CITY ADMINISTRATOR MIKE COCHRAN



CITY COUNCIL
JEFF C. CHANDLER, MAYOR PRO-TEM
MIKE DYSON
KEVIN HEDGPETH
JOEL E. HODGES
DAN OWENS
MICHAEL SALLY

Memo

To: The Planning Commission

Cc: Larry Sturdivant, Building Official; Kevin Coffey, PE, Lowcountry Land Development

From: Jeff Hajek, Planner/Economic Development Director

Date: August 4, 2020

Re: Deferred Decision--Hanahan Commons: Request for Preliminary Plat Approval

Background and Context

This memo is a follow-up to the deferred decision of the Planning Commission at the July 7th meeting. The Commission arrived at said decision following discomfort with what was submitted for a preliminary plat, as well as with the conditions attached to the recommended staff approval. Commissioners wanted to see all conditions addressed before granting approval for this development.

Conditions for Approval and their Current Status

Below are said conditions, which were attached to the recommended approval, and their status as either being "ADDRESSED" or "NOT ADDRESSED" in the revised submittal.

Existing Site Data

- 1. (Section IV—2.1 (Existing Site Data (2)): Applicant must provide the applicable existing "utility transmission lines, storm sewers, ditches, culverts, sanitary sewers, and water mains, including information on both size, equipment and location."
 - a. Per the Drawing Sheet List (cover page) on the submitted plans, "Existing Conditions" (Page 2) was not included in plan set.

<u>ADDRESSED</u>: Sewer and drainage plans were provided, which showed existing utility lines, etc. on Sheet 7.

(Section IV-2.1 (Existing Site Data (3)): Please include all wooded areas of the lot.
 What is reflected on the Site Plan does not reflect the total number of existing trees
 on the property

NOT ADDRESSED: Trees reflected on site plan (Sheet 4) do not appear to reflect the amount of trees in real time that lie on the rear property boundary. After visiting the

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site, it appears that the wooded area between the property and CWS is on the subject parcel.

Proposed Site Data

1. (Section IV—2.1 (Proposed Site Data (5)): Setbacks are stated in the notes section of the site plan, but setbacks need to be shown on the plan for the proposed lots.

ADDRESSED: Setbacks reflected on Sheet 4 (Site Plan)

Landscaping Plan and Tree Protection (Per the 1993 Zoning Ordinance)

(Section 900.4): No landscape plan was submitted for the required Type B buffer. A
Type B buffer should consist of a twenty (20) foot-wide buffer with two (2) deciduous
trees planted 40 to 60 feet on center and eight (8) evergreen plants, 10 feet on center,
per every 100 linear feet. Existing trees can supplement said buffer.

<u>ADDRESSED:</u> Landscape Plan was provided (Sheet 21) with appropriate amount of buffer plantings and required spacing.

2. (Section 903): Please include on the site plan trees that are to be protected, and those that will be removed because of the buildable area requirement. The 93 Ordinance specifies that a tree at least 10" DBH is a protected tree.

<u>ADDRESSED:</u> Landscape Plan (Sheet 21) shows trees proposed to be removed. Trees proposed for removal are unprotected species (i.e. sweetgum, pine, etc.).

Sidewalks (Per the Hanahan Commons PD Document)

1. (PD Document: Zoning Criteria—Sidewalks [Page 5]): PD states that sidewalks will be provided, but none are showed on the proposed site plan.

<u>ADDRESSED</u>: Sidewalks are now shown on Site Plan (Sheet 4) along River Road, in between parcels and right-of-way, and on the west side of the ingress/egress easement.

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Other

Submittal to Respective Utilities

The applicant will need to ensure that the preliminary plat has been submitted to Charleston Water System (CWS), Berkeley County Water and Sanitation (BCWS) and Berkeley County Engineering for general review and review for stormwater management,

Copies of the eventual construction plans will also need to be submitted to Berkeley County Engineering. Comments received by said agencies may affect changes to the preliminary plan.

NOT ADDRESSED: Utility approval letters have not been received as of August 4th, 2020. Receipt of said letters will remain as a condition for approval.

Property Line Adjustment Plat

In order to subdivide the property into the desired amount of parcels for the proposed development, the applicant will need to submit a property line abandonment plat to abandon the parcel boundaries of the seven (7) parcels, in order to create a unified parcel. Following submittal of the property line adjustment plat, a subdivision plat will need to be submitted and approved by the Planning Commission.

<u>ADDRESSED</u>: Plat was submitted for review prior to the July Planning Commission meeting and recorded with Berkeley County. Property is now officially one unified parcel.

Suggestions

Although there are a lack of existing trees on the property currently, staff recommends the implementation of street trees to the proposed development, along the frontage of River Road and on both sides of the ingress/egress easement. There is no requirement for this request in either the PD document or 93 ordinance, but staff believes that this feature contributes greatly to the overall aesthetic of the neighborhood, as well as benefits the City as a whole by providing an increased tree canopy.

ADDRESSED: Through e-mail discussion, applicant is willing to plant one canopy tree in each of the houses respective front yards. This was not reflected in the plan. However, as stated before, during and after the meeting, this is a staff suggestion and not a requirement by the ordinance.

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Staff Recommendation

This plan constitutes a preliminary plat subdivision submittal. Approval of this plan does not imply approval of permits to begin construction. Approval of this application will enable the developer to seek permits for land disturbance and installation of necessary infrastructure to serve this phase of the project. Subsequent to approval to install infrastructure, the applicant must submit a final plat that depicts all easements provided for its maintenance, whether by a public agency or property owners association. Such plat must be approved and recorded prior to transfer of individual lots depicted on this plan.

Based upon staff's review, the City recommends that the Planning Commission *approve* the submitted preliminary plat subdivision for the "Hanahan Commons" Planned Development with conditions. Said conditions include:

- 1. Addressing #2 under "Existing Site Data" in this memo (existing tree data)
- 2. Receipt of recommendation letters from CWS, BCWS and Berkeley County Engineering.

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Staff Report

To: The Hanahan Planning Commission

Cc: Larry Sturdivant, Building Official; Kevin Coffey, Lowcountry Land

Development

From: Jeff Hajek, Planner/Economic Development Director

Date: July 7, 2020

Re: Preliminary Land Development Plan Approval for Hanahan Commons PD

Applicant/Owner: Kevin Coffey, Lowcountry Land Development Location: North side of River Road, adjacent to Fishburne Road

Tax Map Number(s): 265-00-00-007; 265-00-00-008; 265-00-00-031; 265-00-00-

034; 265-00-00-032; 265-00-00-033; 265-00-00-003

Approval Requested: Preliminary Development Plan Approval

Existing Zoning/Land Use: Planned Development, Type B (PD)/No current use

(undeveloped)

General Application Overview and Background

The proposed site is located on the northern side of River Road, near the intersection of River Road and Fishburne Road, just off Murray Drive. The existing site remains undeveloped and currently consists of seven (7) separate parcels.

The applicant is proposing to create a subdivision of twenty (20) single-family lots, ranging from 3,877 SF to 13,607 SF on the existing future 3-acre parcel. The majority of the parcel will be developed into housing, with 0.61 acres (20.3% of the development) remaining open space to be maintained by the HOA. The density of the development will be 6.4 units per acre.

Proposed access will be primarily off of River Road for twelve (12) of the twenty (20) residences, but the development will also install a 26' wide ingress/egress/utility easement on the eastern side of the site for the remaining eight (8) homes and emergency and utility access. Utilities for Charleston Water System (CWS), Berkeley County Water and Sanitation Authority (BCWS) and Dominion Power are existing and little infrastructure enhancements, other than connections made will be needed.

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The subject properties were part of a "Type B," Planned Development (PD) that was approved by City Council March 13, 2007. This PD was approved at the time that the 1993 Zoning Ordinance and 1984 Subdivision Regulations were in effect, therefore this staff report is reviewed through the lens of said ordinances. Per the 93 Ordinance (Section 601.9), the Building Official and Zoning Administrator are allowed to internally approve amendments that are qualified as "minor" in the PD. As such, staff approved the following amendments:

- 1. Reduced total amount of housing units from 32 to 20
- 2. Reduced the side setback requirements from 10' to 5'.

General Conformance Analysis

The following report utilized the "Hanahan Commons" PD document (2007), 1993 City of Hanahan Zoning Ordinance and 1984 Subdivision Regulations, the existing regulations at the time the PD was approved, in order to analyze the submitted preliminary plat for Hanahan Commons. Per the Zoning Ordinance, staff finds the following general conformance standards for the proposed site:

- 1. Lot size—The PD does not require any type of lot minimum for the development
- 2. Lot Width— The PD does not require any type of width minimum for the development
- 3. **Density** The PD does not require any type of density requirement for the development
- 4. **Setbacks**—All proposed building sites meet the required setbacks as dictated by the PD document:
 - Front: 20'
 - Side: 5'.
 - Rear: 20' (5' for Accessory structure or detached garage)

Additionally, the proposed development is immediately surrounded by Single-Family Residential (RS), Residential Trailer (RT) and Conservation/Preservation (CP) zoning and land uses. The land use on the CP-zoned property is the Charleston Water System (CWS) treatment facility. Given the proximity of this utility complex, the proposed development is proposing a "Type B" landscape buffer (Section 900.4), which consists of a twenty (20) foot-wide buffer with two (2) deciduous trees planted 40 to 60 feet on center and eight (8) evergreen plants, 10 feet on center, per 100 linear feet. Said landscape buffer, as well as shared open space, will be maintained by the HOA.

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Preliminary Plat Requested Corrections

Given that the submitted preliminary subdivision plat meets general zoning conformance, there are other pertinent and required elements needed in order to have a complete submittal. These documentation requirements may be found in the 1993 Zoning Ordinance and 1984 Subdivision Regulations. The following will be needed for approval;

Required Contents of the Preliminary Plat (Section IV—2.1, Subdivision Regs.)

Existing Site Data

- (Section IV—2.1 (Existing Site Data (2)): Applicant must provide the applicable existing "utility transmission lines, storm sewers, ditches, culverts, sanitary sewers, and water mains, including information on both size, equipment and location."
 - a. Per the Drawing Sheet List (cover page) on the submitted plans, "Existing Conditions" (Page 2) was not included in plan set.
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- (Section 900.4): No landscape plan was submitted for the required Type B buffer. A Type B buffer should consist of a twenty (20) foot-wide buffer with two (2) deciduous trees planted 40 to 60 feet on center and eight (8) evergreen plants, 10 feet on center, per every 100 linear feet. Existing trees can supplement said buffer.
- 2. (Section 903): Please include on the site plan trees that are to be protected, and those that will be removed because of the buildable area requirement. The 93 Ordinance specifies that a tree at least 10" DBH is a protected tree.

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Sidewalks (Per the Hanahan Commons PD Document)

1. (PD Document: Zoning Criteria—Sidewalks [Page 5]): PD states that sidewalks will be provided, but none are showed on the proposed site plan.

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Suggestions

Although there are a lack of existing trees on the property currently, staff recommends the implementation of street trees to the proposed development, along the frontage of River Road and on both sides of the ingress/egress easement. There is no requirement for this request in either the PD document or 93 ordinance, but staff believes that this feature contributes greatly to the overall aesthetic of the neighborhood, as well as benefits the City as a whole by providing an increased tree canopy.

Recommendation

This plan constitutes a preliminary plat subdivision submittal. Approval of this plan does not imply approval of permits to begin construction. Approval of this application will enable the developer to seek permits for land disturbance and installation of necessary infrastructure to serve this phase of the project. Subsequent to approval to install infrastructure, the applicant must submit a final plat that depicts all easements provided for its maintenance, whether by a public agency or property

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owners association. Such plat must be approved and recorded prior to transfer of individual lots depicted on this plan.

Based upon staff's review, the City recommends that the Planning Commission *approve* the submitted preliminary plat subdivision for the "Hanahan Commons" Planned Development with strict conditions. Said conditions include:

- 1. Addressing all requested information in the "Preliminary Plat Requested Corrections" section of this staff report.
- 2. Receipt of recommendation letters from CWS, BCWS and Berkeley County Engineering.

KEVIN J. COFFEY Know what's below.

ALL ITEMS IN SECTON 10D OF THE CURRENT ARMS MANUAL FOR BOTH CONSTRUCTION AND POST—CONSTRUCTION DESIGN HAVE BEEN STUDIED AND ADDRESSED. ALL NECESSARY BMP'S HAVE BEEN IMPLEMENTED FOR BOTH PHASES (CONSTRUCTION AND POST-CONSTRUCTION) TO AVOID NEGATIVELY IMPACTING IMPAIRED WATERS OF THE SCDOT SYSTEM AND/OR ITS DISCHARGES. SC #22399

UTILITY LOCATE NOTE:

THE CONTRACTOR SHALL CALL 811 FOR A UTILITY LOCATE A MINIMUM OF 72 HOURS PRIOR TO BEGINNING ANY CLEARING AND/OR LAND DISTURBANCE. IT IS THE CONTRACTOR'S RESPONSIBILITY O HAVE THE UTILITIES LOCATED AND MAINTAIN THE LOCATE TICKET UNTIL ALL WORK HAS SUSPENDED ON SITE. UTILITIES SHOWN ON THE PLAN ARE FOR NFORMATION ONLY AND REPRESENT CALL before you dig WHAT WAS LOCATED AT THE TIME OF THE SURVEY.

LOCATION

PROPERTY, ZONING &

ZONING INFORMATION:

2. PROPERTY ADDRESS: RIVER ROAD

6. NO SITE LIGHTING WILL BE PROVIDED.

OR A READILY-AVAILABLE WATER SUPPLY.

DEVELOPMENT. ALL UTILITIES SHALL BE UNDERGROUND

BERKELEY COUNTY SEWER DEPARTMENT.

ELECTRICAL UTILITY NOTES:

SCDOT DETAILS NOTE

SCDOT FOR CURRENT LETTINGS.

ENGINEERING OFFICE.

4 PROPERTY LINE SETBACKS

FRONT: 20 FEET

- REAR:

. THE CURRENT ZONING IS "HANAHAN COMMONS TYPE B PLANNED

DEVELOPMENT", FOR TMS 265-02-00-007, 008, 009 031, 032, 033 & 034. FUTURE LAND USE IS DESIGNATED "SINGLE-FAMILY RESIDENTIAL".

3. REFER TO CITY OF HANAHAN ZONING ORDINANCE, ADOPTED JUNE 8.

5. COVERAGE: NOT MORE THAN 65% MAXIMUM OF THE TOTAL AREA OF A

LOT MAY BE COVERED BY STRUCTURES AND/OR IMPERVIOUS SURFACE.

. A MINIMUM OF (2) 9' x 19' PARKING SPACES WILL BE PROVIDED ON

8. MAINTENANCE OF REQUIRED LANDSCAPED AREAS IS THE RESPONSIBILITY

MAINTAINED SO AS TO ASSURE THE SURVIVAL AND AESTHETIC VALUE OF

THE LANDSCAPING AND SHALL BE PROVIDED WITH AN IRRIGATION SYSTEM

4. ACCORDING TO FEMA FLOOD INSURANCE BATE MAD COMMUNITY PANEL CREEK ALSO THE REQUIREMENTS AND TO WATER & SEWER UTILITIES CONSTRUCTION AS MANDATED BY SCOHEC, GOOSE

2. THE GENERAL INTENT OF THE PROJECT IS TO CONSTRUCT A SUBDIVISION WITH

CONSTRUCTION MUST BE OBTAINED FROM THE CITY OF GOOSE CREEK WATER AND

STANDARD DRAWINGS TO VERIFY CONSTRUCTION SPECIFICATIONS AND DIMENSIONS

STORMWATER FACILITIES IN ACCORDANCE WITH BERKELEY COUNTY SPECIFICATIONS

1. CONTRACTOR TO COORDINATE UNDERGROUND ELECTRICAL CONNECTION WITH

AS OF JANUARY 1, 2016, SCDOT STANDARD DRAWINGS ARE NO LONGER ALLOWED

SHOWN ON THIS PLAN MAY BE FOUND AT THE NEW SCDOT STANDARD DRAWINGS

CONTRACTOR TO USE OFFICIALLY SIGNED/SEALED PDFS FROM SCDOT STANDARD

DRAWINGS WEBSITE USING THE HYPERLINK ABOVE. CONTRACTOR TO REFER TO

TO BE INCLUDED WITH OUR DESIGN PLANS. ALL SCDOT REFERENCES NUMBERS

4. CONTRACTOR IS TO REFER TO THE MOST CURRENT EDITION OF THE SCDOT

OF THE PORTION OF THE ENTRANCE ROAD WITHIN THE SCDOT RIGHT OF WAY.

5. PERMANENT MAINTENANCE COVENANTS AND AS-BUILT DRAWINGS FOR

NEED TO BE RECEIVED AND ACCEPTED BEFORE THE NOTE OF THE CGP.

SOUTH CAROLINA ELECTRIC & GAS COMPANY (SCE & G) DISTRIBUTION

http://www.scdot.org/doing/road.aspx

AND SELECTING THE "STANDARD DRAWINGS" LINK.

96 LOTS, AND THE APPURTENANT STORM DRAINAGE & UTILITIES TO SUPPORT SAID

CREEK DEPARTMENT OF PUBLIC WORKS AND BERKELEY COUNTY WATER AND

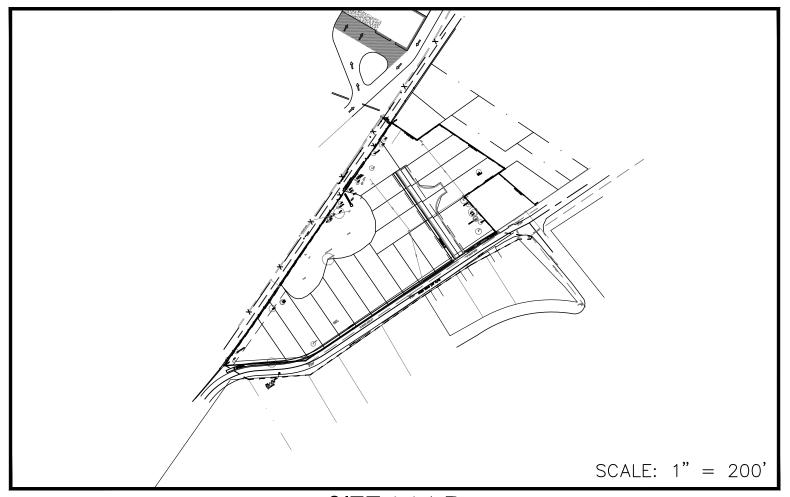
3. PRIOR TO FINAL PLAT APPROVAL INSPECTION AND FINAL APPROVAL OF

OF THE PROPERTY OWNERS. ALL SUCH AREAS SHALL BE PROPERLY

PROJECT INFORMATION:

CIVIL PLANS FOR HANAHAN COMMONS CITY OF HANAHAN, BERKELEY COUNTY, SC

MUNICIPALITY OF GOOSE CREEK



SITE MAP

DRAWING SHEET LIST					
SHEET TITLE	SHEET NO.	TOTAL			
TITLE SHEET & NOTES	1	21			
EXISTING CONDITIONS AND PLAT	2-3	21			
PRELIMINARY EROSION CONTROL PLAN	4	21			
SITE PLAN	5	21			
GRADING & DRAINAGE PLAN	6	21			
SANITARY SEWER PLAN	7	21			
WATER PLAN	8				
DRIVE PROFILES	9	21			
DRAINAGE PROFILES	10	21			
SEWER PROFILES	11				
EROSION CONTROL PHASE 2 PLAN	12	21			
EROSION CONTROL PHASE 2 PLAN	13	21			
WATER DETAILS	14-15				
SANITARY SEWER DETAILS	16	21			
EROSION CONTROL DETAILS	17-18	21			
CONSTRUCTION DETAILS	19-20	21			
LANDSCAPE PLAN	21	21			

SITE GRADING:

. THE VERTICAL DATUM FOR THIS PROJECT IS NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAVD88). HORIZONTAL DATUM IS SOUTH CAROLINA STATE PLANE COORDINATES (SCSPC), NORTH AMERICAN DATUM, 1983 (NAD83), INTERNATIONAL FEET (iFT).

2. ALL FILL SHALL BE COMPACTED TO 95% DRY DENSITY, MODIFIED PROCTOR. ALL WORK TO BE COMPLETED IN ACCORDANCE WITH ALL LOCAL, STATE, AND

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL STATE AND CITY PERMITS: INCLUDING, BUT NOT LIMITED TO BUILDING, EROSION CONTROL, AND ENCROACHMENT PERMITS. NO WORK IS TO BE INITIATED UNTIL PERMITS ARE

4. CONTRACTOR TO SLOPE ALL SITE WORK FOR POSITIVE DRAINAGE. CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE CONSTRUCTION DOCUMENTS AND SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD ANY DISCREPANCIES, OMISSIONS, OR INCONSISTENCIES BE DISCOVERED THAT WOULD PRECLUDE POSITIVE DRAINAGE PRIOR TO COMMENCING ANY CONSTRUCTION.

5. CONTRACTOR SHALL TAKE FIELD MEASUREMENTS TO VERIFY THAT LOCATIONS ARE CORRECT PRIOR TO COMMENCING CONSTRUCTION.

6. CONTRACTOR SHALL VERIFY THE LOCATION AND INVERT ELEVATIONS OF ALL UNDERGROUND UTILITIES AND VERIFY PROPERTY CORNERS AND TOPOGRAPHIC DATA BEFORE ANY CONSTRUCTION IS BEGUN. CALL UTILITY COMPANIES BEFORE ANY EXCAVATION TO LOCATE ALL BURIED AND

7. THE GRADING CONTRACTOR SHALL PROOF-ROLL THE CONSTRUCTION AREA WITH HEAVY-PNEUMATIC EQUIPMENT. ALL SOFT SPOTS SHALL BE UNDERCUT AND RE COMPACTED WITH SUITABLE MATERIAL TO PRESCRIBED GRADES. 8. TOP SOIL SHALL BE STRIPPED TO A DEPTH AS REQUIRED AND USED AS FILL MATERIAL AT THE REAR OF THE LOT TO PRODUCE POSITIVE DRAINAGE. 9. ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE TESTING COMPANY AND SHALL BE FREE OF ROOTS, ORGANICS AND BOULDERS. FILL

SHALL BE PLACED IN 6" LIFTS AND COMPACTED AS SPECIFIED. 10. THE GRADING CONTRACTOR SHALL CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF PLUS OR MINUS 0.10 FEET. 11. ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS III, UNLESS NOTED OTHERWISE ON DRAWINGS AND SHALL CONFORM TO STATE

SPECIFICATIONS. JOINTS SHALL BE O-RING WITH MASTIC JOINT MATERIAL.

12. ALL HDPE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D 2321. 13. ALL UTILITY TRENCHES ARE TO BE THOROUGHLY COMPACTED TO PREVENT SETTLEMENT AND DAMAGE TO FURTHER CONCRETE/ASPHALTIC PAVEMENT AND

14. CONTOURS SHOWN ARE BASED ON A 50 FOOT GRID SYSTEM.

ELECTRONIC CAD FILE NOTICE PROJECT WAS MODELED USING AUTOCAD CIVIL 3D 2017 SOFTWARE. AND AS

SUCH MAY CONTAIN A 3-D MODEL OF THE EXISTING AND FINISHED SURFACES, ROADWAY CORRIDORS, SANITARY AND STORM SEWER, WATER SYSTEM, AND FORCE MAIN. USAGE OF THE CAD FILE TO EXTRACT MODEL DATA WITH OTHER SOFTWARE OR VERSIONS MAY RESULT IN UNDESIRED RESULTS. IN ALL INSTANCES. THE PRINTED PLANS SHALL GOVERN. LOWCOUNTRY LAND DEVELOPMENT ASSUMES NO RESPONSIBILITY FOR MISUSE OF THE CAD FILE. ONCE RELEASED, AND IS CONSIDERED AN UNCONTROLLED COPY OF A CONTROLLED DOCUMENT. ELECTRONIC CAD FILE, WHETHER IN .DWG OR .PDF FORMATS CONTAIN ACTIVE HYPERLINKS. THE USE OF THESE LINKS IS VOLUNTARY. AND THE USER ACCEPTS ALL RESPONSIBILITY FOR ACCESSING LINKS VIA THE INTERNET. LOWCOUNTRY LAND DEVELOPMENT ASSUMES NO RESPONSIBILITY FOR DAMAGES AS A RESULT OF USING THE LINKS HEREIN.

SPECIFICATIONS FOR SEQUENCE OF CONSTRUCTION OPERATIONS

EROSION CONTROL PHASE 1 (SEE SHEET 5 . RECEIVE NPDES COVERAGE FROM DHEC

- PRE-CONSTRUCTION MEETING (ON-SITE IF MORE THAN 10 AC. DISTURBED)
- NOTIFY DHEC EQC REGIONAL OFFICE OR OCRM OFFICE 48 PRIOR TO THE BEGINNING OF LAND-DISTURBING ACTIVITIES. INSTALLATION OF CONSTRUCTION ENTRANCE
- CLEARING AND GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS;
- INSTALLATION OF PERIMETER CONTROLS (SILT FENCE & VEGETATIVE STRIPS) CLEARING AND GRUBBING ONLY IN AREAS OF BASINS / TRAPS / PONDS;

DISTURBED UNTIL THE STRUCTURES AND DIVERSIONS TO THE STRUCTURES

- EROSION CONTROL PHASE 2 (SEE SHEETS 23 AND 24) 8. INSTALLATION OF BASINS / TRAPS / PONDS AND INSTALLATION OF DIVERSIONS TO THOSE STRUCTURES (OUTLET STRUCTURES MUST BE COMPLETELY INSTALLED AS SHOWN ON THE DETAILS BEFORE PROCEEDING O THE NEXT STEP; AREAS DRAINING TO THESE STRUCTURES CANNOT BE
- ARE COMPLETELY INSTALLED); REMAINING CLEARING AND GRUBBING OF SITE OR DEMOLITION AREAS (SEDIMENT & EROSION CONTROL MEASURES FOR THESE AREAS MUST ALREADY BE INSTALLED);
- 10. ROAD GRADING: I. ROUGH GRADING FOR THE REMAINDER OF THE SITE,

EROSION CONTROL PHASE 3 (SEE SHEETS 25 AND 26)

12. UTILITY & STORM DRAIN INSTALLATION AND WHETHER STORM DRAINS WILL BE USED OR BLOCKED UNTIL AFTER COMPLETION OF CONSTRUCTION, PLACEMENT OF INLET PROTECTION AS EACH INLET IS INSTALLED;

13. FINE GRADING, PAVING, ETC.

- 4. FINAL GRADING. LANDSCAPING. OR STABILIZATION: 15. REMOVAL OF TEMPORARY SEDIMENT & EROSION CONTROL MEASURES AFTER
- ENTIRE AREA DRAINING TO THE STRUCTURE IS FINALLY STABILIZED 6. PERFORM AS-BUILT SURVEYS OF ALL DETENTION STRUCTURES AND SUBMIT TO DHEC OR MS4 FOR ACCEPTANCE.
- 17. SUBMIT NOTICE OF TERMINATION (NOT) AND AS-BUILT OF POND TO DHEC

SURFACE MODELING NOTE

WHILE EVERY ATTEMPT HAS BEEN MADE TO CREATE A "FINISHED GRADE" SURFACE 3-D MODEL TO BE AS ACCURATE AS POSSIBLE, AND BALANCING CUT/FILL VOLUMES AS MUCH AS POSSIBLE, IT DOES NOT TAKE INTO CONSIDERATION. NOR REPLACE. AN EXAMINATION OF THE SUBSURFACE CONDITIONS IN THE PROPOSED ROADWAY. AND SELECT FILL OR STRIPPING REQUIREMENTS WILL NEED TO BE DETERMINED DURING THE COURSE OF CONSTRUCTION BY A GEO-TECH REPORT. ANY ISSUES FOUND SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER, INSPECTOR, AND A SOILS CONSULTANT.

WATER UTILITY NOTES:

1. WATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS", S.C.D.H.E.C. REGULATIONS, AND CHARLESTON WATER SYSTEM'S "MINMUM STANDARDS FOR THE DESIGN & CONSTRUCTION OF WATER AND SANITARY SEWER SYSTEMS" AS FOUND AT www.charlestonwater.com. BACKFLOW PREVENTION REQUIREMENTS CAN BE

FOUND AT www.charlestonwater.com/cross_connection.htm.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL TAPS. TAPS REQUIRING A SLEEVE SHALL BE NO CLOSER TO A JOINT THAN 4 FEET.

3. THRUST BLOCKING SHALL BE USED ONLY ON WET TAPS. CONTRACTOR SHALL NOTIFY CWS INSPECTOR 72 HOURS (THREE FULL WORKING DAYS) PRIOR TO MAKING ANY WET TAP.

4. ROUGH GRADING SHALL BE DONE PRIOR TO INSTALLATION OF WATER

5. CONTRACTOR SHALL MAINTAIN BETWEEN 36" - 48" COVER OVER TOP $^\circ$

6. ALL COMPONENTS OF THE PIPING SYSTEM SHALL BE NEW DUCTILE IRON

AND ENCLOSED WITH LINEAR LOW-DENSITY 8 MILS BLUE POLYETHYLENE

7. ALL VALVES AND HYDRANTS SHALL OPEN CLOCKWISE, EXCEPT ON THE FORMER NAVAL BASE, WHERE THE VALVES SHALL OPEN

COUNTERCLOCKWISE.. 8. MEGALUG, FORD SERIES 1400, OR SIGMA ONE-LOK RETAINER GLANDS SHALL BE USED FOR ALL FITTINGS, VALVES. AND HYDRANTS.

9. RESTRAINED LENGTHS SHALL BE IN MULTIPLES OF A FULL LENGTH OF 10. USE 45° OR FLATTER BENDS WHEN GOING UNDER RCP AND DO NOT

INSTALL VALVES, HYDRANTS, OR SERVICES ON DEEP PIPE SECTIONS. 11. WHERE POSSIBLE, HORIZONTAL WATERLINES SHALL BE DEFLECTED IN LIEU OF USING BENDS. DEFLECTIONS SHALL NOT EXCEED 75% OF

MANUFACTURER'S SPECIFICATIONS. 12. WHERE WATER AND SANITARY SEWER LINES CROSS WITHIN 18", THE LINE LAID LAST SHALL HAVE A FULL LENGTH OF PIPE INSTALLED WITH ITS WITH BCWS AT LEAST 72 HOURS IN ADVANCE. MIDPOINT VERTICALLY IN LINE WITH THE OTHER LINE. THE CROSSING SHALLB. THE CONTRACTOR SHALL CONDUCT A PRELIMINARY INSPECTION TO LOCATE

BE AT NOT LESS THAN A 45° ANGLE. 13. ALL MATERIAL SHALL CONFORM TO CWS SPECIFICATIONS AS TO MANUFACTURER, TYPE, AND DESIGN.

14. DEVELOPER'S ENGINEER SHALL INSPECT PROJECT WEEKLY TO PROVIDE WRITTEN WEEKLY UPDATES TO CWS INSPECTOR AND TO CERTIFY THE CORRECTNESS OF THE WATER PORTION OF CONTRACTOR'S RECORD

15. CONTRACTOR INSTALLING THE WATER SYSTEM SHALL BE ON CWS'S "APPROVED CONTRACTORS LIST".

16. COORDINATE INSPECTION AND TESTING OF THE BACKFLOW DEVICES WITH INSPECTION. CWS CROSS CONNECTION DEPARTMENT. WATER SERVICE SHALL NOT BE G. TURNED ON UNTIL ALL BACKFLOW DEVICES HAVE PASSED INSPECTION AND

17. DEVELOPER SHALL TAKE NECESSARY MEASURES TO PROTECT CWS WATER SYSTEM DURING THE TIME BETWEEN THE COMMISSIONING INSPECTION 6. LIMESTONE IS NOT AN APPROVED EMBEDMENT MATERIAL. USE #57 GRANITE. AIR COOLED BLAST FURNACE SLAG OR APPROVED MATERIALS LÏSTED IN BCWS AND THE 2-YEAR MAINTENANCE BOND INSPECTION. 18. CHARLESTON WATER SYSTEM RESERVES THE RIGHT NOT TO INSTALL 17. MJ SLEEVES OR APPROVED ADAPTERS SHALL BE USED TO TRANSITION

WATER METERS IF METER BOXES ARE NOT LOCATED AND ON GRADE IN COMPLIANCE WITH ITS MINIMUM STANDARDS. 19. ALL METER VAULTS AND ASSOCIATED PIPING 3" AND LARGER SHALL BE9. MANHOLE COVERS ARE TO BE INSTALLED COMPLETELY WITH OR COMPLETELY

INSTALLED BY CWS UNLESS APPROVED IN WRITING BY THE WATER

DISTRIBUTION ENGINEER.

CURB INLET

WATER METER

GAS VALVE

CATCH BASIN

BENCHMARK

SEWER CLEANOUT

STORM DRAIN MANHOLE

JUNCTION BOX (RECT.

JUNCTION BOX (CIR.)

FLARED END SECTION

BACKFLOW PREVENTOR

POST INDICATOR VALVE

GAS METER

SITE ABBREVIATIONS

BACK OF CURB

CRITICAL LINE

DROP INLET

FORCE MAIN

GAS METER

GAS VALVE

OVERHEAD POWER OPEN-TOP PIPE FOUND

POLYVINYLCHLORIDE REBAR PIN, FOUND

STORM DRAIN MANHOLE

SANITARY SEWER MANHOLE

TELEPHONE JUNCTION BOX

POWER POLE

REBAR PIN SET **RESTRAINED JOINT**

SQUARE FEET

CABLE TV

SEWER UTILITY NOTES:

OCCUR, OR OTHERWISE SPECIFIED.

BY BCWS.

BE USED WHEN:

DEPTH: CLASS 52 DIP.

CONSTRUCTION PLANS

STANDARDS," SC DHEC AND BCWS REGULATIONS.

AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.

PROTECTO 401 CERAMIC EPOXY COATING.

LESS THAN 2' OF CLEARANCE;

OR SOLID MOLDED C900 FITTINGS.

DRAWINGS ON SITE AT ALL TIMES.

1. SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES

2. ALL SANITARY SEWER SERVICES SHALL BE LAID ON A MINIMUM SLOPE OF

0.5% AND SHALL BE 6" PVC UNLESS INCIDENCES NOTED IN NOTE NO. 10

3. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH BCWS

UTILITIES PRIOR TO BEGINNING WORK. CONTRACTOR SHALL NOTIFY THE

DRAWINGS PRIOR TO BEGINNING OR CONTINUING WORK. ANY DEVIATIONS

FROM THE CONSTRUCTION PLANS SHALL NEED TO BE APPROVED IN WRITING

CONNECTION TO EXISTING SEWER SYSTEM SHALL BE MADE IN THE PRESENCE

CONTRACTOR SHALL PLACE 6" SERVICES AND STUB UP TO EXISTING GRADE.

CONCRETE COLLARS SHALL BE PLACED AROUND 6" PLUGGED CLEAN OUT.

SIDEWALK. AREAS AFFECTED BY STREET RUNOFF OR BELOW THE 50 YEAR

FLOOD ELEVATION. MANHOLE COVER SHALL BE INSTALLED COMPLETELY WITHIN

. MANHOLES RECEIVING FORCE MAIN DISCHARGE SHALL BE COATED WITH RAVEN

CROSSING BENEATH STORM DRAINAGE PIPE WITH

CROSSING WATER MAIN WITHIN 18".

WATERTIGHT RINGS AND COVERS SHALL BE INSTALLED ON MANHOLES IN

ENGINEER OF ANY DISCREPANCIES FOUND IN THE FIELD OR ON THE

OF BCWS INSPECTOR WITH AT LEAST 72 HOURS ADVANCED NOTICE.

