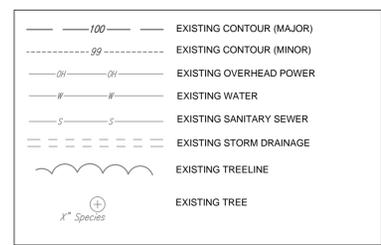


GENERAL NOTES

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH TOWN OF PITTSBORO STANDARDS AND SPECIFICATIONS, AS WELL AS ANY OTHER APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.
2. THE BOUNDARY AND TOPOGRAPHIC INFORMATION ARE BASED ON FIELD SURVEY PERFORMED BY VAN R. FINCH - LAND SURVEYS, P.A. ON JANUARY 23, 2015. ELEVATIONS ARE BASED ON A BENCHMARK NAIL SET IN 22" PECAN TREE SHOWN ON THIS SHEET. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
3. THERE ARE NO WETLANDS OR BUFFERED FEATURES ON SITE PER LETTER BY PIEDMONT ENVIRONMENTAL DATED NOVEMBER 14, 2014. THERE IS NO FEMA FLOODPLAIN CONTAINED ON THIS SITE PER FIRM PANEL 370420974100J, EFFECTIVE FEBRUARY 2, 2007.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING, COORDINATING, AND PAYMENT FOR ALL NECESSARY LOCATING SERVICES INCLUDING INDEPENDENT LOCATING SERVICES. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES LOCATED AT LEAST 48 HOURS PRIOR TO BEGINNING DEMOLITION, EXCAVATION, OR ANY OTHER FORM OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
5. ALL SUB-SURFACE UTILITIES IDENTIFIED ON THE CONSTRUCTION DOCUMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON SURVEY INFORMATION GATHERED FROM FIELD INSPECTION AND/OR ANY OTHER APPLICABLE RECORD DRAWINGS WHICH MAY BE AVAILABLE. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ACTUAL IN PLACE SUB-SURFACE UTILITY INFORMATION INCLUDING HORIZONTAL AND VERTICAL LOCATION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
6. EXISTING IMPROVEMENTS DAMAGED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED OR REPLACED TO ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL PERMITS, INSPECTIONS, CERTIFICATIONS, AND OTHER REQUIREMENTS WHICH MUST BE MET UNDER THIS CONTRACT ARE OBTAINED.
8. IF DEPARTURES FROM THE PROJECT DRAWINGS OR SPECIFICATIONS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREFOR SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO CONSTRUCTION. NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE RELOCATION OF ANY EXISTING UTILITY INFRASTRUCTURE REQUIRED TO COMPLETE ANY PORTION OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE COORDINATION AND COSTS OR ASSOCIATED WORK.
10. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND/OR METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.

TOTAL SITE AREA = 1.06 AC.

LEGEND



BOHLER ENGINEERING

STATE OF NORTH CAROLINA
 PROFESSIONAL ENGINEER
 LICENSE NO. 14027

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 SOUTH FLORIDA

REVISIONS

REV	DATE	COMMENT	BY
1	5/13/15	TOWN OF PITTSBORO COMMENTS	AWA
1	7/02/15	TOWN OF PITTSBORO COMMENTS	MAR

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NOT APPROVED FOR CONSTRUCTION

PROJECT No.:	NCR142045
DRAWN BY:	MAR
CHECKED BY:	LML
DATE:	04/7/2015
SCALE:	
CAD I.D.:	MAR

CONSTRUCTION PLANS

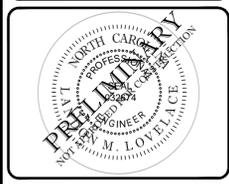
FOR
DAVIE STREET COTTAGES

LOCATION OF SITE
 PITTSBORO, NC

BOHLER ENGINEERING
 NC, PLLC, NCBELS P-1132

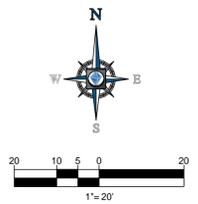
4011 WESTCHASE BLVD., SUITE 290
 RALEIGH, NC 27607

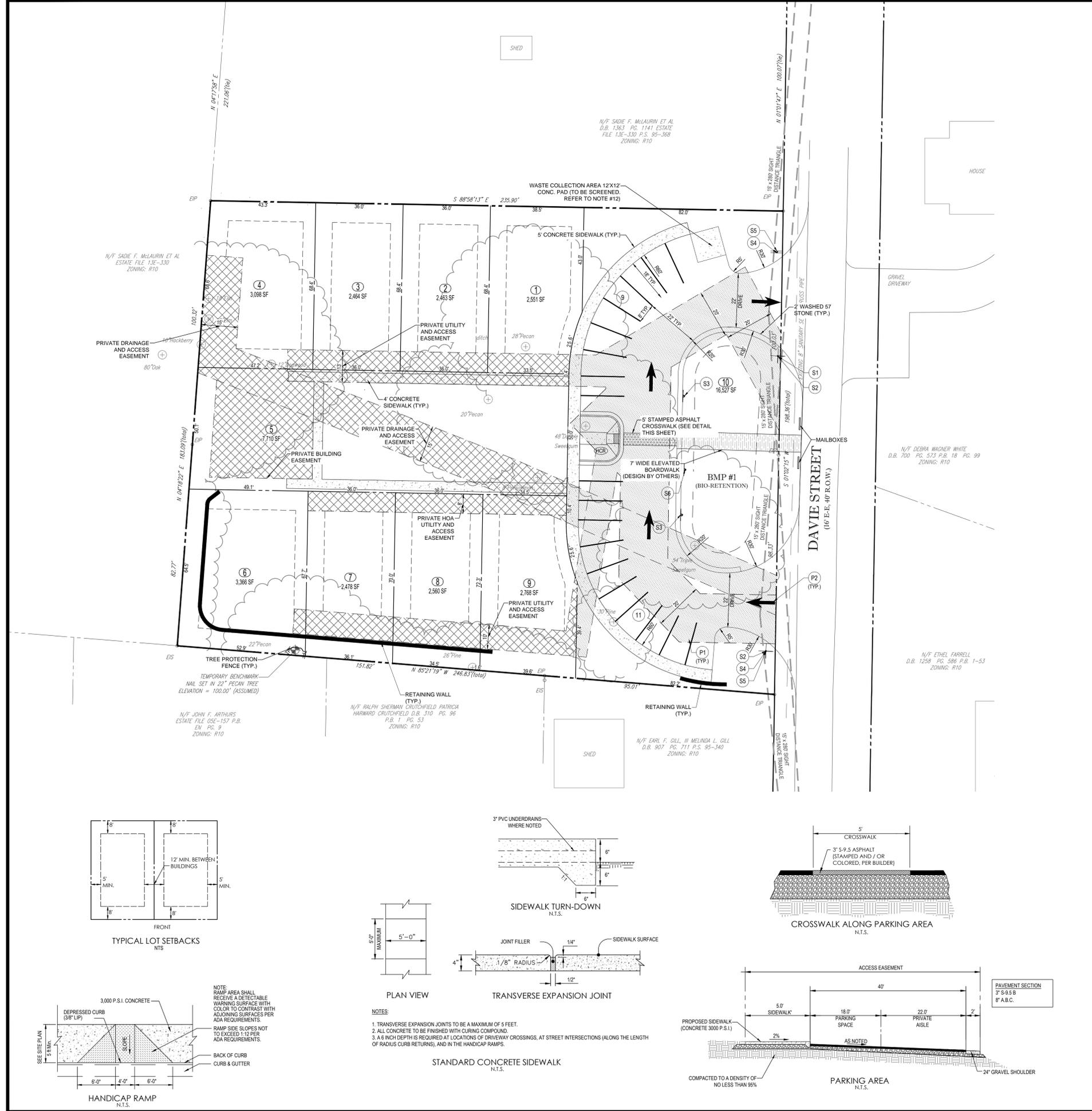
Phone: (919) 578-9000
 Fax: (919) 703-2665
 NC@BohlerEng.com



