SHALL BE MINIMIZED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION IS STRICTLY PROHIBITED.
- IF THE MAJORITY OF MUD OR DIRT IS NOT REMOVED FROM CONSTRUCTION TRAFFIC, CONTRACTOR SHALL CONSTRUCT VEHICLE WASH AREAS AT CONSTRUCTION TRAFFIC EXIT POINTS. MUD AND DIRT SHALL BE INTERCEPTED AND TRAPPED BEFORE WASH WATER IS ALLOWED TO BE DISCHARGED OFFSITE. RINSE-OFF WILL NOT BE ALLOWED OUTSIDE THE PROJECT CONSTRUCTION LIMITS.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT REACHES 4-INCHES DEEP.
- EROSION AND SEDIMENTATION CONTROL MEASURES, STRUCTURES, AND DEVICES SHALL BE SO PLANNED, DESIGNED, AND CONSTRUCTED AS TO PROVIDE PROTECTION FROM THE CALCULATED MAXIMUM PEAK RATE OF RUN-OFF FROM THE 10-YEAR STORM. RUNOFF RATES SHALL BE CALCULATED USING THE PROCEDURES AS OUTLINES IN THE WAKE COUNTY SEDIMENTATION AND EROSION CONTROL ORDINANCE.

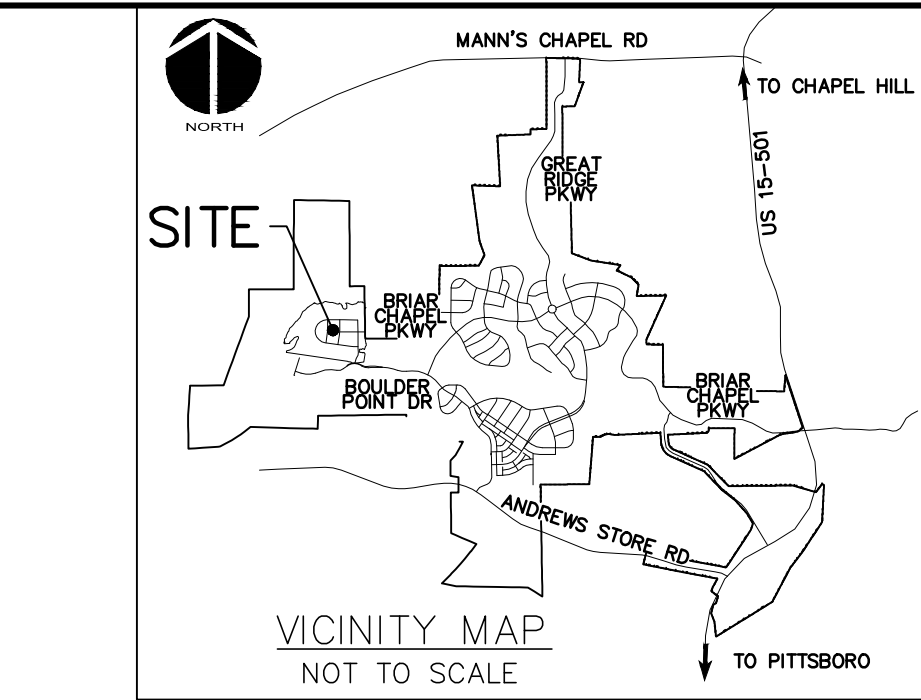
| NPDES GROUNDCOVER STABILIZATION TIMEFRAMES   |               |                                                                   |
|----------------------------------------------|---------------|-------------------------------------------------------------------|
| SITE AREA DESCRIPTION                        | STABILIZATION | TIMEFRAME EXCEPTIONS                                              |
| PERIMETER DIKES, SWALES, DITCHES, SLOPES     | 7 DAYS        | NONE                                                              |
| HIGH QUALITY WATER (HQW) ZONES               | 7 DAYS        | NONE                                                              |
| SLOPES STEEPER THAN 3:1                      | 7 DAYS        | 14 DAYS FOR SLOPES 10' OR LESS IN LENGTH AND NOT STEEPER THAN 2:1 |
| SLOPES 3:1 OR FLATTER                        | 14 DAYS       | 7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH                      |
| ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1 | 14 DAYS       | NONE, EXCEPT FOR PERIMETERS AND HQW ZONES                         |

GENERAL NOTES:

- ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER IF ANY DISCREPANCIES EXIST PRIOR TO CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE PAID TO CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- CONTRACTOR SHALL NOTIFY "NORTH CAROLINA ONE CALL" AT 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR TO CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NORTH CAROLINA ONE CALL".
- OVERHEAD ELECTRIC LINES MAY EXIST ON THE SITE. CONTRACTOR SHALL CONTACT DUKE POWER AT (336) 634-4633 PRIOR TO COMMENCING ANY ACTIVITY WITHIN 200-FT OF DUKE POWER RIGHT OF WAY.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL ARRANGE AND ATTEND A PRECONSTRUCTION CONFERENCE WITH CHATHAM COUNTY, OWNER AND ENGINEER.
- EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON BEST AVAILABLE RECORD DRAWINGS.
- SOIL UNDER BUILDINGS, PAVED AREAS AND WITHIN SLOPES GREATER THAN 3:1 (H:V) SHALL BE APPROVED, PLACED AND COMPACTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. THESE SOILS SHALL BE COMPACTED TO THE STANDARD PROCTOR MAXIMUM DRY DENSITY UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- ALL GRADED AREAS SHALL BE SLOPED SUCH THAT NO AREAS OF STANDING WATER OCCUR AND ALL AREAS POSITIVELY DRAIN TO DRAINAGE STRUCTURES, SWALES OR STORMWATER MANAGEMENT FACILITIES.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS AND SHALL REPLACE ALL MARKERS REMOVED IF DAMAGED DURING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING AS NECESSARY THROUGHOUT CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL PERMIT CONDITIONS, MONITORING AND REPORTING REQUIREMENTS.
- REFER TO SHEET D2.1 FOR PROPOSED ROAD CROSS SECTION DETAILS AND PAVEMENT SCHEDULE.
- GRADED SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH CURLEX SINGLE NET (CURLEX I) MATING BY AMERICAN EXCELSIOR COMPANY OR APPROVED EQUAL.
- STREAM AND WETLAND LOCATIONS ARE BASED ON DELINEATIONS PROVIDED BY SOIL AND ENVIRONMENTAL CONSULTANTS IN RALEIGH, NC - CONTACT SEAN CLARK AT 919-846-5900.
- NO PORTION OF THIS PROPERTY IS LOCATED IN SPECIAL FLOOD HAZARD AREA "AE" AS SHOWN ON FEMA FIRM MAP #3710976500I DATED FEBRUARY 2, 2007.
  - BRIAR CHAPEL PARKWAY AND BOULDER POINT DRIVE EXTENSION SEALED JANUARY 1, 2012
  - BRIAR CHAPEL PHASE 15 NORTH SEALED AUGUST 13, 2015.
  - US STEEL SEALED JULY 22, 2015.
- EXISTING INFRASTRUCTURE AS SHOWN MAY BE UNDER CONSTRUCTION AND SHALL BE FIELD VERIFIED BY CONTRACTOR.
  - BRIAR CHAPEL PARKWAY AND BOULDER POINT DRIVE EXTENSION SEALED JANUARY 1, 2012
  - BRIAR CHAPEL PHASE 15 NORTH SEALED AUGUST 13, 2015.
  - US STEEL SEALED JULY 22, 2015.
- BEFORE STARTING ANY CONSTRUCTION OF IMPROVEMENTS WITHIN ANY NCDOT STREET OR HIGHWAY RIGHT-OF-WAY, CONTACT NCDOT DISTRICT OFFICE AND OBTAIN ALL PERMITS AND ENCROACHMENTS AND KEEP COPIES ON CONSTRUCTION SITE AT ALL TIMES. ALSO CONTACT NCDOT DISTRICT OFFICE 24 HOURS IN ADVANCE BEFORE PLACING CURB AND GUTTER AT (336) 629-1423.

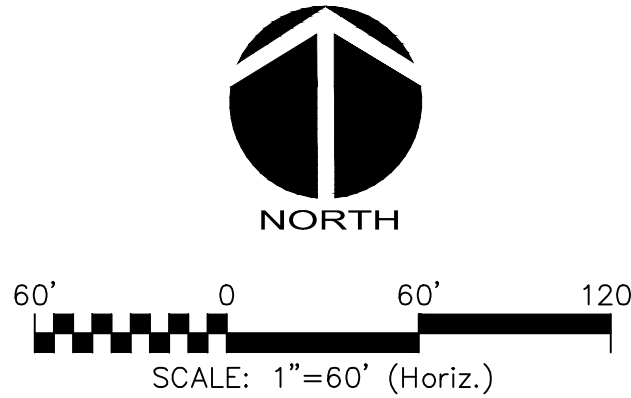
LIMITS OF DISTURBANCE NOTES:

- SILT FENCE AND TREE PROTECTION FENCE LINES ALSO DELINEATE THE LIMITS OF DISTURBANCE. ALL SILT FENCING OR TREE PROTECTION FENCING SHALL BE INSTALLED INSIDE LIMITS OF DISTURBANCE.
- LIMITS OF DISTURBANCE BEYOND PREVIOUSLY APPROVED AREAS: 0.30 ACRES

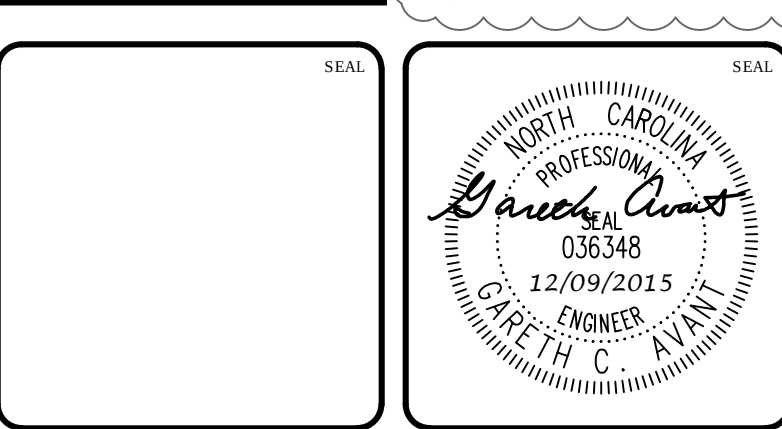


| LEGEND: |                                          |
|---------|------------------------------------------|
|         | TEMPORARY CONSTRUCTION ENTRANCE          |
|         | RIPRAP OUTLET PROTECTION                 |
|         | ADDITIONAL DISTURBED AREA                |
|         | COMBINATION SILT/TREE PROTECTION FENCING |
|         | TEMPORARY DIVERSION DITCH                |
|         | EXISTING CONTOUR                         |
|         | PROPOSED CONTOUR                         |
|         | EX. LIMITS OF DISTURBANCE                |
|         | LIMITS OF DISTURBANCE                    |
|         | SEDIMENT BASIN BAFFLE                    |
|         | HARDWARE CLOTH & GRAVEL INLET PROT.      |
|         | ARC PIPE INLET PROTECTION                |
|         | CHECK DAM                                |

CALL N.C. ONE CALL CENTER BEFORE YOU DIG STOP 1-800-632-4949 AVOID UTILITY DAMAGE



| REV. NO. | DESCRIPTIONS                                      | DATE       |
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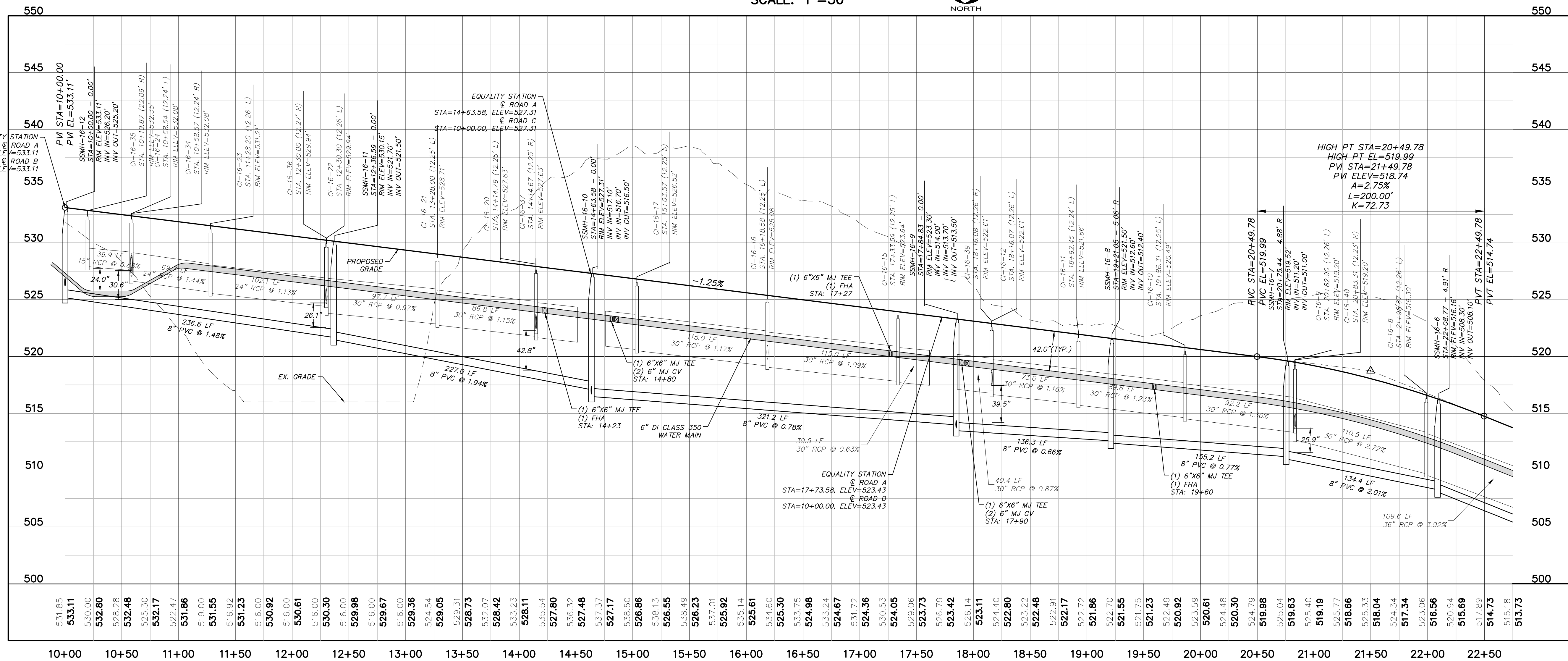
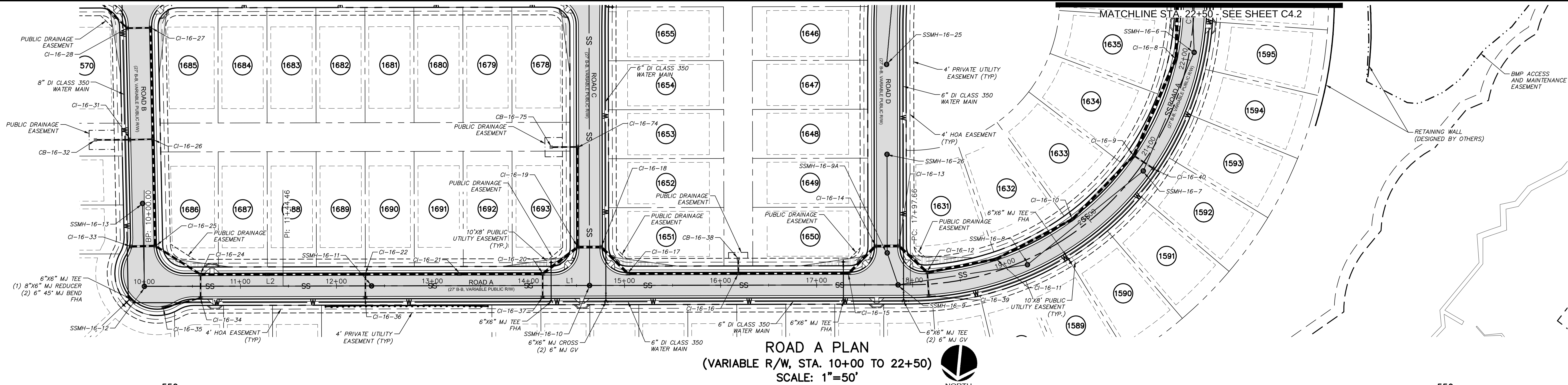


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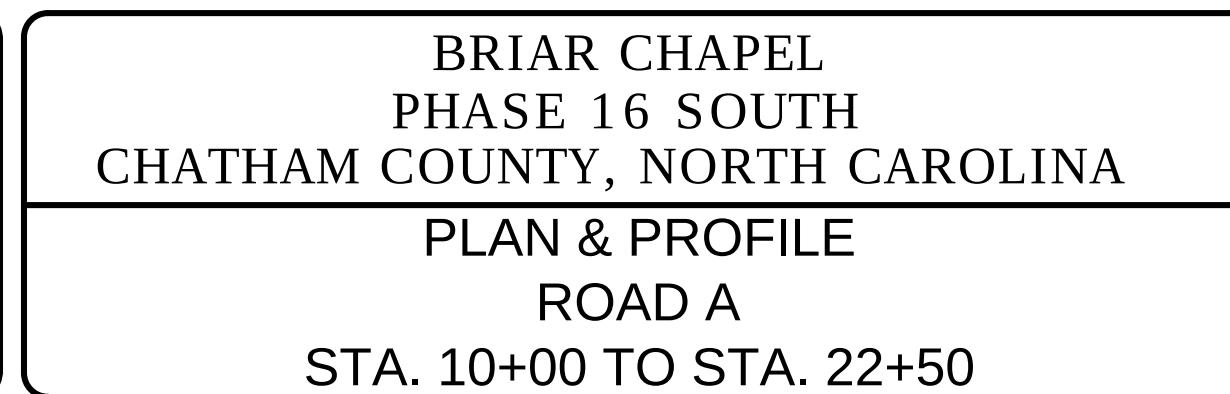
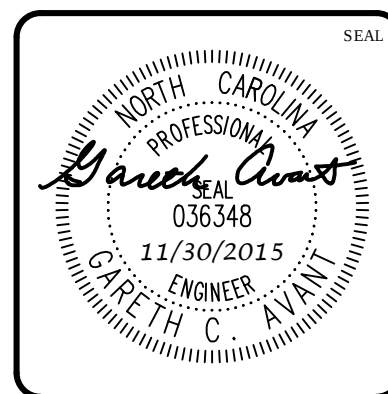
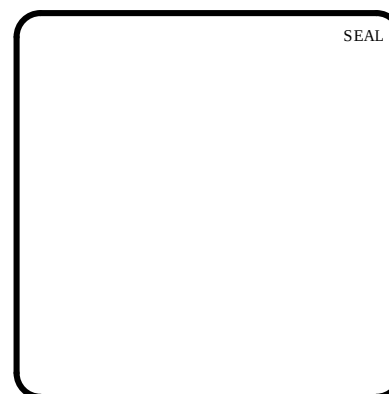
**BRIAR CHAPEL**  
by Newland COMMUNITIES

**BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA  
STAGE 4  
GRADING, DRAINAGE & EROSION  
CONTROL PLAN**

|                                                 |                             |                       |
|-------------------------------------------------|-----------------------------|-----------------------|
| DATE: SEPTEMBER 30, 2015                        | SCALE: HORIZONTAL: 1" = 50' | M&C FILE NUMBER: C3.X |
| MCE PROJ. # 02735-0149                          | DESIGNED: BSS               | DRAWING NUMBER: C3.4  |
| CHECKED: GCA                                    | PROJ. MGR. CHS              | REVISION: 4           |
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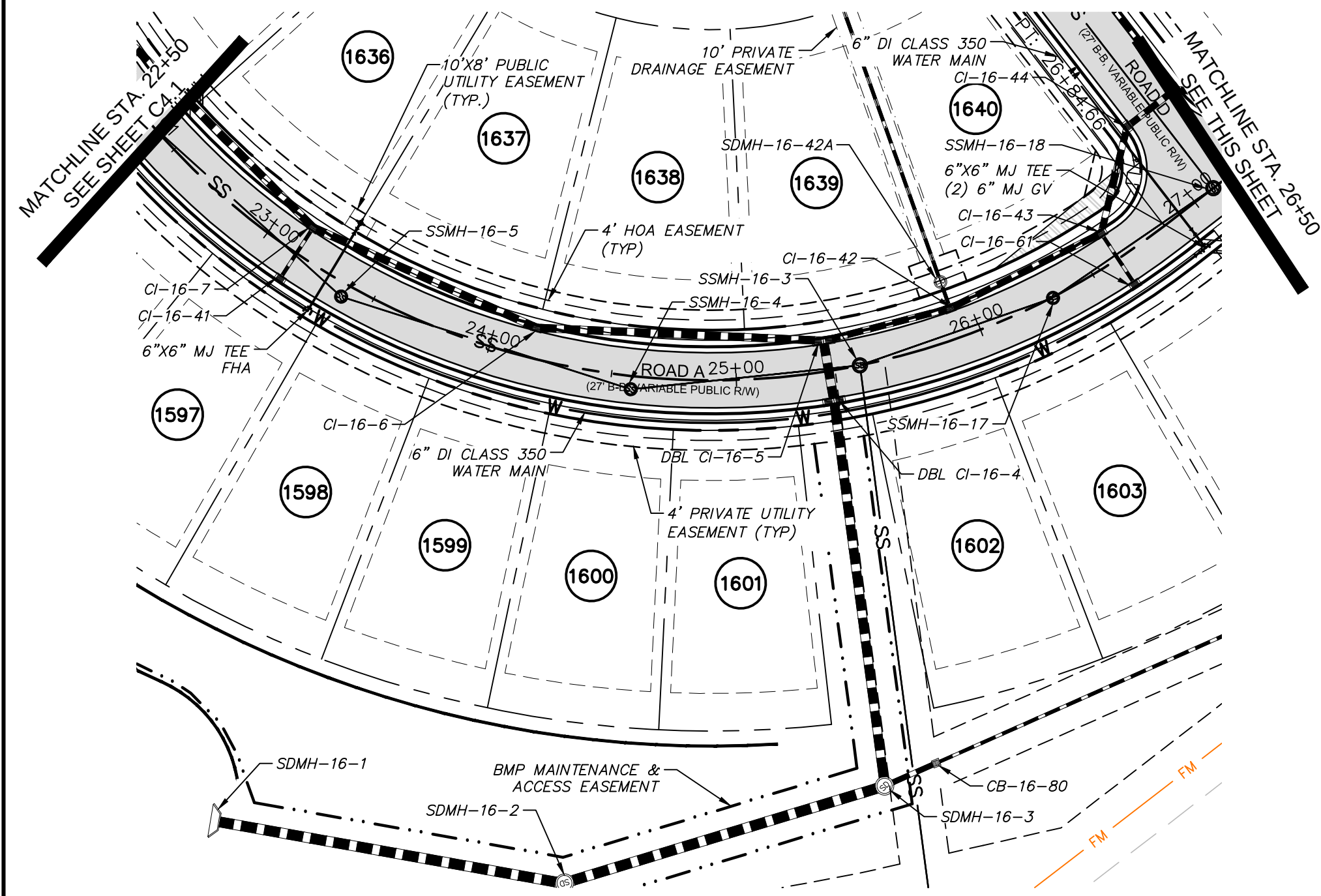


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| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
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| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |

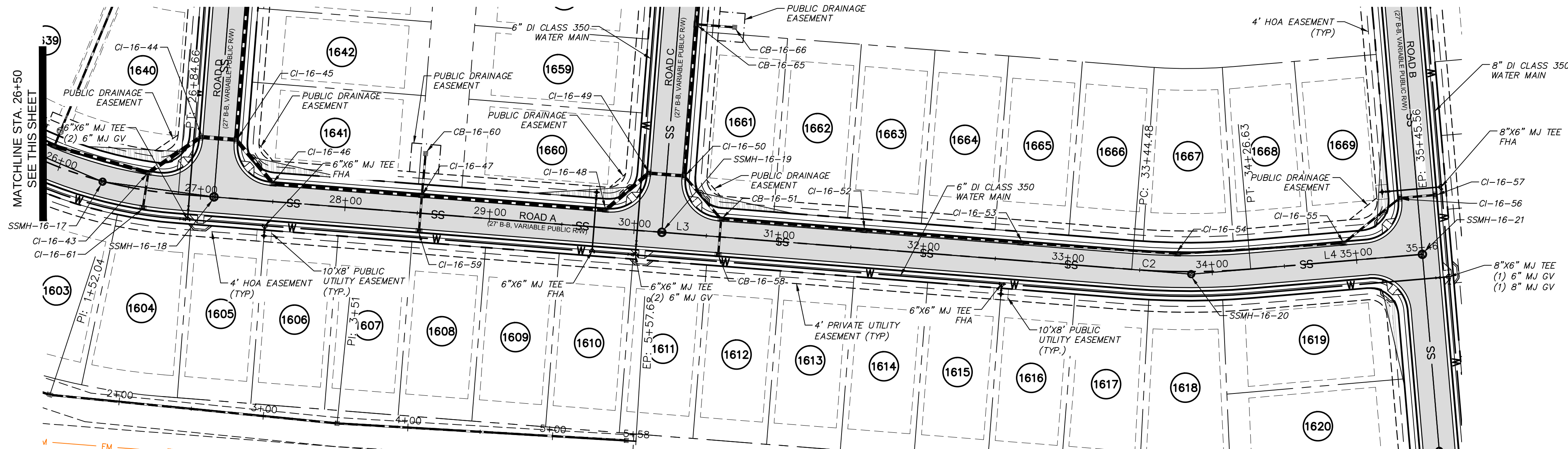


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| DRAWN: BSS                                      | VERTICAL: N/A   |
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| PROJ. MGR. CHS                                  |                 |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION: 3     |

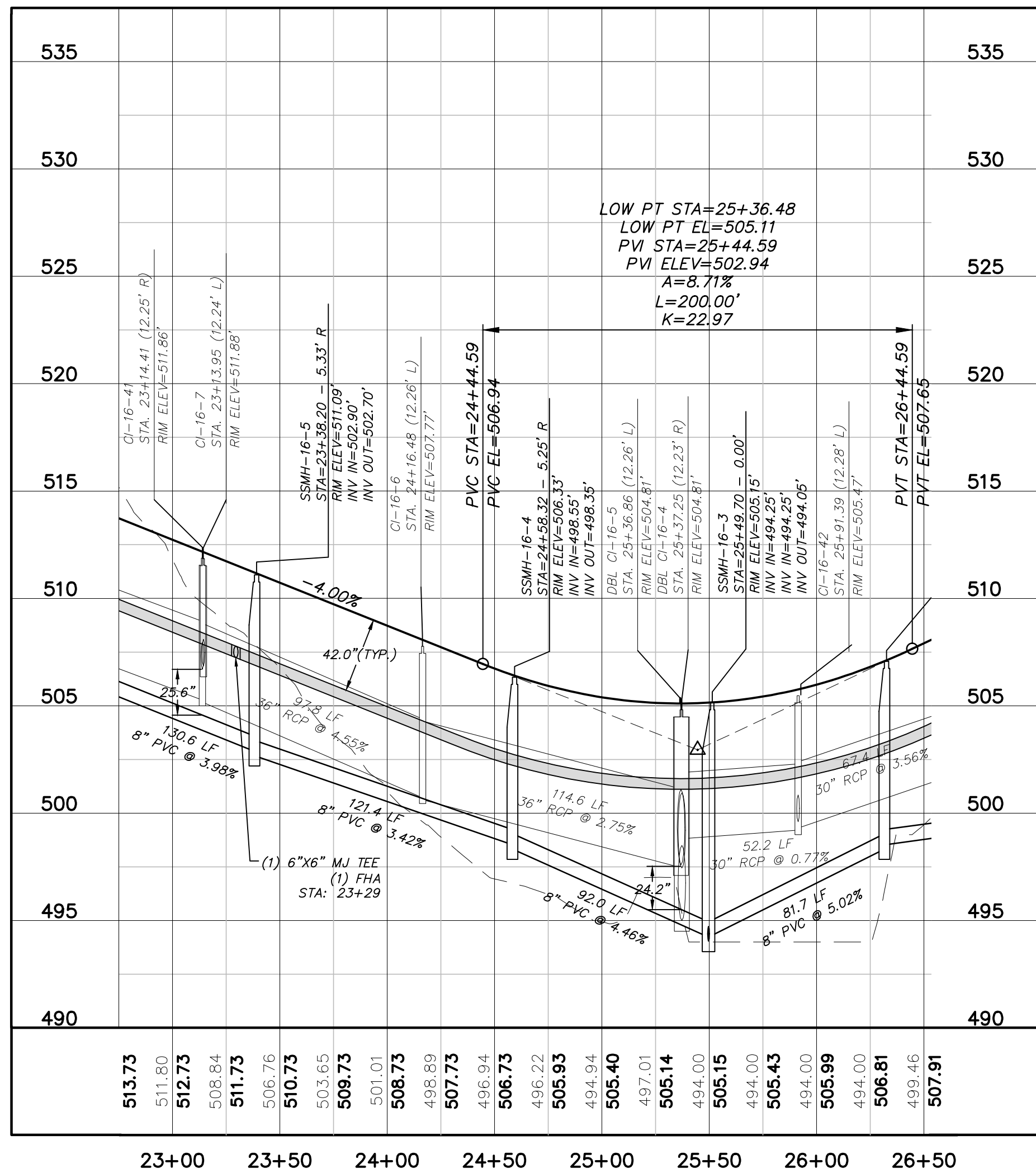
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| HORIZONTAL: N/A | DRAWING NUMBER: C4.1  |
| VERTICAL: N/A   |                       |



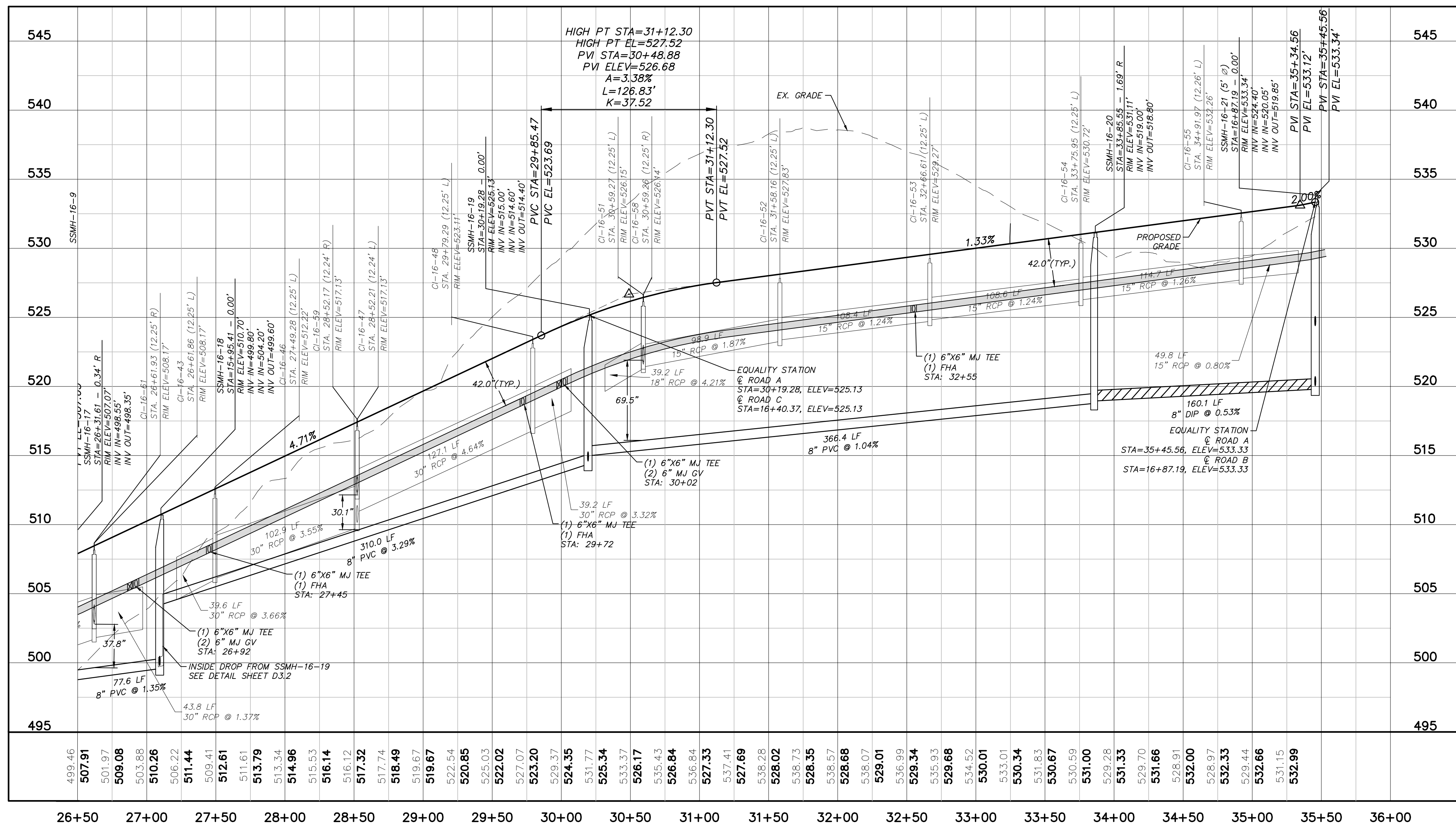
ROAD A PLAN  
(40' PUBLIC R/W, STA. 22+50 TO 26+50)  
SCALE: 1"=50'



ROAD A PLAN  
(40' PUBLIC R/W, STA. 26+50 TO 35+50)  
SCALE: 1"=50'

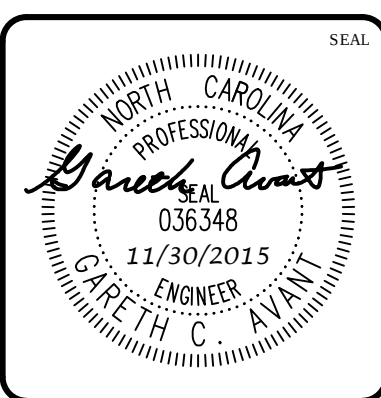
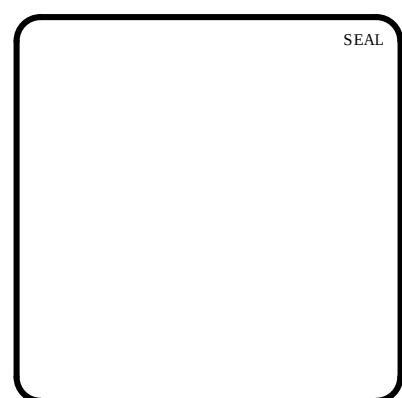


ROAD A PROFILE  
(STA. 22+50 TO 26+50)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'



ROAD A PROFILE  
(STA. 26+50 TO 35+50)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

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|----------|---------------------------------------------------|------------|
| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |



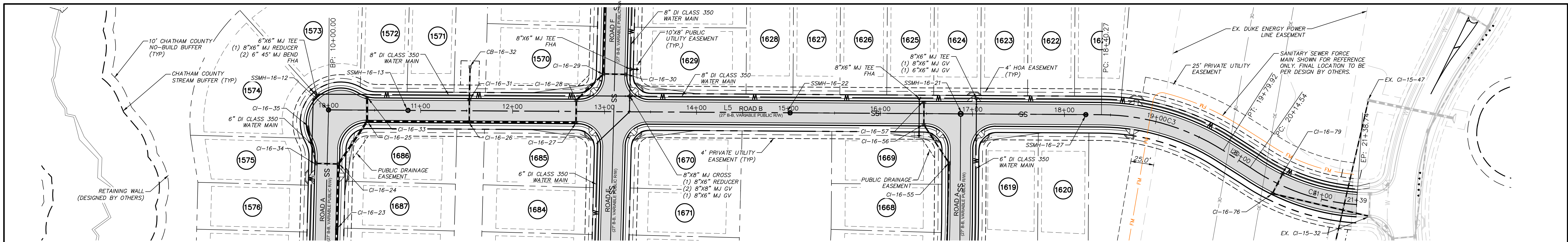
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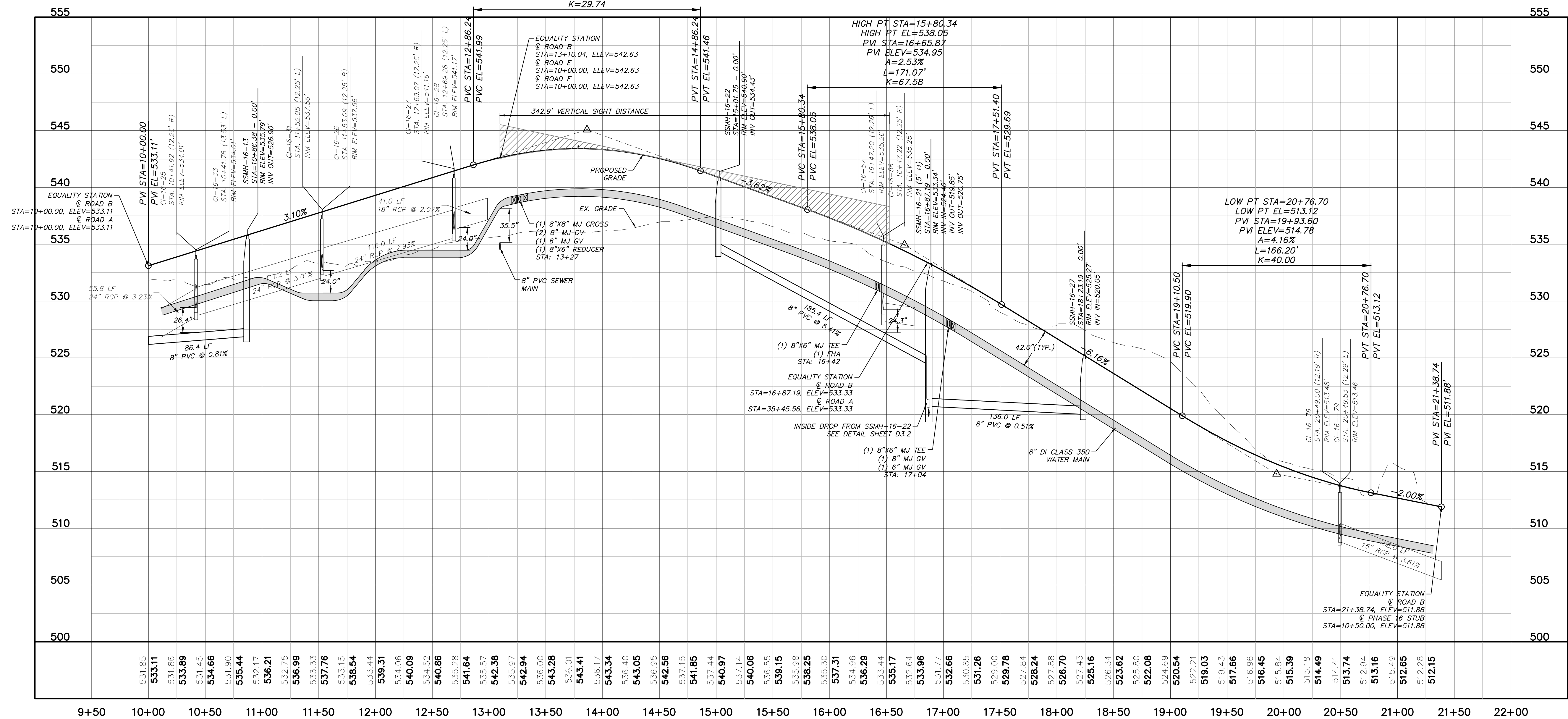
**BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA**  
PLAN & PROFILE  
ROAD A  
STA. 22+50 TO STA. 26+50  
ROAD A  
STA. 26+50 TO STA. 35+50

|                          |                             |
|--------------------------|-----------------------------|
| DATE: SEPTEMBER 30, 2015 | SCALE: HORIZONTAL: 1" = 50' |
| MCE PROJ. # 02735-0149   | VERTICAL: N/A               |
| DRAWN: BSS               |                             |
| DESIGNED: BSS            |                             |
| CHECKED: GCA             |                             |
| PROJ. MGR. CHS           |                             |

|                                                 |             |
|-------------------------------------------------|-------------|
| SCALE: HORIZONTAL: 1" = 50'                     | SCALE: C4.X |
| VERTICAL: N/A                                   | SCALE: C4.2 |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION: 3 |

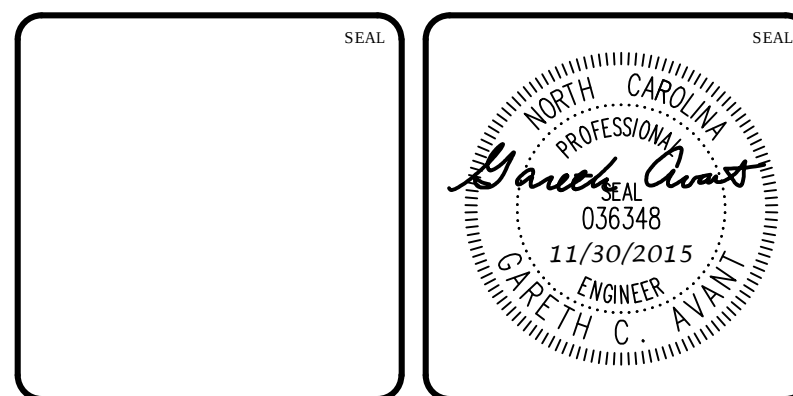


ROAD B  
(40' PUBLIC R/W, STA. 10+00 TO 21+38.74)  
SCALE: 1"=50'



ROAD B  
(STA. 10+00 TO 21+38.74)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

| REV. NO. | DESCRIPTION                                       | DATE       |
|----------|---------------------------------------------------|------------|
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |
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| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |

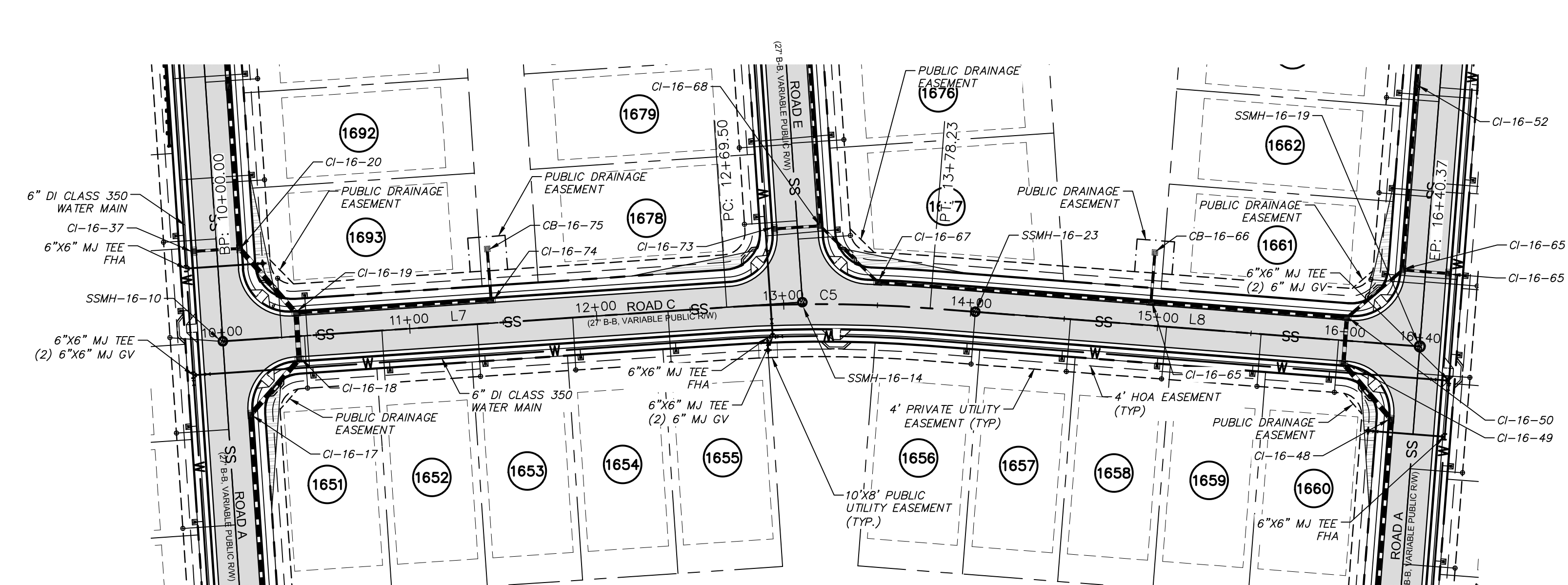


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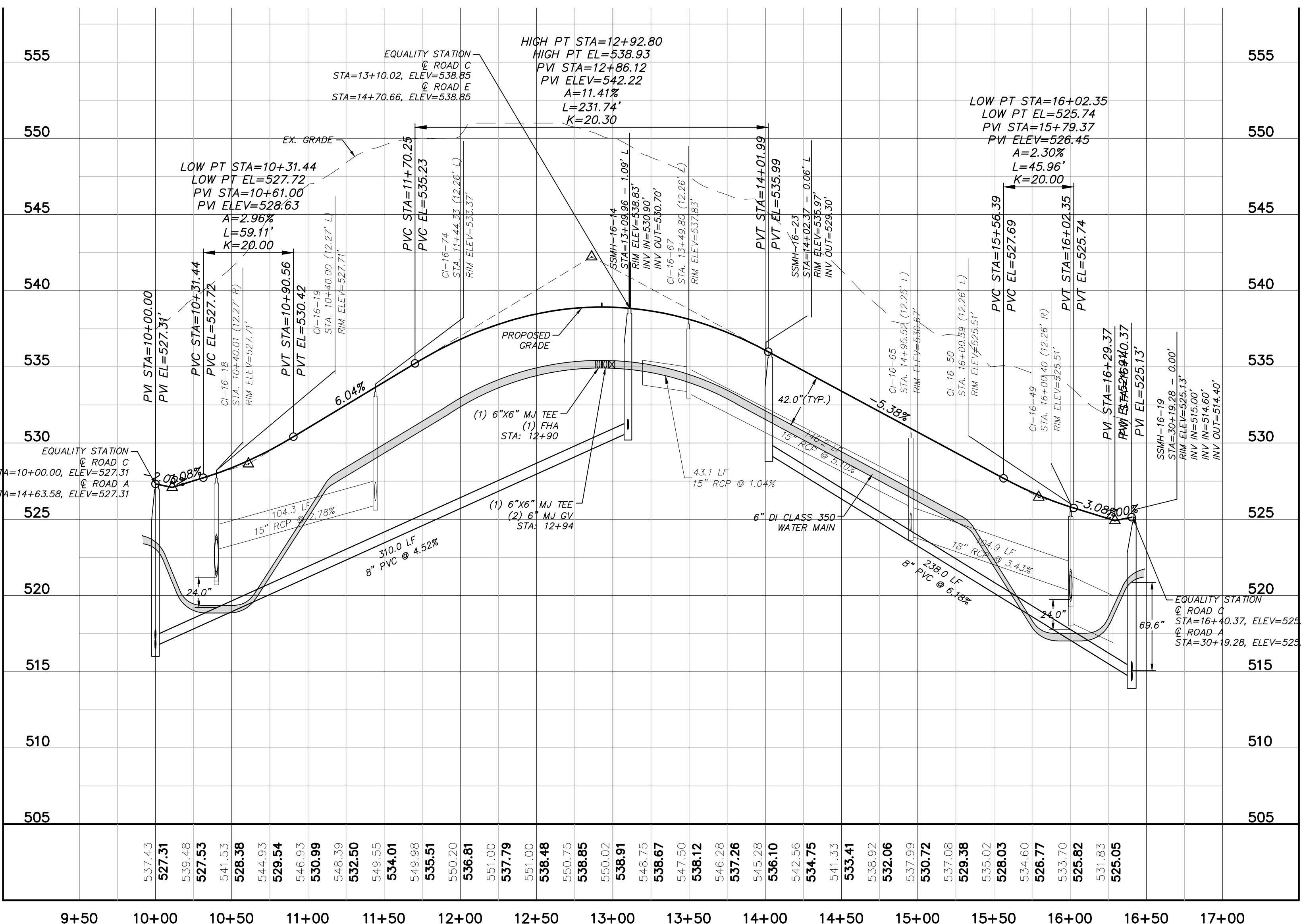
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CHATHAM COUNTY, NORTH CAROLINA  
PLAN & PROFILE  
ROAD B  
STA. 10+00 TO STA. 21+38.74**

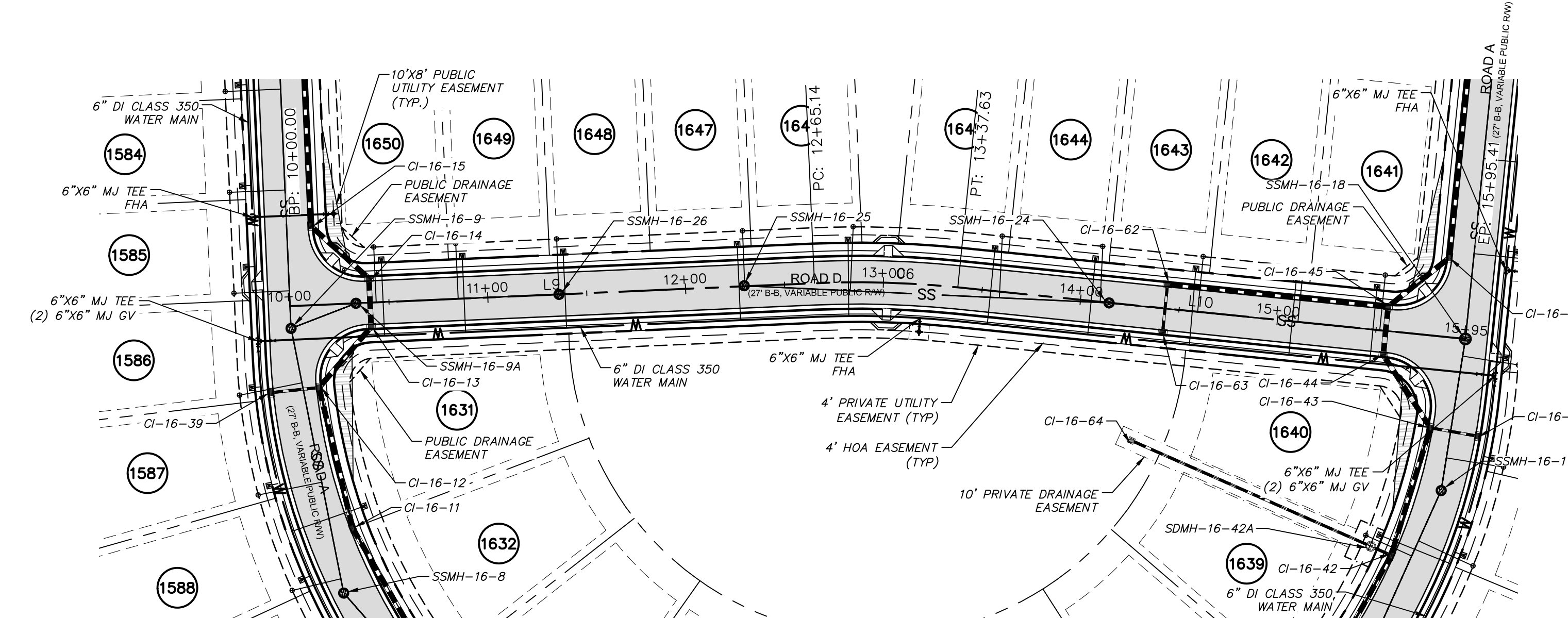
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| DESIGNED: BSS                                   |                      |                       |
| CHECKED: GCA                                    |                      |                       |
| PROJ. MGR: CHS                                  |                      |                       |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION: 3          |                       |



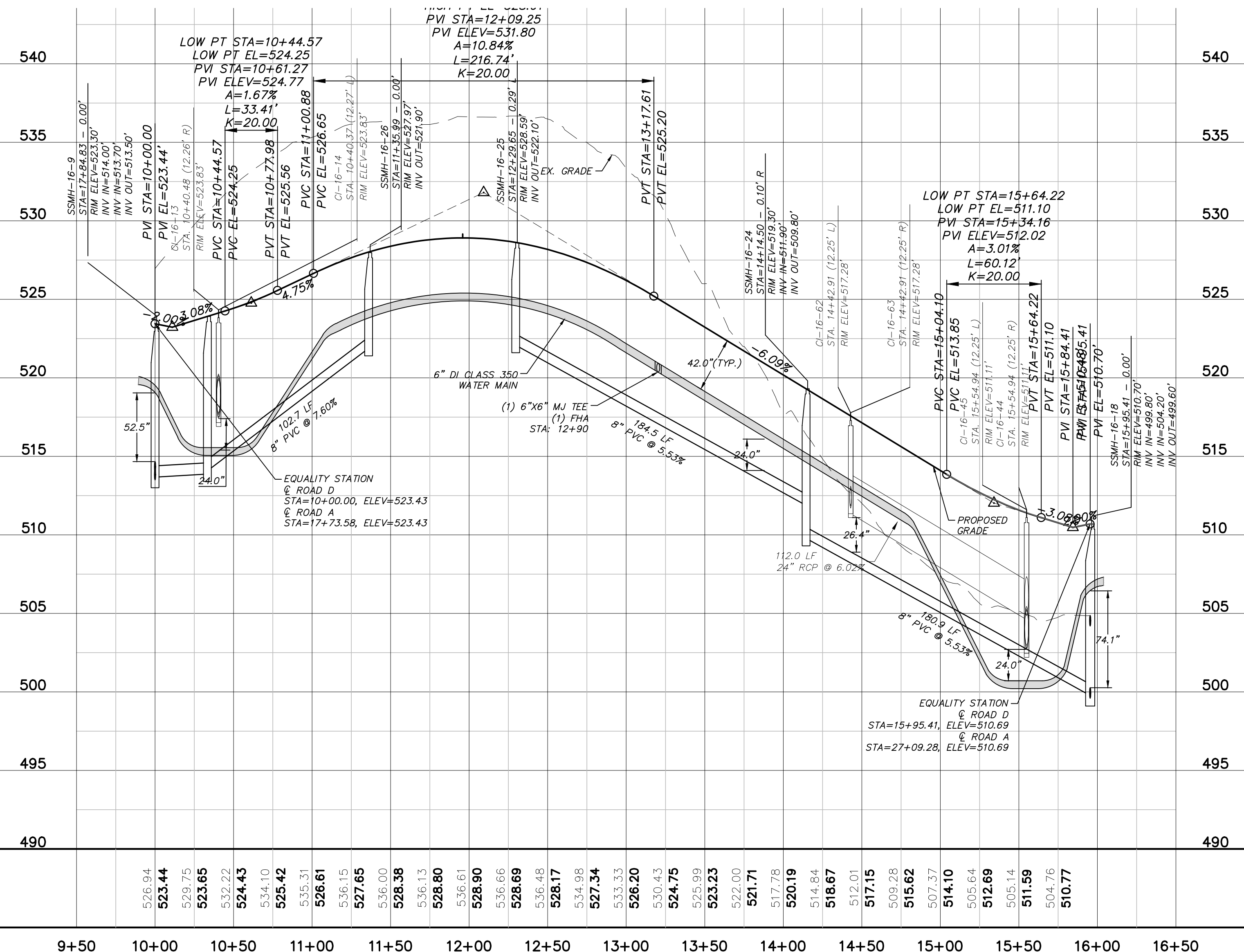
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SCALE: 1"=50'



ROAD C  
(STA. 10+00 TO 16+40)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

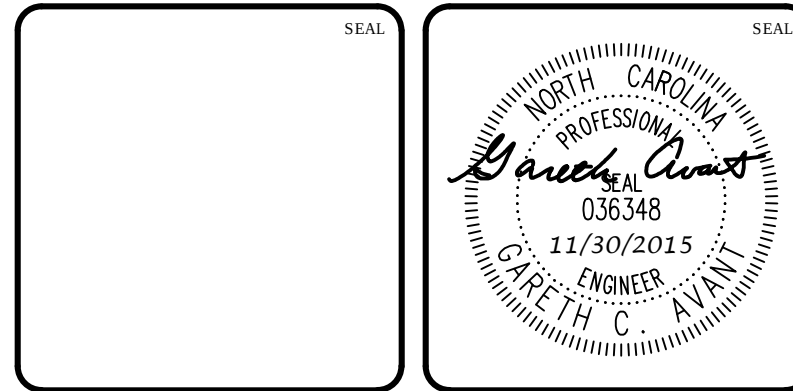


ROAD D  
(STA. 10+00 TO 15+95)  
SCALE: 1"=50'



ROAD D  
(STA. 10+00 TO 15+95)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

| REV. NO. | DESCRIPTION                                       | DATE       |
|----------|---------------------------------------------------|------------|
| 3        | REVISED PER COMMENTS RECEIVED FROM NCROT          | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |

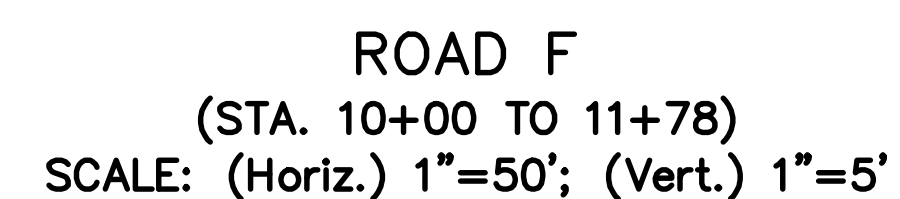
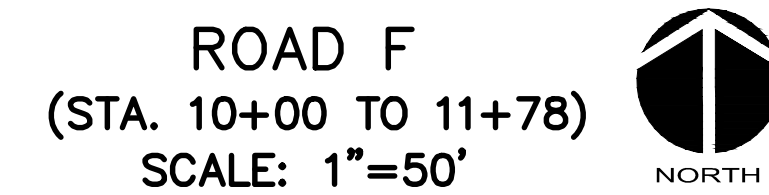
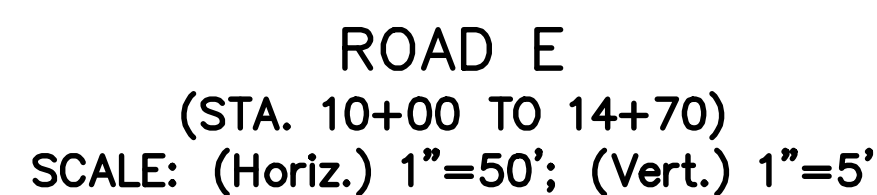
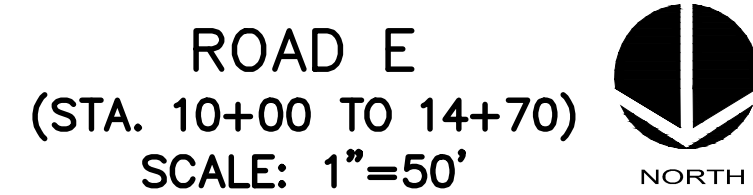


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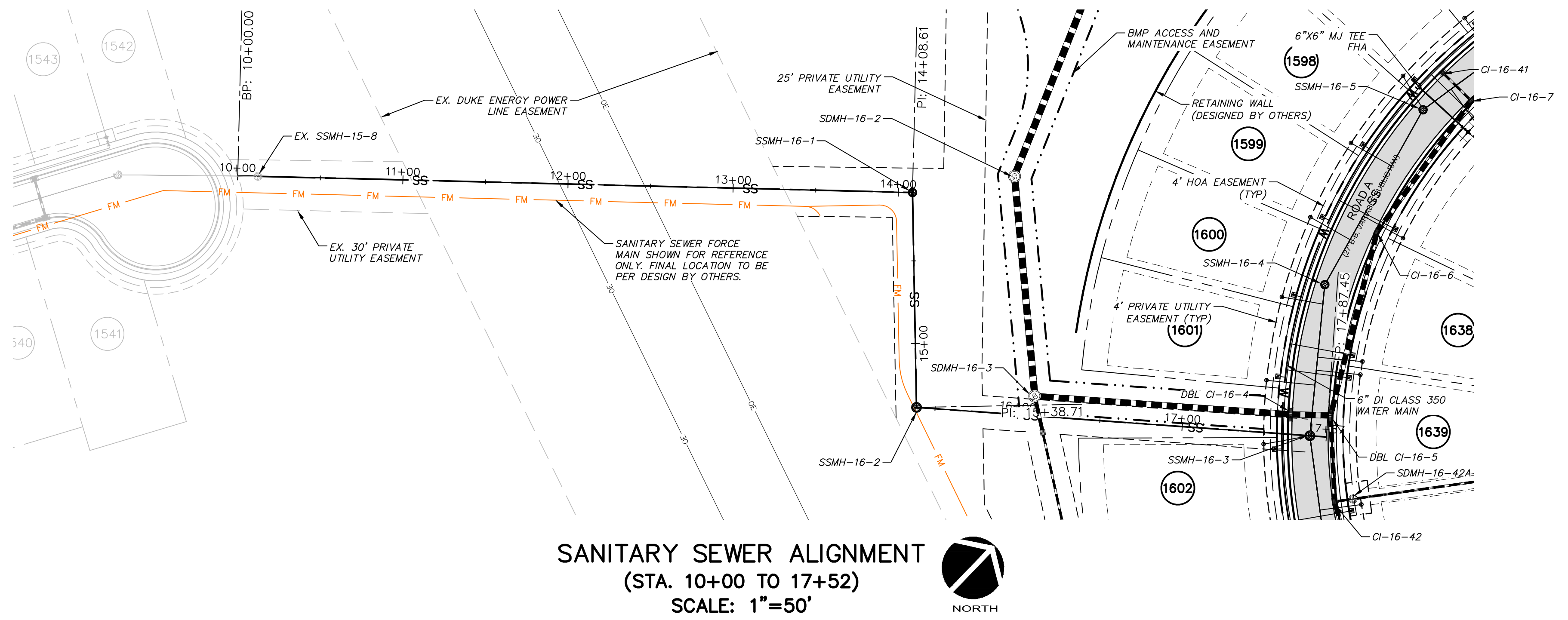
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CHATHAM COUNTY, NORTH CAROLINA**  
PLAN & PROFILE  
ROAD C  
STA. 10+00 TO STA. 16+40  
ROAD D  
STA. 10+00 TO STA. 15+95

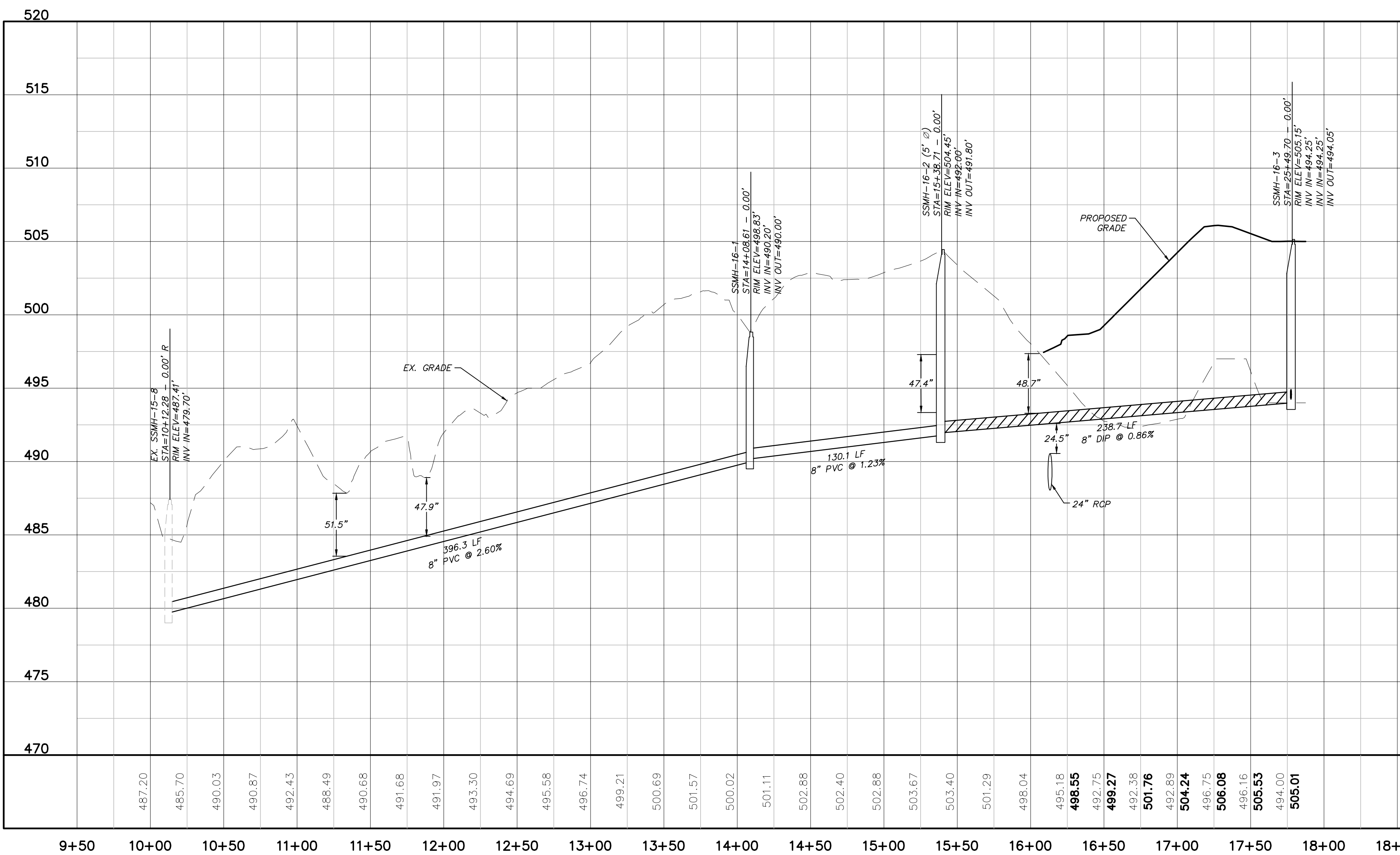
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| DATE: SEPTEMBER 30, 2015<br>MCE PROJ. # 02735-0149<br>DRAWN: BSS<br>DESIGNED: BSS<br>CHECKED: GCA<br>PROJ. MGR. CHS | SCALE: HORIZONTAL: 1" = 50' VERTICAL: N/A | MCE FILE NUMBER: C4.X<br>DRAWING NUMBER: C4.4 |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY                                                                     | REVISION: 3                               |                                               |



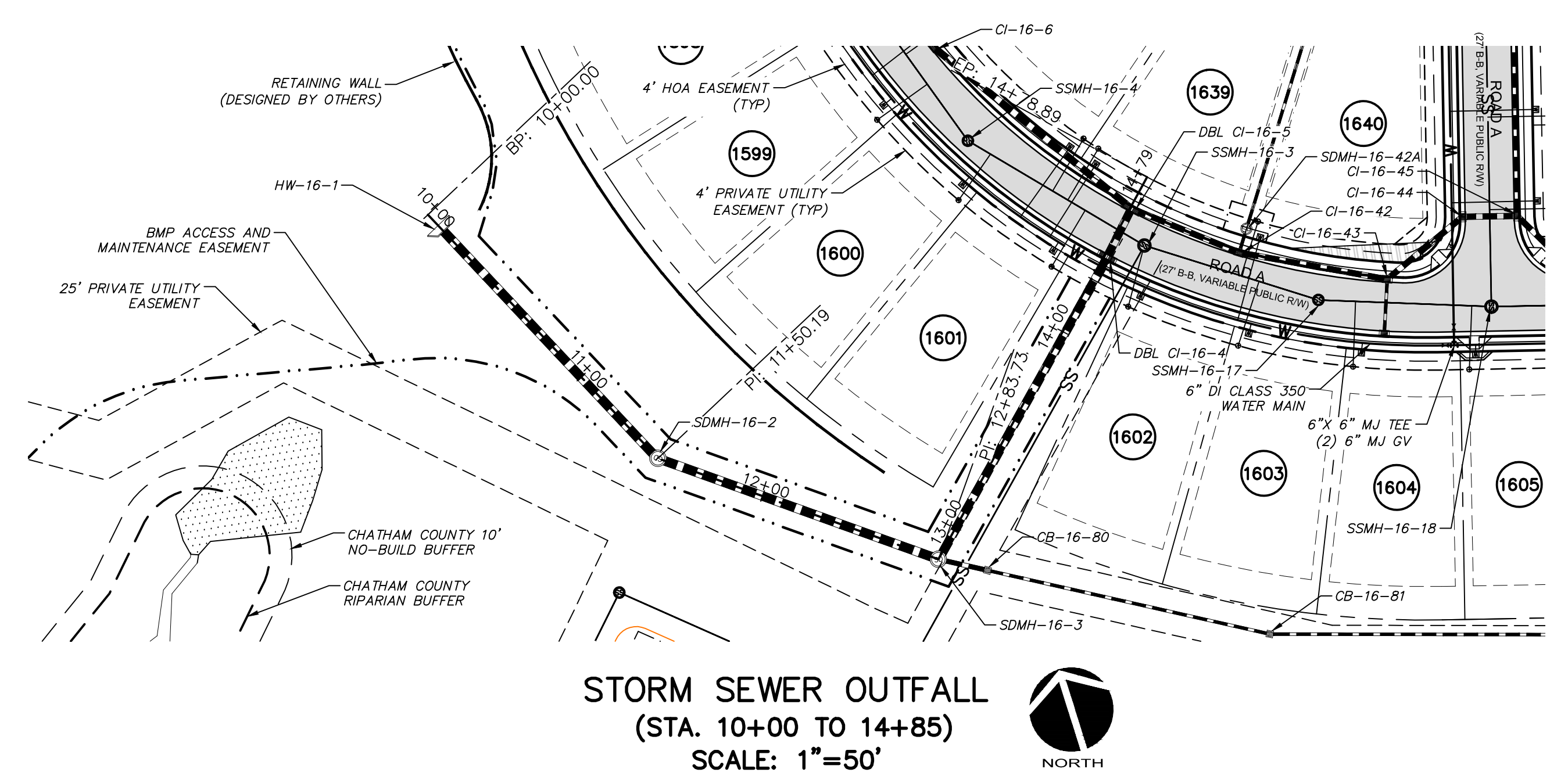
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| DRAWN <u>BSS</u>                |                                                                                                                                                           |                                                                                                                          |
| DESIGNED <u>BSS</u>             |                                                                                                                                                           |                                                                                                                          |
| CHECKED <u>GCA</u>              |                                                                                                                                                           |                                                                                                                          |
| PROJ. MGR. <u>CHS</u>           | STATUS: <u>FINAL DRAWINGS</u><br><div style="border: 1px solid black; padding: 5px; text-align: center; font-size: 1.2em;">FOR REVIEW PURPOSES ONLY</div> |                                                                                                                          |
|                                 |                                                                                                                                                           | REVISION<br><div style="border: 1px solid black; padding: 5px; text-align: center; font-size: 1.5em;">3</div>            |