OR COMPLETELY OUT OF PAVED AREAS (INCLUDING SIDEWALKS).

ALL DUCTILE IRON PIPES, JOINTS AND FITTINGS SHALL BE LINED WITH

. SELECTION OF PIPE MATERIALS SHALL COMPLY WITH THE FOLLOWING:

LESS THAN THREE (<3') OF COVER: CLASS 52 DIP; — GREATER THAN 3

FEET BUT LESS THAN 15 FEET (>3' BUT <15') IN DEPTH: SDR-26 PVC AND

IN ACCORDANCE WITH CROSSING REQUIREMENTS LISTED ABOVE; - GREATER

52 DIP OR DR-18 C900 PVC; - GREATER THAN 24 FEET (>24') IN

12. SEWER SERVICE CONNECTIONS LOCATED AT DEPTHS GREATER THAN 15' SHALL

13. CLEAN OUTS SHALL BE INSTALLED WITHIN THE RIGHT—OF—WAY OR GENERAL

UTILITY EASEMENT (GUE) AND HAVE A MINIMUM OF 1 FOOT SEPARATION

FROM SIDEWALKS. INSTALL CLEAN OUTS NO MORE THAN 18" OFF OF THE

THE CONTRACTOR SHALL SCHEDULE ALL REQUIRED TESTS AND INSPECTIONS

ANY DEFECTS AND DETERMINE WHEN THE SEWER SYSTEM IS READY FOR

C. THE ENGINEER SHALL SCHEDULE LOW PRESSURE AIR TEST AND DEFLECTION

D. THE CONTRACTOR SHALL SUPPLY TO THE OWNER'S ENGINEER AN AS-BUILT

E. A SET OF PRELIMINARY RECORD DRAWINGS SHALL BE PROVIDED TO BCWS

F. CCTV INSPECTION VIDEOS SHALL BE SUBMITTED FOR BCWS REVIEW. ANY

THE ENGINEER SHALL SUBMIT THE TEST RESULTS, RECORD DRAWINGS,

. THE ENGINEER SHALL SCHEDULE A FINAL INSPECTION WITH BCWS AT LEAST

BETWEEN PVC AND DIP. FERNCO OR SIMILAR COUPLINGS ARE NOT ALLOWED.

18. SERVICES SHOWN MUST BE INSTALLED WITHIN RIGHT-OF-WAY OR UE, AND

MUST HAVE A MINIMUM SEPARATION OF 1' FROM SIDEWALKS.

CONTINUITY TEST CERTIFICATION LETTER AND ALL OTHER REQUIRED

TESTS AND FINAL INSPECTION. PRIOR TO INSPECTION, THE SEWER SYSTEM

TEST WITH BCWS. DEFLECTION TEST SHALL BE CONDUCTED PRIOR TO LOW

SURVEY, INCLUDING THE SERVICE LATERAL INFORMATION, THE LOCATIONS OF

NECESSARY REPAIRS ARE TO BE COMPLETED PRIOR TO SCHEDULING A FINAL

COMMON PROPERTY CORNER UNLESS OTHERWISE NOTED ON THE

14. CONTRACTOR SHALL KEEP A RED-LINED SET OF THE CONSTRUCTION

15. UPON COMPLETION OF CONSTRUCTION OF THE SEWER SYSTEM, THE

FOLLOWING APPROVAL PROCEDURES MUST BE FOLLOWED:

SHALL BE FLUSHED AND CLEANED OF DEBRIS

WHICH SHALL HAVE BEEN STAKED IN THE FIELD.

INSPECTOR FOR CCTV INSPECTION VIDEO REVIEW.

DOCUMENTS TO BCWS FOR REVIEW AND APPROVAL

OUT OF PAVED AREAS (INCLUDING SIDEWALKS).

BE MADE WITH DUCTILE IRON FITTINGS LINED WITH PROTECTO 401 COATING

THAN 15 FEET BUT LESS THAN 24 FEET (>15' BUT <24') IN DEPTH: CLASS

WATER VALVE

TO BE REMOVED

CRIMP-TOP PIPE FOUND

GLOBAL POSITIONING SYSTEM

HIGH-DENSITY POLYETHELENE

HOMEOWNERS ASSOCIATION

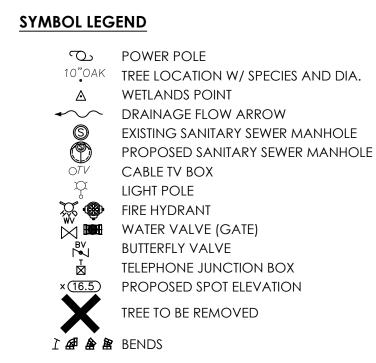
DUCTILE IRON PIPE

EDGE OF PAVEMEN EDGE OF TRAVELWAY

BUTTERFLY VALVE CURB INLET CENTERLINE

LINE LEGEND — - - — PROPERTY LINE W/ CORNER FOUND ———PROPERTY LINE W/ CORNER SET ----- BUILDING FOOTPRINT "CHECKS" ----- - ------ - CENTERLINE OF RIGHT-OF-WAY — s —— s —— S—— EXISTING SANITARY SEWER LINE PROPOSED SANITARY SEWER LINE ------ OHP ------- OVERHEAD POWER LINE EROSION PREVENTION/SEDIMENT CONTROL — - - — - - — - - — RIGHT-OF-WAY LINE —— тв —— тв —— PROTECTIVE TREE BARRICADE — 4" SDR 26 FORCE MAIN (3-D MODELED W/ AIR RELEASE MH) _____EXISTING CONTOUR

PROPOSED CONTOUR



STORMWATER MANAGEMENT NOTES:

1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MÀTS, IN ADDITION TO HYDROSEEDING. I MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION.

TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE. 2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW. - WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR

FROZEN GROUND CONDITIONS SOON AS PRACTICABLE. - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY

DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE. 3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY INSTALLED, THE PERMITTEE MUST

ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION. 4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED. GRADED. AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER

SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE

SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD

ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL

FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C REG. 72-300 ET SEQ. AND SCR100000. 10. THICKNESS CLASS 52 DIP OR SDR-26 PVC IN STEEL OR HDPE CASING SHALL 8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.

ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS. 10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH

SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES. 11. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE

RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED. 12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR

GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS. 13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL. 14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN

A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE 15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND

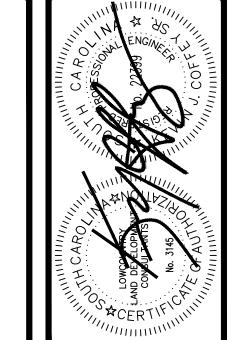
EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.) THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:

- WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN - WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE

COMPOUNDS AND OTHER CONSTRUCTION MATERIALS; FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION

AND MAINTENANCE: AND - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A

MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE. 18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE 19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED

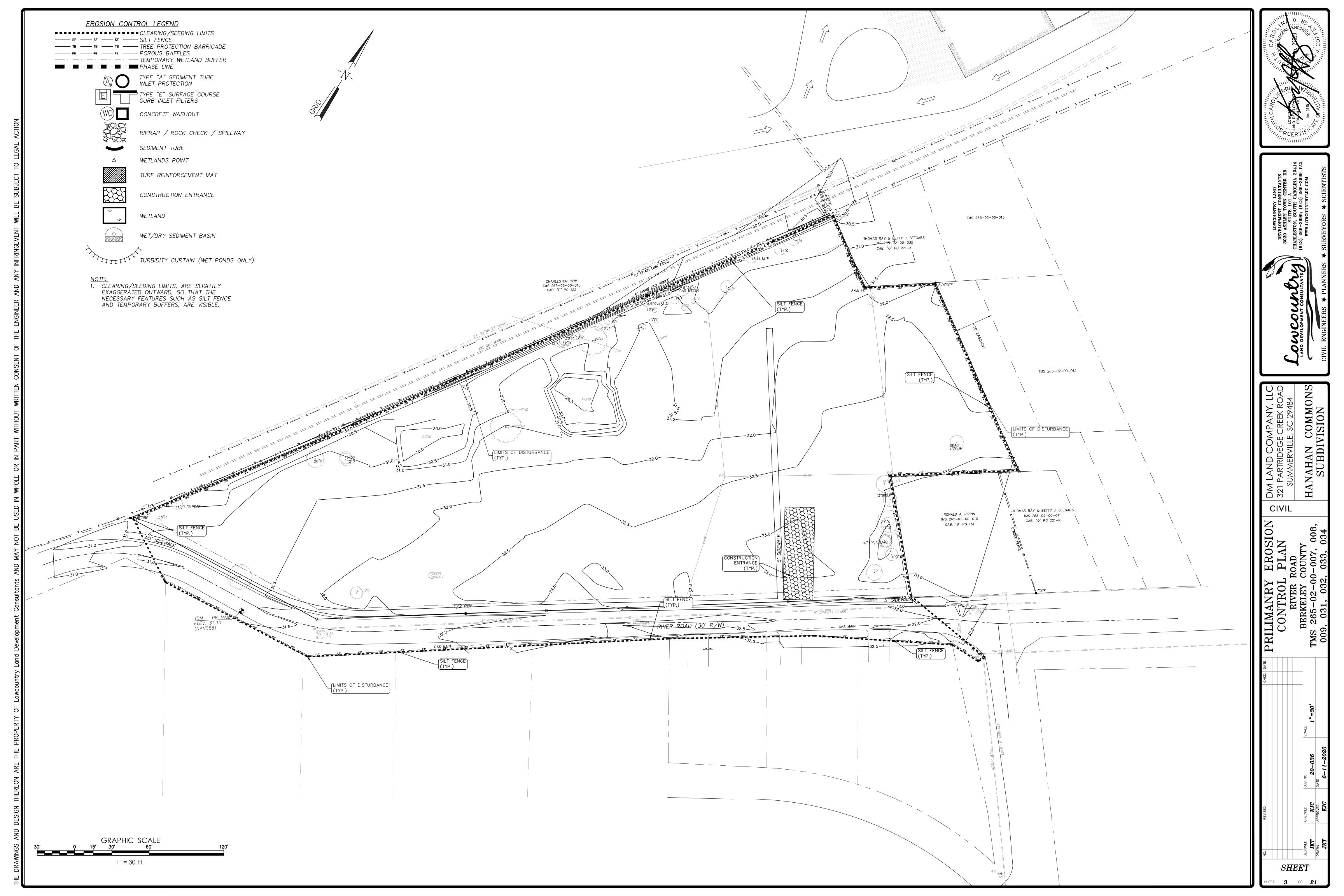


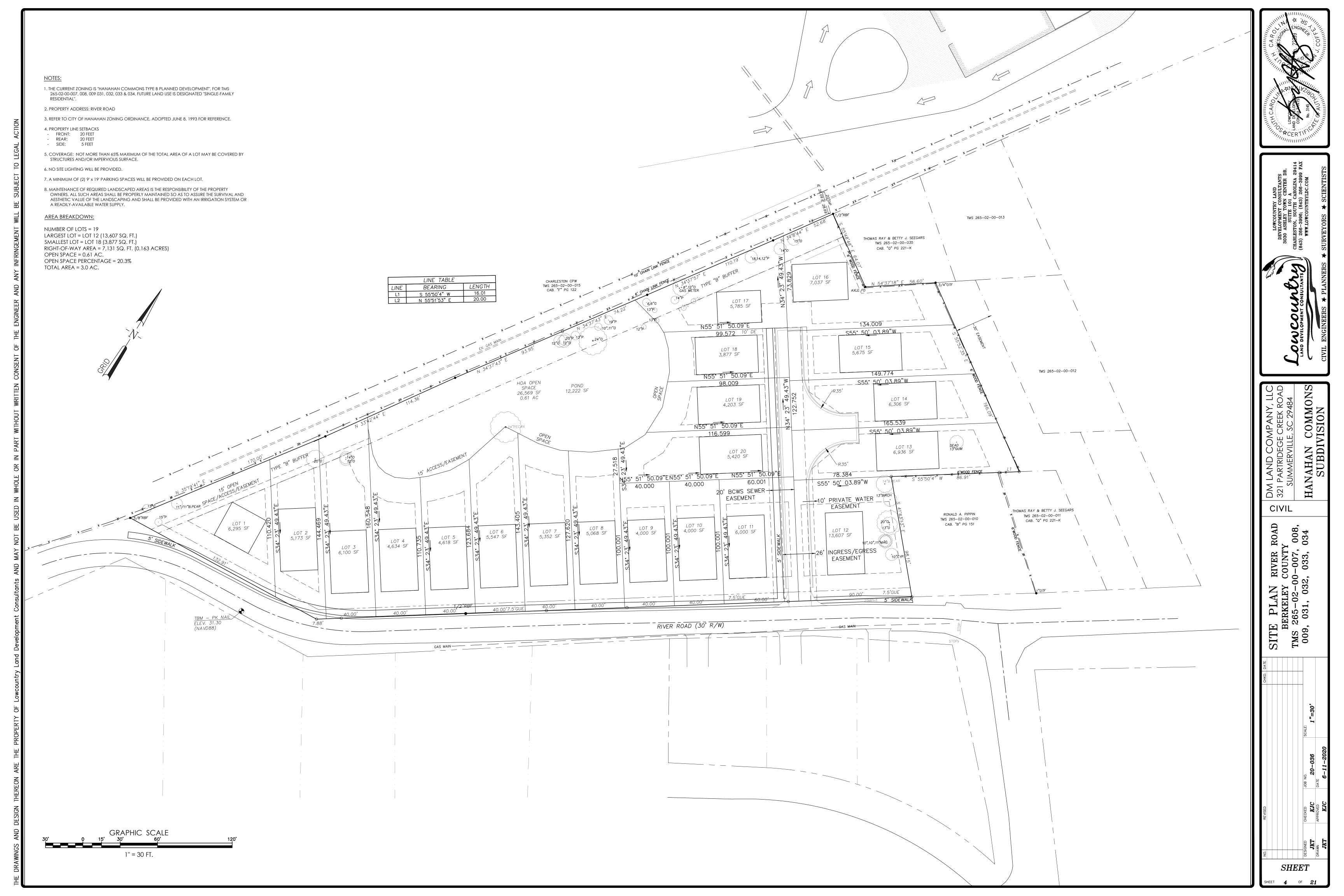
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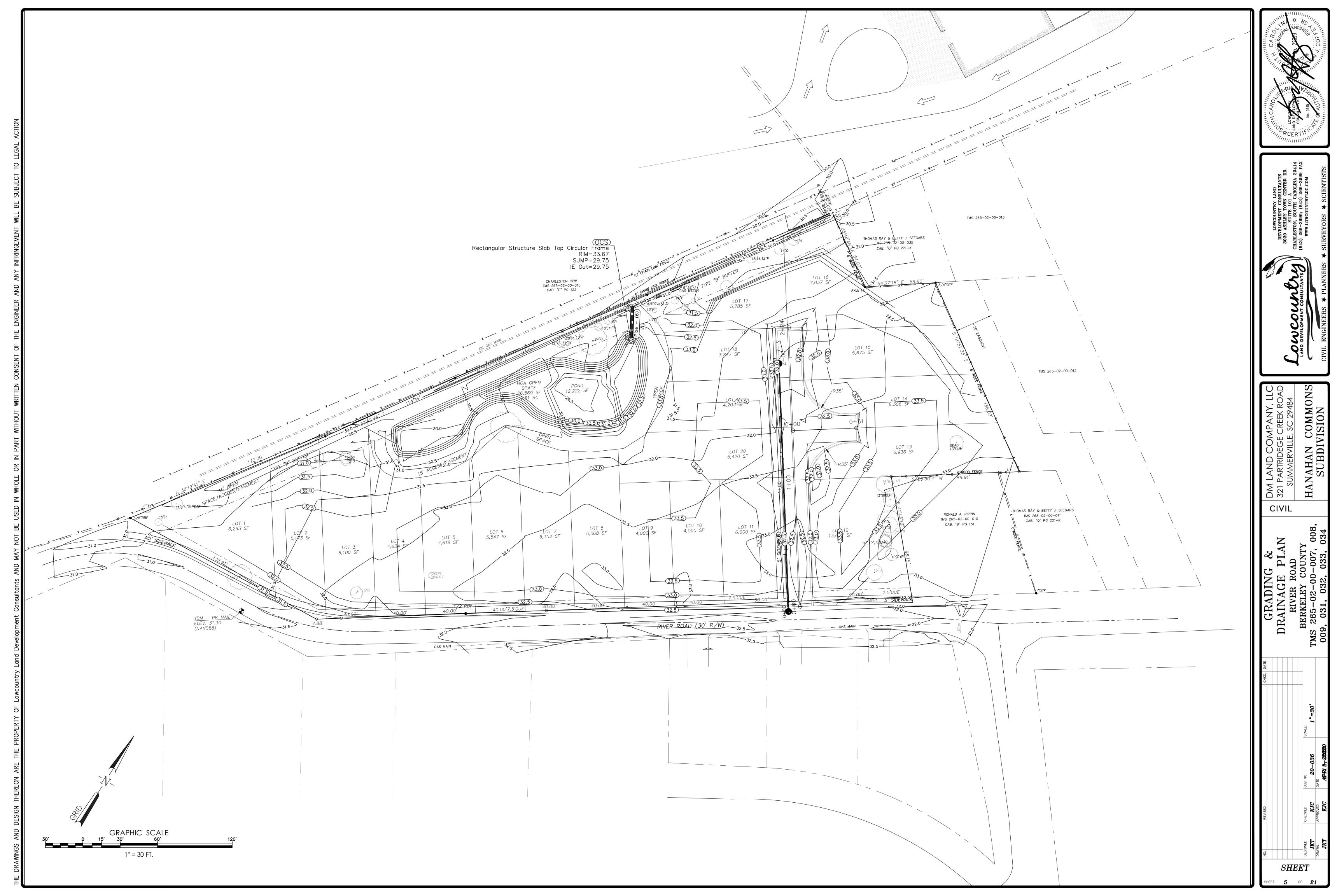
IEE'I NOTE ROAD COUNT 00-007,

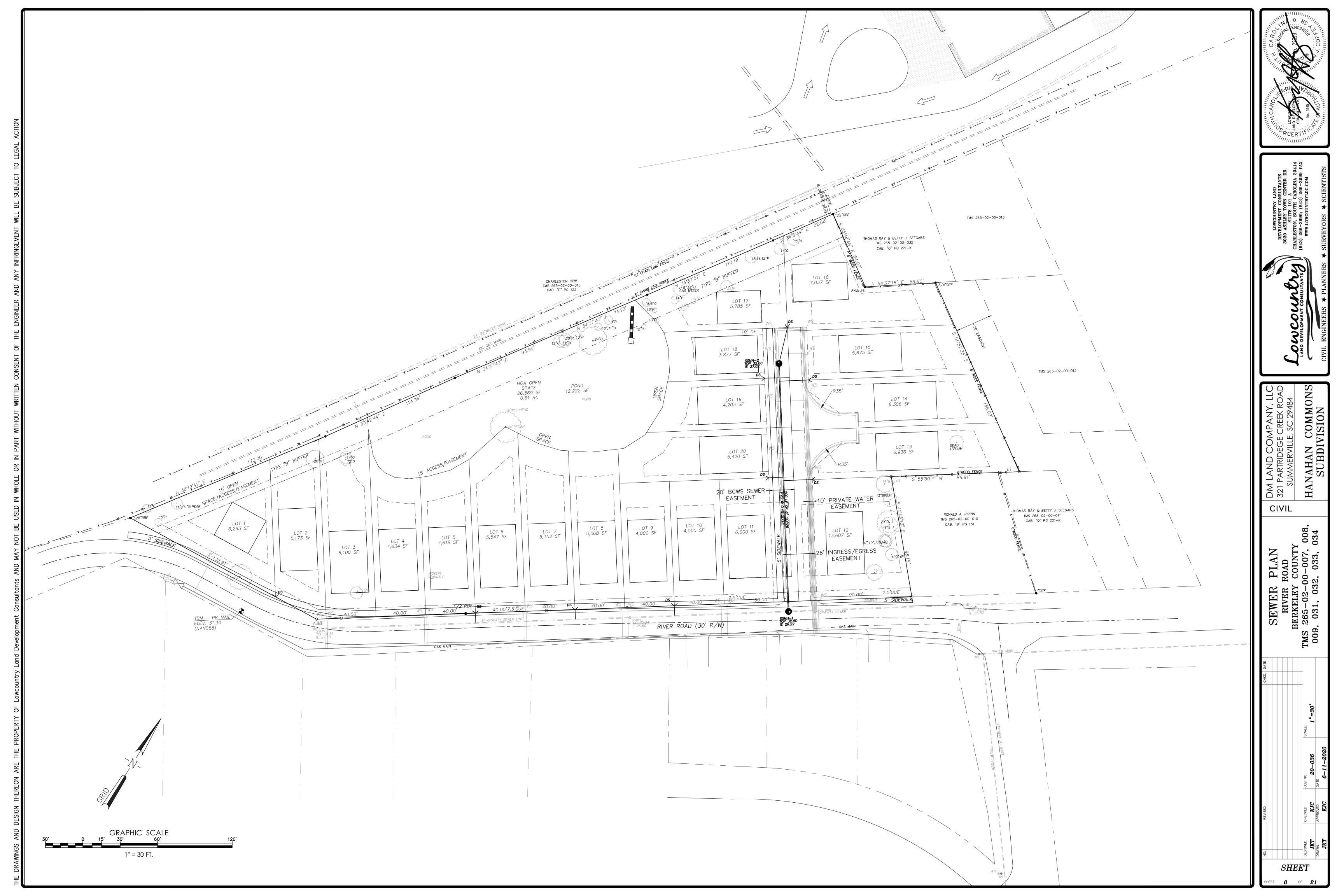


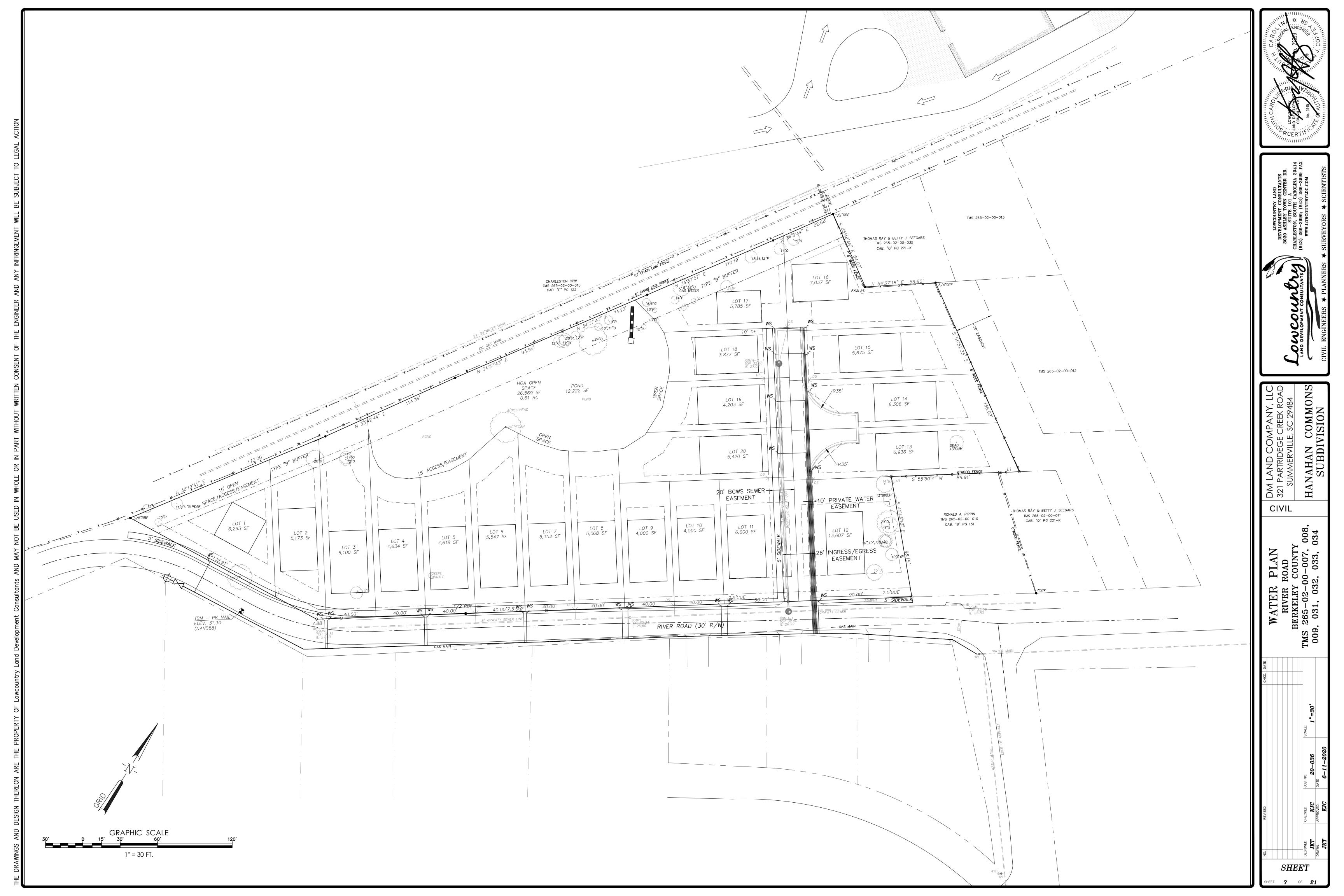


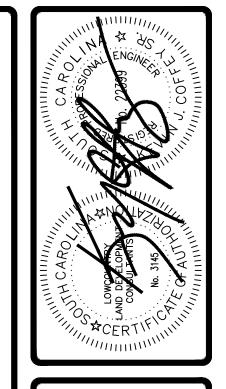






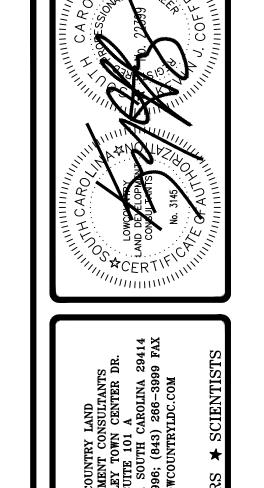






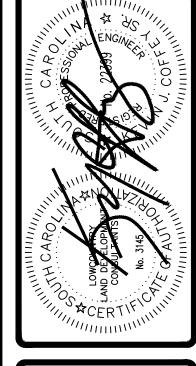
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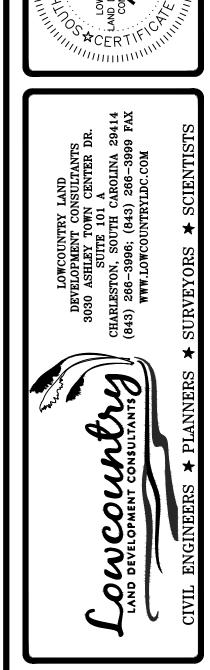
SHEET



CIVIL

SHEET





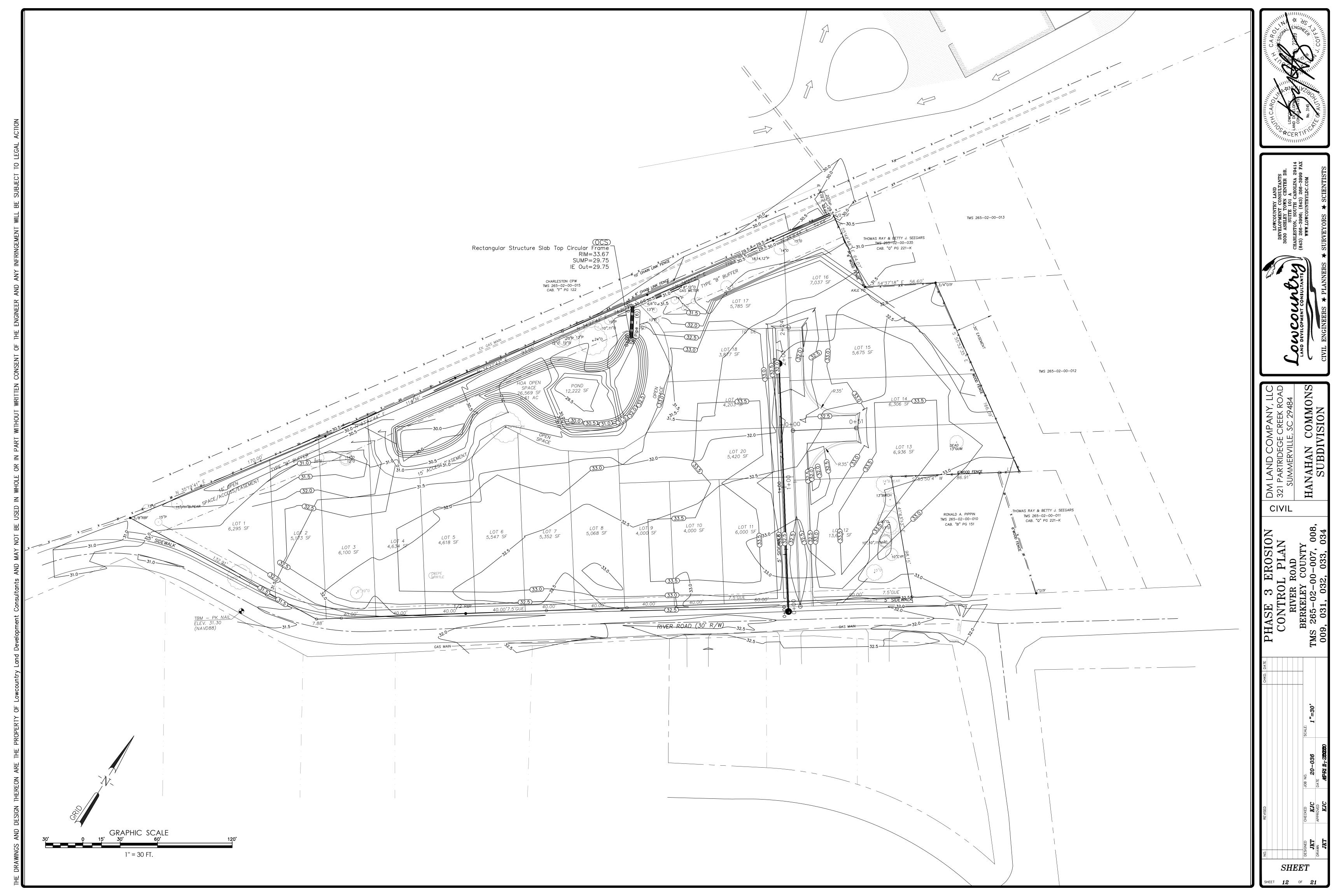
HANAHAN COMMONS SUBDIVISION

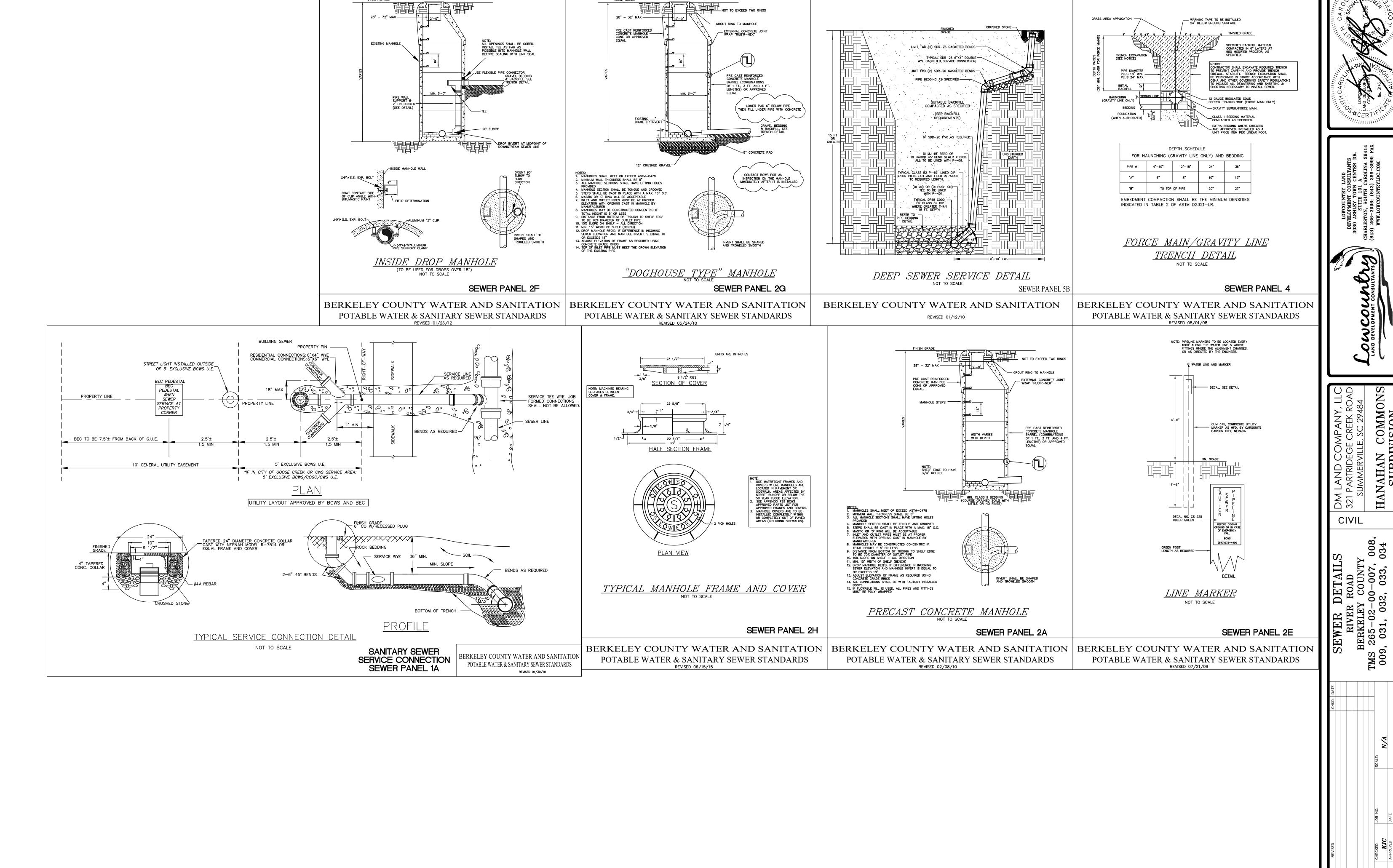
CIVIL SEWER PROFILES
RIVER ROAD
BERKELEY COUNTY
TMS 265-02-00-007, 008
009, 031, 032, 033, 034