SHEET TITLE:
EXISTING CONDITIONS PLAN

SHEET NUMBER:
C-1.0





SITE LAYOUT NOTES

1. REFER TO GENERAL NOTES ON SHEET C-100.
2. SETBACKS ARE SHOWN IN ACCORDANCE WITH THE APPROVED TOWN OF PITTSBORO STANDARDS. REFER TO TOWN OF PITTSBORO ORDINANCE FOR PORCHES, DECKS, GARAGES, ETC.
3. UTILITY AND PIPELINE EASEMENTS SHALL BE RECORDED AS PART OF THE SUBDIVISION PLAT AFTER CONSTRUCTION IS COMPLETED.
4. ALL PAVEMENT MARKING AND STREET SIGNAGE SHALL BE IN ACCORDANCE WITH THE MUTCD. ALL SPECIALTY STREET SIGNS AND POSTS SHALL BE SUBMITTED TO THE TOWN OF PITTSBORO FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
5. COMMON OPEN SPACE WILL BE RECORDED AS LOTS ARE RECORDED AND SHALL BE MAINTAINED BY THE NEIGHBORHOOD HOMEOWNERS ASSOCIATION.
6. ALL SIGHT DISTANCE TRIANGLES ARE IN ACCORDANCE WITH AASHTO STANDARDS.
7. ALL TRASH AND RECYCLING SHALL BE HANDLED AT THE WASTE COLLECTION AREA WITH SERVICE PROVIDED BY WASTE INDUSTRIES. DUMPSTERS / RECYCLING SHALL BE SCREENED FROM VIEW BY A STRUCTURAL ENCLOSURE. CONCRETE PAD SHALL BE 4" THICK, 4000 PSI CONCRETE WITH EXPANSION JOINTS SPACED NO MORE THAN 15' APART.
8. A PRIVATE LANDSCAPE FEATURE SHALL BE PROVIDED FOR EACH LOT WITHIN THE P.O.S. AREA. REFER TO C-2-0 FOR DETAILS.
9. EACH LOT SHALL HAVE A WALKWAY FROM THE MAIN SIDEWALK. MATERIAL FOR THE PATH MAY VARY FROM LOT TO LOT AND MAY INCLUDE PAVERS, FLAGSTONE, OR EQUIVALENT.
10. SITE LIGHTING FOR PARKING & COMMON AREAS SHALL BE COORDINATED WITH DUKE-PROGRESS. POWER SHALL BE BROUGHT TO THE SITE FROM EXISTING POLES AND SHALL BE UNDERGROUND WITHIN THE SITE. ALL POWER STRUCTURES SHALL BE SCREENED WITH PLANTINGS IN ACCORDANCE WITH PITTSBORO REQUIREMENTS.
11. ONE COVERED PARKING SPACE PER UNIT WILL BE PROVIDED IN THE PARKING AREA.
12. ARCHITECTURAL PLANS FOR ALL THE SITE STRUCTURES INCLUDING THE COVERED PARKING, MAILBOXES, SHELTER, WASTE COLLECTION AREA, FENCING, RETAINING WALLS, RAILINGS, AND BARRIERS SHALL BE PROVIDED AT TIME OF BUILDING PERMIT SUBMITTAL.
13. ALL SITE AMENITIES, INCLUDING SIGNAGE, SITE STRUCTURES (AS MENTIONED ABOVE), AND LANDSCAPED FEATURES, SHALL BE DESIGNED IN A COHESIVE MANNER USING SIMILAR COLORS, MATERIALS, AND THEMES.
14. THE HOA SHALL RESERVE FUNDS IN ESCROW FOR THE MAINTENANCE OF ALL SITE IMPROVEMENTS INCLUDING THE STAMPED ASPHALT, PRIVATE UTILITIES, STORMWATER PIPES AND BMP, RETAINING WALLS, SIDEWALKS, STREETS AND PARKING LOT, BUT NOT INCLUDING PUBLIC PORTIONS OF WATER AND SEWER. THE OWNER MUST AGREE TO THAT AMOUNT PRIOR TO PLAN APPROVAL.
15. SCREENING SHALL BE PROVIDED ON THE NORTH, WEST, AND SOUTH PERIMETER OF THE SITE FROM ADJACENT OWNERS BY FENCING OR EVERGREEN PLANTINGS. REFER TO L-1.0 FOR DETAILS.
16. LOT 10 SHALL BE DEDICATED OPEN SPACE. LOT 5 SHALL BE DEDICATED COMMON OPEN SPACE AND THE PRIVATE BUILDING EASEMENT REPRESENTS THE MAXIMUM BUILDING ENVELOPE FOR THE CONSTRUCTION OF A COMMUNITY BUILDING.

