# BRIAR CHAPEL PHASE 13 SECTION 1 & 2 CONSTRUCTION DOCUMENTS U.S. HWY 15-501 and MANN'S CHAPEL ROAD CHATHAM COUNTY, NORTH CAROLINA

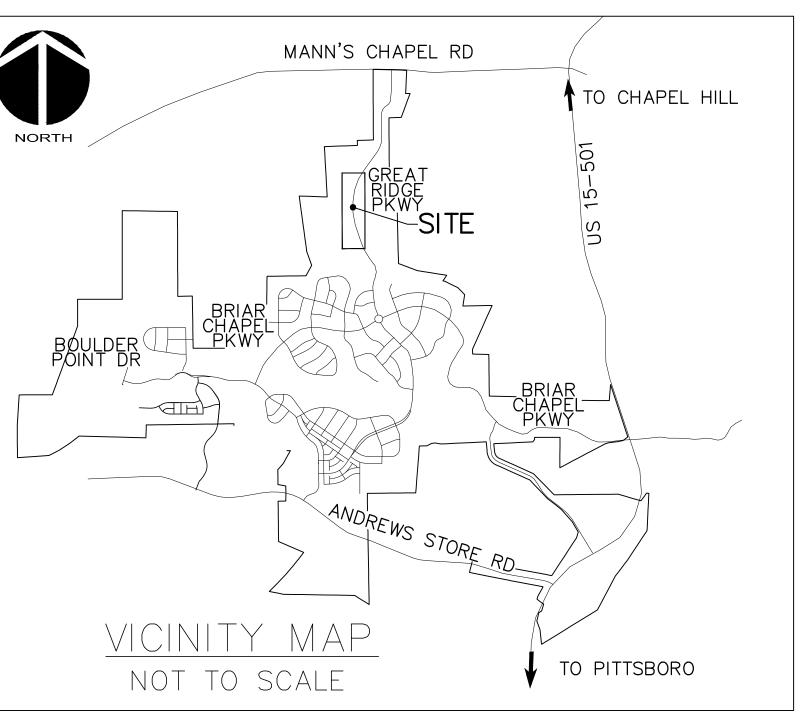
# COUNTY AND AGENCY CONTACTS

- 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: Brian Burkhart, PE Email: brian.burkhart@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: Marty Tillman, PE Email: mtillman@ncdot.gov
- NCDENR Division of Water Quality 512 N. Salisbury St Archdale Building, 9th Floor Raleigh, NC 27604 (919) 807-6373 phone Contact: Karen Higgins Email: karen.higgins@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



DATE: JULY 26, 2017 REVISED: OCTOBER 9, 2017



# VICINITY MAP NTS

NNP BRIAR	CHAPEL, LLC
1342 BRIAR	CHAPEL PAF
CHAPEL HIL	L, NC 27516
PHONE:	(919) 951
FAX:	(919) 240
CONTACT:	LEE BOV
EMAIL:	lbowman

	C0.1	COVER SHEET	SEAL DATE
	C0.2	OVERALL EXISTING CONDITIONS/DEMOLITION PLAN	2017.10.09
	C1.0	OVERALL SITE PLAN	2017.10.09
	C1.1	SITE PLAN	2017.10.09
PROJECT DATA	C1.2	SITE PLAN	2017.10.09
	C2.0	OVERALL UTILITY PLAN	2017.10.09
NAME OF PROJECT:	C2.1	UTILITY PLAN	2017.10.09
	C2.2	UTILITY PLAN	2017.10.09
PHASE 13 SECTION 1 & 2	C3.0	OVERALL STAGE 1 EROSION CONTROL PLAN	2017.10.09
CHATHAM COUNTY, NORTH CAROLINA	C3.1	STAGE 1 EROSION CONTROL PLAN	2017.10.09
OWNER:	C3.2	STAGE 1 EROSION CONTROL PLAN	2017.10.09
NNP BRIAR CHAPEL, LLC	C3.3	OVERALL GRADING, DRAINAGE, AND STAGE 2 EROSION CONTROL PLAN	2017.10.09
1342 BRIAR CHAPEL PARKWAY	C3.4	GRADING, DRAINAGE, AND STAGE 2 EROSION CONTROL PLAN	2017.10.09
CHAPEL HILL, NC 27516 PHONE: (919) 951-0700	C3.5	GRADING, DRAINAGE, AND STAGE 2 EROSION CONTROL PLAN	2017.10.09
FAX: (919) 240-4963 CONTACT: LEE BOWMAN	C4.1	PLAN & PROFILE ALLEY 2 STA. 10+00 TO STA. 16+63.66	2017.10.09
EMAIL: Ibowman@newlandco.com PREPARED BY: McKIM & CREED	C4.2	PLAN & PROFILE ALLEY 1 STA. 10+00.66 TO STA. 11+53.50 PLAN & PROFILE ALLEY 3 STA. 10+00.55 TO STA. 11+53.50 PLAN & PROFILE ALLEY 4 STA. 10+00.73 TO STA. 11+53.50	2017.10.09
1730 VARSITY DRIVE, SUITE 500 RALEIGH, NORTH CAROLINA 27606	C4.3	PLAN & PROFILE ALLEY 6 STA. 10+00 TO STA. 15+29	2017.10.09
PHONE: (919) 233-8091 FAX: (919) 233-8031 CONTACT: GARETH AVANT, PE EMAIL: gavant@mckimcreed.com	C4.4	PLAN & PROFILE ALLEY 5 STA. 10+00.35 TO STA. 11+53.50 PLAN & PROFILE ALLEY 3 STA. 10+00.23 TO STA. 11+53.50 PLAN & PROFILE STORM CROSSING STA. 10+00.00 TO STA. 14+32.33	2017.10.09
PROJECT AREA: 11.03 ACRES These improvements shall be constructed in accordance with the following plans, and the Standard Specifications of NCDOT and Chatham County.	C4.5	PLAN & PROFILE BMP #33 EASTERN OUTFALL STA. 10+00.00 TO STA. 10+94.64 PLAN & PROFILE BMP #33 WESTERN OUTFALL STA. 10+00.00 TO STA. 10+72.25 PLAN & PROFILE BMP #34 OUTFALL STA. 10+00.00 TO STA. 14+43.53	2017.10.09
	D1.1	EROSION AND SEDIMENTATION CONTROL DETAILS	2017.10.09
	D1.2	EROSION AND SEDIMENTATION CONTROL DETAILS	2017.10.09
	D2.1	NCDOT ROADWAY DETAILS	2017.10.09
	D2.2	NCDOT DRAINAGE DETAILS	2017.10.09
	D2.3	NCDOT DRAINAGE DETAILS	2017.10.09
	D2.4	NCDOT DRAINAGE DETAILS	2017.10.09
	D3.1	UTILITY DETAILS	2017.10.09
	D3.2	UTILITY DETAILS	2017.10.09
	D4.1	BMP #33 PLAN & DETAILS	2017.10.09
	D4.2	BMP #33 PLAN & DETAILS	2017.10.09
	D4.3	BMP #33 PLAN & DETAILS	2017.10.09
	D4.4	BMP #34 PLAN & DETAILS	2017.10.09
	D4.4A	BMP #33 & #34 CROSS SECTIONS	2017.10.09
	D4.5	STORM DRAINAGE & SANITARY SEWER TABLES	2017.10.09



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

www.mckimcreed.com

Newland communities

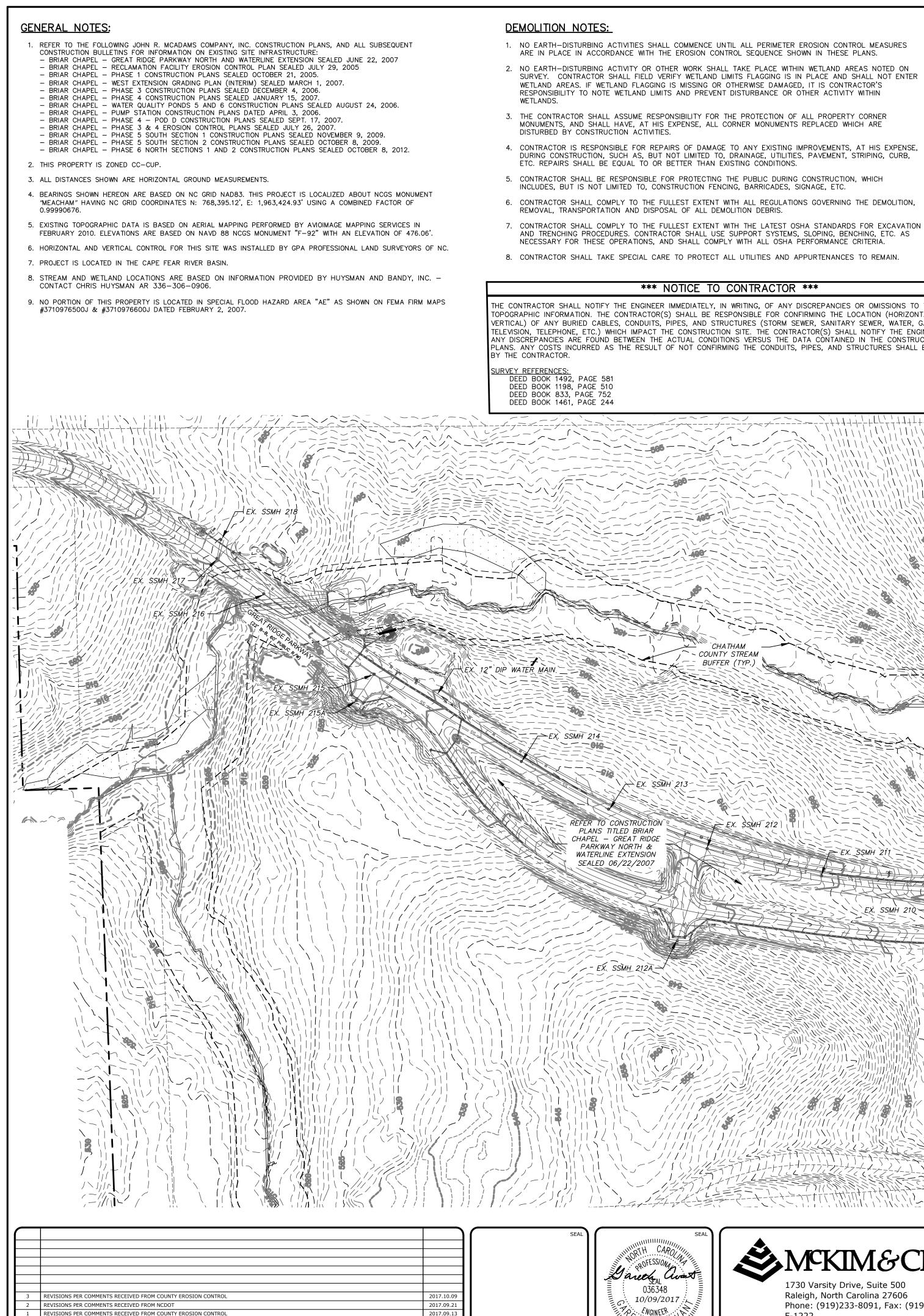
# SHEET INDEX



... ENGINEER ...