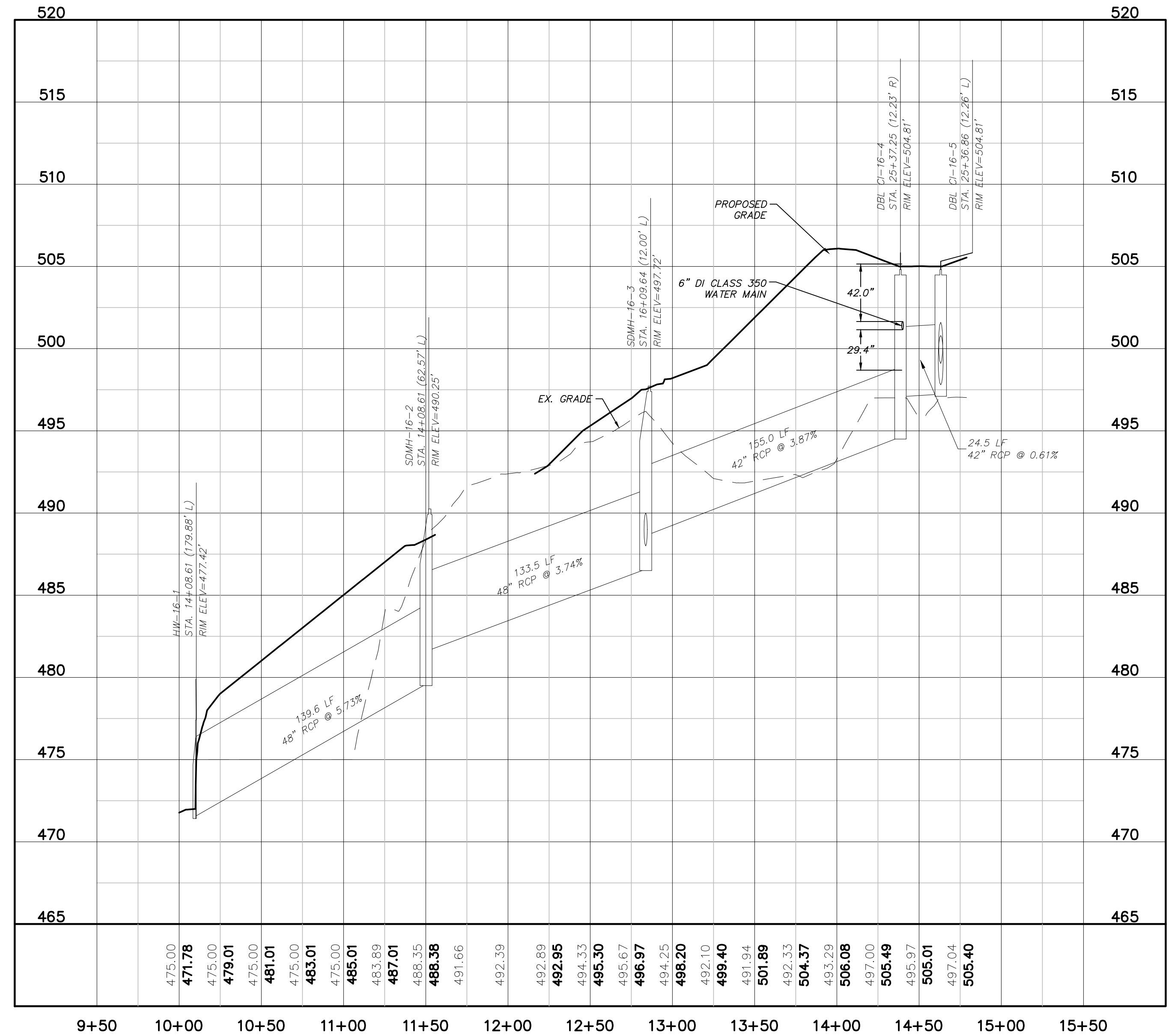
SANITARY SEWER ALIGNMENT  
(STA. 10+00 TO 17+52)  
SCALE: 1"=50'



SANITARY SEWER ALIGNMENT  
(STA. 10+00 TO 17+52)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

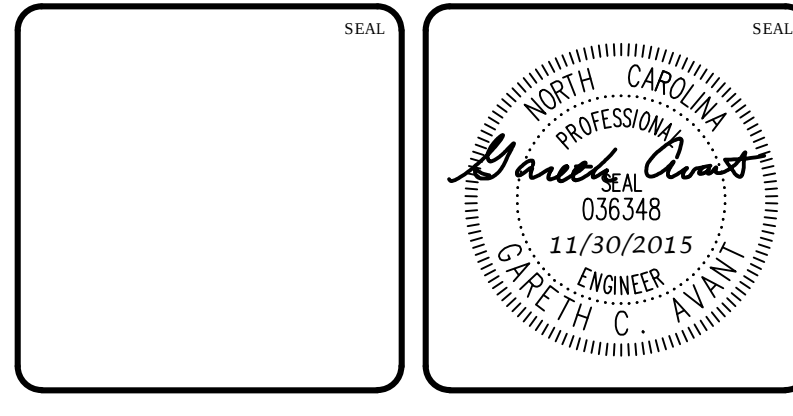


STORM SEWER OUTFALL  
(STA. 10+00 TO 14+85)  
SCALE: 1"=50'



STORM SEWER OUTFALL  
(STA. 10+00 TO 14+85)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

| REV. NO. | DATE       | DESCRIPTION                                       |
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| 1        | 2015.09.30 | ISSUED FOR PERMITTING                             |
| 2        | 2015.11.12 | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY |
| 3        | 2015.11.30 | REVISED PER COMMENTS RECEIVED FROM MCDOT          |



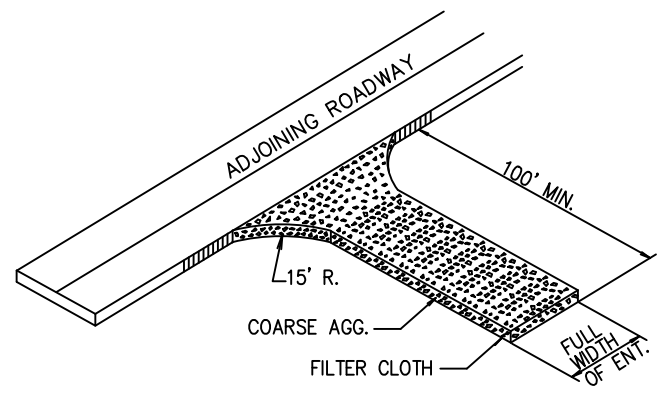
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SANITARY SEWER ALIGNMENT  
STA. 10+00 TO STA. 17+52  
STORM SEWER OUTFALL  
STA. 10+00 TO STA. 14+85

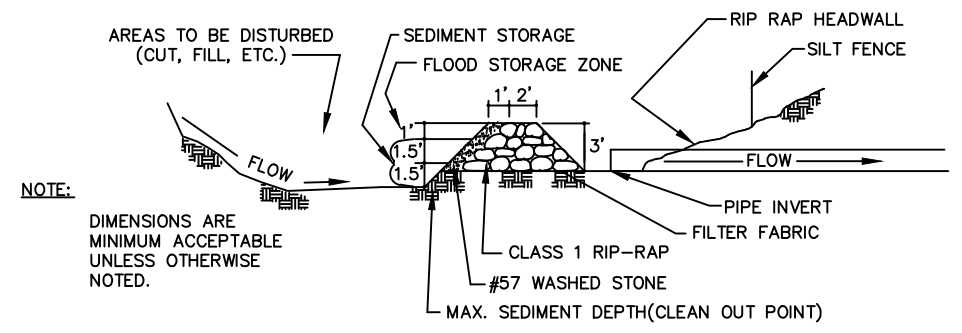
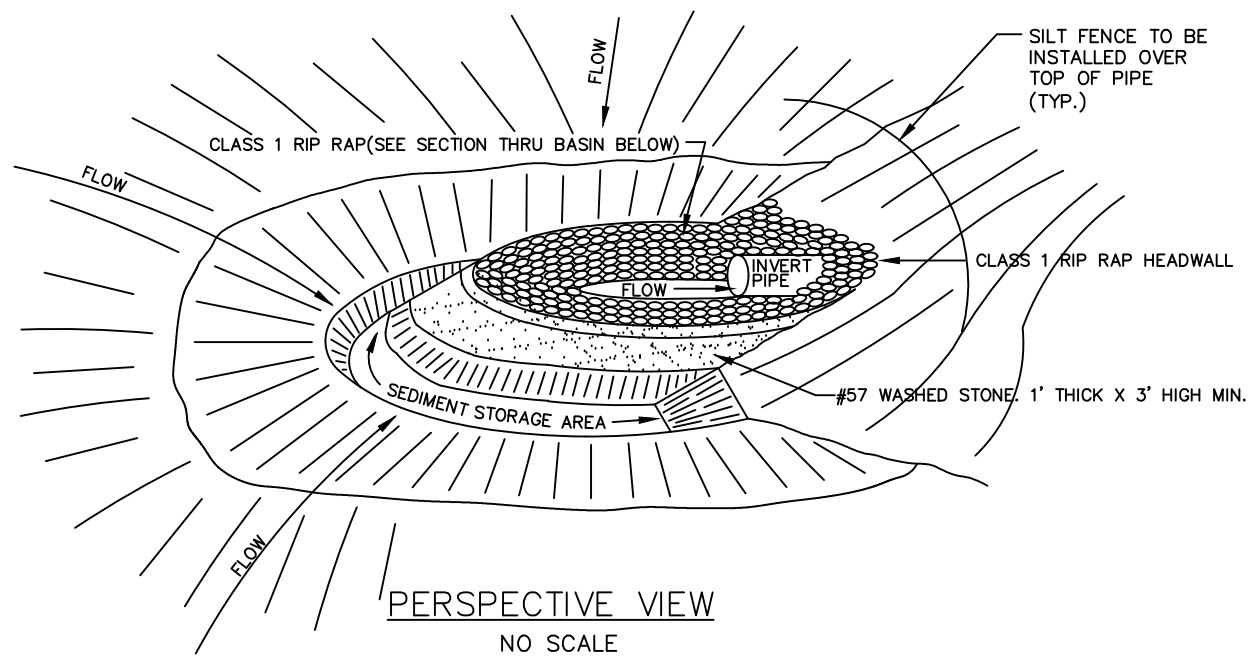
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| MCE PROJ. # 02735-0149                          | HORIZONTAL: 1" = 50' | DRAWING NUMBER: C4.6  |
| DRAWN: BSS                                      | VERTICAL: N/A        |                       |
| DESIGNED: BSS                                   |                      |                       |
| CHECKED: GCA                                    |                      |                       |
| PROJ. MGR. CHS                                  |                      |                       |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION: 3          |                       |





- A. COARSE AGGREGATE (2"-3" STONE) SHALL BE USED. PAD TO BE 100'L X 25'W X 6"D MIN. PLACE A MINIMUM OF 3" OF STONE IN A CUT SECTION TO HELP SECURE FILTER CLOTH.
- B. TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.
- C. ENTRANCES SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
- D. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOP DRESSING MAY BE NECESSARY. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.
- E. TEMPORARY PADS MUST BE LOCATED ON EACH SIDE OF ADJOINING ROADWAY.

### TEMPORARY CONSTRUCTION ENTRANCE NTS

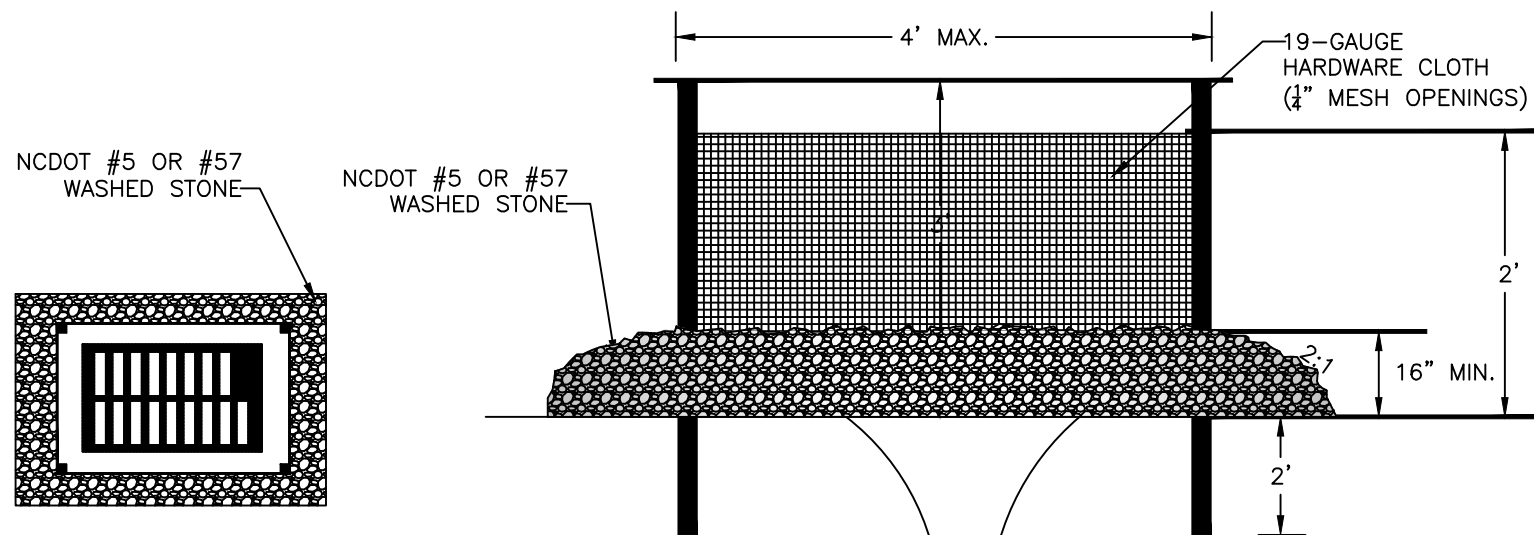


SECTION THRU BASIN, FILTER AND CULVERT PIPE  
NO SCALE

### ARC FILTER INLET PROTECTION NTS

#### NOTES:

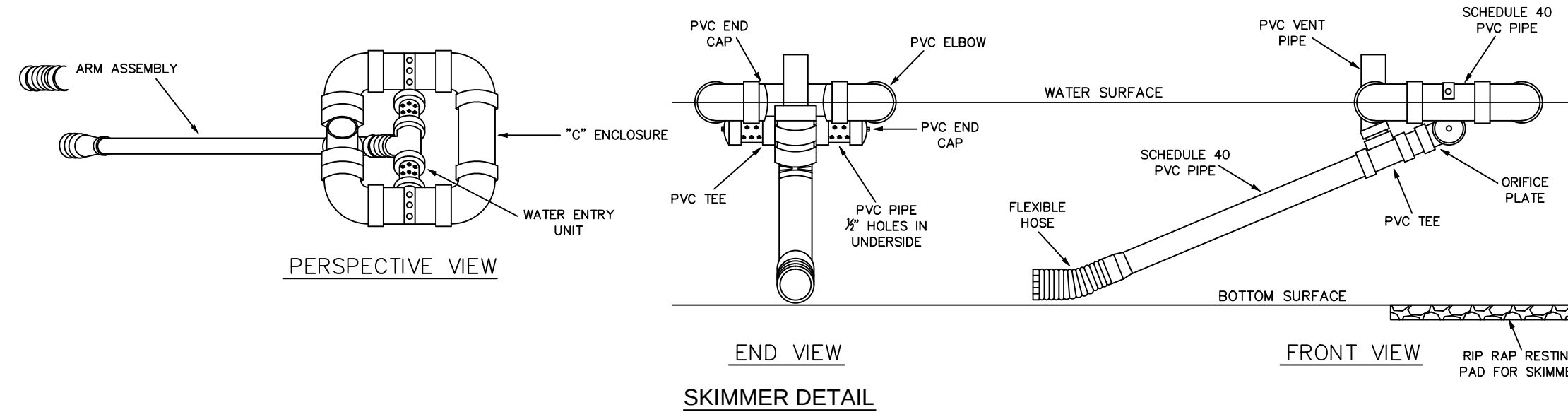
- UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
- DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
- SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
- PLACE CLEAN GRAVEL (NC DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
- ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
- COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUND COVER.



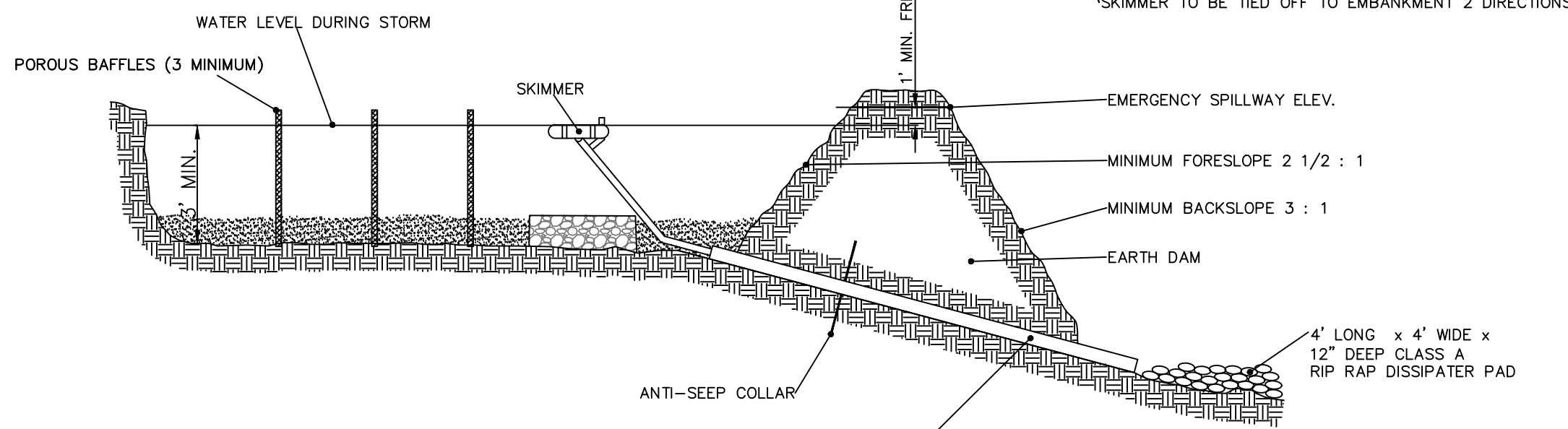
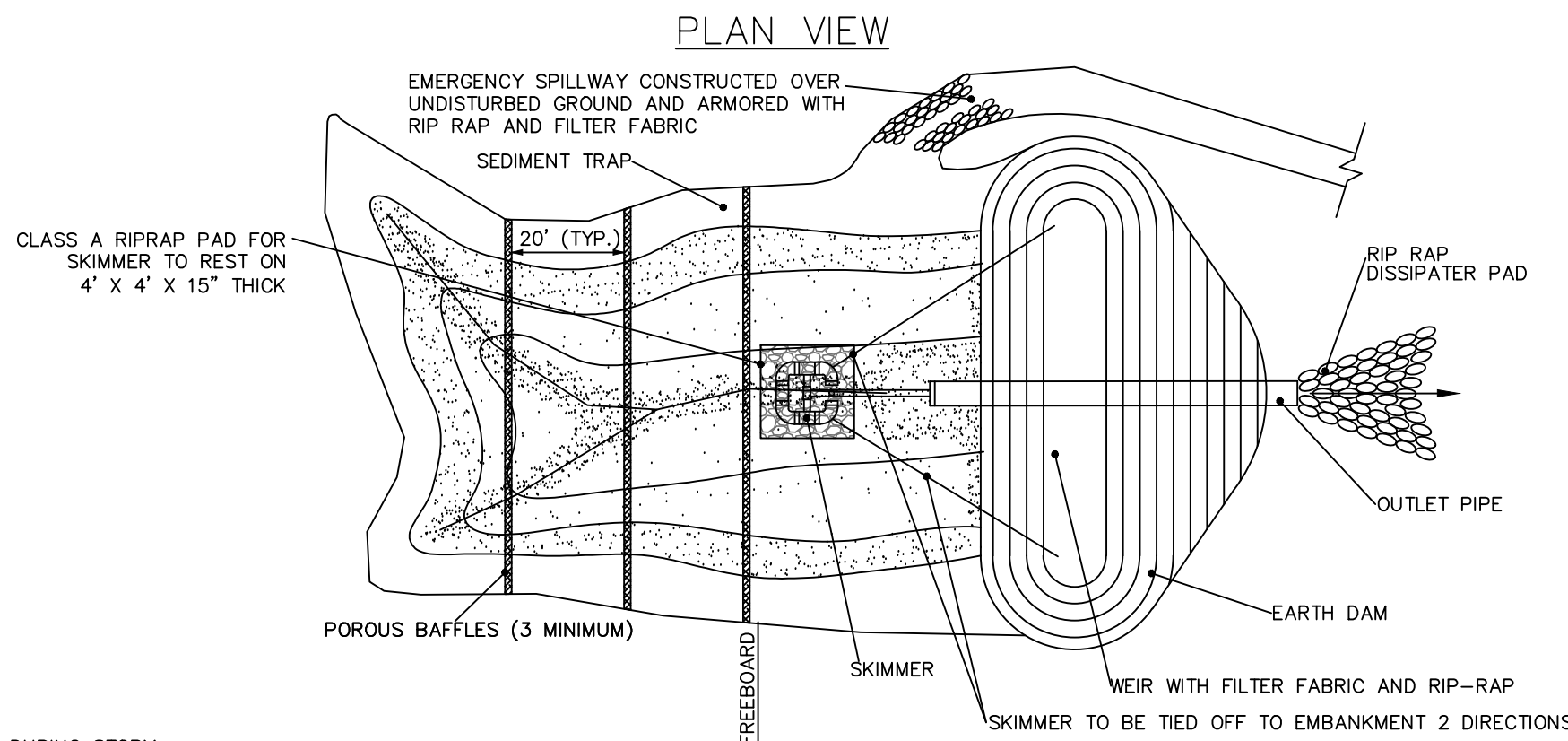
PLAN VIEW

CROSS SECTION

### HARDWARE CLOTH & GRAVEL INLET PROTECTION NTS



SKIMMER DETAIL



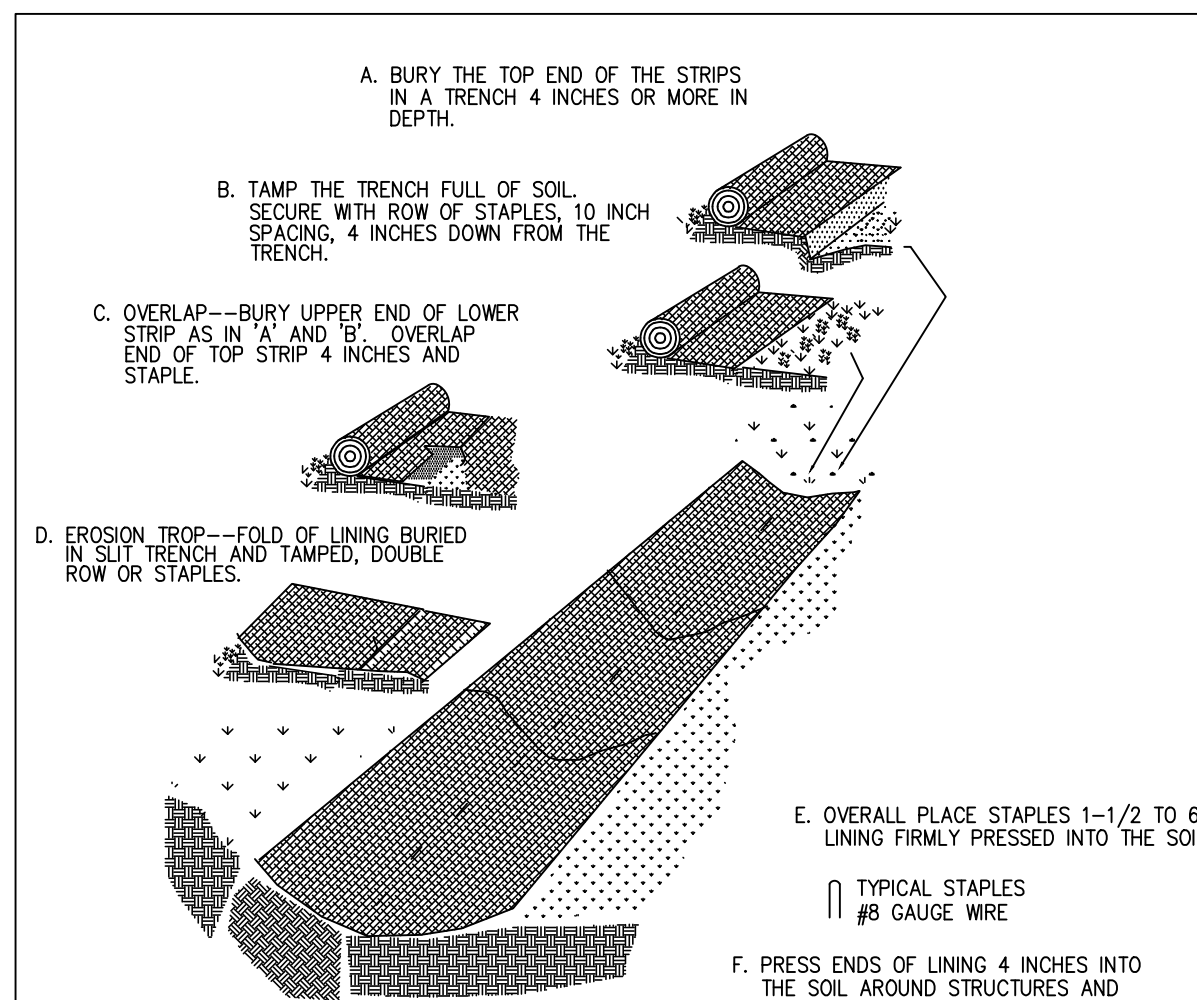
CROSS SECTION

4

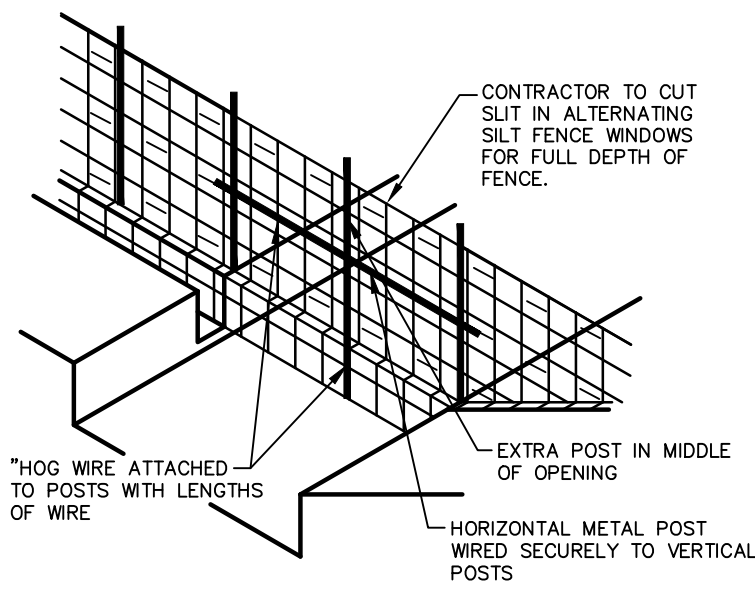
| BASIN # | DISTURBED AREA (ac) | TOTAL DRAINAGE AREA (ac) | REQUIRED STORAGE | REQUIRED SURFACE AREA | MINIMUM DEPTH | BOTTOM ELEVATION | TOP WIDTH | TOP LENGTH | PROVIDED STORAGE | PROVIDED SURFACE AREA | STORAGE/ SPILLWAY ELEVATION | SPILLWAY WIDTH | TOP OF DAM ELEVATION | SKIMMER SIZE | SKIMMER DIAMETER |
|---------|---------------------|--------------------------|------------------|-----------------------|---------------|------------------|-----------|------------|------------------|-----------------------|-----------------------------|----------------|----------------------|--------------|------------------|
| 9       | 6.76                | 6.76                     | 24,340 CF        | 11,920 SF             | 3.0'          | 515.0'           | 81'       | 150'       | 28,566 CF        | 12,150 SF             | 518.0'                      | 28.0'          | 520.0'               | 3.0"         | 3.0"             |
| 10      | 2.70                | 2.70                     | 9,720 CF         | 4,760 SF              | 3.0'          | 516.0'           | 53'       | 94'        | 10,086 CF        | 4,982 SF              | 519.0'                      | 12.0'          | 521.0'               | 2.5"         | 1.8"             |
| 13*     | 29.67               | 29.67                    | 106,810 CF       | 52,340 SF             | 5.5'          | 466.0'           | 166'      | 318'       | 184,832 CF       | 52,788 SF             | 473.25'                     | 60.0'          | 477.25'              | 8.0"         | 6.3"             |

\*OUTLET STRUCTURE SHALL BE INSTALLED PER FINAL BMP OUTLET STRUCTURE PLANS AS SHOWN ON SHEET D4.1 OF THESE PLANS

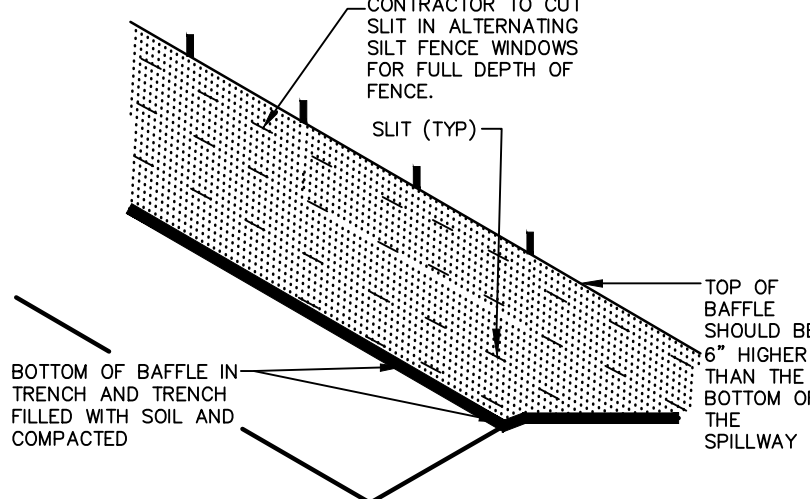
### SKIMMER SEDIMENT BASIN NTS



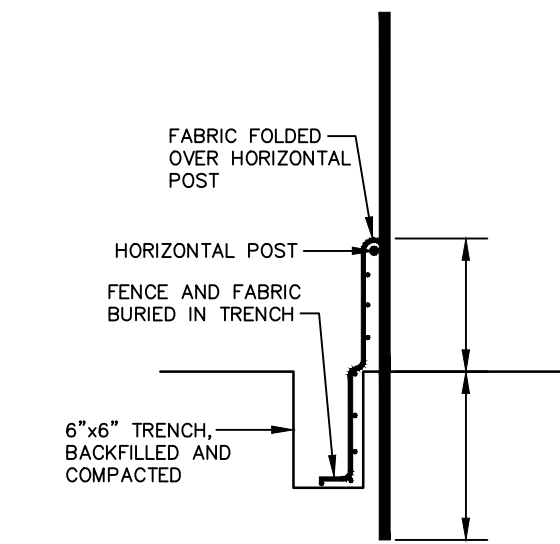
### LINER INSTALLATION IN SWALES/DITCHES NTS



### BAFFLE INSTALLATION - STEP 1



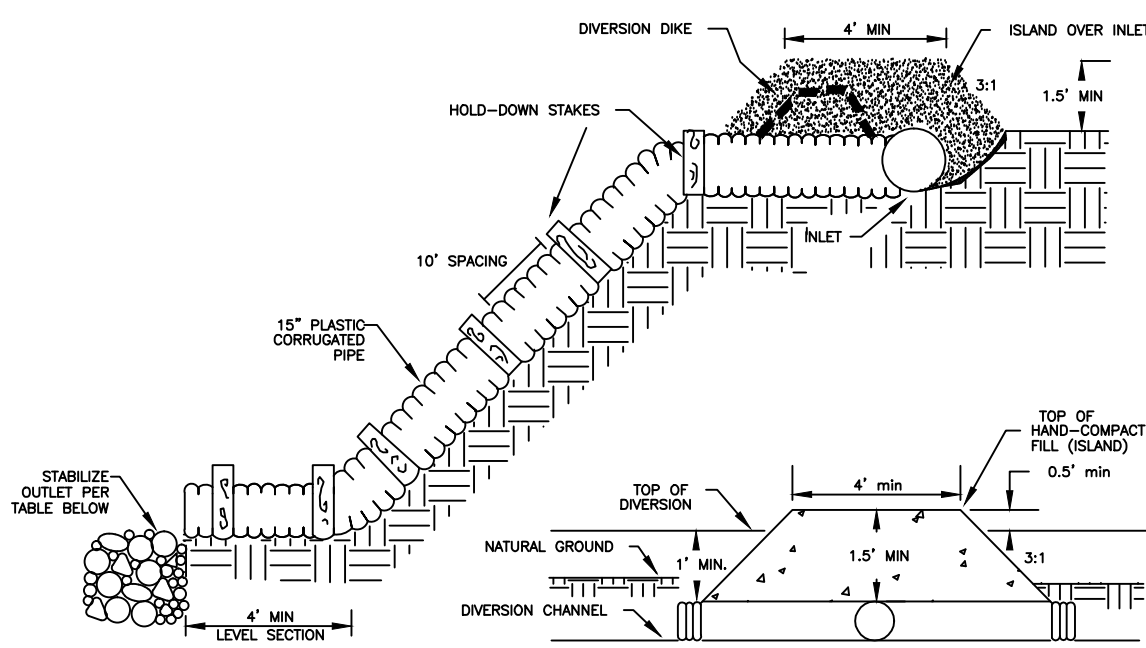
### BAFFLE INSTALLATION - STEP 2



### SECTION AT OPENING

- NOTES:
- DRIVE STEEL FENCE POST AT LEAST 18" INTO SOLID GROUND
  - WOOD POSTS ARE NOT ACCEPTABLE
  - USE STAPLES 1" APART TO ATTACH FABRIC TO "HOG WIRE"
  - BAFFLE SPACED AS PER APPROVED PLAN.

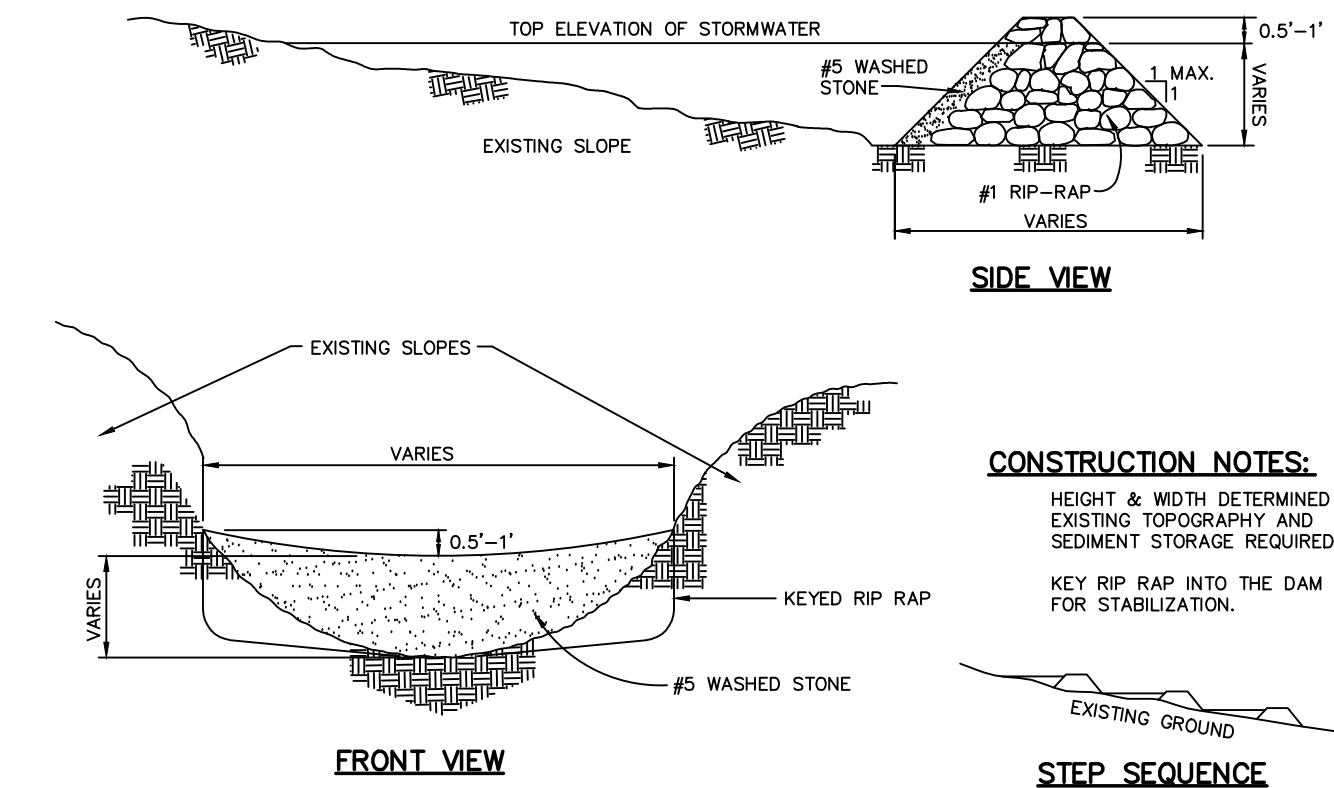
### BAFFLE INSTALLATION DETAIL



### OUTLET PROTECTION SIZING

| OUTLET SIZE | Lo (FT.) | W (FT.) | DEPTH (IN.) | LINING CLASSIFICATION |
|-------------|----------|---------|-------------|-----------------------|
| 12"         | 6.0      | 3.0     | 22          | CLASS B               |
| 15"         | 7.5      | 3.75    | 22          | CLASS B               |
| 18"         | 9.0      | 4.5     | 22          | CLASS B               |
| 24"         | 12.0     | 6.0     | 22          | CLASS B               |
| 30"         | 15.0     | 7.5     | 22          | CLASS B               |

### TEMPORARY SLOPE DRAIN NTS



### CHECK DAM NTS

#### NOTES:

POSITIVE GRADE MUST BE PROVIDED TO ASSURE DRAINAGE. IF SLOPE EXCEEDS 2% SEED AND MULCH DIVERSION. TRY NOT TO EXCEED 5% MAXIMUM D.A. = 5 ACRES WITHOUT SUPPORTING CALCS. DIVERSIONS AT THE TOP OF SLOPES MUST EMPTY INTO AN APPROVED SLOPE DRAIN. BERM/DITCH IS MOST COMMONLY USED.