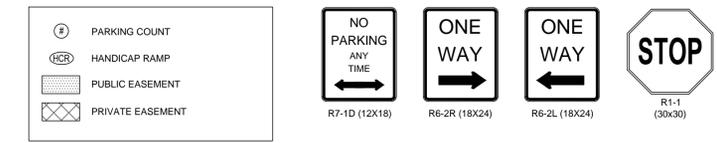
PAVEMENT MARKING AND SIGNAGE NOTES

1. ALL SIGNAGE INSTALLED SHALL CONFORM TO STANDARDS SET FORTH BY THE LATEST PUBLISHED EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) STANDARD CONSTRUCTION DRAWINGS, AND THE TOWN OF PITTSBORO STANDARDS.
2. SIGNAGE MATERIAL SHALL CONFORM TO MUTCD COLOR AND REFLECTIVITY STANDARDS AND SHALL AT A MINIMUM BE ENGINEERING GRADE REFLECTIVE MATERIAL, EXCEPT STOP SIGNS. STOP SIGNS SHALL BE CONSTRUCTED OF HI-INTENSITY GRADE MATERIAL ON A 30-INCH OCTAGONAL STOP SIGN BLANK.
3. ALL SIGNS, EXCEPT STREET MARKERS, SHALL BE MOUNTED IN A MANNER THAT THE BOTTOM OF THE SIGN IS A MINIMUM OF 7-FEET ABOVE GROUND LEVEL. STREET MARKER SIGNS SHALL BE MOUNTED OVER THE TOP OF STOP SIGNS.
4. GROUND MOUNTED SIGN POSTS USED TO INSTALL STREET SIGNAGE SHALL BE 12-FEET LONG AND CONSTRUCTED OF 14 GAUGE GALVANIZED STEEL "U" CHANNEL POSTS OR TWO INCH (2-IN) GALVANIZED SQUARE STEEL TUBING. ALTERNATE SIGN POSTS MAY BE PROPOSED TO BETTER MATCH SITE FEATURES.
5. GROUND MOUNTED SIGN POSTS SHALL BE DRIVEN TO A MINIMUM OF 30-INCHES BELOW GROUND LEVEL. ALL POSTS SHALL BE PLUMBED AND LEVELLED AS THE POST IS INSTALLED.
6. PAVEMENT MARKINGS MUST BE MADE OF A THERMOPLASTIC MATERIAL AND ADHERE TO SECTION 1200 OF THE NCDOT ROADWAY STANDARD DRAWINGS, 2002 EDITION.

EASEMENT NOTES

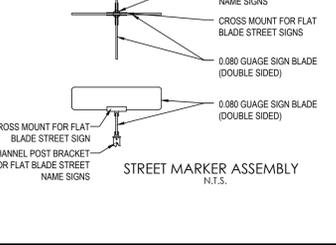
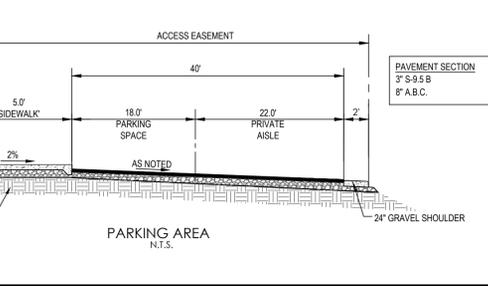
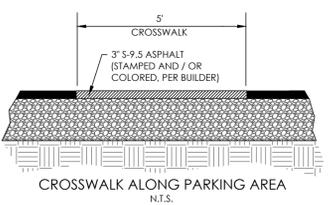
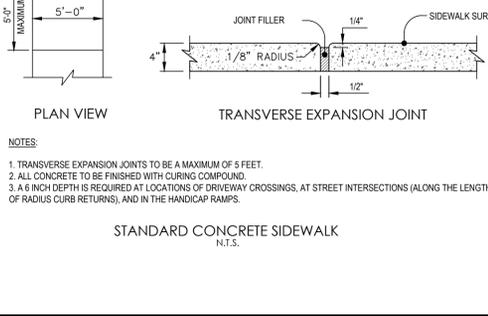
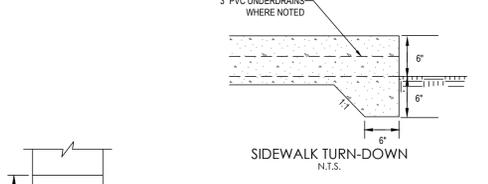
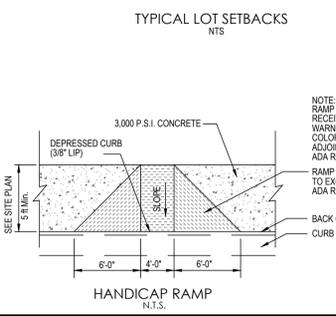
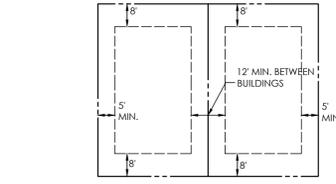
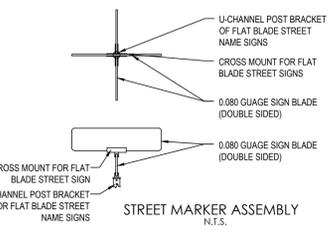
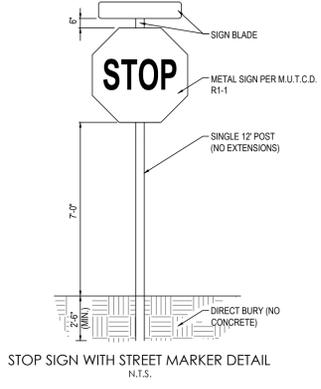
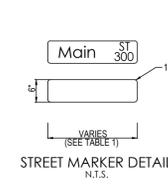
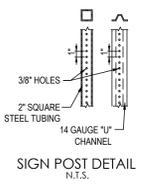
1. THIS PLAN SHOWS LIMITS AND USES OF PROPOSED EASEMENTS. FINAL LABELS AND DESCRIPTIONS SHALL BE PROVIDED BY A P.L.S. AT TIME OF PLAT.
2. PUBLIC EASEMENTS ENCOMPASS ACCESS TO ALL PUBLIC UTILITIES, DRAINAGE SYSTEMS, PRIVATE BMPs, AND ASSOCIATED RETAINING WALLS. EASEMENTS SHALL ALLOW TOWN STAFF AND/OR APPOINTED THIRD PARTIES, INCLUDING BUT NOT LIMITED TO PRIVATE CONTRACTORS, TO ACCESS, ASSESS, REPAIR, AND MAINTAIN FACILITIES AS NEEDED. PUBLIC EASEMENTS MAY SHARE CORRIDORS WITH OVERHEAD POWER. EASEMENTS MAY VARY IN WIDTH.
3. PRIVATE HOA EASEMENTS ENCOMPASS ACCESS TO ALL PRIVATE UTILITIES, DRAINAGE SYSTEMS, BMPs, AND RETAINING WALLS. EASEMENTS SHALL ALLOW HOA STAFF AND/OR APPOINTED THIRD PARTIES, INCLUDING BUT NOT LIMITED TO PRIVATE CONTRACTORS, TO ACCESS, ASSESS, REPAIR, AND MAINTAIN FACILITIES AS NEEDED. EASEMENTS MAY VARY IN WIDTH.