SHEET

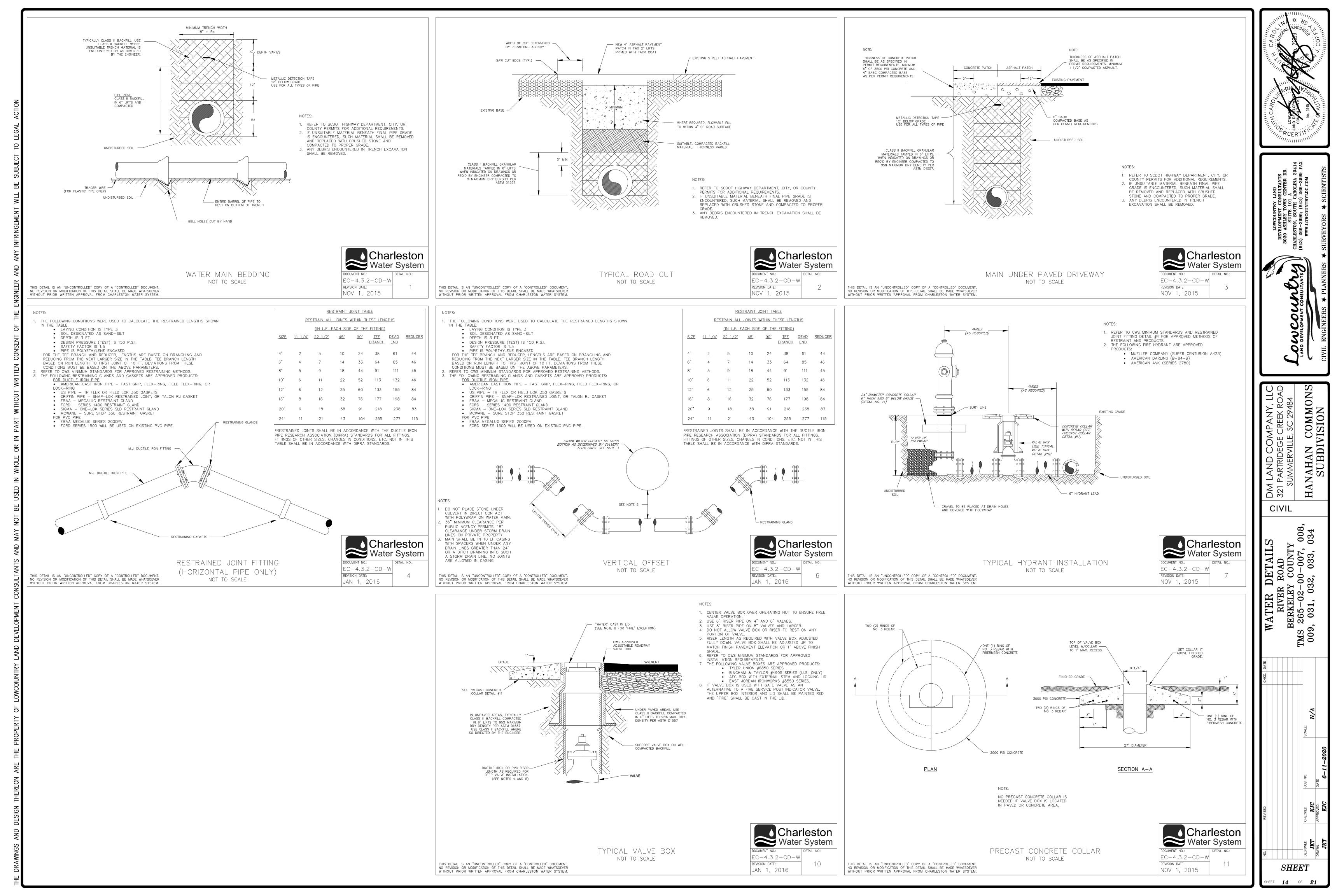
Profile view of Sanitary Sewer
Horz: 1"=30'
Vert: 1"=3' 0+00 2+00

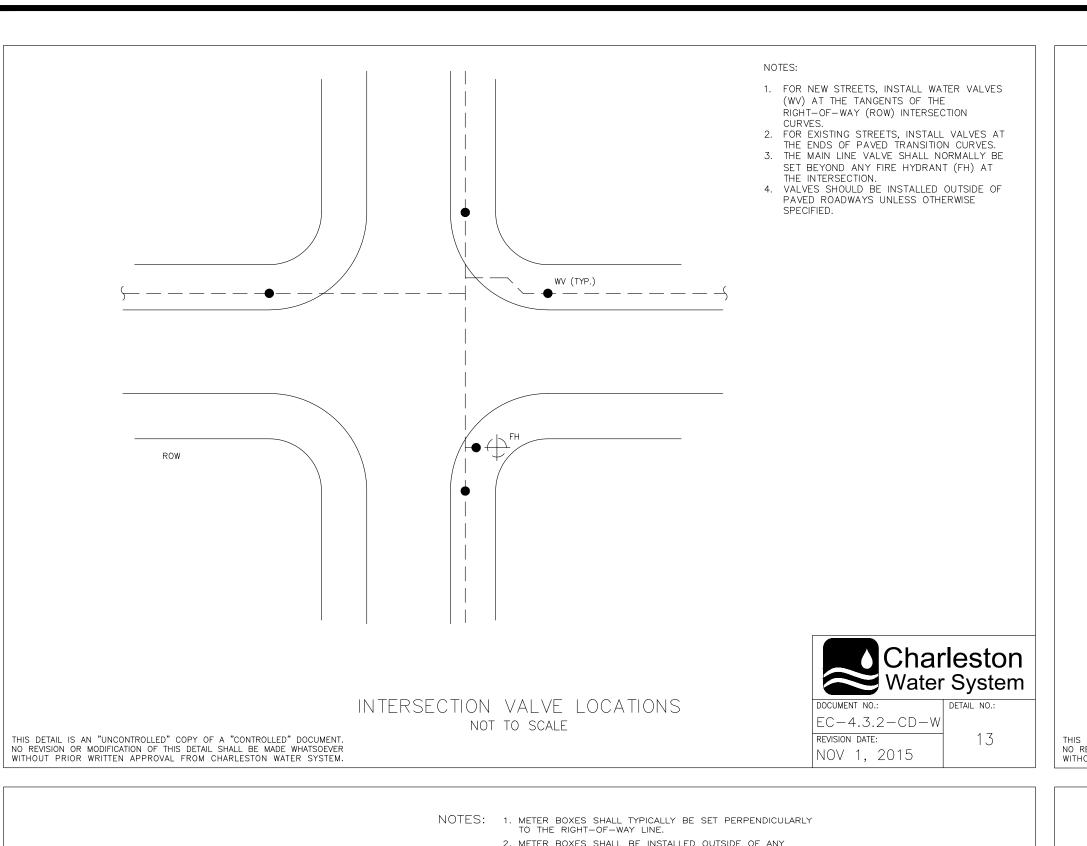


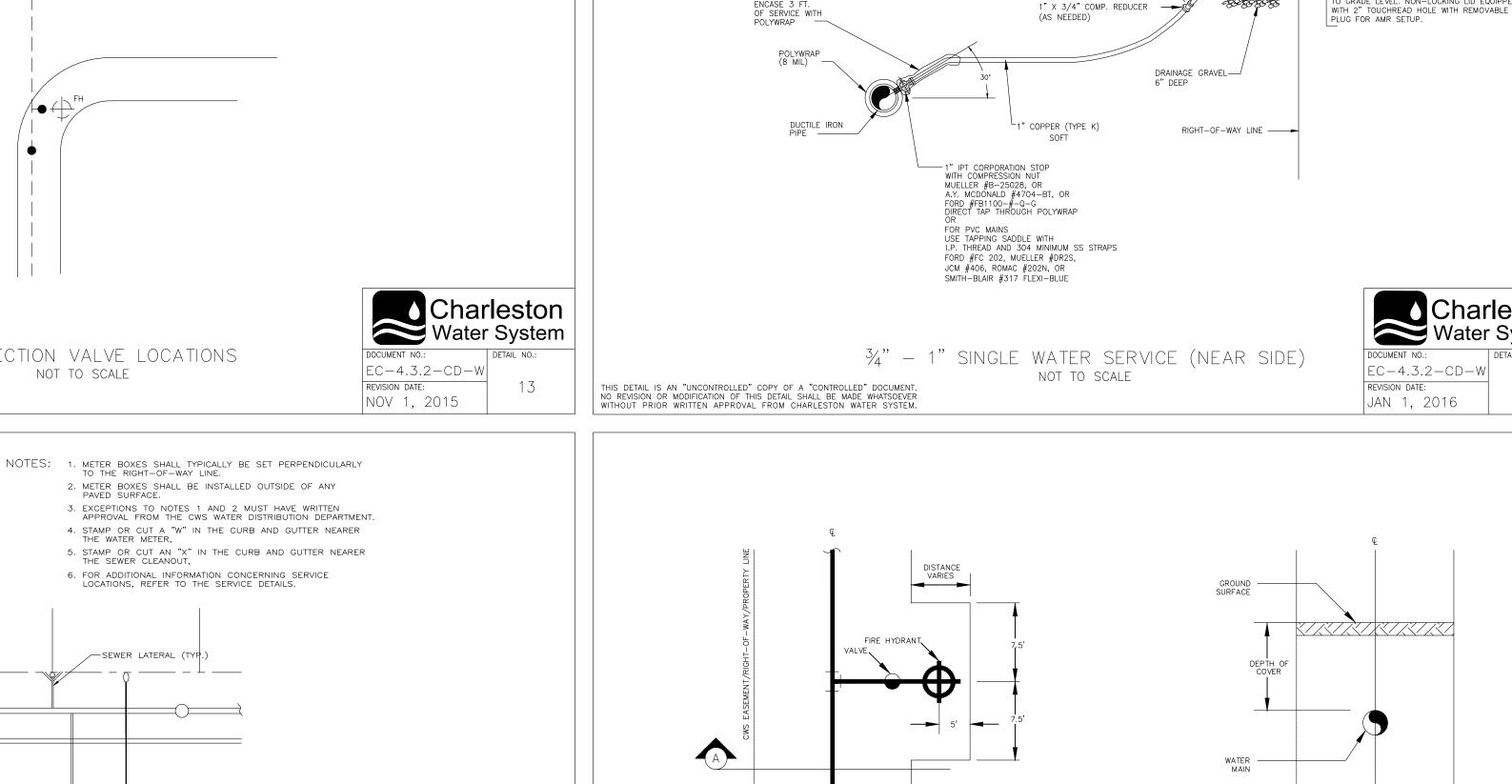












1. CONTRACTOR WILL PROVIDE ALL MATERIAL AND INSTALL SERVICES UNDER CWS SUPERVISION.

2. ALL TAPS WILL BE MADE IN ACCORDANCE WITH

4. ALL METER BOXES TO BE INSTALLED WITHIN ROAD RIGHTS-OF-WAY UNLESS SPECIFIED OTHERWISE.

CWS MINIMUM STANDARDS AND AWWA GUIDELINES FOR TAPPING THROUGH POLYETHYLENE ENCASEMENT.

3. ALL METER BOXES SHALL BE INSTALLED PERPENDICULARLY TO THE RIGHT-OF-WAY LINE OR PROPERTY LINE AS SHOWN

7.5'

<u>PLAN VIEW</u>

TYPICAL 15' CWS WATER EASEMENT

-FINISHED GRADE

NO. 4 REBAR -

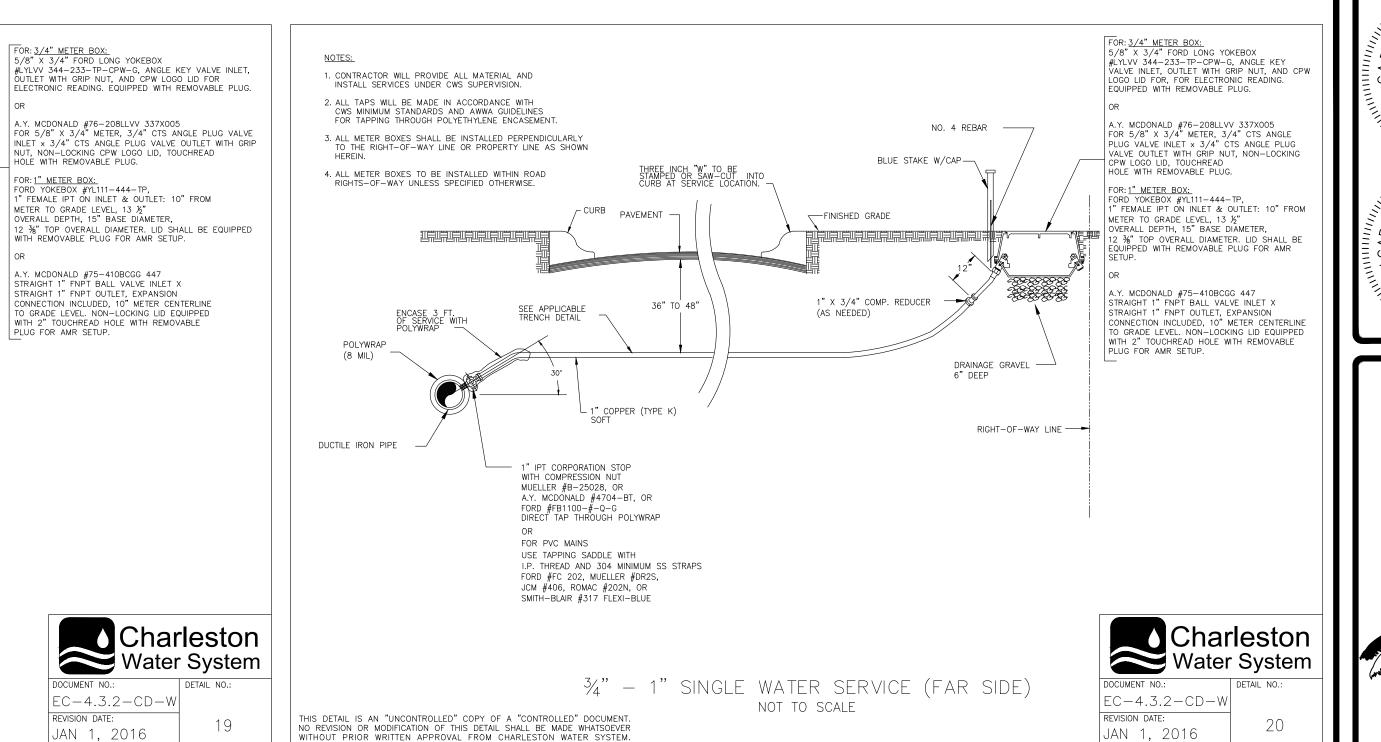
METER TO GRADE LEVEL, 13 ½" OVERALL DEPTH, 15" BASE DIAMETER,

A.Y. MCDONALD #75-410BCGG 447 STRAIGHT 1" FNPT BALL VALVE INLET X STRAIGHT 1" FNPT OUTLET, EXPANSION

7.5' - 7.5' -

SECTION "A"

BLUE STAKE W/CAP-



" CERT'

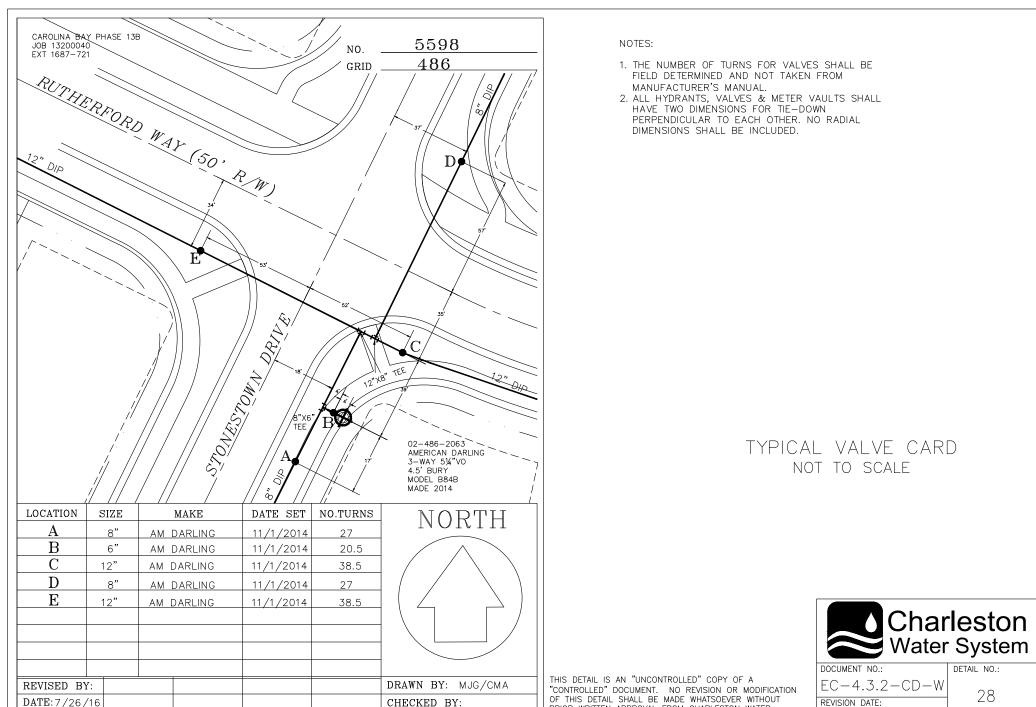
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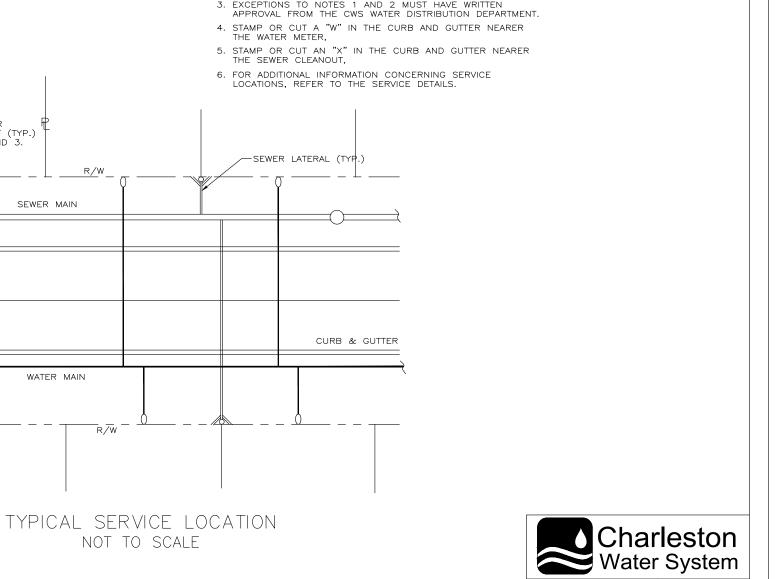
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JAN 1, 2016







THIS DETAIL IS AN "UNCONTROLLED" COPY OF A "CONTROLLED" DOCUMENT. NO REVISION OR MODIFICATION OF THIS DETAIL SHALL BE MADE WHATSOEVER WITHOUT PRIOR WRITTEN APPROVAL FROM CHARLESTON WATER SYSTEM.

- . WATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS", S.C.D.H.E.C. REGULATIONS, AND CHARLESTON WATER SYSTEM'S "MINIMUM STANDARDS FOR THE DESIGN & CONSTRUCTION OF WATER AND SANITARY SEWER SYSTEMS" AS FOUND AT www.charlestonwater.com. BACKFLOW PREVENTION REQUIREMENTS CAN ALSO BE FOUND AT www.charlestonwater.com.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL TAPS. TAPS REQUIRING A SLEEVE SHALL BE NO CLOSER TO A JOINT
- THAN 4 FEET. 3. THRUST BLOCKING SHALL BE USED ONLY ON WET TAPS. CONTRACTOR SHALL NOTIFY CWS INSPECTOR A MINIMUM OF 72 HOURS (THREE FULL WORKING DAYS) PRIOR TO MAKING ANY WET TAP.
- 4. ROUGH GRADING SHALL BE DONE PRIOR TO INSTALLATION OF WATER MAINS.

METER BOX NEAR

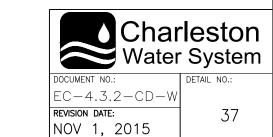
SEE NOTES 2 AND 3.

SEWER MAIN

WATER MAIN

- 5. CONTRACTOR SHALL MAINTAIN BETWEEN 36" 48" COVER OVER TOP OF PIPE.
- 6. ALL COMPONENTS OF THE PIPING SYSTEM SHALL BE NEW DUCTILE IRON AND ENCLOSED WITH LINEAR LOW—DENSITY 8 MILS BLUE POLYETHYLENE ENCASEMENT.
- 7. ALL VALVES AND HYDRANTS SHALL OPEN CLOCKWISE, EXCEPT ON THE FORMER NAVAL BASE, WHERE THE VALVES SHALL OPEN COUNTERCLOCKWISE..
- 8. MEGALUG, FORD SERIES 1400, OR SIGMA ONE-LOK RETAINER GLANDS SHALL BE USED FOR ALL FITTINGS, VALVES. AND HYDRANTS.
- 9. RESTRAINED LENGTHS SHALL BE IN MULTIPLES OF A FULL LENGTH OF PIPE.
- 10. USE 45° OR FLATTER BENDS WHEN GOING UNDER RCP AND DO NOT INSTALL VALVES, HYDRANTS, OR SERVICES ON DEEP PIPE SECTIONS.
- 11. WHERE POSSIBLE, HORIZONTAL WATERLINES SHALL BE DEFLECTED IN LIEU OF USING BENDS. DEFLECTIONS SHALL NOT EXCEED 75%
- 12. WHERE WATER AND SANITARY SEWER LINES CROSS WITHIN 18", THE LINE LAID LAST SHALL HAVE A FULL LENGTH OF PIPE INSTALLED WITH ITS MIDPOINT VERTICALLY IN LINE WITH THE OTHER LINE. THE CROSSING SHALL BE AT
- NOT LESS THAN A 45° ANGLE.
- 13. ALL MATERIAL SHALL CONFORM TO CWS SPECIFICATIONS AS TO MANUFACTURER, TYPE, AND DESIGN. 14. DEVELOPER'S ENGINEER SHALL INSPECT PROJECT WEEKLY TO PROVIDE WRITTEN WEEKLY UPDATES TO CWS INSPECTOR AND TO CERTIFY THE CORRECTNESS OF THE WATER PORTION OF CONTRACTOR'S RECORD DRAWINGS.
- 15. CONTRACTOR INSTALLING THE WATER SYSTEM SHALL BE ON CWS'S "APPROVED CONTRACTORS LIST".
- 16. COORDINATE INSPECTION OF THE BACKFLOW DEVICES WITH CWS CROSS CONNECTION DEPARTMENT BY CALLING (843) 727-6981. WATER SERVICE SHALL NOT BE TURNED ON UNTIL ALL BACKFLOW DEVICES HAVE PASSED INSPECTION.
- 17. DEVELOPER SHALL TAKE NECESSARY MEASURES TO PROTECT CWS WATER SYSTEM DURING THE TIME BETWEEN THE COMMISSIONING INSPECTION AND THE 2-YEAR MAINTENANCE BOND INSPECTION. 18. CHARLESTON WATER SYSTEM RESERVES THE RIGHT NOT TO INSTALL WATER METERS IF METER BOXES ARE NOT
- LOCATED AND ON GRADE IN COMPLIANCE WITH ITS MINIMUM STANDARDS. 19. ALL METER VAULTS AND ASSOCIATED PIPING 3" AND LARGER SHALL BE INSTALLED BY CWS UNLESS APPROVED IN WRITING BY THE CWS WATER DISTRIBUTION ENGINEER.

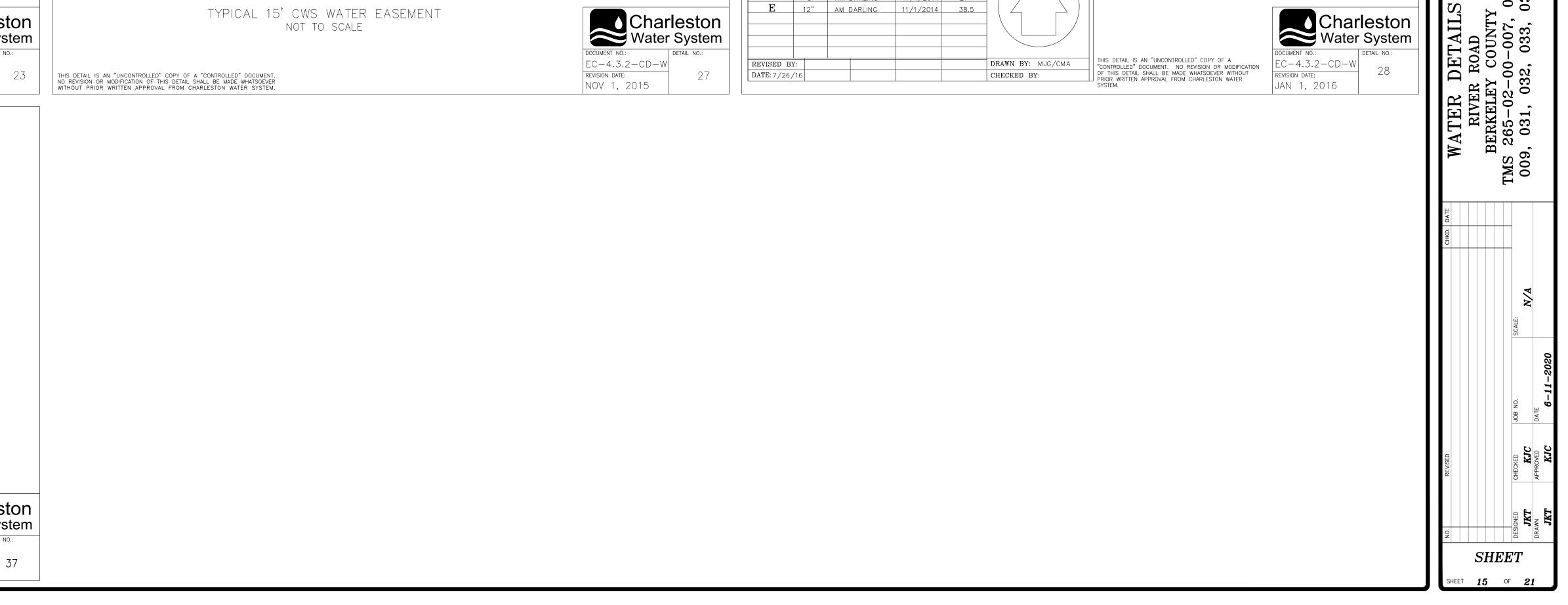
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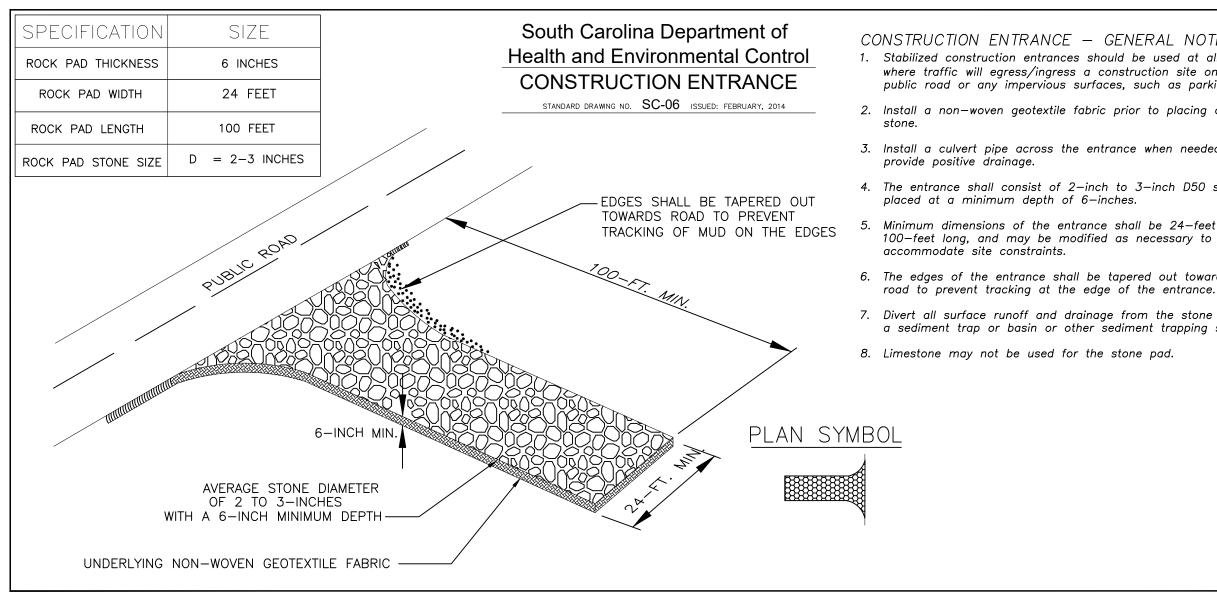


EC-4.3.2-CD-W

REVISION DATE:

NOV 1, 2015





CONSTRUCTION ENTRANCE - GENERAL NOTES 1. Stabilized construction entrances should be used at all points where traffic will egress/ingress a construction site onto a public road or any impervious surfaces, such as parking lots.

2. Install a non-woven geotextile fabric prior to placing any

3. Install a culvert pipe across the entrance when needed to

4. The entrance shall consist of 2-inch to 3-inch D50 stone

placed at a minimum depth of 6-inches. 5. Minimum dimensions of the entrance shall be 24-feet wide by

accommodate site constraints. 6. The edges of the entrance shall be tapered out towards the

7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.

8. Limestone may not be used for the stone pad.

CONSTR. ENTRANCE - INSPECTION & MAINTENANCE 1. The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.

2. Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.

3. During regular inspections, check for mud and sediment buildup and pad integrity. Inspection frequencies may need to be more frequent during long periods of wet weather.

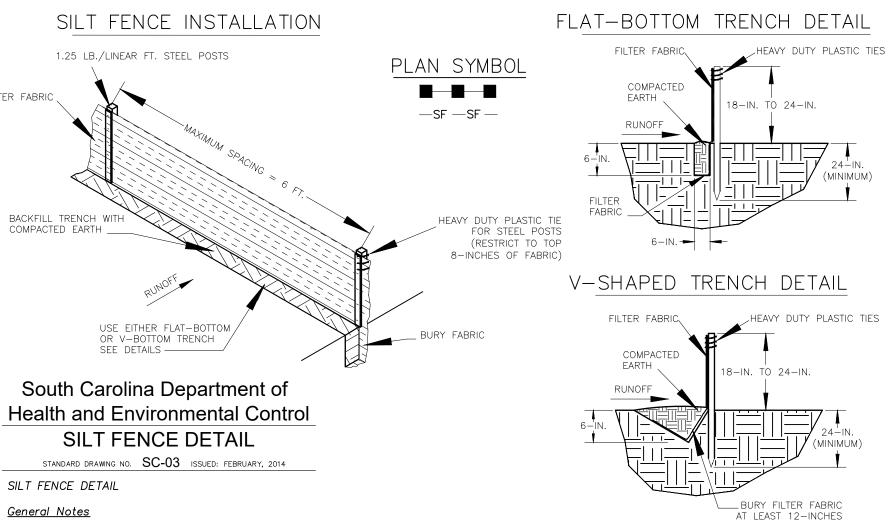
4. Reshape the stone pad as necessary for drainage and runoff

Wash or replace stones as needed and as directed by site inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off-site by vehicles. Frequent washing will extend the useful

Immediately remove mud and sediment tracked or washed onto adjacent impervious surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a

7. During maintenance activities, any broken pavement should be repaired immediately.

8. Construction entrances should be removed after the site has reached final stabilization. Permanent vegetation should replace areas from which construction entrances have been removed, unless area will be converted to an impervious surface to serve



Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.

2. Maximum sheet or overland flow path length to the silt fence shall be 100-feet.

Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.

Silt fence joints, when necessary, shall be completed by one of the following options: - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;

Overlap silt fence by installing 3—feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll

with heavy—duty plastic ties; or, Overlap entire width of each silt fence roll from one support post to the next support post.

Attach filter fabric to the steel posts using heavy—duty plastic ties that are evenly spaced within the top 8—inches of the fabric.

6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.

Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

<u>Post Requirements</u>

Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics.

- Composed of a high strength steel with a minimum yield strength of 50,000 psi. - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.

- Weigh 1.25 pounds per foot $(\pm 8\%)$

2. Posts shall be equipped with projections to aid in fastening of filter fabric.

3. Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17—square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.

Install posts to a minimum of 24—inches. A minimum height of 1— to 2— inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.

5. Post spacing shall be at a maximum of 6-feet on center.

<u>Fabric Requirements</u>

Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements: Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that

are formed into a network such that the filaments or yarns retain dimensional stability relative to each other; - Free of any treatment or coating which might adversely alter its physical properties after installation;

- Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,

2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.

12—inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.

5. Filter Fabric shall be installed at a minimum of 24-inches above the ground.

. The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.

4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.

Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24—hours after each rainfall even that produces 1/2-inch or more of precipitation.

Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.

4. Remove accumulated sediment when it reaches 1/3 the height of the silt fence.

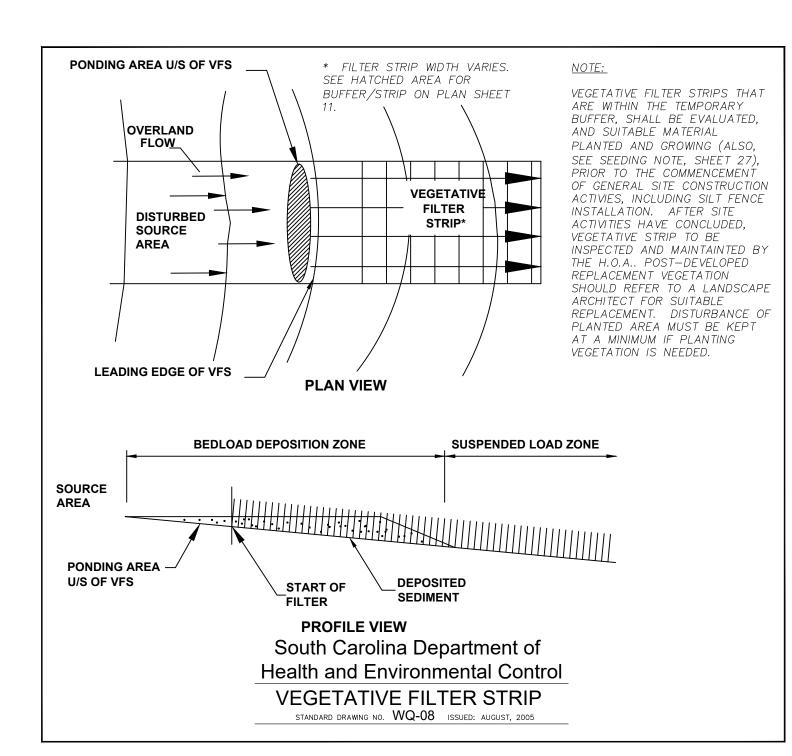
Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment

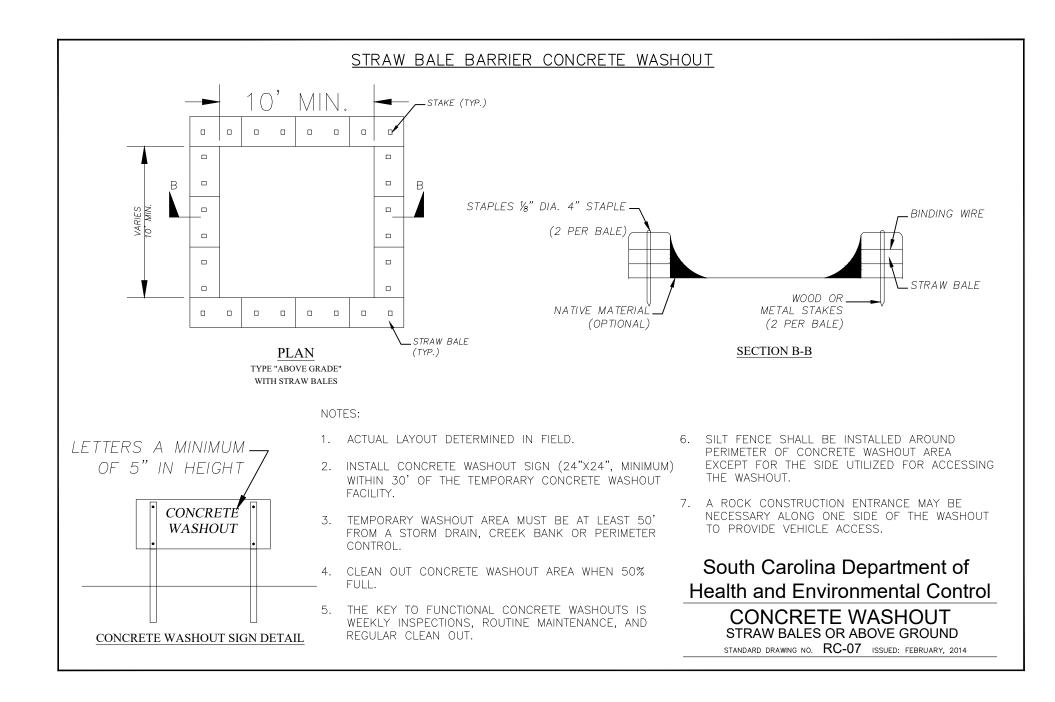
6. Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie-backs and/or reinstall silt fence, as necessary.