- MACHINE COMPACTION OF ALL FILL IS REQUIRED. DIVERSIONS SUFFICIENT TO DIRECT ALL SEDIMENT-LADEN STORMWATER INTO A SEDIMENT CONTROL DEVICE MUST BE INSTALLED PRIOR TO CLEARING AND GRUBBING OF THE AREA (OR IN CONJUNCTION WITH THIS OPERATION) IF SEDIMENT CONTROLS AND DIVERSIONS ARE INSTALLED AS EACH CRITICAL POINT IS REACHED).
- DIVERSIONS SHOULD BE LOCATED TO MINIMIZE DAMAGES BY CONSTRUCTION OPERATIONS.
- DIVERSIONS SHOULD BE SEED AND MULCHED IF THEY ARE TO REMAIN IN PLACE OVER 30 DAYS.
- CHECK DEVICE AFTER EACH RAIN, BUT ONCE A WEEK REGARDLESS. REPAIR AS NECESSARY.

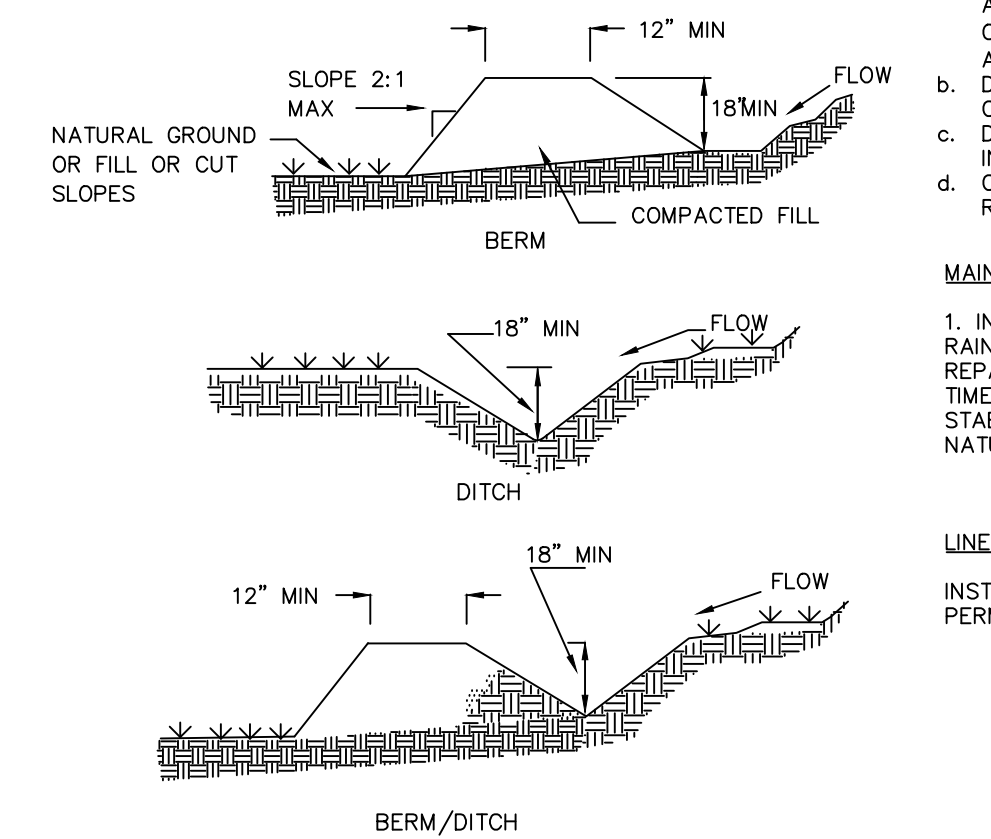
#### MAINTENANCE

- INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

#### LINER SPECIFICATIONS:

INSTALLED LINERS MUST MEET THE FOLLOWING MINIMUM PERMISSIBLE SHEAR SPECIFICATIONS:

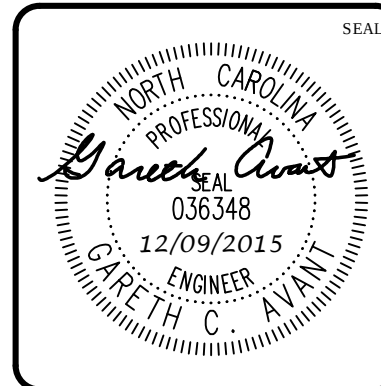
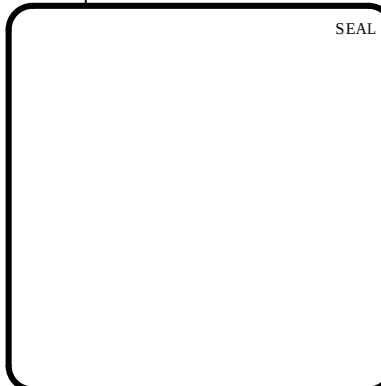
STRAW W/NET - 1.45 LB/FT<sup>2</sup>  
SYNTHETIC MAT - 2.00 LB/FT<sup>2</sup>  
SC250 - MIN. SPECIFICATIONS PER TENSAR NORTH AMERICAN  
GREEN Wmax SC250 TURF REINFORCEMENT MAT  
C350 - MIN. SPECIFICATIONS PER TENSAR NORTH AMERICAN  
GREEN Wmax C350 TURF REINFORCEMENT MAT  
P550 - MIN. SPECIFICATIONS PER TENSAR NORTH AMERICAN  
GREEN Wmax P550 TURF REINFORCEMENT MAT



| TDD #                     | TOTAL LENGTH | SLOPE (%) | LINER       | RECEIVING SLOPE DRAIN SIZE (IN.) |
|---------------------------|--------------|-----------|-------------|----------------------------------|
| STAGE 3 DIVERSION DITCHES |              |           |             |                                  |
| 40                        | 947'         | 1.1       | STRAW W/NET | 24                               |
| 41                        | 513'         | 2.4       | STRAW W/NET | 18                               |

### TEMPORARY DIVERSION DITCH NTS

| REV. NO. | DESCRIPTIONS                                      | DATE       |
|----------|---------------------------------------------------|------------|
| 4        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.12.09 |
| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |



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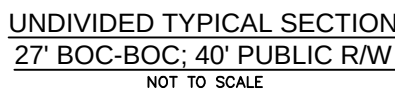
**BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA**  
**EROSION & SEDIMENTATION  
CONTROL DETAILS**

DATE: SEPTEMBER 30, 2015  
MCE PROJ. # 02735-0149  
DRAWN: BSS  
DESIGNED: BSS  
CHECKED: GCA  
PROJ. MGR: CHS

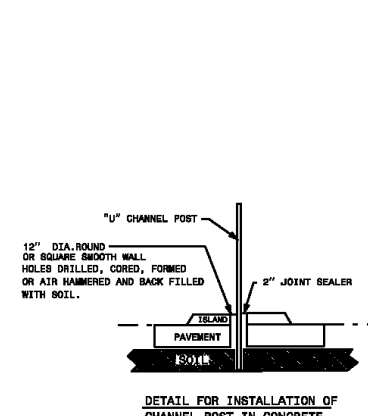
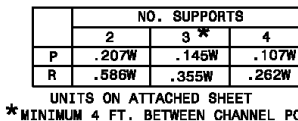
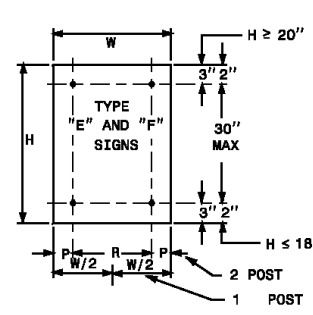
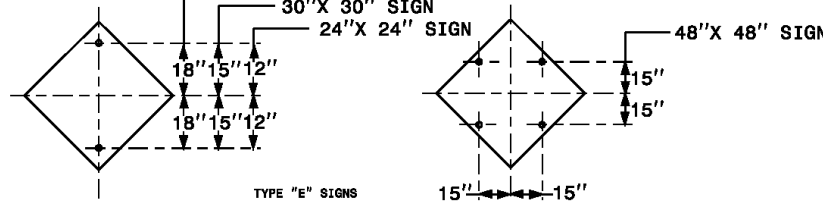
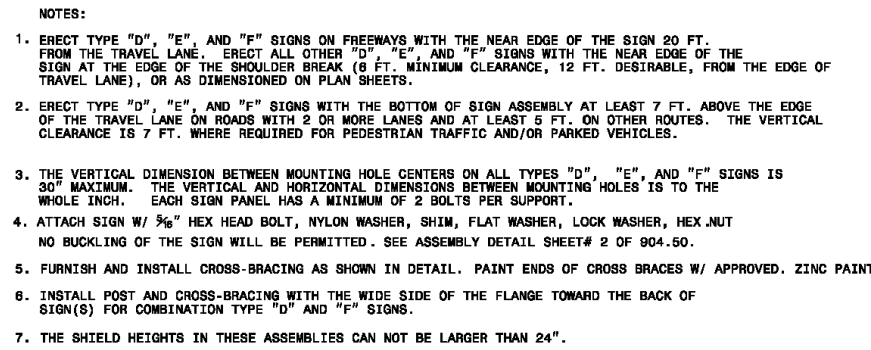
SCALE  
HORIZONTAL: AS NOTED  
VERTICAL: N/A

D1.X  
DRAWING NUMBER  
D1.2

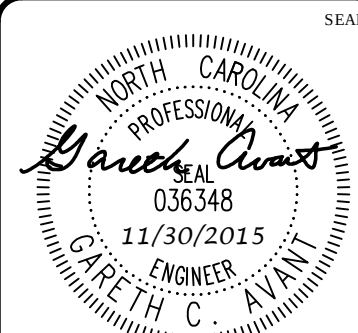
STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY  
REVISION: 4



| PAVEMENT SCHEDULE |                                                                                    |
|-------------------|------------------------------------------------------------------------------------|
| (C1)              | 1.0" SF9.5A ASPHALT SURFACE COURSE<br>AT AN AVERAGE RATE OF 110 LBS. PER SQ. YARD. |
| (D1)              | 2.0" S9.5B ASPHALT SURFACE COURSE<br>AT AN AVERAGE RATE OF 224 LBS. PER SQ. YARD.  |
| (J)               | 8" COMPACTED ABC STONE BASE COURSE                                                 |
| (K)               | 30" CURB AND GUTTER                                                                |
| (U)               | COMPACTED SUBGRADE                                                                 |
| (G)               | GEOTEXTILE FABRIC (IF NECESSARY)<br>COORDINATE WITH GEOTECHNICAL ENGINEER          |



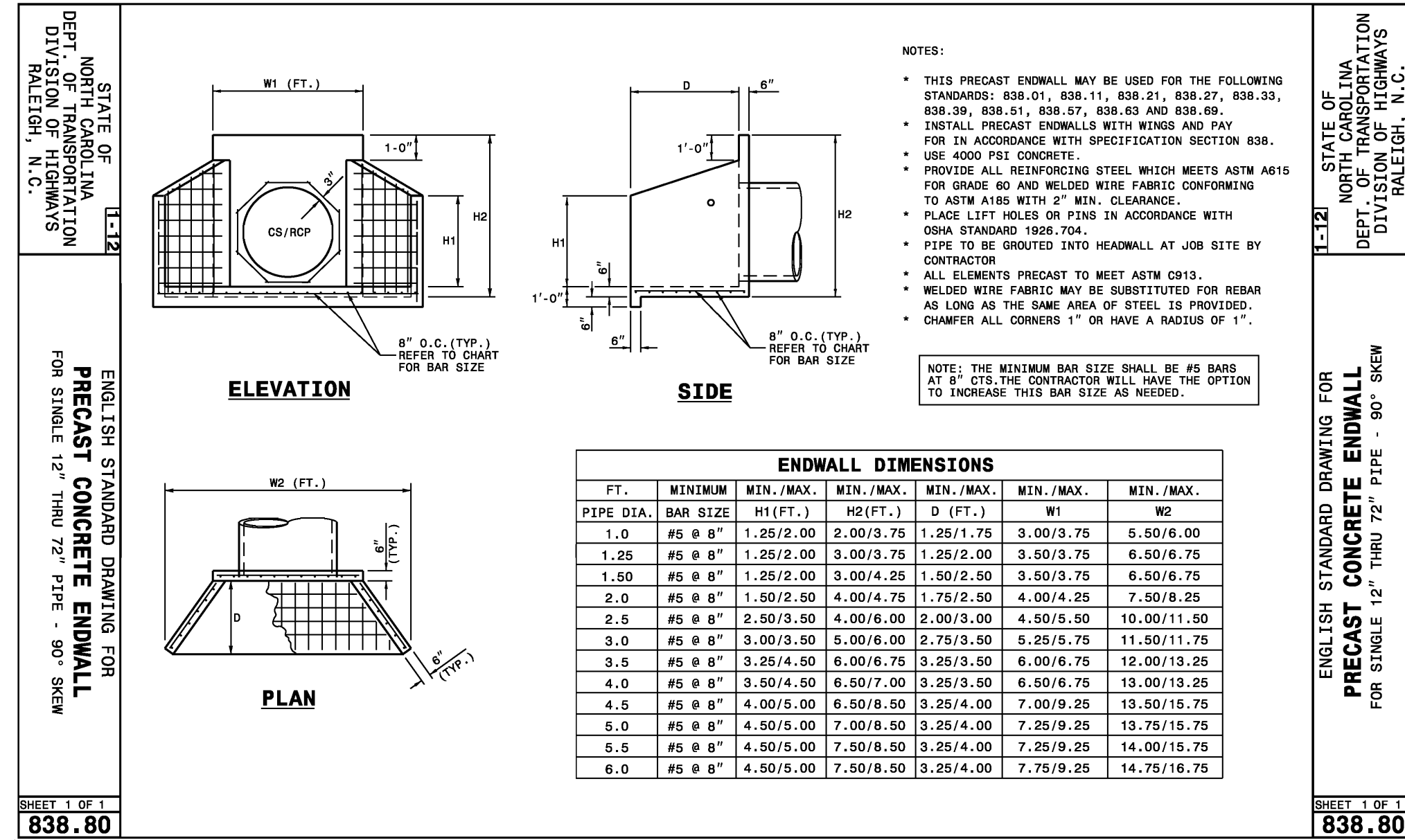
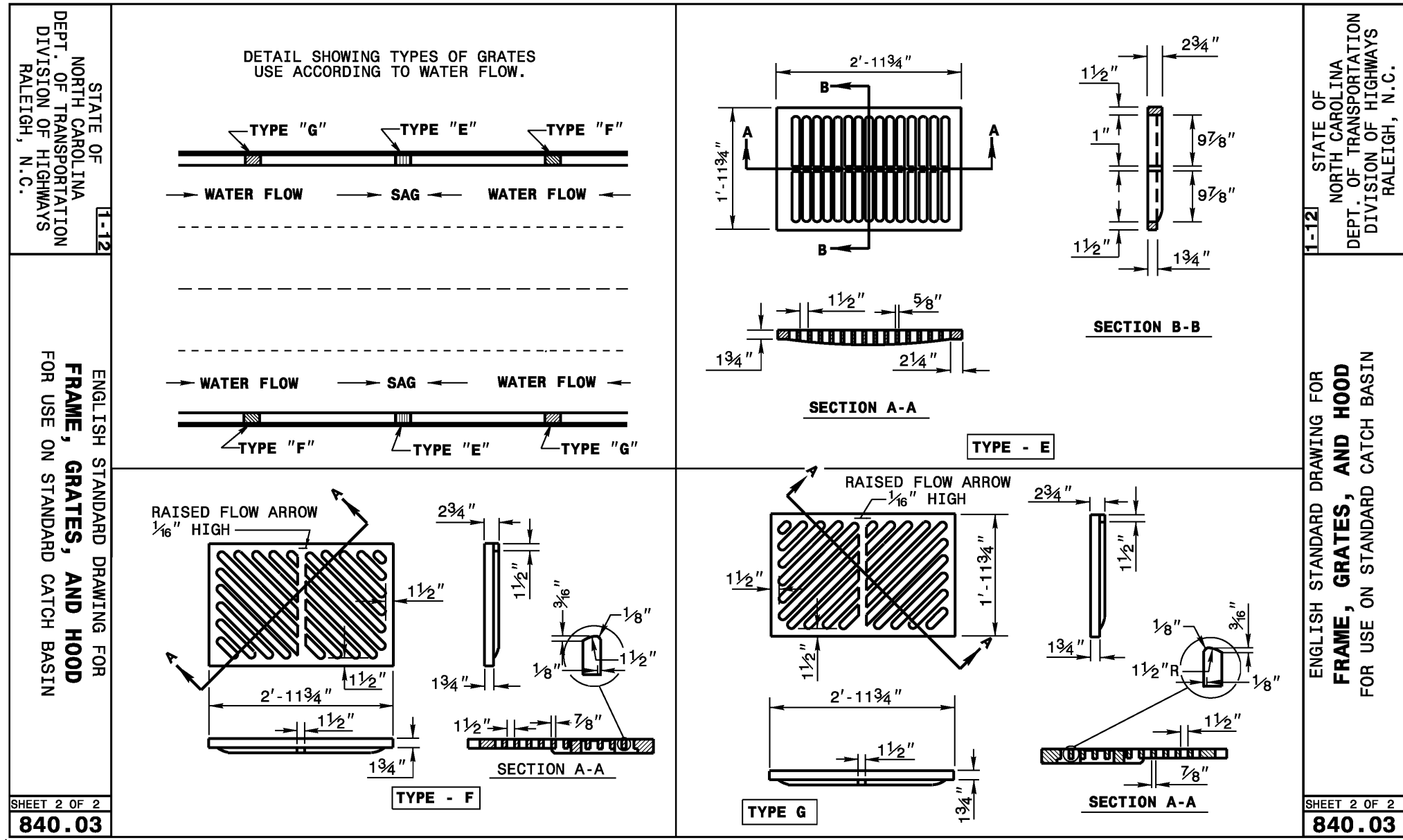
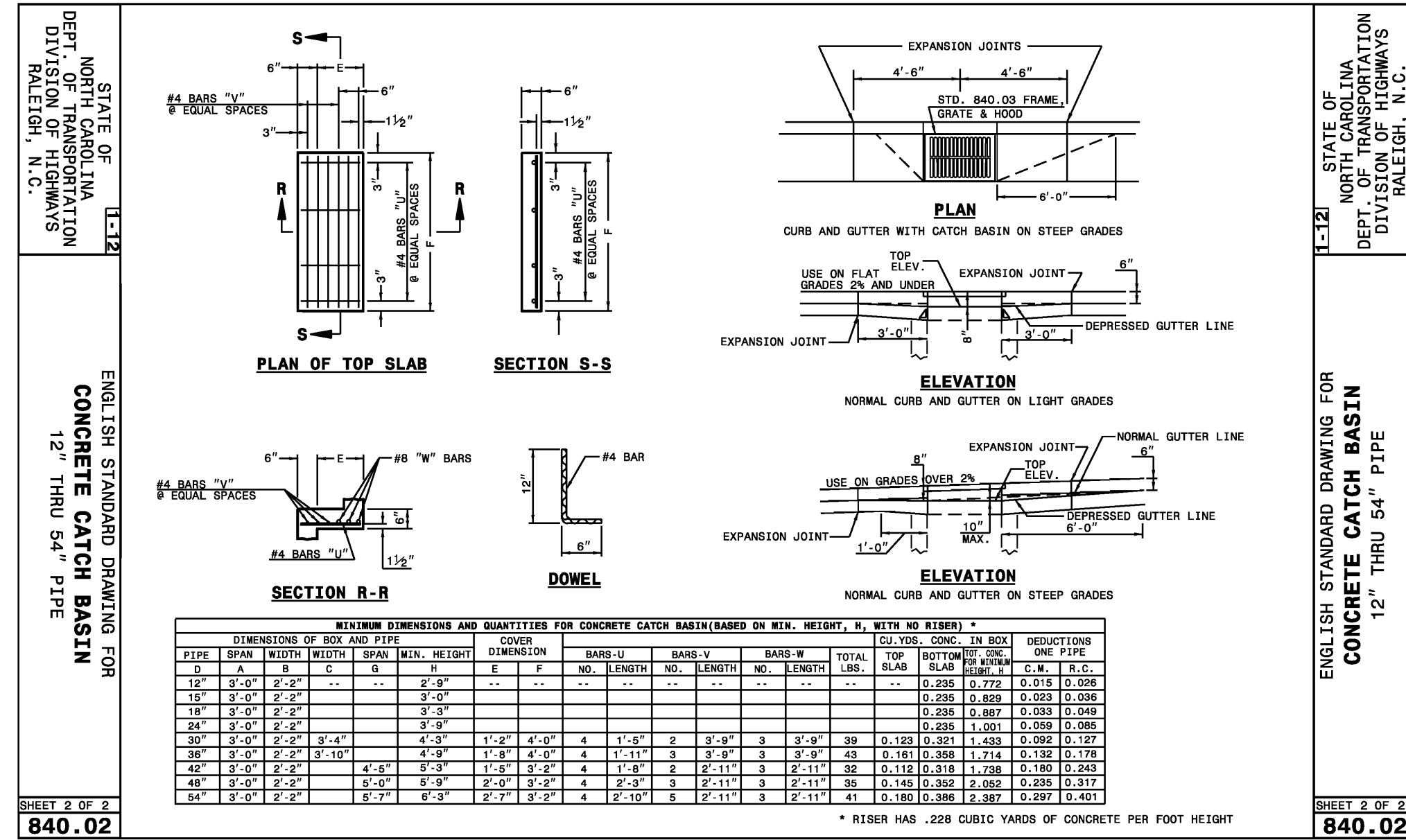
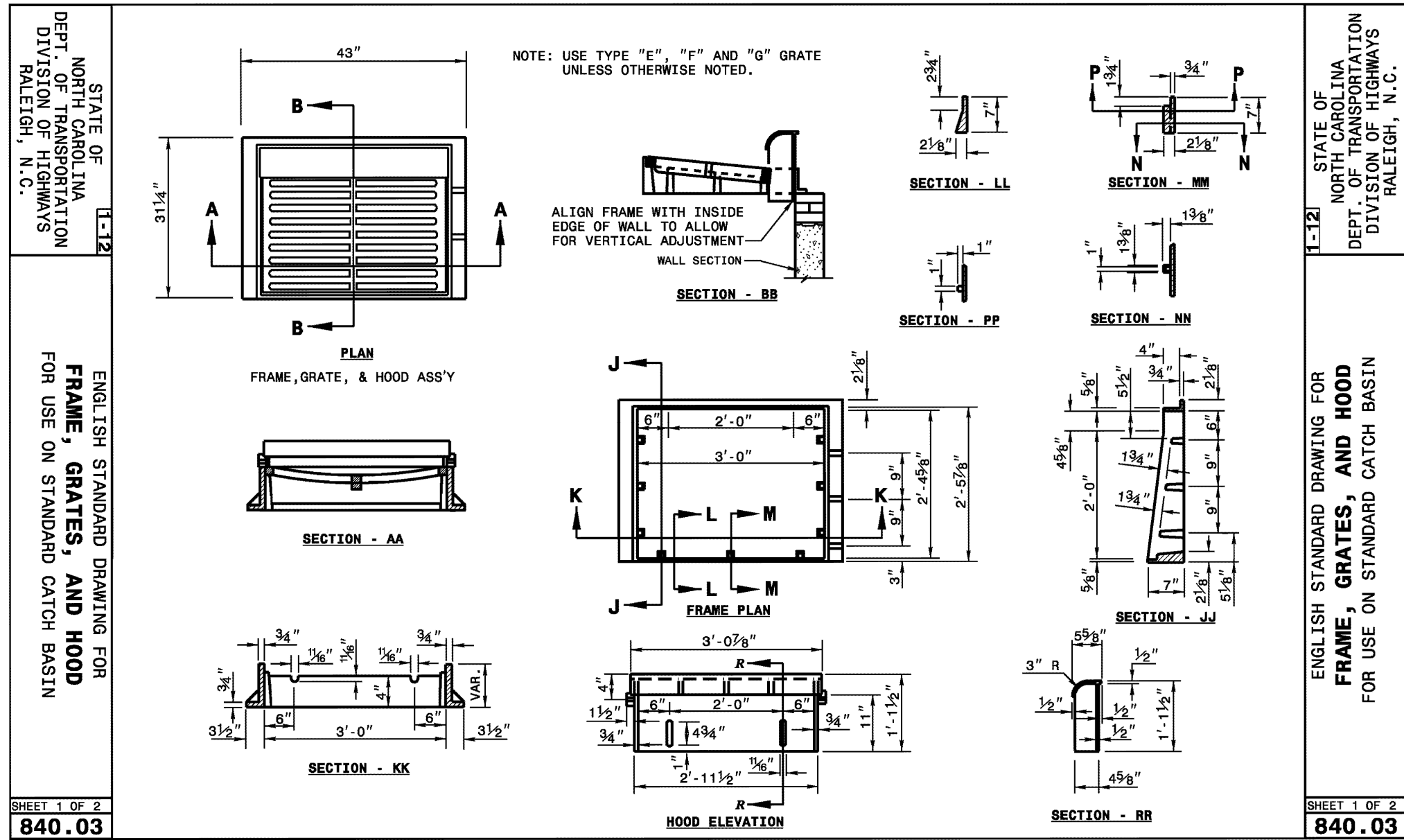
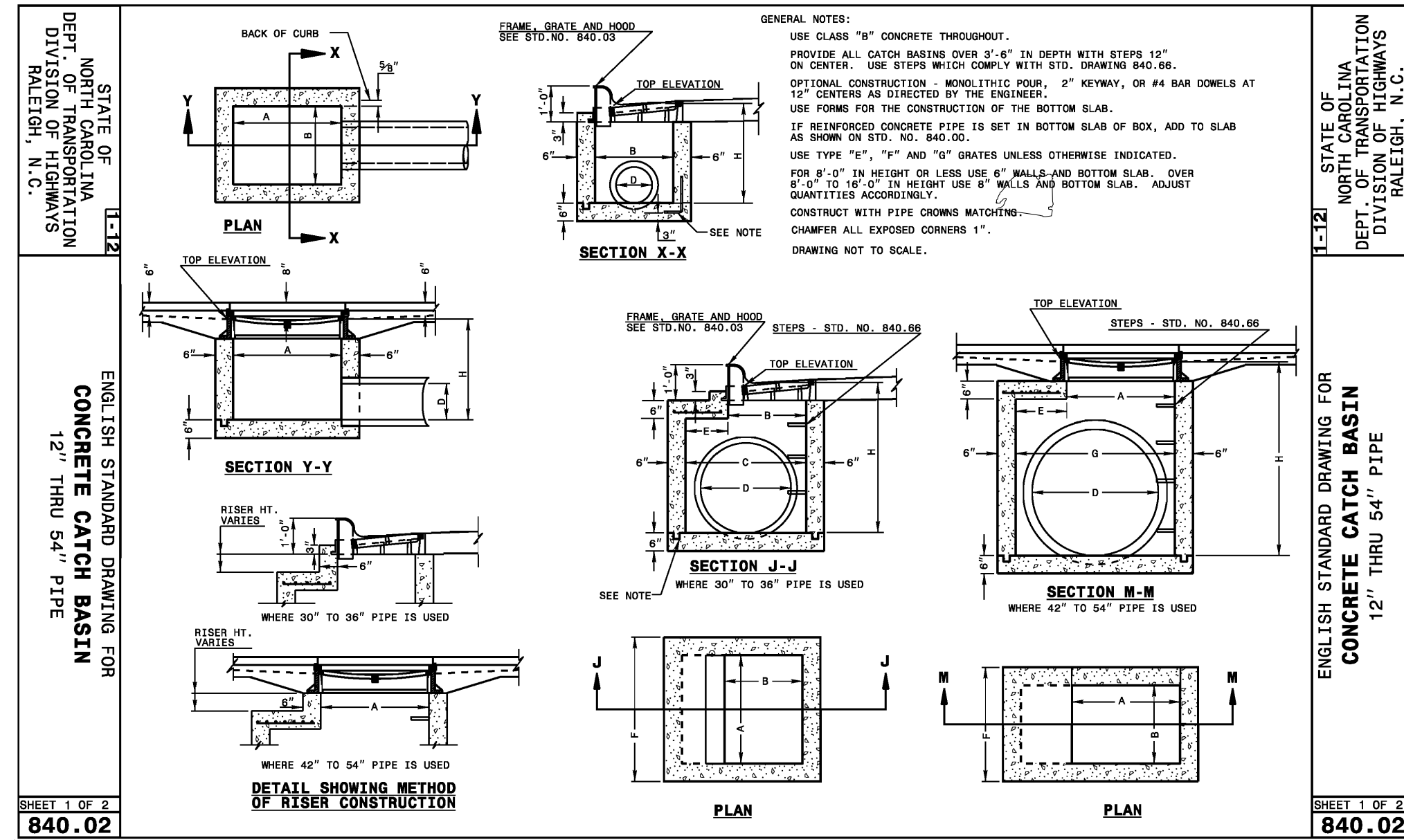
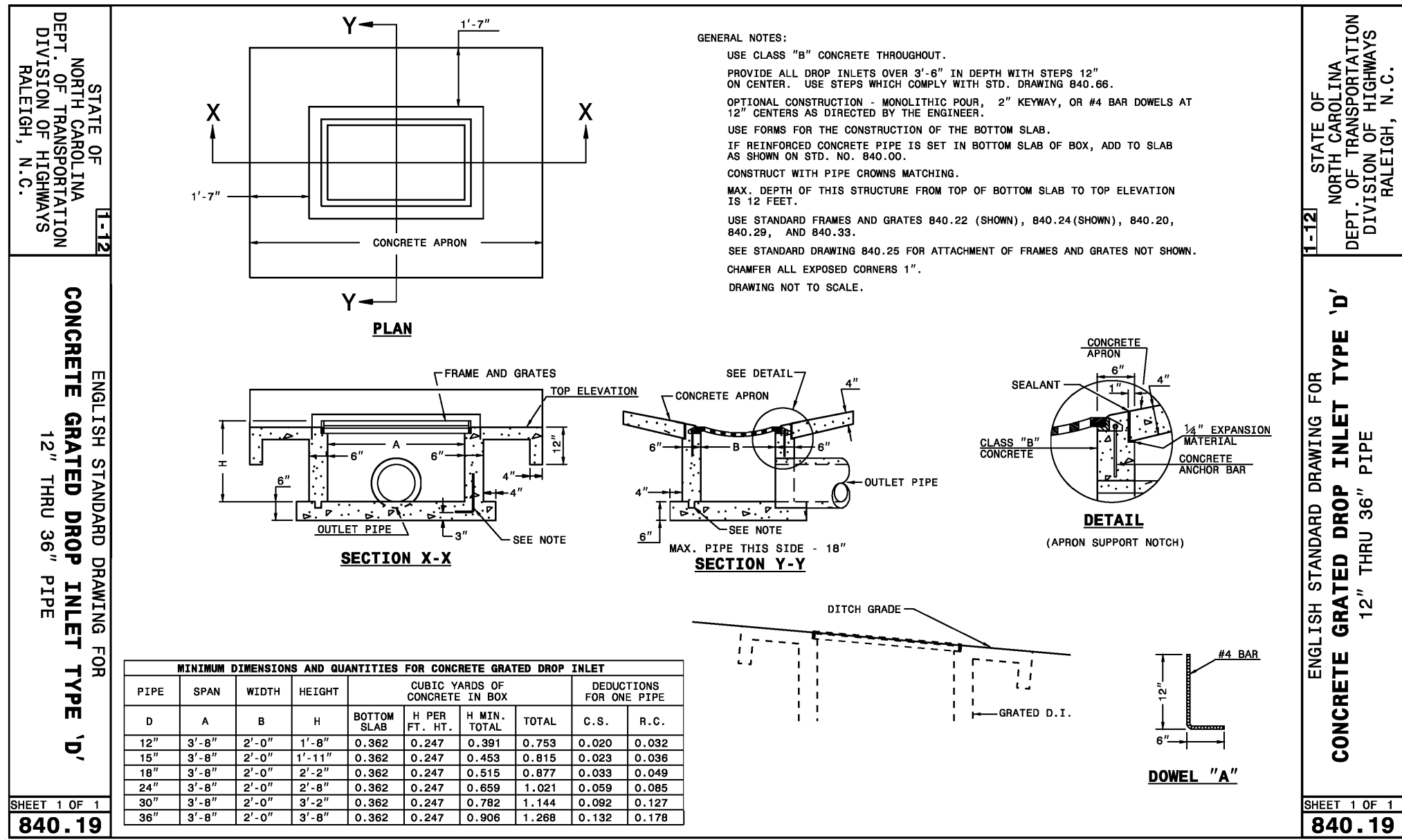
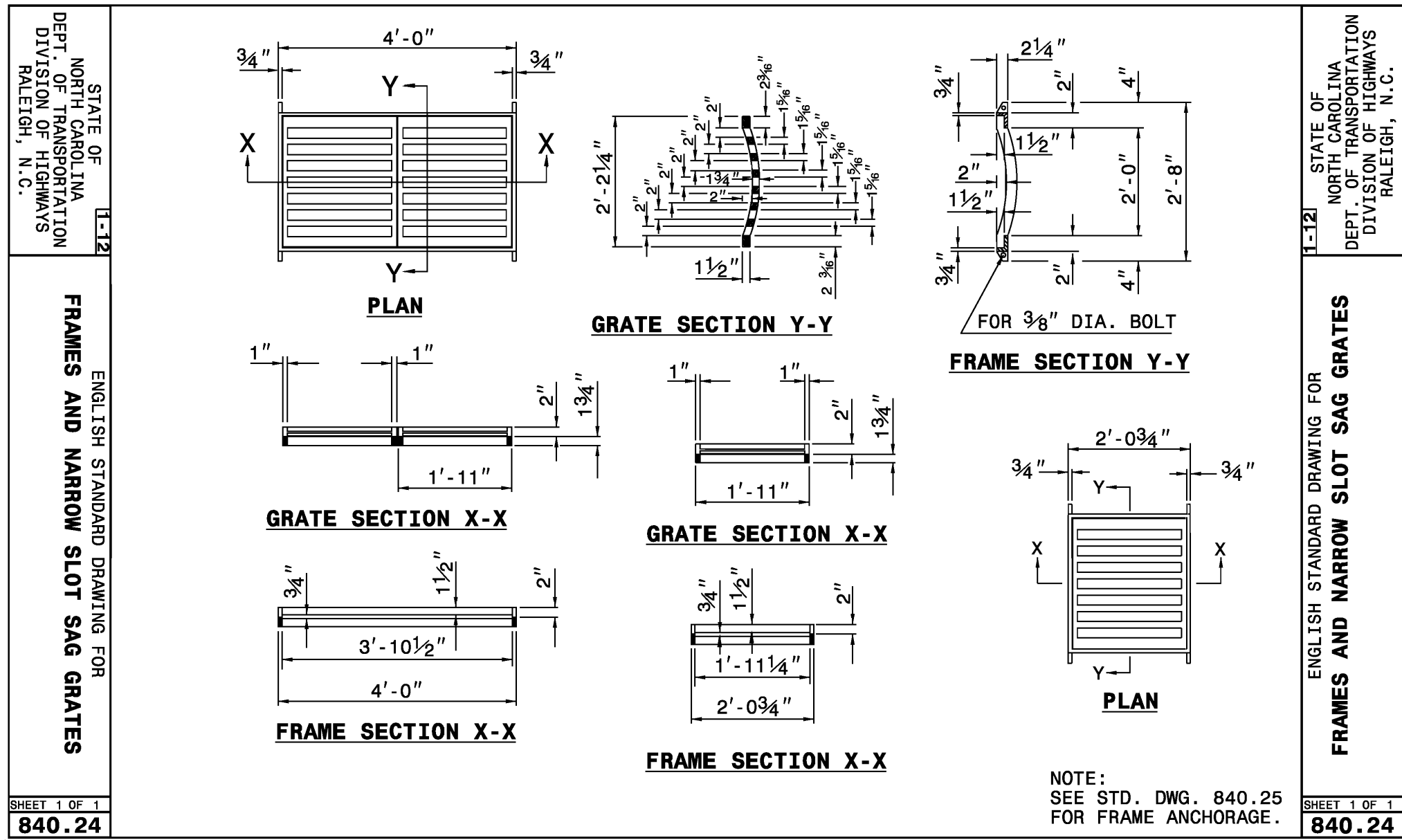
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| 3       | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2       | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1       | ISSUED FOR PERMITTING                             | 2015.09.30 |
| REV.NO. | DESCRIPTIONS                                      | DATE       |
|         | REVISIONS                                         |            |