LEGEND



SIGNAGE AND MARKING LEGEND

SYMBOL	SIGN	MUTCD #	DIMENSIONS
(S1)	STOP SIGN	R1-1	30" x 30"
(S2)	STREET MARKER	D-3-1	VARIES
(S3)	NO PARKING	R7-1D	12" x 18"
(S4)	ONE WAY (RIGHT)	R6-2R	18" x 24"
(S5)	ONE WAY (LEFT)	R6-2L	18" x 24"
(S6)	ENVIRONMENTAL PLACARD	SEE DETAIL ON SHEET C-6.0	
(P1)	WHITE STRIPE	4"	18'
(P2)	STRAIGHT ARROW	-	9.5'



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 WASHINGTON, DC
 WASHINGTON STATE
 WEST VIRGINIA

REVISIONS

REV	DATE	COMMENT	BY
1	5/13/15	TOWN OF PITTSBORO COMMENTS	AWA
1	7/02/15	TOWN OF PITTSBORO COMMENTS	MAR

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PROJECT No.: NCR142045
 DRAWN BY: MAR LML
 CHECKED BY: 04/7/2015
 DATE: 04/7/2015
 SCALE:
 CAD I.D.: MAR

CONSTRUCTION PLANS

FOR
DAVIE STREET COTTAGES

LOCATION OF SITE
 PITTSBORO, NC

BOHLER ENGINEERING

NC, PLLC, NCBELS P-1132

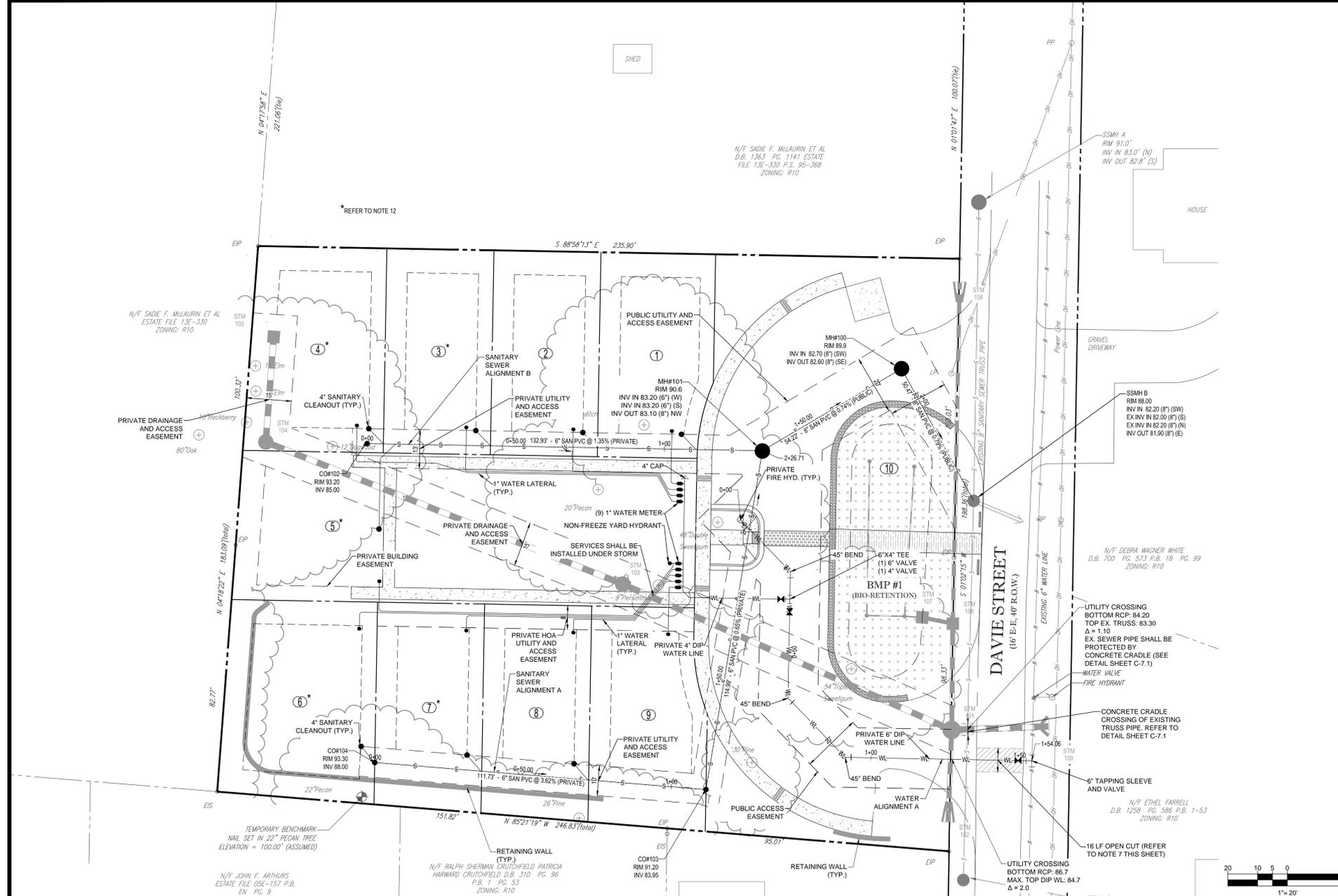
4011 WESTCHASE BLVD., SUITE 290
 RALEIGH, NC 27607
 Phone: (919) 578-9000
 Fax: (919) 703-2665
 NC@BohlerEng.com

PROFESSIONAL SEAL

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SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C-2.0