AVOID UTILITY DAMAGE

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DESCRIPTIONS

## 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

3. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL PROPERTY CORNER

# 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,

#### 5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE PUBLIC DURING CONSTRUCTION, WHICH

6. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH ALL REGULATIONS GOVERNING THE DEMOLITION,

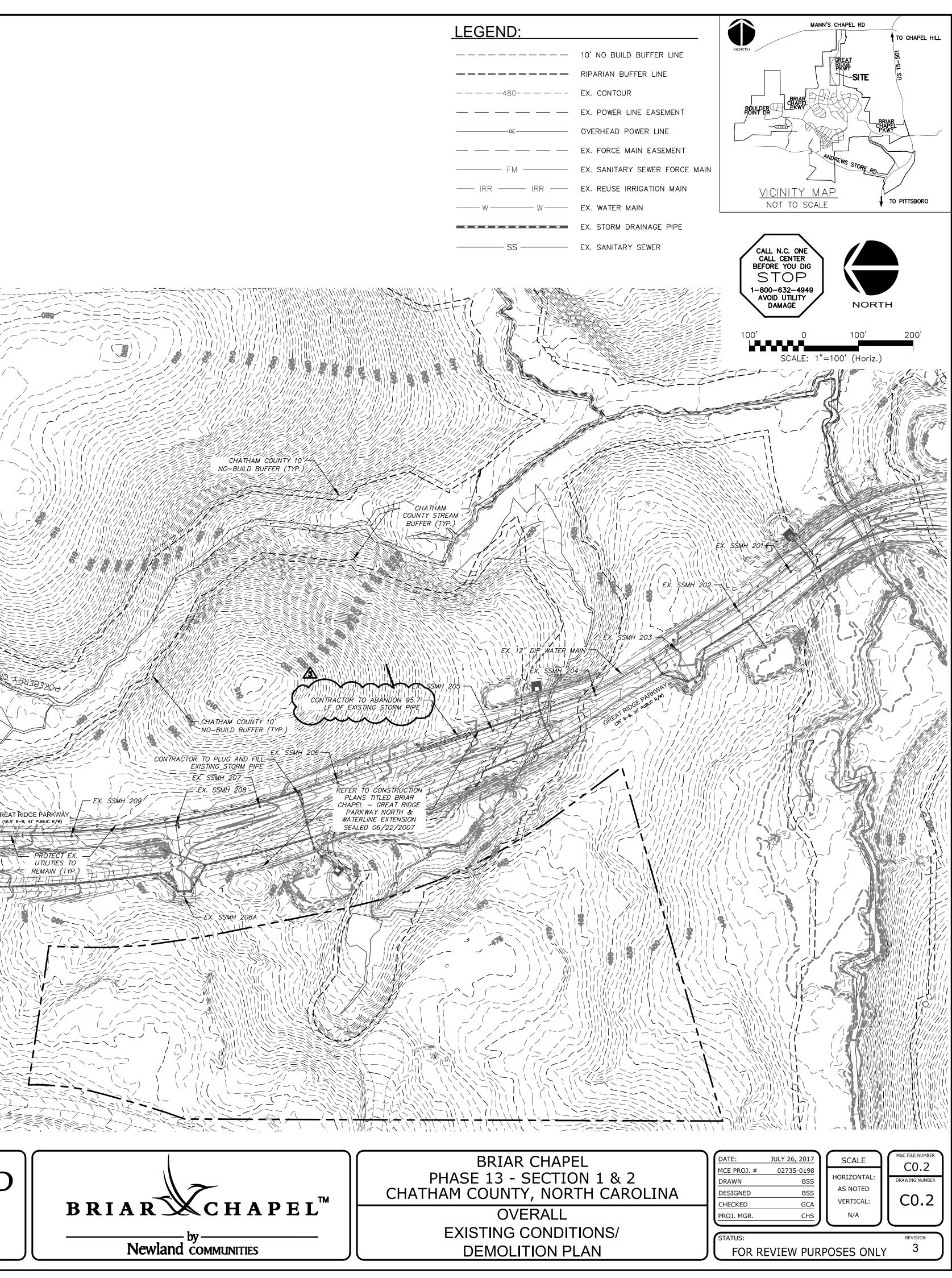
AND TRENCHING PROCEDURES. CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, ETC. AS NECESSARY FOR THESE OPERATIONS, AND SHALL COMPLY WITH ALL OSHA PERFORMANCE CRITERIA.

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

`СНАТНАМ - COUNTY STREAM BUFFER (TYP.)

