REQUEST FOR COMMITTEE ACTION

HENDERSON COUNTY TECHNICAL REVIEW COMMITTEE

MEETING DATE: Tuesday, January 3, 2017

SUBJECT: Master Plan for South Creek Cottages (2016-M05)

STAFF CONTACT: Brian Burgess, Planner

ATTACHMENTS: 1. Staff Report

2. Combined Master and Development Plan

3. Water Availability Letter

SUMMARY OF REQUEST:

Gary Davis, Civil Engineer, on behalf of South Creek Cottages, LLC, owners, submitted a Master Plan for the project known as South Creek Cottages (formerly referred to as "Chapel Cove"). The project is located on approximately 19.36 acres of land located on Patty's Chapel Rd. (SR 1555). The project site is composed of two (2) separate parcels (9662-01-4641 and 9662-11-1358).

The Master Plan proposes a total of 21 single family residential lots. The applicant is currently proposing a density of 1.1 dwelling units per acre. The project is not located in a water supply watershed district nor is it located within the floodplain. A public water connection to the City of Hendersonville and private individual or community septic systems are proposed to serve the project site.

TECHINCAL REVIEW COMMITTEE ACTION REQUESTED:

Because the project includes less than 35 lots, final approval is given by the Technical Review Committee. Staff has found that the Master Plan appears to meet the technical standards of the subdivision regulations of Chapter 200A, Henderson County Land Development Code (LDC) except for the comments listed in the Staff Report (See Attachment 1).

Staff recommends approval of the Master Plan subject to the developer addressing any issues raised by the Technical Review Committee and addressing the comments listed in the Staff Report.

Suggested Motion: I move that the TRC approves the South Creek Cottages Major Subdivision Master Plan with the conditions noted in the staff report and otherwise noted by the TRC.

Henderson County Planning Department Staff Report

Combined Master and Development Plan South Creek Cottages, Major Residential Subdivision (2016-M05) Pin: 9662-01-4641; 9662-11-1358

South Creek Cottages, LLC, Owner Gary Davis, Plan Preparer

Master Plan Comments:

According to Chapter 42A, Henderson County Land Development Code (LDC) §42A-341, the purpose of a Master Plan is to provide general information about the proposed development to allow for an assessment of its impact on the orderly growth and development of the County, environmental quality, land values, natural features identified on the site analysis sketch and the County's roads and governmental services. During the review of the Master and Development Plan, the Technical Review Committee should take into consideration: applicable recommendations of the *Henderson County 2020 Comprehensive Plan*, the potential use of the land to be subdivided, and the impact of the subdivision and proposed use whether residential, commercial or industrial.

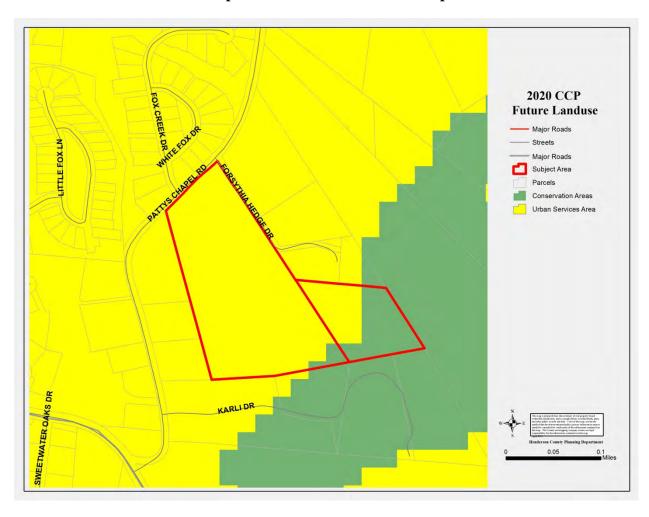
When reviewing the Master and Development Plan it is important to consider that, due to severe topographic conditions, inadequate road access, distance from services, unique natural areas, soils that do not easily support soil drainage systems and or the proximity to existing and incompatible land uses/zoning, all land may not be suitable to be subdivided for the purpose of dense development (LDC §42A-75).

The proposed project is in the Hooper's Creek Township, on Patty's Chapel Rd., near Howard Gap Rd. Staff has reviewed the submitted Combined Master Plan and Development Plan for South Creek Cottages major residential subdivision, taking into consideration the recommendations of the *Henderson County 2020 Comprehensive Plan* and reviewing the plan for conformance with Henderson County Land Development Code. Staff offers the following comments:

- 1. **Henderson County 2020 Comprehensive Plan (CCP).** The Future Land Use Map of the CCP shows the project site as being located primarily within a Urban Services Area (USA) with some of the subject area falling within a Conservation Area. (See Map A: CCP Future Land Use Map).
 - (a) **Urban Services Area.** The Urban Services designation of the Growth Management Strategy is applied to the project site. The CCP states that, "Wide ranges of residential

densities will exist. Over the long term, land use regulations and policies should favor higher density development, consistent with natural constraints and the availability of urban services. At the same time, policies and regulations should protect existing less-intensely developed communities." (2020 CCP, Pg. 133). The developer is proposing moderately dense development. "Land use planning should acknowledge the presence of sensitive natural areas such as floodplains, wetlands, areas of excessively steep topography, and other natural and cultural assets, and should strive to protect these areas from development that would damage them or diminish their integrity." (2020 CCP, Pg. 133). This should be considered in light of the subject area's partial inclusion in a conservation area.

(b) **Conservation Area.** Conservation Areas are "land areas that are intended to remain largely in their natural state, with only limited development." (2020 CCP, Pg. 138) The developer is proposing only 5 lots that would fall into this area, with roughly 14% of the total acreage being within a Conservation Area.

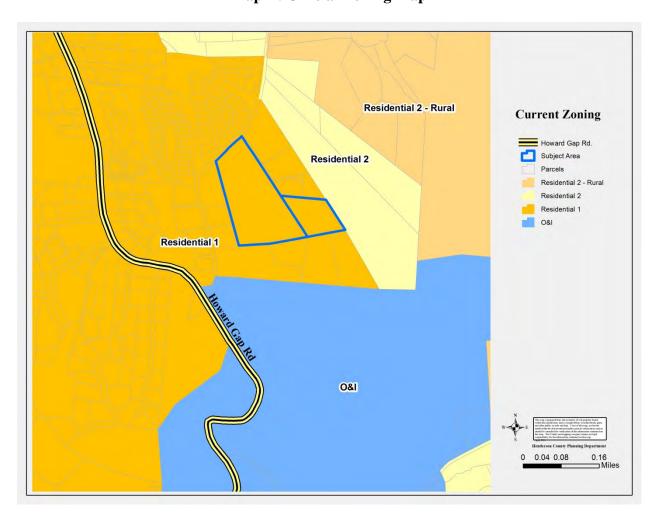


Map A: CCP Future Land Use Map

According to the plan, the Subject area would have a minimum lot size of 28,066 square feet (0.64 acres) and a maximum lot size of 43,306 square feet (0.99 acres). (See Attached, Master Plan & Development Plan).

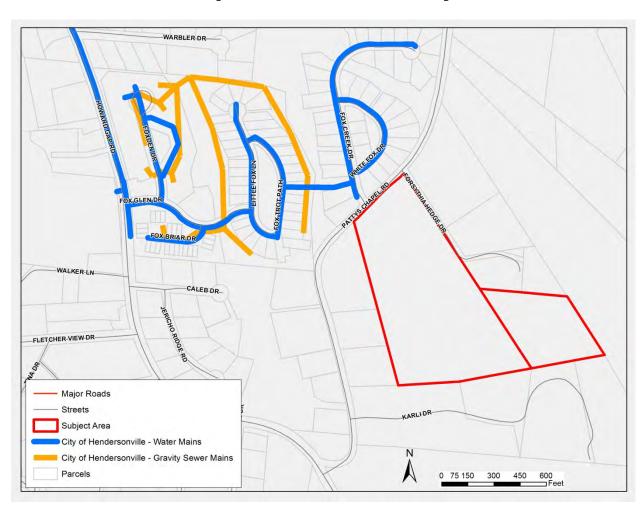
2. Chapter 42A, Henderson County Land Development Code (LDC). According to Chapter 42, Henderson County Land Development Code (LDC) and its Official Zoning Map adopted September 19, 2007 (as amended), the proposed project site is located within the Residential One (R-1) zoning district (See Map B: Official Zoning Map). The R-1 district allows for single-family and manufactured homes (multi-section), excluding manufactured homes (singlewide) and mobile homes.

Combined, the property totals 19.36 acres. The Master Plan proposal of 21 residential lots would fall within the permitted density requirements by the LDC. (See Attached, Master Plan & Development Plan).