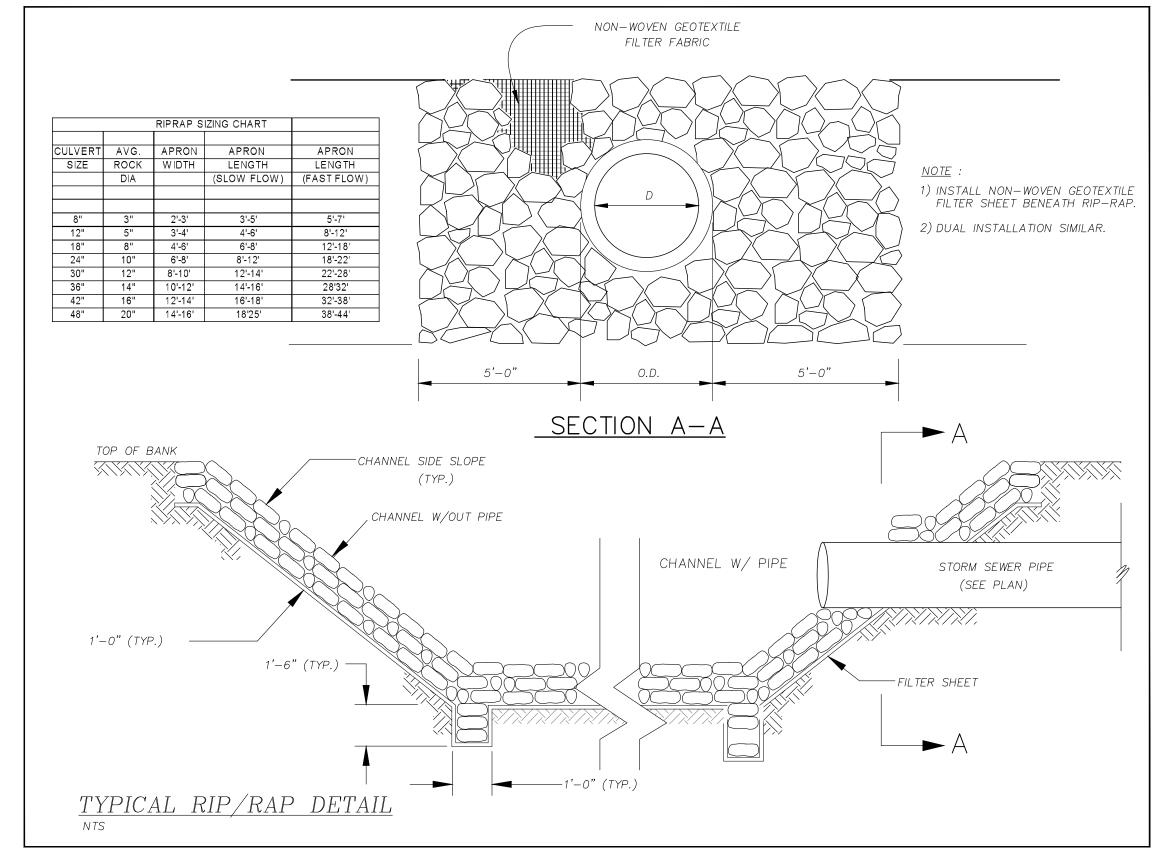
Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.

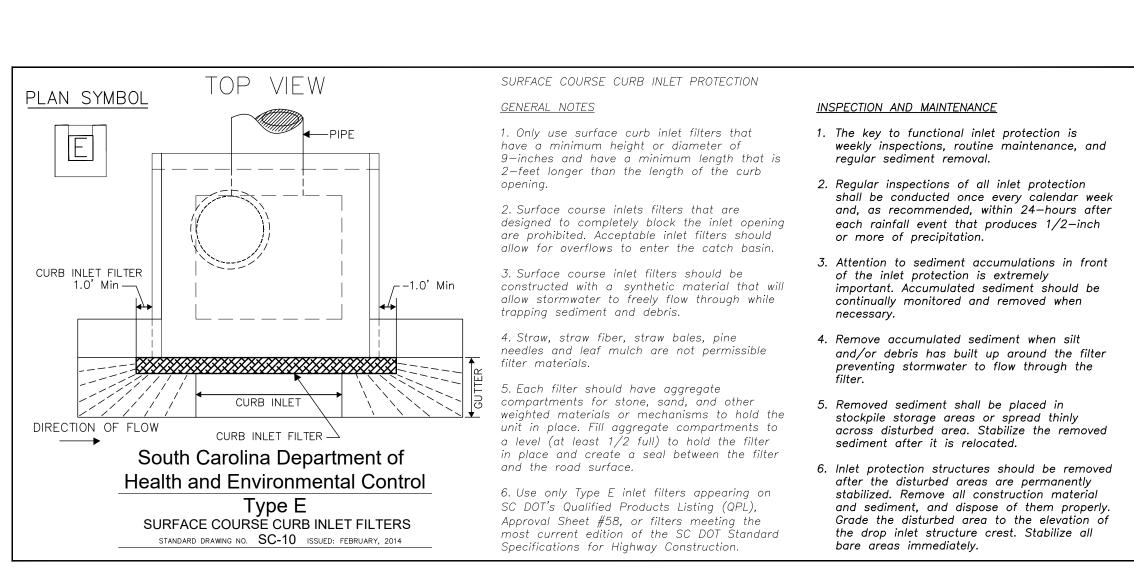
8. Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

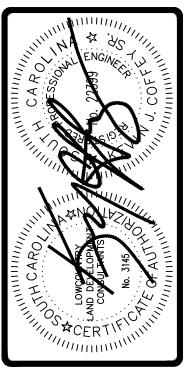
1. ALL tree protection barricades must have two horizontal cross rails. 2. Barricades shall be erected at a minimum distance from the base of protected trees and grand trees according to the following standards: 3. For protected trees greater than twenty three inches (23") D.B.H. and grand trees protective barricades shall provide a diameter protection around the tree equal to the diameter breast height of the tree (i.e.; a 24" diameter tree would require a 24' diameter protective barricade) 4' HIGH CHAIN LINK FENCE 1" DIAMETER METAL SECURE TO POST AND CROSS — CROSS RAIL SECURED POSTS ON 5' O.C. BAR WITH WIRE ROOT ZONE TO BE PROTECTED TREE PROTECTION BARRIER DETAIL











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CIVIL

- SEDIMENT TUBES GENERAL NOTES Sediment tubes may be installed along contours, in drainage conveyance channels, and around inlets to help prevent off-site discharge of sediment-laden
- Sediment tubes are elongated tubes of compacted geotextiles, curled excelsior wood, natural coconut fiber, or hardwood mulch. Straw, pine needle, and leaf mulch-filled sediment tubes are not permitted.
- The outer netting of the sediment tube should consist of seamless, high-density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high-density polyethylene non-degradable material.
- Sediment tubes, when used as checks within channels, should range between 18-inches and 24-inches depending on channel dimensions. Diameters outside this range may be allowed where necessary when approved.
- Curled excelsior wood, or natural coconut products that are rolled up to create a sediment tube are not allowed.
- Sediment tubes should be staked using wooden stakes (2-inch X 2-inch) or steel posts (standard "U" or "T" sections with a minimum weight of 1.25 pounds per foot) at a minimum of 48-inches in length placed on 2—foot centers.
- Install all sediment tubes to ensure that no gaps exist between the soil and the bottom of the tube. Manufacturer's recommendations should always be consulted before installation.
- . The ends of adjacent sediment tubes should be overlapped 6-inches to prevent flow and sediment from passing through the field joint.
- Sediment tubes should not be stacked on top of one another, unless recommended by manufacturer.
- O. Each sediment tube should be installed in a trench with a depth equal to 1/5 the diameter of the
- 1. Sediment tubes should continue up the side slopes a minimum of 1—foot above the design flow depth of the channel.
- 12. Install stakes at a diagonal facing incoming runoff.

SEDIMENT TUBE SPACING

SLOPE	MAX. SEDIMENT TUBE SPACING			
LESS THAN 2%	150-FEET 100-FEET			
2%				
3%	75-FEET			
4%	50-FEET			
5%	40-FEET			
6%	30-FEET			
GREATER THAN 6%	25-FEET			

- SEDIMENT TUBES INSPECTION & MAINTENANCE The key to functional sediment tubes is weekly inspections, routine maintenance, and regular sediment
- 2. Regular inspections of sediment tubes shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
- 3. Attention to sediment accumulations in front of the sediment tube is extremely important. Accumulated sediment should be continually monitored and removed
- 4. Remove accumulated sediment when it reaches 1/3 the height of the sediment tube.
- 5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
- 6. Large debris, trash, and leaves should be removed from in front of tubes when found.
- 7. If erosion causes the edges to fall to a height equal to or below the height of the sediment tube, repairs should be made immediately to prevent runoff from bypassing
- 3. Sediment tubes should be removed after the contributing drainage area has been completely stabilized. Permanent vegetation should replace areas from which sediment tubes have been removed.

South Carolina Department of Health and Environmental Control SEDIMENT TUBES

STANDARD DRAWING NO. SC-05 ISSUED: FEBRUARY, 2014

PLANTING & SEEDING SCHEDULE:

SEEDING SCHEDULES FOR TEMPORARY VEGETATION UPPER & LOWER STATE LBS. PER ACRE PLANTING COMMON NAME OF SEED <u>DATES</u> <u>RATE</u> ANNUAL SUDAN GRASS APRII 1 -

SEEDING SCHEDULES FOR PERMANENT VEGETATION

(SWEET OR TIFT)

	SCHEDULE NO.	COMMON NAME OF SEED	RURAL <u>RATE</u>	URBAN <u>RATE</u>	PLANTIN DATES
	3	COMMON BERMUDA (HULLED)	0	60	MARCH AUG. 14
ı		PENSACOLA BAHIA	50	0	۸۵۵، ۱۱
		SERICEA LESPEDEZA (SCARIFIED)	50	50	
	4	COMMON BERMUDA (UNHULLED)	0	90	AUG. 15 FEB. 28
ı		PENSACOLA BAHIA	50	0	1 20. 20
		SERICEA LESPEDEZA (UNHULLED, UNSCARIFIED)	80	80	
		RESEEDING CRIMSON CLOVER ANNUAL RYEGRASS	20 5	0 15	
		RYF GRAIN	20	0	

LT FENCE (TYP.) WASHOUT AREA (TYP.) INDIVIDUAL LO CONSTRUCTION

TO ADEQUATE

DRAINAGEWAY

LOT EXAMPLE "A"

SLOPES TO FRONT

2. NO MORE THAN 1/4 ACRE TO DRAIN TO 100 L.F. OF SILT FENCE.

<u>NOTES</u>

DIVERSION SWALE /

↓ SLOPE

WASHOUT AREA (TYP.

TSLOPE **T** (TYP.) * * * * * DIRECT RUNOFF FROM DRIVEWAY TO SEDIMENT FENCE INDIVIDUAL LOT CONSTRUCTION ENTRANCE (TYP.) ENTRANCE (TYP.) STREET OR ROADWAY STREET OR ROADWAY

1. THE KEY TO FUNCTIONAL INDIVIDUAL LOT BMPS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.

3. SEE INDIVIDUAL LOT CONSTRUCTION ENTRANCE, SILT FENCE, CONCRETE WASHOUT & STOCKPILE DETAILS FOR ADDITIONAL INFORMATION.

SILT FENCE (TYP.)

BASIS. ADDITIONAL BMPS SHOULD BE IMPLEMENTED AS NOTED ON PLANS OR DIRECTED UPON SITE INSPECTIONS.

MATERIALS (SUCH AS EXCESS BUILDING MATERIALS, TRASH, AND OTHER POTENTIAL POLLUTANTS).

4. ADDITIONAL BMPS, SUCH AS INLET PROTECTION, ROCK CHECKS, SEDIMENT TUBES & SILT FENCE ROCK OUTLETS, MAY BE NECESSARY ON A LOT-TO-LOT

6. PROPER WASTE DISPOSAL TECHNIQUES MUST BE IMPLEMENTED ON EACH LOT TO PREVENT STORMWATER RUNOFF CONTACT WITH EXPECTED WASTE

INDIVIDUAL RESIDENTIAL LOT CONTROLS

5. CONCRETE WASHOUTS MAY NOT NEED TO BE PROVIDED ON EACH INDIVIDUAL LOT WHEN A WASHOUT AREA HAS BEEN DESIGNATED AND IMPLEMENTED WITHIN

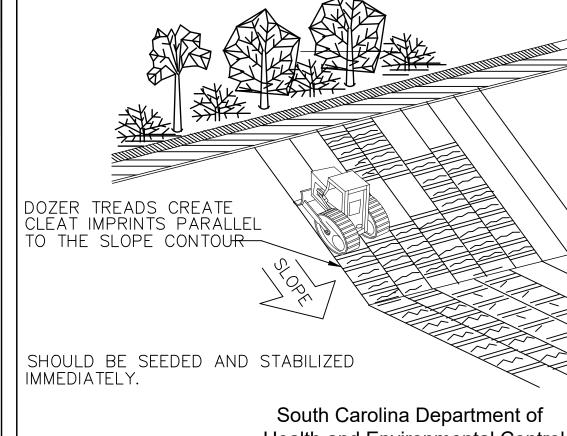
SLOPES TO REAR South Carolina Department of Health and Environmental Control INDIVIDUAL LOTS RESIDENTIAL BMPS CONTROLS

STANDARD DRAWING NO. RC-09 ISSUED: FEBRUARY, 2014

LOT EXAMPLE

SILT FENCE (TYP OUTLET SWALE TO STABLE area or adequate DRAINAGEWAY **SLOPE** HOUSE DIVERSION SWALE INDIVIDUAL LOT CONSTRUCTION ENTRANCE (TYP.) WASHOUT AREA (TYP./) STREET OR ROADWAY

> LOT EXAMPLE "C" SLOPES TO SIDE



Health and Environmental Control TRACKING

STANDARD DRAWING NO. EC-01 ISSUED: AUGUST, 2005

HEAVY DUTY PLASTIC TIES SUPPORT POST 24" INTO BOTTOM OR SIDES SLOPES COMPACTED STAKE FOR SUPPORT WIRE RUNOFF CROSS SECTION VIEW FLAT-BOTTOM TRENCH DETAIL HEAVY DUTY PLASTIC TIES POROUS BAFFLE ROW-BAFFLE MATERIAL CONCENTRATED INFLOW RUNOFF (MINIMUM) BAFFLE MATERIAL V-SHAPED TRENCH DETAIL NON-CONCENTRATED BOTTOM OF SEDIMENT South Carolina Department of SIDE SLOPES OF SEDIMENT BASIN OR TRAP PLAN SYMBOL Health and Environmental Contro POROUS BAFFLES PERSPECTIVE VIEW standard drawing no. SC-13 PAGE 1 of 2 —PB —PB —

BAFFLES - POST REQUIREMENTS

Porous baffle posts must be 60-inch to 96-inch long steel posts that meet, at a minimum, the following physical characteristics. - Composed of a high strength steel with a minimum yield strength of - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches. - Weigh 1.25 pounds per foot (± 8%)

Posts shall be equipped with projections to aid in fastening of baffle material. Install posts to a minimum of 24-inches. A minimum height of 1- to 2inches above the fabric shall be maintained, and a maximum height of $\overline{\mathbf{3}}$ feet shall be maintained above the ground.

4. Post spacing shall be at a maximum of 4—feet on center.

BAFFLES - MATERIAL REQUIREMENTS Baffle material must be composed of coir—based materials or Turf Reinforcement Matting (TRM) that consists of the following requirements:

- Have a light penetration (% openings) between 10-35%; Free of loose straw material: - Have a minimum tensile strength of 145 lb/ft; and, - Have a minimum width of 48-inches.

. 12—inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled or baffle material may be stapled into ground by using 12—inch staples with a maximum spacing of 12—inches. Baffle material shall be purchased in continuous rolls and cut to the width of

the sediment basin or trap to avoid joints. BAFFLES - GENERAL NOTES

Attach baffle to the steel posts using heavy—duty plastic ties that are evenly Install the baffle rows perpendicular to the direction of the stormwater flow and place each baffle the proper distance from inlet and outlets to allow access for

BAFFLES - INSPECTION & MAINTENANCE The key to functional porous baffles is weekly inspection, routine maintenance,

2. Regular inspections of porous baffles shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.

3. Attention to sediment accumulations along each row of baffles is extremely important. Accumulated sediment should be continually monitored and removed Remove accumulated sediment when it reaches 1/3 the height of the baffle

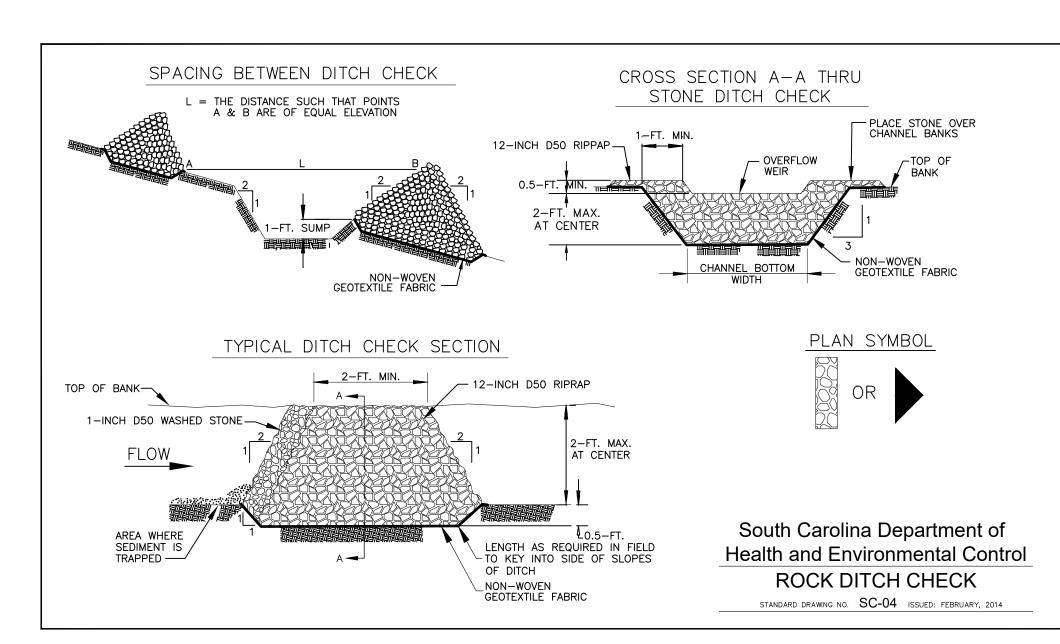
row or when it reaches the clean-out height of the sediment basin or trap, whichever is reached first. 5. Removed sediment shall be placed in stockpile storage areas or spread thinly

across disturbed area. Stabilize the removed sediment after it is relocated. Check for areas where stormwater runoff has eroded a channel beneath each row of baffles, or where the baffle has sagged or collapsed due to runoff

7. Check for tears/rips within the baffles, areas where the baffle has begun to decompose, and for any other circumstance that may render the baffle ineffective. Removed damaged baffles and reinstall new baffles immediately. Porous baffles should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be

> South Carolina Department of Health and Environmental Contr

POROUS BAFFLES standard drawing no. SC-13 PAGE 2 of GENERAL NOTES FEBRUARY 2014
DATE



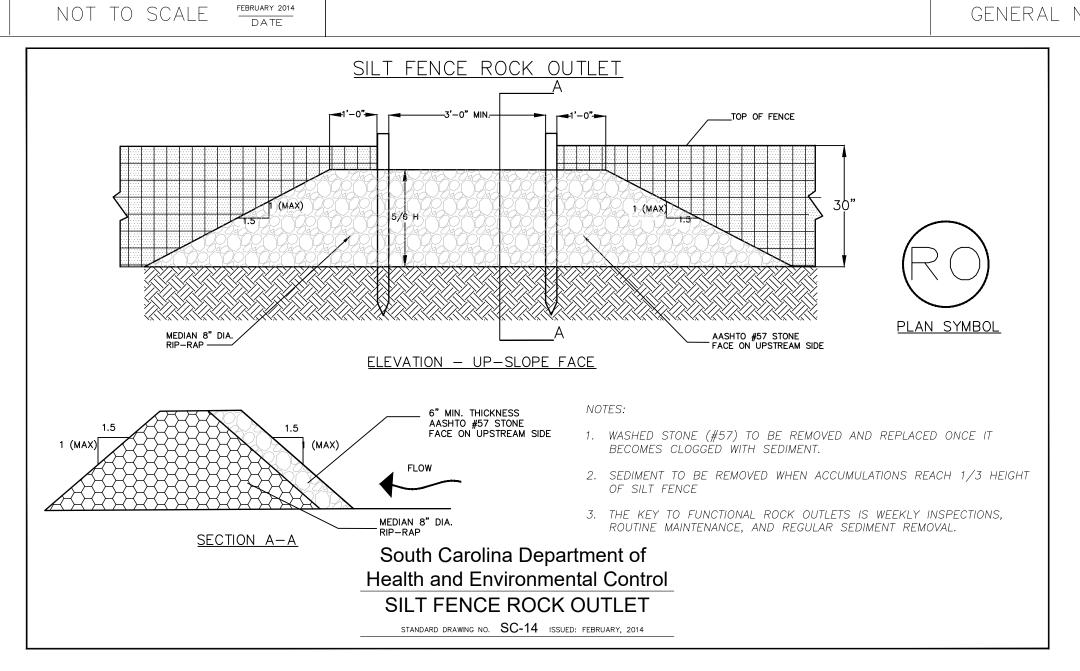
- ROCK DITCH CHECK GENERAL NOTES 1. Rock Ditch Checks should not be placed in Waters of the State or USGS blue-line streams (unless approved by Federal Authorities).
- 2. Rock Ditch Checks should be installed in steeply sloped channels where adequate vegetation cannot be established. This BMP measure should only be used in small open
- 3. A non-woven geotextile fabric shall be installed over the soil surface where the rock ditch check is to be placed.
- 4. The body of the rock ditch check shall be composed of 12—inch D50 Riprap. The upstream face may be composed of 1—inch 5. Rock Ditch Checks should not exceed a height
- of 2—feet at the centerline of the channel. 6. Rock Ditch Checks should have a minimum top flow length of 2-feet.

7. Riprap should be placed over channel banks to

- prevent water from cutting around the ditch 8. The riprap should be placed by hand or mechanical placement (no dumping of rock to form dam) to achieve complete coverage of the channel. Doing so will also ensure that the
- 9. The maximum spacing between the dams should be such that the toe of the upstream check is at the same elevation as the top of the downstream check.

center of the check is lower than the edges.

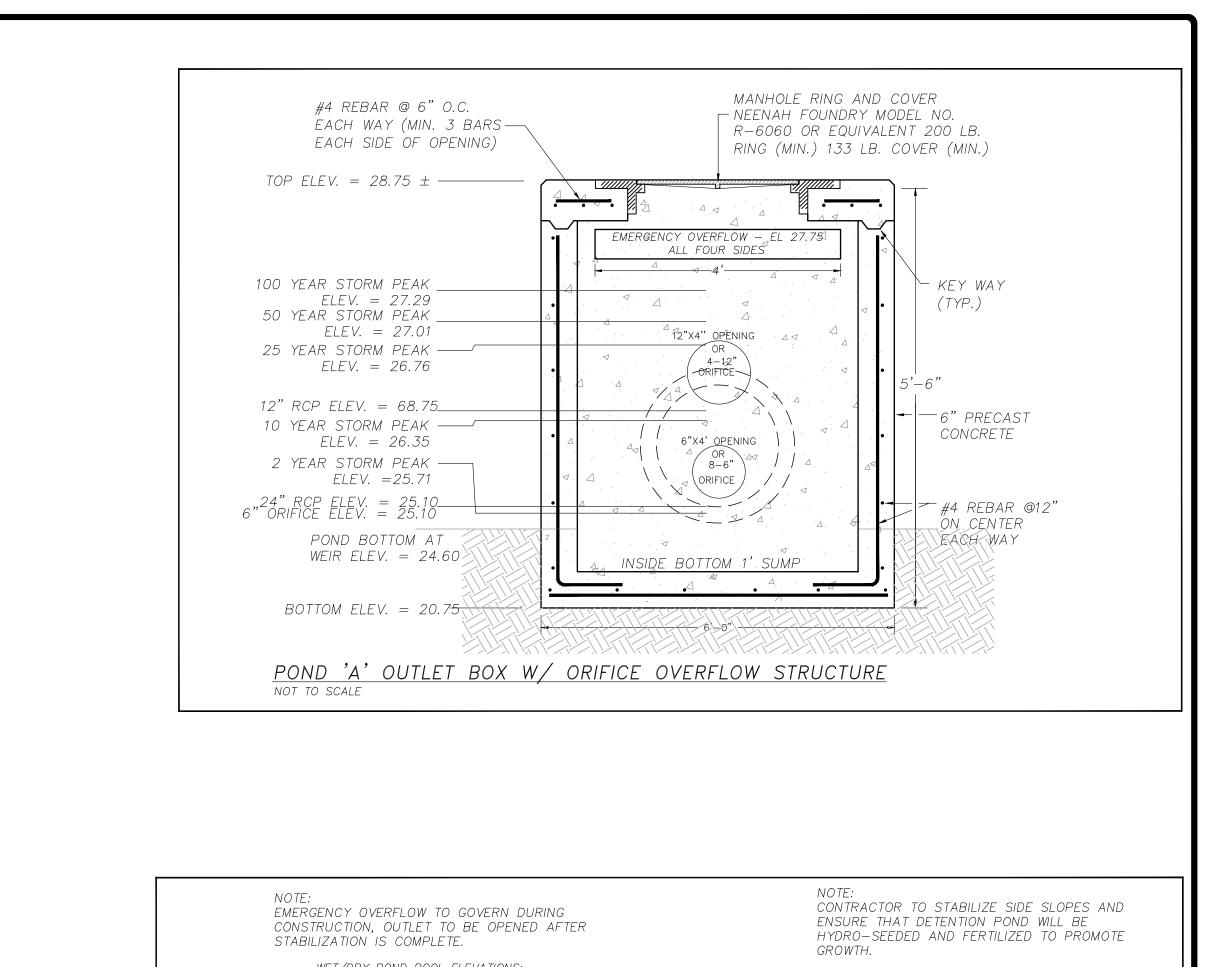
- ROCK DITCH CHECK INSPECTION & MAINTENANCE 1. The key to functional rock ditch check is weekly inspections, routine maintenance, and regular sediment
- 2. Regular inspections of rock ditch checks shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
- Attention to sediment accumulations in front of the rock ditch check is extremely important. Accumulated sediment should be continually monitored and removed
- 4. Remove accumulated sediment when it reaches 1/3the height of the rock ditch check.
- 5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
- 6. Inspect Rock Ditch Checks' edges for erosion and evidence of runoff bypassing the installed check. If evident repair promptly as necessary to prevent erosion and bypassing.
- 7. In the case of grass—lined ditches, channels, and swales, rock ditch checks should be removed when the grass has matured sufficiently to protect the ditch or swale unless the slope of the swale is greater than
- After construction is completed and final stabilization is reached, the entirety of the rock ditch check should be removed if vegetation will be used for permanent erosion control measures. The area beneath the removed rock ditch check must be addressed with permanent stabilization measures.

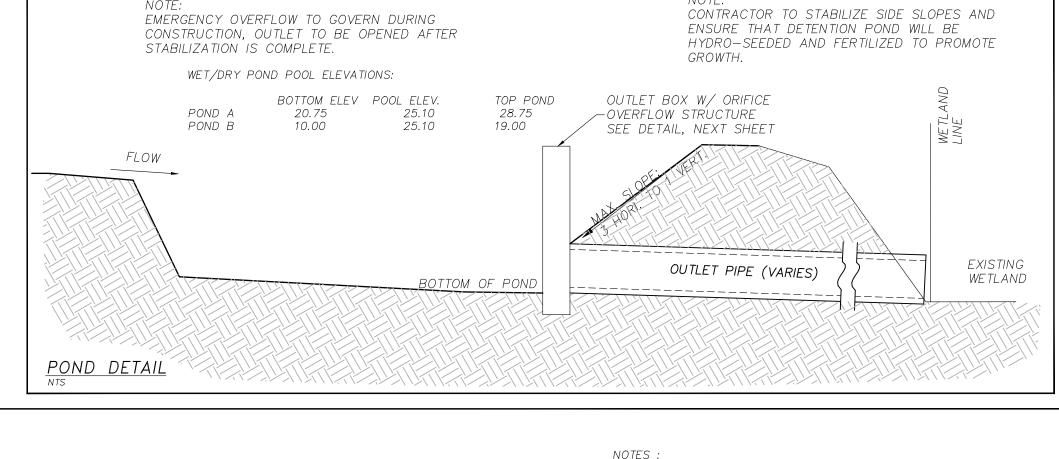


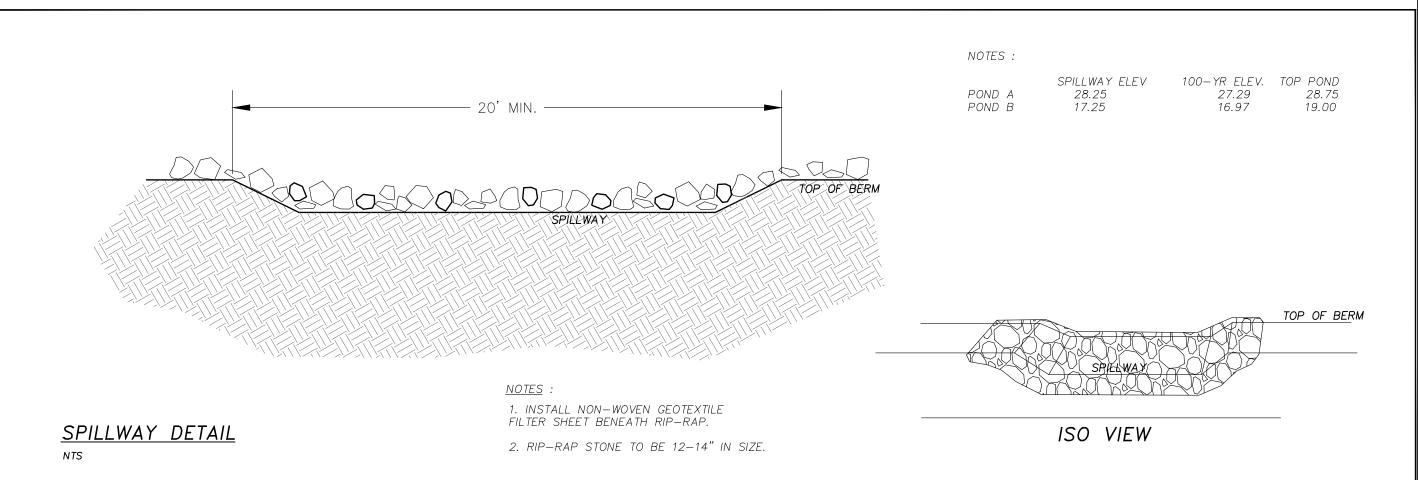
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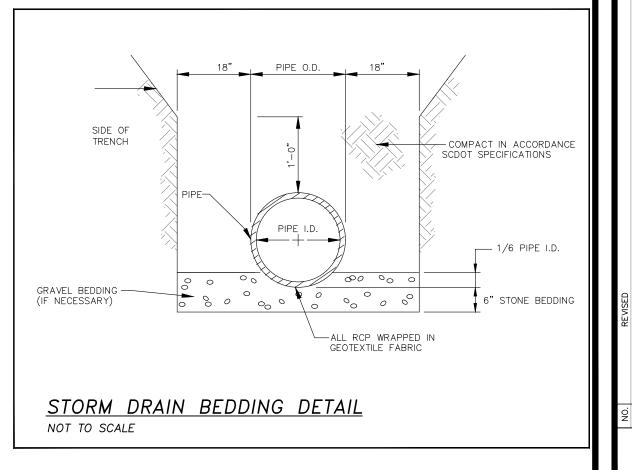
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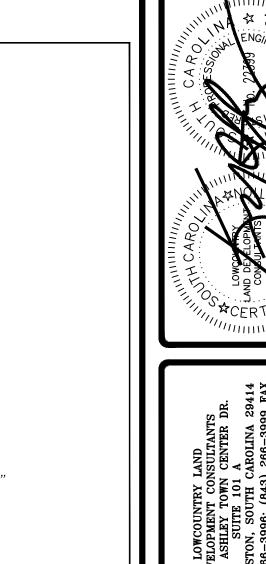
SHEET