HE 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



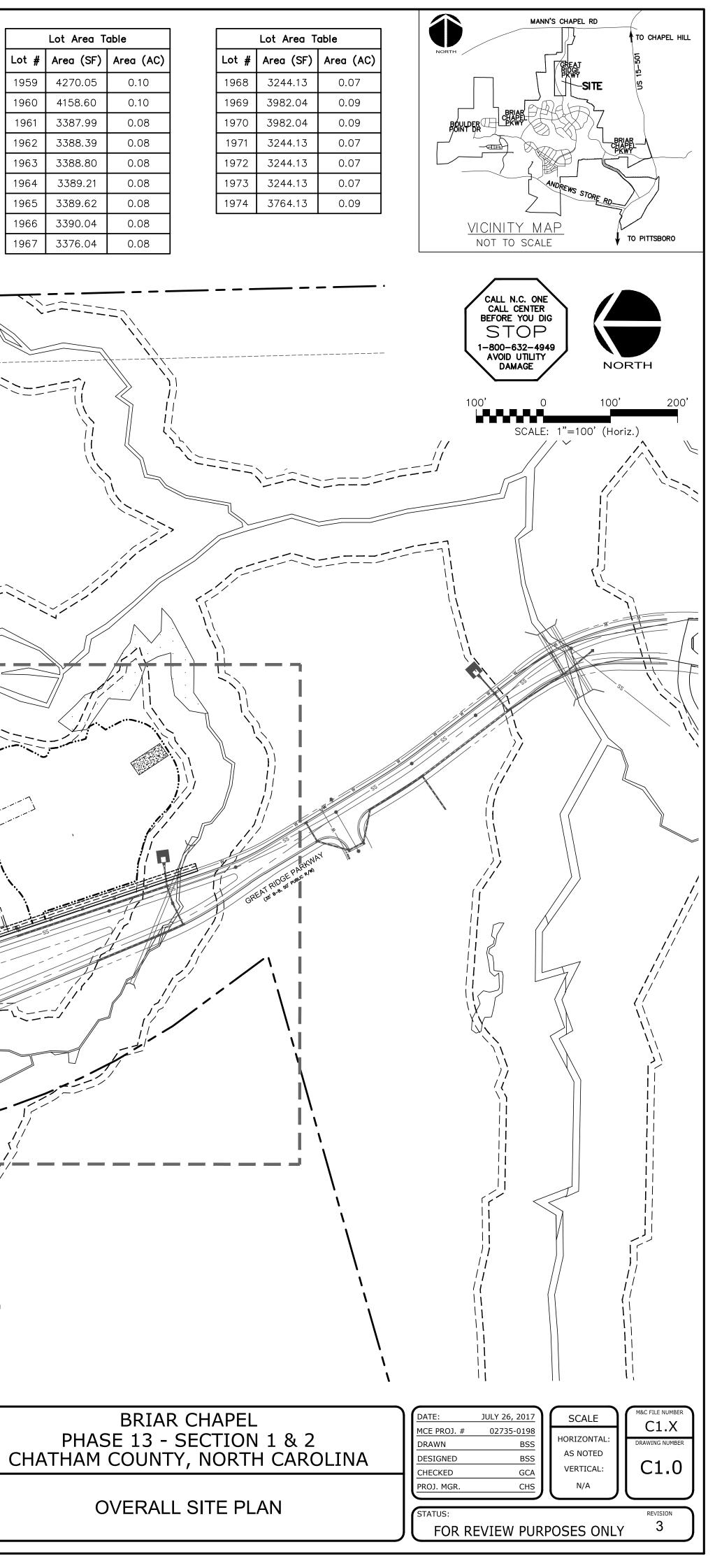


SITE GENERAL NOTES: 1. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER IF ANY DISCREPANCIES EXIST PRIOR TO CONSTRUCTION. NO	LEGEND:
ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.	FUTL
<ol> <li>REFER TO THE FOLLOWING JOHN R. MCADAMS COMPANY, INC. CONSTRUCTION PLANS, AND ALL SUBSEQUENT CONSTRUCTION BULLETINS FOR INFORMATION ON EXISTING SITE INFRASTRUCTURE:</li> <li>BRIAR CHAPEL – GREAT RIDGE PARKWAY NORTH AND WATERLINE EXTENSION SEALED JUNE 22, 2007</li> </ol>	= EXIS
– BRIAR CHAPEL – RECLAMATION FACILITY EROSION CONTROL PLAN SEALED JULY 29, 2005 – BRIAR CHAPEL – PHASE 1 CONSTRUCTION PLANS SEALED OCTOBER 21, 2005. – BRIAR CHAPEL – WEST EXTENSION GRADING PLAN (INTERIM) SEALED MARCH 1, 2007.	HOA
<ul> <li>BRIAR CHAPEL – PHASE 3 CONSTRUCTION PLANS SEALED DECEMBER 4, 2006.</li> <li>BRIAR CHAPEL – PHASE 4 CONSTRUCTION PLANS SEALED JANUARY 15, 2007.</li> <li>BRIAR CHAPEL – WATER QUALITY PONDS 5 AND 6 CONSTRUCTION PLANS SEALED AUGUST 24, 2006.</li> </ul>	— — — — — — — — — — PUBI
– BRIAR CHAPEL – PUMP STATION CONSTRUCTION PLANS DATED APRIL 3, 2006. – BRIAR CHAPEL – PHASE 4 – POD D CONSTRUCTION PLANS SEALED SEPT. 17, 2007. – BRIAR CHAPEL – PHASE 3 & 4 EROSION CONTROL PLANS SEALED JULY 26, 2007. – BRIAR CHAPEL – PHASE 5 SOUTH SECTION 1 CONSTRUCTION PLANS SEALED NOVEMBER 9, 2009.	EXIS
<ul> <li>BRIAR CHAPEL - PHASE 5 SOUTH SECTION 1 CONSTRUCTION PLANS SEALED NOVEMBER 9, 2009.</li> <li>BRIAR CHAPEL - PHASE 5 SOUTH SECTION 2 CONSTRUCTION PLANS SEALED OCTOBER 8, 2009.</li> <li>BRIAR CHAPEL - PHASE 6 NORTH SECTIONS 1 AND 2 CONSTRUCTION PLANS SEALED OCTOBER 8, 2012.</li> </ul>	
3. STREAM AND WETLAND LOCATIONS ARE BASED ON INFORMATION PROVIDED BY HUYSMAN AND BANDY, INC CONTACT CHRIS HUYSMAN AR 336-306-0906.	10' I
4. NO PORTION OF THIS PROPERTY IS LOCATED IN SPECIAL FLOOD HAZARD AREA "AE" AS SHOWN ON FEMA FIRM MAP #3710976500J & #3710976600J DATED FEBRUARY 2, 2007.	
<ol> <li>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.</li> </ol>	BMP
6. 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. 7. REFER TO PLAN AND PROFILE SHEETS FOR DETAILED SANITARY SEWER AND STORM DRAINAGE INFORMATION WITHIN	
PUBLIC ROADS. CHATHAM COUNTY REQUIRED SITE NOTES	
1. PROPERTY OWNER/DEVELOPER:	
NNP BRIAR CHAPEL, LLC 1342 BRIAR CHAPEL PARKWAY CHAPEL HILL, NC 27516 RHONE: (010) 051 0700	
PHONE: (919) 951–0700 2. SITE AKPAR #: 80418, 86285, & 2617	
	СНАТНАМ
	COUNTY STREAM BUFFER (TYP.)
	(932)
	1933
	1937
	1940 1947 1947
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	SEAL
	WINNING OFFSSION
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3     REVISIONS PER COMMENTS RECEIVED FROM COUNTY EROSION CONTROL     2017.10.09       2     REVISIONS PER COMMENTS RECEIVED FROM NCDOT     2017.09.21       1     REVISIONS PER COMMENTS RECEIVED FROM COUNTY EROSION CONTROL     2017.09.13	■ : 036348 . 10/09/20 
1     REVISIONS PER COMMENTS RECEIVED FROM COUNTY EROSION CONTROL     2017.09.13       0     SUBMITTAL TO AGENCIES     2017.07.26       REV.NO.     DESCRIPTIONS     DATE	Unit Seal ( 036348) 10/09/20 10/09/20 10/09/20
REVISIONS	1

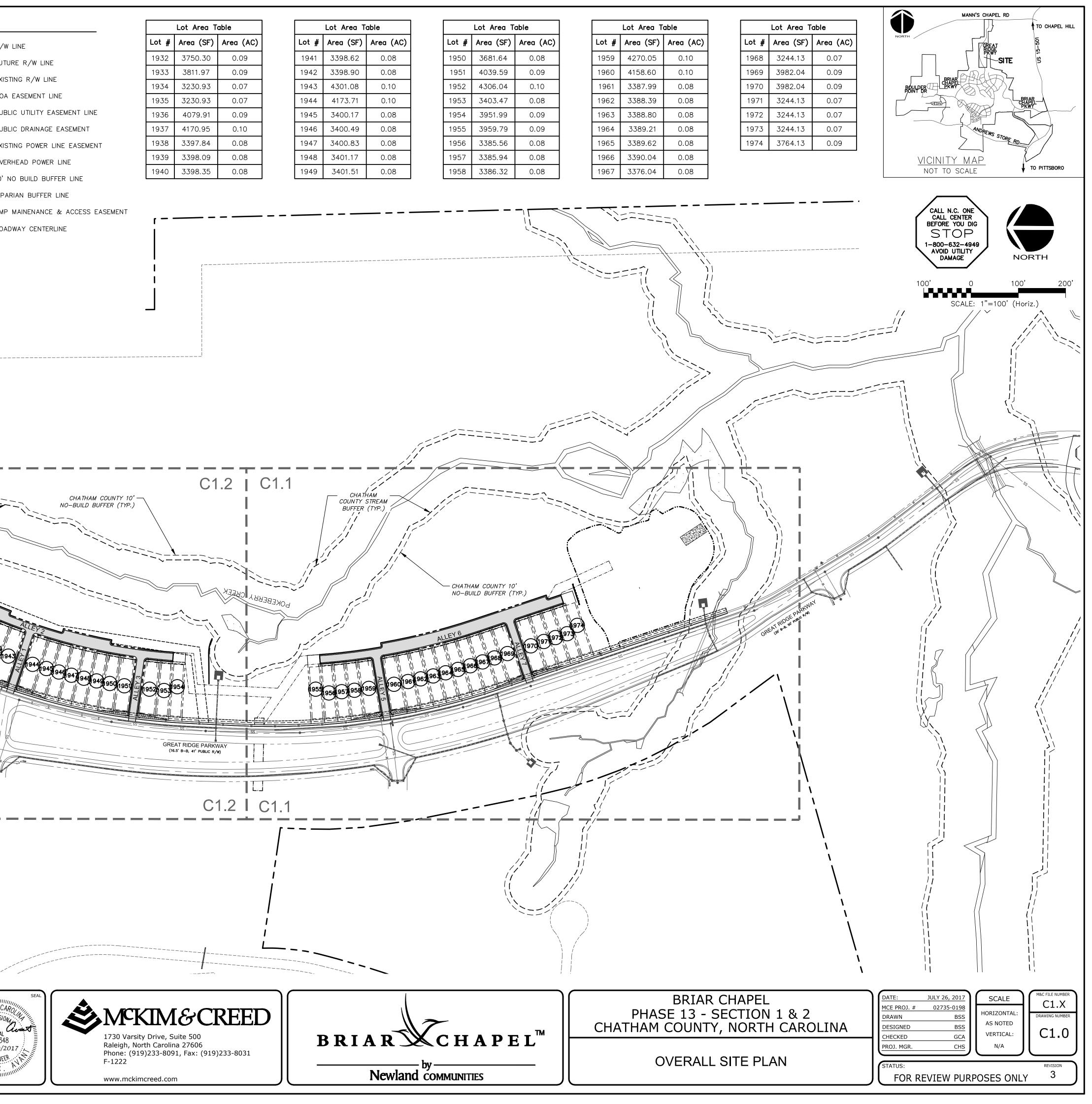
	Lot Area Table		
W LINE	Lot #	Area (SF)	Area (AC)
TURE R/W LINE	1932	3750.30	0.09
,	1933	3811.97	0.09
STING R/W LINE	1934	3230.93	0.07
A EASEMENT LINE	1935	3230.93	0.07
BLIC UTILITY EASEMENT LINE	1936	4079.91	0.09
BLIC DRAINAGE EASEMENT	1937	4170.95	0.10
STING POWER LINE EASEMENT	1938	3397.84	0.08
RHEAD POWER LINE	1939	3398.09	0.08
NO BUILD BUFFER LINE	1940	3398.35	0.08

Lot Area Table					
Lot # Area (SF)		Area (AC)			
1941	3398.62	0.08			
1942	3398.90	0.08			
1943	4301.08	0.10			
1944	4173.71	0.10			
1945	3400.17	0.08			
1946	3400.49	0.08			
1947	3400.83	0.08			
1948	3401.17	0.08			
1949	3401.51	0.08			

Lot Area TableLot #Area (SF)Area (AC19503681.640.0819514039.590.0919524306.040.1019533403.470.0819543951.990.0919553959.790.0919563385.560.08	2)
19503681.640.0819514039.590.0919524306.040.1019533403.470.0819543951.990.0919553959.790.09	C)
1951       4039.59       0.09         1952       4306.04       0.10         1953       3403.47       0.08         1954       3951.99       0.09         1955       3959.79       0.09	
1952       4306.04       0.10         1953       3403.47       0.08         1954       3951.99       0.09         1955       3959.79       0.09	
1953       3403.47       0.08         1954       3951.99       0.09         1955       3959.79       0.09	
1954     3951.99     0.09       1955     3959.79     0.09	
1955 3959.79 0.09	
1956 3385 56 0.08	
1900 0000.00 0.00	
1957 3385.94 0.08	
1958 3386.32 0.08	



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- 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.
- 2. 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 WITHIN 24 HOURS OF EVERY 0.5" OR MORE RAINFALL EVENT. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
- 4. 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, OWNER'S REPRESENTATIVE AND ENGINEER WITH ANY ADDITIONAL MEASURES NEEDED.
- . CONTRACTOR SHALL ESTABLISH GROUNDCOVER ON DISTURBED AREAS WITHIN THE NUMBER OF CALENDAR DAYS AFTER COMPLETION OF GRADING PER THE SCHEDULE BELOW:

#### (14) CALENDAR DAYS GRADUAL SLOPES: MODERATE SLOPES: (10) CALENDAR DAYS STEEP SLOPES: (7) CALENDAR DAYS

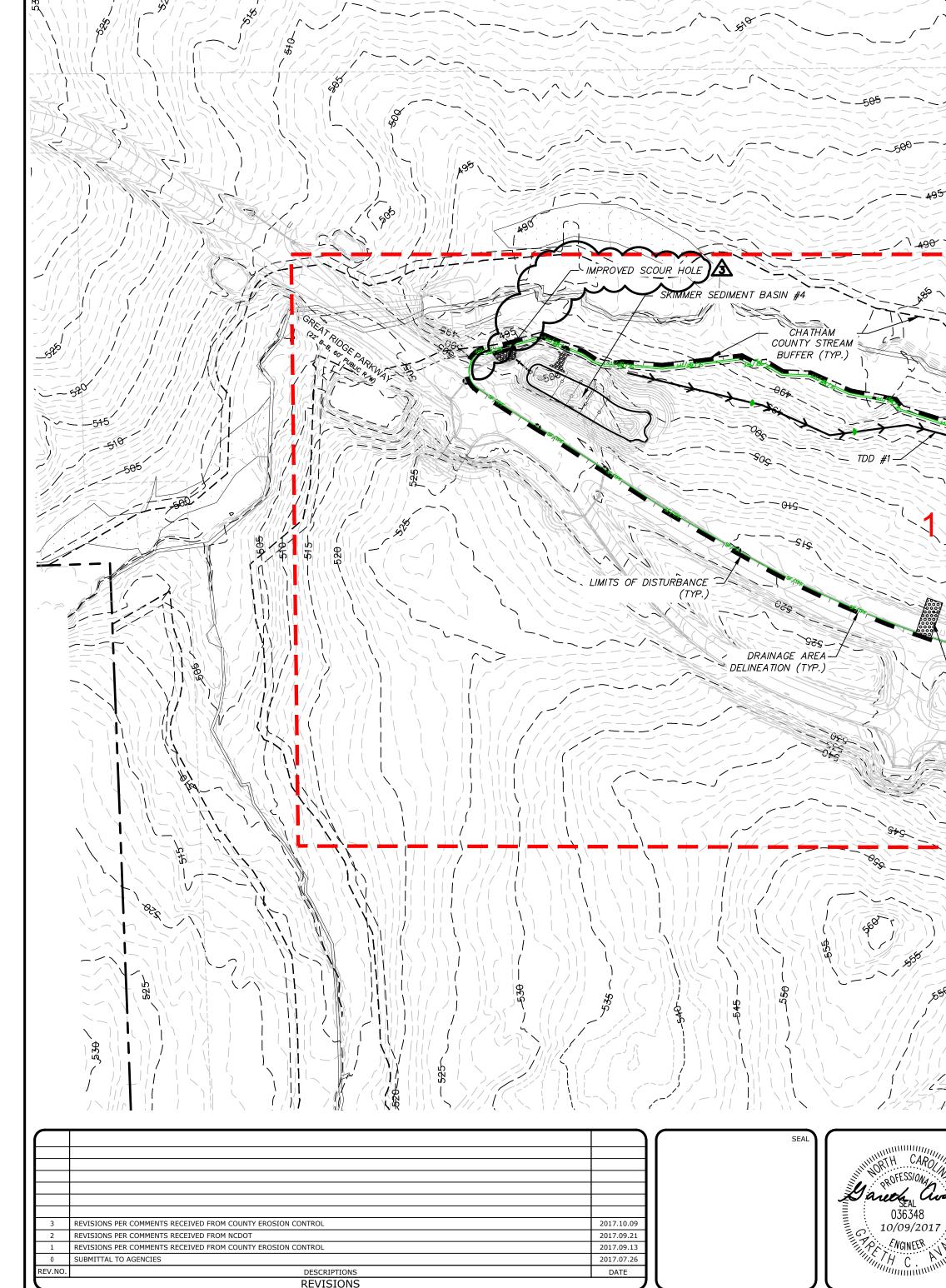
- SLOPES ARE AS DEFINED IN THE CHATHAM COUNTY SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE.
- . CONTRACTOR SHALL ARRANGE PRE-CONSTRUCTION MEETING WITH THE OWNER'S REPRESENTATIVE, ENGINEER AND CHATHAM COUNTY.
- 7. OBTAIN LETTER OF PLAN APPROVAL FOR SEDIMENTATION AND EROSION CONTROL FROM CHATHAM COUNTY SOIL EROSION & SEDIMENTATION
- CONTRO 8. CONTRACTOR TO POST EROSION CONTROL PERMIT PROMINENTLY ON SITE AT ALL TIMES.
- 9. CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES TO AVOID CONFLICT DURING INSTALLATION OF EROSION CONTROL MEASURES AND STORM DRAINAGE. CONTRACTOR IS TO CALL 1-800-632-4949 FOR "NC ONE CALL" TO HAVE UTILITIES LOCATED.

## STAGE 1 CONSTRUCTION SEQUENCE (CONT.):

- 10. CONTRACTOR TO HAVE A PROFESSIONAL LAND SURVEYOR FLAG PROPERTY LINES, EASEMENTS, LANDSCAPE BUFFERS, STREAM BUFFERS, TREE PROTECTION AREAS AND LIMITS OF DISTURBANCE.
- 11. CONTRACTOR TO ENSURE THAT EXISTING EROSION CONTROL DEVICES ARE IN WORKING ORDER AND FUNCTIONING AS INTENDED IN PARTICULAR EXISTING INLET PROTECTION DEVICES ALONG GREAT RIDGE PARKWAY. IF NOT, CONTRACTOR IS TO TAKE MEASURES TO RESTORE EXISTING NON-FUNCTIONING EROSION CONTROL DEVICES.
- 12. INSTALL TREE PROTECTION FENCING AND SILT FENCING AS SHOWN AND DETAILED ON PLAN. TIMBER ONLY AS NECESSARY TO INSTALL THESE DEVICES.
- 13. CONSTRUCT TEMPORARY SKIMMER SEDIMENT BASINS & TEMPORARY SEDIMENT TRAP TO THE REQUIRED DIMENSIONS AND ELEVATIONS AS DETAILED IN THESE PLANS. PERMANENT RISER STRUCTURES SHALL BE INSTALLED IN SKIMMER BASINS #2 (BMP #33) & #4 (BMP #34) PER THE DETAILS AS SHOWN IN SHEETS D4.1-D4.4 AND SKIMMERS SHALL BE ATTACHED ACCORDINGLY. GRUB ONLY AS NECESSARY TO INSTALL THE BASINS. MATERIAL EXCAVATED DURING THE CONSTRUCTION OF SEDIMENT BASINS SHALL BE TEMPORARILY STOCKPILED ADJACENT TO BASINS. ONCE ROUGH GRADING OPERATIONS BEGIN, THESE MATERIALS SHALL BE PLACED AS NEEDED IN AREAS OF FILL OR MOVED TO LARGER STOCKPILE AREAS.
- 14. INSTALL BAFFLES PER PLAN. SEED AND MULCH SIDE SLOPES OF SEDIMENT BASINS UPON COMPLETION. INSTALL BIODEGRADABLE MATTING ON SIDE SLOPES OF BASINS IF NECESSARY TO ESTABLISH COVER.
- 15. CONSTRUCT TEMPORARY DIVERSION DITCHES AS SHOWN AND DETAILED IN THESE PLANS. SEED, MULCH AND INSTALL REQUIRED LINERS IN THESE DITCHES. INSTALL CHECK DAMS IN DITCHES AS SHOWN AND DETAILED ON PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE EROSION CONTROL MEASURES.
- 15. CONTACT CHATHAM COUNTY SOIL EROSION & SEDIMENTATION AT 919-548-6643 AND ENGINEER UPON COMPLETION OF INITIAL EROSION CONTROL MEASURES.
- 16. ONCE TEMPORARY SKIMMER SEDIMENT BASINS AND DIVERSION DITCHES HAVE BEEN INSTALLED, GRUB WITHIN DELINEATED DRAINAGE AREAS ASSOCIATED WITH THE INSTALLED TEMPORARY SKIMMER SEDIMENT BASINS.

## STAGE 1 CONSTRUCTION SEQUENCE (CONT.):

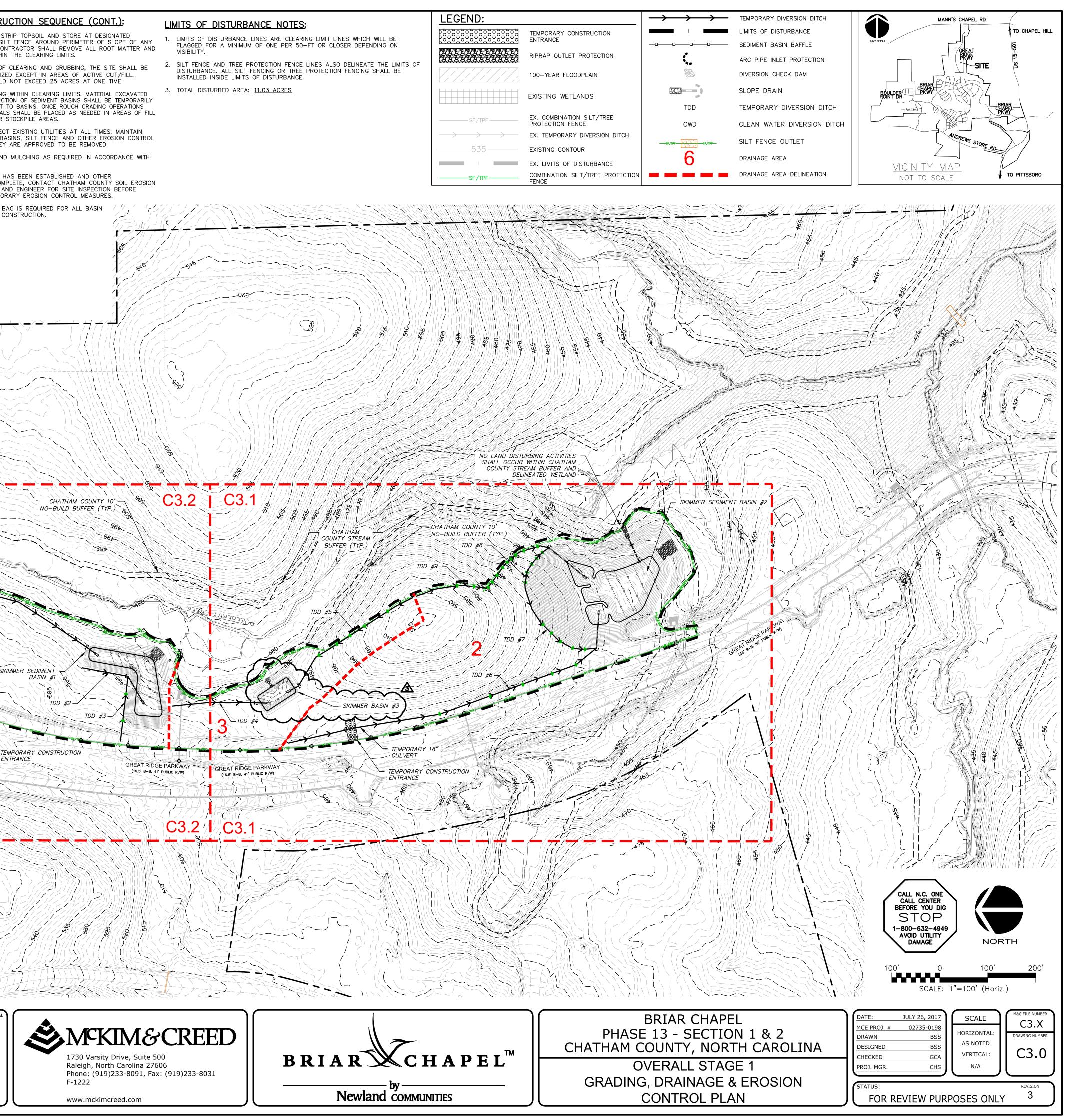
- 18. AFTER COMPLETION OF CLEARING AND GRUBBING, THE SITE SHALL BE TEMPORARILY STABILIZED EXCEPT IN AREAS OF ACTIVE CUT/FILL. ACTIVE AREAS SHOULD NOT EXCEED 25 ACRES AT ONE TIME.
- - 20. MAINTAIN AND PROTECT EXISTING UTILITIES AT ALL TIMES. MAINTAIN DIVERSION DITCHES, BASINS, SILT FENCE AND OTHER EROSION CONTROL MEASURES UNTIL THEY ARE APPROVED TO BE REMOVED. 21. PERFORM SEEDING AND MULCHING AS REQUIRED IN ACCORDANCE WITH
  - THE PLANS. 22. ONCE GROUNDCOVER 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.