Map B: Official Zoning Map

3. **Water and Sewer Availability.** Applicant proposes private individual septic and public water. The distance to nearest public water and sewer (City of Hendersonville) is ~87 feet from water and ~296 feet from sewer. The developer is not proposing enough lots to require connection (LDC §42A-113 C.5). The developer has provided correspondence affirming that City of Hendersonville water is available to the site. (see attached, RE: Water Availability)



Map C: Public Water and Sewer Map

Master & Development Plan Comments:

1. **Soil Erosion and Sedimentation Control Plan.** The Applicant shall submit written notice from the appropriate local agencies verifying that an Erosion and Sedimentation

- Control Plan has been received or a written notice from a professional land surveyor, engineer, landscape architect, architect, or professional planner certifying that no plan is required (LDC §42A-113B).
- 2. **Private Road Standards.** The Applicant has indicated that new roads are proposed. All subdivision roads must be designed and constructed to the minimum standards of LDC §42A-81 C (Table 3.1). The final plat(s) must contain a note stating: *The private roads indicated on this final plat may not meet the requirements of the North Carolina Department of Transportation for acceptance into the state road system.* Planning Staff proposes the following conditions to ensure the private roads meet the standards of the Land Development Code:
 - a. **Road Drainage and Culverts.** Road or drainage structures shall be constructed in accordance with state roads standards. Road drainage side ditches shall be constructed with sufficient depth and width to carry the expected volume of storm water runoff (LDC §42A-100).
 - b. **Road Construction.** A professional engineer or professional land surveyor certify on the final plat that no portion of the constructed roads have grades that exceed maximum allowable grade as defined for each class of road or submit a final asbuilt graded center line profile showing grade and alignment for all roads (LDC §42A-82).
 - c. **Minimum Curve Radius.** Should the Applicant request a reduction in centerline radii, that a professional engineer or professional land surveyor certify on the final plat, the existing cross slope of roadway sections where reductions in centerline radii are requested (LDC §42A-106 C).
 - d. **Dead Ends, Cul-de-sacs and Turnarounds.** The Applicant proposes two (2) cul-de-sacs located at the end of local road, Olivet Lane and Eden Court. All turnarounds must meet of the LDC §42A-105 C (8).
- 3. **Shoulder Stabilization.** All areas disturbed by the construction of a private road, including cut and fill slopes, shoulders and ditch banks, shall be seeded to stabilize the soil and prevent erosion. Seeding should be done as soon as feasible after road construction (LDC §42A-97).
- 4. **Road Grade.** The maximum road grade for local roads constructed of gravel is 15 percent and 18 percent for asphalt. A professional engineer or professional land surveyor must certify on the Final Plat that no portion of the road has a grade that exceeds the allowable percent or submit a final as-built graded center line profile showing grade and alignment of the road (LDC §42A-81C (Table 3.1). and §42A-81 C(4)).
- 5. **Road Name Approval.** Proposed road names for a private and/or public road shall be preapproved by Henderson County in accordance with Chapter 42 of the Henderson

- County Code, Property Addressing (LDC §42A-98). The applicant lists the proposed road names for all road segments. The names of the shared drives should be confirmed with the Master and Development Plan approval. Property Addressing has reviewed and approved the proposed road names in this plan.
- 6. **Subdivision Names.** The final plat shall contain certification that the public records of the County have been searched and the proposed subdivision name meets the standards set forth in this Chapter (LDC §42A-85).
- 7. **Fire Protection Requirements.** Any subdivision served by a public water system shall meet the County's standard of one (1) hydrant per 1000 feet of linear road distance. (LDC §42A-81 B(4))
- 8. **Street Tree Requirements.** According to the street tree requirements of Chapter 42A (LDC §42A-176 & 178) the applicant must provide one tree per 50 linear feet of property abutting an internal road. Trees may be placed in groups with a minimum spacing of no less than 15 feet and maximum spacing of no more than 65 feet. The trees must be placed within the right-of-way or within 20 feet of the edge of the right-of-way. The applicant may use existing trees in accordance with §42A-153 instead of planting new trees. These existing trees must also be located within the right-of-way or 20 feet of the edge of the right-of-way as required by §42A-178. All street trees must be properly planted and meet the spacing requirements or the applicant may post an improvement guarantee with the County before the final plat can be approved. Planning Staff recommends that street trees outside the ROW be protected by requiring a platted easement or restriction preventing lot owners from removing trees designated as meeting the street tree requirement.
- 9. **Miscellaneous Advisory Provisions.** The Applicant should become familiar with the Miscellaneous Advisory Provisions of Chapter 42A (LDC §42A-87).
- 10. **Final Plat Requirements.** The Final Plat(s) must meet the requirements provided by the Planning Department whenever a subdivision of land occurs (LDC §42A-343).