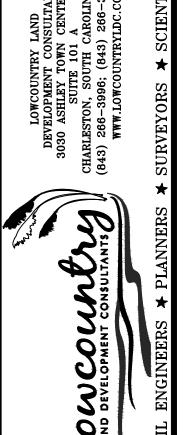




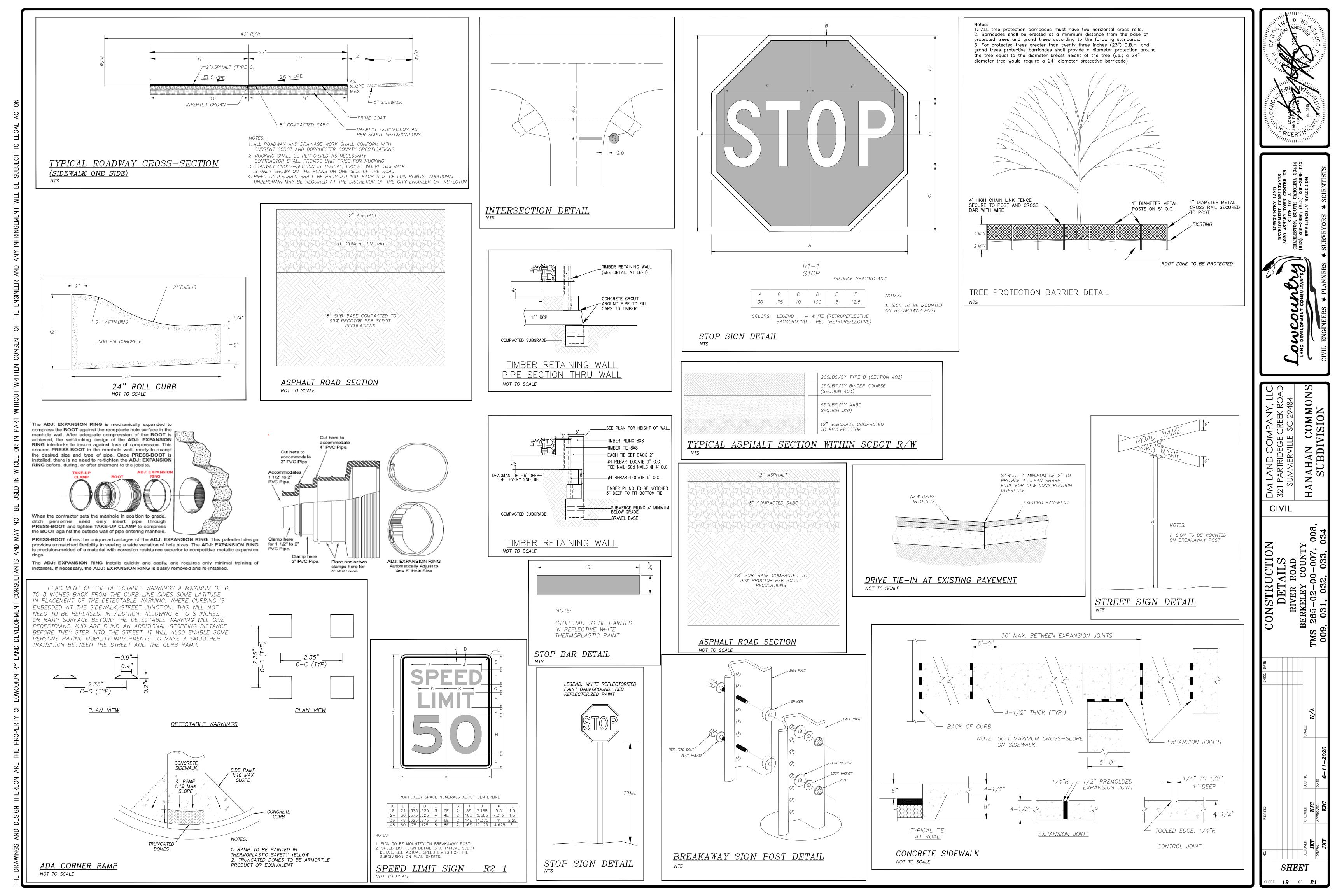


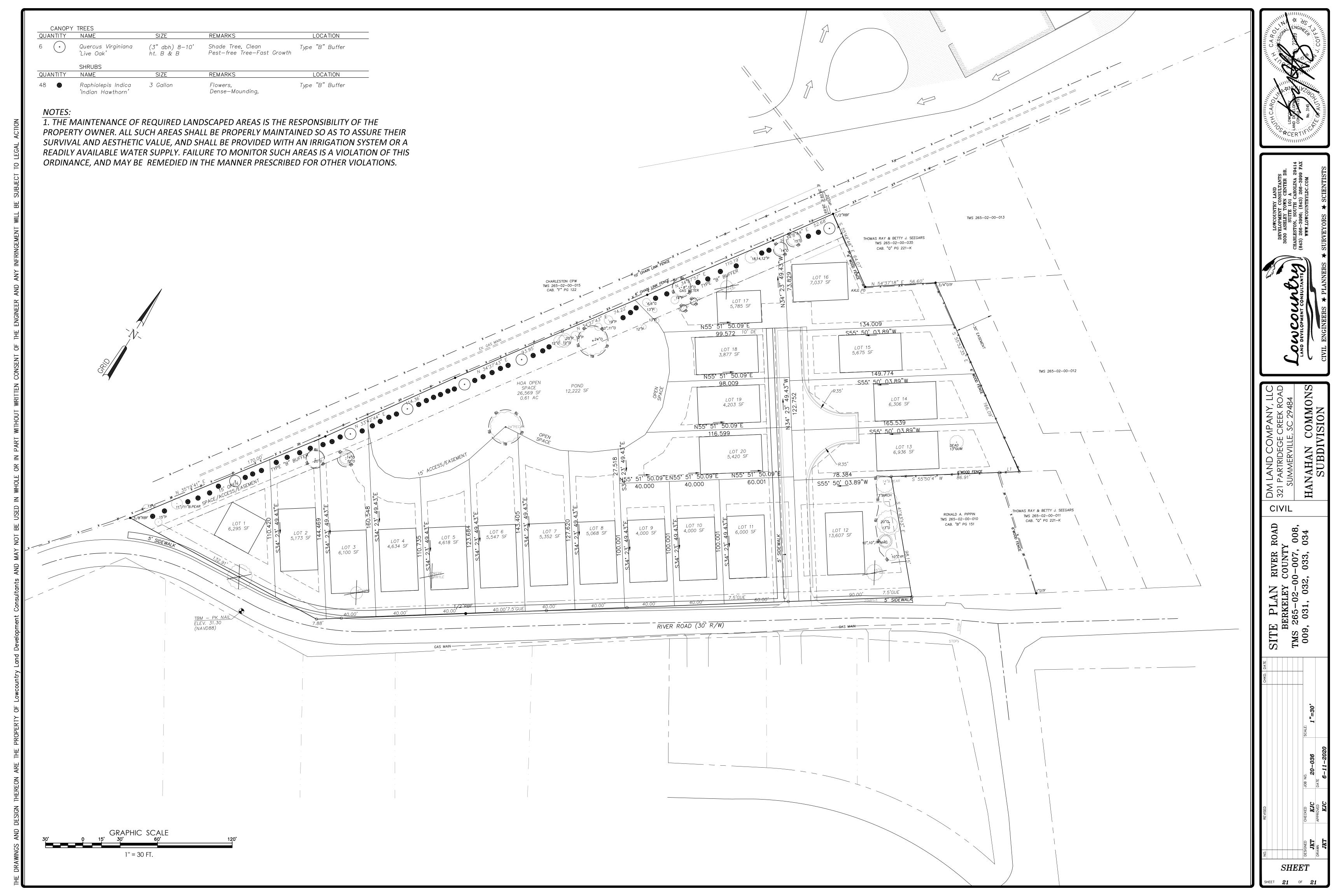


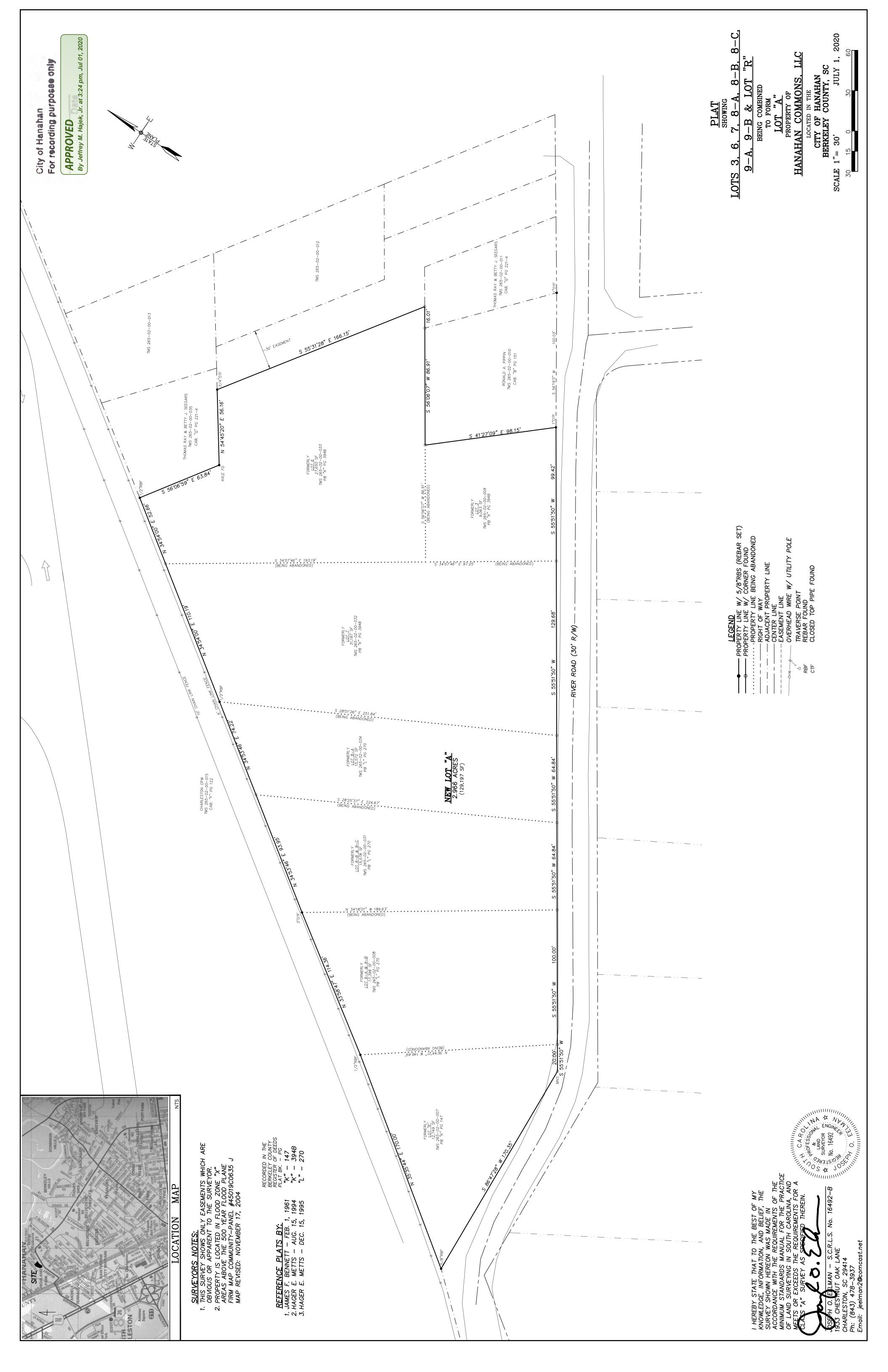




CIVIL









PO Box B Charleston, SC 29402 103 St. Philip Street (29403)

(843) 727-6800 www.charlestonwater.com

August 6, 2020

Kevin Coffey Lowcountry Land Development Consultants LLC Via email kevin@lowcountryldc.com

Water Availability to TMS 265-02-00-007 Re: Single family residence

This letter is to certify our willingness and ability to provide water service to the above referenced site in Berkeley County, South Carolina. The development of this and the other single family lots known as Hanahan Commons may tap the DIP segment in the 24" line near the 24" valve to the west, then come along River Road and loop into the existing 6".

It will of course be a developer responsibility to ensure there are adequate pressures and quantities on the existing mains to serve this site with domestic water/fire flow and not negatively impact the existing developments. Please be advised any extensions or modifications to the infrastructure as well as any additional fire protection will be a developer's expense. All fees and cost associated with providing service to this site will be a developer expense and will be due prior to connection of any Charleston Water System's water system. This letter does not reserve capacity in the Charleston Water System infrastructure and it is incumbent upon the developer or his agent to confirm the availability herein granted past 12 months of this correspondence.

The Charleston Water System certifies the availability of service only insofar as its rights allow. Should access to our existing main/mains be denied by appropriate governing authorities, the Charleston Water System will have no other option than to deny service. This letter is not to be construed as a letter of acceptance for operation and maintenance from the Department of Health and Environmental Control.

If there are any questions pertaining to this letter, please do not he sitate to call on me at (843) 727-6869.

Sincerely,

Lydia Owens Charleston Water System

Lyoha Owens

Thomas B. Pritchard, Chairman David E. Rivers, Vice Chairman William E. Koopman, Jr., Commissioner Mayor John J. Tecklenburg (Ex-Officio) Councilmember Perry K. Waring (Ex-Officio)

Officers

Kin Hill, P.E., Chief Executive Officer Mark Cline, P.E., Assistant Chief Executive Officer Dorothy Harrison, Chief Administrative Officer Wesley Ropp, CMA, Chief Financial Officer Russell Huggins, P.E., Capital Projects Officer

CITY ADMINISTRATOR MIKE COCHRAN



CITY COUNCIL
JEFF C. CHANDLER, MAYOR PRO-TEM
MIKE DYSON
KEVIN HEDGPETH
JOEL E. HODGES
DAN OWENS
MICHAEL SALLY

Staff Report

To: The Hanahan Planning Commission

Cc: Larry Sturdivant, Building Official; Roger Hunt, Stanley Martin Homes;

Abigail Richardson, Seamon Whiteside

From: Jeff Hajek, Planner/Economic Development Director

Date: August 4, 2020

Re: Preliminary Land Development Plan Approval for Butler Tract

Townhome Development

Applicant/Owner: Roger Hunt, Stanley Martin Homes

Location: Westside of Foster Creek Road, adjacent to Tanner Ford Boulevard and

Foster Creek Road

Tax Map Number(s): 259-00-00-019

Approval Requested: Preliminary Development Plan Approval

Existing Zoning/Land Use: Residential—Manufactured Home (RT)/Single-family

residential

General Application Overview and Background

The proposed site is located on the westside of Foster Creek Road, adjacent to the Tanner Ford Boulevard and Foster Creek Road intersection, as well as just north of the Bowen planned development. The existing site currently consists of one (1) single-family home, setback approximately 470 feet, with a retention pond in between the primary structure and Foster Creek Road.

The applicant is proposing to create a subdivision of forty-one (41) townhome lots, ranging from 1,558 SF to 4,286 SF on the 5.37-acre parcel, with a density of 7.6 units per acre. Units will be three (3) stories each (within the 35 foot height requirement), allowing for two (2) parking stalls, one in the drive-under garage and the other on the driveway. Guest parking will be provided in the form of on-street parking throughout the development.

The majority of the parcel will be developed into housing, with approximately 1.86 acres (34.6% of the development) remaining open space to be maintained by the HOA. Amenities will include common park areas, a mail kiosk, sidewalks on both

CITY ADMINISTRATOR MIKE COCHRAN



CITY COUNCIL
JEFF C. CHANDLER, MAYOR PRO-TEM
MIKE DYSON
KEVIN HEDGPETH
JOEL E. HODGES
DAN OWENS
MICHAEL SALLY

sides of the main road through the development, and an interconnected pond system.

Said pond system will manage stormwater among the three ponds, that ultimately will outfall to the Goose Creek Reservoir. Proposed access will be primarily off Foster Creek Road for the entire development. All proposed roads within the development will be privately maintained.

Utilities for Charleston Water System (CWS), Berkeley County Water and Sanitation Authority (BCWS) and Dominion Power are existing and little infrastructure enhancements, other than connections and extensions will be needed. An offsite sewer main extension 600+/- down Foster Creek will provide gravity sewer service to the development.

General Conformance Analysis

The following report utilized the 2008 Hanahan Zoning Ordinance, specifically Section 5.12 (Townhouse development) to analyze the submitted preliminary land development plan for the Butler Tract Townhome Development. Townhouse development is a conditional use in the RT district, under Section 4.3, the Land Use Table.

Per the Zoning Ordinance, staff finds the following general conformance standards for the proposed site:

- Lot size—Section 5.12 does not require a minimum lot size for proposed townhouses, however, the entire parcel of the townhome development must be at least 1.5 acres; this requirement has been met with a total of 5.37 acres.
- 2. Lot Width— The proposed parcels meet the minimum width of 18'
- 3. **Density** Section 5.12 does not have density requirement, rather this is dictated by a series of design constraints (i.e., no more than 8 town houses may be joined together) and specific setbacks.
- 4. **Setbacks**—All proposed building sites meet the required setbacks as dictated by the ordinance, except the front setback. Below are the required:

Front: 25'Side: 15'.Rear: 10'

CITY ADMINISTRATORMIKE COCHRAN



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KEVIN HEDGPETH
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DAN OWENS
MICHAEL SALLY

The proposed development is immediately flanked by two (2) Residential—Manufactured Housing (RT) zoned properties and one Conservation/Preservation (CP) zoned parcel. The land use zoned CP, is owned by Charleston Water System (CWS, or Commissioners of Public Works [CPW]). Given that the rear of the development is adjacent to CPW property, a parcel of lesser density, a landscape buffer, per Section 6.4.3 (Multi-family, townhouse, patio home, and zero lot line residential developments) is required. Said buffer shall be 10-feet wide, with two (2) trees and eight (8) smaller plants per 100 linear feet. This requirement has been met by the developer. The landscape buffer will be maintained by the HOA.

Preliminary Plat Requested Corrections

Given that the submitted preliminary subdivision plat meets general zoning conformance, there are other pertinent and required elements needed to have a complete submittal. These documentation requirements may be found in the 2008 Zoning Ordinance, Sections 3.2, 4.3 and 5.12. The following will be needed for approval;

Required Contents of the Preliminary Plan (Section 3.2)

Existing Site Information

 Section 3.2(B)(3)(g): Tree survey shows which trees will remain protected and which trees will be removed for development. However, applicant must provide the amount of subsequent tree mitigation for the trees slated for removal. For reference, see Section 7.7 (Tree removal mitigation) on what is required mitigation.

Proposed Land Development Information

- 1. **Section 3.2(B)(4)(b):** "Pettiford Place" and "Callaway Circle" will need to be pre-approved by Berkeley County E-911.
- 2. Section 3.2(B)(4)(e): Lot lines and dimensions were provided on *site plan*, but total size (square feet) will need to be provided for each lot. This was provided on the preliminary plat, but not the site plan.

CITY ADMINISTRATORMIKE COCHRAN



CITY COUNCIL
JEFF C. CHANDLER, MAYOR PRO-TEM
MIKE DYSON
KEVIN HEDGPETH
JOEL E. HODGES
DAN OWENS
MICHAEL SALLY

Other

Setback Reduction Request

The developer is requesting a reduction from the 25' front setback requirement to 17', an 8-foot change. This request is a permissible change, per Section 5.12, pending the Planning Commission's approval.

Fire/EMS Public Safety

Fire Chief is requesting an additional two (2) fire hydrants to the currently proposed one (1) hydrant, located at the cul-de-sac on Pettiford Place. Per the Fire Code, a hydrant is required every 500 linear feet. Chief measured that Pettiford Place is approximately 800 feet long. He added the third hydrant as an extra precaution because of the one cul-de-sac and the circle (Callaway Circle).

Also, the Fire Chief has requested confirmed radii for both the cul-de-sac on Pettiford Place and Callaway Circle. This is required to ensure fire safety vehicles can properly navigate the development.

Street Trees

The applicant has proposed the planting of 53 street trees with a total of 56 street trees (3 existing trees will be utilized). The requirement of 1 tree every 40 feet has been met and the proposed trees will be on both sides of the street. Staff was unable to find the caliper designation in the planting schedule but wanted to reiterate that the minimum caliper required must be 3" and this measurement should be reflected in the plans.

Submittal to Respective Utilities

The applicant will need to ensure that the preliminary plan has been submitted to Charleston Water System (CWS), Berkeley County Water and Sanitation (BCWS) and Berkeley County Engineering for general review and review for stormwater management.

Copies of the eventual construction plans will also need to be submitted to Berkeley County Engineering. Comments received by said agencies may affect changes to the preliminary plan.

CITY ADMINISTRATORMIKE COCHRAN



CITY COUNCIL
JEFF C. CHANDLER, MAYOR PRO-TEM
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KEVIN HEDGPETH
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DAN OWENS
MICHAEL SALLY

Private Roads (Suggestion)

The developer is proposing to privately maintain the roads. While the City cannot require the developer to a particular road ownership structure, past precedence in various other developments has created issues where road repairs and drainage far exceed HOA funds and thus subdivisions suffer poor road conditions that are out of the standards for adoption by Berkeley County Roads and Bridges.

Recommendation

This plan constitutes a preliminary plat subdivision submittal. Approval of this plan does not imply approval of permits to begin construction. Approval of this application will enable the developer to seek permits for land disturbance and installation of necessary infrastructure to serve this phase of the project. Subsequent to approval to install infrastructure, the applicant must submit a final plat that depicts all easements provided for its maintenance, whether by a public agency or property owners association. Such plat must be approved and recorded prior to transfer of individual lots depicted on this plan.

Based upon staff's review, the City recommends that the Planning Commission *approve* the submitted preliminary plan subdivision, with the front setback reduction of 17', for the "Butler Tract Townhome Development" with conditions. Said conditions include:

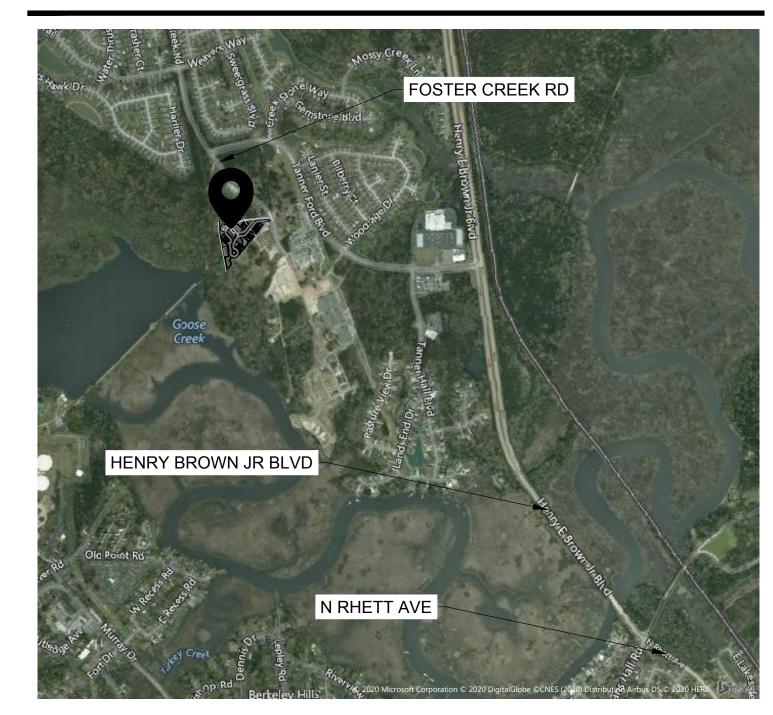
- 1. Addressing all requested information in the "Preliminary Plat Requested Corrections" section of this staff report.
- 2. Addressing all "Other" requested information in this staff report, which includes: "Fire/EMS Public Safety" and "Street Trees."
- 3. Receipt of recommendation letters from CWS, BCWS and Berkeley County Engineering.

BUTLER TRACT

CITY OF HANAHAN, SOUTH CAROLINA

TMS# 259-00-00-019

SITE LOCATION MAP



PROJECT DESCRIPTION

STANLEY MARTIN HOMES IS PROPOSING TO DEVELOP 5.37 ACRES OF LAND LOCATED IN THE CITY OF HANAHAN, SC ON FOSTER CREEK ROAD (TMS 259-00-00-019). THE PROPOSED PROJECT WILL INCLUDE A 41 LOT TOWNHOUSE DEVELOPMENT AND ALL ASSOCIATED UTILITIES, STORMWATER, AND ROAD INFRASTRUCTURE.

GENERAL NOTES

FLOOD ZONE INFORMATION: THIS PROPERTY IS LOCATED IN FLOOD ZONES 'X' PER FEMA FLOOD INSURANCE RATE MAP, SEE COMMUNITY PANEL 45015C0695E DATED DECEMBER 7, 2018.

EXISTING UTILITIES WARNING: THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING ANY WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES

CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.

ALL DIMENSIONS ARE TO EDGE OF PAVEMENT, FACE OF CURB, FACE OF BUILDING, OR FACE OF WALK. SPOT ELEVATION ARE FINISHED GRADE/PAVEMENT.

TAX MAP INFORMATION: #259-00-00-019

THE PUBLIC RIGHT-OF-WAY MUST REMAIN ADA COMPLIANT DURING CONSTRUCTION OR AN ALTERNATIVE ROUTE MUST BE PROVIDED.

IT IS THE OWNER'S RESPONSIBILITY TO REPAIR ALL DAMAGED SIDEWALKS TO REINSTATE AN ADA ACCESSIBLE ROUTE.

PLANS ARE BASED ON THE NGVD 29 DATUM

SITE OVERVIEW

ZONING SUMMARY

TOTAL SITE ACREAGE: 5.37

TMS 259-00-00-018: RT

TMS 259-00-00-020: RT

SETBACKS & BUFFERS: 10 FT REAR SETBACK

17 FT FRONT SETBACK

MINIMUM LOT WIDTH: 18 FT

EXCEPTIONS (SECTION 7.4) REQUIRED 20 TREES PER ACRE

PROTECTED TREES = 8" CAL & GREATER

LANDMARK TREES = 36" CAL & GREATER W/

7.5 FT SIDE SETBACK

10 FT REAR BUFFER

HEIGHT LIMIT = 35 FT

ZONING: RESIDENTIAL-MANUFACTURED HOUSING DISTRICT (RT)

TOWNHOUSE DEVELOPMENT CONDITIONAL USE





SHEET INDEX TITLESHEET **LEGEND & REVISION NOTES**

PRELIMINARY PLAT PRELIMINARY PLAT NOTES & TABLES SWPPP PHASE **SWPPP PHASE 2** SWPPP NOTES **SWPPP DETAILS SWPPP DETAILS** SITE PLAN SITE DETAILS SITE DETAILS

GRADING & DRAINAGE PLAN GRADING PLAN WATER PLAN WATER DETAILS SEWER PLAN SEWER DETAILS

L2.0 PLANT SCHEDULE, DETAILS AND NOTES

LANDSCAPE PLAN

SEE SHEET C1.1 FOR DETAILED **REVISION HISTORY**

PROJECT CONTACTS

POWER

DEVELOPER/OWNER: STANLEY MARTIN HOMES 502 WANDO PARK BLVD SUITE 101 MOUNT PLEASANT, SC 29464 CONTACT: ROGER HUNT PHONE: 843-259-6213

UTILITY CONTACTS:

WATER AND SEWER **BCWS SEWER** PHONE: 843-719-2315 CONTACT: ELLEN HILL

CWS WATER PHONE: 843-727-6869 CONTACT: LYDIA OWENS

CIVIL ENGINEER & LANDSCAPE ARCHITECT: SEAMON WHITESIDE & ASSOCIATES, LLC 501 WANDO PARK BLVD., SUITE 200 MOUNT PLEASANT, SC 29464 CONTACT: ABIGAIL RICHARDSON PHONE: 843-884-1667

SURVEYOR PARKER LAND SURVEYING, LLC 5910 GRIFFIN ST HANAHAN, SC 29410 CONTACT: BILL VAUSE PHONE: 843-554-7777

SCDHEC-OCRM

MUNICIPALITY CONTACTS:

CITY OF HANAHAN PHONE: 843-885-5045 PLANNING DEPARTMENT CONTACT: JEFF HAJEK

PHONE: 843-953-0243 CONTACT: CHRISTOPHER STOUT

BERKELY COUNTY **ROADS AND BRIDGES CONTACT: DANNY THROWER** PHONE: 843-719-4131

SW+ PROJECT: 5/18/2020 DRAWN BY: CHECKED BY:

MOUNT PLEASANT, SC

GREENVILLE, SC

SUMMERVILLE, SC 843.884.1667 SPARTANBURG, SC

CHARLOTTE, NC 980.312.5450

WWW.SEAMONWHITESIDE.COM

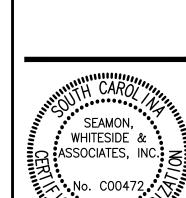
REVISION HISTORY TITLESHEET

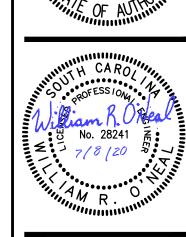
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			DRAWI	NG L	EGE	END				
JECTS AND SYMBOLS	EXISTING	<u>NEW</u>	OBJECTS AND SYMBOLS	EXISTING	<u>NEW</u>	<u>ABBREVIATIONS</u>	EXISTING	<u>NEW</u>	SWPP PLAN LEGEN	<u>D</u>
			Benchmark	•	N/A	Sewer Easement	Ex. S.E.	S.E.	Turf Reinforcement Mat (See Turf And Grasses Species)	TR
Adjoining Property Line	· ·	N/A	Sanitary Sewer Manhole	(\$)	•	Storm Easement	Ex. W.E.	W.E.	(See Turi And Grasses Species)	
Centerline		(Same as Existing)	Sanitary Sewer Manhole ID #	N/A	MH #	Drainage Easement	Ex. D.E.	D.E.	Sodding (See Turf and Grasses Specs)	S
Easement			Sanitary Sewer Cleanout	0	⊗ /	General Utility Easement	Ex. G.U.E.	G.U.E.		
Setback		(Same as Existing)	Double Sanitary Sewer Service (Residential Only)	\prec	~	Access Easement	Ex. A.E.	A.E.	Surface Roughening (Surface Tracking/Stair Stepping-See Detail)	SR
	FC FC		Single Sanitary Sewer Service (Residential Only)		~	Ingress/Egress Easement	Ex. I/E E.	I/E E	-	
Sanitary Sewer (Gravity)	——ES——ES—	55	TYPE 1 Storm Drainage Structure			Pond Maintenance Easement	Ex. P.M.E.	P.M.E.	Temporary Seeding (See Schedule in EC Notes)	TS
Sanitary Sewer (Force Main)	EFMEFM	FMFM	TYPE 16 Storm Drainage Structure TYPE 17 Storm Drainage Structure (Right)		<u> </u>	Water Surface Elevation Polyvinyl Chloride Pipe	Ex. W.S.E. Ex. PVC	W.S.E. PVC	Permanent Seeding	
Water Line	EWEW	WW	TYPE 17 Storm Drainage Structure (Right)			Reinforced Concrete Pipe	Ex. PVC	RCP	(See Turf and Grasses Species)	PS
			TYPE 18 Storm Drainage Structure			High Density Corrugated	Ex. HDPE	HDPE	Mulching	
Curb & Gutter (Straight)			Catch Basin		•	Polyethylene Pipe Ductile Iron Pipe	Ex. DIP	DIP	(See Turf and Grasses Species)	M
Curb & Gutter (Roll)			Isolation Box			Corrugated Metal Pipe	Ex. CMP	CMP	Typical Lot Erosion Control Plan	
		(Width varies with size)	Storm Drainage Junction Structure			Home Owner's Association	Ex. HOA	HOA	(See Detial)	LE
Storm Drain	——ED——ED—		Yard Inlet		YI	Property Owners Association	Ex. POA	POA	Flexible Growth Medium	FG
Roof Drain	ERDERD	RDRD	Storm Drainage Structure ID #	N/A	#	. Topony o imale / isosolation	EX. 1 6/1	1 6/1	(See Turf and Grasses Species)	(FG)
Subsurface Drainage	EUDEUD	UD	Telephone Box	[T]	N/A				Erosion Control Blanket	EC
-	ESFESF	SFSF	Telephone Manhole	$\widehat{\mathbb{T}}$	N/A				(See Turf and Grasses Species)	
Silt Fence, Standard			Electrical Box	[E]	N/A	<u>HATCH PATTERNS</u>			Dust Control	DC
Silt Fence, Reinforced	ERSF	RSFRSF	Electrical Manhole	(Ē)	N/A					
Phase Line	N/A		Power Pole	400	'		\downarrow \downarrow	y y	Bonded Fiber Matrix (See Turf and Grasses Species)	BF
Watershed Limit	N/A		Light Pole	¤	×	Freshwater Wetland	· • •	· •	(coo run and chacese epocace)	
Flood Zone	ZONE 'X' ZONE 'AE'	N/A	Fire Hydrant Assembly	-	五				Concrete Washout Basin (See Detail)	CW
	——————————————————————————————————————	———C———C——	Water Blowoff		•				,	
			Water Line Bends, Angle Varies	N/A					Block & Stone Inlet Protection (See Detail)	
Natural Gas	——EG——EG—	——			Ly 다	Freshwater Wetland Buffer				
Overhead Electrical	——EP——EP——	———P———P——	Water Line Valve		101				Temp. Sediment Control Tube (See Tube)	
Underground Electrical	——EUP——EUP——	——UP——UP——	Water Line Reducer Single Water Service (Residential Only)	\triangleright	•				Tanan Badi Bitah Chadia	
Underground Telephone	——FT——FT——	—TT	Double Water Service (Residential Only)				<u> </u>	-ArAr- 	Temp. Rock Ditch Checks (See Detail)	
,			Sign	4	,	Saltwater Marsh	TIR TIL TIL TIL	<u> </u>	Turf Reinforcement Mat Outlet Protection	_
Underground Cable	——ETV——ETV—	—— V——— V——		<u> </u>	•		ste ste ste	ste ste	(See Detail and Turf and Grasses Specs)	
Underground Fiber Optic	——EFO——EFO—	——F0——F0——	ADA Accessible Parking Space	ዼ	ዼ				Filter Fabric Inlet Protection	1 - 1
Fence	XX		Spot Elevation	+X.XX	√X.XX				(See Detail)	
Elevation Contour	22/	22	Watershed Area	N/A	X.XXAc	Saltwater Marsh Buffer			Temp. Curb Inlet Weep Filter	
	· br	·····	Detail ID #	N/A	# (Sheet #) # (ID #)				(See Detail)	
Revision Cloud (Encloses Revision)	N/A	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Keynote	N/A	*				Curb Inlet Sediment Filter	
,		{	Parking Count ID#	N/A	(#)	Area to Be Cleared and	+ + +	+ + +	(See Detail)	
			Lot#	N/A	#	Grubbed	+ + +	+ + +	Both Curb Inlet Filters (See Above)	
			Revision ID #	N/A	/#				(3321.3236)	
				IVA	<u>/ #\</u>				Construction Entrance	

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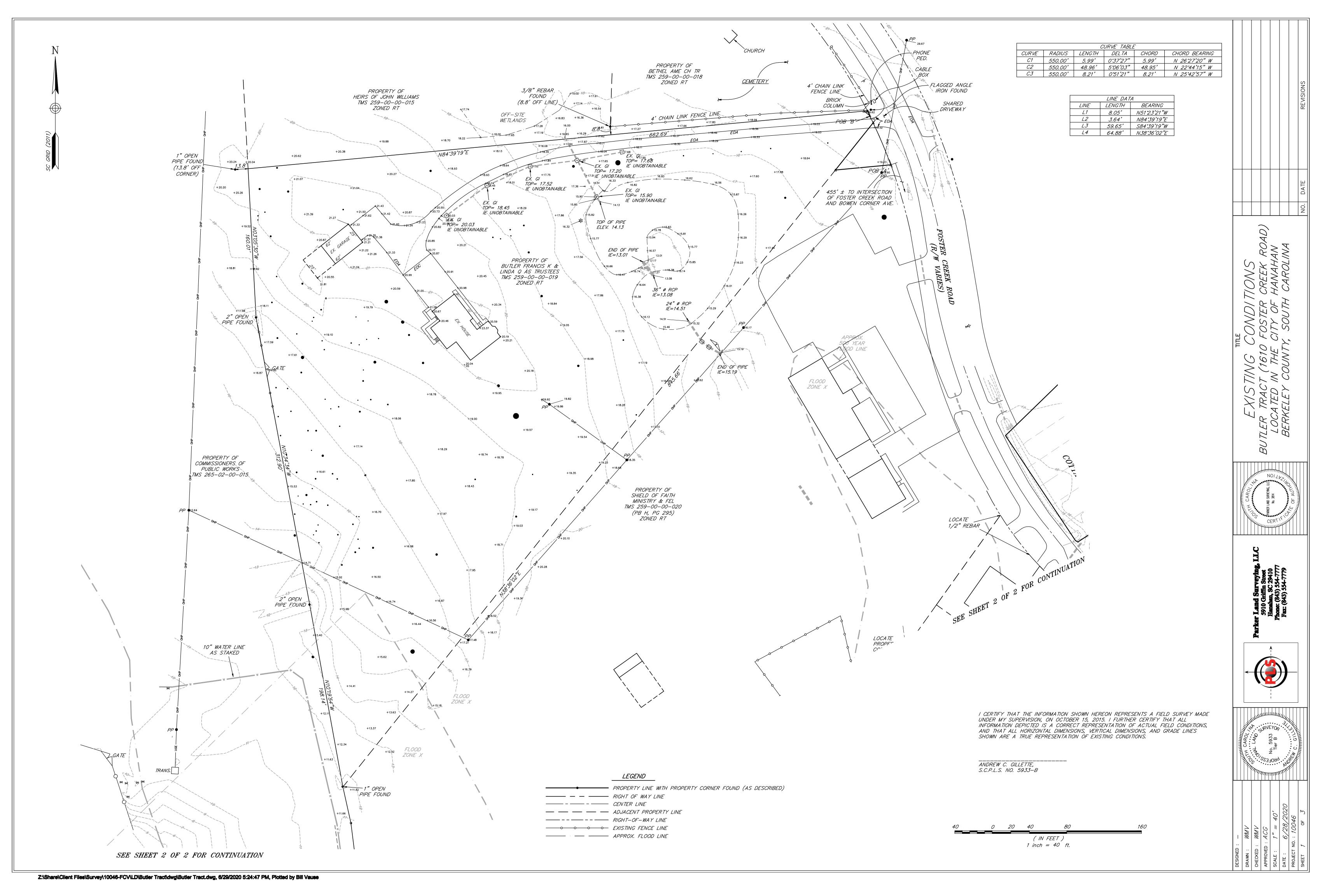