- 17. CONTRACTOR SHALL STRIP TOPSOIL AND STORE AT DESIGNATED LOCATION. PROVIDE SILT FENCE AROUND PERIMETER OF SLOPE OF ANY STOCKPILE AREAS. CONTRACTOR SHALL REMOVE ALL ROOT MATTER AND ORGANICS FROM WITHIN THE CLEARING LIMITS.
- 19. BEGIN ROUGH GRADING WITHIN CLEARING LIMITS. MATERIAL EXCAVATED DURING THE CONSTRUCTION OF SEDIMENT BASINS SHALL BE TEMPORARILY STOCKPILED ADJACENT TO BASINS. ONCE ROUGH GRADING OPERATIONS BEGIN. THESE MATERIALS SHALL BE PLACED AS NEEDED IN AREAS OF FILL OR MOVED TO LARGER STOCKPILE AREAS.
- 23. USE OF A SEDIMENT BAG IS REQUIRED FOR ALL BASIN DEWATERING DURING CONSTRUCTION.

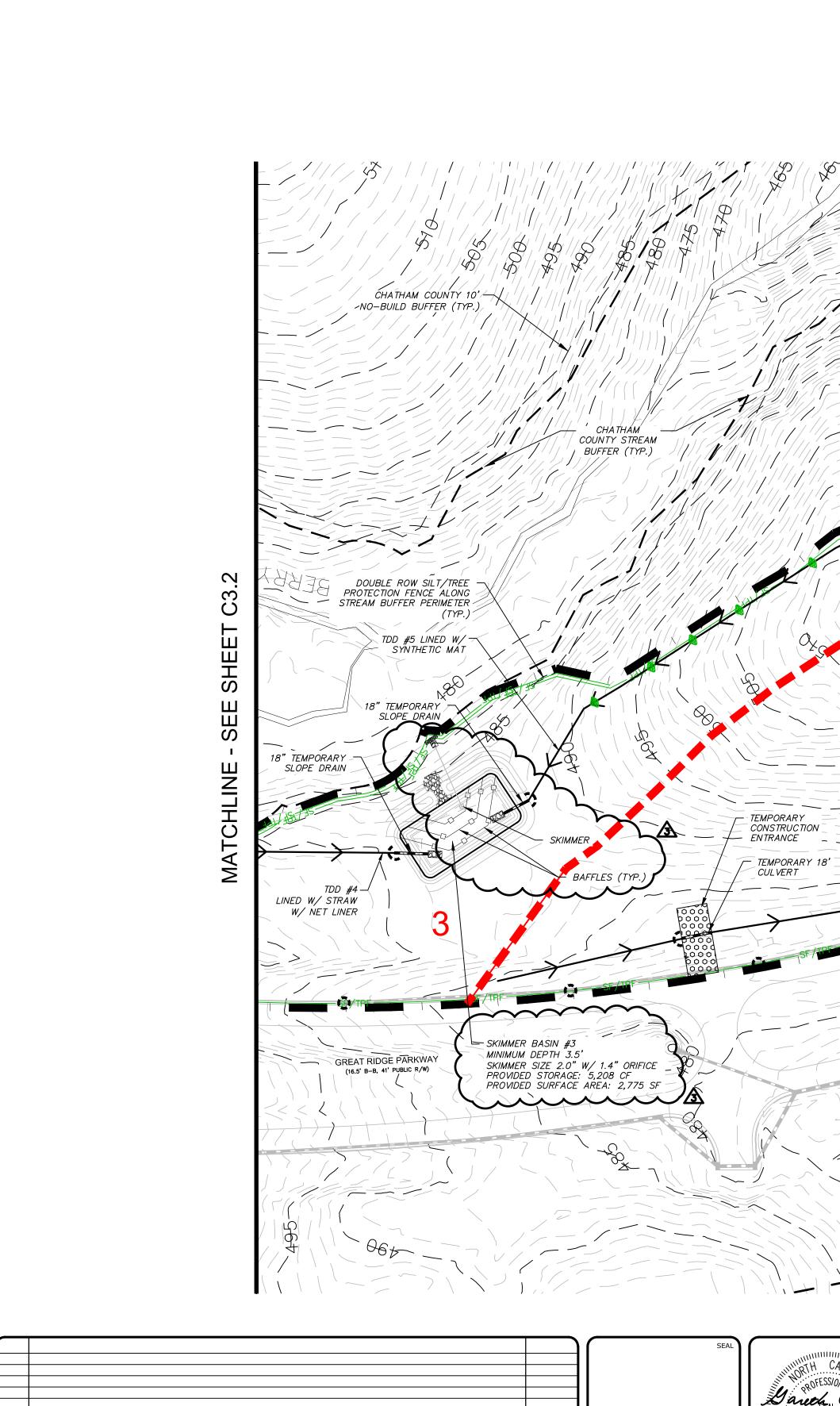
- VISIBILITY.
- DISTURBANCE. ALL SILT FENCING OR TREE PROTECTION FENCING SHALL BE INSTALLED INSIDE LIMITS OF DISTURBANCE.

ENTRANCE









DESCRIPTIONS

ONS PER COMMENTS RECEIVED FROM COUNTY EROSION CONTR

ENTS RECEIVED FROM COUNTY FROSION CONTRO

IMENTS RECEIVED FROM NCD



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

DOUBLE ROW SILT/TREE PROTECTION FENCE ALONG

DELINEATED WETLAND

(TYP.)

🚽 24" TEMPORARY 🚽

SLOPE DRAIN

STREAM BUFFER PERIMETER

NO LAND DISTURBING ACTIVITIES 7-

SHALL OCCUR WITHIN CHATHAM

COUNTY STREAM BUFFER AND

HARDWARE CLOTH AND -GRAVEL INLET PROTECTION FOR EXISTING STORM INLETS (TYP.)

EXISTING WETLAND OR WITHIN DELINEATED STREAM BUFFER

24" TEMPORAR SLOPE DRAIN

3





www.mckimcreed.com

CHATHAM COUNTY 10

NO-BUILD BUFFER (TYP.)

DD #9 LINED W/

ECK DAM (TY

ROTECTION

HARDWARE CLOTH AND GRAVEL INLET PROTECTION FOR EXISTING STORM INLETS

TDD #8 LINED W/

TDD #7 LINED W/

SC250

#### EROSION CONTROL NOTES:

1. PRIOR TO BEGINNING CONSTRUCTION, AN ON SITE PRE-CONSTRUCTION MEETING SHALL BE HELD. CHATHAM COUNTY OFFICIALS, THE ENGINEER, OWNER'S REPRESENTATIVE AND CONTRACTOR MUST ATTEND. NOTICE MUST BE GIVEN 48 HOURS NOTICE PRIOR TO SCHEDULING.

2. ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL MANUAL.

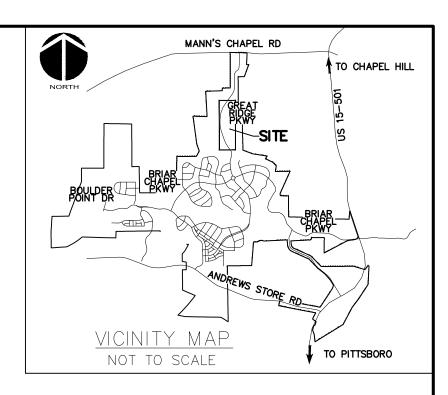
ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED
 PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED

AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS, UNLESS OTHERWISE NOTED IN STABILIZATION TIMEFRAME CHART, TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED WITHIN 14 DAYS TO AREAS THAT ARE LEFT TO

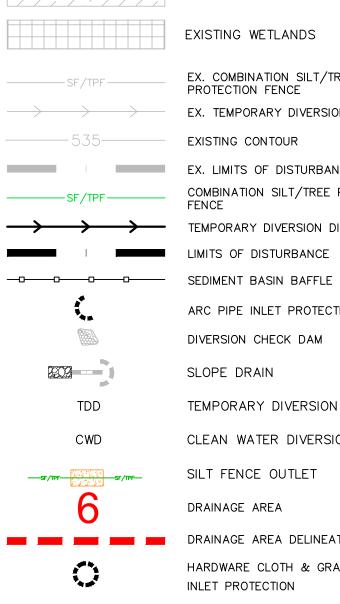
BE DORMANT FOR MORE THAN ONE YEAR. PERIODICALLY AND AFTER EACH RUNOFF PRODUCING RAINFALL EVENT EXCEEDING <sup>1</sup> INCH. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE ÉFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY. ANY MEASURE THAT FAILS TO FUNCTION AS INTENDED SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER OR OWNER'S REPRESENTATIVE.