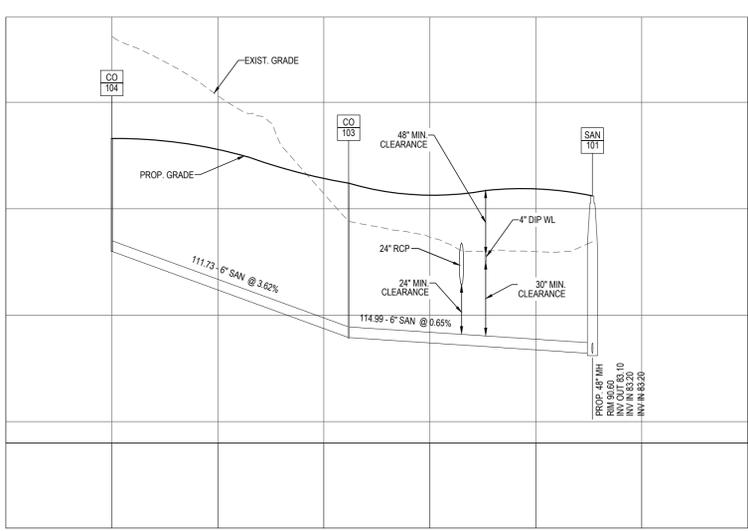


UTILITY NOTES

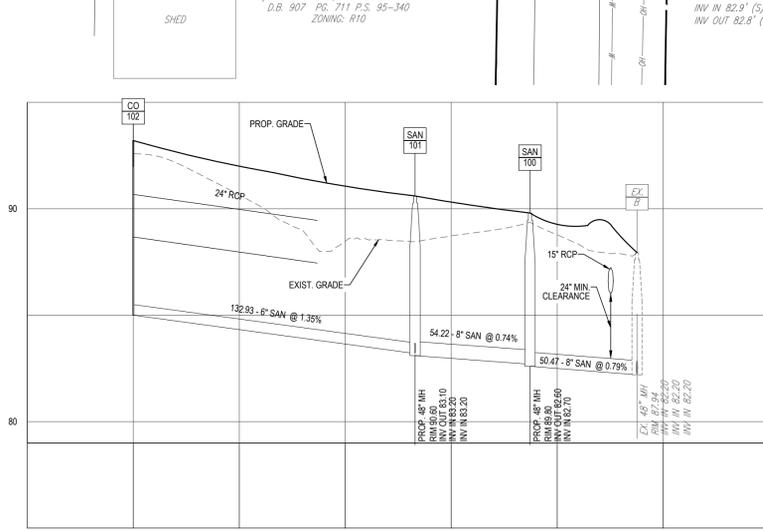
1. REFER TO GENERAL NOTES SHEET C-1.0
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF PITTSBORO STANDARD SPECIFICATIONS AND DETAILS THAT ARE CURRENT AT THE TIME OF PLAN APPROVAL.
3. ALL PRIVATE SEWER LINES SHALL BE 6" SCHEDULE 40 PVC. ALL PRIVATE SERVICE LATERALS SHALL BE 4" SCHEDULE 40 PVC UNLESS OTHERWISE NOTED. CLEANOUTS SHALL BE PROVIDED AS SHOWN ON THESE PLANS AND PER DETAIL ON C-7.1
4. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHOWN ON PLANS IS BASED ON AVAILABLE INFORMATION BUT CAN BE CONSIDERED ONLY AS APPROXIMATE.
5. FINAL OVERHEAD UTILITIES AND SITE LIGHTING PLAN SHALL BE PROVIDED BY DUKE ENERGY - PROGRESS.
6. IF WATER IS DESIRED FOR CONSTRUCTION, THE DEVELOPER MUST APPLY FOR A HYDRANT METER ASSEMBLY PER TOWN OF PITTSBORO REQUIREMENTS.
7. CONTRACTOR SHALL PERFORM OPEN CUTS TO PAVEMENT IN DAVIE STREET TO NECESSARY WIDTH TO PERFORM UTILITY WORK. CONTRACTOR SHALL ADHERE TO NCDOT STANDARDS FOR PAVEMENT REPAIRS, INCLUDING COMPACTION REQUIREMENTS. DENSITY TESTING WILL BE REQUIRED AND A COPY OF THE TEST RESULTS PROVIDED TO THE TOWN. OR, FLOWABLE FILL CAN BE USED WITHOUT DENSITY TESTING.
8. PUBLIC WATERLINE MAINTENANCE BY THE TOWN OF PITTSBORO SHALL STOP AT THE RIGHT OF WAY LINE. THE HOA IS RESPONSIBLE FOR MAINTAINING ALL WATERLINE WITHIN THE SITE, HOWEVER A PUBLIC UTILITY EASEMENT SHALL BE GRANTED AS SHOWN FOR TOWN OF PITTSBORO ACCESS.
9. PUBLIC SANITARY SEWER MAINTENANCE BY THE TOWN OF PITTSBORO SHALL EXTEND TO MH 101. THE HOA IS RESPONSIBLE FOR MAINTAINING ALL PRIVATE SANITARY SEWER LINES AND SERVICES UPSTREAM OF MH 101, HOWEVER A PUBLIC UTILITY EASEMENT SHALL BE GRANTED AS SHOWN FOR TOWN OF PITTSBORO ACCESS.
10. EMERGENCY PERSONNEL MUST BE NOTIFIED OF LANEROAD CLOSURES ON DAVIE STREET ASSOCIATED WITH WATERMAIN TAP. ONE LANE OF TRAFFIC SHALL BE OPEN AT ALL TIMES. CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL & WILL SUBMIT TRAFFIC CONTROL PLAN FOR TOWN APPROVAL PRIOR TO OPEN CUT.
11. THE 8 INCH SEWER CONNECTION SHALL BE MADE TO THE EXISTING MANHOLE SSMH B BY PROFESSIONALLY CORING IN THE MANHOLE USING A CONCRETE CORING MACHINE USING A CONCRETE CORING MACHINE. THE PIPE CONNECTION SHALL THEN BE SEALED USING AN APPROVED RUBBER BOOT & NON-SHRINK GROUT.
12. A RESIDENTIAL SPRINKLER SYSTEM DESIGNED PER SECTION P2904 OF THE NORTH CAROLINA RESIDENTIAL BUILDING CODE AND NFPA IS REQUIRED FOR LOTS 3, 4, 5, 6 and 7. SPRINKLER SYSTEM DESIGN AND CALCULATIONS, AS WELL AS VERIFICATION OF ADEQUATE FLOW FROM 1" WATER SERVICE, MUST BE PREPARED BY A NORTH CAROLINA LICENSED PROFESSIONAL ENGINEER AND MUST BE SUBMITTED TO THE TOWN OF PITTSBORO AT TIME OF BUILDING PERMIT. FLOW PRESSURE MUST BE TESTED AT THE INSTALLED SERVICE LINE FOR EACH INDIVIDUAL LOT PRIOR TO SPRINKLER DESIGN. IF ADEQUATE FLOW AND PRESSURE CAN NOT BE VERIFIED FROM THE 1" SERVICE, A TALCO LSF COMPACT RESIDENTIAL FIRE PUMP AND TANK (OR APPROVED EQUAL) WILL BE REQUIRED.

TOWN OF PITTSBORO UTILITY NOTES

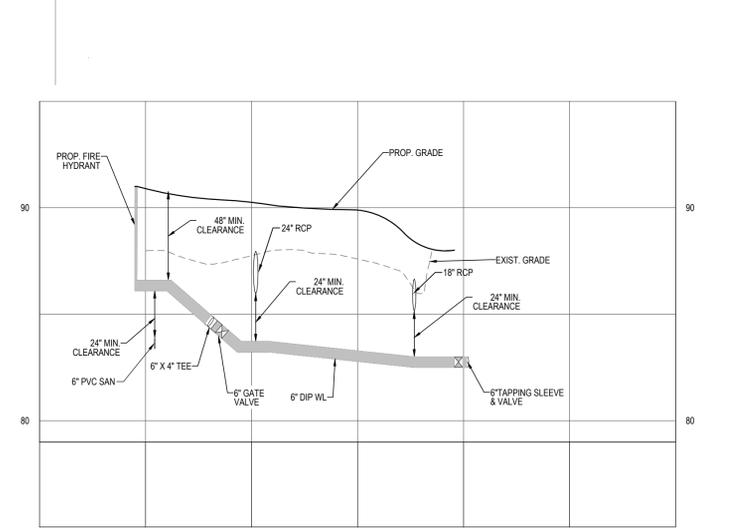
1. OWNER / CONTRACTOR SHALL NOTIFY TOWN OF PITTSBORO AT LEAST 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION WORK. ONCE WORK HAS BEGUN, AT LEAST 48 HOURS NOTICE SHALL BE GIVEN PRIOR TO ANY SORT OF DISRUPTION TO THE TOWN'S SERVICES SUCH AS TAPPING WATER MAINS, OPERATING VALVES, CLOSING STREETS, PLUGGING SEWER, ETC.
2. UTILITY SEPARATION REQUIREMENTS:
 - A) A DISTANCE OF 100" SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATION. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25" FROM A PRIVATE WELL OR 50" FROM A PUBLIC WELL.
 - B) WHEN INSTALLING WATER AND/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10". IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - C) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10" ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
 - D) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN AND RCP STORM DRAIN CROSSINGS. MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN AND/OR PROFILE BY THE TOWN OF PITTSBORO PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 4 HOUR ADVANCE NOTICE TO THE TOWN OF PITTSBORO PUBLIC UTILITIES DEPARTMENT.
5. 3.0" MINIMUM COVER IS REQUIRED ON ALL WATER MAINS.
6. INSTALL 1" TYPE-K COPPER WATER SERVICES WITH NEPTUNE RADIO METERS LOCATED AT ROW OR WITHIN A WATERLINE EASEMENT IMMEDIATELY ADJACENT, AT A MINIMUM DEPTH OF 3'.
7. INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
8. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
9. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDQW, USACE, AND/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND, &/OR FLOODPLAIN IMPACTS (RESPECTIVELY).