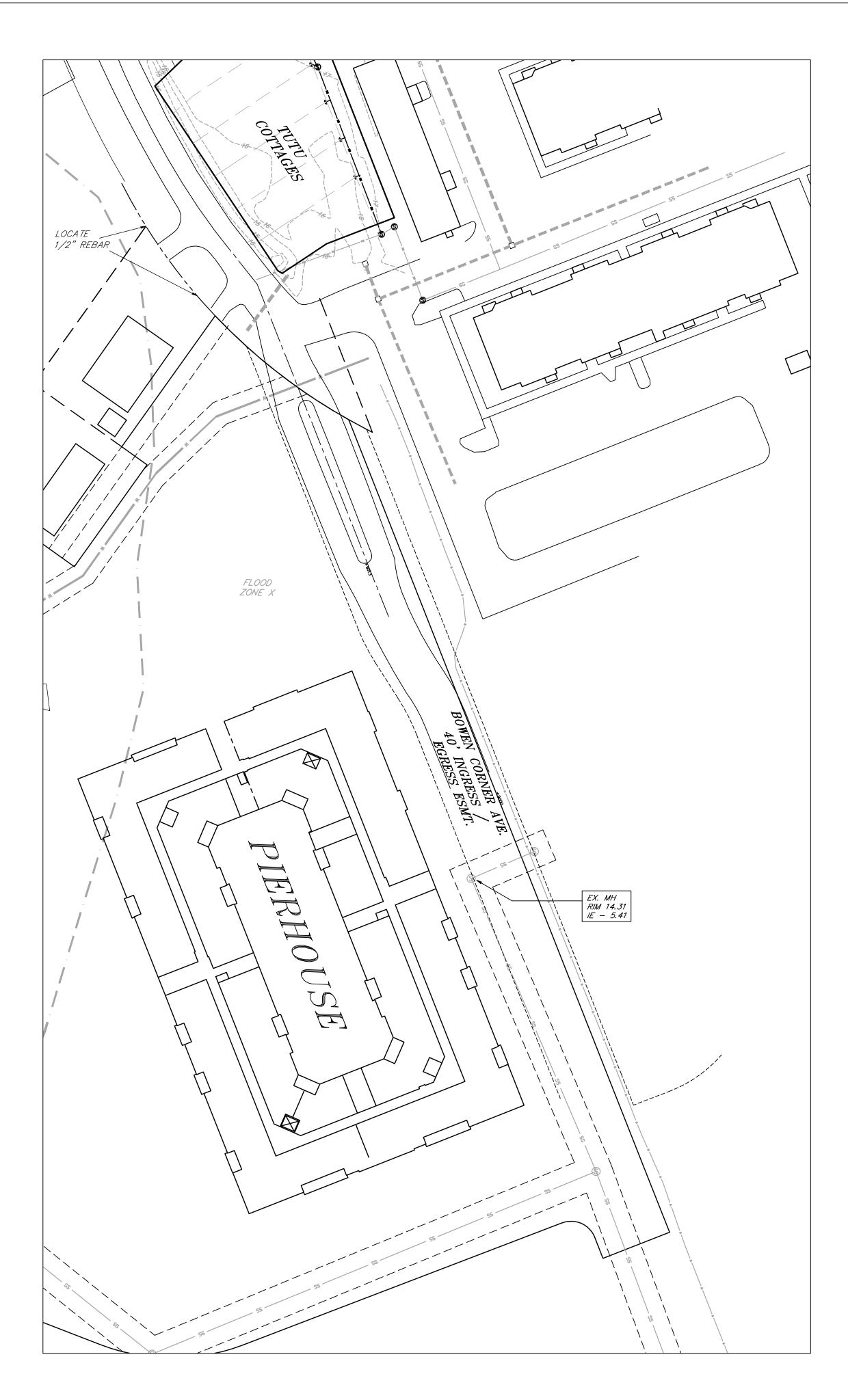
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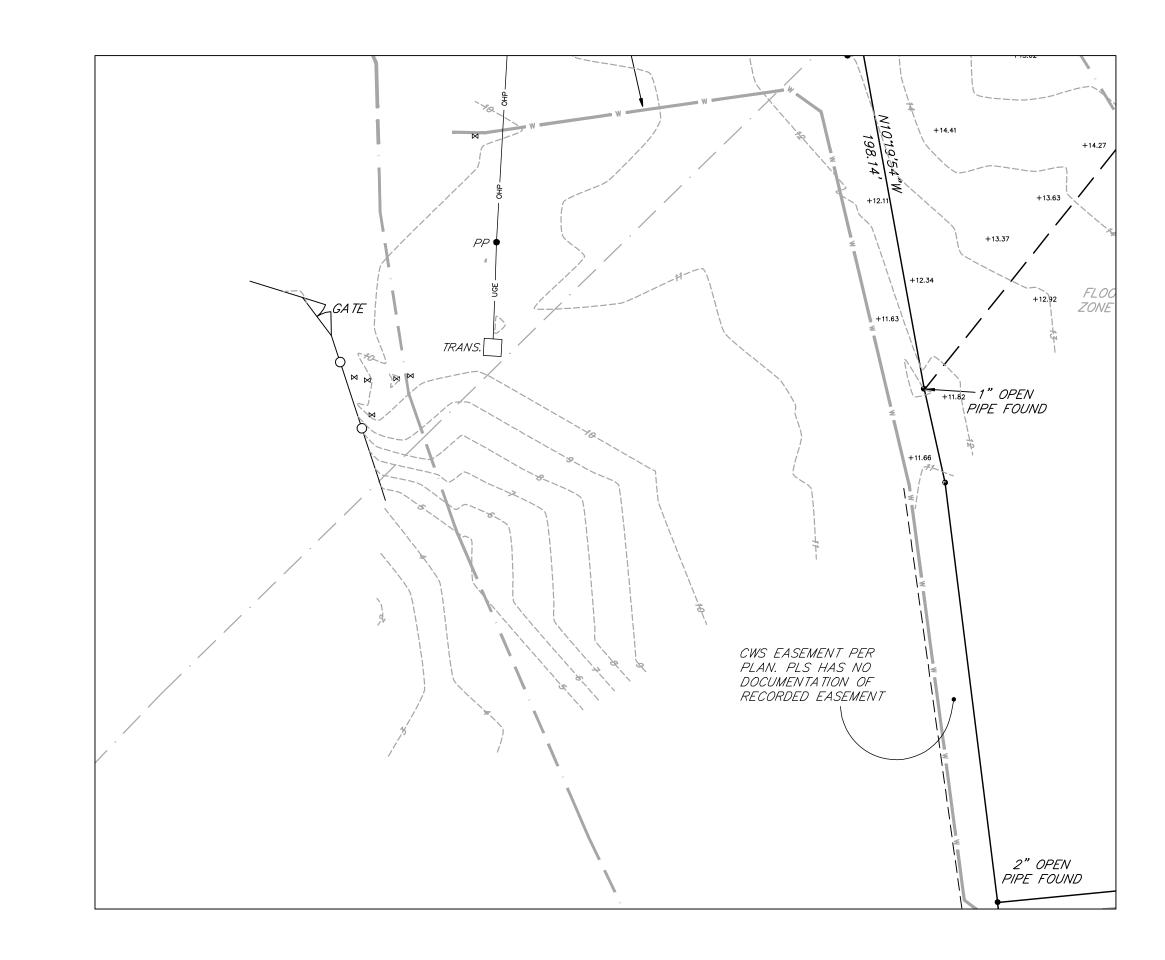
REVISION HISTORY

LEGEND & REVISION NOTES

CITY OF HANAHAN SKETCH PLAN SUBMITTAL DATE- 6/9/2020 MEETING- 7/7/2020
 CITY OF HANAHAN PRELIMINARY PLAT SUBMITTAL DATE - 7/8/2020 MEETING - 8/4/2020







LEGEND

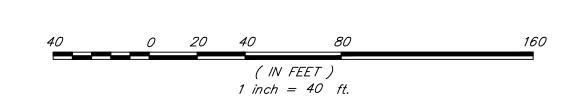
PROPERTY LINE WITH PROPERTY CORNER FOUND (AS DESCRIBED)

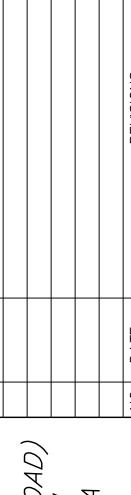
RIGHT OF WAY LINE

APPROX. FLOOD LINE

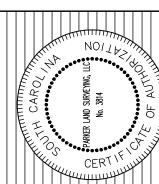
I CERTIFY THAT THE INFORMATION SHOWN HEREON REPRESENTS A FIELD SURVEY MADE UNDER MY SUPERVISION, ON OCTOBER 15, 2015. I FURTHER CERTIFY THAT ALL INFORMATION DEPICTED IS A CORRECT REPRESENTATION OF ACTUAL FIELD CONDITIONS, AND THAT ALL HORIZONTAL DIMENSIONS, VERTICAL DIMENSIONS, AND GRADE LINES SHOWN ARE A TRUE REPRESENTATION OF EXISTING CONDITIONS.

ANDREW C. GILLETTE, S.C.P.L.S. NO. 5933–B

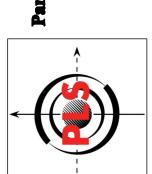


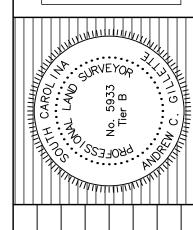


EXISTING CONDITIONS
BUTLER TRACT (1610 FOSTER CREEK RC
LOCATED IN THE CITY OF HANAHAN
BERKELEY COUNTY, SOUTH CAROLINA

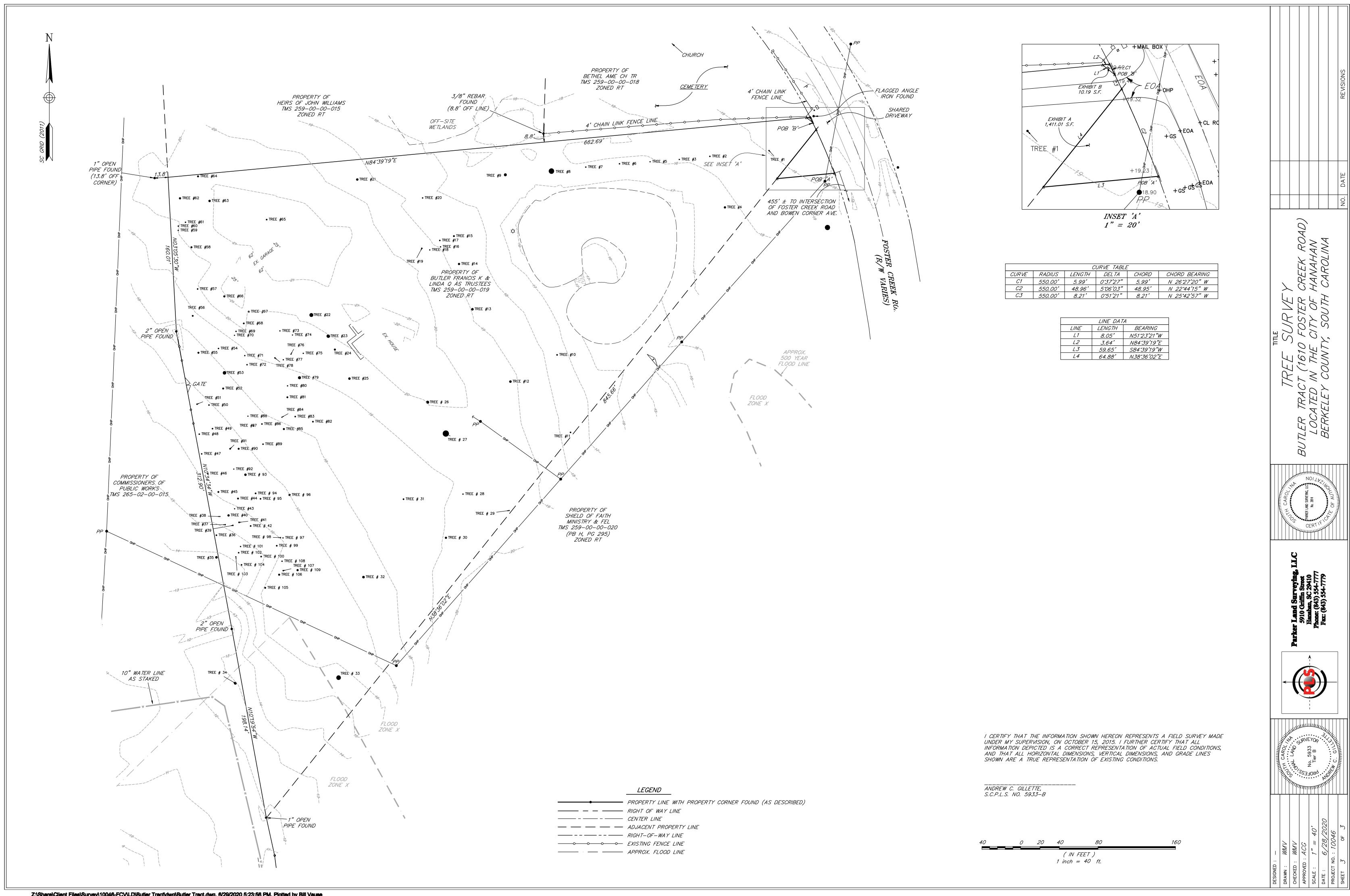


ker Land Surveying, LLC 5910 Griffin Street Hanahan, SC 29410 Phone: (843) 554-777





ECKED: WMVPROVED: ACGALE: I'' = 4O'TE: 6/28/2020OJECT NO.: 10046

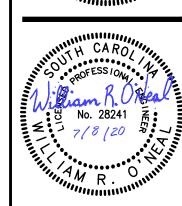


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980.312.5450 WWW.SEAMONWHITESIDE.COM

WHITESIDE & ASSOCIATES, INC



5/18/2020

CHECKED BY: AEMR **REVISION HISTORY**

PRELIMINARY PLAT

		PAF	RCEL CURVE	ETABLE	
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	3.38	50.00	003.8729	S82°16'40"W	3.38
C2	33.64	50.00	038.5442	S61°04'09"W	33.01
C3	2.79	50.00	003.1964	S40°11'56"W	2.79
C4	6.25	100.00	003.5828	S40°23'31"W	6.25
C5	20.31	100.00	011.6351	S48°00'03"W	20.27
C6	21.52	100.00	012.3300	S59°59'01"W	21.48
C7	33.40	100.00	019.1388	S75°43'05"W	33.25
C8	3.80	120.00	001.8160	S84°22'46"W	3.80
C9	111.69	120.00	053.3290	S56°48'25"W	107.70
C10	14.69	120.00	007.0162	S26°38'03"W	14.69
C11	34.51	50.00	039.5429	S03°21'17"W	33.83
C12	22.29	20.00	063.8694	S48°21'05"E	21.16
C13	3.45	60.00	003.2931	S78°38'23"E	3.45
C14	20.87	60.00	019.9321	S67°01'37"E	20.77
C15	20.14	60.00	019.2344	S47°26'38"E	20.05
C16	22.03	60.00	021.0390	S27°18'26"E	21.91
C17	25.98	60.00	024.8097	S04°22'58"E	25.78
C18	146.37	60.00	139.7735	S77°54'32"W	112.68
C19	31.07	60.00	029.6675	N17°22'14"W	30.72
C20	21.14	60.00	020.1903	N07°33'30"E	21.03
C21	13.33	60.00	012.7271	N24°01'01"E	13.30
C22	10.19	20.00	029.1897	N15°47'08"E	10.08
C23	6.15	20.00	017.6077	N07°36'47"W	6.12
C24	26.06	100.00	014.9318	N08°57'03"W	25.99
C25	10.32	100.00	005.9128	N01°28'17"E	10.32
C26	32.63	100.00	018.6984	N13°46'37"E	32.49
C27	34.45	30.00	065.7941	N09°46'15"W	32.59
C28	0.56	50.00	000.6445	N42°20'45"W	0.56
C29	33.62	50.00	038.5286	N22°45'33"W	32.99

C30 2.11 50.00 002.4226 N02°17'01"W 2.11

		PAR	RCEL CURVE	ETABLE	
Curve #	Length	Radius	Delta	Chord Direction	Chord Lengt
C31	31.60	50.00	036.2144	N17°02'06"E	31.08
C32	10.64	50.00	012.1898	N41°14'13"E	10.62
C33	5.54	50.00	006.3518	N50°30'28"E	5.54
C34	25.06	50.00	028.7159	N68°02'30"E	24.80
C35	21.24	50.00	024.3435	S85°25'43"E	21.08
C36	22.27	50.00	025.5147	S60°29'58"E	22.08
C37	4.43	50.00	005.0740	S45°12'18"E	4.43
C38	22.86	30.00	043.6599	S64°29'53"E	22.31
C39	12.29	30.00	023.4741	N81°56'06"E	12.21
C40	45.36	170.00	015.2878	N77°50'31"E	45.23
C41	42.15	50.12	048.1835	N62°40'18"E	40.91
C42	79.61	100.00	045.6136	N61°24'27"E	77.52

NOTES:

- 1. THIS DRAWING IS A PRELIMINARY PLAT AND IS NOT FOR RECORDATION OR CONVEYANCE.
- 2. ALL MEASUREMENTS ARE CALCULATED AND ARE NOT SURVEYED UNLESS OTHERWISE NOTED.
- 3. BOUNDARY INFORMATION PROVIDED BY PARKER LAND SURVEYING, LLC 4. TOPOGRAPHIC SURVEYS PROVIDED BY PARKER LAND SURVEYING, LLC
- 5. TOTAL AREA = 5.37 ACRES
- TOTAL LOTS = 41
- NET DENSITY = 7.64 LOTS PER ACRE
- 6. THIS PROPERTY IS SHOWN ON TAX MAP #259-00-00-019
- 7. OWNER/DEVELOPER IS: STANLEY MARTIN HOMES
 - 502 WANDO PARK BLVD, SUITE 101 MOUNT PLEASANT, SC 29464
- PHONE: (843) 259-6213 8. SEWER SERVICE SHALL BE PROVIDED BY BERKELEY COUNTY WATER AND SANITATION.
- 9. WATER SERVICE SHALL BE PROVIDED BY CHARLESTON WATER SYSTEM
- 10. SUB-DIVISION ROADS: RIGHT-OF-WAY WIDTH = 50' (UNLESS OTHERWISE NOTED)
- PAVEMENT WIDTH = 25' (B.O.C. TO B.O.C.)
- 11. ZONING: RESIDENTIAL-MANUFACTURED HOUSING DISTRICT (RT) TOWNHOUSE DEVELOPMENT CONDITIONAL USE

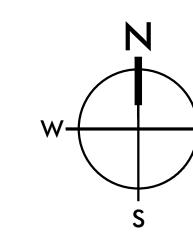
SETBACKS AND BUFFERS.

SETBACK	S AND BUFFERS:				
	MIN. FRONT SETBACK	MIN. REAR SETBACK	MIN. SIDE SETBACK	MIN. REAR BUFFER	
	(FT.)	(FT.)	(FT.)	(FT)	
	17	10	7.5	10	

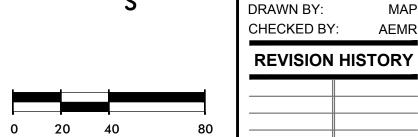
- MINIMUM FRONT YARD WHEN PARKING IS PROVIDE IN REAR OF FEE SIMPLE TOWNHOUSE SHALL BE 0 FEET.
- MINIMUM DISTANCE BETWEEN TOWNHOUSE BUILDINGS SHALL BE 20 FEET.
- THERE SHALL BE A 30' SETBACK FROM POND EASEMENTS LOCATED AT THE REAR OR SIDES OF THE LOTS.

- 12. PROPERTY IS LOCATED IN ZONE "X" ON FEMA FLOOD INSURANCE RATE MAP 45015C PANEL NUMBER 0695E, REVISED DECEMBER 7, 2018.
- 13. DRAINAGE EASEMENTS AND POND TO BE PRIVATE AND MAINTAINED BY THE HOA. POND EASEMENTS TO BE PRIVATE UNLESS
- INDICATED OTHERWISE.
- 14. H.O.A. ACCESS EASEMENTS SHALL BE PRIVATE AND MAINTAINED BY THE H.O.A.
- 15. BUFFER AREAS, PRIVATE ROADS, PONDS, POND OUTFALLS, DRAINAGE SWALES, COMMON AREAS, MAIL KIOSKS, AND PROPERTY
- RESPONSIBILITIES OF ALL PONDS, OPEN SPACES, COMMON AREAS, OUTFALL STRUCTURES, AND SWALES ARE THAT OF THE HOA.

DESIGNATED AS H.O.A. SHALL BE OWNED AND MAINTAINED BY THE H.O.A. 16. BERKELEY COUNTY WILL NOT BE RESPONSIBLE FOR ROADWAY AND ASSOCIATED DRAINAGE. OWNERSHIP AND MAINTENANCE



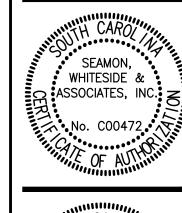
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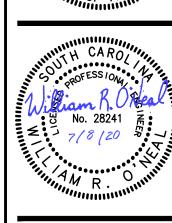




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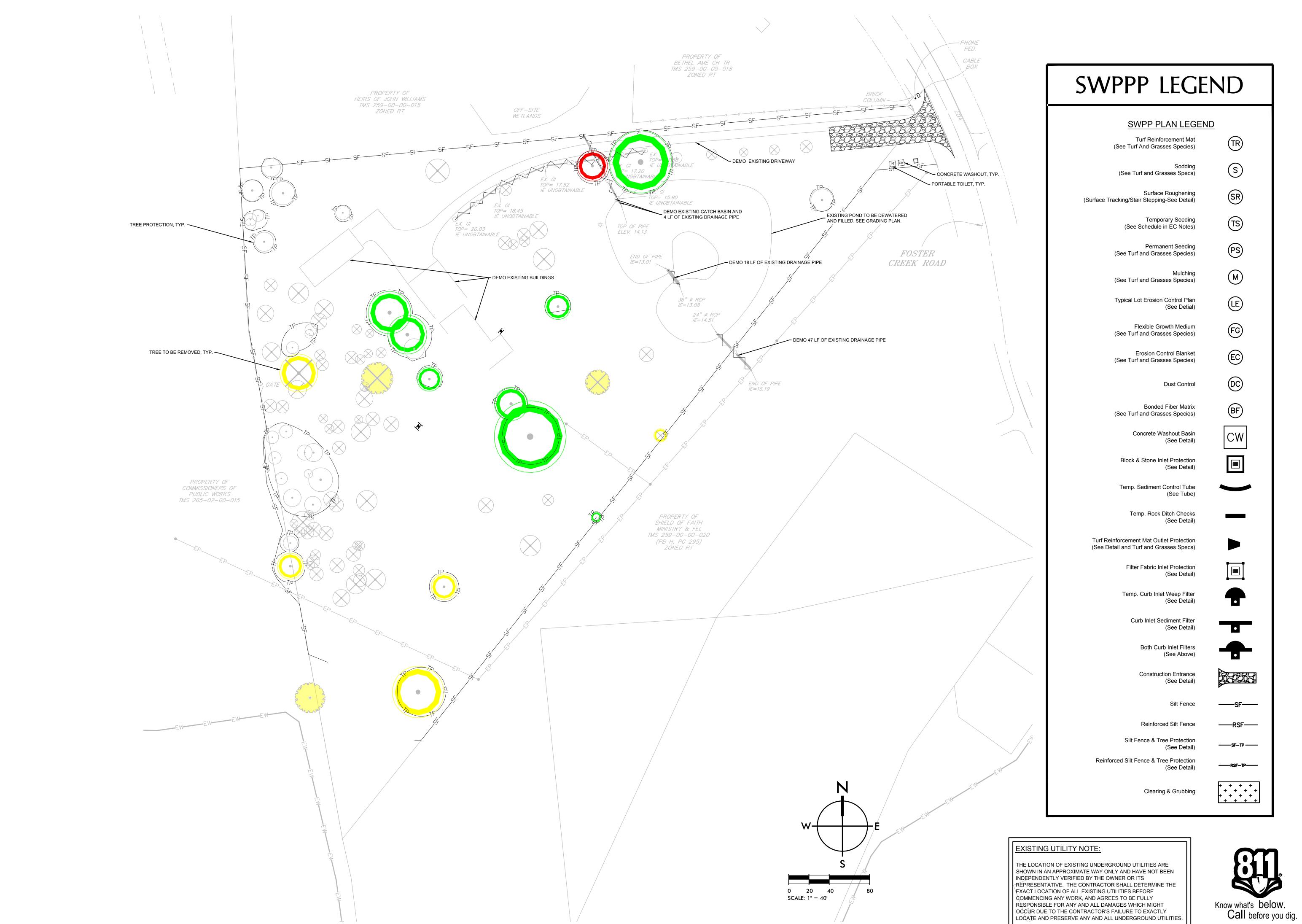
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PRELIMINARY PLAT NOTES & TABLES





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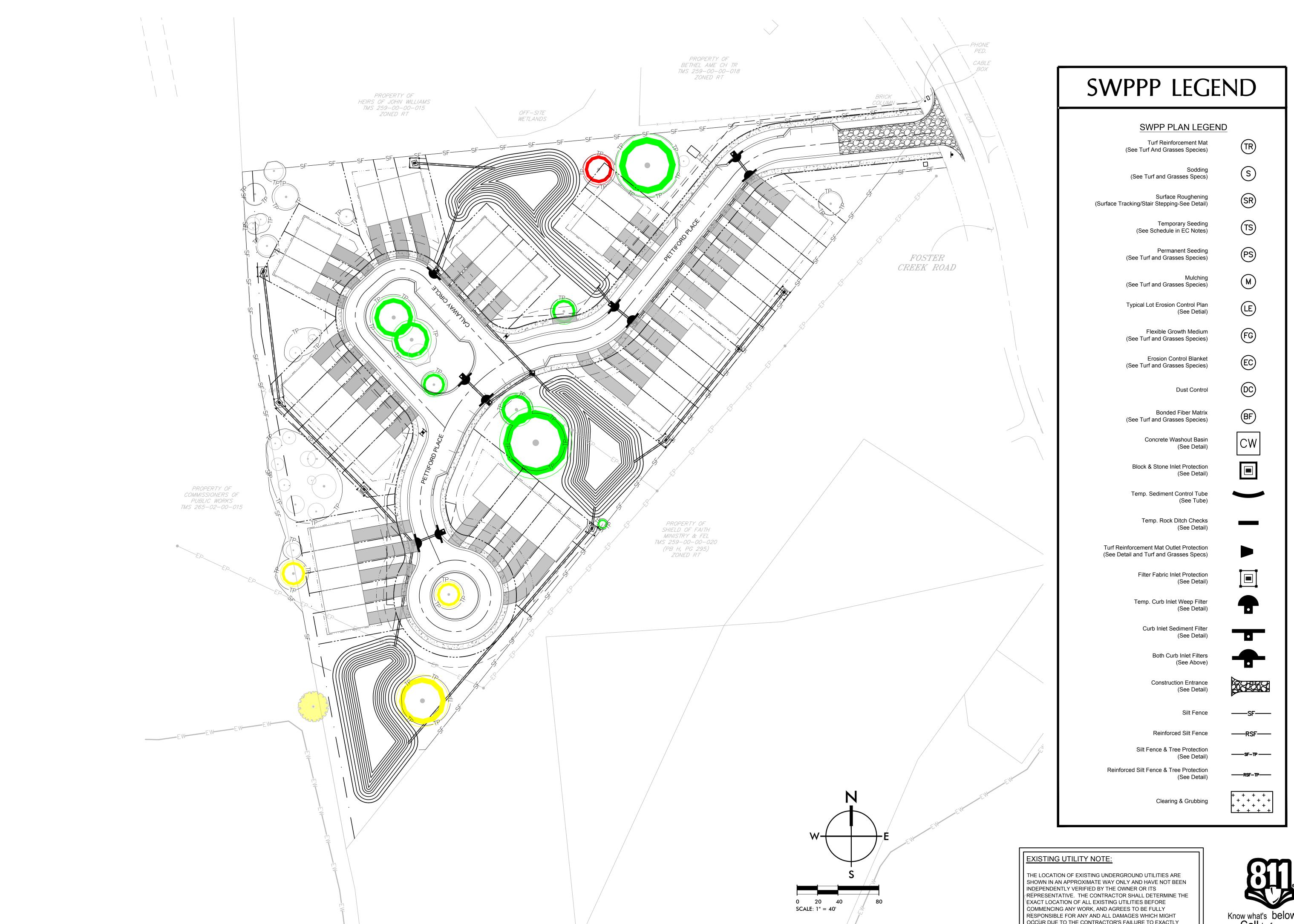


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REVISION HISTORY

SWPPP PHASE 1



OCCUR DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



Know what's below.

Call before you dig.

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SWPPP PHASE 2

C3.1

DRAINAGE FACILITIES MAINTENANCE PLAN TEMPORARY STORMWATER AND SEDIMENT CONTROLS (SSC'S)

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE INCLUDING BUT NOT NECESSARILY LIMITED TO:
- I. DURING CONSTRUCTION (UNTIL FINAL APPROVAL BY THE AUTHORITIES HAVING JURISDICTION AND THE OWNER):
- (1) DAILY: (A) OBSERVING PAVED AREAS THAT ARE UTILIZED FOR SITE ACCESS TO LOOK FOR SIGNS OF SOIL BEING TRACKED FROM THE SITE AND TAKING CORRECTIVE ACTION AS NECESSARY (SEE NOTE #6 UNDER "STORMWATER AND SEDIMENT CONTROL").
- (B) CORRECTING ANY DAMAGE TO SSC'S AS SOON AS POSSIBLE WHEN IT OCCURS (2) WEEKLY (SEE NOTE #3 UNDER "STORMWATER AND SEDIMENT CONTROL"-CONTRACTOR
- SHALL COORDINATE WITH ENGINEER TO CONFIRM THAT ARRANGEMENTS ARE IN PLACE FOR REQUIRED INSPECTIONS AND LOG MANAGEMENT):
- (A) INSPECTING SSC'S FOR DAMAGE AND ACCUMULATED SEDIMENT. REMOVING SEDIMENT AND REPAIRING OR REPLACING DAMAGED SSC'S AS NECESSARY
- (B) EVALUATING PERFORMANCE AND AMENDING, MODIFYING, IMPROVING, OR RELOCATING SSC'S AS NECESSARY.
- (C) LOGGING INSPECTION OBSERVATIONS, RECOMMENDATIONS, REPAIRS, RELOCATIONS, AMENDMENTS, AND IMPROVEMENTS AS NECESSARY.
- (3) BI-WEEKLY:
- (A) EVALUATING SITE AND INSTALLING PERMANENT LANDSCAPING OR TEMPORARY SEEDING AS NECESSARY.
- II. AT COMPLETION OF CONSTRUCTION (UPON FINAL APPROVAL BY AUTHORITIES HAVING JURISDICTION AND THE OWNER) REMOVAL OF ALL TEMPORARY SSC'S.

2. POND(S) AND/OR DETENTION BASIN(S) AND DITCHES

- A. DURING CONSTRUCTION (UNTIL FINAL APPROVAL BY THE AUTHORITIES HAVING JURISDICTION AND THE OWNER): I. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE INCLUDING BUT NOT
 - NECESSARILY LIMITED TO:
- (1) REMOVING ACCUMULATED SEDIMENT. (2) MAINTAINING POND AND DITCH BANKS INCLUDING PREVENTION AND REPAIR OF SLOPE
- (3) ESTABLISHING AND MAINTAINING TEMPORARY AND PERMANENT STABILIZATION
- (LANDSCAPING AND/OR GRASS AS INDICATED ON THE PLANS). B. AFTER CONSTRUCTION:
- I. THE OWNER OR HIS ASSIGNS SHALL BE RESPONSIBLE FOR PERPETUAL MAINTENANCE
- INCLUDING BUT NOT NECESSARILY LIMITED TO:
 - (1) MONTHLY (BI-WEEKLY DURING GROWING SEASON): (A) AESTHETIC MAINTENANCE OF THE POND BANKS, PROJECT INTERNAL DITCHES AND SURROUNDING COMMON AREAS INCLUDING MOWING, LANDSCAPE MAINTENANCE, AND REMOVAL OF TRASH AND DEBRIS.
 - (2) EVERY 6 MONTHS: (A) INSPECTION OF THE POND(S) AND ASSOCIATED OUTLET STRUCTURE(S) AND DITCHES.
 - (B) REMOVAL OF ANY BLOCKAGES AND ACCUMULATED DEBRIS AT THE OUTLET STRUCTURE(S).
 - (C) REPAIR AND STABILIZATION OF ANY BANK EROSION.
 - (D) REPAIR OR REPLACEMENT OF ANY DAMAGE TO THE OUTLET STRUCTURE(S).
 - (3) EVERY 12 MONTHS: (A) TREATMENT, AS NECESSARY, FOR AQUATIC WEED CONTROL. (4) EVERY 5 YEARS:
 - (A) INSPECTION OF SEDIMENT COLLECTION AND WHEN NECESSARY, REMOVAL AND PROPER DISPOSAL OF ACCUMULATED SEDIMENT. REMOVAL OF COLLECTED SEDIMENT IS NECESSARY WHEN THE DRAINAGE FLOW OF INLET/OUTLET PIPES OR STRUCTURES ARE IMPAIRED AND/OR DETENTION STORAGE CAPACITY IS REDUCED FROM THE ORIGINAL DESIGN PARAMETERS.
 - (B) MORE FREQUENT REMOVAL OF COLLECTED SEDIMENT MAY BE NECESSARY WHEN CONDITIONS REQUIRE.
 - I. THE OWNER OR HIS ASSIGNS SHALL BE RESPONSIBLE FOR COORDINATING WITH THE MS4 OPERATOR TO INSURE COMPLIANCE WITH OTHER INSPECTION PROCEDURES AND/OR DOCUMENTATION.

3. DRAINAGE CULVERTS AND STRUCTURES:

- A. DURING CONSTRUCTION (UNTIL FINAL APPROVAL BY THE AUTHORITIES HAVING JURISDICTION AND
 - I. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE INCLUDING BUT NOT
 - **NECESSARILY LIMITED TO:** (1) PROTECTING THE CULVERTS AND STRUCTURES FROM DAMAGE.
 - (2) PREVENTING SEDIMENT FROM ENTERING THE CULVERTS AND STRUCTURES.
- (3) REPAIR OF ANY DAMAGE AND REMOVAL OF SEDIMENT AS SOON AS POSSIBLE AFTER IT OCCURS.
- B. AFTER CONSTRUCTION
- I. FOR PUBLIC ROADWAY AND EASEMENT AREAS, THESE AREAS WILL BE DEDICATED TO AN OPERATING GOVERNMENTAL AUTHORITY UPON COMPLETION AND THAT AUTHORITY WILL PERFORM MAINTENANCE.
- II. FOR PRIVATE PROPERTY AREAS, THE OWNER OR HIS ASSIGNS WILL BE RESPONSIBLE FOR MAINTENANCE IN PERPETUITY.