Site Development CHAPEL COVE SUBDIVISION

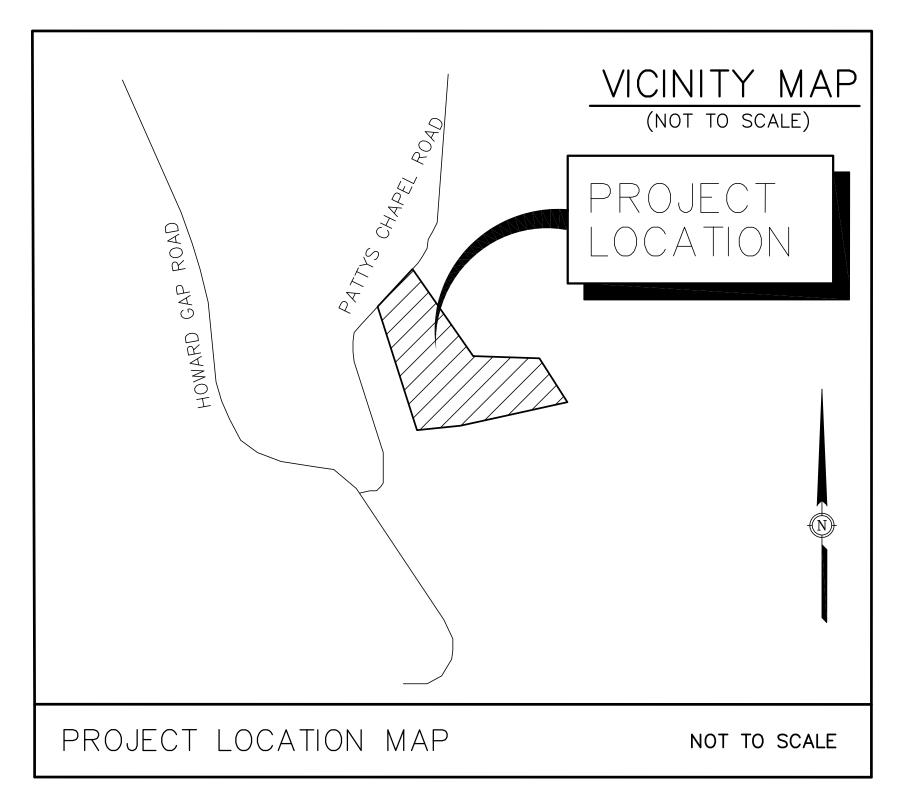
HENDERSON COUNTY, NORTH CAROLINA

OWNER/DEVELOPER: SOUTH CREEK COTTAGES, LLC

103 MCDOWELL RD. MILS RIVER, NC 28759

CONTACT: RICK MOORE

(828) 891-8900



INDEX OF DRAWINGS

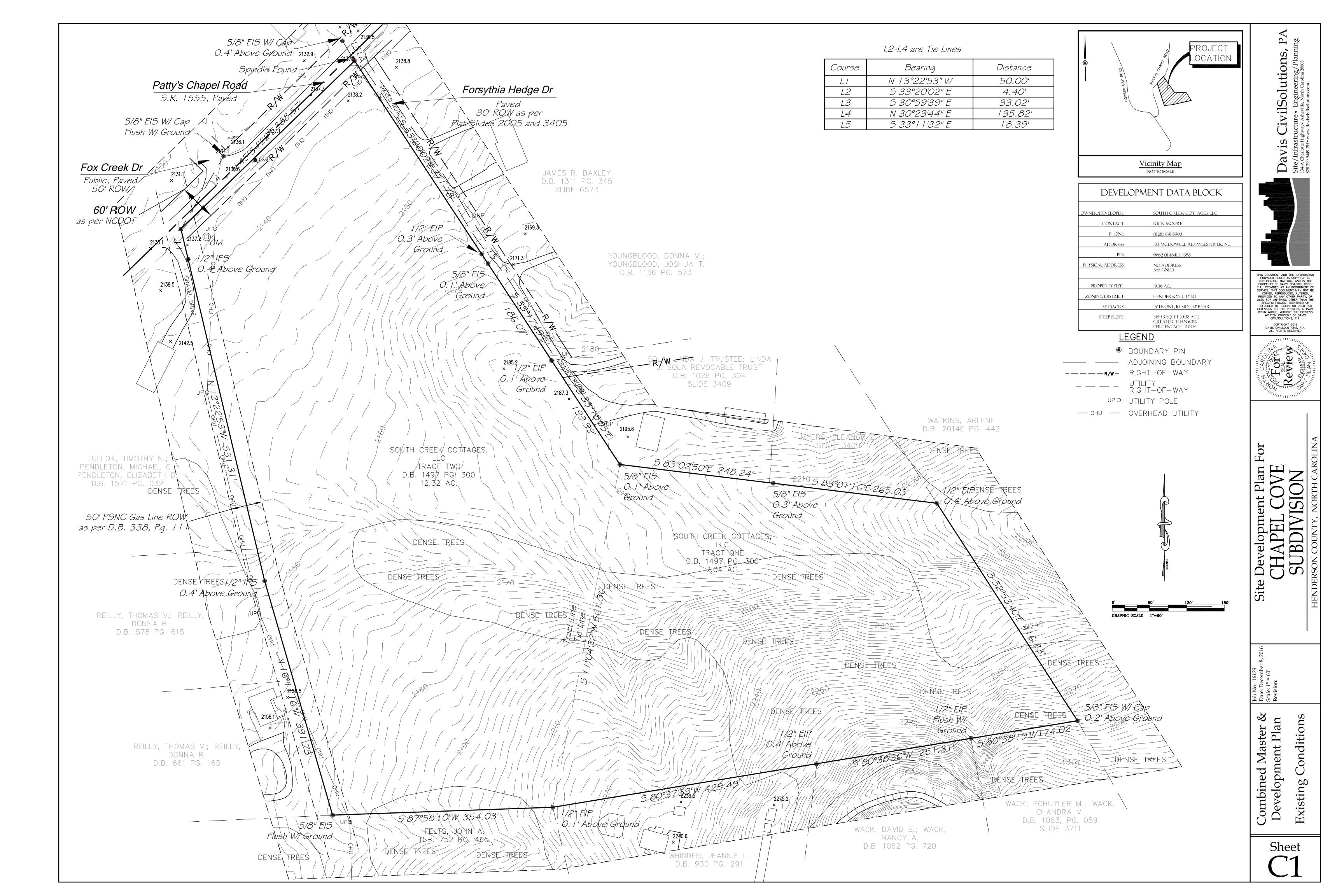
- **COVER SHEET & VICINITY MAP**
- **EXISTING CONDITIONS** OVERALL LAYOUT
- LANDSCAPE
- GRADING, STORM DRAIN & EROSION CONTROL
- UTIITIES **DETAILS**
- **DETAILS**