SANITARY SEWER ALIGNMENT A
SCALE: 1" = 20' HORIZONTAL
1" = 2' VERTICAL



SANITARY SEWER ALIGNMENT B
SCALE: 1" = 20' HORIZONTAL
1" = 2' VERTICAL



WATER ALIGNMENT A
SCALE: 1" = 20' HORIZONTAL
1" = 2' VERTICAL

BOHLER ENGINEERING

STATE OF NORTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
LICENSE NO. 142045

LAND SURVEYING
PROGRAM MANAGER
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

NORTH CAROLINA
NORTH VIRGINIA
SOUTH CAROLINA
FLORIDA
VIRGINIA
ALABAMA
ARIZONA
CALIFORNIA
CONNECTICUT
DELAWARE
DISTRICT OF COLUMBIA
ILLINOIS
INDIANA
IOWA
KANSAS
MARYLAND
MASSACHUSETTS
MICHIGAN
MINNESOTA
MISSISSIPPI
MISSOURI
MONTANA
NEBRASKA
NEVADA
NEW HAMPSHIRE
NEW JERSEY
NEW MEXICO
NEW YORK
OHIO
OKLAHOMA
OREGON
PENNSYLVANIA
RHODE ISLAND
Tennessee
Texas
Utah
Vermont
Washington
West Virginia
Wisconsin
Wyoming

REVISIONS

REV	DATE	COMMENT	BY
1	5/13/15	TOWN OF PITTSBORO COMMENTS	AWA
1	7/02/15	TOWN OF PITTSBORO COMMENTS	MAR

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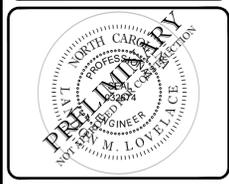
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CONSTRUCTION PLANS

FOR
DAVIE STREET COTTAGES

LOCATION OF SITE
PITTSBORO, NC

BOHLER ENGINEERING
NC, PLLC, NCBELS P-1132
4011 WESTCHASE BLVD., SUITE 290
RALEIGH, NC 27607
Phone: (919) 578-9000
Fax: (919) 703-2665
NC@BohlerEng.com

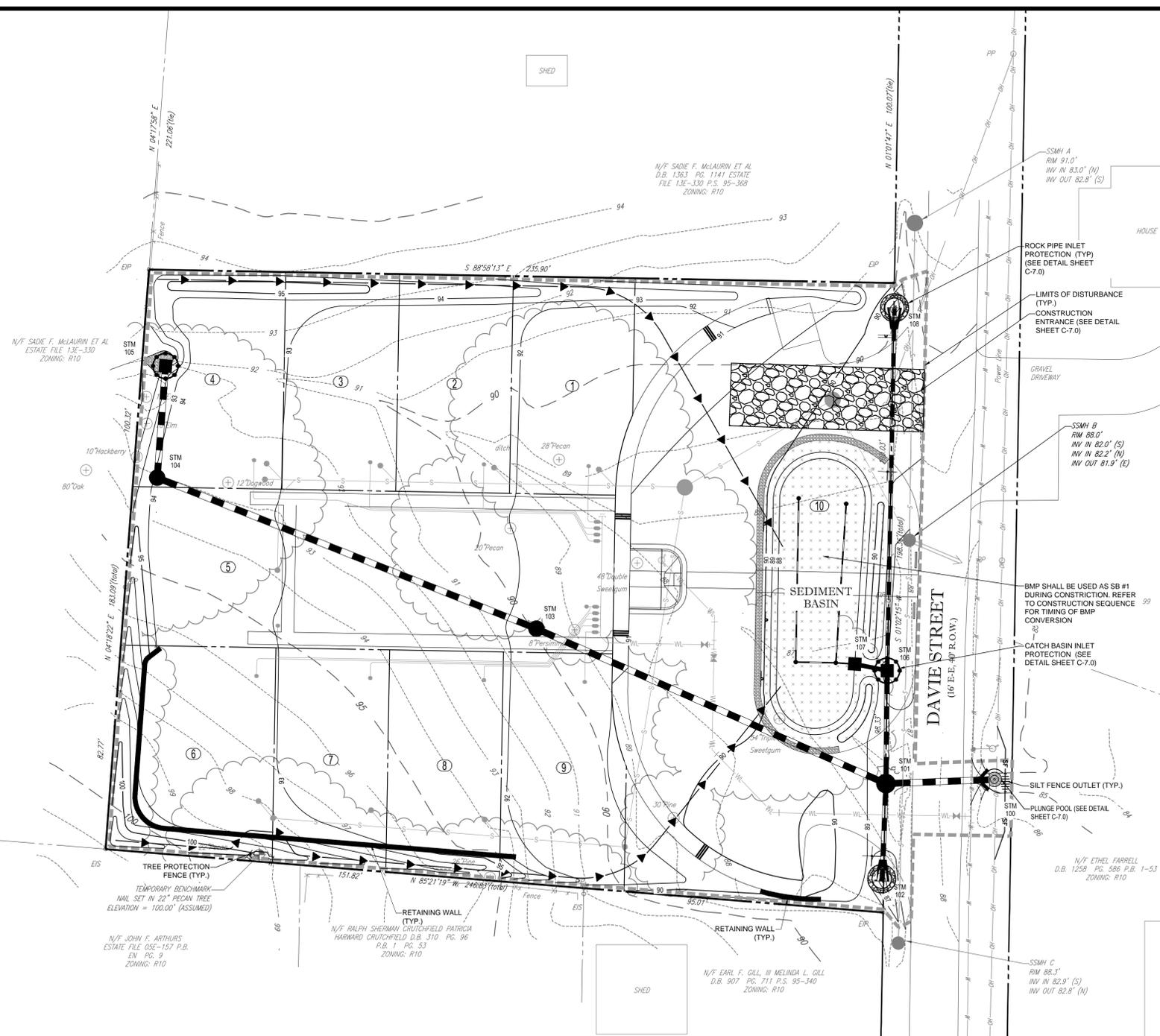


SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C-4.0

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REFER TO SHEET C-5.0 FOR SEDIMENT BASIN
SUMMARY, EROSION CONTROL NOTES AND
CONSTRUCTION SEQUENCE