TEMPORARY BUFFER ZONE MANAGEMENT AND SURFACE WATER PROTECTION:

TEMPORARY (CONSTRUCTION) BUFFERS ARE NOT TO BE CONFUSED WITH PERMANENT BUFFERS THAT MAY BE SHOWN ELSEWHERE IN THE CONSTRUCTION PLANS. EXERCISE CARE TO DIFFERENTIATE BETWEEN TEMPORARY AND PERMANENT BUFFERS AND THEIR ASSOCIATED REQUIREMENTS.

ALL PERIMETER AND SEDIMENT CONTROL BMPs, SHALL BE INSTALLED PRIOR TO THE DISCHARGE OF STORMWATER RUNOFF INTO THE ADJACENT SURFACE WATER'S AND SHALL BE MAINTAINED UNTIL FINAL STABILIZATION.

AREAS CONTRIBUTING DIRECT RUNOFF TO TEMPORARY BUFFER AREAS SHALL BE STABILIZED PRIOR TO COMMENCING WORK WITHIN THE TEMPORARY BUFFER AREA.

ONCE CONSTRUCTION WITHIN AND ADJACENT TO TEMPORARY BUFFER AREAS IS COMPLETED, THE AREAS SHALL BE STABILIZED AS SOON AS PRACTICAL.

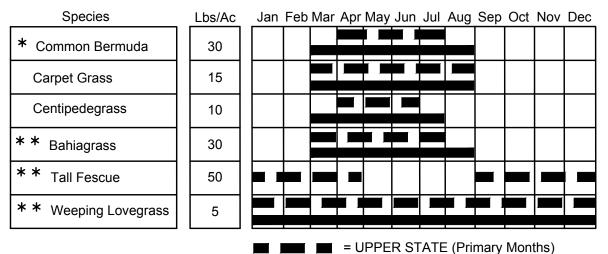
IN THE EVENT A BUFFER IS ACCIDENTALLY DISTURBED, THE CONTRACTOR SHALL STABILIZE THE AREA AS SOON AS POSSIBLE AND THE ENGINEER REGARDING REMEDIAL MEASURES OR EROSION CONTROL MEASURES.

NO DISTURBANCE SHALL OCCUR WITHIN CRITICAL AREAS (IE: SALTWATER MARSH).

- PERMANENT SEEDING (TO BE USED WHERE PERMANENT TURF AND/OR STABILIZATION IS INDICATED ON PLANS AND/OR DETAILS. UNLESS OTHERWISE DEFINED ON THE PLANS, ALL AREAS DISTURBED MUST BE STABILIZED)
- 1. IN PARTICULAR, IT IS THE CONTRACTOR'S RESPONSIBLITY TO;
- A. ESTABLISH A UNIFORM PERENNIAL STAND OF VEGETATION WITH A ROOT SYSTEM THAT IS SUFFICIENTLY DEVELOPED TO SURVIVE DRY PERIODS AND WINTER WEATHER AND BE CAPABLE OF RE-ESTABLISHMENT IN THE SPRING.
- B. PROVIDE MINIMUM UNIFORM DENSITY COVERAGE OF 70% THROUGHOUT THE SEEDED AREA, IN ACCORDANCE WITH THE DEFINITION OF "FINAL STABILIZATION" AS DEFINED IN THE SCDHEC NPDES
- C. MAINTAIN THE STAND OF VEGETATION INCLUDING MOWING; FERTILIZING; WEED, DISEASE AND INSECT CONTROL; AND WATERING AS NECESSARY, UNTIL FINAL ACCEPTANCE BY THE OWNER AND/OR AUTHORITY HAVING JURISDICTION.
- 2. ALL NECESSARY (GROUND BED) PREPARATION, INSTALLATION, AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE LANDSCAPING SPECIFICATIONS FOR THE PROJECT OR, IN INSTANCES WHERE LANDSCAPING SPECIFICATIONS DO NOT EXIST, IN ACCORDANCE WITH APPLICABLE PORTIONS (INCLUDING BED PREPARATION, MULCH, FERTILIZERS, STIMULANTS, TACKIFIERS, ETC) OF SECTION 810 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
- 3. UNLESS OTHERWISE INDICATED ON THIS SHEET OR IN SPECIFICATIONS, PERMANENT SEED SELECTION AND APPLICATION SHALL BE IN ACCORDANCE WITH APPENDIX C OF THE SOUTH CAROLINA DHEC STORM WATER MANAGEMENT BMP HANDBOOK. SEED SPECIES AND APPLICATION RATE SHALL BE AS INDICATED FOR THE PROJECT LOCATION, SOIL TYPE, AND DATE OF INSTALLATION.
- 4. PERMANENT SEED SELECTION (SELECTION METHOD BELOW FOLLOWS SCDOT RECOMMENDATIONS): SELECT A MINIMUM OF TWO (2) SEED SPECIES FROM TABLE 1 BELOW, AND A MINIMUM OF ONE (1) ACCEPTABLE ANNUAL NURSE CROP SEED SPECIES FROM TABLE 2 BELOW (UNDER THE TEMPORARY SEEDING SECTION), OR;

SELECT ONE (1) SEED SPECIES FROM TABLE 1 AT DOUBLE THE SPECIFIED RATE WITH A MINIMUM OF ONE (1) ACCEPTABLE ANNUAL NURSE CROP SEED SPECIES FROM TABLE 2 AT THE SPECIFIED RATE. DURING APPLICATION IN "NON-PRIMARY MONTHS", THE SEED MIX SHALL BE PREPARED TO PROVIDE FOR GERMINATION OF PERMANENT SPECIES IN THE FOLLOWING SPRING AND SUMMER TO INSURE 70% COVERAGE IS ACHIEVED AS DESCRIBED IN NOTE 1 ABOVE.

TABLE 1 - PERMANENT SEEDING (Perennial Seed)



= LOWER STATE (Primary Months)

Use unhulled seed during fall and winter months.

SUBSEQUENT CONSTRUCTION.

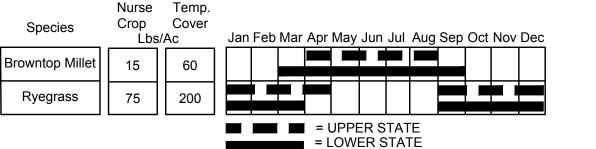
* * Only use where specified on plans or in specifications or if approved by the owner, engineer or landscape architect.

TEMPORARY SEEDING (TO BE USED ONLY FOR TEMPORARY STABILIZATION DURING CONSTRUCTION) 1. IN PARTICULAR THE CONTRACTOR SHALL:

- A. ESTABLISH A STAND OF VEGETATION THAT IS CAPABLE TO PREVENT EROSION AND SEDIMENT LOSS IN ACCORDANCE WITH THE DEFINITION OF "TEMPORARY STABILIZATION" AS DEFINED IN THE SCDHEC NPDES GENERAL PERMIT.
- B. INITIATE TEMPORARY STABILIZATION EFFORTS AS REQUIRED IN NOTE 2 AND 12 OF THE
- "STORMWATER AND SEDIMENT CONTROL" NOTES LISTED ON THIS PAGE. C. MAINTAIN THE STAND OF VEGETATION UNTIL REPLACED BY PERMANENT LANDSCAPING OR
- 2. ALL NECESSARY (GROUND BED) PREPARATION, INSTALLATION, AND MAINTENANCE OF TEMPORARYSEEDING SHALL BE IN ACCORDANCE WITH APPLICABLE PORTIONS (INCLUDING BED PREPARATION, MULCH, FERTILZERS STIMULANTS, TACKIFIERS, ETC) OF SECTION 810 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
- 3. UNLESS OTHERWISE INDICATED ON THIS SHEET OR IN SPECIFICATIONS, TEMPORARY SEED SHALL BE IN ACCORDANCE WITH APPENDIX C OF THE SOUTH CAROLINA DHEC STORM WATER MANAGEMENT BMP HANDBOOK. SEED SPECIES AND APPLICATION RATE SHALL BE AS INDICATED FOR THE PROJECT LOCATION, SOIL TYPE, AND DATE OF INSTALLATION.
- 4. TEMPORARY SEED SELECTION (SELECTION METHOD BELOW FOLLOWS SCDOT RECOMMENDATIONS): FOR SHORT DURATION APPLICATIONS, SELECT A MINIMUM OF ONE (1) SEED SPECIES FROM TABLE 2

FOR LONGER DURATION APPLICATIONS. SELECT A MINIMUM OF ONE (1) SEED SPECIES FROM TABLE 1 ABOVE (UNDER PERMANENT SEEDING) AND FROM TABLE 2 BELOW, AND APPLY AT THE RATES

TABLE 2 - NURSE CROP AND TEMPORARY SEEDING (Annual Seed)



PERMITTING NOTES

- 1. THESE PLANS HAVE BEEN PREPARED TO MEET THE INITIAL REQUIREMENTS OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR COVERAGE UNDER THE NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (NPDES). THE OWNER AND CONTRACTOR(S) ARE ADVISED THAT ADDITIONAL REQUIREMENTS, WHICH ARE BEYOND THE SCOPE OF THESE PLANS, MUST BE MET IN ORDER TO ASSURE CONTINUED COVERAGE UNDER THE NPDES.
- 2. COVERAGE UNDER THE NPDES IS INITIATED BY THE SC DEPT. OF HEALTH AND ENVIRONMENTAL CONTROL'S (SCDHEC) APPROVAL OF THE PROJECT FOR CONSTRUCTION. THE OWNER'S SUBMITTAL OF AN ENVIRONMENT PROTECTION AGENCY (EPA) NOTICE OF INTENT (NOI) SERVES AS THE OWNER'S CERTIFICATION THAT HE HAS PREPARED, AND WILL IMPLEMENT AND MAINTAIN, A SWPPP THROUGHOUT THE CONSTRUCTION PERIOD. FURTHERMORE, IT CERTIFIES THAT HE WILL DOCUMENT AND WHERE REQUIRED, REPORT SITE CONDITIONS, REMEDIAL EFFORTS, SWPPP MODIFICATIONS, AND OTHER STORMWATER RELATED ACTIVITIES IN ACCORDANCE WITH NPDES REQUIREMENTS. COVERAGE UNDER THE NPDES IS TERMINATED UPON THE OWNER'S SUBMITTAL OF AN EPA NOTICE OF TERMINATION (NOT) WHEN SCDHEC APPROVAL OF THE COMPLETED PROJECT HAS BEEN RECEIVED.
- 3. THE OWNER IS ADVISED THAT SWA'S SCOPE OF SERVICES DOES NOT NECESSARILY INCLUDE EFFORTS TO DOCUMENT AND REPORT ACTIVITIES IN ACCORDANCE WITH NPDES REQUIREMENTS. WHILE SWA CAN PERFORM THESE SERVICES UPON REQUEST, THEY CAN ALSO BE PROVIDED BY THIRD PARTY FIRMS WHO SPECIALIZE IN DOCUMENTATION AND REPORTING OF NPDES RELATED ACTIVITIES. REGARDLESS, THESE ACTIVITIES MUST BE ACCOMPLISHED, DOCUMENTED, AND WHERE REQUIRED, REPORTED THROUGHOUT THE CONSTRUCTION PERIOD IN ORDER TO AVOID AN NPDES VIOLATION.
- 4. ADDITIONAL PARTIES WHO ARE ASSOCIATED WITH A PROJECT THAT HAS RECEIVED NPDES COVERAGE ARE REQUIRED TO ADHERE TO THE REQUIREMENTS OF THE PROJECT SWPPP FOR THOSE PORTIONS THAT PERTAIN TO THEIR ACTIVITIES (REFER TO SECTIONS 2.1 & 2.2 OF THE STATE GENERAL PERMIT). IN ADDITION, PARTIES WHO ARE ASSOCIATED WITH ACTIVITIES THAT ARE PART OF A "LARGER COMMON PLAN" (LCP) THAT HAS RECEIVED NPDES COVERAGE MAY ALSO SHARE RESPONSIBILITY FOR COMPLIANCE AS A "SECONDARY PERMITTEE" (REFER TO SECTIONS 2.2.2 OF THE STATE GENERAL PERMIT). ALL PARTIES ASSOCIATED WITH ANY CONSTRUCTION ACTIVITIES ARE ADVISED TO CLARIFY THEIR RESPONSIBILITIES FOR COMPLIANCE WITH THE STATE GENERAL PERMIT AND THE PROJECT'S NPDES PERMIT AND SWPPP.
- 5. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS ARE REQUIRED TO SUBMIT AN "INDIVIDUAL LOT NOTICE OF INTENT" MEETING THE REQUIREMENTS OF SECTION 2.3.2 AT LEAST SEVEN (7) BUISNESS DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. REFER TO SECTION 2.2.2 AND SECTION 2.3.2 OF THE STATE GENERAL PERMIT.

INITIAL LAND DISTURBANCE PHASE - SEQUENCE OF CONSTRUCTION:

- 1.1 RECEIVE NPDES COVERAGE FROM DHEC.
- 1.2 CONDUCT PRE-CONSTRUCTION MEETING (AS DEFINED IN SECTION 4.1 OF THE STATE GENERAL PERMIT OR AS SPECIFIED IN THE PROJECTS NPDES PERMIT).
- 1.3 NOTIFY DHEC EQC OFFICE OR DHEC-OCRM AND THE MS 4 OPERATOR 48 HOURS PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES.
- 1.4 INSTALL CONSTRUCTION ENTRANCE(S) AND BEGIN MAINTENANCE OF SEDIMENT CONTROLS AS NECESSARY CONTINUE MAINTENANCE UNTIL ALL FINAL STABILIZATION MEASURES ARE IN PLACE AND REMOVAL OF CONTROLS IS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- 1.5 CLEAR AND GRUB FOR THE INSTALLATION OF PERIMETER CONTROLS (SILT FENCE) AND TREE BARRICADES. COORDINATE A INSPECTION WITH THE MS4 OPERATOR OR LOCAL MUNICIPALITY AND THE ENGINEER PRIOR TO CONTINUING ANY WORK ACTIVITIES.
- 1.6 INITIATE CLEARING AND GRUBBING FOR THE BALANCE OF THE SITE.
- 1.7 MASS GRADING MAY BEGIN. THIS CAN BEGIN AS SOON AS AREAS ALLOW AFTER CLEARING AND GRUBBING.

INITIAL LAND DISTURBANCE PHASE - NOTES:

THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE INITIAL LAND DISTURBANCE PHASE.

- 1.A INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL EXISTING STORM DRAINAGE STRUCTURES AS INDICATED.
- 1.B STONE CHECK DAMS OR OTHER APPROPRIATE BMP'S SHALL BE INSTALLED IN AREAS OF CONCENTRATED FLOWS OR DITCHES WHERE INDICATED ON PLANS OR IN OTHER AREAS WHERE NEEDED.
- 1.C CONTRACTOR SHALL PERFORM DE-WATERING WITH APPROPRIATE BMP'S IN A MANNER THAT MEETS LOCAL AND STATE REGULATIONS WITH REGARD TO DISPOSAL OF WATER AND REMOVED SEDIMENT.
- 1.D TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBANCE AND SHALL BE MAINTAINED UNTIL FINAL LANDSCAPING IS INSTALLED. ANY FAILURES OF FENCING SHALL BE
- 1.E NO BURN OR BURY PITS SHALL BE PERMITTED ON THE CONSTRUCTION SITE WITHOUT PERMISSION OF THE AUTHORITIES HAVING JURISDICTION, THE OWNER, AND THE ENGINEER.
- TRACKING OR FLOW OF MUD ONTO PAVED AREAS.

1.F THE CONSTRUCTION ENTRANCE / EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT

- 1.G THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES INCLUDING REPLACING OR REPAIRING ANY DAMAGED DEVICES.
- 1.H THE LOCATION OF SOME EROSION CONTROL DEVICES MAY NEED TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DEVIATE FROM THOSE PROPOSED. IT IS THE CONTRACTORS RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER.
- 1.1 FOLLOW ALL "STORMWATER AND SEDIMENT CONTROL" NOTES LISTED ON THIS PAGE.

CONSTRUCTION PHASE - SEQUENCE OF CONSTRUCTION:

- 2.1 CONTINUE MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL ALL FINAL STABILIZATION MEASURES ARE IN PLACE AND REMOVAL OF CONTROLS IS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- 2.2 CLEAR AND GRUB THE REMAINDER OF THE SITE.
- 2.3 COMPLETE MASS GRADING OPERATIONS AND ROUGH GRADING
- 2.4 INITIATE INSTALLATION OF WATER AND SEWER SYSTEMS. DRY UTILITY INSTALLATION MAY BEGIN DURING PHASE 2 IF POSSIBLE.
- 2.5 INSTALL STORM DRAINAGE SYSTEM INCLUDING SEDIMENT PROTECTION AS EACH STRUCTURE IS INSTALLED.
- 2.6 WHEN APPLICABLE, VERTICAL CONSTRUCTION MAY BEGIN DURING PHASE 2.

CONSTRUCTION PHASE - NOTES:

- THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE CONSTRUCTION PHASE.
- 2.A STORM DRAIN OUTLET PROTECTION (RIP RAP, TURF REINFORCING FABRICS, CHECK DAMS, ETC) AS DEFINED ON THE PLANS, SHALL BE PLACED AT ALL OUTLETS AS THEY ARE INSTALLED. 2.B APPROPRIATE MEASURES ARE TO BE IMPLEMENT AS REQUIRED TO PREVENT SEDIMENT FROM ENTERING
- INLET PIPES AND BOXES. EACH PROTECTIVE MEASURE IS TO BE IN PLACE AS SOON AS POSSIBLE, AND PRIOR TO ANY RAIN EVENT, AFTER PIPE, STRUCTURE, ETC. IS INSTALLED. ACCUMULATED SEDIMENT SHALL BE REMOVED AND PLACED ON-SITE IN SUCH A MANNER THAT IT DOES NOT ACCUMULATE AGAIN. 2.C FINAL CUT AND FILL SLOPES ARE TO FOLLOW THE CONSTRUCTION PLANS. TEMPORARY CUT AND FILL
- SLOPES SHALL NOT NOT EXCEED 2H:1V. 3H:1V OR BETTER IS PREFERRED IN ALL LOCATIONS UNLESS INFEASIBLE.
- 2.D FOLLOW ALL "STORMWATER AND SEDIMENT CONTROL" NOTES LISTED ON THIS PAGE.

STABILIZATION PHASE - SEQUENCE OF CONSTRUCTION

- 3.1 CONTINUE MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL ALL FINAL STABILIZATION MEASURES ARE IN PLACE AND REMOVAL OF CONTROLS IS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- 3.2 COMPLETE ALL UTILITIES AND SITE SURFACE IMPROVEMENTS AS APPLICABLE, INCLUDING BUT NOT NECESSARILY LIMITED TO: WATER, SEWER, DRAINAGE, POWER, COMMUNICATIONS, GAS, BUILDING SHELL, CURBS, WALKS, PAVEMENT, COURTYARDS, PLAZAS, FOUNTAINS, MONUMENTS, TRAILS, SITE LIGHTING, ETC.
- 3.3 INSTALL LANDSCAPING AND/OR ESTABLISH PERMANENT SOIL STABILIZATION.
- 3.4 WHEN APPLICABLE, CLEAN, RE-GRADE, AND RE-ESTABLISH SOIL STABILIZATION FOR DETENTION BASINS/PONDS; MODIFY DETENTION BASIN/POND STRUCTURES AS DEFINED ON PLANS TO CONVERT IT TO THE PERMANENT OUTLET.
- 3.5 REMOVE TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AFTER THE ENTIRE AREA FLOWING TO EACH MEASURE IS PERMANENTLY STABILIZED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- 3.6 PERFORM AS-BUILT SURVEYS OF THE DRAINAGE SYSTEM, AS REQUIRED BY AUTHORITIES HAVING JURISDICTION, AND SUBMIT TO THE OWNER AND ENGINEER FOR REVIEW AND SUBMITTAL TO DHEC AND/OR THE MS4 FOR REVIEW AND APPROVAL.
- 3.7 SUBMITTAL NOTICE OF TERMINATION (NOT) TO DHEC, BY THE OWNER AND ENGINEER.

STABILIZATION PHASE - NOTES:

- 3.A AFTER CURBING, AGGREGATE BASE AND PAVING HAS BEEN COMPLETED, ALL INLET SEDIMENT TRAPS INSTALLED ON CURB INLETS SHALL BE REMOVED AND REPLACED WITH INLET FILTER PROTECTION. PROTECTION DEVICES MAY BE REMOVED ONCE AREA DRAINING TO EACH INLET HAS BEEN FULLY STABILIZED.
- 3.B UPON COMPLETION OF THE PROJECT AND AUTHORIZATION FROM THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE ALL TEMPORARY EROSION CONTROL MEASURES, UNLESS OTHERWISE NOTED.
- 3.C FOLLOW ALL "STORMWATER AND SEDIMENT CONTROL" NOTES LISTED ON THIS PAGE.

- STORMWATER AND SEDIMENT CONTROL JNLESS OTHERWISE NOTED, CONTRACTOR SHALL PROVIDE FOR ALL OF THE REQUIREMENTS LISTED BELOW, AS APPLICABLE, AS PART OF HIS WORK INCLUDED IN HIS BASE BID.
- 1. IF NECESSARY, SLOPES THAT EXCEED 8 VERTICAL FEET IN HEIGHT SHALL BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO SEEDING. TEMPORARY SLOPE DRAINS AND/OR

BERMS SHALL BE INSTALLED AS NECESSARY UNTIL FINAL GRADE AND STABILIZATION IS ESTABLISHED.

- 2. STABILIZATION MEASURES (EITHER PERMANENT LANDSCAPING OR TEMPORARY SEEDING) SHALL BE INSTALLED AS SOON AS PRACTICAL ON PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES
- HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER CONSTRUCTION HAS CEASED, EXCEPT AS STATED BELOW A. WHERE STABILIZATION BEFORE THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN

MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.

- GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INSTALLED AS SOON AS PRACTICABLE B. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE HAS TEMPORARILY CEASED AND LAND DISTURBING ACTIVITIES WILL RESUME WITHIN 14 DAYS, TEMPORARY STABILIZATION
- 3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP IS INAPPROPRIATE. OR HAS BEEN INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
- 4. PROVIDE SILT FENCE AND/OR OTHER EROSION CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED BY PERMANENT SEEDING, OR OTHER MEASURES WHERE INDICATED ON THE PLANS, IMMEDIATELY AFTER UTILITY CONSTRUCTION IS COMPLETE UNLESS ADDITIONAL CONSTRUCTION IS TO TAKE PLACE. BACKFILLING OF THE TRENCH AT THE END OF EACH DAY IS MANDATORY AND TEMPORARY SEEDING IS RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER ADDITION SHALL BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED INTO ANY WATERS OF THE STATE.
- 5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVISES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION OND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

6. THE CONTRACTOR SHALL TAKE NECESSARY ACTIONS TO PREVENT TRACKING OF SOIL ONTO PAVED

AREAS THAT ARE UTILIZED FOR ACCESS TO THE SITE AND TO MINIMIZE THE GENERATION OF DUST.

OPERATIONS. THE CONTRACTOR SHALL DAILY REMOVE SOIL FROM PAVEMENT AS MAY BE REQUIRED. . RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH

SHOULD TRACKING OCCUR THE CONTRACTOR SHALL IMMEDIATELY CEASE OR MODIFY CAUSAL

- 8. TEMPORARY DIVERSION BERMS AND/OR DITCHES SHALL BE INSTALLED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
- 9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE (OR PROTECTION AS OTHERWISE REQUIRED BY AUTHORITY HAVING JURISDICTION) SHALL BE INSTALLED IN ALL AREAS WHERE A 50 FT BUFFER CANNOT BE MAINTAINED BETWEEN THE DISTURBED AREA AND THE WOS. IN ADDITION, A 10 FT BUFFER SHALL BE MAINTAINED BETWEEN THE NEAREST ROW OF SILT FENCE AND THE WOS.
- 10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, CHEMICALS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) SHALL BE PREVENTED FROM ENTERING OR OTHERWISE POLLUTING STORMWATER DISCHARGES.
- 11. A COPY OF THE SWPPP, INSPECTION RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES UNTIL THE DATE THAT FINAL STABILIZATION IS ACHIEVED.
- 12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
- 13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL
- 14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING. WHEEL WASHING, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
- 15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH THE APPROPRIATE BMP'S (SEDIMENT BASIN, FILTER BAG, ETC.).
- 16. THE FOLLOWING DISCHARGES FROM THE SITE ARE PROHIBITED:

S.C. REG. 72-300 ET SEQ. AND SCR100000.

- A. WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL; B. WASTEWATER FROM WASHOUT AND CLEANING OF STUCCO, PAINT, PAINT, FORM RELEASE OILS, CURING COMPOUNDS, AND OTHER CONSTRUCTION MATERIALS;
- C. FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATIONS AND
- MAINTENANCE; AND D. SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
- 17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTION MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS ACHIEVED ON ALL AREAS OF THE CONSTRUCTION SITE.
- 18. IF EXISTING BMP'S NEED TO BE MODIFIED OR IF ADDITIONAL BMP'S ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
- INCLUDE REVIEW OF THE APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE. 20. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING

19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE AND SHALL

REASONABLY POSSIBLE. 21. THE SILT FENCE SHALL BE KEPT ERECT AT ALL TIMES AND REPAIRED WHEN REQUESTED BY THE SITE INSPECTOR OR ENGINEER. SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 1/3 HEIGHT OF THE BARRIER. THE PERIMETER SILT FENCE SHALL BE INSPECTED REGULARLY ONCE EVERY WEEK

AND WITHIN 24 HOURS OF A RAIN EVENT THAT PRODUCES 1 / 2" OR MORE OF PRECIPITATION.

OR FLOW OF MUD ONTO PAVED AREAS. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED

FROM VEHICLES ONTO PAVED AREAS OR INTO STORM DRAINAGE SHALL BE REMOVED AS SOON AS

- 22. SILT FENCE SHALL BE PLACED AT THE TOE OF OF ALL DIRT STOCK PILE AREAS (ON THE LOW SIDE WHERE SEDIMENT CAN BE WASHED AWAY).
- 23. THE CONTRACTOR SHALL MAINTAIN ALL PONDS, SEDIMENT BASINS, AND EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SEDIMENT SHALL BE REMOVED FROM BASINS WHEN IT REACHES THE HALFWAY POINT ON THE RISER.

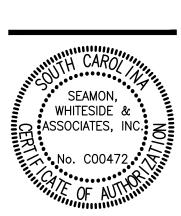
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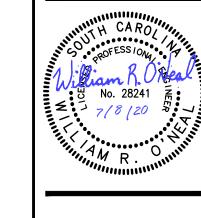
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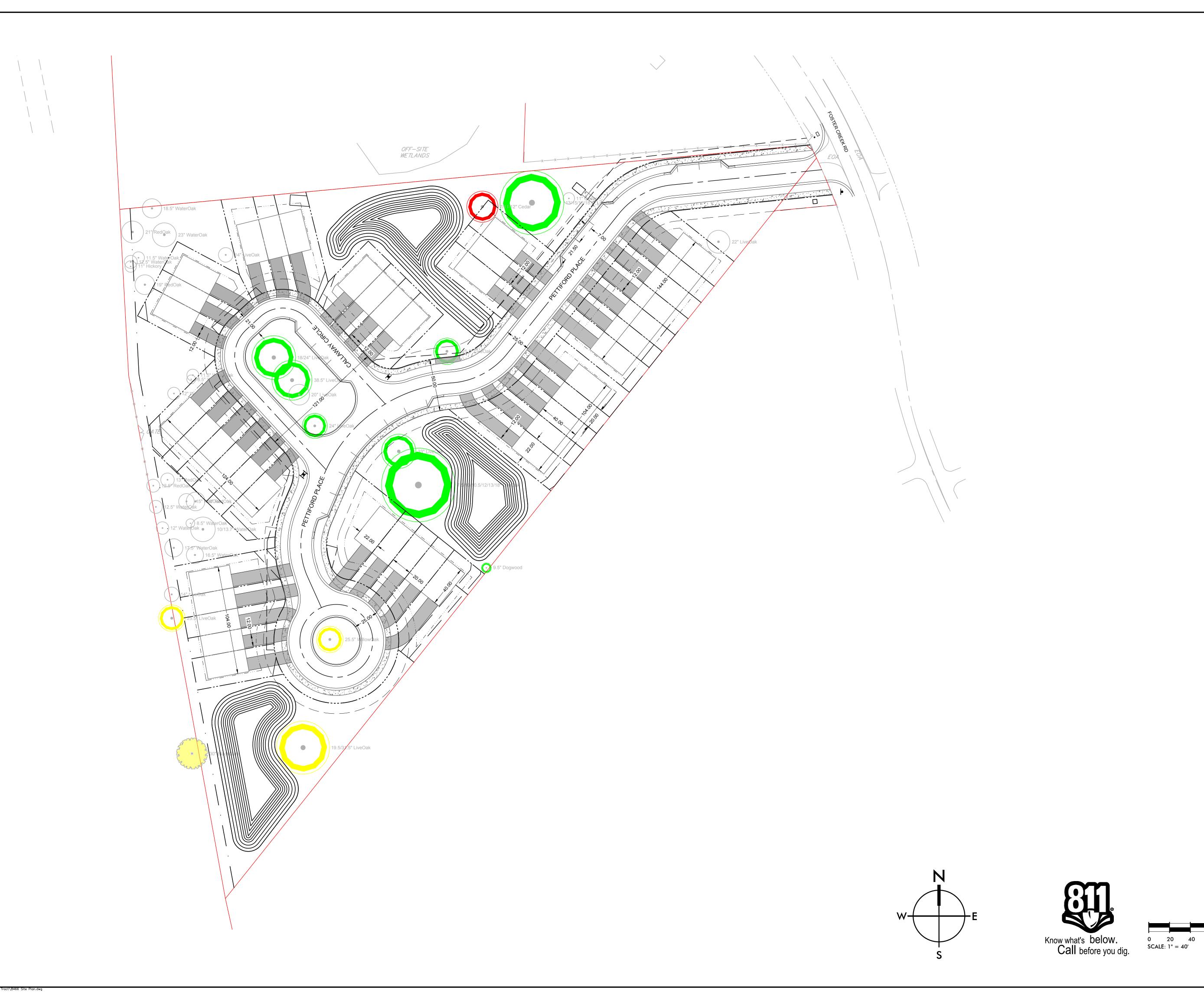


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REVISION HISTORY

SWPPP

NOTES



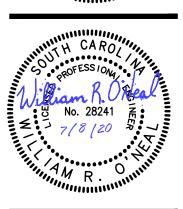


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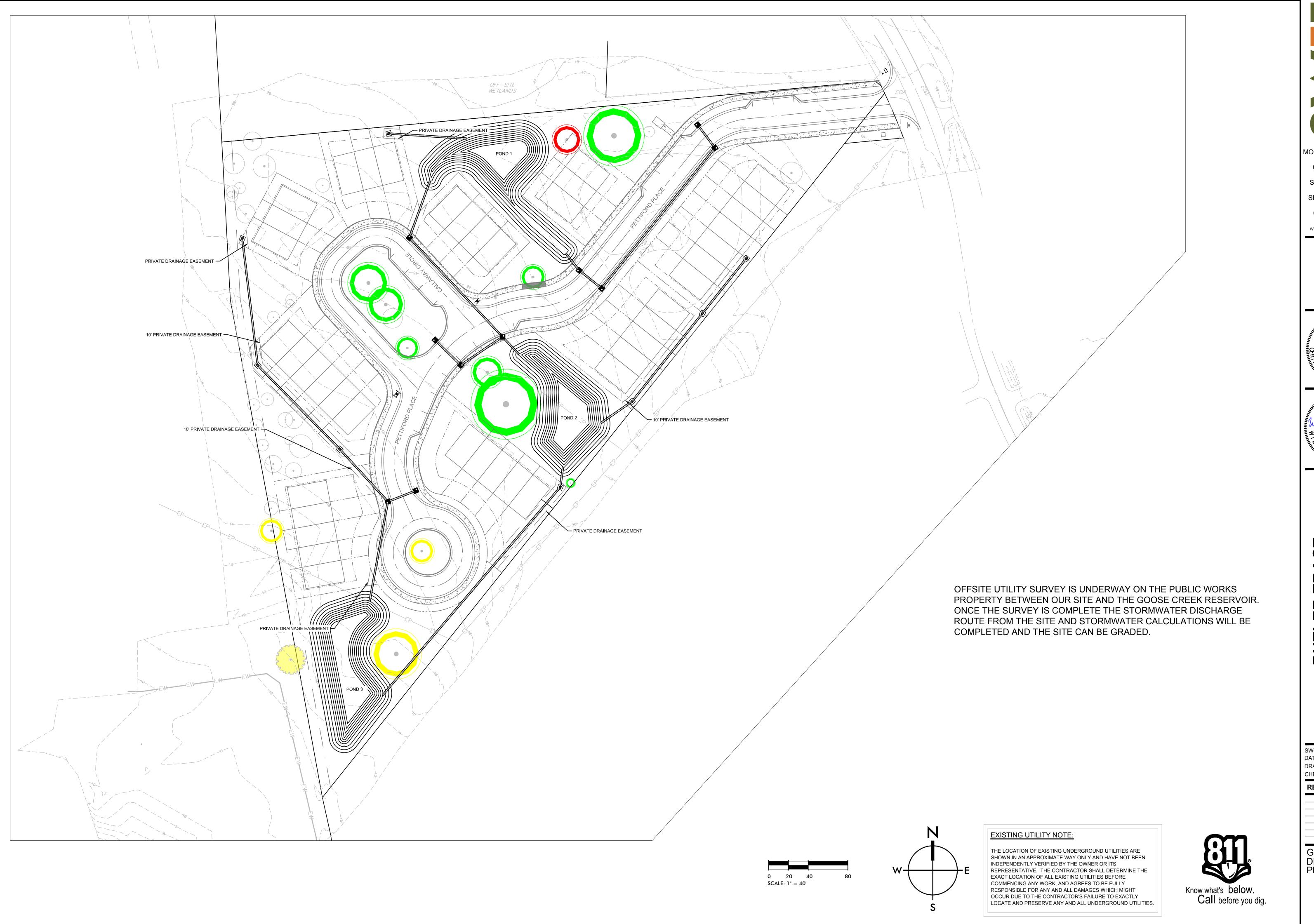
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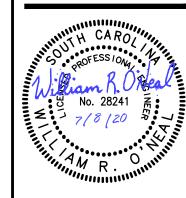
SITE PLAN