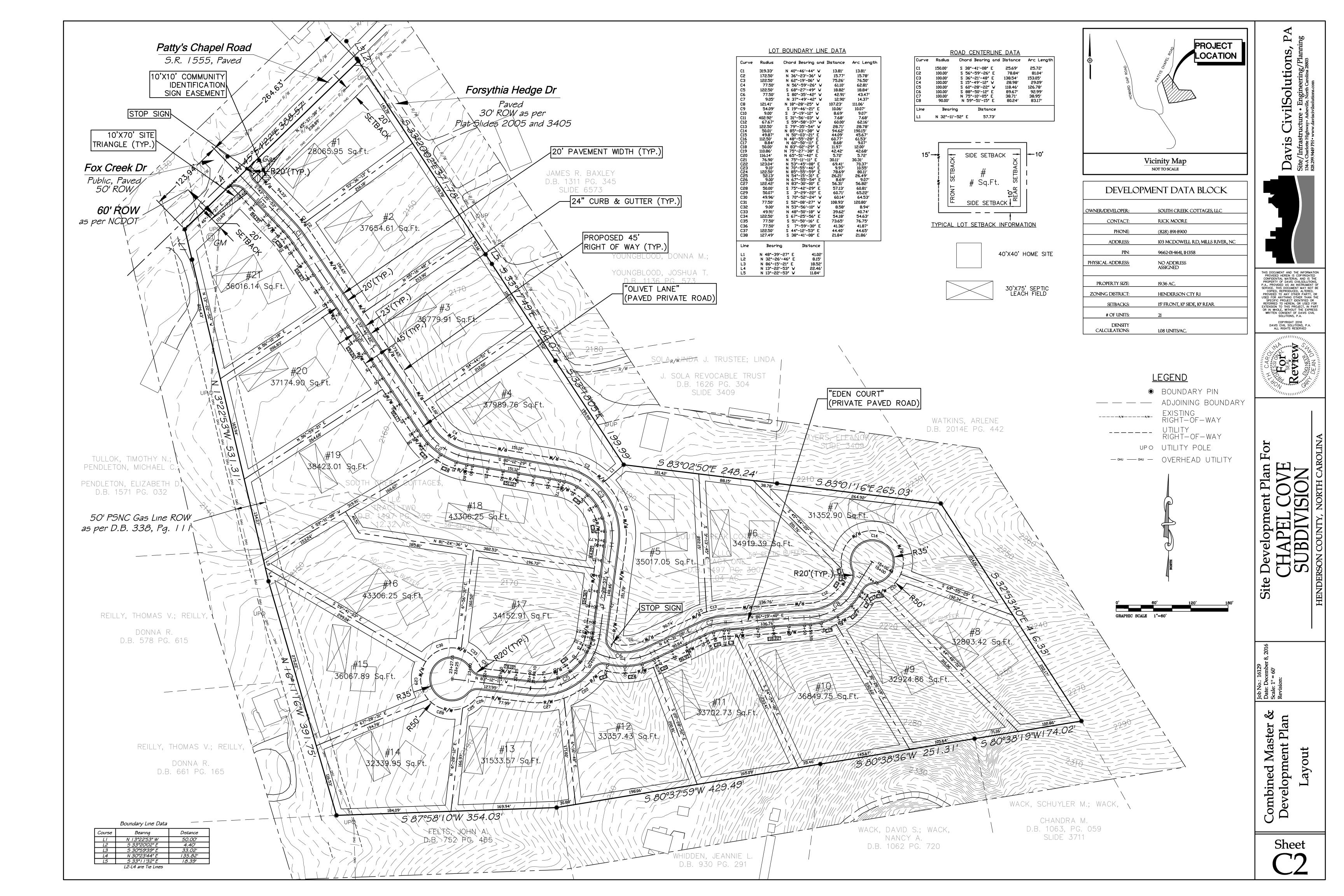
COMBINED MASTER AND DEVELOPMENT PLAN

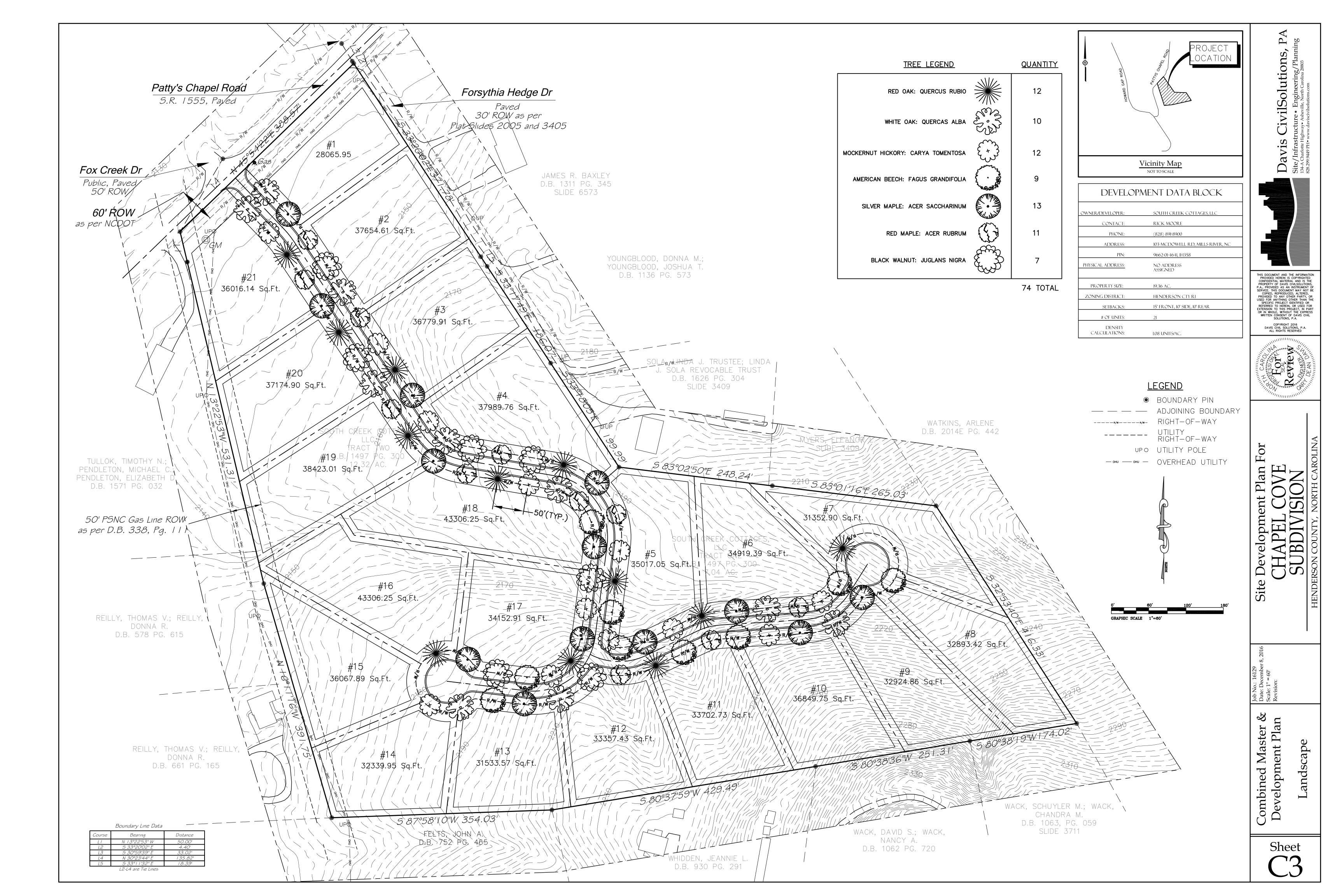


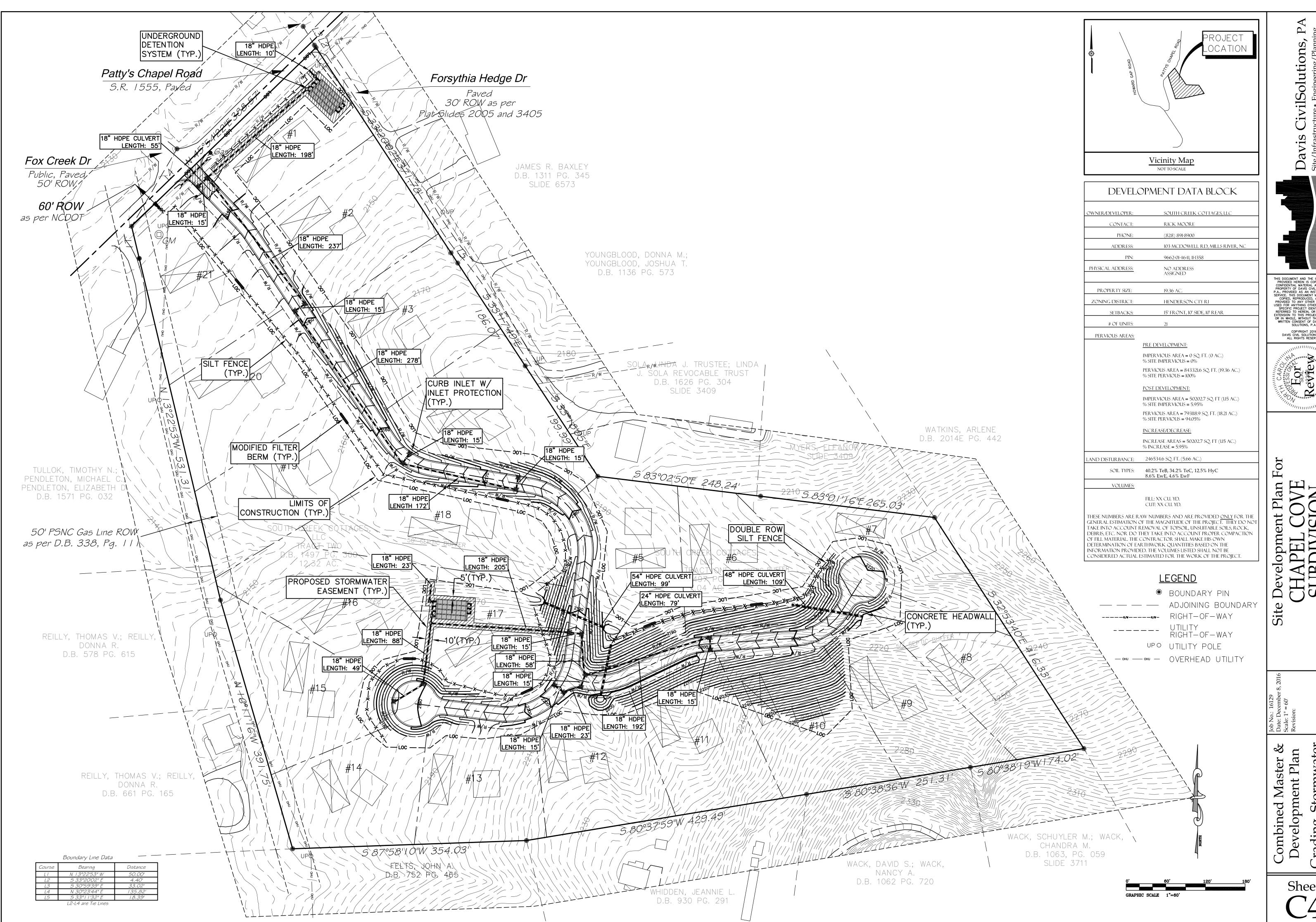


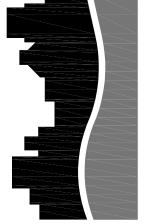
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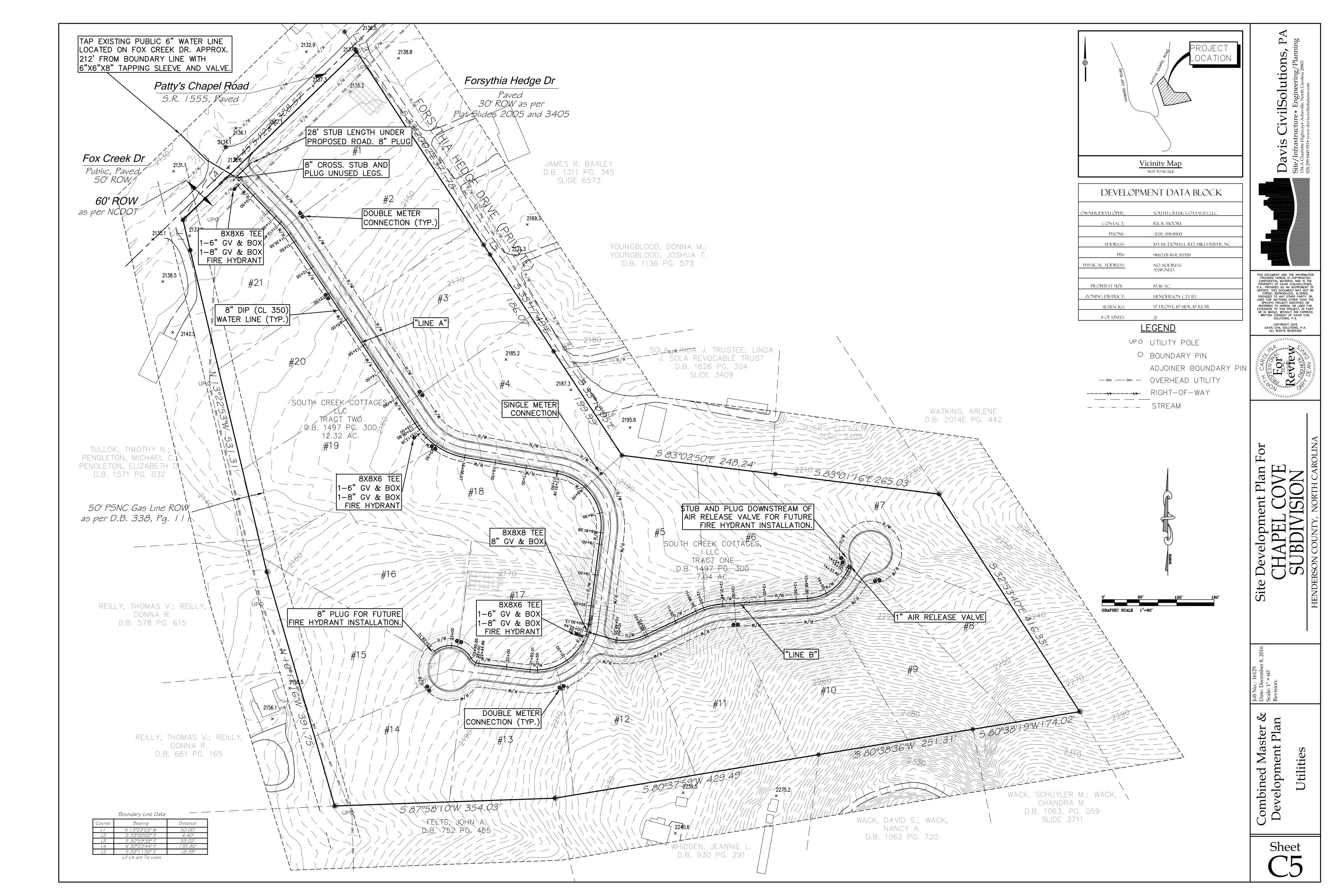




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21. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH RESPECTIVE UTILITY.

22. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND/OR MATERIAL INSIDE OR OUTSIDE THE CONTRACT LIMITS DUE TO CONSTRUCTION OPERATIONS.

23. THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.

24. DO NOT SCALE THESE DRAWINGS AS THEY ARE REPRODUCTIONS AND SUBJECT TO DISTORTION.

25. THE CONTRACTOR SHALL VERIFY ALL LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON THE PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE, OTHER OBSTRUCTIONS OR FROM ANY DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NON-SUBSCRIBING UTILITIES. THE CONTRACTOR(S) SHALL CONTACT NC "ONE CALL" AT (800) 632-4949 FOR ASSISTANCE IN LOCATING EXISTING UTILITIES. CALL AT LEAST 48 HOURS PRIOR TO ANY DIGGING.

26. THE CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.

27. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REVIEW ALL PLANS AND SPECIFICATIONS AND THE JOB SITE. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER WHO PREPARED THE PLANS OF ANY DISCREPANCIES THAT MAY REQUIRE MODIFICATIONS TO THESE PLANS OR OF ANY FIELD CONFLICTS.

28. ALL PERMITS RELATIVE TO THE PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY AND LOCAL CODES.

29. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS.

30. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THE REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD THE OWNER AND DESIGN PROFESSIONAL HARMLESS OF ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, ACCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR DESIGN

31. ALL RECOMMENDATIONS/REQUIREMENTS OUTLINED IN THE SOILS REPORT AND ADDENDUMS TO THE SOILS REPORT CONTAINED IN THE CONTRACT DOCUMENTS SHALL BE INCORPORATED INTO THE EARTHWORK AND RELATED SPECIFICATIONS FOR THIS PROJECT.

32. IF BORROWED OR WASTE FILL MATERIAL IS GENERATED, AN APPROVED GRADING PERMIT MUST BE SECURED FOR THE BORROW OR WASTE MATERIAL SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.

33. UNLESS A PERMIT FROM NCDENR - DIVISION OF WASTE MANAGEMENT TO OPERATED A LANDFILL IS ON FILE FOR THE OFFICIAL SITE, ACCEPTABLE FILL MATERIAL SHALL BE FREE OF ORGANIC OR OTHER DEGRADABLE MATERIALS, MASONRY, CONCRETE AND BRICK IN SIZES EXCEEDING 12 INCHES, AND ANY MATERIALS WHICH WOULD CAUSE THE SITE TO BE REGULATED AS A LANDFILL BY THE STATE OF NORTH CAROLINA.

34. ALL CONSTRUCTED SEVERE CLOPES GREATER THAT 2:1 AND GREATER THAT FIVE (5) FEET IN HEIGHT AN INSPECTION AND A STABILITY CERTIFICATE ARE REQUIRED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER WITH GEOTECHNICAL EXPERTISE SUFFICIENT TO PERFORM THE INSPECTION AND STABILITY ANALYSIS. FOR ALL CONSTRUCTED SEVERE SLOPES WITHIN PROPOSED OR EXISTING PUBLIC RIGHTS-OF-WAY, PERIODIC INSPECTIONS AND COMPACTION REPORTS ARE REQUIRED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER WITH GEOTECHNICAL EXPERTISE.

NOTE-2A

GENERAL CONSTRUCTION NOTES

- 1. FINISH GRADE TOLERANCES SHALL BE AS NOTED IN THE SPECIFICATIONS. THE ENGINEER MAY MAKE GRADE CHANGES AS REQUIRED IN THE FIELD WITHOUT EFFECTING THE UNIT BID PRICE FOR UNCLASSIFIED EXCAVATION.
- 2. UNLESS OTHERWISE STATED, ALL FILL AREAS SHALL BE CONSTRUCTED IN LAYERS OF 8" MAXIMUM THICKNESS. WITH WATER ADDED OR SOIL CONDITIONED TO THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE ENGINEER AND COMPACTED WITH A SHEEP'S FOOT ROLLER TO A COMPACTION EQUAL TO OR GREATER THAN 95% (100% IN THE TOP 2' OF THE SUB GRADE BELOW ROADWAYS, PARKING LOTS, AND SLABS) OF THE DENSITY OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH THE STANDARD PROCTOR METHOD OF MOISTURE-DENSITY RELATIONSHIP TEST, ASTM D698 OR AASHTO-99 UNLESS SPECIFIED IN OTHER SPECIFICATIONS. COPIES OF COMPACTION REPORTS SHALL BE PROVIDED TO THE LOCAL REGULATORY AGENCY. WHERE REQUIRED.
- 3. ENTIRE AREA TO BE GRADED SHALL BE CLEARED AND GRUBBED. NO FILL SHALL BE PLACED ON ANY AREA NOT CLEARED AND GRUBBED.
- 4. ALL SOIL EROSION CONTROL MEASURES REQUIRED BY THE GRADING PLAN SHALL BE PERFORMED PRIOR TO GRADING, CLEARING OR GRUBBING. ALL EROSION CONTROL DEVICES SUCH AS SILT FENCES, ETC., SHALL BE MAINTAINED IN WORKABLE CONDITION FOR THE LIFE OF THE PROJECT BY THE CONTRACTOR AT HIS EXPENSE. EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT ONLY ON THE ENGINEER'S APPROVAL. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO CLEARING AND GRUBBING UNLESS OTHERWISE SPECIFIED. IF DURING THE LIFE OF THE PROJECT, A STORM CAUSES SOIL EROSION WHICH CHANGES FINISH GRADES OR CREATES "GULLIES" AND "WASHED AREAS", THESE SHALL BE REPAIRED AT NO ADDITIONAL COST, AND ALL SILT WASHED OFF OF THE PROJECT SITE ONTO ADJACENT PROPERTY SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST. THE CONTRACTOR SHALL ADHERE TO ANY APPROVED EROSION CONTROL PLANS WHETHER INDICATED IN THE CONSTRUCTION PLANS OR UNDER SEPARATE COVER.

EROSION CONTROL IS FIELD PERFORMANCE BASED AND ADDITIONAL SILT FENCE, TEMPORARY SEDIMENT BASINS AND OTHER MEASURES MAY NEED TO BE INSTALLED IN ADDITION TO THE APPROVED PLAN AS NECESSARY. MEASURES INDICATED ON THE DRAWINGS CAN AND SHOULD BE ADJUSTED TO ASSURE

DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE, UNLESS SPECIFIED OTHERWISE.