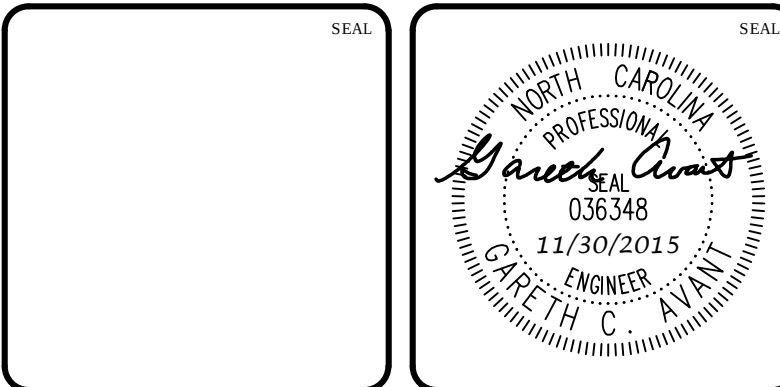
BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA

NCDOT ROADWAY DETAILS

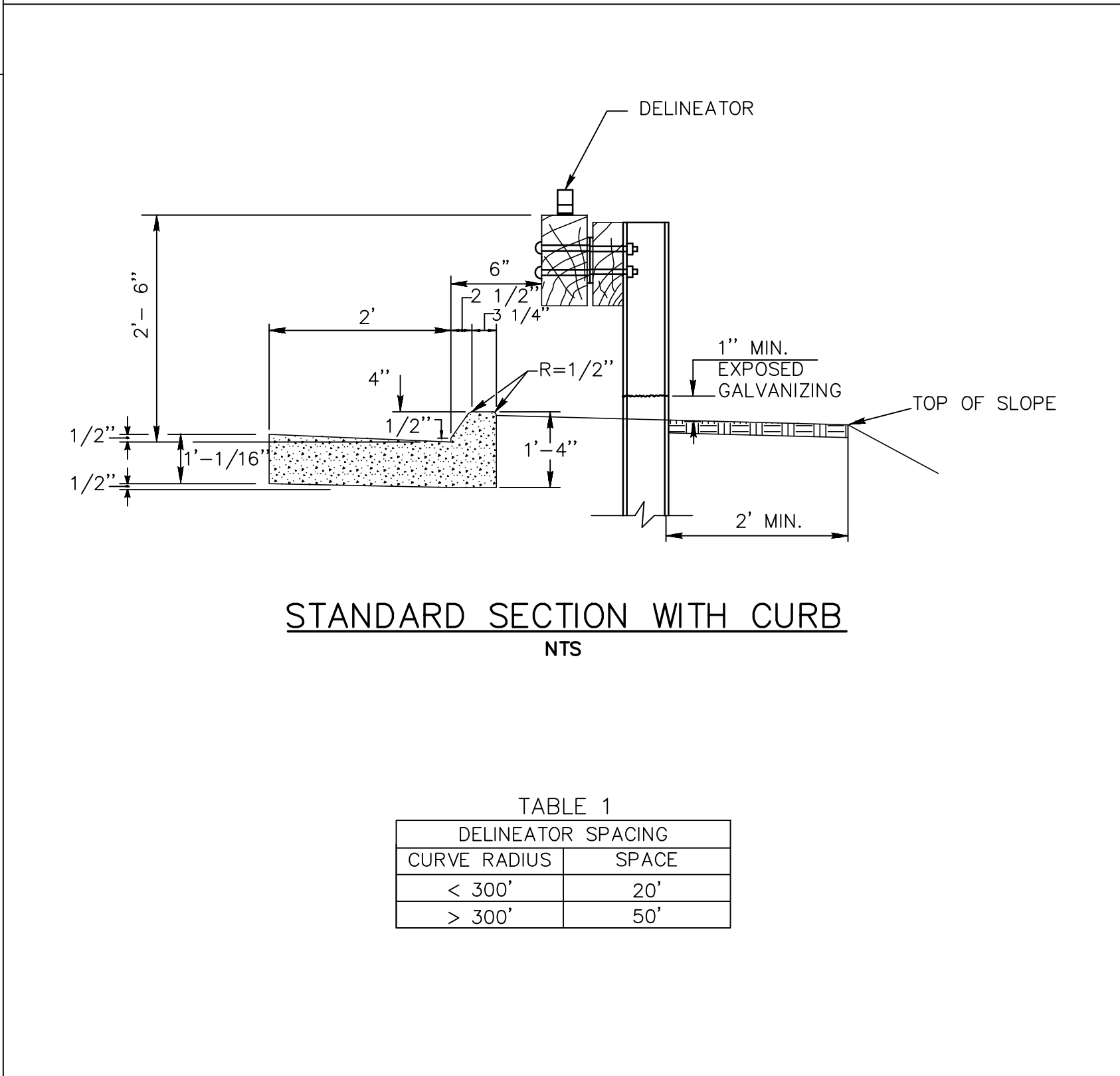
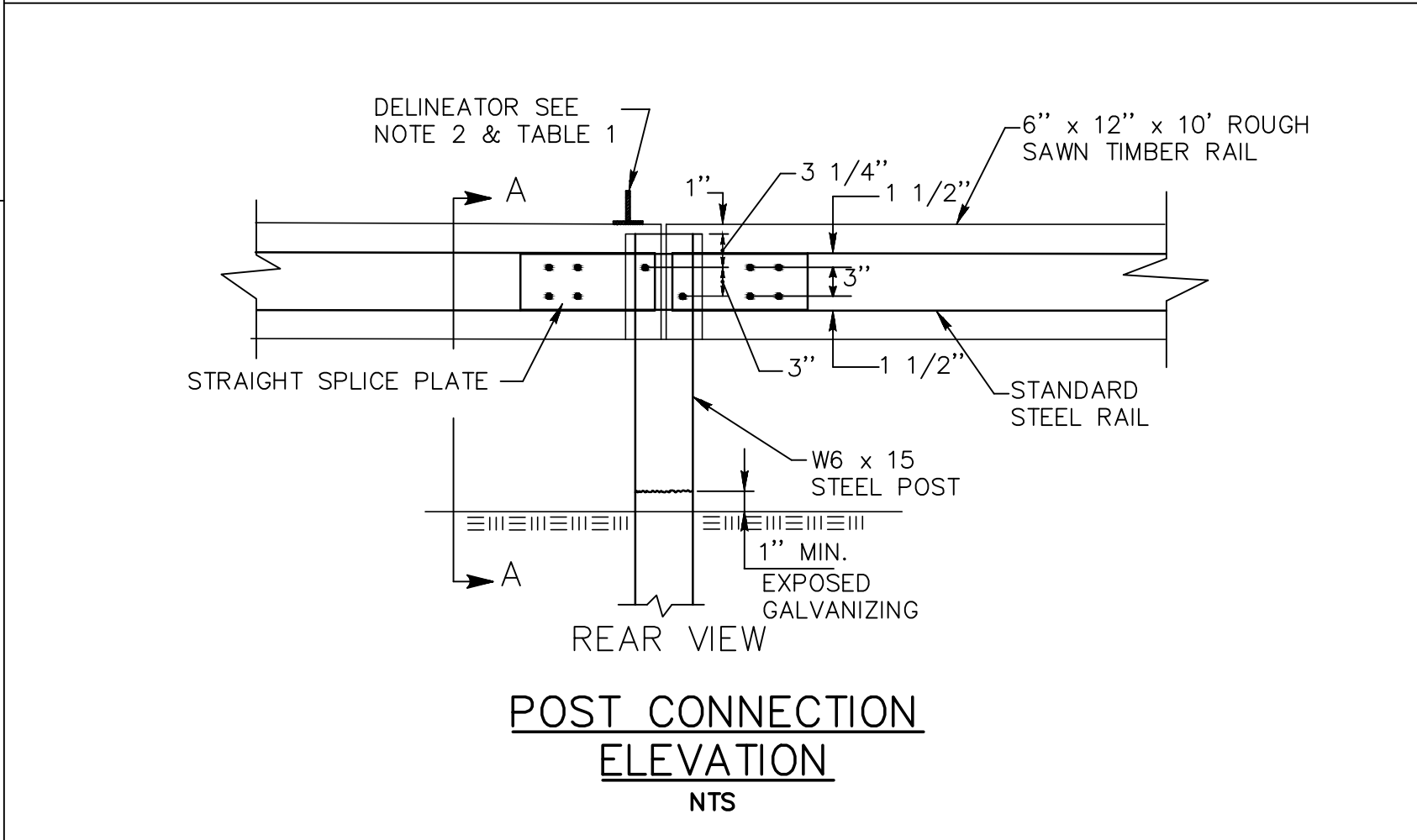
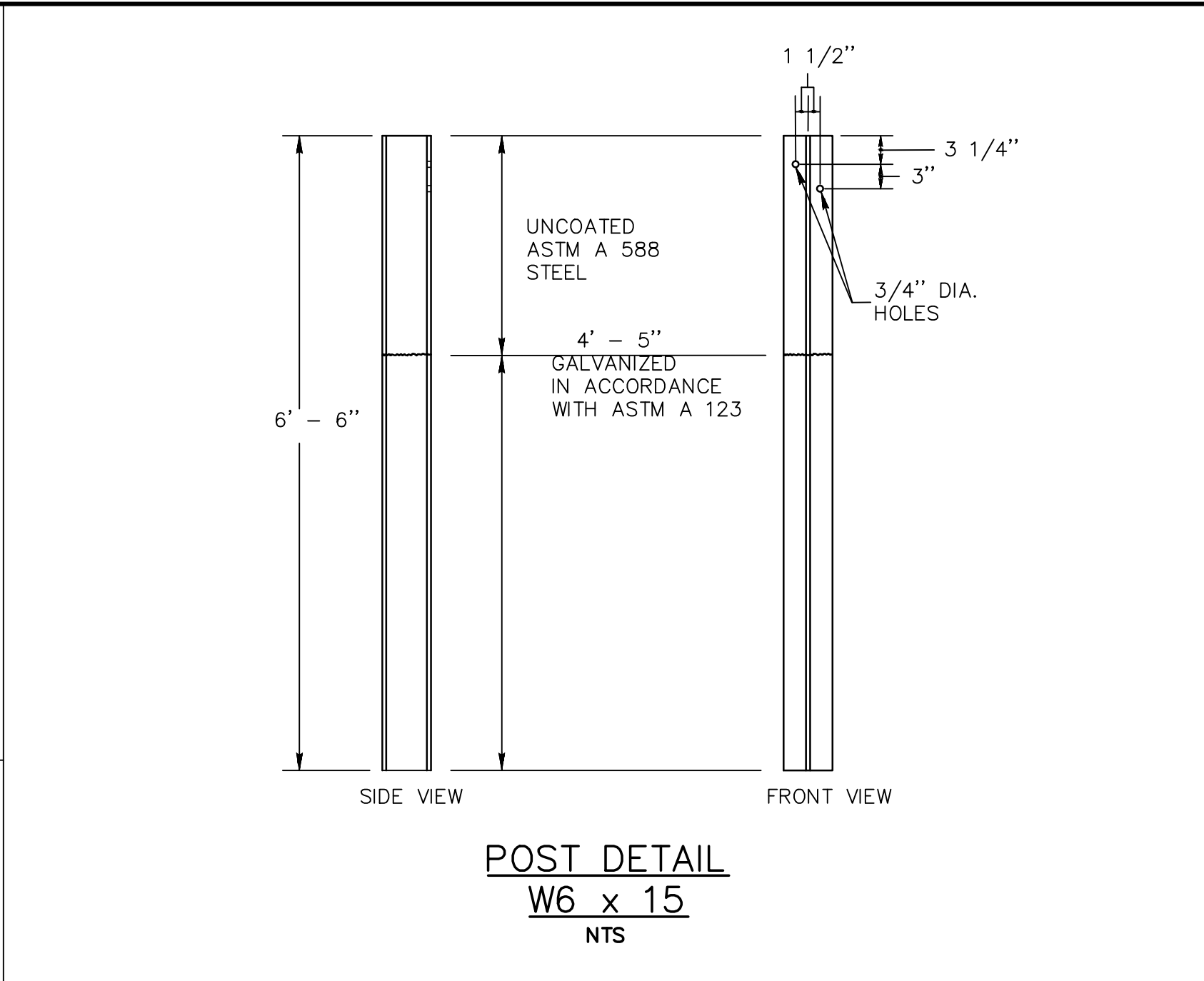
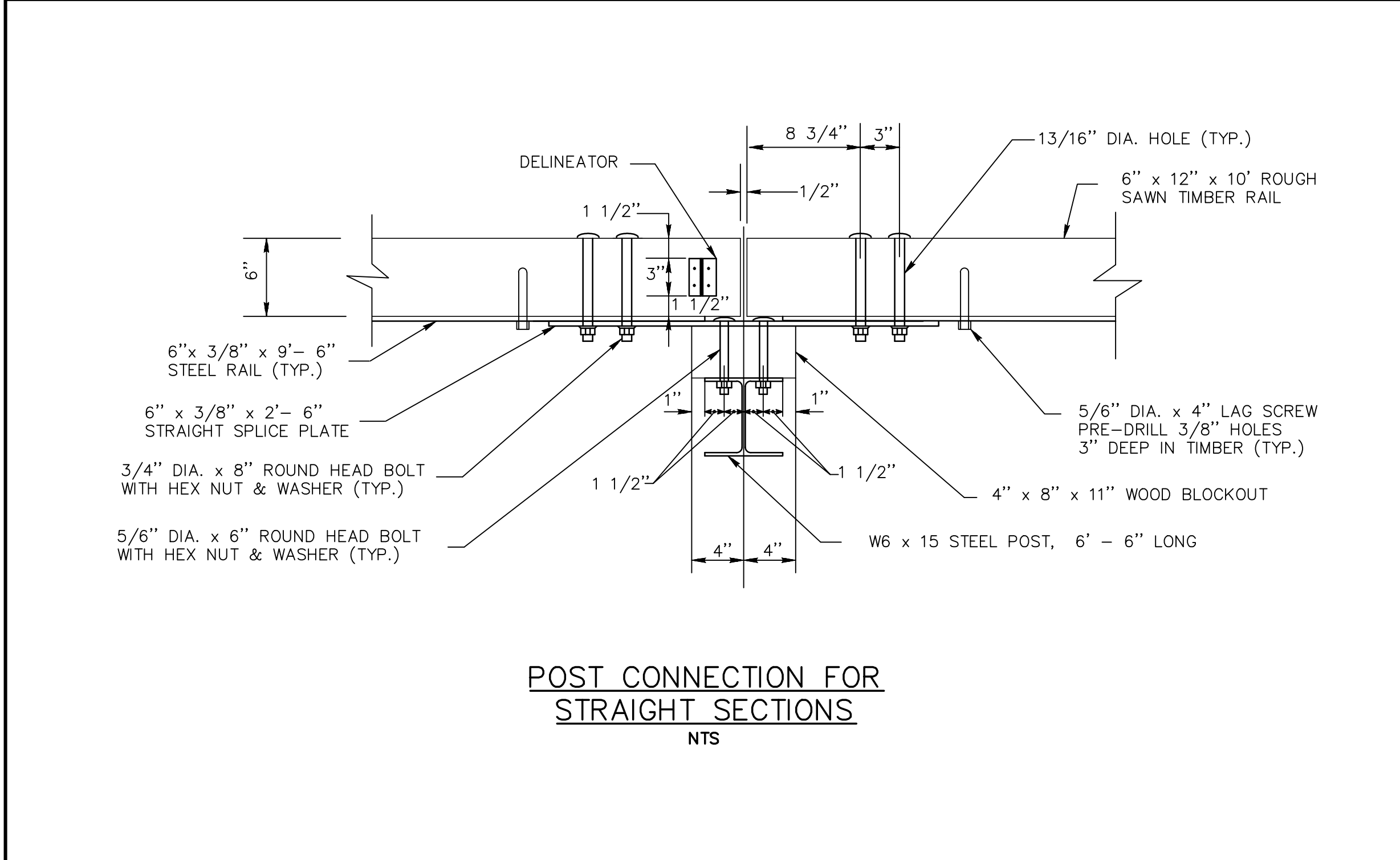
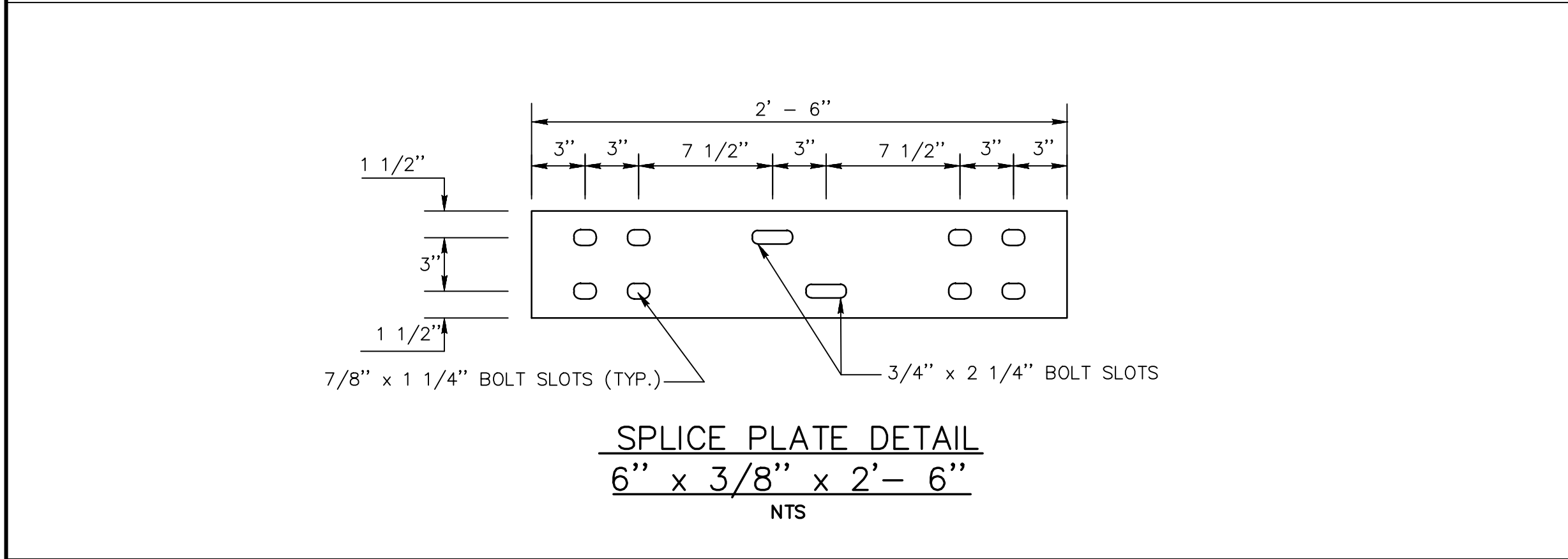
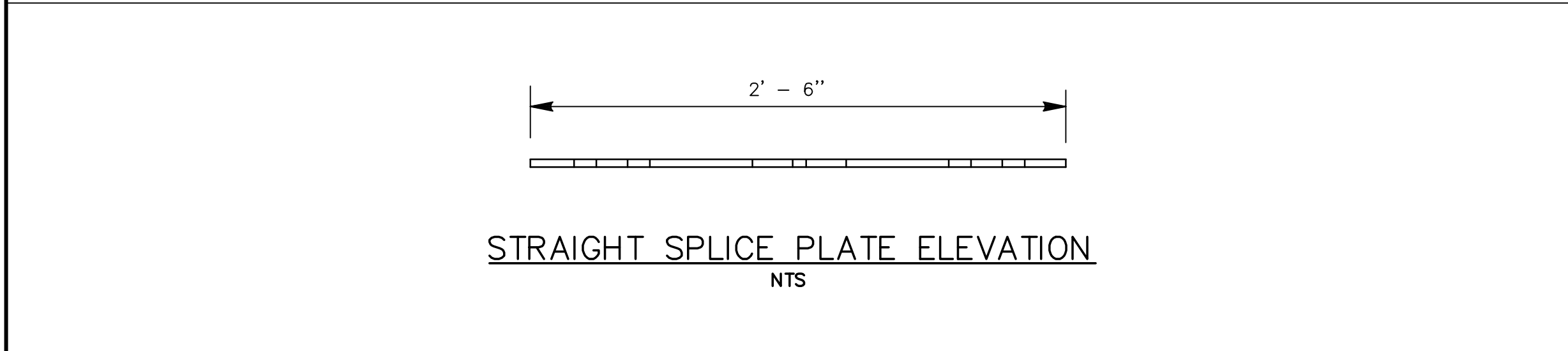
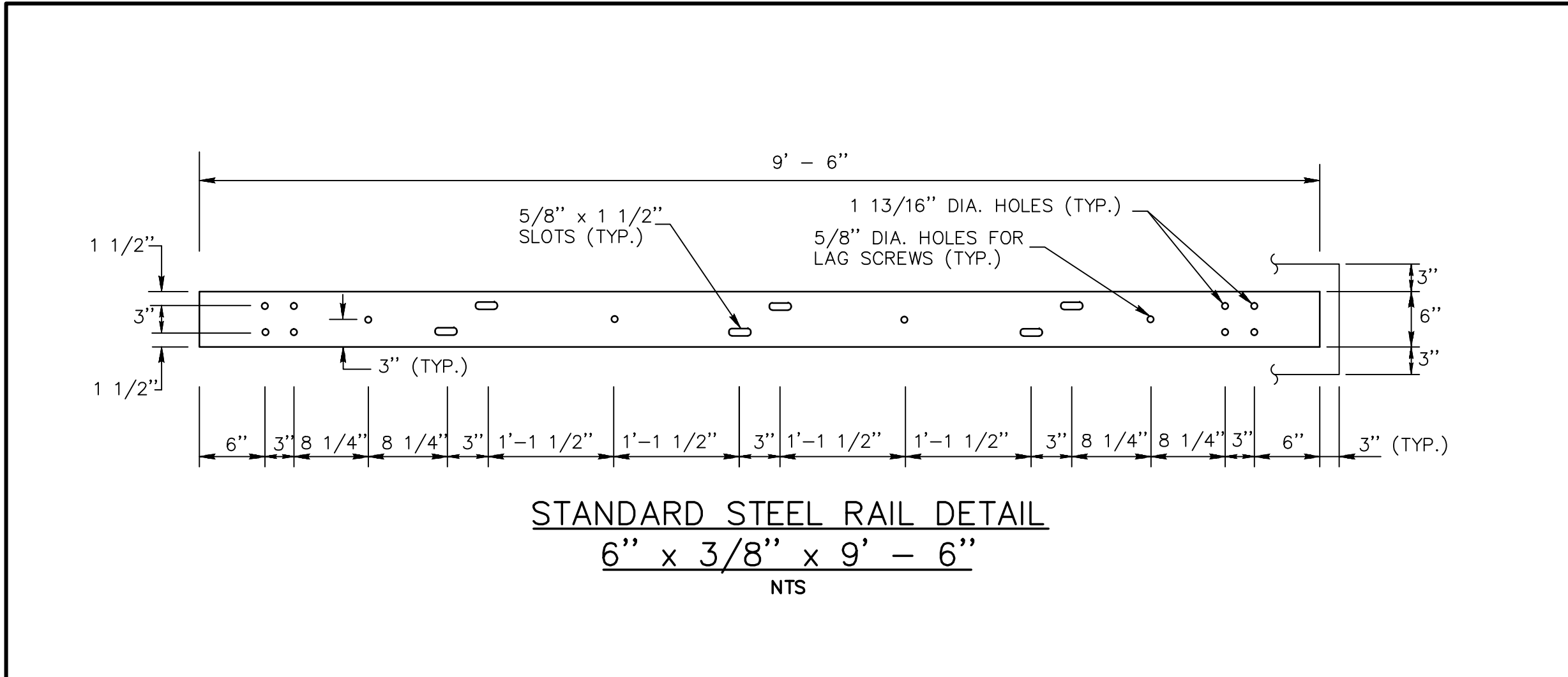
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|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------|-------------|------|-----|----------------|-----------|------|-----|--|
| DATE: <u>SEPTEMBER 30, 2015</u> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">SCALE</td> <td style="width: 50%; padding: 5px;">NSC FILE NUMBER</td> </tr> <tr> <td style="width: 50%; padding: 5px;">HORIZONTAL:</td> <td style="width: 50%; padding: 5px;">D2.X</td> </tr> <tr> <td style="width: 50%; padding: 5px;">N/A</td> <td style="width: 50%; padding: 5px;">DRAWING NUMBER</td> </tr> <tr> <td style="width: 50%; padding: 5px;">VERTICAL:</td> <td style="width: 50%; padding: 5px;">D2.1</td> </tr> <tr> <td style="width: 50%; padding: 5px;">N/A</td> <td style="width: 50%; padding: 5px;"></td> </tr> </table> | SCALE | NSC FILE NUMBER | HORIZONTAL: | D2.X | N/A | DRAWING NUMBER | VERTICAL: | D2.1 | N/A |  |
| SCALE                           | NSC FILE NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |                 |             |      |     |                |           |      |     |  |
| HORIZONTAL:                     | D2.X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |                 |             |      |     |                |           |      |     |  |
| N/A                             | DRAWING NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |                 |             |      |     |                |           |      |     |  |
| VERTICAL:                       | D2.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |                 |             |      |     |                |           |      |     |  |
| N/A                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |                 |             |      |     |                |           |      |     |  |
| MCE PROJ. # <u>02735-0149</u>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |                 |             |      |     |                |           |      |     |  |
| DRAWN <u>BSS</u>                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |                 |             |      |     |                |           |      |     |  |
| DESIGNED <u>BSS</u>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |                 |             |      |     |                |           |      |     |  |
| CHECKED <u>GGA</u>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |                 |             |      |     |                |           |      |     |  |
| PROJ. MGR. <u>CHS</u>           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |                 |             |      |     |                |           |      |     |  |



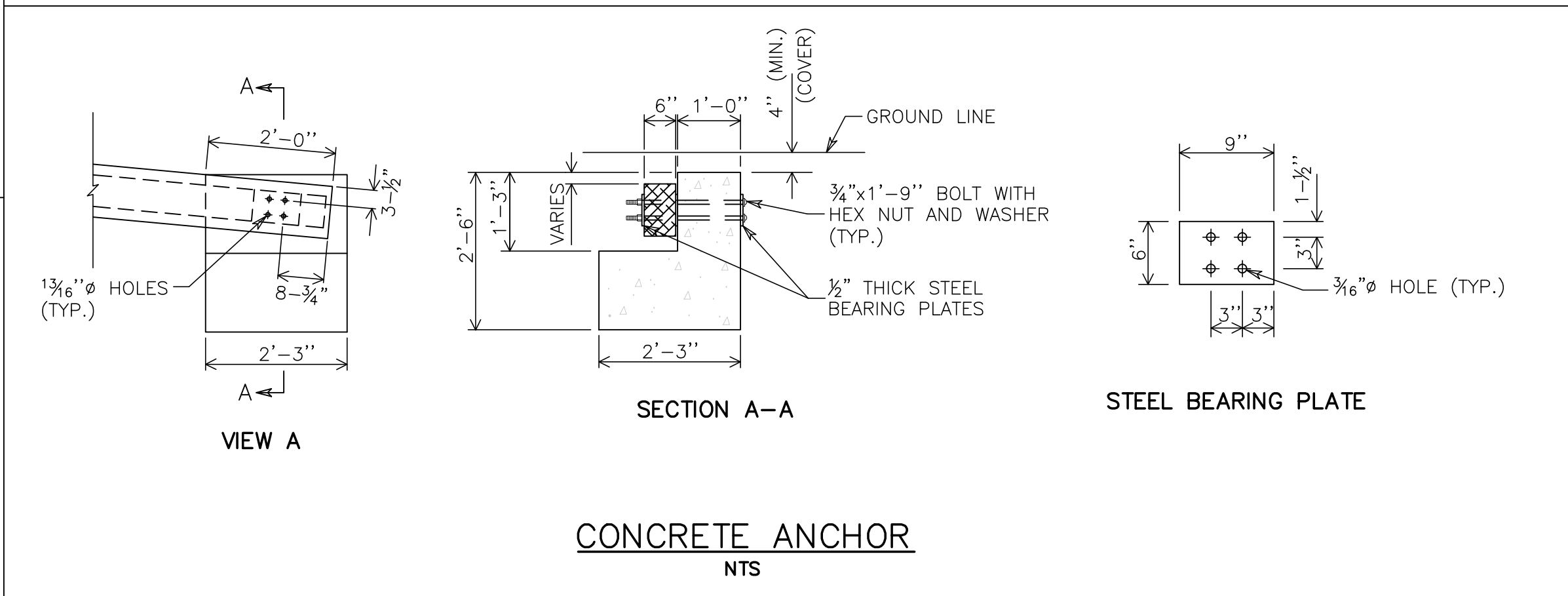
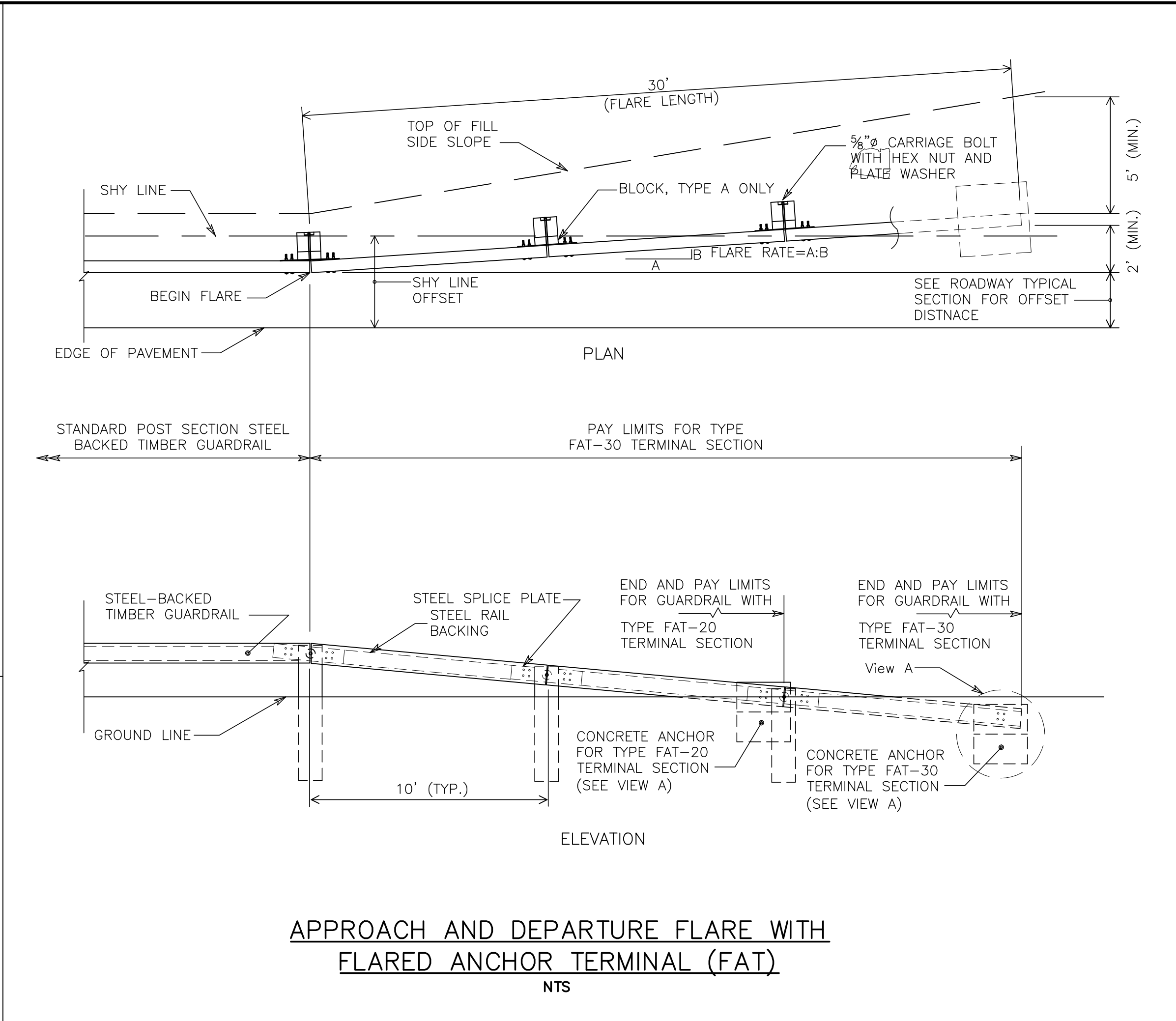
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| REV. NO. | DESCRIPTIONS                                      | DATE       |
| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |



|                          |                         |                       |            |               |              |                |                                                 |             |
|--------------------------|-------------------------|-----------------------|------------|---------------|--------------|----------------|-------------------------------------------------|-------------|
| DATE: SEPTEMBER 30, 2015 | SCALE: HORIZONTAL: D2.X | PROJECT: # 02735-0149 | DRAWN: BSS | DESIGNED: BSS | CHECKED: GCA | PROJ. MGR: CHS | STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION: 3 |
|--------------------------|-------------------------|-----------------------|------------|---------------|--------------|----------------|-------------------------------------------------|-------------|