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STATE OF NORTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
NO. 142045

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REVISIONS

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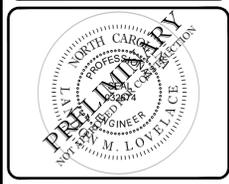
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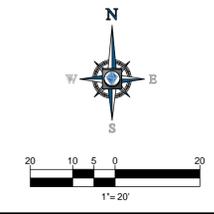
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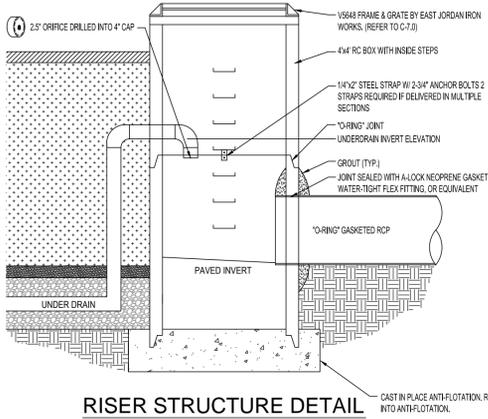
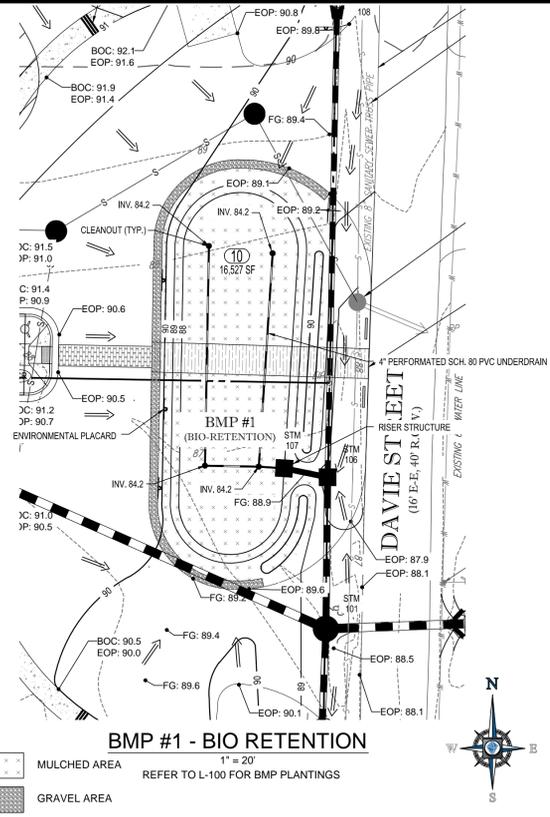
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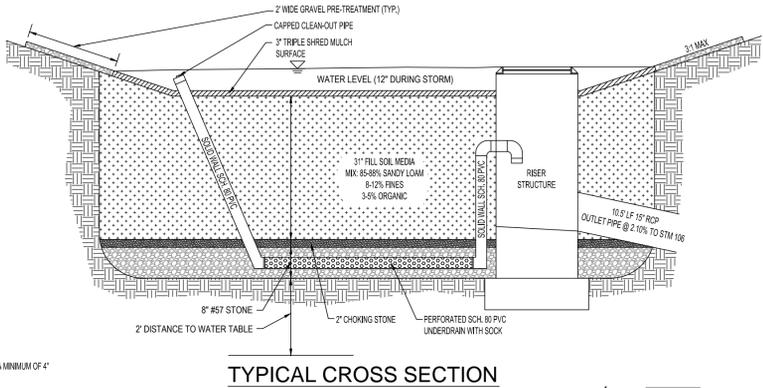
SHEET TITLE:
EROSION AND SEDIMENT CONTROL PLAN PHASE II
SHEET NUMBER:
C-5.1





	DIMENSIONS	ELEV.
TOP OF DAM (SEE PLAN VIEW)		89.10
EMERGENCY SPILLWAY	12' WIDE	88.90
TOP OF RISER (TOP OF FRAME)	4' x 4'	88.67
TOP OF MULCH (TRIPLE SHRED)	3' DEEP	87.67
TOP OF SOIL MIX	3\"/>	

REFER TO SHEET C-5.0 FOR SEDIMENT BASIN SUMMARY, EROSION CONTROL NOTES AND CONSTRUCTION SEQUENCE



BMP NOTES

1. REFER TO GENERAL NOTES ON SHEET C-1.0
2. REFER TO DAM EMBANKMENT AND SEED BED PREPARATION NOTES ON THIS SHEET.
3. REFER TO CONSTRUCTION SEQUENCE ON SHEET C-5.0 FOR TIMING OF BMP CONVERSION.
5. NO PLANTINGS OF ANY SORT SHALL BE PERMITTED WITHIN 5' OF THE RISER STRUCTURE.
6. A PE CERTIFICATION WILL BE REQUIRED AT TIME OF BMP AS-BUILT.

BIORETENTION BACKFILLING SEQUENCE

1. UNDERCUT BIORETENTION AREA TO NECESSARY DEPTH (SEE BIORETENTION AREA CROSS SECTION).
2. PLACE 4\"/>

BIORETENTION COMPACTION NOTICE

1. CONTRACTOR SHALL MINIMIZE THE COMPACTION OF BOTH THE BASE OF THE BIORETENTION AREA AND THE REQUIRED BACKFILL. WHEN POSSIBLE, CONTRACTOR SHALL USE EXCAVATION HOES TO REMOVE THE ORIGINAL SOIL. IF THE BIORETENTION AREA IS EXCAVATED USING A LOADER, THE CONTRACTOR SHALL USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TIRES. COMPACTION AT THE BASE OF THE BIORETENTION AREA CAN BE ALLEVIATED BY USING A CHISEL TILLING OPERATION AS A CHISEL TILLING OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACURE THE SOIL PROFILE THROUGH THE 12\"/>

BIORETENTION MATERIAL SPECIFICATIONS

1. THE GRAVEL LAYER SHALL MEET THE STANDARDS SET FORTH IN AASHTO-M-43. THE GRAVEL SHALL BE A POORLY GRADED MATERIALS WITH AN AVERAGE DIAMETER OF 0.25\"/>