- A. CLEARING AND GRUBBING WASTES SHALL BE REMOVED FROM THE SITE AND PROPERLY
- SOLID WASTES TO BE REMOVED, SUCH AS SIDEWALKS, CURBS, PAVEMENT, ETC., MAY BE PLACED IN SPECIFIC DISPOSAL AREAS DELINEATED ON THE PLANS WITH THE PRIOR APPROVAL OF THE ENGINEER OR SHALL BE REMOVED FROM THE SITE AS REQUIRED BY THE SPECIFICATIONS. THIS MATERIAL SHALL HAVE A MINIMUM COVER OF 2'. THE CONTRACTOR SHALL MAINTAIN SPECIFIED COMPACTION REQUIREMENTS IN THESE AREAS. WHEN DISPOSAL SITES ARE NOT PROVIDED, THE CONTRACTOR SHALL REMOVE THIS WASTE FROM THE SITE AND PROPERLY DISPOSE OF IT AT HIS EXPENSE.
- ABANDONED UTILITIES SUCH AS CULVERTS, WATER PIPE, HYDRANTS, CASTINGS, PIPE APPURTENANCES, UTILITY POLES, ETC., SHALL BE THE PROPERTY OF THE SPECIFIC UTILITY AGENCY, OR COMPANY HAVING JURISDICTION. BEFORE THE CONTRACTOR CAN REMOVE, DESTROY, SALVAGE, REUSE, SELL OR STORE FOR HIS OWN USE ANY ABANDONED UTILITY, HE MUST PRESENT TO THE OWNER WRITTEN PERMISSION FROM THE UTILITY INVOLVED.
- D. ON SITE BURNING IS AN ACCEPTABLE METHOD OF DISPOSING OF FLAMMABLE WASTES WHERE ALLOWED BY LOCAL CODES. WHEN BURNING IS ANTICIPATED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND MEETING GOVERNING CODES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR HIS REPRESENTATIVE AS TO THE SPECIFIC LOCATION OF BURNING AND SHALL PROVIDE COPIES OF SECURED PERMITS. AFTER BURNING IS COMPLETED, PURE ASH MAY BE DISPOSED OF BY MIXING WITH FILL DIRT UPON THE APPROVAL OF THE ENGINEER. ALL MATERIAL NOT TOTALLY BURNED SHALL BE DISPOSED OF AS SPECIFIED IN "B" ABOVE. THE CONTRACTOR SHALL NOT HOLD UP WORK PROGRESS FOR THE PURPOSE OF WAITING FOR A "BURNING DAY".
- 6. IN THE EVENT EXCESSIVE GROUNDWATER OR SPRINGS ARE ENCOUNTERED WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL INSTALL NECESSARY UNDER DRAINS AND STONE AS DIRECTED BY THE ENGINEER AND AS APPROVED BY PERMITTING FROM THE REGULATORY AGENCIES. ALL WORK SHALL BE PAID BASED UPON UNIT BIDS, UNLESS SPECIFIED OTHERWISE.
- 7. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ADJUSTMENT OF ALL UTILITY SURFACE ACCESSES WHETHER HE PERFORMS THE WORK OR A UTILITY COMPANY PERFORMS THE WORK.
- 8. THE CONTRACTOR SHALL CONTROL ALL "DUST" BY PERIODIC WATERING AND SHALL PROVIDE ACCESS AT ALL TIMES FOR PROPERTY OWNERS WITHIN THE PROJECT AREA AND FOR EMERGENCY VEHICLES. ALL OPEN DITCHES AND HAZARDOUS AREAS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATIONS.

NORTH CAROLINA LAND QUALITY SECTION

EROSION CONTROL NOTES

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND

3. - OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY A REPRESENTATIVE OF THE NORTH

CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES,

5. - SEED AND MULCH DENUDED AREA WITHIN 14 DAYS ON DISTURBED FLAT AREAS AND 7 DAYS ON ALL PERIMETER

DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL.

GROUND COVER SHALL BE REQUIRED AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 (OR 7) CALENDAR

SEED AND SOIL AMENDMENTS SHALL BE PLACED ON A PREPARED SEEDBED AT THE FOLLOWING RATES PER ACRE:

4,000 LBS

1,000 LBS 100 LBS

40 LBS.

4.000 LBS

1,000 LBS

100 LBS

IF HYDROSEEDING, WOOD CELLULOSE MAY BE USED IN ADDITION TO STRAW MULCH AT THE RATE OF

ALL SEEDING SHALL BE MAINTAINED, WATERED, ETC., UNTIL A PERMANENT VEGETATIVE GROUND COVER IS

BASINS AND ALL OTHER MEASURES MAY NEED TP BE ADDED IN ADDITION TO THE APPROVED PLAN AS NECESSARY. MEASURES SHOWN CAN AND SHOULD BE ADJUSTED TO ASSURE MAXIMUM PROTECTION OF SITE.

THE CONTRACTOR SHALL MAKE INSPECTIONS OF THE SITE DURING AND AFTER THE INSTALLATION OF EROSION CONTROL FACILITIES; THE COMPLETION OF EACH PHASE OF CLEARING AND GRADING; THE INSTALLATION OF STORM DRAINAGE FACILITIES; THE COMPLETION OF CONSTRUCTION; IMMEDIATELY AFTER EACH RAINFALL EVENT;

THE SITE INSPECTION SHALL DOCUMENT THE INSTALLATION OF ALL REQUIRED FACILITIES; THE COMPLETION OF ALL GRADING AND GROUND COVER; THE MAINTENANCE OF ALL FACILITIES; AND ANY DEVIATIONS FROM

THE APPROVED PLANS. AT A MINIMUM, THE DOCUMENTATION SHALL BE PROVIDED USING DEMLRDWQ FORM

120 LBS.

4,000 LBS. (ANCHORED)

4,000 LBS. (ANCHORED)

QUALITY SECTION. THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE COMPLIED WITH FOR ALL WORK.

AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.

OBTAIN GRADING PERMIT

LAND QUALITY SECTION.

FERTILIZER (10-10-10)

FERTILIZER (10-10-10)

KY-31 FESCUE

STRAW MULCH

GERMAN MILLET

KY-31 FESCUE

SWITCH GRASS

STRAW MULCH

RYE (GRAIN)

4. - PROCEED WITH GRADING, CLEARING AND GRUBBING.

DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

(OR SMALL-STEMMED SUDAN GRASS @ 40 LBS.)

ESTABLISHED OVER ALL DISTURBED AREAS.

SUMMER (PERMANENT) SEEDING (MAY 15 TO AUGUST 15)

FOR ALL SLOPES 2:1 OR STEEPER ADD TO THE ABOVE:

7. - REMOVE SOIL EROSION CONTROL MEASURES AND STABILIZE THESE AREAS.

RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.

AND CONTINUALLY UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

04292013 PROVIDED AT LEAST WEEKLY TO THE ENGINEER.

WINTER (TEMPORARY) SEEDING (AUGUST 15 TO MAY 15) MOUNTAINS

50 LBS

ALL SLOPES 2:1 OR STEEPER SHALL BE COVERED BY EROSION CONTROL MATTING.

6. - MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

8. - REQUEST FINAL APPROVAL BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL

9. - EROSION CONTROL IS FIELD PERFORMANCE BASED AND ADDITIONAL SILT FENCES, TEMPORARY SEDIMENT

GENERAL: ALL EROSION CONTROL MEASURES ARE TO BE PERFORMED IN STRICT ACCORDANCE WITH REQUIREMENTS OF THE

2. - INSTALL ALL EROSION CONTROL MEASURES AS REQUIRED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT

BE USED.

EQUAL. WITH WATER TIGHT JOINTS.

SHALL BE 12 GAUGE.

SMOOTH EXTERIOR, WITH DOUBLE GASKETED JOINTS.

BOXES SHALL CONFORM TO STANDARD DETAIL 840.31.

HENDERSON COUNTY EROSION CONTROL NOTES

GENERAL CONSTRUCTION NOTES CONT'D.

ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADE AND SMOOTH.

ACCEPT SEED. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING OPERATIONS WITHOUT FIRST

STEEPER, SHALL BE COVERED, AFTER SEEDING, WITH EROSION CONTROL MATTING CONSISTING OF

AASHTO M-36, WITH PREROLLED ENDS TO ACCOMMODATE CORRUGATED COUPLING BANDS. 18" PIPE

SHALL BE 16 GAUGE, 24" AND 30" PIPE SHALL BE 14 GAUGE AND 36" PIPE AND OVER SHALL BE

WHERE SPECIFIED, STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) CONFORMING TO

WHERE SPECIFIED, ALL STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), CORRUGATED

EXTERIOR, SMOOTH WALL INTERIOR, WITH SOIL TIGHT JOINTS, BACKFILLED WITH # 57 WASHED STONE UP

WHERE SPECIFIED, ALL STORM DRAIN PIPE SHALL BE DUAL WALL HIGH DENSITY POLYPROPYLENE (HDPP),

ALL CORRUGATED METAL STORM DRAIN PIPE (CMP) SHALL BE ALUMINIZED TYPE 2 CORRUGATED STEEL

MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M-36. THE PIPE SHALL BE

MANUFACTURED FROM ALUMINIZED STEEL TYPE 2 MATERIAL CONFORMING TO THE REQUIREMENTS OF

HUGGER BANDS. THE USE OF DIMPLE BANDS WILL NOT BE ALLOWED. PIPE THROUGH 24" DIAMETER

12. CATCH BASINS CAST-IN-PLACE SHALL CONFORM TO THE REQUIREMENTS OF NCDOT STANDARD

THROUGH 840.04. DROP INLETS SHALL CONFORM TO STANDARD DETAIL 840.14. JUNCTION

13. CURB INLET FRAME, GRATE AND HOOD SHALL BE NEENAH R-3233D, PRODUCTS BY DEWEY BROS.

STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES (LATEST EDITION). CONCRETE SHALL

CONSTRUCTED IN ACCORDANCE WITH SECTION 825. MASONRY SHALL MEET THE REQUIREMENTS

15. TOPS OF PROPOSED FRAMES AND GRATES SHALL BE FLUSH WITH FINISHED GRADE. ALL STORM DRAIN

BOXES AND MANHOLES OVER 4' IN DEPTH SHALL HAVE STEPS DIRECTLY BENEATH THE OPENING.