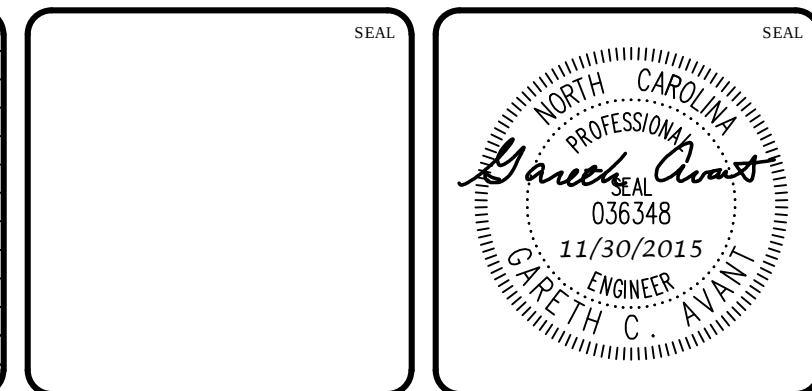


| TABLE 1<br>DELINEATOR SPACING |       |
|-------------------------------|-------|
| CURVE RADIUS                  | SPACE |
| < 300'                        | 20'   |
| > 300'                        | 50'   |



- NOTES
- MATERIALS AND CONSTRUCTION OF THE GUARDRAIL SHALL CONFORM TO SPECIAL PROVISION PROVIDED WITH THE PROJECT. ALL HARDWARE IN CONTACT WITH THE GROUND SHALL BE GALVANIZED IN ACCORDANCE WITH THE SPECIAL PROVISION.
  - DELINEATOR REFLECTORS SHALL BE BROWN PLASTIC INVERTED T-SECTIONS CONFORMING TO DURAFLEX CORP. SLEXX 2020, OR APPROVED EQUAL. REFLECTIVE SHEETING SHALL BE SQUARE, AND A MINIMUM OF 19 SQ. IN., AND CONFORM TO SECTION M.18.09. DELINEATORS SHALL BE ATTACHED WITH FOUR (4) 1'' - LONG, GALVANIZED WOOD SCREWS. REFLECTORS SHALL BE SPACED IN ACCORDANCE WITH THE TABLE, AND POSITIONED PERPENDICULAR TO THE ADJACENT EDGE OF LANE. DO NOT ATTACH REFLECTORS ON FLAIR OR TERMINAL SECTIONS. REFLECTIVE SHEETING SHALL BE SILVER-WHITE ON ALL RAIL SECTIONS ADJACENT TO THE RIGHT SHOULDER, AND YELLOW ON RAIL SECTIONS ADJACENT TO THE LEFT SHOULDER OF TRAVEL LANES.
  - TWO ADDITIONAL 5/6'' DIA. x 4'' LONG LAG SCREWS AND WASHERS SHALL BE INSTALLED AT ALL MID-SPAN POINTS FOR STANDARD SYSTEMS.
  - ALL CONNECTION HARDWARE SHALL BE SUFFICIENTLY TIGHTENED TO ACCOMMODATE FOR SHRINKAGE OF THE WOOD ELEMENTS.
  - FOR THE END ANCHOR TYPE II, EXTEND THE FLARE INTO THE CUT SLOPE UNTIL A MINIMUM 12'' OF COVER IS OBTAINED OVER THE GUARDRAIL END.
  - FOR THE END ANCHOR TYPE I, EXTEND THE FLARE OUT SIDE THE CLEAR ZONE AND BURY THE GUARDRAIL END TO OBTAIN A MINIMUM COVER OF 4''.
  - BEGIN THE CUT FLARE AT THE NEAREST POST TO A TRANSITION POINT BETWEEN FILL AND CUT AS DIRECTED BY THE ENGINEER.
  - THE GUARDRAIL FLARE SHOWN ON THE MISCELLANEOUS DETAILS IS THE MINIMUM LENGTH AND RATE REQUIRED AS DIRECTED BY THE ENGINEER. FLARE THE GUARDRAIL SO THAT THE TERMINAL SECTION IS OUTSIDE THE CLEAR ZONE.

| REV. NO. | DESCRIPTIONS                                      | DATE       |
|----------|---------------------------------------------------|------------|
| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
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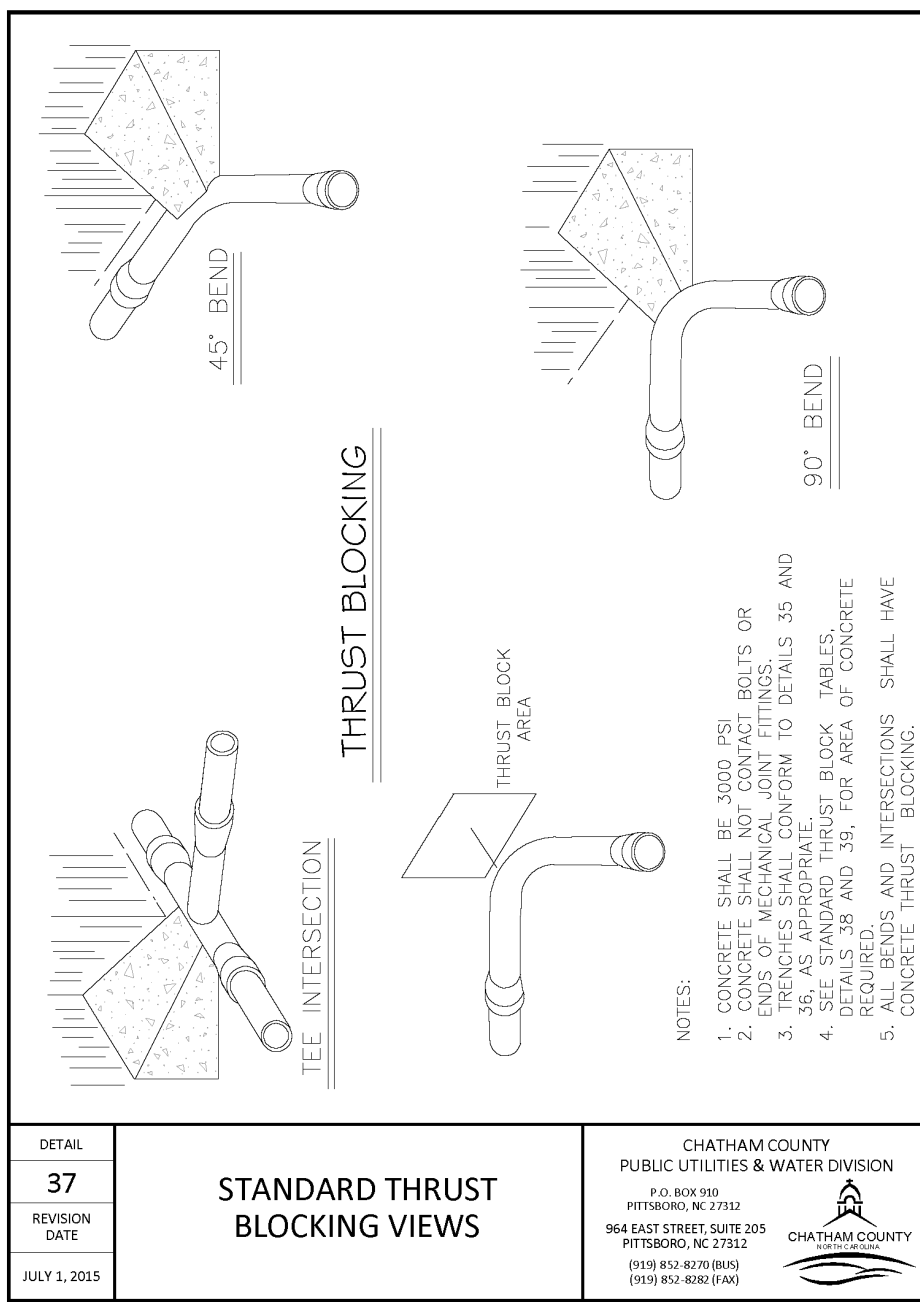
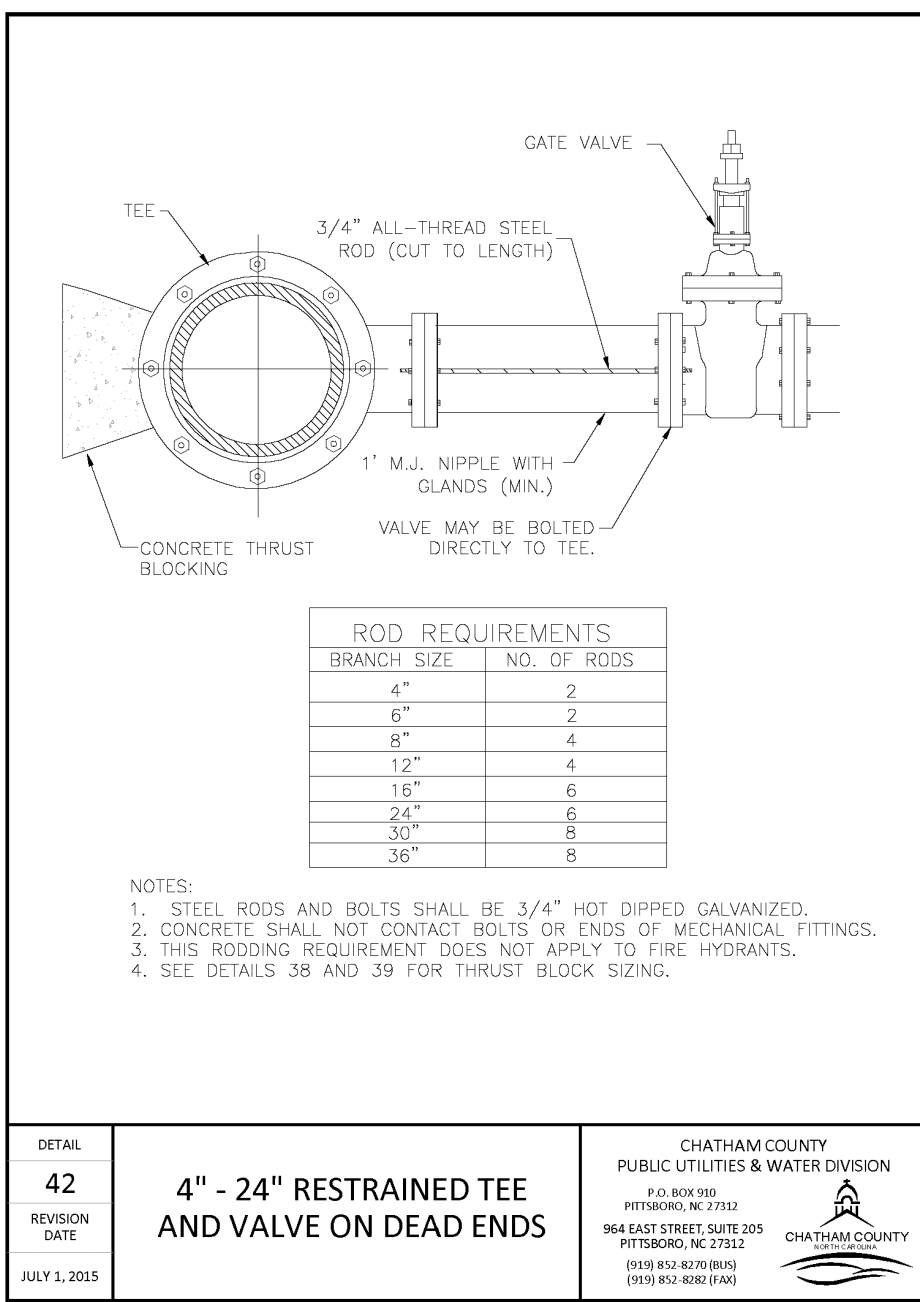
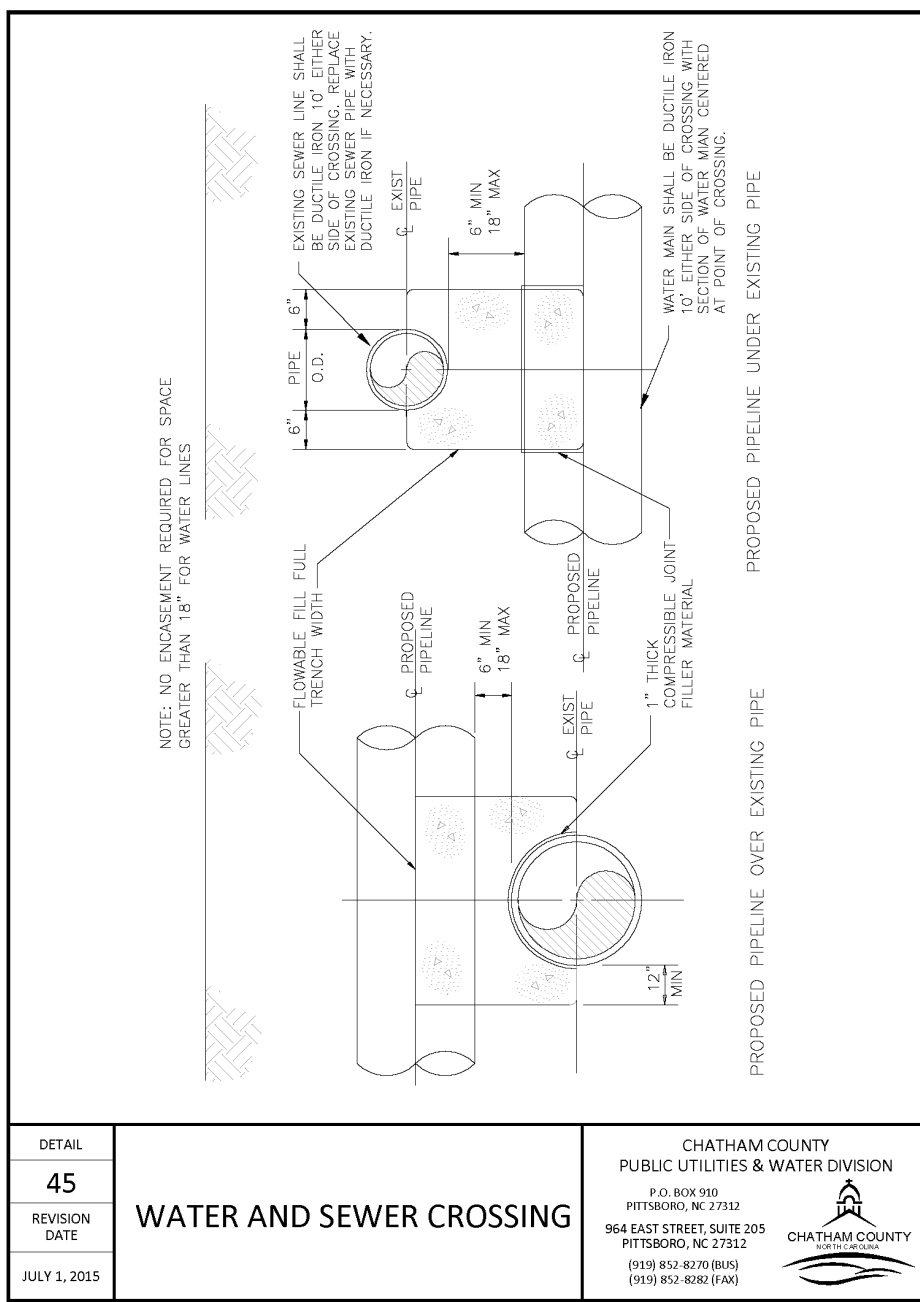
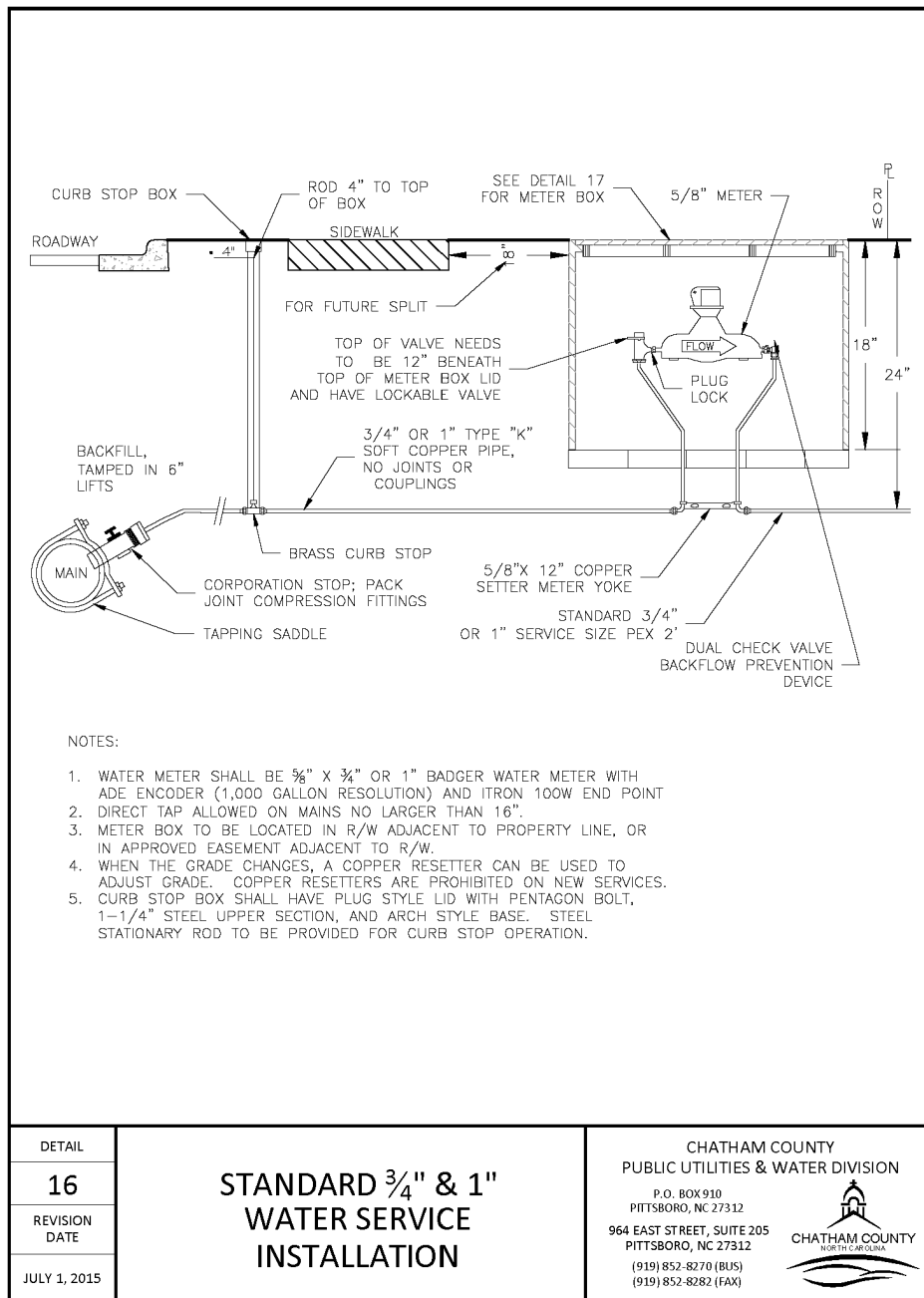
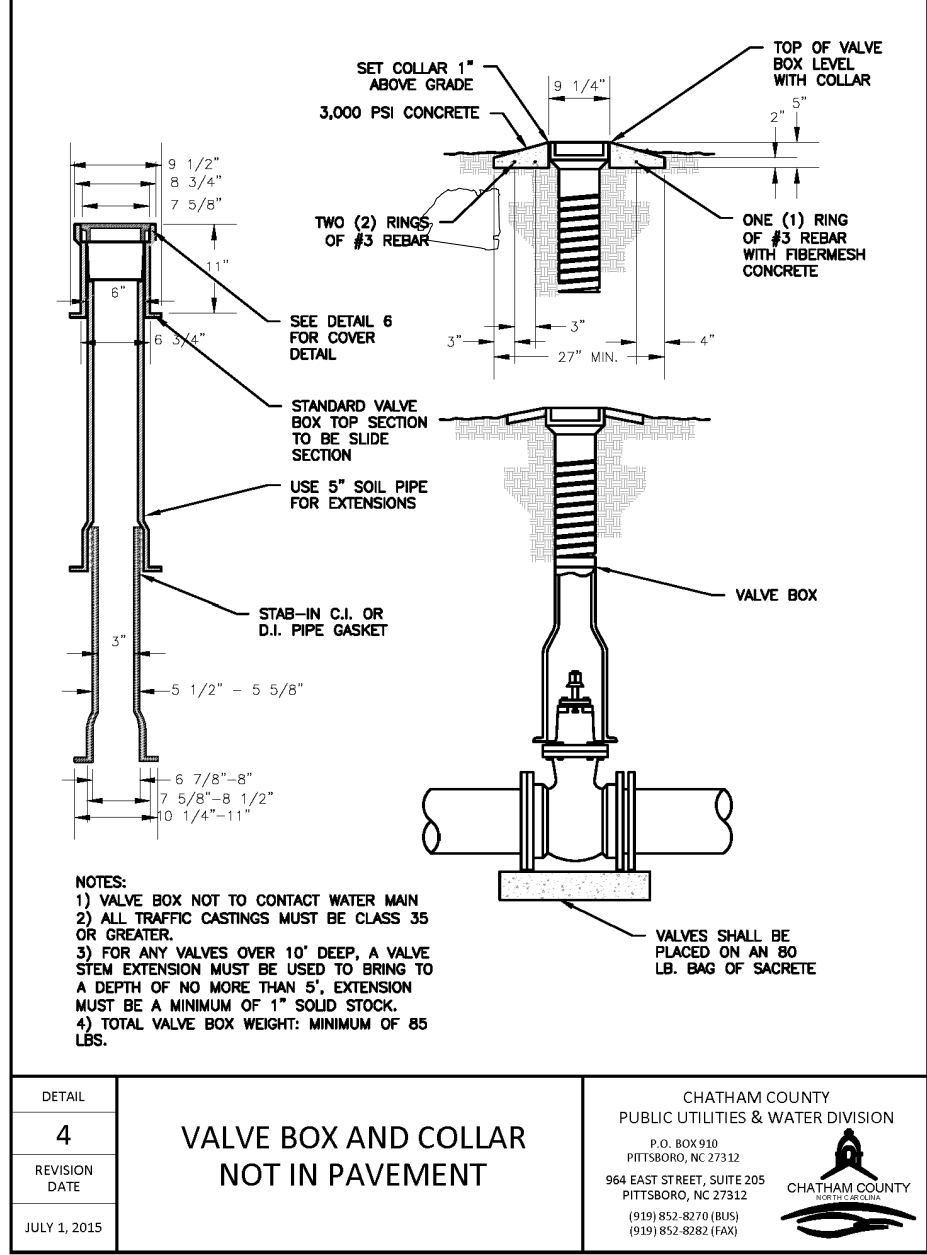
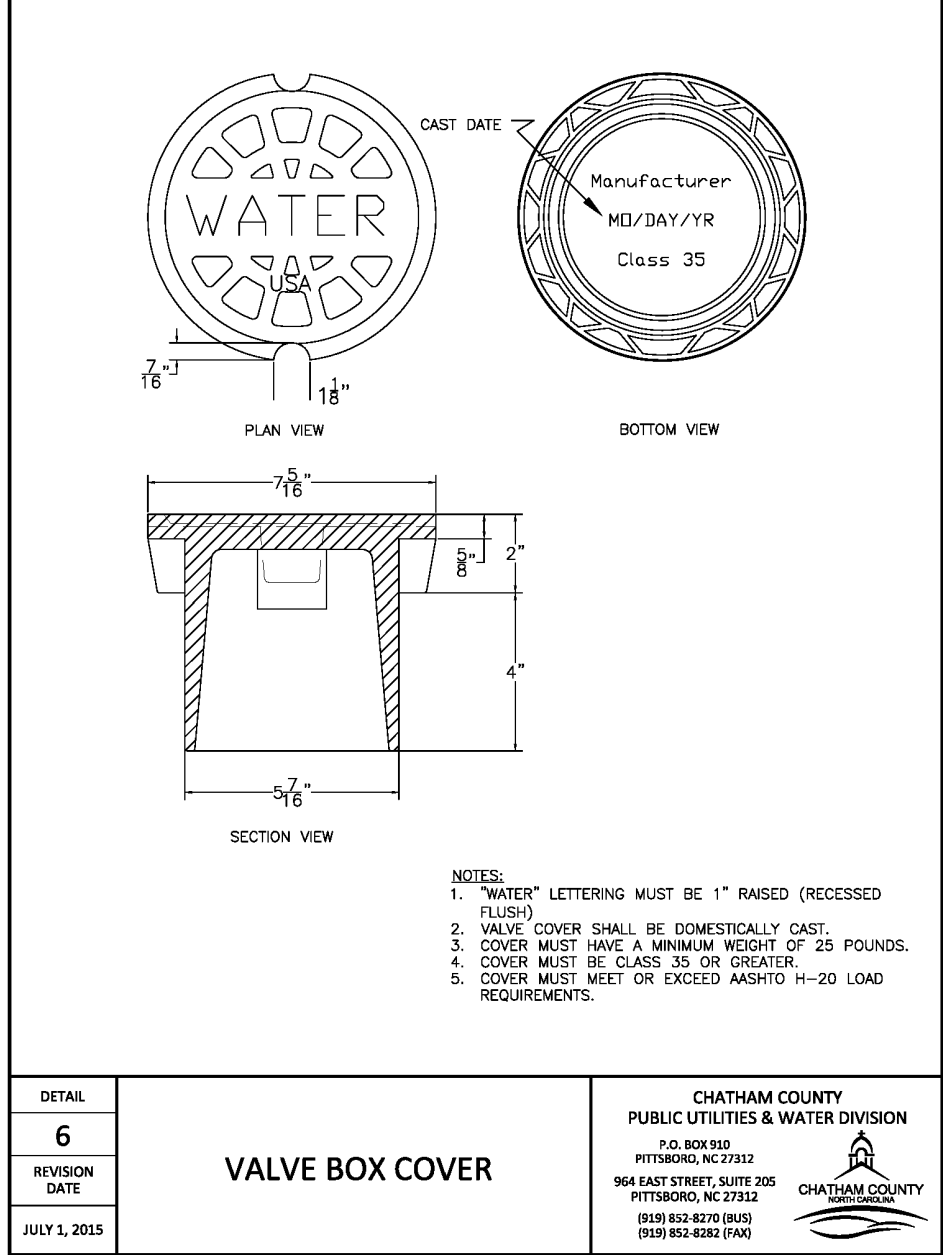
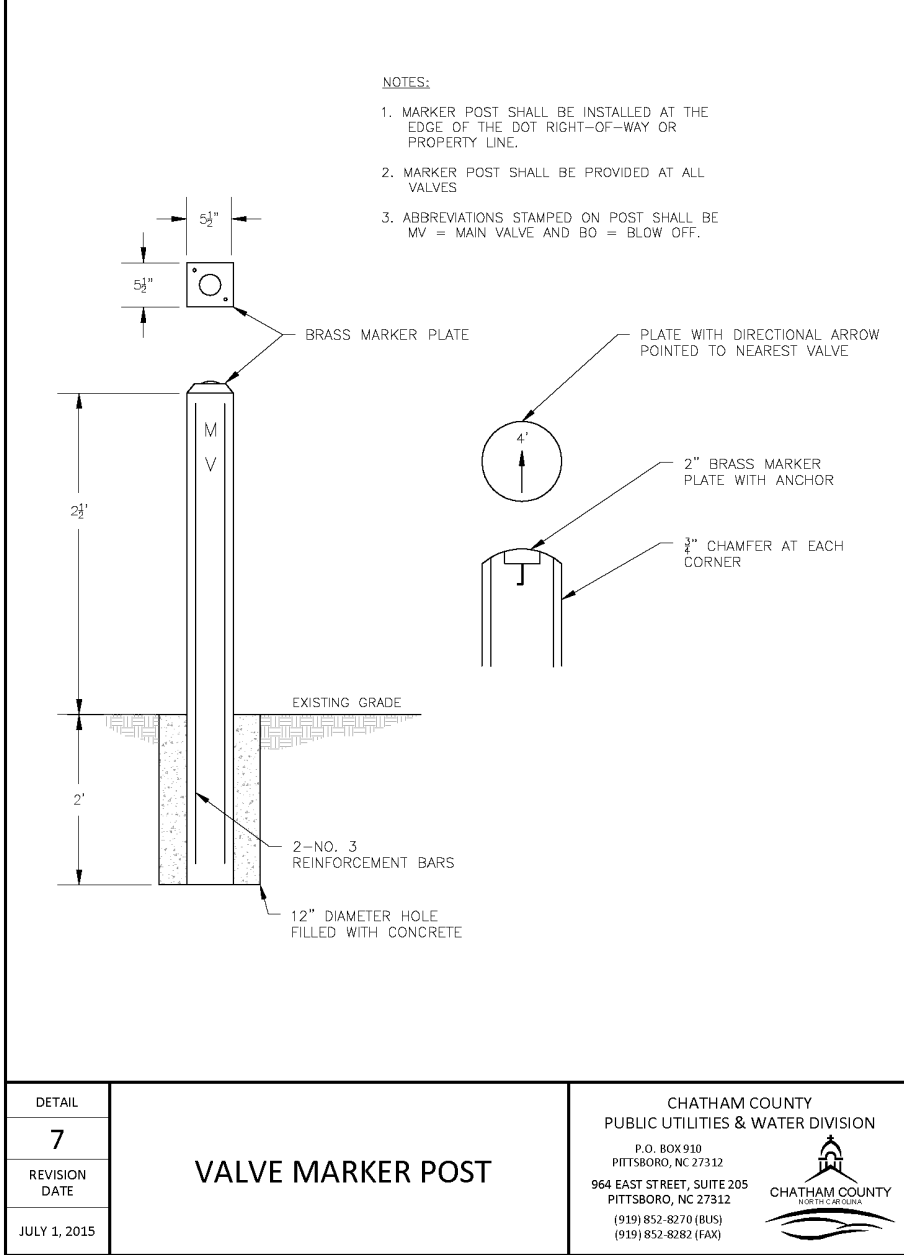
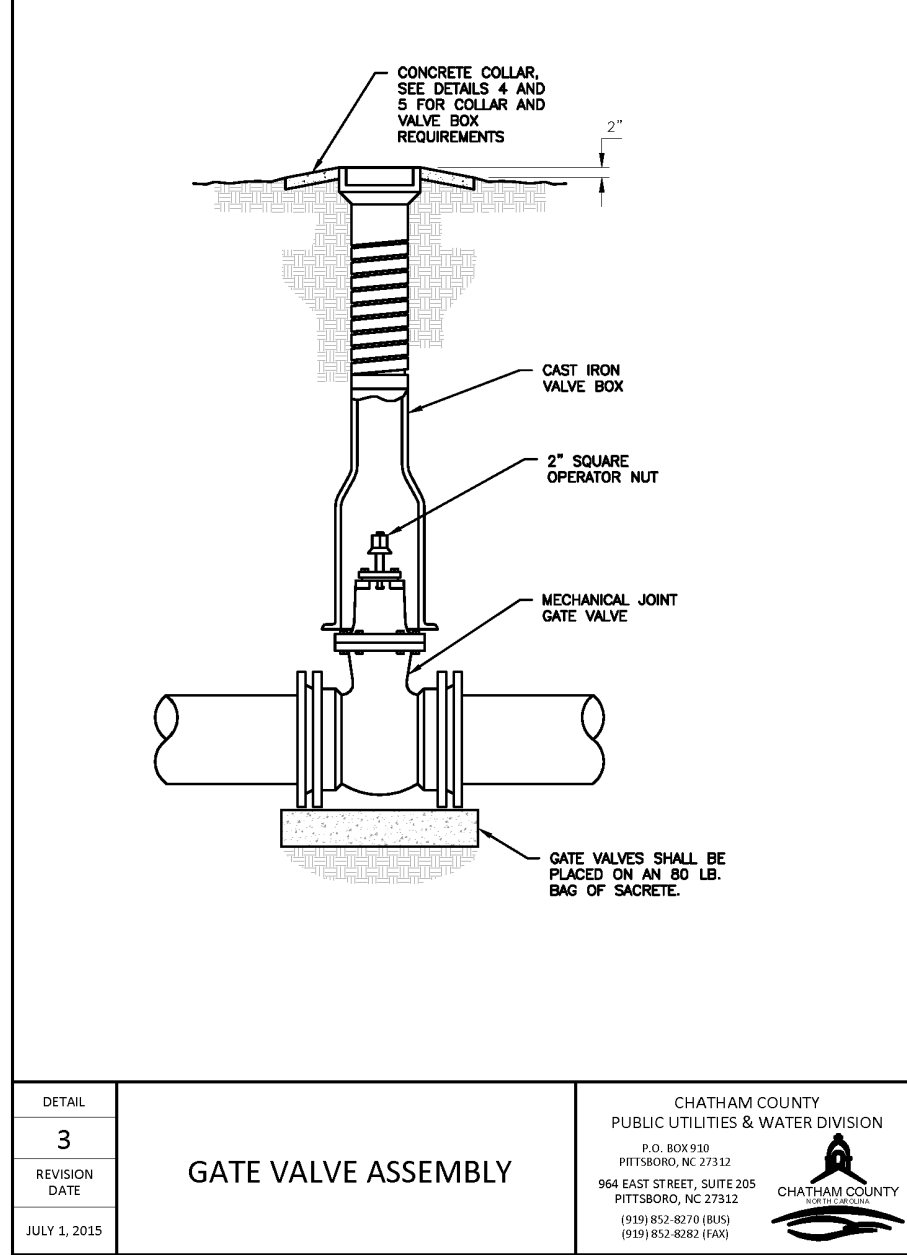
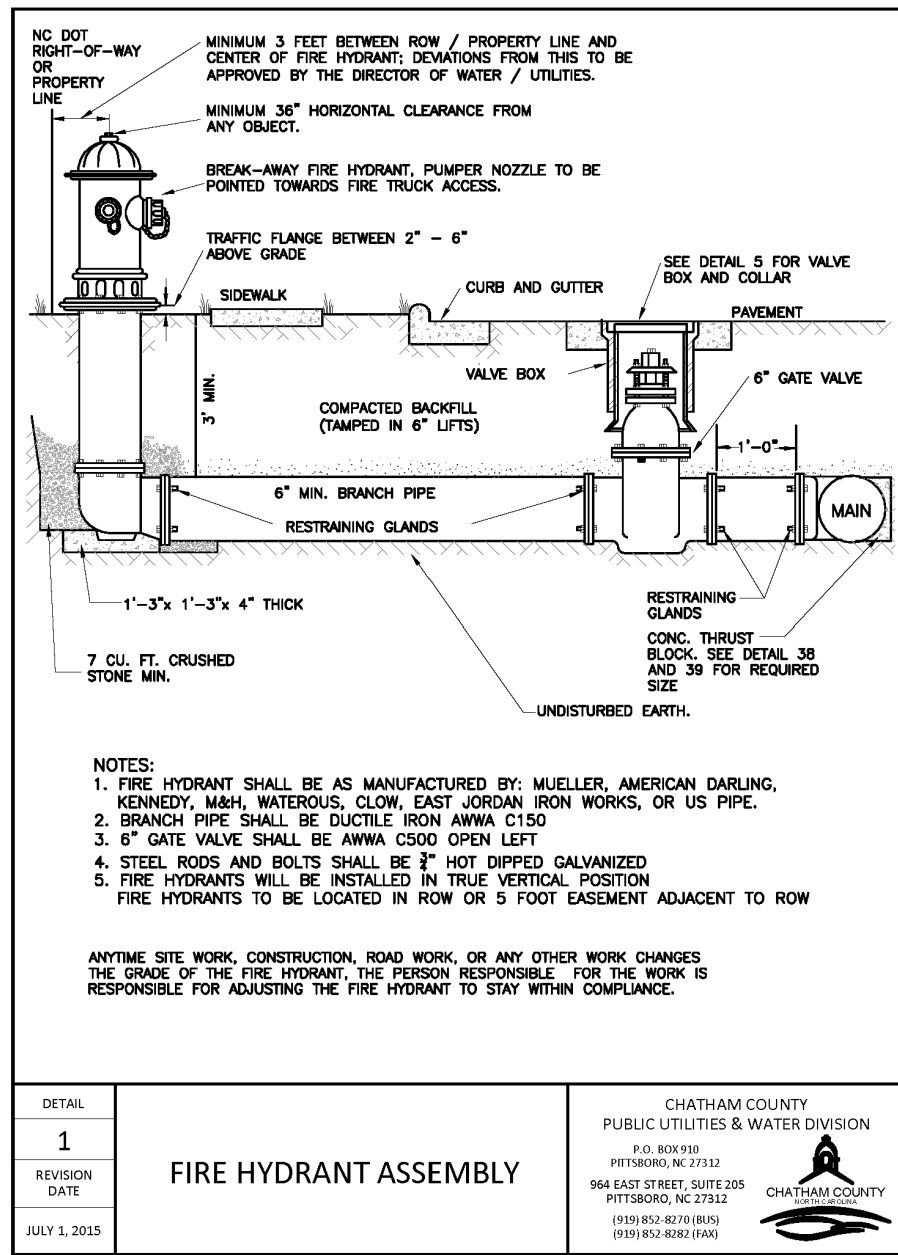
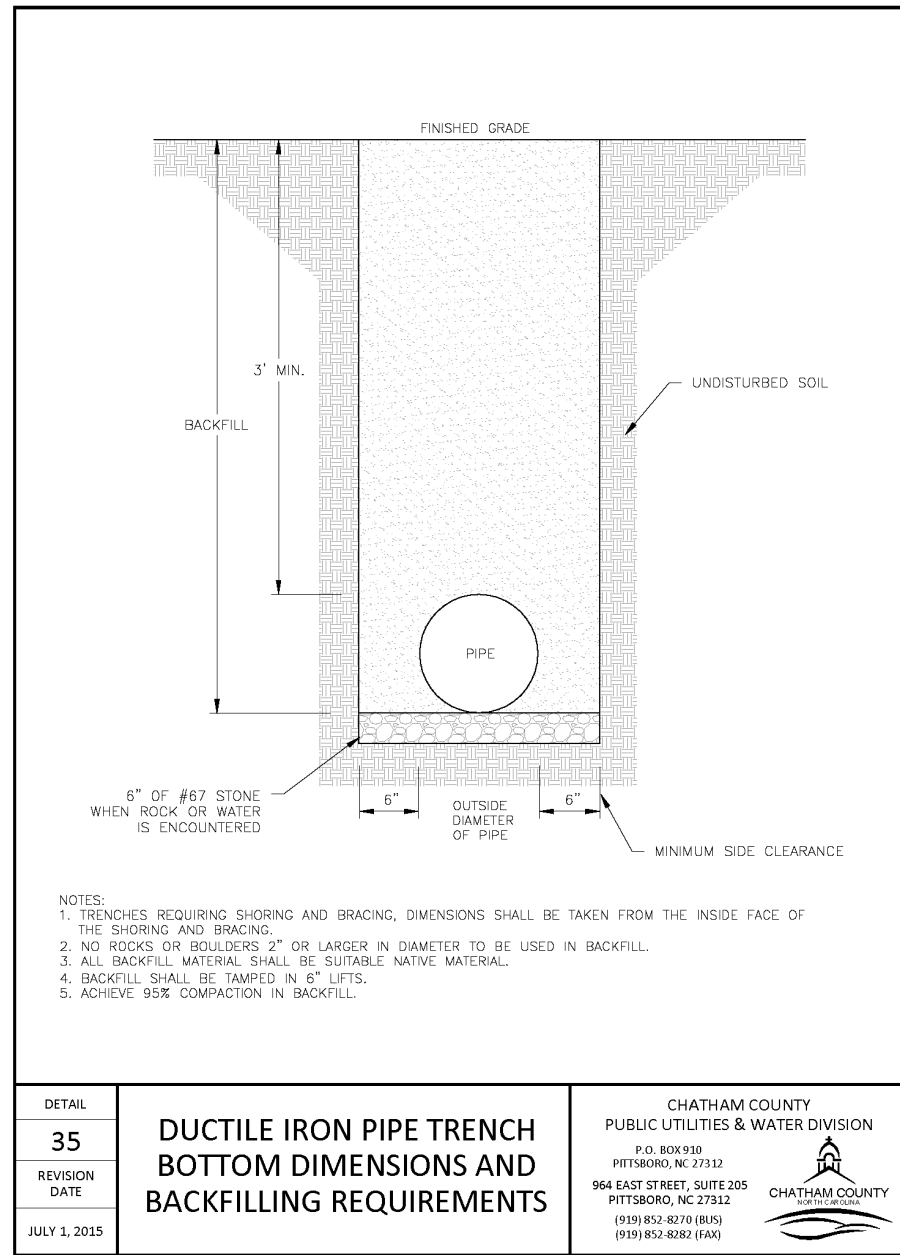
**BRIAR CHAPEL™**