BIORETENTION PLANTING SOIL MIX

1. THE PLANTING SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN ONE-HALF INCH IN DIAMETER. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE AN OBSTACLE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, JOHNSON GRASS, QUACK GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADA THISTLE, OR OTHER NOXIOUS WEEDS.
2. THE CONTRACTOR SHALL PROVIDED A BIORETENTION SOIL MIX USING THE TWO COMPONENTS LISTED BELOW THAT WILL MEET THE ASTM STANDARDS AS FOLLOWS:
 - A. SANDY LOAM TOPSOIL - 35%
 - B. COARSE SAND - 65%
 - C. PERMEABILITY - 2\"/>
- NOTES:
 - CLAY PERCENTAGE SHALL NOT EXCEED 8%
 - SILT PERCENTAGE SHALL NOT EXCEED 12%
 - SILT AND CLAY PERCENTAGE SHALL NOT EXCEED 12%
 - PHOSPHOROUS INDEX SHALL BE BETWEEN 10 AND 30
3. THE CONTRACTOR SHALL TEST THE PLANTING SOIL PRIOR TO PLACEMENT TO ENSURE THE FOLLOWING CRITERIA ARE MET:
 - A. pH RANGE - 5.5 TO 6.5
 - B. ORGANIC MATTER - 1.5% TO 5%
 - C. MAGNESIUM - 35 LB/AC
 - D. PHOSPHOROUS P205 - 100 LB/AC
 - E. POTASSIUM K20 - 85 LB/AC
 - F. SOLUBLE SALTS NOT TO EXCEED 500 PPM
4. THE FOLLOWING TEST FREQUENCIES SHALL APPLY TO THE ABOVE SOIL CONSTITUENTS: ALL BIORETENTION AREAS SHALL HAVE A MINIMUM OF ONE TEST PER 200 CUBIC YARDS. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR pH, PHOSPHOROUS, AND POTASSIUM AND ADDITIONAL TESTS OF ORGANIC MATTER AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED BIORETENTION SOIL. SHOULD THE pH FALL OUT OF THE ACCEPTABLE RANGE, IT MAY BE MODIFIED (HIGHER) WITH LIME OR (LOWER) WITH IRON SULFATE PLUS SULFUR.
5. IN-SITU PERMEABILITY TESTING MUST BE PERFORMED AFTER INSTALL. BMP WILL NOT BE ACCEPTED WITH A PERMEABILITY OF LESS THAN 2\"/>

DAM EMBANKMENT NOTES

1. CONTROLLED FILL AS SPECIFIED BY THE GEOTECHNICAL ENGINEER. IN THE DAM EMBANKMENT SHALL BE PLACED IN 6-INCH LOOSE LAYERS (3-INCH LOOSE LAYERS WITHIN 3- FEET OF EITHER SIDE OF THE PRINCIPAL SPILLWAY PIPE TO A DEPTH OF 2- FEET OVER THE PIPE) AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR - TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698.
2. ALL VISIBLE ORGANIC DEBRIS SUCH AS ROOTS AND LIMBS SHALL BE REMOVED FROM THE FILL MATERIAL PRIOR TO COMPACTION TO THE REQUIRED DENSITY. SOILS WITH ORGANIC MATTER CONTENT EXCEEDING 5% BY WEIGHT SHALL NOT BE USED. STONES GREATER THAN 3-INCH (IN ANY DIRECTION) SHALL BE REMOVED FROM THE FILL PRIOR TO COMPACTION.
3. FILL MATERIAL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITIES OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED RANGES OR OTHERWISE NOT CONFORMING TO SPECIFIED REQUIREMENTS SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIALS.
4. ANY FILL LAYER THAT IS SMOOTH DRUM ROLLED TO REDUCE MOISTURE PENETRATION DURING A STORM EVENT SHALL BE PROPERLY SCARIFIED PRIOR TO THE PLACEMENT OF THE NEXT SOIL LIFT.
5. SURFACE WATER AND STREAM FLOW SHALL BE CONTINUOUSLY CONTROLLED THROUGHOUT CONSTRUCTION AND THE PLACEMENT OF CONTROLLED FILL.
6. FOUNDATION AREAS MAY REQUIRE UNDERCUTTING OF COMPRESSIBLE AND/OR UNSUITABLE SOILS IN ADDITION TO THAT INDICATED ON THE PLANS. ALL SUCH UNDERCUTTING SHALL BE PERFORMED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND SHALL BE MONITORED AND DOCUMENTED. IN NO CASE SHALL THERE BE AN ATTEMPT TO STABILIZE ANY PORTIONS OF THE FOUNDATION SOILS WITH CRUSHED STONE.
7. TREATMENT OF SEEPAGE AREAS, SUBGRADE PREPARATION, FOUNDATION DEWATERING AND ROCK FOUNDATION PREPARATION (I.E., TREATMENT WITH SLUSH GROUTING, DENTAL CONCRETE, ETC.) MAY BE REQUIRED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER. ALL SUCH ACTIVITIES SHALL BE CLOSELY MONITORED AND DOCUMENTED BY THE GEOTECHNICAL ENGINEER.
8. FILL ADJACENT TO THE RISER AND PRINCIPAL SPILLWAY PIPE SHALL BE PLACED SO THAT LIFTS ARE AT THE SAME LEVEL ON BOTH SIDES OF THE STRUCTURES.
9. EARTHWORK COMPACTION WITHIN 3- FEET OF ANY STRUCTURES SHALL BE ACCOMPLISHED BY MEANS OF HAND TAMPERS, MANUALLY DIRECTED POWER TAMPERS OR PLATE COMPACTORS OR MINIATURE SELF-PROPELLED ROLLERS.
10. COMPACTION BY MEANS OF DROP WEIGHTS FROM A CRANE OR HOIST SHALL NOT BE PERMITTED.
11. HEAVY EQUIPMENT SHALL NOT BE ALLOWED TO PASS OVER CAST-IN-PLACE STRUCTURES (INCLUDING THE CRADLE) UNTIL ADEQUATE CURING TIME HAS ELAPSED.
12. TO RE-ESTABLISH VEGETATION AFTER CONSTRUCTION, A 2- TO 3-INCH LAYER OF TOPSOIL SHALL BE PLACED ON THE DISTURBED EMBANKMENT SURFACE AND THE AREA SEEDED AND MULCHED OR HYDROSEEDED.

SEED BED PREPARATION

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ENTIRE AREA, THEN RIP TO 6 INCHES DEEP.
2. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER DEBRIS LEAVING SURFACES SMOOTH AND UNIFORM.
3. APPLY LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL AT THE FOLLOWING RATES:
 - LIME: 2 TONS/ACRE
 - FERTILIZER (10-10-10): 0.5 TONS/ACRE
 - SUPERPHOSPHATE (20%): 0.25 TONS/ACRE
 - MULCH (SMALL GRAIN STRAW): 2 TONS/ACRE
 - TACK (ASPHALT EMULSION): 300 GAL/ACRE
4. CONTINUE TILLING UNTIL A WELL-PULVERIZED, FIRM, UNIFORM SEED BED IS PREPARED 4-6 INCHES DEEP.
5. SEED FRESHLY PREPARED SEED BED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTI-PACK AFTER SEEDING.
6. MULCH AND TACK IMMEDIATELY AFTER SEEDING.
7. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS WITHIN PLANTING SEASON, IF POSSIBLE.

ALL CONSTRUCTION MUST BE PERFORMED IN ACCORDANCE WITH CURRENT TOWN OF PITTSBORO STANDARDS AND SPECIFICATIONS IN PLACE AT TIME OF PLAN APPROVAL

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