NO RIPRAP SHALL BE PLACED IN THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED TO BE NECESSARY DURING CONSTRUCTION





LEGEND:



#### TEMPORARY CONSTRUCTION ENTRANCE

RIPRAP OUTLET PROTECTION

100-YEAR FLOODPLAIN

EXISTING WETLANDS

#### EX. COMBINATION SILT/TREE PROTECTION FENCE

EX. TEMPORARY DIVERSION DITCH EXISTING CONTOUR

EX. LIMITS OF DISTURBANCE

COMBINATION SILT/TREE PROTECTION FENCE

TEMPORARY DIVERSION DITCH

LIMITS OF DISTURBANCE

ARC PIPE INLET PROTECTION DIVERSION CHECK DAM

SLOPE DRAIN

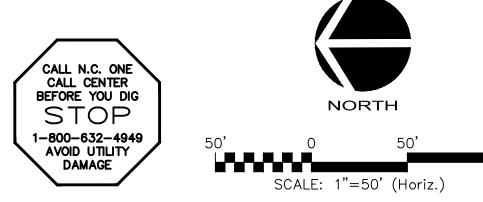
TEMPORARY DIVERSION DITCH

CLEAN WATER DIVERSION DITCH

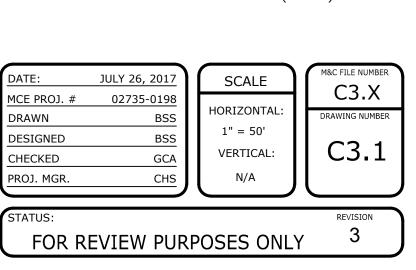
SILT FENCE OUTLET

DRAINAGE AREA

DRAINAGE AREA DELINEATION HARDWARE CLOTH & GRAVEL INLET PROTECTION



BRIAR CHAPEL PHASE 13 - SECTION 1 & 2 CHATHAM COUNTY, NORTH CAROLINA STAGE 1 **GRADING, DRAINAGE & EROSION** CONTROL PLAN



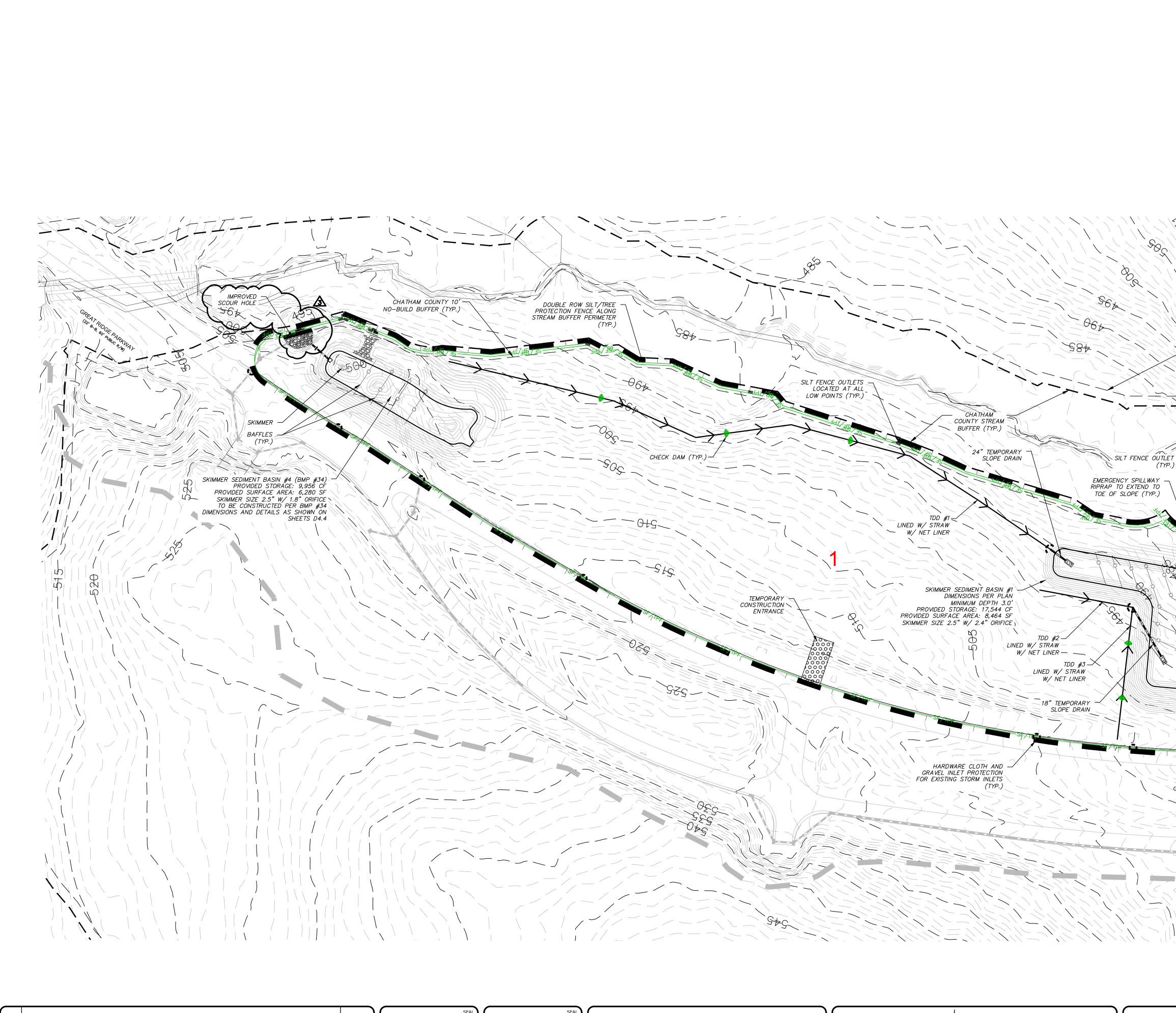
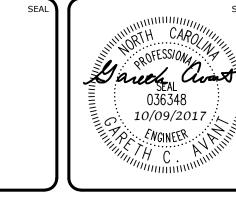
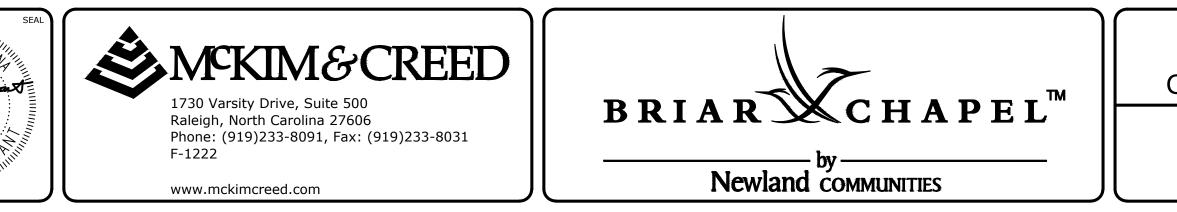
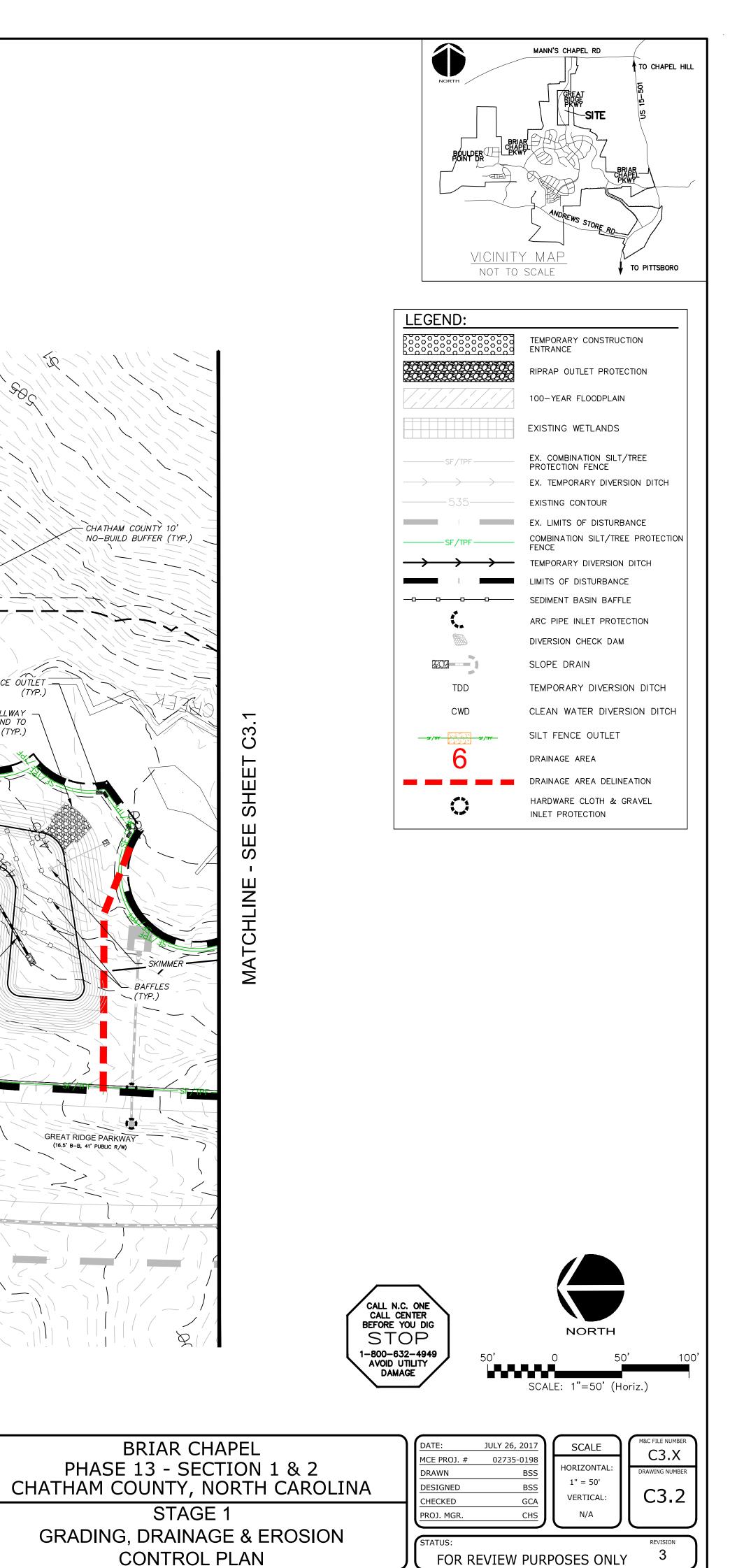


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#### **GENERAL NOTES:**

- 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.
- 2. 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
- 4. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL ARRANGE AND ATTEND A PRECONSTRUCTION CONFERENCE WITH CHATHAM COUNTY, OWNER AND ENGINEER.

#### GENERAL NOTES (CON'T):

- 5. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON BEST AVAILABLE RECORD DRAWINGS.
- 6. 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.
- 7. 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.
- 8. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS AND SHALL REPLACE ALL MARKERS REMOVED IF DAMAGED DURING CONSTRUCTION.

## LEGEND: ------ EXISTING POWER LINE EASEMENT OVERHEAD POWER LINE 10' NO BUILD BUFFER LINE \_\_\_\_\_ RIPARIAN BUFFER LINE COMBINATION SILT/TREE PROTECTION FENCING - TPF - TREE PROTECTION FENCING ----- EXISTING CONTOUR -480— ------ PROPOSED CONTOUR EX. LIMITS OF DISTURBANCE LIMITS OF DISTURBANCE STAGE 1 DIVERSION DITCH TEMPORARY CONSTRUCTION ENTRANCE STAGE 1 CHECK DAM STAGE 1 ARC FILTER INLET PROTECTION STAGE 1 RIPRAP OUTLET PROTECTION EROSION CONTROL MATTING >---- CHATHAM COUNTY 10' ``NO–BUILD BUFFER (TYP.) CHATHAM COUNTY STREAM BUFFER (TYP.) (TO BE REMOVED)-CHA THAM COUNTY STREAM BUFFER (TYP. ´#34 TÓ BE USED AS SKIMMER∖~ BASIN DURING CONSTRUCTION DIMENT SEE DETAIL SHEET D4.4 EX. TDD (TO BE REMOVED) EX. SKIMMER-SEDIMENT BASIN #1-TO BE REMOVED

3	REVISIONS PER COMMENTS RECEIVED FROM COUNTY EROSION CONTROL	2017.10.09
2	REVISIONS PER COMMENTS RECEIVED FROM NCDOT	2017.09.21
1	REVISIONS PER COMMENTS RECEIVED FROM COUNTY EROSION CONTROL	2017.09.13
0	SUBMITTAL TO AGENCIES	2017.07.26
REV.NO.	DESCRIPTIONS	DATE
	REVISIONS	



## GENERAL NOTES (CON'T):

#3710976500J DATED FEBRUARY 2, 2007.

9. CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING AS NECESSARY THROUGHOUT CONSTRUCTION. USE OF SEDIMENT BAG IS REQUIRED FOR ALL BASIN DEWATERING.

10. CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL PERMIT CONDITIONS, MONITORING AND REPORTING REQUIREMENTS. 11. REFER TO SHEET D2.1 FOR PROPOSED ROAD CROSS SECTION

DETAILS AND PAVEMENT SCHEDULE. 12. GRADED SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH CURLEX SINGLE NET (CURLEX I) MATTING BY AMERICAN

EXCELSIOR COMPANY OR APPROVED EQUAL. 13. STREAM AND WETLAND LOCATIONS ARE BASED ON DELINEATIONS 2. LIMITS OF DISTURBANCE: 11.03 ACRES

PROVIDED BY SOIL AND ENVIRONMENTAL CONSULTANTS IN RALEIGH, NC - CONTACT SEAN CLARK AT 919-846-5900. 14. NO PORTION OF THIS PROPERTY IS LOCATED IN SPECIAL FLOOD HAZARD AREA "AE" AS SHOWN ON FEMA FIRM MAP

## GENERAL NOTES (CON'T):

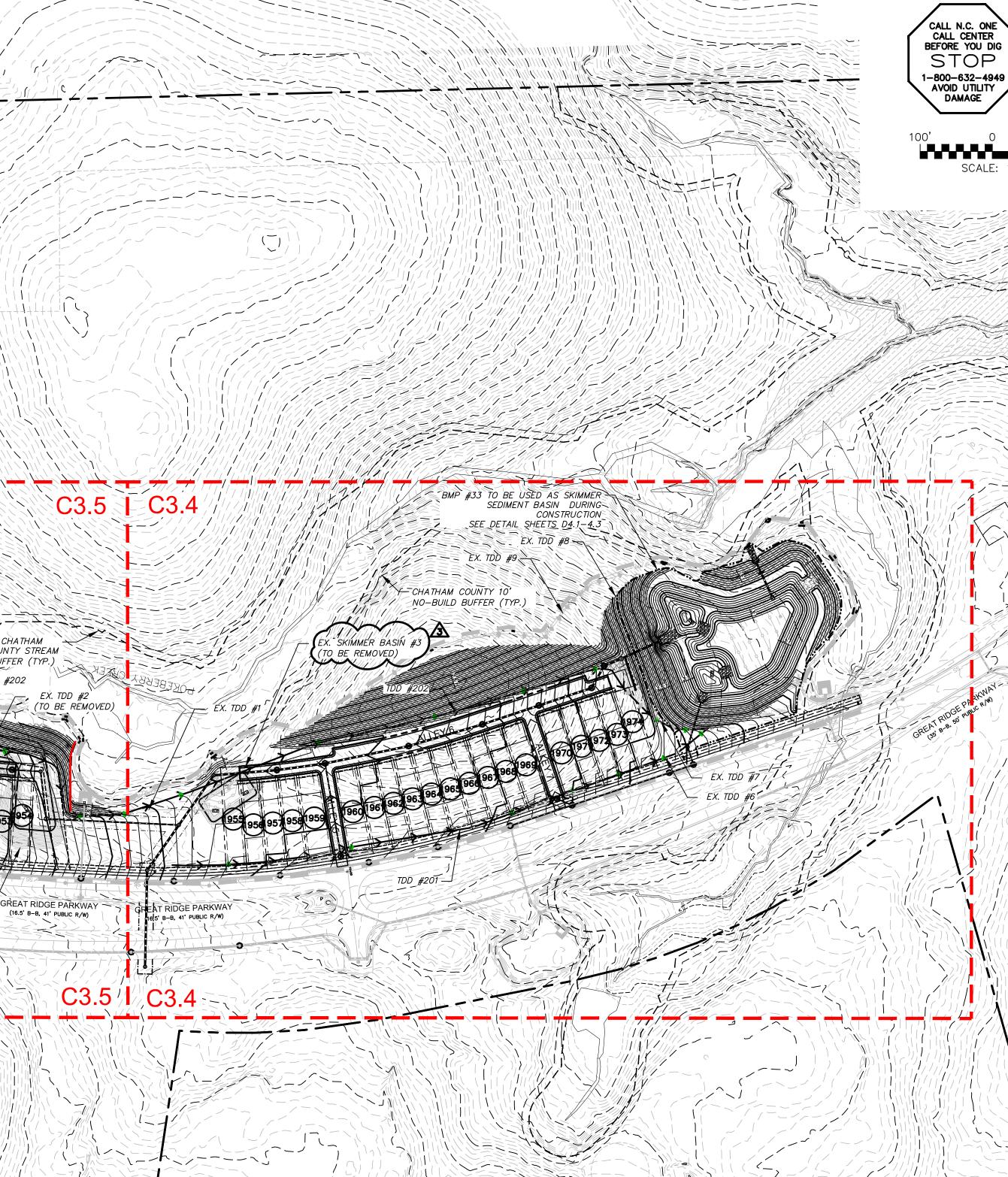
16. BEFORE STARTING ANY CONSTRUCTION OF IMPROVEMENTS WITHIN ANY NCDOT STREET OR HIGHWAY RIGHT-OF-WAY, CONTACT NCDOT DISTRICT OFFICE AND OBTAIN ALL PERMITS AND ENCROACHMENTS AND KEEP COPIES ON CONSTRUCTION SITE AT ALL TIMES. ALSO CONTACT NCDOT DISTRICT OFFICE 24 HOURS IN ADVANCE BEFORE PLACING CURB AND GUTTER AT (336) 629–1423.

## LIMITS OF DISTURBANCE NOTES:

- 1. 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.

## **RETAINING WALL NOTES:**

- 2. TOP GRADE OF WALL AND BOTTOM GRADE OF WALL SPECIFIED IN PLANS ARE INTENDED TO BE THE FINISHED PAVEMENT OR EARTH
- BOUNDARIES OF THE PROJECT PROPERTY, WITHOUT IMPACTING BUFFERS.
- CONSTRUCTION.





1. 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.

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 HORIZONTAL WALL LOCATION AS SHOWN IS THE FINISHED LOCATION OF THE BOTTOM OF WALL. THE WALL DESIGNER SHALL COORDINATE WITH THE ENGINEER TO VERIFY WHETHER CONFLICTS EXIST. THE WALL DESIGNER SHALL NOTIFY THE ENGINEER IN CASE OF ANY CONFLICTS, INCLUDING BUT NOT LIMITED TO EXISTING OR PROPOSED UTILITIES, WALL BATTER, GEOGRID PLACEMENT, ETC., OR IF ANY ASPECT OF WALL PLACEMENT CAN NOT BE ACCOMPLISHED. ALL WORK RELATED TO THE RETAINING WALL CONSTRUCTION SHALL BE ACCOMPLISHED WITHIN THE

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

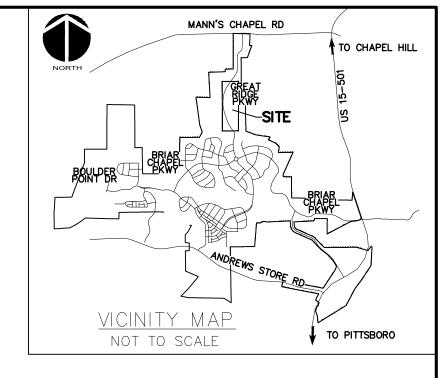
200'

NORTH

100

SCALE: 1"=100' (Horiz.)

DAMAGE



#### STAGE 2 CONSTRUCTION SEQUENCE:

- 1. CONTRACTOR SHALL MAINTAIN ALL STAGE 1 EROSION CONTROL DEVICES THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH THESE PLANS OR AS CONSTRUCTION REQUIRES THEM TO BE REMOVED, WITH APPROVAL CHATHAM COUNTY.
- 2. GRADING OPERATIONS SHALL BE COMPLETED SUCH THAT RUNOFF CAN BE DIRECTED TOWARDS ANY OF THE APPROVED SEDIMENT BASINS OR TRAPS AT ALL TIMES DURING CONSTRUCTION.
- 3. MASS GRADING SHALL BEGIN AT THE SOUTHERN HALF OF PHASE 13, JUST NORTH OF BMP #33, AND CONTINUE NORTH TOWARDS THE MIDDLE STREAM FINGER. AS MATERIAL IS REMOVED FROM THE SOUTHERN SECTION, IT SHALL BE PLACED IN THE NORTHERN SECTION, CLOSEST TO BMP #34 IN ORDER TO MAINTAIN POSITIVE DRAINAGE IN TDD #1 AND INTO TEMPORARY SEDIMENT BASIN #1 FOR AS LONG AS POSSIBLE.
- 4. AS MASS GRADING ALLOWS, STAGE 2 TEMPORARY DIVERSION DITCHES SHALL BE INSTALLED AND TEMPORARY STAGE 1 MEASURES SHALL BE REMOVED ONCE CONTRIBUTING AREAS CAN BE DIVERTED TO OTHER APPROVED EROSION CONTROL DEVICES.
- 5. TEMPORARY DIVERSION DITCH #200 SHALL BE INSTALLED, SEEDED AND LINED IN ACCORDANCE WITH THESE PLANS AS GRADING ALLOWS TO DIVERT RUNOFF INTO BMP #34. TEMPORARY ROCK CHECK DAMS AND SLOPE DRAINAGE SHALL BE INSTALLED AT THE TIME OF INSTALLATION.
- TEMPORARY DIVERSION DITCH #201 SHALL BE INSTALLED, SEEDED AND LINED IN ACCORDANCE WITH THESE PLANS TO PREVENT SEDIMENTATION INTO GREAT RIDGE PARKWAY DURING CONSTRUCTION.
- 7. TEMPORARY DIVERSION DITCH #202 SHALL BE INSTALLED, SEEDED AND LINED IN ACCORDANCE WITH THESE PLANS. IT SHALL BE EXTENDED NORTH AS GRADING ALLOWS IN ORDER TO MAINTAIN POSITIVE DRAINAGE FROM IT'S BEGINNING POINT TO BMP #33. TEMPORARY SEDIMENT BASIN #1 AND TEMPORARY SEDIMENT TRAP #4 SHALL BE MUCKED OUT, AND FILLED WITH MATERIAL PLACED IN A CONTROLLED MANNER, UNDER THE SUPERVISION OF THE PROJECT'S GEOTECHNICAL ENGINEER. THE BASIN SHALL ONLY BE REMOVED WITH THE APPROVAL OF CHATHAM COUNTY.
- 8. AS ELEVATIONS ARE BROUGHT TO FINAL GRADES AND STORM PIPING AND OTHER UTILITIES ARE INSTALLED IN ROADWAY SECTIONS, CONTRACTOR SHALL INSTALL HARDWARE CLOTH AND GRAVEL INLET PROTECTION AS SHOWN ON PLANS.
- 9. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, PAVING, DITCH LINING, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
- 10. 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 IN THE SOUTHERN HALF OF PHASE.
- 11. ONCE GROUNDCOVER 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.
- 12. FINAL BMP CONVERSION, INCLUDING MUCKING OUT OF ACCUMULATED SEDIMENT, REMOVAL OF SKIMMERS OR BAFFLES AND FINAL PLANTING SHALL OCCUR AT A LATER DATE, ONCE UPSTREAM AREAS HAVE BEEN STABILIZED OR CONSTRUCTION OF HOMES ON MOST LOTS HAS BEEN COMPLETED.