by  
**Newland COMMUNITIES**

**BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA**

**GUARDRAIL DETAILS**

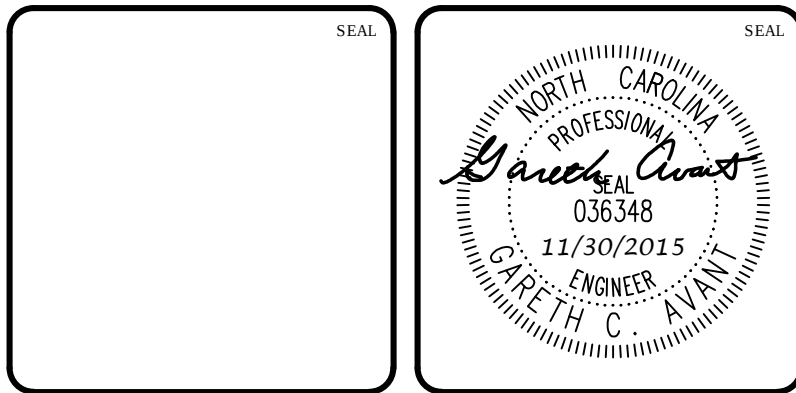
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| DRAWN: BSS                                      | VERTICAL: N/A   |                       |
| DESIGNED: BSS                                   |                 |                       |
| CHECKED: GCA                                    |                 |                       |
| PROJ. MGR. CHS                                  |                 |                       |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY | REVISION: 3     |                       |



| REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS<br>BASED ON TEST PRESSURE OF 200 P.S.I.                                                                                                                   |                           |                                                                                                                                                                                          |          |          |          |          |          |          |          |          |          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| ALL AREAS GIVEN IN SQUARE FEET                                                                                                                                                                                   |                           |                                                                                                                                                                                          |          |          |          |          |          |          |          |          |          |
| SIZE AND DEGREE OF BEND                                                                                                                                                                                          | STAYING THROUST IN POUNDS | MORE THAN 18" DIA.                                                                                                                                                                       | 20" DIA. | 24" DIA. | 30" DIA. | 36" DIA. | 42" DIA. | 48" DIA. | 60" DIA. | 72" DIA. | 90" DIA. |
| 8"                                                                                                                                                                                                               |                           |                                                                                                                                                                                          |          |          |          |          |          |          |          |          |          |
| 11 1/4"                                                                                                                                                                                                          | 1,108                     | 1                                                                                                                                                                                        | 1        | 1        | 1        | 1        | 2        | 1        |          |          |          |
| 22 1/2"                                                                                                                                                                                                          | 2,207                     | 1                                                                                                                                                                                        | 2        | 2        | 1        | 1        | 1        | 3        | 3        | 1        |          |
| 45°                                                                                                                                                                                                              | 4,328                     | 2                                                                                                                                                                                        | 3        | 3        | 1        | 1        | 1        | 2        | 5        | 5        | 1        |
| 90°                                                                                                                                                                                                              | 7,996                     | 2                                                                                                                                                                                        | 4        | 5        | 1        | 1        | 2        | 2        | 8        | 1        | 1        |
| PLUG                                                                                                                                                                                                             | 5,635                     | 2                                                                                                                                                                                        | 3        | 4        | 1        | 1        | 2        | 2        | 8        |          |          |
| 8"                                                                                                                                                                                                               |                           |                                                                                                                                                                                          |          |          |          |          |          |          |          |          |          |
| 11 1/4"                                                                                                                                                                                                          | 1,970                     | 1                                                                                                                                                                                        | 1        | 2        | 1        | 1        | 1        | 2        | 1        | 2        | 1        |
| 22 1/2"                                                                                                                                                                                                          | 3,922                     | 1                                                                                                                                                                                        | 2        | 3        | 1        | 1        | 1        | 4        | 1        | 4        | 1        |
| 45°                                                                                                                                                                                                              | 7,894                     | 2                                                                                                                                                                                        | 4        | 5        | 1        | 1        | 2        | 8        | 1        |          |          |
| 90°                                                                                                                                                                                                              | 14,218                    | 4                                                                                                                                                                                        | 8        | 9        | 2        | 2        | 4        | 15       | 2        |          |          |
| PLUG                                                                                                                                                                                                             | 10,053                    | 3                                                                                                                                                                                        | 5        | 6        | 2        | 2        | 3        | 10       | 1        |          |          |
| 12"                                                                                                                                                                                                              |                           |                                                                                                                                                                                          |          |          |          |          |          |          |          |          |          |
| 11 1/4"                                                                                                                                                                                                          | 4,433                     | 2                                                                                                                                                                                        | 3        | 3        | 1        | 1        | 2        | 5        | 1        |          |          |
| 22 1/2"                                                                                                                                                                                                          | 8,826                     | 3                                                                                                                                                                                        | 5        | 6        | 2        | 2        | 3        | 9        | 1        |          |          |
| 45°                                                                                                                                                                                                              | 17,312                    | 5                                                                                                                                                                                        | 9        | 11       | 3        | 3        | 5        | 18       | 2        |          |          |
| 90°                                                                                                                                                                                                              | 31,983                    | 8                                                                                                                                                                                        | 16       | 19       | 4        | 4        | 8        | 32       | 4        |          |          |
| PLUG                                                                                                                                                                                                             | 22,619                    | 6                                                                                                                                                                                        | 12       | 14       | 3        | 3        | 6        | 23       | 3        |          |          |
| 16"                                                                                                                                                                                                              |                           |                                                                                                                                                                                          |          |          |          |          |          |          |          |          |          |
| 11 1/4"                                                                                                                                                                                                          | 7,881                     | 4                                                                                                                                                                                        | 4        | 5        | 1        | 1        | 2        | 8        | 1        |          |          |
| 22 1/2"                                                                                                                                                                                                          | 15,691                    | 4                                                                                                                                                                                        | 8        | 10       | 2        | 2        | 4        | 16       | 2        |          |          |
| 45°                                                                                                                                                                                                              | 30,779                    | 8                                                                                                                                                                                        | 16       | 19       | 4        | 4        | 8        | 31       | 4        |          |          |
| 90°                                                                                                                                                                                                              | 56,881                    | 15                                                                                                                                                                                       | 29       | 35       | 8        | 8        | 15       | 57       | 6        |          |          |
| PLUG                                                                                                                                                                                                             | 40,213                    | 10                                                                                                                                                                                       | 21       | 25       | 5        | 5        | 9        | 34       | 4        |          |          |
| REACTION BEARING AREAS IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THROUST VECTOR.<br>USE 60° - 90 DEGREE BEND VALUE FOR HORIZONTALS FOR ADDITIONAL SQUARE FOOTAGE. |                           |                                                                                                                                                                                          |          |          |          |          |          |          |          |          |          |
| DETAIL                                                                                                                                                                                                           |                           |                                                                                                                                                                                          |          |          |          |          |          |          |          |          |          |
| 38                                                                                                                                                                                                               |                           | CHATHAM COUNTY<br>PUBLIC UTILITIES & WATER DIVISION<br>1770 PARKWAY NE #7332<br>RICHMOND, GA 37332<br>REAR TRENCH AREA<br>RITTSBURG, GA 37312<br>PH (910) 630-8040<br>(910) 630-8040 FAX |          |          |          |          |          |          |          |          |          |
| REVISION DATA                                                                                                                                                                                                    |                           |                                                                                                                                                                                          |          |          |          |          |          |          |          |          |          |
| JULY 1, 2015                                                                                                                                                                                                     |                           | CHATHAM COUNTY<br>PUBLIC UTILITIES & WATER DIVISION<br>1770 PARKWAY NE #7332<br>RICHMOND, GA 37332<br>REAR TRENCH AREA<br>RITTSBURG, GA 37312<br>PH (910) 630-8040<br>(910) 630-8040 FAX |          |          |          |          |          |          |          |          |          |

| REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| REV. NO. | DESCRIPTIONS                                      | DATE       |
|----------|---------------------------------------------------|------------|
| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |



**MCKIM & CREED**

1730 Varsity Drive, Suite 500  
Raleigh, North Carolina 27606  
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**BRIAR CHAPEL™**

by Newland COMMUNITIES

**BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA**

**UTILITY DETAILS**

DATE: SEPTEMBER 30, 2015  
MCE PROJ. # 02735-0149  
DRAWN: BSS  
DESIGNED: BSS  
CHECKED: GCA  
PROJ. MGR: CHS

SCALE: HORIZONTAL: N/A  
VERTICAL: N/A

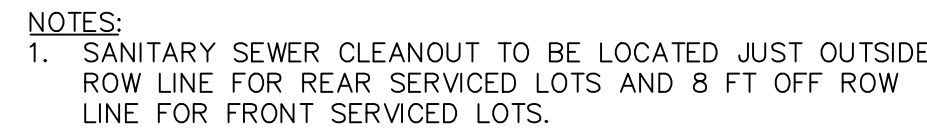
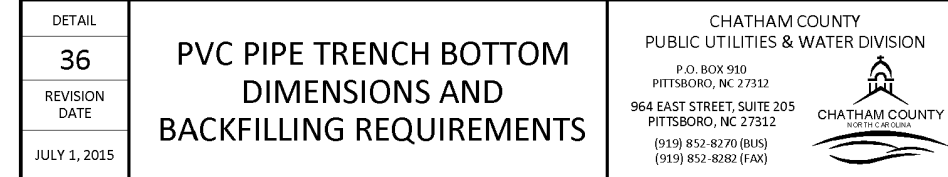
MBC FILE NUMBER: D3.X  
DRAWING NUMBER: D3.1

STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY

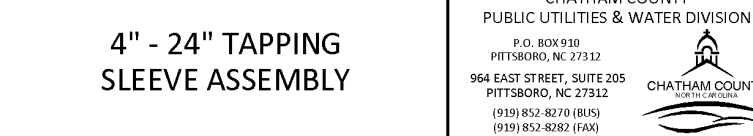
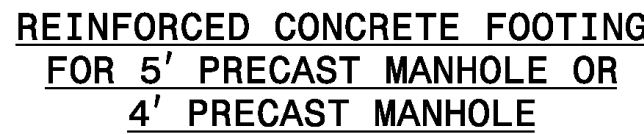
REVISION: 3

1. THE TAPE SHALL BE AN INERT, BOND LAYER PLASTIC WITH A METALIZED FOIL CORE AND SHALL BE HIGHLY RESISTANT TO ALKALIS, ACID, OR OTHER DESTRUCTIVE CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS.
2. THE TAPE SHALL BE BRIGHTLY COLORED TO CONTRAST WITH SOIL, AND SHALL BEAR AN IMPRINT IDENTIFYING THE TYPE OF LINE BURIED BELOW. THE TAPE SHALL BE A MINIMUM OF 2" WIDE.
3. THE TAPE SHALL BE BURIED A MINIMUM OF 6" AND A MAXIMUM OF 12" BELOW THE GROUND SURFACE DIRECTLY ABOVE THE WATER LINE WITH PRINTED SIDE UP.

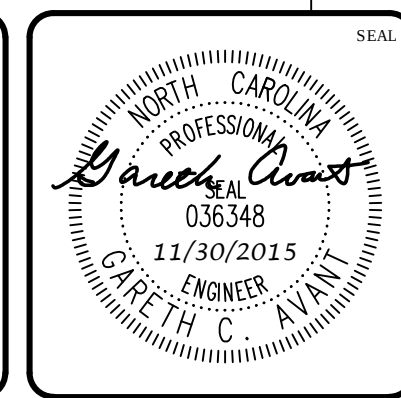
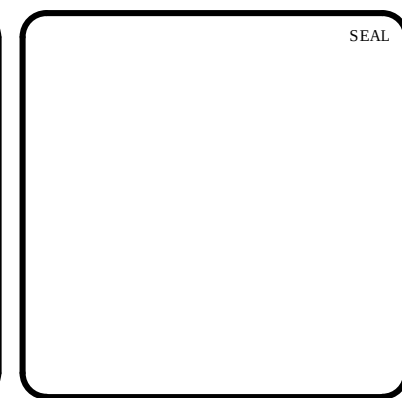
1. TRACER WIRE IS TO BE STANDARD NO. 12 GAUGE COATED COPPER WIRE.
2. LOCATION WIRE CONNECTIONS ARE TO BE A WATER TIGHT CONNECTION USING TWISTER DB PLUS WATERPROOF WIRE CONNECTORS OR AN APPROVED EQUAL.



## NT



|           |                                                   |            |
|-----------|---------------------------------------------------|------------|
| 3         | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2         | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1         | ISSUED FOR PERMITTING                             | 2015.09.30 |
| REV.NO.   | DESCRIPTIONS                                      | DATE       |
| REVISIONS |                                                   |            |

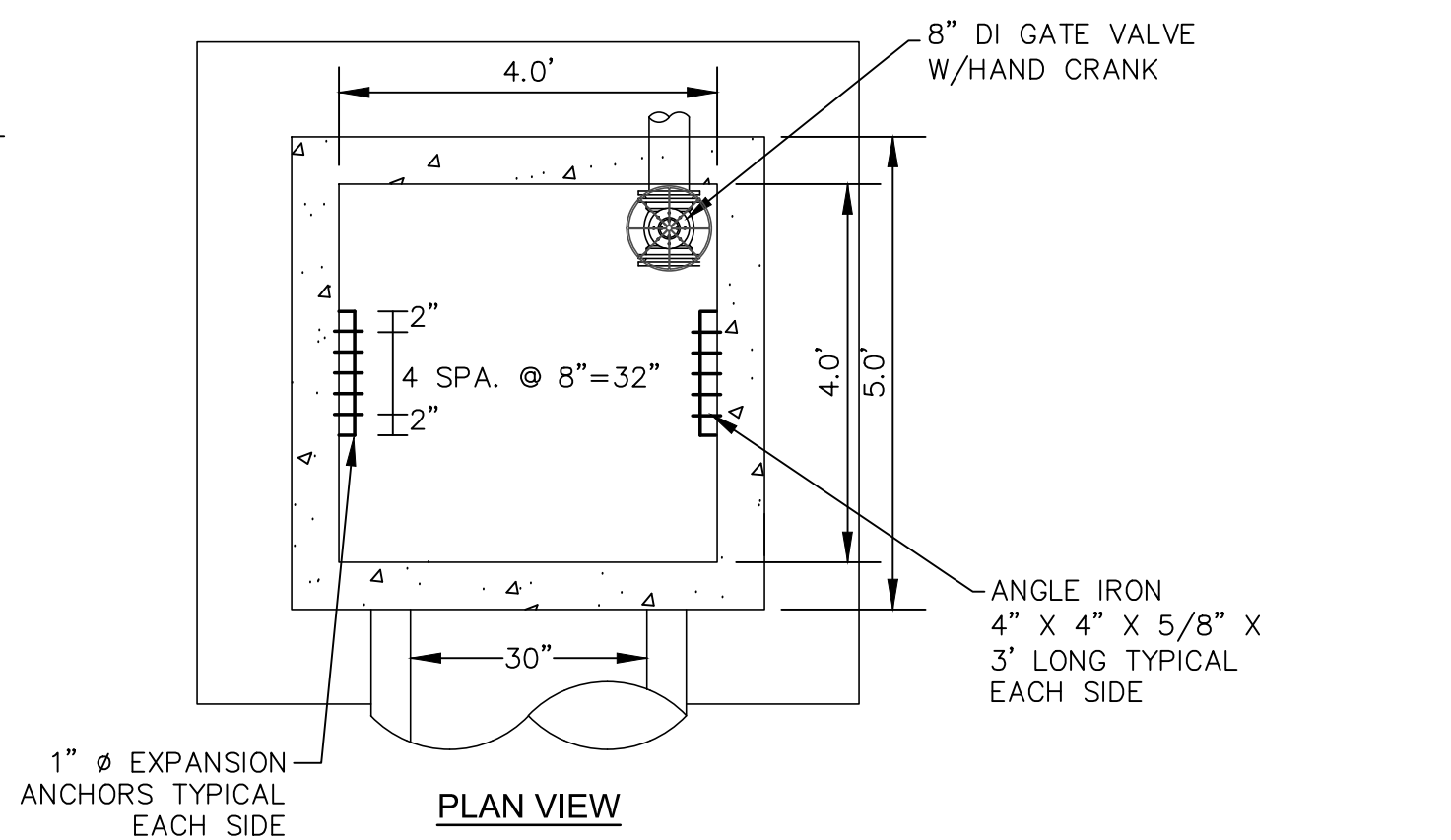
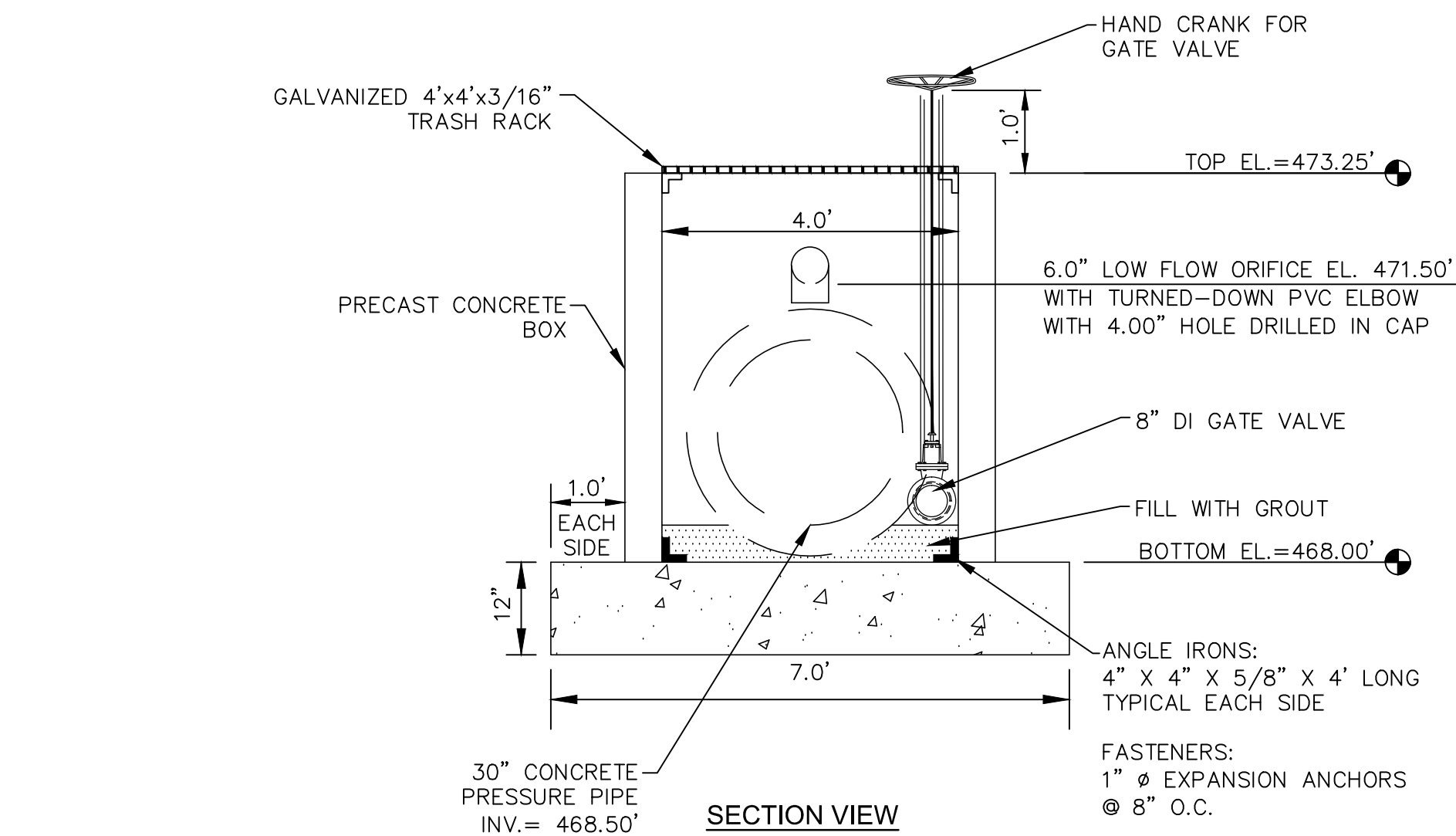
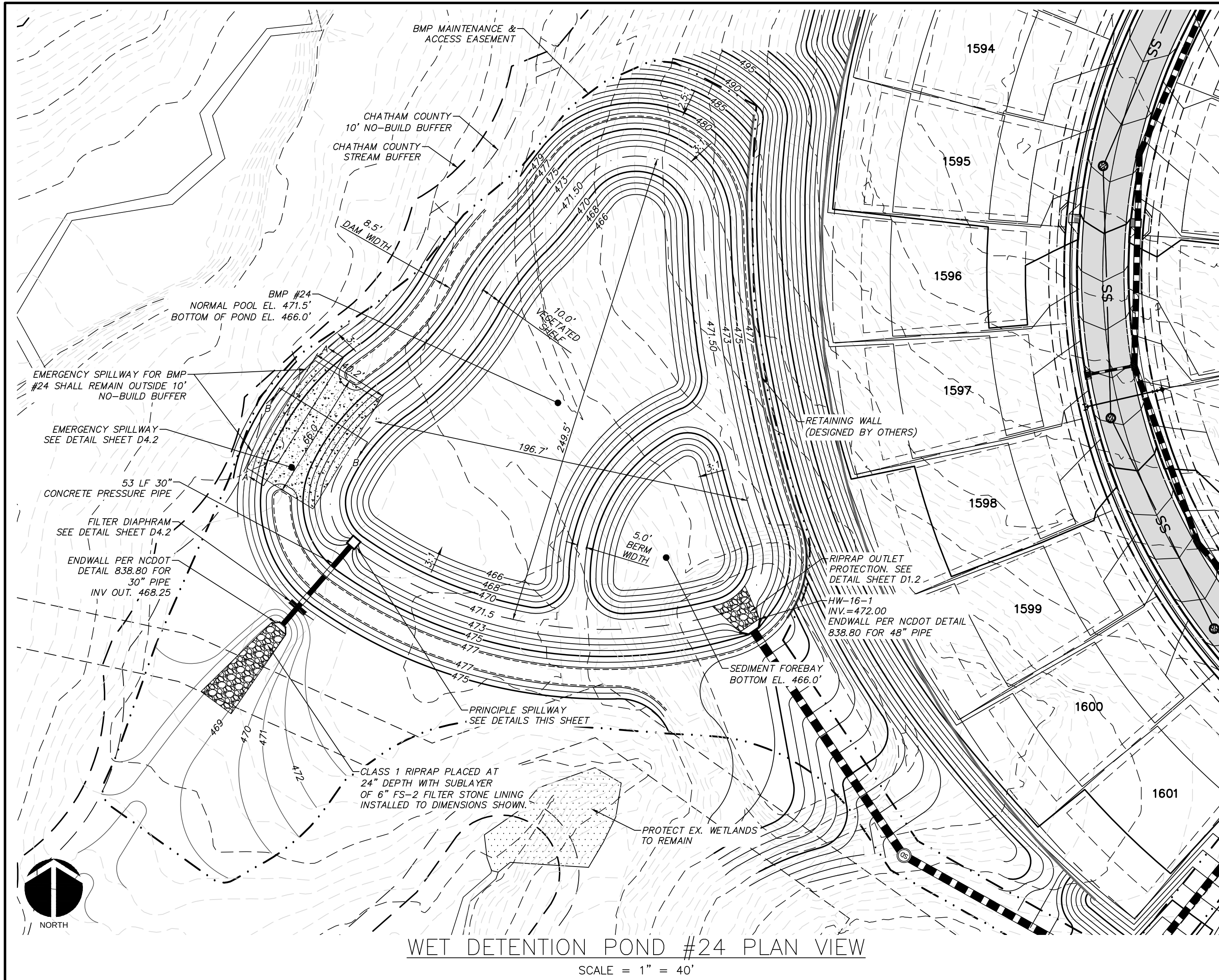


BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA

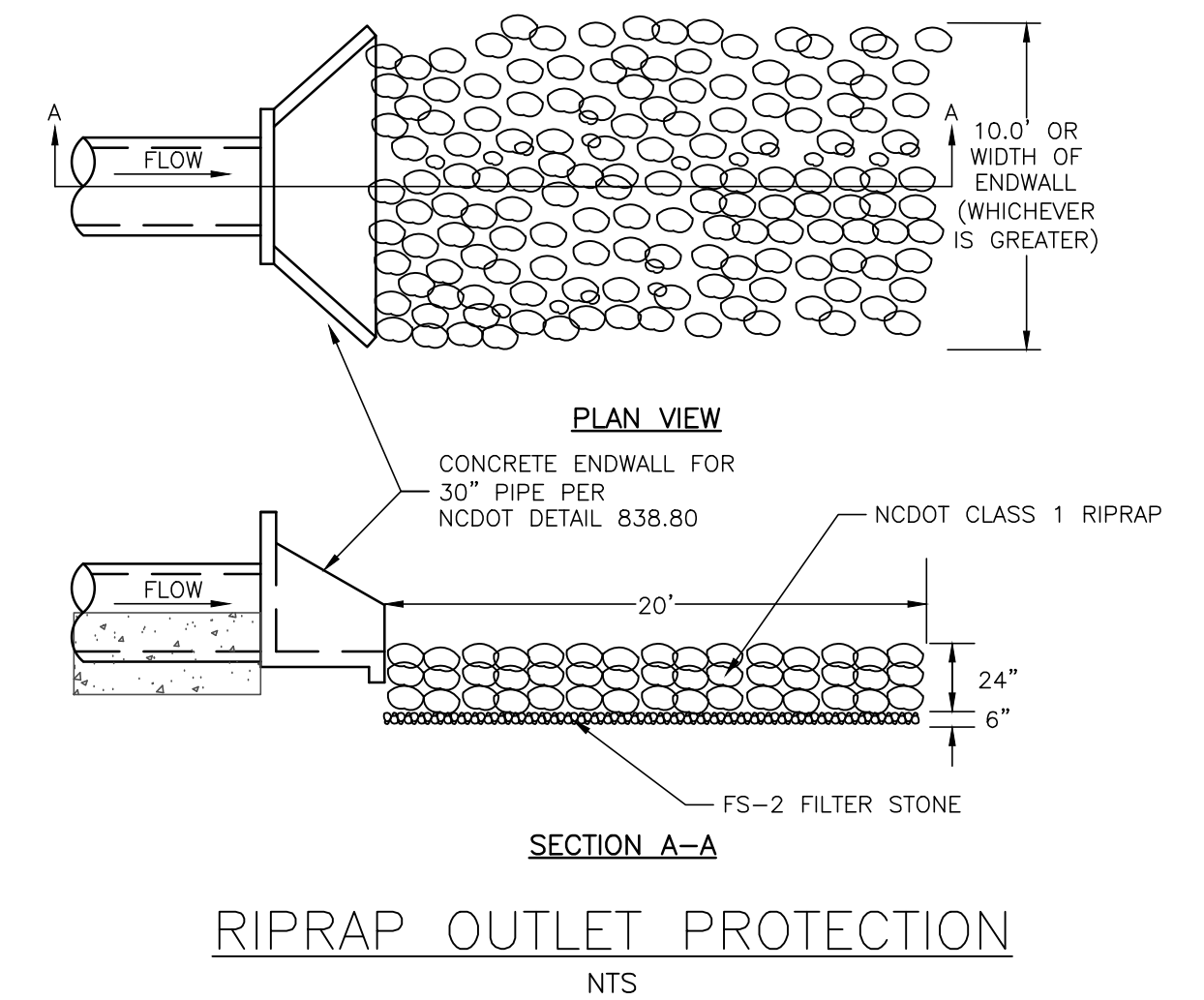
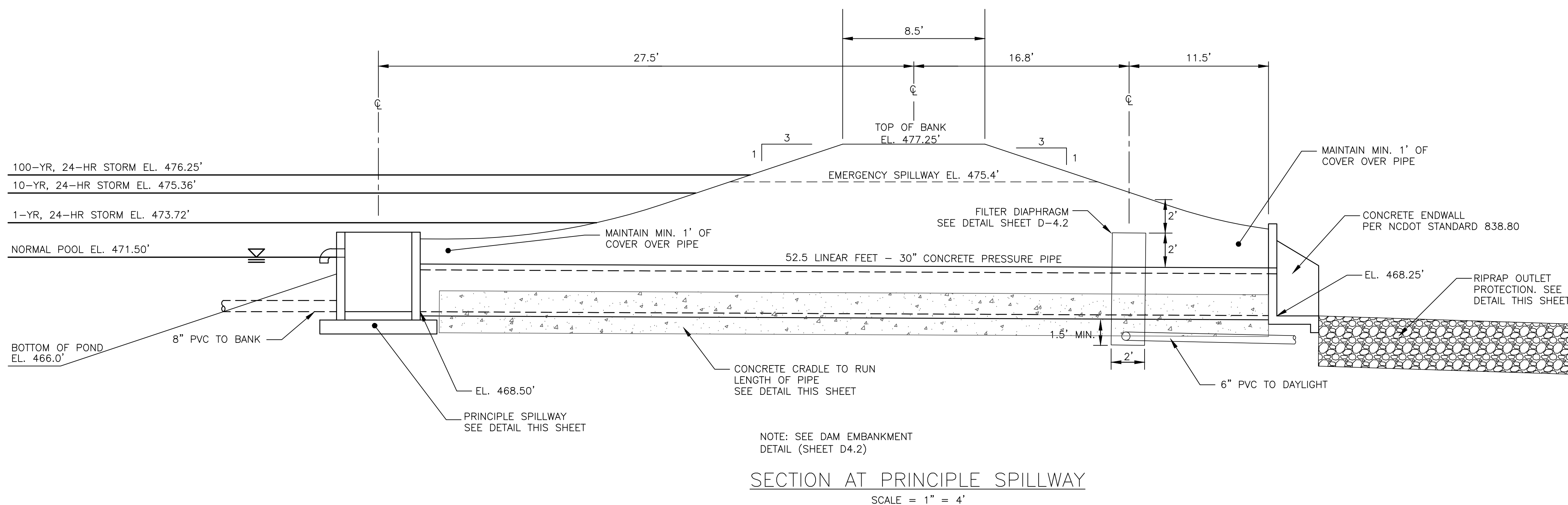
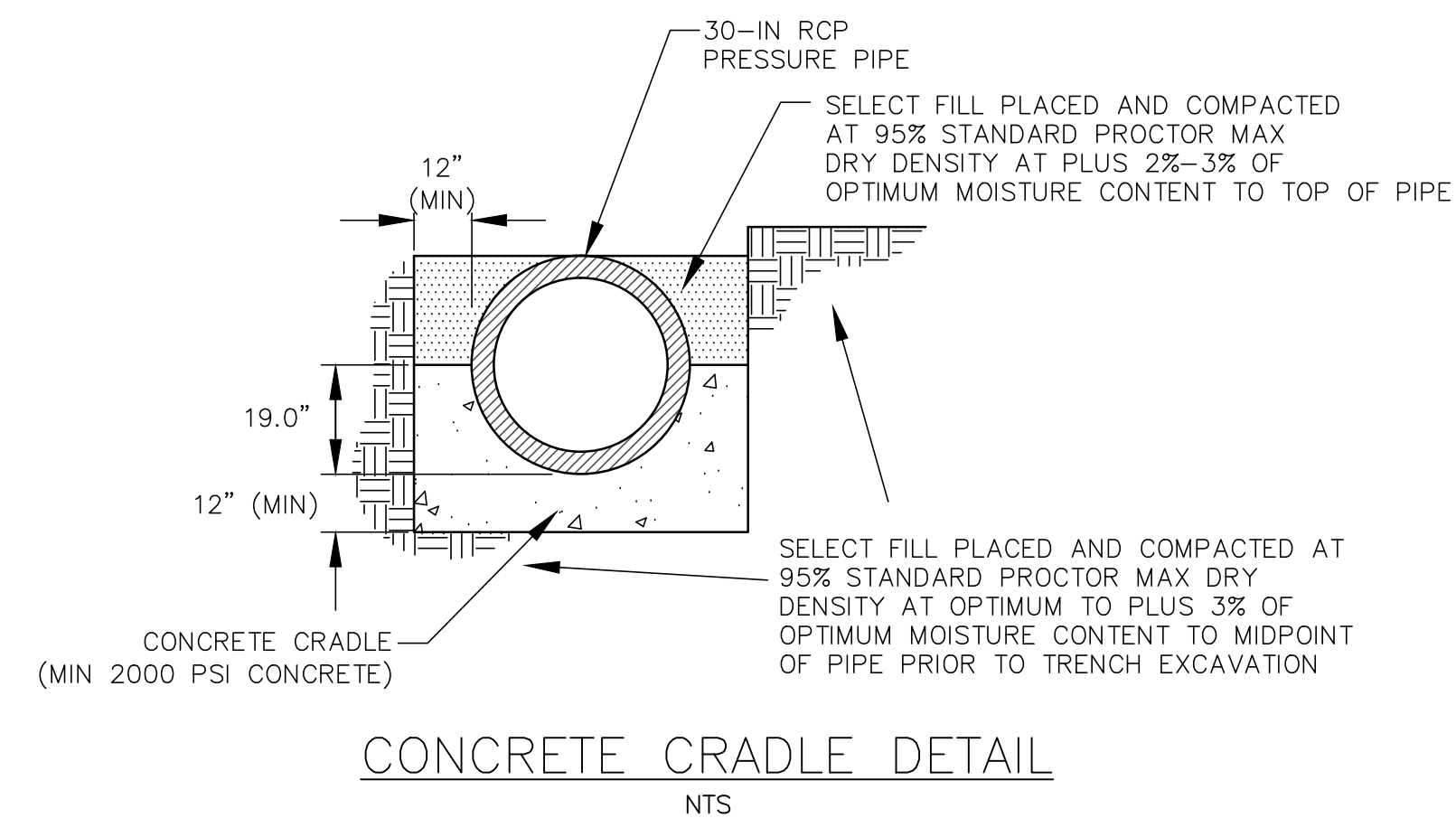
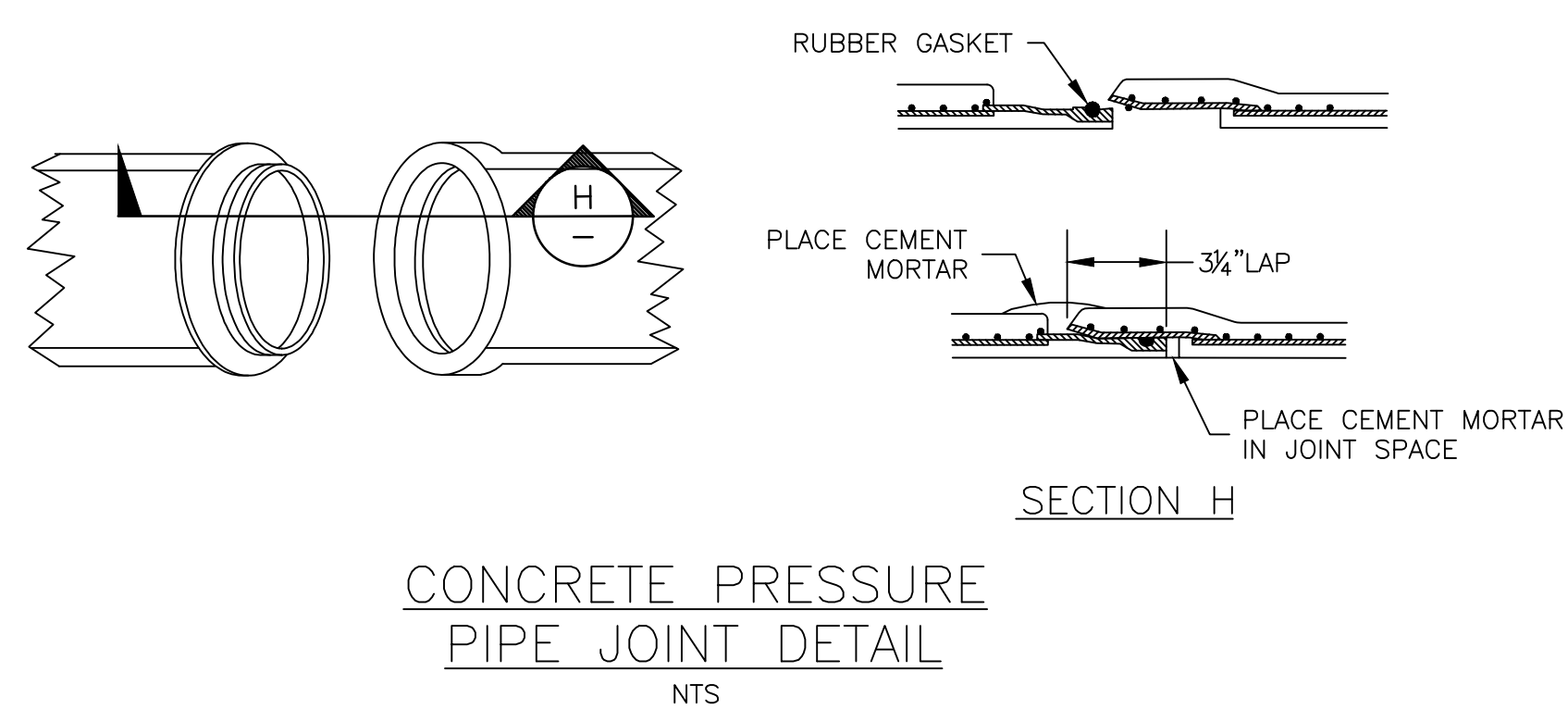
UTILITY DETAILS