16. TINDALL PRE CAST CONCRETE BOXES ARE ACCEPTABLE ALTERNATIVES FOR PROPOSED CATCH BASINS

GRADING PERMITS FOR ANY BORROW OR WASTE SITES TO BE USED, PRIOR TO CONSTRUCTION.

17. CONTRACTOR SHALL PROVIDE THE OWNER AND THE LOCAL REGULATORY AGENCY WITH PROOF OF ACTIVE

18. THE CONTRACTOR SHALL ASSUME MAINTENANCE OF ALL EROSION CONTROL FACILITIES LEFT ON SITE BY

BE CLASS A OR B, 4000 PSI MINIMUM, MEETING THE REQUIREMENTS OF SECTION 1000,

OF SECTION 1040, CONSTRUCTED IN ACCORDANCE WITH SECTION 830 AND/OR 834.

CURB INLET CATCH BASIN SHALL CONFORM TO NCDOT STANDARD DETAILS 840.02

AASHTO M-274. ALL PIPE SHALL BE FURNISHED WITH PREROLLED ENDS AND SHALL BE JOINED WITH

SHALL BE 16 GAUGE, PIPE THROUGH 42" DIAMETER SHALL BE 14 GAUGE, PIPE THROUGH 54" DIAMETER

11. CONTRACTOR SHALL VERIFY THE APPROPRIATENESS OF ALL ELEVATIONS BEFORE INSTALLATION OF FACILITIES

SPECIFICATIONS FOR ROADS AND STRUCTURES (LATEST EDITION) ARTICLES 840-1 THROUGH 840-3.

U.S. FOUNDRY OR EQUAL. DROP INLET FRAME AND GRATE SHALL BE NEENAH R-3339A OR EQUAL.

FIELD INLET COVER SHALL CONFORM TO NCDOT STANDARD DETAIL 840.04, OPENING FACING UPSTREAM.

14. CONCRETE AND MASONRY SHALL MEET THE REQUIREMENTS OF THE APPROPRIATE SECTION OF THE NCDOT

CORRUGATED EXTERIOR, SMOOTH WALL INTERIOR, WITH GASKETED JOINTS, BACKFILLED WITH #57 WASHED

STONE UP TO THE SPRING LINE OF THE PIPE, WITH 12" STONE ON EACH SIDE OF THE PIPE, AND 8" BENEATH

THE PIPE. PIPES OF A DIAMETER OF 30" OR GREATER SHALL BE TRIPLE WALL, CORRUGATED STRUCTURAL CORE,

AND THAT THOSE ELEVATIONS CONTRIBUTE TO THE PROPER INTENDED PERFORMANCE OF THE INSTALLED FACILITIES.

HDPE PIPE USED FOR STORM DRAINAGE DETENTION SYSTEMS SHALL BE "HANCOR BLUE SEAL" OR APPROVED

TO MIN. 6" OVER THE TOP OF THE PIPE, 12" ON EACH SIDE OF THE PIPE, AND 8" BENEATH THE PIPE.

AASHTO M-170, AS CONTAINED IN NCDOT STANDARD SPECIFICATION 1032-9 FOR WALL "B" TYPE.

10. WHERE SPECIFIED, STORM DRAIN PIPE SHALL BE CORRUGATED METAL PIPE (CMP) CONFORMING TO

PERFORMED BY A MECHANICAL "HYDRO-SEEDER". HAND SEEDING SHALL BE AUTHORIZED ON AN AREA

BY AREA APPROVAL BY THE ENGINEER. ALL FILL AND CUT SLOPES 2:1 HORIZONTAL TO VERTICAL, OR

BIODEGRADABLE STRAW WITH NATURAL FIBER OR BIODEGRADABLE NETTING, APPROVED BY THE ENGINEER.

12 GAUGE AS SPECIFIED ON THE PLANS, PIPE AND COUPLING BANDS SHALL CONFORM TO NCDOT 1032-3 FOR

PLAIN PIPE OR 1032-4(A) FOR BITUMINOUS COATED AND PARTIALLY PAVED PIPE. DIMPLE BANDS SHALL NOT

FREE OF ALL ROCKS LARGER THAN 3". EQUIPMENT TRACKS. DIRT CLODS, BUMPS, RIDGES AND

GOUGES PRIOR TO SEEDING; THE SURFACE SHALL BE LOOSENED TO A DEPTH OF ±4"-6" TO

OBTAINING THE ENGINEER'S APPROVAL OF THE GRADED SURFACE. ALL SEEDING SHALL BE

9. ALL AREAS WHERE THERE IS EXPOSED DIRT SHALL BE SEEDED, FERTILIZED AND MULCHED

PREVIOUS CONTRACTORS IN THE CASE OF PHASED PROJECTS WHEN SPECIFIED BY THE CONTRACT DOCUMENTS.

THE CONTRACTOR SHALL MAINTAIN, ADD TO AND/OR ADJUST ALL FACILITIES TO ASSURE MAXIMUM PROTECTION

NOTE-2

2. - INSTALL ALL EROSION CONTROL MEASURES AS REQUIRED.

4. - SEED AND MULCH DENUDED AREAS WITHIN 14 DAYS AFTER FINISHED GRADES ARE ESTABLISHED, AND/OR WITHIN 7 DAYS ON ALL PERIMETER AREAS AND SLOPES GREATER THAN 3:1. SEED AND SOIL AMENDMENTS SHALL BE PLACED ON A PREPARED SEEDBED AT THE FOLLOWING RATES PER ACRE:

SUMMER (PERMANENT) SEEDING (MAY 15 TO AUGUST 15) 2,000 LBS 750 LBS 100 LBS 4,000 LBS. (ANCHORED)

WINTER (TEMPORARY) SEEDING (AUGUST 15 TO MAY 15) MOUNTAINS 2,000 LBS FERTILIZER (10-10-10) 750 LBS KY-31 FESCUE 100 LBS

IF HYDROSEEDING, WOOD CELLULOSE MAY BE USED IN ADDITION TO STRAW MULCH AT THE RATE OF 1,000 LBS PER ACRE.

ESTABLISHED OVER ALL DISTURBED AREAS.

6. - MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

8. - REQUEST FINAL APPROVAL BY HENDERSON COUNTY.

EROSION CONTROL IS FIELD PERFORMANCE BASED AND ADDITIONAL SILT FENCES, TEMPORARY SEDIMENT BASINS AND ALL OTHER MEASURES MAY NEED TO BE ADDED IN ADDITION TO THE APPROVED PLAN AS NECESSARY. MEASURES SHOWN CAN AND SHOULD BE ADJUSTED TO ASSURE MAXIMUM PROTECTION OF SITE.

BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RETAIN EROSION.

STABILIZATION OF ALL LAND DISTURBANCE SHALL OCCUR AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14, OR 7, CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

AREAS DEDICATED FOR MANAGEMENT OF LAND CLEARING AND DEMOLITION DEBRIS, EARTHEN STOCK PILE THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.

THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE WEEKLY SELF-INSPECTION PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE NPDES SELF—INSPECTION REPORT FORM FROM THE NCDENR, DIVISION OF LAND RESOURCES SHALL BE USED AND ALL REPORTING REQUIREMENTS SHALL BE FOLLOWED. INSPECTION ITEMS INCLUDE, BUT IS NOT LIMITED TO, SEDIMENT CONTROL BASINS, TRAPS, AND PONDS, ROCK DAMS, TEMPORARY DIVERSIONS, TEMPORARY SLOPE DRAINS, ROCK CHECK DAMS, SILT FENCE, INLET PROTECTION, STORM DRAIN FACILITIES, ENERGY DISSAPATERS, AND STABILIZATION METHODS OF OPEN CHANNELS, AND THE NEED FOR GROUND COVER.

CompleteSWpermit08032011.pdf THE CONTRACTOR SHALL MAKE INSPECTIONS OF THE SITE DURING AND AFTER THE INSTALLATION OF EROSION CONTROL FACILITIES; THE COMPLETION OF EACH PHASE OF CLEARING AND GRADING; THE INSTALLATION OF STORM DRAINAGE FACILITIES; THE COMPLETION OF CONSTRUCTION; IMMEDIATELY AFTER EACH RAINFALL EVENT;

GENERAL: ALL EROSION CONTROL MEASURES ARE TO BE PERFORMED IN STRICT ACCORDANCE WITH REQUIREMENTS OF HENDERSON COUNTY. THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE COMPLIED WITH FOR ALL WORK. OBTAIN EROSION CONTROL PERMIT THROUGH HENDERSON COUNTY.

3. - PROCEED WITH GRADING, CLEARING AND GRUBBING.