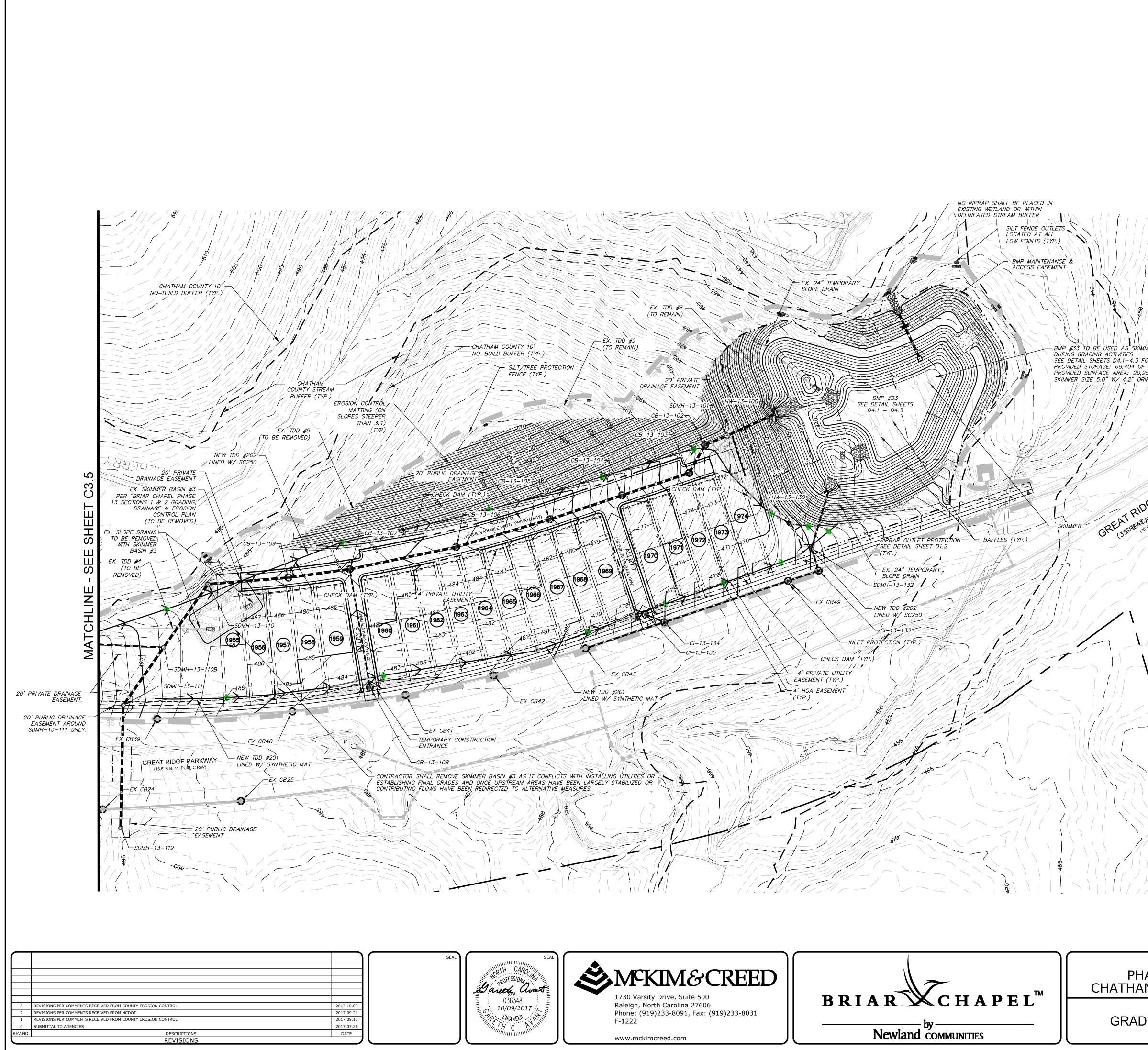
#### NCDOT REQUIRED DRAINAGE NOTES

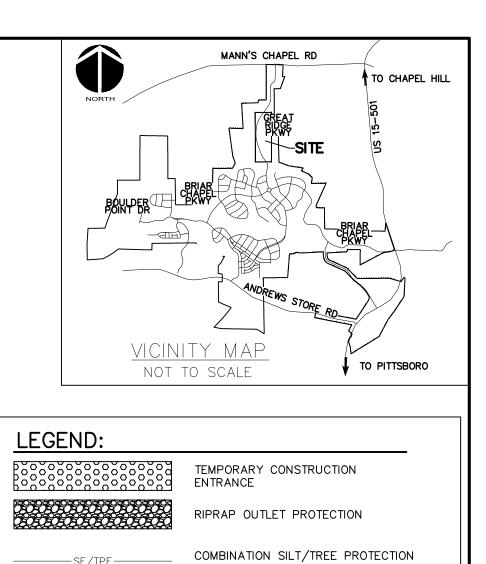
- 1. NCDOT DOES NOT ACCEPT MAINTENANCE RESPONSIBILITY FOR THE DRAINAGE STRUCTURES AND PIPING OUTSIDE OF NCDOT'S ROADWAY RIGHT-OF-WAY
- 2. NCDOT ASSUMES NO RESPONSIBILITY FOR OPERATION. MAINTENANCE OR LIABILITY OF THE STRUCTURAL STORMWATER BMP'S.

T FIDGE PARWNAY-		
T RID GU PURU Si Bre. 50		
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BRIAR CHAPEL
PHASE 13 - SECTION 1 & 2
HATHAM COUNTY, NORTH CAROLINA
OVERALL STAGE 2
GRADING, DRAINAGE & EROSION
CONTROL PLAN

DATE:	JULY 26, 2017	SCALE	M&C FILE NUMBER	
MCE PROJ. #	02735-0198	HORIZONTAL:		
DRAWN	BSS	AS NOTED	DRAWING NUMBER	
DESIGNED	BSS			
CHECKED	GCA	VERTICAL:	C3.3	
PROJ. MGR.	CHS	N/A		
STATUS:	REVISION			
FOR RE	7 3			





FENCE

EXISTING CONTOUR

EX. LIMITS OF DISTURBANCE

LIMITS OF DISTURBANCE

ARC PIPE INLET PROTECTION

EROSION CONTROL MATTING

HARDWARE CLOTH & GRAVEL INLET PROT.

TEMPORARY DIVERSION DITCH



### STORM DRAINAGE NOTES:

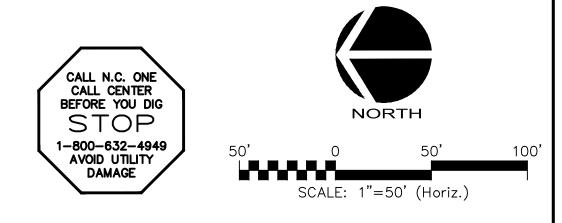
1. STORM DRAINAGE PIPES SHALL BE:

- 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.
- 2. ALL CONCRETE SHALL MEET A MINIMUM 3,000 PSI COMPRESSIVE STRENGTH.

\_\_\_\_\_\_ SF / TPF \_\_\_\_\_\_

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- 3. ALL PIPE IN STORM DRAIN STRUCTURES SHALL BE STRUCK EVEN WITH INSIDE WALL.
- 4. 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.
- 5. 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.
- 6. MATERIALS DEEMED AS UNSUITABLE FOR BACKFILL PURPOSES BY THE OWNER'S REPRESENTATIVE SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.
- 7. 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.
- 8. UNDER NO CIRCUMSTANCES SHALL WATER BE ALLOWED TO RISE IN UNBACKFILLED TRENCHES AFTER PIPE HAS BEEN PLACED.
- 9. ALL FLARED END SECTIONS DISCHARGING INTO WATER QUALITY PONDS WILL HAVE A CONCRETE PAD POURED UNDERNEATH THE FLARED END SECTION IN ACCORDANCE WITH PROVIDED CONSTRUCTION DETAILS.
- 10. RIM ELEVATIONS OF STORM DRAIN STRUCTURES SHALL BE FIELD VERIFIED. 11. STORM DRAINAGE WITHIN PRIVATE EASEMENTS TO BE OWNED, OPERATED AND
- MAINTAINED BY HOME OWNER'S ASSOCIATION OR AGENT THEREOF. 12. 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. 13. 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.
- 14. 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.



BRIAR CHAPEL PHASE 13 - SECTION 1 & 2 HATHAM COUNTY, NORTH CAROLINA	DATE: MCE PROJ. # DRAWN DESIGNED CHECKED	JULY 26, 2017 02735-0198 BSS BSS GCA	SCALE HORIZONTAL: 1" = 50' VERTICAL:	M&C FILE NUMBER C3.4 DRAWING NUMBER C3.4
STAGE 2 GRADING, DRAINAGE & EROSION CONTROL PLAN	PROJ. MGR.	CHS	N/A POSES ONLY	REVISION