|                          |             |                            |
|--------------------------|-------------|----------------------------|
| DATE: SEPTEMBER 30, 2015 | SCALE       | NSC FILE NUMBER            |
| MCE PROJ. # 02735-0149   | HORIZONTAL: | D3.X                       |
| DRAWN BSS                | N/A         | DRAWING NUMBER<br><br>D3.2 |
| DESIGNED BSS             | VERTICAL:   |                            |
| CHECKED GCA              | N/A         |                            |
| PROJ. MGR. CHS           |             |                            |

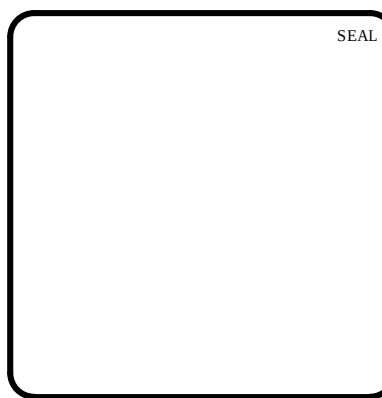
STATUS: REVISION  
 FINAL DRAWINGS  
 FOR REVIEW PURPOSES ONLY 3



PRINCIPLE SPILLWAY  
SCALE = 1" = 2'



| REV. NO. | DESCRIPTION                                       | DATE       |
|----------|---------------------------------------------------|------------|
| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |

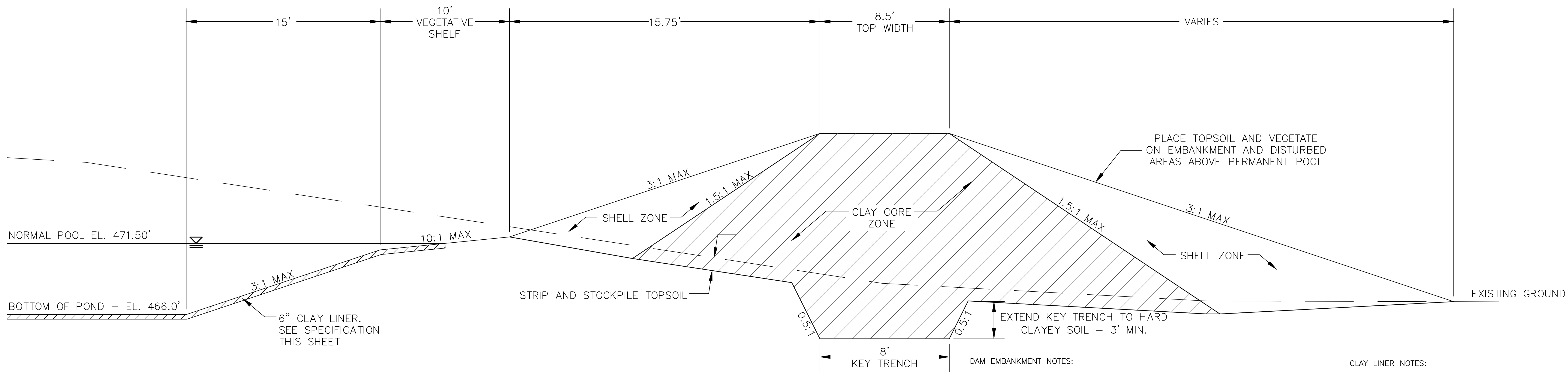


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by  
**Newland COMMUNITIES**

**BRIAR CHAPEL  
PHASE 16 SOUTH  
CHATHAM COUNTY, NORTH CAROLINA**  
**BMP #24 PLAN & DETAILS**

|                                                                                                                     |                                              |                                           |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------|
| DATE: SEPTEMBER 30, 2015<br>MCE PROJ. # 02735-0149<br>DRAWN: BSS<br>DESIGNED: BSS<br>CHECKED: GCA<br>PROJ. MGR: CHS | SCALE: HORIZONTAL: AS NOTED<br>VERTICAL: N/A | FILE NUMBER: D4.X<br>DRAWING NUMBER: D4.1 |
| STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY                                                                     |                                              | REVISION: 3                               |



DAM EMBANKMENT DETAIL

NTS

DAM EMBANKMENT NOTES:

- 1) TOPSOIL BENEATH THE EMBANKMENT SHALL BE REMOVED AND STOCKPILED. THE FOUNDATION WILL BE PROOF ROLLED AND ANY SOFT OR ORGANIC MATERIALS WILL BE REMOVED.
- 2) ALL MATERIAL SHALL BE COMPACTED IN 6-8 INCH LIFTS TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY OR HIGHER (ASTM D-698). THE CLAY CORE ZONE WILL HAVE A MOISTURE CONTENT OF OPTIMUM TO 4 PERCENT ABOVE OPTIMUM MOISTURE CONTENT. THE SHELL ZONE FILL WILL HAVE A MOISTURE CONTENT FROM 2 PERCENT BELOW OPTIMUM MOISTURE CONTENT TO 4 PERCENT ABOVE OPTIMUM.
- 3) EMBANKMENT FILL:  
SHELL ZONE: SOILS WITH LESS THAN 30% PASSING THE NO. 200 SIEVE OR A PI OF LESS THAN 10 WHEN THE PERCENTAGE OF MATERIAL PASSING THE NO. 200 SIEVE IS GREATER THAN 30 PERCENT. SOILS WHICH ARE CLASSIFIED AS CLAYS (CH OR CL) SHOULD NOT BE USED AT THE FACE OF THE SHELL ZONES.

CLAY CORE ZONE: CH, CL OR SC MATERIAL WITH A PI RANGING BETWEEN 15 AND 60

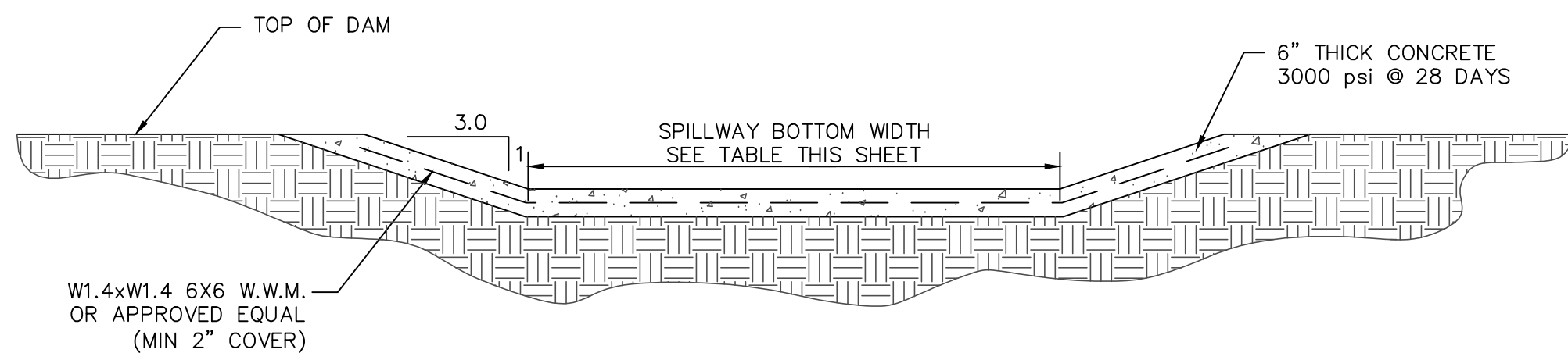
- 4) NO FILL SHALL CONTAIN ROCKS OR GRAVEL LARGER THAN 4 INCHES IN DIAMETER.

- 5) A PROFESSIONAL GEOTECHNICAL ENGINEER SHALL APPROVE ALL MATERIALS USED FOR THE EMBANKMENT AND SUPERVISE CONSTRUCTION.

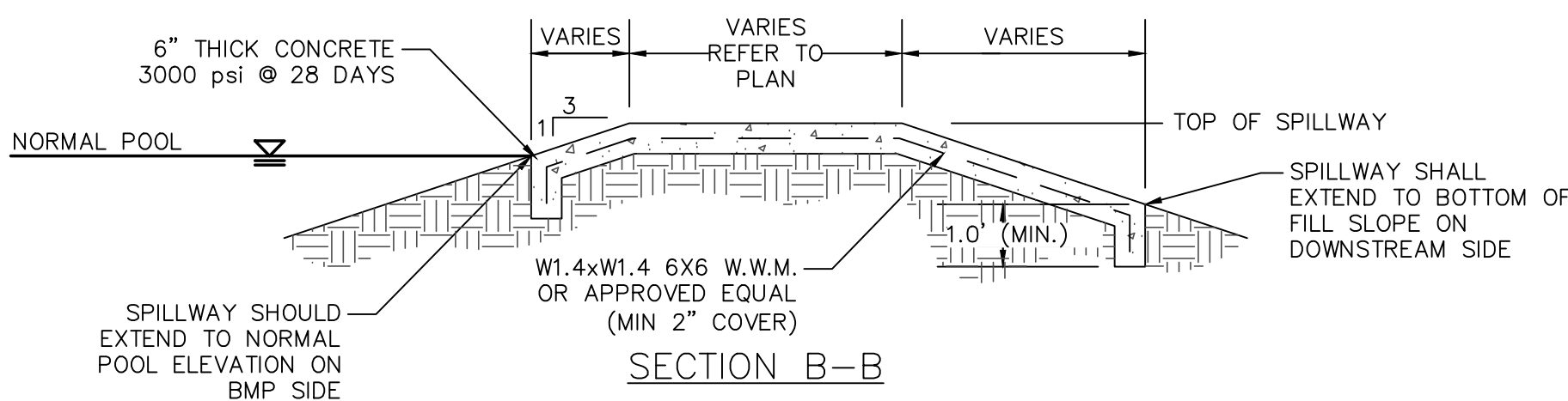
- 6) ALL DISTURBED AREAS ABOVE PERMANENT POOL SHALL BE SEEDED USING THE FOLLOWING GRASS SEED MIX MANUFACTURED BY ERNST SEED COMPANY: Carolina FACW Meadow Mix ERNMX-182

CLAY LINER NOTES:

IN ORDER TO HELP SUSTAIN THE PERMANENT POOL AND TO PREVENT WATER FROM INFILTRATING TOO QUICKLY INTO THE UNDERLYING SOIL, THE CONTRACTOR SHALL INSTALL A 6" THICK CLAY LINER ON THE BOTTOM OF THE BMP AREA UP TO THE NORMAL POOL ELEVATION. THE LINER CAN BE ACCOMPLISHED BY BLENDING EXISTING SITE SOILS WITH CLAY TO ACHIEVE A LOW PERMEABILITY MIXTURE OR BY INSTALLING A GEOSYNTHETIC LINER MADE OF A BENTOMAT CL. IF THE CONTRACTOR CHOOSES TO BLEND THE EXISTING SITE SOILS WITH CLAY, THE ONSITE GEOTECHNICAL ENGINEER SHALL DETERMINE THE AMOUNT OF CLAY TO ADD, THE DEGREE OF COMPACTION, AND WILL OVERSEE THE INSTALLATION OF THE CLAY LINER. THE MAXIMUM PERMEABILITY RATE FOR THE LINER SHALL BE 0.01 IN/HR IN ACCORDANCE WITH THE NCDENR BMP MANUAL. THE PROPOSED MATERIAL FOR THIS LINER SHALL BE TESTED BY THE ONSITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. THE RESULTS OF THIS TESTING SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW PRIOR TO PLACEMENT. UPON COMPLETION OF LINER INSTALLATION, A 4" MINIMUM LAYER OF TOPSOIL SHALL BE ADDED OVER THE LINER TO PROVIDE A HEALTHY MEDIA FOR VEGETATION GROWTH.



SECTION A-A



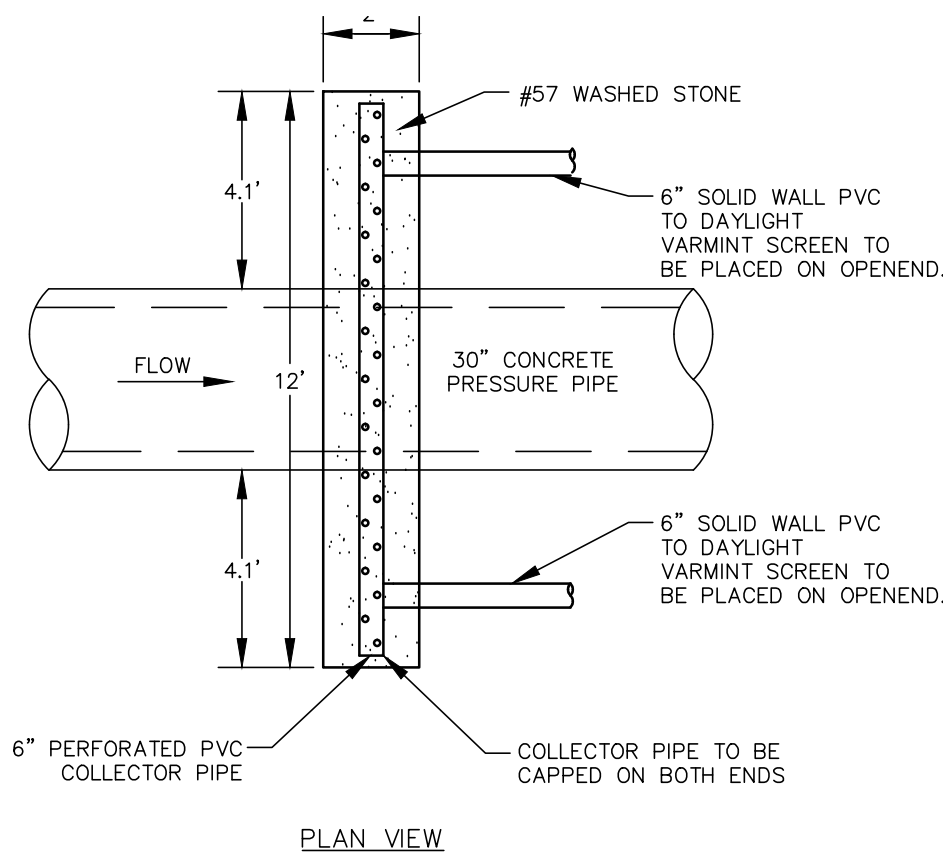
SECTION B-B

|         | NORMAL<br>POOL<br>EL. | TOP DAM<br>EL. | SPILLWAY<br>BOTTOM<br>EL. | SPILLWAY<br>BOTTOM<br>WIDTH |
|---------|-----------------------|----------------|---------------------------|-----------------------------|
| BMP #24 | 471.50                | 477.25         | 475.40                    | 60'                         |

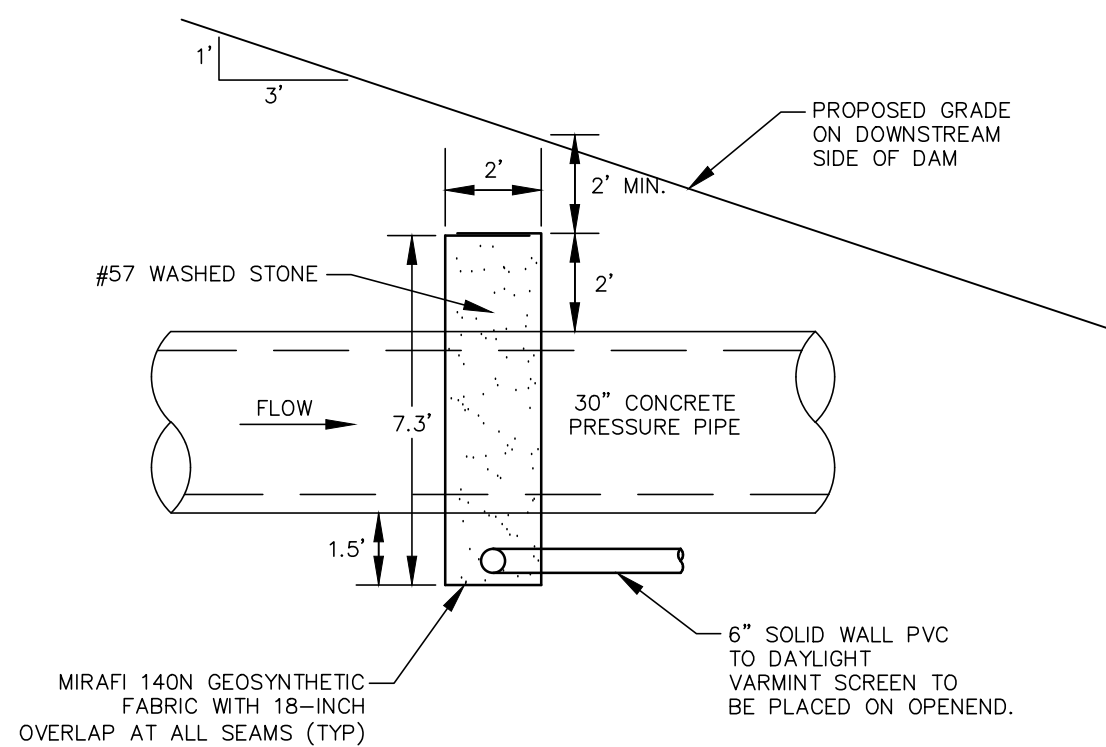
NOTE:  
EXPANSION/CONTRACTION JOINTS PER  
AMERICAN CONCRETE INSTITUTE (ACI)  
STANDARDS FOR SLABS ON GRADE.

EMERGENCY SPILLWAY DETAIL

NTS

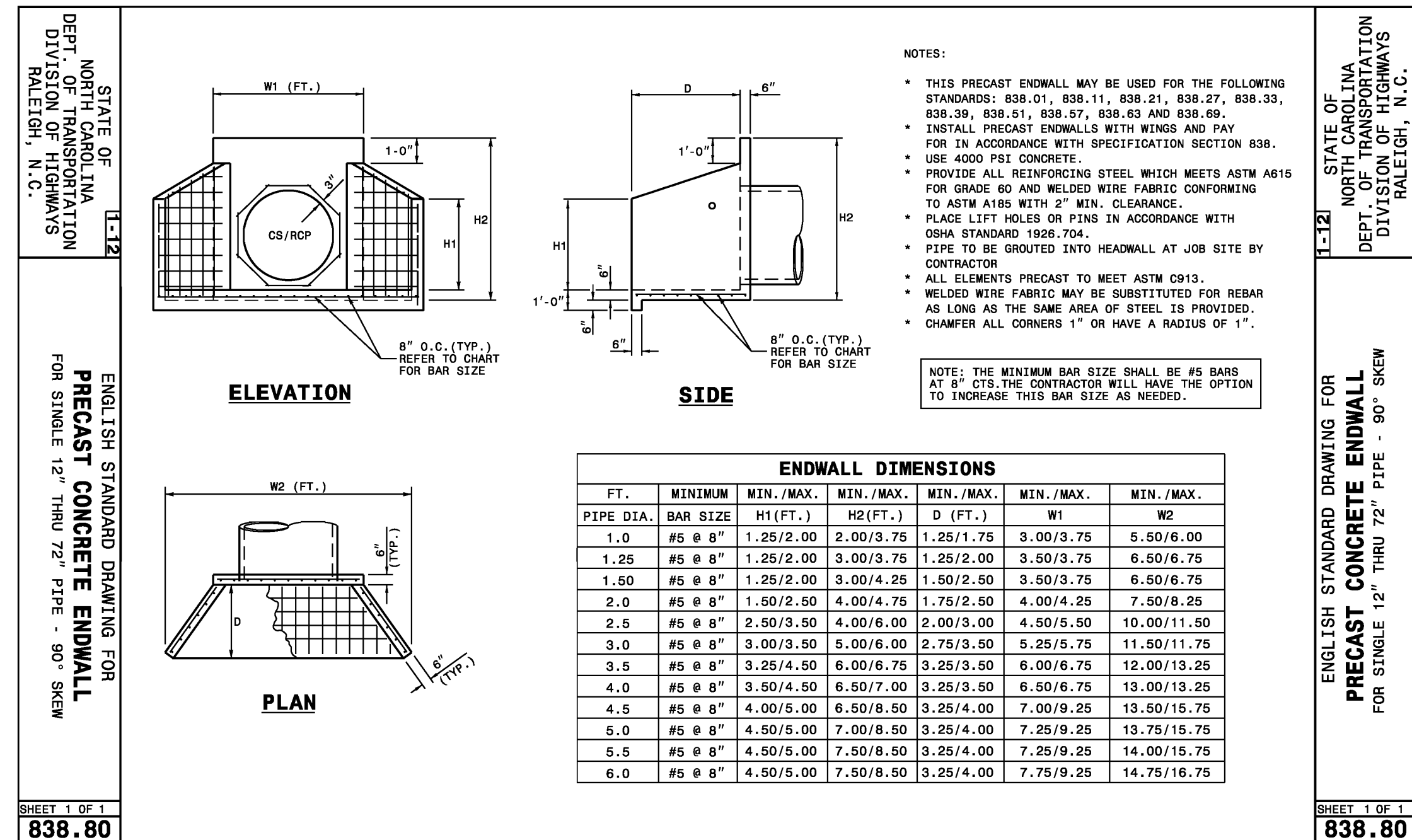


PLAN VIEW

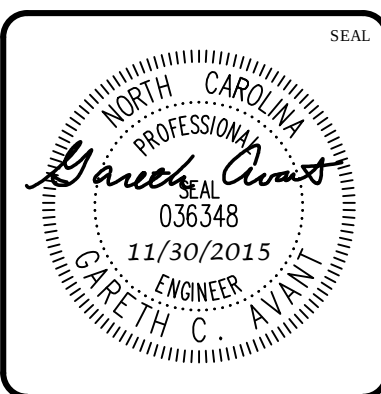
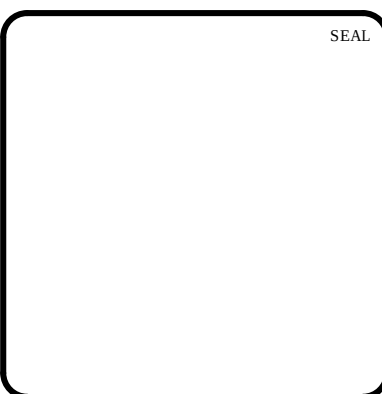


FILTER DIAPHRAGM DETAIL

NTS



| REV. NO. | DESCRIPTION                                       | DATE       |
|----------|---------------------------------------------------|------------|
| 3        | REVISED PER COMMENTS RECEIVED FROM NCDOT          | 2015.11.30 |
| 2        | REVISED PER COMMENTS RECEIVED FROM CHATHAM COUNTY | 2015.11.12 |
| 1        | ISSUED FOR PERMITTING                             | 2015.09.30 |

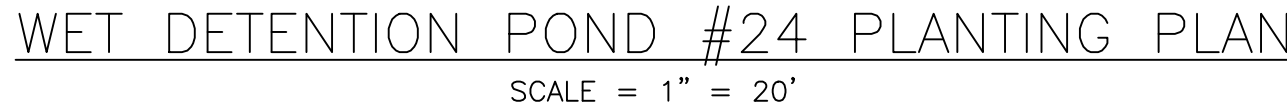


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**BMP #24 PLAN & DETAILS**

DATE: SEPTEMBER 30, 2015  
MCE PROJ. # 02735-0149  
DRAWN: BSS  
DESIGNED: BSS  
CHECKED: GCA  
PROJ. MGR. CHS  
SCALE: HORIZONTAL: AS NOTED  
VERTICAL: N/A  
MBC FILE NUMBER: D4.X  
DRAWING NUMBER: D4.2  
STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY  
REVISION: 3



ANY  
D ROOTS

AMENDED TOPSOIL  
MIN. 12 IN DEPTH

EXISTING SOIL

SHALLOW WATER  
PLANT VARIETY 'A'

24" O.C. (TYP)

NORMAL POOL LEVEL

24" O.C. (TYP)

SHALLOW LAND  
PLANT VARIETY 'A'

24" O.C. (TYP)

SHALLOW LAND  
PLANT VARIETY 'B'

SHALLOW WATER  
PLANT VARIETY 'B'

LIMITS OF 10:1 SLOPE

EACH VARIETY OF PLANT NOTED TO BE PLANTED  
SHALL BE IN GROUPS AS SHOWN ON THIS SHEET.

VEGETATED PLANTING SHELF DE

NTS

NOTES:

1. CONTINUE PLANTING SCHEME SHOWN FOR EACH OF THE 5 PLANT VARIETIES NOTED BELOW AROUND ENTIRE LENGTH OF THE SHALLOW WATER PLANTING ZONE

2. CONTINUE PLANTING SCHEME SHOWN FOR EACH OF THE 5 PLANT VARIETIES NOTED BELOW AROUND ENTIRE LENGTH OF THE SHALLOW LAND PLANTING ZONE

3. OTHER SPECIES WITH SIMILAR GROWTH HABITS AND MAY BE APPROVED AS LISTED IN THE "STORMWATER BEST MANAGEMENT PRACTICES MANUAL" TABLE 9-1.

VEGETATED PLANTING SHELF DETAIL

NTS

GENERAL PLANTING NOTES:

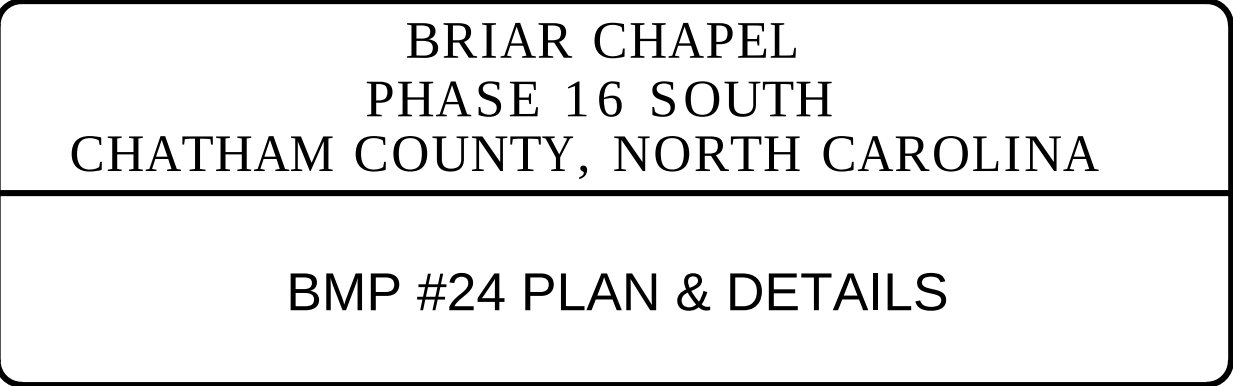
1. AVOID COMPACTING TOPSOIL TO PROMOTE HEALTHY ENVIRONMENTAL CONDITIONS FOR THE PLANTS.
2. ALL PLANTS SHOULD BE PLANTED IN THE INDICATED RANGE TO ENSURE SURVIVAL.
3. SHALLOW WATER AND SHALLOW LAND AREAS TO BE PLANTED WITH BARE ROOT, PLUGS, OR CONTAINER LIVE PLANTINGS AS SPECIFIED.
4. EXCAVATE A HOLE TWICE THE DIAMETER OF ROOT BALL AND EQUAL TO THE ROOT DEPTH OF THE INDIVIDUAL PLANT. PLACE PLANT IN HOLE WITH CROWN FLUSH WITH SOIL SURFACE. BACKFILL WITH TOPSOIL AND LIGHTLY PLANT.
5. BEGIN PLANTING DURING LOCAL GROWING SEASON IN ORDER TO ENSURE THAT PLANTS HAVE ADEQUATE TIME TO ESTABLISH BEFORE WINTER MONTHS.
6. OBTAIN PLANTS FROM: COASTAL PLAIN CONSERVATION NURSERY (252-482-5707), MELLOW MARSH FARMS (919-742-1200), CURE NURSERY (919-542-6186) OR ENGINEER APPROVED SUBSTITUTE.
7. REFER TO EROSION CONTROL DETAIL SHEET D1.2 FOR SEEDBED PREPARATION AND SEEDING SCHEDULES FOR AREAS NOT SPECIFIED IN THIS PLAN.

SHALLOW WATER PLANTING NOTES:

1. 70% OF PICKERELWEED SHOULD BE PLANTED WITHIN 5-6 INCHES BELOW NORMAL POOL.
2. 70% OF SWEETFLAG AND 70% OF SOUTHERN BLUE FLAG IRIS SHOULD BE PLANTED IN THE 2-3 INCHES BELOW NORMAL POOL.
3. 70% OF SOFT RUSH SHOULD BE PLANTED AT THE NORMAL POOL ELEVATION.

SHALLOW LAND PLANTING NOTES:

11. PLANTS IN THIS GROUP SHOULD NOT BE PLANTED IN AREAS THAT ARE INUNDATED FOR EXTENDED PERIODS.



|                                                    |  |             |  |                 |  |
|----------------------------------------------------|--|-------------|--|-----------------|--|
| DATE: SEPTEMBER 30, 2012                           |  | SCALE       |  | MAC FILE NUMBER |  |
| DRAW PROJ. # 02735-0149                            |  | HORIZONTAL: |  | D4.X            |  |
| BSS                                                |  | AS NOTED    |  | DRAWING NUMBER  |  |
| DESIGNED BSS                                       |  | VERTICAL:   |  | D4.3            |  |
| CHECKED GCA                                        |  | N/A         |  |                 |  |
| PROJ. MGR. CHS                                     |  |             |  |                 |  |
| STATUS: FINAL DRAWINGS<br>FOR REVIEW PURPOSES ONLY |  |             |  |                 |  |
|                                                    |  |             |  | REVISION<br>3   |  |