WHERE APPROVED BY THE ENGINEER.

OF THE SITE.

FERTILIZER (10-10-10) STRAW MULCH GERMAN MILLET 40 LBS. (OR SMALL-STEMMED SUDAN GRASS @ 40 LBS.)

4.000 LBS. (ANCHORED) STRAW MULCH RYE (GRAIN) 120 LBS.

FOR ALL SLOPES 2:1 OR STEEPER ADD TO THE ABOVE: SERICEA LESPEDEZA (KOREAN) 50 LBS.

ALL SEEDING SHALL BE MAINTAINED, WATERED, ETC., UNTIL A PERMANENT VEGETATIVE GROUND COVER IS

ALL SLOPES 2:1 OR STEEPER SHALL BE COVERED BY EROSION CONTROL MATTING.

7. - REMOVE SOIL EROSION CONTROL MEASURES AND STABILIZE THESE AREAS.

GENERAL INFORMATION

THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED

MATERIAL, CONSTRUCTION AND DOMESTIC WASTE, AND HAZARDOUS OR TOXIC WASTE MUST BE LOCATED AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN

A. SELF-INSPECTION PROGRAM - EROSION CONTROL INSPECTORS 1. http://www.hendersoncountync.org/engineering/Complete%20package%20for%20self%20inspection.pdf B. NPDES STORMWATER GENERAL PERMIT - WATER QUALITY INSPECTORS 1. http://www.hendersoncountync.org/engineering/erosion/

AND CONTINUALLY UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

FEDERAL NPDES STORM WATER PHASE II REQUIREMENTS SHALL BE MET BY THE CONTRACTOR FOR ALL CONSTRUCTION SITES LARGER THAN 1 ACRE EFFECTIVE AUGUST 3, 2011. THESE REQUIREMENTS ARE SUMMARIZED AS FOLLOWS:

1. - IMPLEMENT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND KEEP A COPY OF THE PLAN ON SITE. DEVIATION FROM THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN WILL BE CONSIDERED A VIOLATION OF THE FEDERAL NPDES GENERAL PERMIT.

2. - PREVENT SPILLING OF FUELS, LUBRICANTS, COOLANTS, HYDRAULIC FLUIDS, AND ANY OTHER PETROLEUM PRODUCTS ONTO THE GROUND OR INTO SURFACE WATERS. DISPOSE OF SPENT FUELS APPROPRIATELY.

3. – USE HERBICIDES, PESTICIDES, AND FERTILIZER IN A MANNER CONSISTENT WITH THE FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT AND IN ACCORDANCE WITH LABEL RESTRICTIONS.

4. - CONTROL MANAGEMENT AND DISPOSAL OF LITTER AND SANITARY WASTE FROM THE SITE SO THAT NO ADVERSE IMPACTS TO WATER QUALITY OCCUR.

5. - INSPECT ALL EROSION AND SEDIMENTATION CONTROL FACILITIES EVERY SEVEN CALENDAR DAYS (TWICE IN SEVEN CALENDAR DAYS FOR STORM WATER DISCHARGES TO STREAMS ON THE LATEST EPA-APPROVED 303(d) LIST) AND WITHIN 24 HOURS OF ANY STORM EVENT OF MORE THAN 0.5 INCH OF RAIN IN A 24-HOUR PERIOD. MAINTAIN A RAIN GAUGE ON SITE AND KEEP A RECORD OF THE RAINFALL AMOUNTS AND DATES.

6. - OBSERVE STORM WATER RUNOFF DISCHARGES AND LOOK FOR CLARITY, FLOATING SOLIDS, SUSPENDED OILS, OIL SHEEN AND OTHER OBVIOUS INDICATORS OF POLLUTION AND EVALUATE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES. IF SEDIMENTATION IS LEAVING THE DISTURBED AREA, TAKE IMMEDIATE ACTION TO CONTROL THE DISCHARGE.

7. - KEEP A RECORD OF INSPECTIONS. RECORD ANY VISIBLE SEDIMENTATION FOUND OUTSIDE THE DISTURBED LIMIT AND RECORD MEASURES TAKEN TO CLEAN UP THE SEDIMENT. MAKE THESE RECORDS AVAILABLE TO THE DIVISION OF WATER QUALITY OR ITS AUTHORIZED AGENT UPON REQUEST.

8. - MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES TO KEEP THEM OPERATING AT OPTIMUM EFFICIENCY. CONTACT THE ENGINEER FOR A COPY OF THE GENERAL PERMIT TO DISCHARGE STORM WATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM.

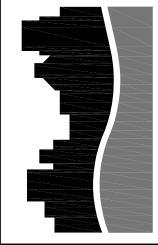
VIOLATIONS OF THE NPDES STORM WATER RULES CONSTITUTE A VIOLATION OF THE FEDERAL CLEAN WATER ACT AND ARE SUBJECT TO CIVIL PENALTIES OF UP TO \$27,000 PER DAY. UNDER STATE LAW, A DAILY CIVIL PENALTY OF \$10,000 PER VIOLATION CAN BE ASSESSED FOR VIOLATION OF TERMS OF THE PERMIT.

9. - REVEGETATION OF SLOPES 3:1 OR GREATER, INCLUDING PERIMETER AREAS, ARE REQUIRED WITHIN 7 CALENDAR DAYS.

NOTE-6

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SEEDING NOTES

SLOPE SEEDING MIXTURE

VALDA HARD FESCUE

PENLAWN RED FESCUE

KEN-BLU KENTUCKY BLUEGRASS

400 LB/ACRE 18-46-50 FERTILIZER.

TACKING WITH ASPHALT.

ASTRO TALL FESCUE

PERENNIAL RYE

SEEDING DATES

MOUNTAINS

SOIL AMENDMENTS

MAINTENANCE

SPECIES

RATE (LB/ACRE) SPECIES KENTUCKY BLUEGRASS (20%) 260 LBS. REBEL FESCUE (80%)

SEEDING DATES MARCH 15 - MAY 15 MOUNTAINS

PERMANENT SEEDING

LAWN SEEDING MIXTURE

AUGUST 15 - OCTOBER 15

SOIL AMENDMENTS FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY

STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE RE-FERTILIZE IF GROWTH IN NOT FULLY ADEQUATE. RE-SEED, RE-FERTILIZE AND MULCH IMMEDIATELY

TEMPORARY SEEDING FOR SUMMER

FOLLOWING EROSION OR OTHER DAMAGE.

SPECIES RATE (LB/ACRE) GERMAN MILLET 40 LBS.

SEEDING DATES MOUNTAINS MAY 15 - AUGUST 15 PIEDMONT MAY 1 - AUGUST 15 COASTAL PLAIN APRIL 15 - AUGUST 15

SOIL AMENDMENTS

SEEDING MIXTURE

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE

RE-FERTILIZE IF GROWTH IN NOT FULLY ADEQUATE. RE-SEED, RE-FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

SEEDING NOTES

SEEDING MIXTURE

TEMPORARY SEEDING FOR FALL

SPECIES RATE (LB/ACRE) RYE (GRAIN) 260 LBS.

SEEDING DATES

RATE (LB/ACRE)

20 LBS.

8 LBS.

25 LBS.

25 LBS.

1.5 LBS.

MARCH 15 - MAY 15 AUGUST 15 - OCTOBER 15

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY

RE-FERTILIZE IF GROWTH IN NOT FULLY ADEQUATE.

RE-SEED, RE-FERTILIZE AND MULCH IMMEDIATELY

FOLLOWING EROSION OR OTHER DAMAGE.

MOUNTAINS AUGUST 15 - DECEMBER 15 AUGUST 15 - DECEMBER 15 PIEDMONT AUGUST 15 - DECEMBER 30 COASTAL PLAIN

SOIL AMENDMENTS

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE

REPAIR AND RE-FERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE (PIEDMONT AND COASTAL PLAIN) OR KOREAN

TEMPORARY SEEDING FOR WINTER & EARLY SPRING

(MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

SEEDING MIXTURE SPECIES

RATE (LB/ACRE) RYE (GRAIN) 120 LBS. ANNUAL LESPEDEZA (KOBE 50 LBS. IN PIEDMONT & COASTAL PLAIN, KOREAN IN MOUNTAINS)

SEEDING DATES

MOUNTAINS (ABOVE 2,500') FEBRUARY 15 - MAY 15 MOUNTAINS (BELOW 2,500') FEBRUARY 1 - MAY 1 PIEDMONT JANUARY 1 - MAY 1 DECEMBER 1 - APRIL 15 COASTAL PLAIN

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A

MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL. <u>MAINTENANCE</u>

RE-FERTILIZE IF GROWTH IN NOT FULLY ADEQUATE. RE-SEED, RE-FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

NOTE-14

NOTE-15