C4.0



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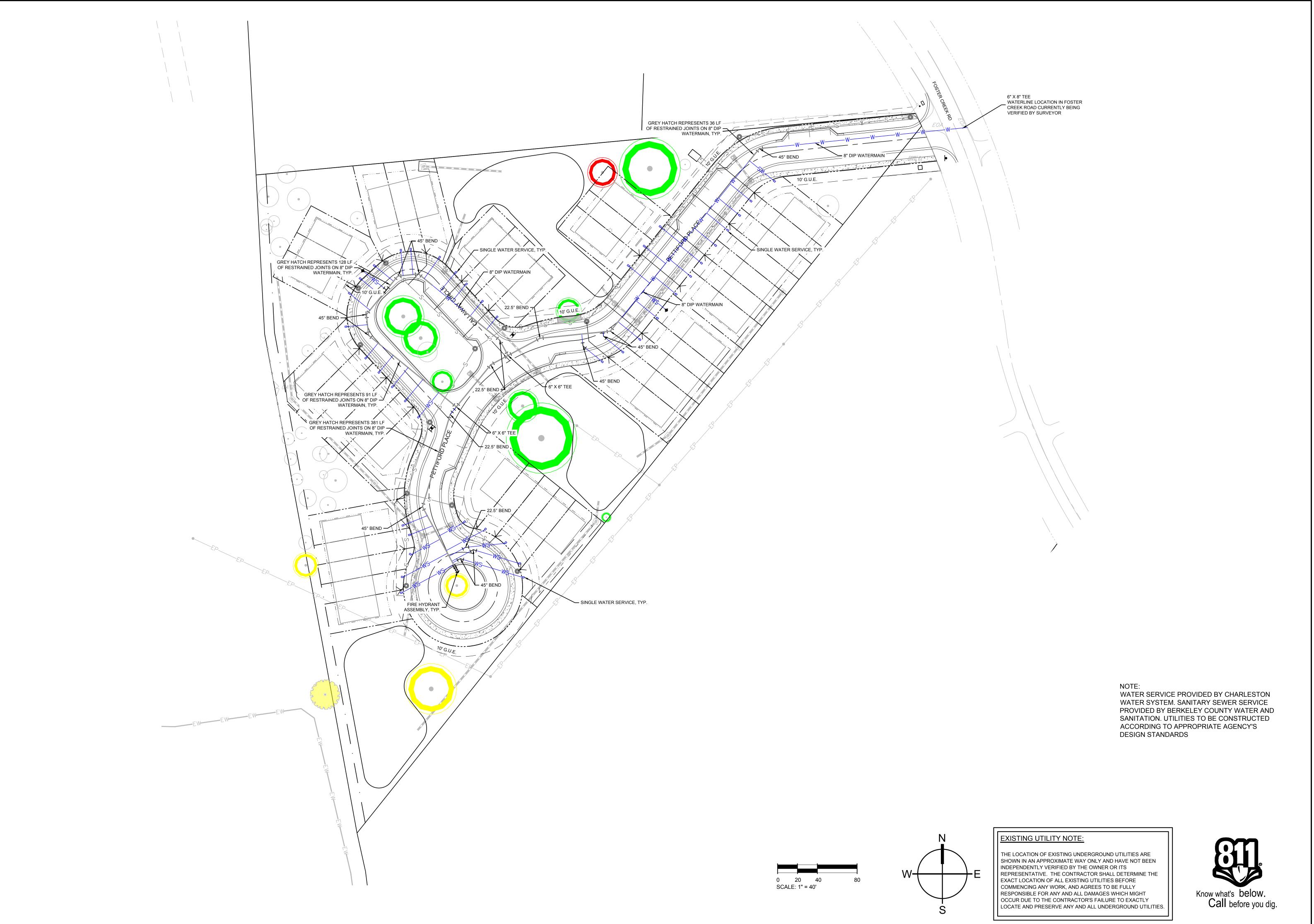


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GRADING & DRAINAGE PLAN

C5.0



SEA MONWHITES ID

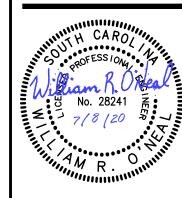
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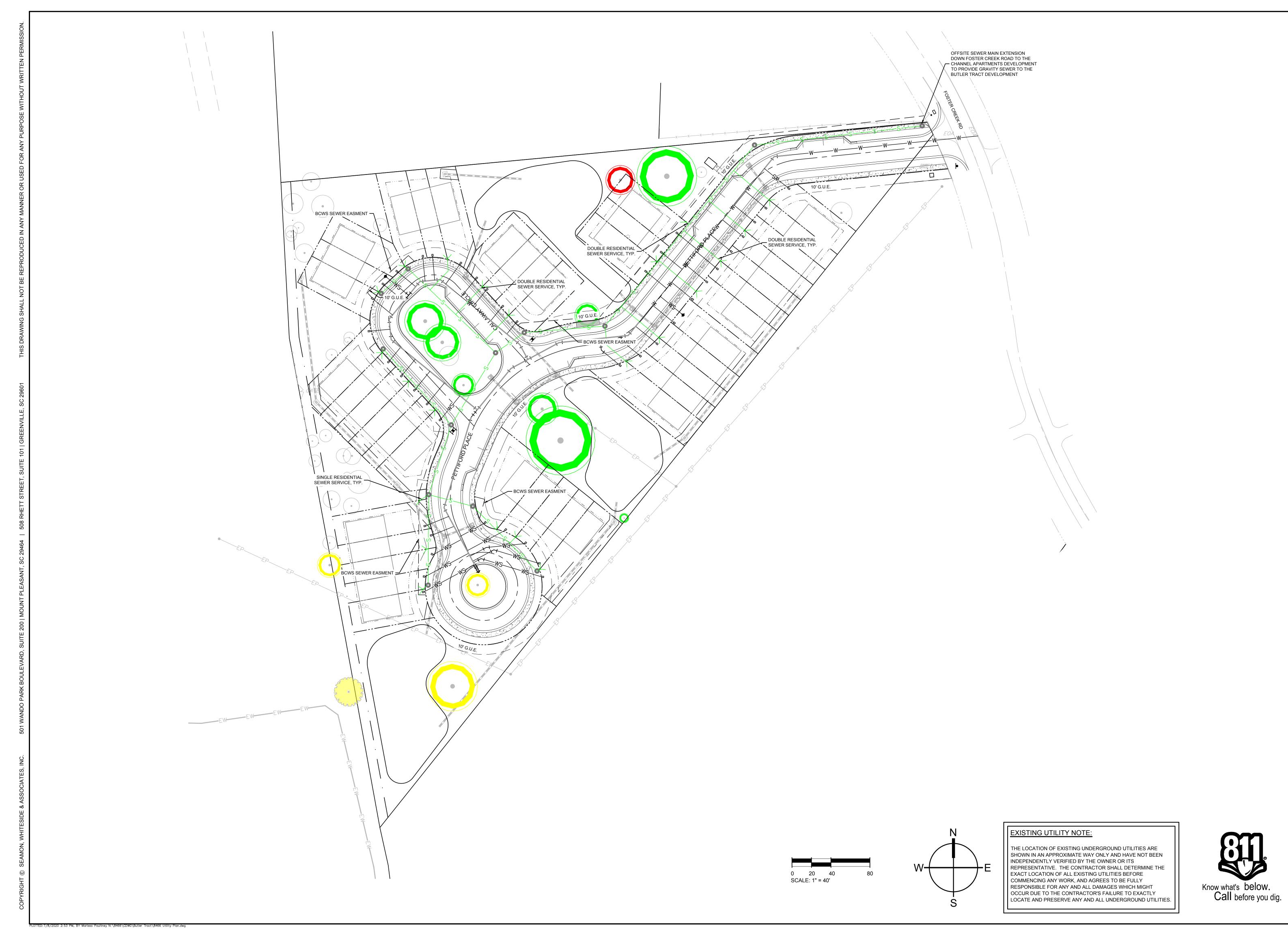


ANLEY MARTIN HOMES

SW+ PROJECT: 8312
DATE: 5/18/2020
DRAWN BY: MAP
CHECKED BY: AEMR

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WATER PLAN





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REVISION HISTORY

SEWER PLAN

C8.0

GENERAL NOTES:

- 1. SEE SWPPP PLANS [SHEETS C3.0 C3.5] FOR SILT FENCE LOCATIONS, TREE PROTECTION ZONES AND BARRICADES, AND ADDITIONAL NOTES AND DETAILS.
- 2. FOR REQUIRED TREE MITIGATION AND DEVELOPMENT INCHES PER THE CITY OF HANAHAN ZONING ORDINANCE, PLEASE REFER TO SHEET L2.0 FOR PLANT SCHEDULE QUANTITY AND SIZES.
- 3. THE OVERALL PLANT QUANTITY FOR THE ENTIRE SITE CAN BE FOUND ON THE MASTER PLAN SCHEDULE, SHEET L2.0.
- 4. SEE SITE PLAN [C4.0] FOR SITE LABELS, INFORMATION AND DETAILS.
- 5. CONTRACTOR TO CONTACT CIVIL ENGINEER OR LANDSCAPE ARCHITECT REGARDING ANY SITEWORK MODIFICATIONS FROM THESE PLANS PRIOR TO CHANGES IN THE FIELD. CONTACT: 843-884-1667

PLANT LEGEND

	_	_	
TREES	CODE	QTY	BOTANICAL / COMMON NAME
	MAGG-B	6	Magnolia grandiflora / Southern Magnolia
(°)	QUNU	40	Quercus nuttallii / Nuttall Oak
	ULMA	9	Ulmus parvifolia `Allee` / Allee Lacebark Elm
UNDERSTORY TREES	CODE	QTY	BOTANICAL / COMMON NAME
+	JUNV-B	9	Juniperus virginiana `Silicola` / Southern Red Cedar
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME
\ +}	ILVO	25	Ilex vomitoria / Yaupon Holly
\odot	MYRC	32	Myrica cerifera / Wax Myrtle

STREET TREES REQUIRED: 1 TREE PER 50 LINEAR FEET OF ROADWAY

1304 (LINEAR FEET OF ROAD)/50 = 26.08 TREES REQUIRED PER SIDE 26.08 X 2 = 53 TOTAL TREES REQUIRED

EXISTING TREES (TO COUNT TOWARDS STREET TREE REQUIREMENTS): 7

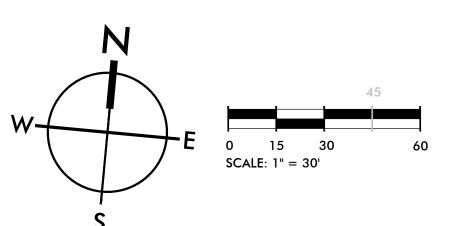
STREET TREES PROVIDED: 49 + 7 = 56

	BUFFER REQUIREMENTS:	10' WIDE, 666.46 LF		
VEGETATION TYPE	REQUIRED PER 100 L.F.	TOTAL REQUIRED	EXISTING	PROPOSED
CANOPY TREE	2	14	8	6
UNDERSTORY TREES OR SHRUBS	8	54	0	66

<u>HOA NOTE:</u> HOA AREAS ARE OPEN SPACE AMENITIES TO BE DESIGNED AFTER PLANNING COMMISSION.

MITIGATION NOTE: TREE MITIGATION TO BE CALCULATED AFTER PLANNING COMMISSION.

<u>DRIVEWAY NOTE:</u> DRIVEWAY LOCATIONS ARE SUBJECT TO CHANGE UNTIL FINAL BUILDING PRODUCT HAS BEEN DETERMINED.





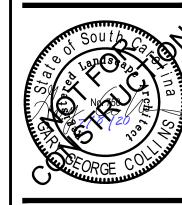
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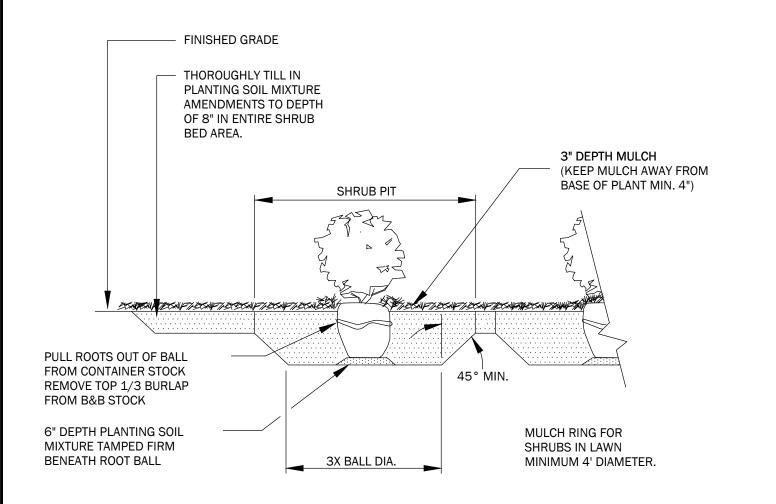


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LANDSCAPE PLAN

TYPICAL TREE PLANTING



2. SCARIFY SIDES AND BOTTOM OF PIT.

GENERAL NOTES:

1. PLANT SO THAT TOP OF ROOT BALL IS 1" ABOVE FINISH GRADE.

3. BACKFILL SHRUB PIT WITH SPECIFIED PLANTING SOIL MIXTURE IN 6" LAYERS, HAND-TAMPED, TO REMOVE VOIDS.

4. WHEN 2/3 BACKFILLED, FILL WITH WATER. 5. AFTER PLACING AND HAND-TAMPING FINAL LAYERS, WATER AGAIN UNTIL NO MORE WATER IS ABSORBED.

TYPICAL SHRUB PLANTING

1. THE TECHINICAL SPECIFICATIONS ARE MADE A PART OF THESE PLANS AND SHALL BE CONSULTED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING WORK AS SPECIFIED IN THE TECHNICAL SPECIFICATIONS AND ON THESE PLANS.

2. CONTRACTOR SHALL NOTIFY THIS OFFICE OF ANY DISCREPANCIES PRIOR TO BEGINNING

OR CONTINUING WORK. 3. THERE WILL BE NO SUBSTITUTIONS, DELETIONS OR ADDITIONS WITHOUT APPROVAL OF THIS OFFICE. 4. SIZE OF PLANT MATERIALS SHALL CONFORM WITH THE CURRENT EDITION OF 'AMERICAN STANDARD FOR NURSERY STOCK' FOR NUMBER ONE GRADE NURSERY STOCK AS ADOPTED BY THE AMERICAN

ASSOCIATION OF NURSERYMEN AND AMERICAN NATIONAL STANDARDS INSTITUTE. 5. THE QUANTITIES ON THE SCHEDULE ARE ONLY A GUIDE. ALL QUANTITIES SHALL BE VERIFIED BY THE CONTRACTOR ON THE PLANTING PLAN.

PLANT SCHEDULE NOTES

1. FOR EACH UNAMENDED SOIL TYPE, FURNISH SOIL ANALYSIS AND A WRITTEN REPORT BY A QUALIFIED SOIL-TESTING LABORATORY STATING PERCENTAGES OF ORGANIC MATTER; GRADATION OF SAND, SILT, AND CLAY CONTENT; CATION EXCHANGE CAPACITY; SODIUM ABSORPTION RATIO; DELETERIOUS MATERIAL; BUFFER PH LEVELS; AND MINERAL AND PLANT-NUTRIENT CONTENT OF THE SOIL. 2. A MINIMUM OF THREE REPRESENTATIVE SAMPLES SHALL BE TAKEN FROM VARIED LOCATIONS FOR EACH SOIL TO BE USED OR AMENDED FOR PLANTING PURPOSES.

3. SUBMIT TO LANDSCAPE ARCHITECT THE LAB RECOMMENDATIONS FOR SOIL TREATMENTS AND SOIL AMENDMENTS TO BE INCORPORATED. INDICATE LAB RECOMMENDATIONS IN WEIGHT PER 1000 SQ. FT. OR VOLUME PER CU. YD. FOR NITROGEN, PHOSPHORUS, AND POTASH NUTRIENTS AND ORGANIC AND INORGANIC SOIL AMENDMENTS TO BE ADDED TO PRODUCE PLANTING SOIL SUITABLE FOR HEALTHY, VIABLE PLANTS.

4. ALL SOILS USED FOR PLANTING SHALL BE PREPARED AS NECESSARY USING ORGANIC AND INORGANIC SOIL AMENDMENTS AND FERTILIZERS IN THE QUANTITIES RECOMMENDED IN THE SOIL ANALYSIS REPORT TO PRODUCE SATISFACTORY PLANTING SOIL FOR HEALTHY. VIABLE PLANTS. PLANTING SOILS SHALL HAVE A PH LEVEL BETWEEN 6.0 AND 7.0.

5. IN ALL PLANTING AREAS, SPREAD PLANTING SOIL TO A DEPTH OF 8 INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT.

SOIL NOTES

SPECIMEN MATERIAL TF TREE FORM HABIT

GENERAL PLANTING NOTES

IRRIGATION NOTES

1. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF PROPOSED IRRIGATION

CONTRACTOR TO SUPPLY AUTOMATIC IRRIGATION SYSTEMS, COMPLETE

SODDED AND IMPROVED EXISTING GRASS AREAS, TREES, SHRUBS AND

2. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR AUTOMATIC

IRRIGATION SYSTEMS. CONTRACTOR SHALL PROVIDE ELECTRIC METER AND

SERVICE IN ACCORDANCE WITH STATE AND LOCAL CODES FOR IRRIGATION

SYSTEM. LOCATION OF METERS AND CONTROL PANELS FOR IRRIGATION

SHALL BE APPROVED BY OWNER'S REP. PRIOR TO INSTALLATION.

PLANT SCHEDULE

PLANT SCHEDULE

UNDERSTORY TREES

SHRUBS

TREES

CODE

MAGG-B

JUNV-B

ILVO

COORDINATE WATER METER REQUIREMENTS WITH CIVIL ENGINEER.

PLANTING BEDS. COORDINATE IRRIGATION WITH OWNER'S

AND INSTALLED, SYSTEM TO INCLUDE ALL VALVES, PIPES, HEADS, FITTINGS.

RAIN SENSOR, AND CLOCK AND TO PROVIDE 100% COVERAGE OF ALL NEW

SYSTEM TO LANDSCAPE ARCHITECT AND OWNER FOR ACCEPTANCE.

FWF FULL WELL FORMED

MS MULTI-STEMMED TRUNK CAL TRUNK CALIPER

GAL GALLON CONTAINER

- REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING AND BURLAPPING OF PLANTS IN THE PLANT LIST SHOULD FOLLOW OR EXCEED THE STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN THE AMERICAN STANDARD FOR NURSERY STOCKS (ASNS). UNLESS OTHERWISE SPECIFIED, ANY SIZE SPECIFIED SHALL BE CONSIDERED MINIMUM. MINIMUMS FOR HEIGHT, SPREAD, OR CALIPER SHALL TAKE PRECEDENT OVER A SPECIFIED CONTAINER SIZE.
- 2. ALL PLANTS SHALL HAVE A WELL FORMED HEAD WITH MINIMUM CALIPER, HEIGHT AND SPREAD OF THE SIDE
- 4. THE LANDSCAPE CONTRACTOR IS HEREBY NOTIFIED OF THE EXISTENCE OF UNDERGROUND UTILITIES WITHIN THE LIMITS OF THE PROJECT AREA. THE CONTRACTOR SHOULD VERIFY THE EXACT LOCATION OF ALL UTILITY LINES PRIOR TO COMMENCEMENT OF DIGGING OPERATIONS. CONTRACTOR RESPONSIBLE FOR LOCATING, PROTECTING, AND REPAIRING ALL DAMAGE TO BUILDINGS, UTILITIES, PAVEMENT, AND CURB & GUTTER. ANY REPAIRS SHALL BE DONE
- 5. THE CONTRACTOR WILL BE RESPONSIBLE FOR STAKING AND LAYOUT OF PLANTINGS ON THIS PROJECT. THE LANDSCAPE ARCHITECT OR OWNER SHALL BE ADVISED WHEN STAKES ARE READY FOR INSPECTION ON VARIOUS PLANTING AREAS. ALL LAYOUT WORK SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT AND OWNER PRIOR TO OPENING ANY PLANTING PITS.
- 6. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO VERIFY THAT EACH EXCAVATED TREE OR SHRUB PIT WILL PERCOLATE (DRAIN) PRIOR TO ADDING TOPSOIL AND INSTALLING TREES OR SHRUBS. THE CONTRACTOR SHALL FILL THE BOTTOM OF HOLES WITH SIX (6) INCHES OF WATER. THIS WATER SHOULD PERCOLATE WITHIN A TWENTY-FOUR (24) HOUR PERIOD. IF WATER DOESN'T PERC, CONTRACTOR SHALL NOTIFY THE OWNER'S REP PRIOR TO
- 7. SHOULD THE LANDSCAPE CONTRACTOR ENCOUNTER UNSATISFACTORY SURFACE OR SUBSURFACE DRAINAGE CONDITIONS, SOIL DEPTH, LATENT SOILS, HARD PANS, STEAM OR OTHER UTILITY LINES OR OTHER CONDITIONS THAT WILL IFOPARDIZE THE HEALTH AND VIGOR OF THE PLANTS. HE MUST ADVISE THE LANDSCAPE ARCHITECT IN WRITING THE PLANTING AREAS ARE SUITABLE FOR PROPER GROWTH AND DEVELOPMENT OF THE PLANTS TO BE INSTALLED.
- PROJECT AND SHALL MAINTAIN THE SITE IN A REASONABLY NEAT AND CLEAN STATE THROUGHOUT THE INSTALLATION PROCESS. STREETS AND PAVED AREAS SHALL BE CLEANED REGULARLY TO REMOVE CONSTRUCTION MATERIALS AND OTHER DEBRIS RESULTING FROM WORK OF THE PROJECT

- BRANCHES AS SHOWN ON THE PLANT LIST. TRUNKS SHALL BE UNDAMAGED AND SHAPE SHALL BE TYPICAL OF THE
- 3. MEASUREMENT OF CONIFER HEIGHT SHALL INCLUDE NOT MORE THAN FIFTY (50) PER CENT OF THIS YEARS' VERTICAL
- PROMPTLY AT CONTRACTOR'S EXPENSE.

- OF THE CONDITIONS PRIOR TO INSTALLING THE PLANTS. OTHERWISE, THE LANDSCAPE CONTRACTOR WARRANTS THAT

- EGG EGG CAN CONTAINER B&B BALLED AND BURLAPPED
 - ESP ESPALIER
- 9. REPLACEMENTS OF DEAD OR UNSATISFACTORY MATERIAL SHALL BE MADE AS SPECIFIED IN THE PLANT LIST. THE OWNER OR LANDSCAPE ARCHITECT SHALL INSPECT REPLACED PLANTS WHEN ALL REPLACEMENTS HAVE BEEN MADE. REPLACEMENTS ARE TO BE ALIVE AND IN A HEALTHY CONDITION WHEN THE REPLACEMENTS ARE COMPLETE. REPLACEMENTS ARE NOT SUBJECT TO AN ADDITIONAL GUARANTEE, BUT THE LANDSCAPE CONTRACTOR SHALL CONSULT WITH THE LANDSCAPE ARCHITECT ON REASON FOR PLANT DECLINE/DEATH AND HOW TO AVOID FUTURE

CON CONTAINERIZED MATERIAL

BARE ROOT MATERIAL

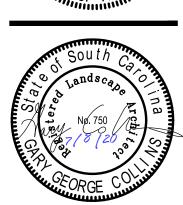
- 10. SHOULD THE CONTRACTOR NOT MAKE REPLACEMENTS IN A SATISFACTORY AND TIMELY FASHION IN ACCORD WITH THE PLANTING NOTES, THE OWNER, AFTER PROPER NOTIFICATION TO THE CONTRACTOR MAY UTILIZE THE FUNDS OF THE RETAINAGE TO HAVE THE REPLACEMENTS MADE IN ACCORDANCE WITH THE SPECIFICATIONS BY ANOTHER
- 11. NO EXCAVATION OR PLANTING PIT SHALL BE LEFT UNATTENDED OVERNIGHT.
- 12. PLANT MATERIAL QUANTITIES PROVIDED IN THE PLANT LIST ARE FOR REFERENCE ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR THE ACTUAL PLANT MATERIAL COUNTS. DISCREPANCIES BETWEEN QUANTITIES SHOWN ON THE PLANTING PLAN AND THOSE IN THE PLANT LIST SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION. IF CLARIFICATION OF DISCREPANCIES FROM THE LANDSCAPE ARCHITECT IS NOT POSSIBLE, THEN QUANTITIES SHOWN ON THE PLANTING PLAN SHALL TAKE PRECEDENCE.
- 13. REMOVE BURLAP/STRAPPING AND WIRE BASKET FROM TOP 1/3 OF ROOT BALL ON TREES.
- 14. REMOVE PAPER, PLASTIC OR METAL AROUND ROOT BALLS OF SHRUBS.
- 16. WATER ALL PLANT MATERIAL IMMEDIATELY AFTER PLANTING.
- 17. TREE GUYING MATERIAL SHALL BE 'ARBOR-TIE' OR EQUIVALENT.
- 18. ALL PLANT BEDS TO BE MULCHED WITH 3" OF DOUBLE SHREADED HARDWOOD MULCH UNLESS OTHERWISE SPECIFIED.
- 19. ALL AREAS OF PLANTING, INCLUDING AREAS OF GRASS SEEDING AND SOD, SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AND SHALL BE PROVIDED APPROPRIATE SOIL FOR THE PROPOSED PLANTINGS.
- ALL EXISTING VEGETATION WITHIN AREAS TO BE PLANTED, SODDED AND/OR SEEDED SHALL BE REMOVED PRIOR TO PLANTING, SODDING, AND SEEDING. ALL AREAS INDICATED TO BE GRASS SEED SHALL BE SEEDED PER GRASSING SPECIFICATIONS FOR PERMANENT STABILIZATION.



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REVISION HISTORY

PLANT SCHEDULE, DETAILS AND NOTES

8. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP THE SITE AT THE COMPLETION OF THE

Magnolia grandiflora / Southern Magnolia

Ulmus parvifolia `Allee` / Allee Lacebark Elm

Juniperus virginiana `Silicola` / Southern Red Cedar

BOTANICAL / COMMON NAME

| Quercus nuttallii / Nuttall Oak

BOTANICAL / COMMON NAME

BOTANICAL / COMMON NAME

Ilex vomitoria / Yaupon Holly

Myrica cerifera / Wax Myrtle

CITY ADMINISTRATOR MIKE COCHRAN



CITY COUNCIL
JEFF C. CHANDLER, MAYOR PRO-TEM
MIKE DYSON
KEVIN HEDGPETH
JOEL E. HODGES
DAN OWENS
MICHAEL SALLY

Staff Report

To: The Hanahan Planning Commission

Cc: Larry Sturdivant, Building Official; Roger Hunt, Stanley Martin Homes;

Abigail Richardson, Seamon Whiteside

From: Jeff Hajek, Planner/Economic Development Director

Date: August 4, 2020

Re: Preliminary Land Development Plan Approval for Parker's Gas Station

Applicant/Owner: Buckel Design Group, Mike Hull

Location: Northwest quadrant of Tanner Ford Boulevard-Tanner Hall Boulevard

intersection

Tax Map Number(s): 259-00-00-180

Approval Requested: Preliminary Development Plan Approval Existing Zoning/Land Use: General Commercial (CG)/Undeveloped

General Application Overview and Background

The proposed site is located on the northwest corner of Tanner Ford Boulevard and Tanner Hall Boulevard, adjacent to the Hanahan Crossing shopping center (BiLo Grocery Store). The existing site is currently undeveloped land.

The applicant is proposing to create a gas station with a retail sales area (Parker's Kitchen) of 5,330 SF, which will be setback near the rear of the property, approximately 130' from the front property line. The single row 6 Multiple Product Dispenser (MPD) canopy will be setback approximately 45' from the Tanner Hall Boulevard right-of-way.

Proposed access will be primarily off through the ingress/egress easement into the Hanahan Crossing shopping center with a two-way entrance/exit onto the property. Additionally, there will be a right in/right out located immediately off of Tanner Ford Boulevard.

Utilities for Charleston Water System (CWS), Berkeley County Water and Sanitation Authority (BCWS) and Dominion Power are existing and little infrastructure enhancements, other than connections and/or extensions will be needed.

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General Conformance Analysis

The following report utilized the 2008 Hanahan Zoning Ordinance, specifically Section 4.5.9 (Standards By Zone: General Commercial) to analyze the submitted preliminary land development plan for the Parker's Kitchen Gas Station.

Per the Zoning Ordinance, staff finds the following general conformance standards for the proposed site:

- 1. **Lot size**—The proposed meets the minimum of 6,000 SF with a total of 1.92 acres (83,635 SF).
- 2. Lot Width— The proposed parcels meet the minimum width of 18'
- 3. **Density** The density requirement of seven (7) units per acre only applies to residential uses in the CG district.
- 4. **Setbacks**—The proposed structures on site, meets the required setbacks:

Front: 25'Side: 5'.Rear: 15'

The proposed development is immediately flanked by a General Commercial (CG) zoned property to the east (Hanahan Crossing) and one Multifamily Residential (RM) property to the west and north of the subject parcel.

Preliminary Plat Requested Corrections

Given that the submitted preliminary subdivision plat meets general zoning conformance, there are other pertinent and required elements needed to have a complete submittal. These documentation requirements may be found in the 2008 Zoning Ordinance, Sections 3.2, 4.3 and 5.12. The following will be needed for approval;

Required Contents of the Preliminary Plan (Section 3.2)

Existing Site Information

 Section 3.2(B)(3)(g): Tree survey shows all trees that currently exist on the property, however, applicant will need to show which trees will remain protected and which trees are slated to be removed for development.

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Additionally, applicant must provide the amount of subsequent tree mitigation for the trees slated for removal. For reference, see Section 7.7 (Tree removal mitigation) on what is required mitigation. Should there not be enough room on-site to provide said mitigation, a fee-in-lieu of can be provided to the Hanahan Community Tree Planting Fund (Section 7.8).

Proposed Land Development Information

- 1. Section 6.4.2 (Landscaping provisions for certain land uses (Commercial and Industrial): If a commercial use abuts a residential district, the developer of the commercial property is required to plant a landscape buffer. Since the proposed development abuts a future multifamily residential use, the applicant is required to install one of the following buffer types:
 - a. A landscaped buffer ten (10) feet wide that shall consist of at least five (5) canopy trees, seven (7) understory trees, and thirty (30) shrubs per one hundred (100) linear feet of buffer.
 - b. A landscaped buffer eight (8) feet wide with the inclusion of a berm, with a maximum slope of two to one (2:1), that is at least two (2) feet in height. The landscaping shall consist of at least five (5) canopy trees, seven (7) understory trees, and thirty (30) shrubs per one hundred (100) linear feet of buffer
 - c. A natural, undisturbed vegetative buffer at least eight (8) feet wide, where it is demonstrated that the minimum plantings are retained and provide a year-round opaque buffer.

After talking with the owner (Parker's), the seller (Tanner Real Estate, LLC) of the property negotiated between Parker's and the future multifamily tenant, that the multifamily development will install the buffer as a condition of the sale. This was Parker's request because the way that the seller had subdivided the properties did not leave them ample room for their preferred layout.

Staff has requested said agreement between Tanner Real Estate, LLC and Parker's Kitchen to ensure that following completion of either development, that the required buffer will be planted. Should this not be possible, staff also recommends that a letter of agreement is sent between the two parties, where Parker's Kitchen agrees to pay for and install the landscape

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buffer on the multifamily development property once the apartment community has neared completion on their development.

Other

Traffic Study

Per Section 3.3, a traffic study is required as part of a complete preliminary land development plan application or zoning permit for any land development projected to generate one hundred (100) or more peak-hour vehicle trips at any intersection at the perimeter of the development.

This was requested by the City to the design professional (Todd Salvagin) on June 1, at the early conceptual stages of the project. Per the applicant, Berkeley County engineer Kevin Kubiak requested that they currently not conduct a traffic study at this moment since school was out of session and would not reflect accurate counts. Furthermore, the County also stated that the forecasted amount of trips that will be generated will not require additional infrastructure to be installed and the deceleration lane off of Tanner Ford Boulevard would be adequate for the development. E-mail correspondence will need to be provided from the County to verify stated information.

Fire/EMS Public Safety

The Fire Chief is requesting that the emergency gas shut off valve be shown on the plans, as he was unable to find said valve with what was submitted. Additionally, he has suggested another fire hydrant be located in the northeast part of the property, adjacent to the ingress/egress entrance to the gas station, to increase fire safety of the gas station and adjacent shopping center.

Submittal to Respective Utilities

The applicant will need to ensure that the preliminary plan has been submitted to Charleston Water System (CWS), Berkeley County Water and Sanitation (BCWS) and Berkeley County Engineering for general review and review for stormwater management.

Copies of the eventual construction plans will also need to be submitted to Berkeley County Engineering. Comments received by said agencies may affect changes to the preliminary plan.

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Recommendation

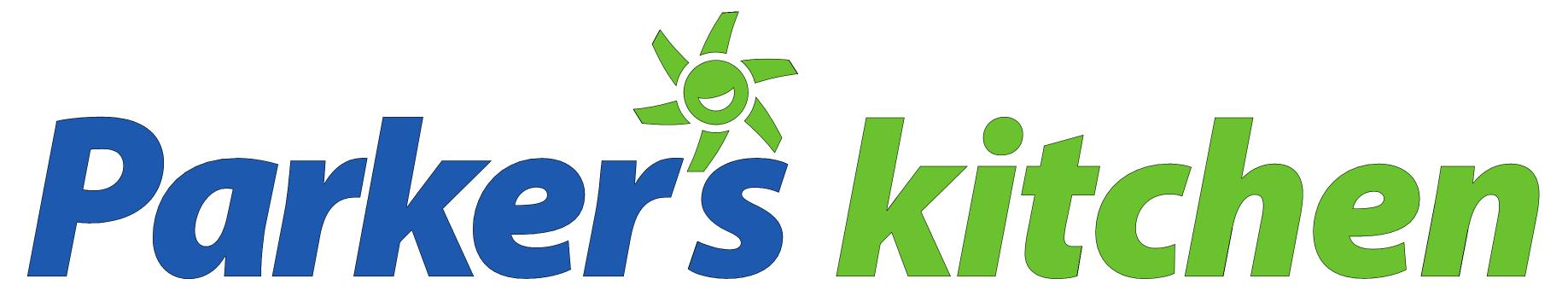
This plan constitutes a preliminary plat subdivision submittal. Approval of this plan does not imply approval of permits to begin construction. Approval of this application will enable the developer to seek permits for land disturbance and installation of necessary infrastructure to serve this phase of the project.

Subsequent to approval to install infrastructure, the applicant must submit a final plat that depicts all easements provided for its maintenance, whether by a public agency or property owners association. Such plat must be approved and recorded prior to transfer of individual lots depicted on this plan.

Based upon staff's review, the City recommends that the Planning Commission *approve* the submitted preliminary land development plan, *with* conditions. Said conditions include:

- 1. Submitting all requested information in the "Preliminary Plat Requested Corrections" section of this staff report.
- 2. Submitting all "Other" requested information in this staff report, which includes: "Traffic Study" and "Fire/EMS Public Safety"
- 3. Receipt of recommendation letters from CWS, BCWS and Berkeley County Engineering.

PROPOSED:



PARKER'S STORE #89 TANNER FORD BLVD HANAHAN, BERKELEY COUNTY, SC

UTILITY/GOVERNMENTAL CONTACT LIST:

GAS COMPANY:

SC ELECTRIC & GAS - DOMINION 6099 FAIN STREET CHARLESTON, SC 29406 PHONE: 843-815-8816 CONTACT: LUCAS KINARD

TELEPHONE COMPANY:

AT&T PHONE: 843-722-5081 CONTACT: DEBBIE MCCANDLESS

ELECTRIC COMPANY:

SC ELECTRIC & GAS - DOMINION ENERGY 2390 W AVIATION AVE NORTH CHARLESTON, SC 29406 PHONE: 843-576-8737 CONTACT: WILL REID

SANITARY SEWER COMPANY:

BERKELEY COUNTY WASTEWATER 1003 HWY 52 MONCKS CORNER, SC 29461 PHONE: 843-719-2331 CONTACT: TOMMY HARRIS LOCAL PLANNING AND ZONING OFFICE

CITY OF HANAHAN PLANNING AND ZONING 1255 YEAMANS HALL ROAD HANAHAN, SC 29410 PHONE: 843-885-5045 CONTACT: JEFF HAJEK

DEPARTMENT OF TRANSPORTATION

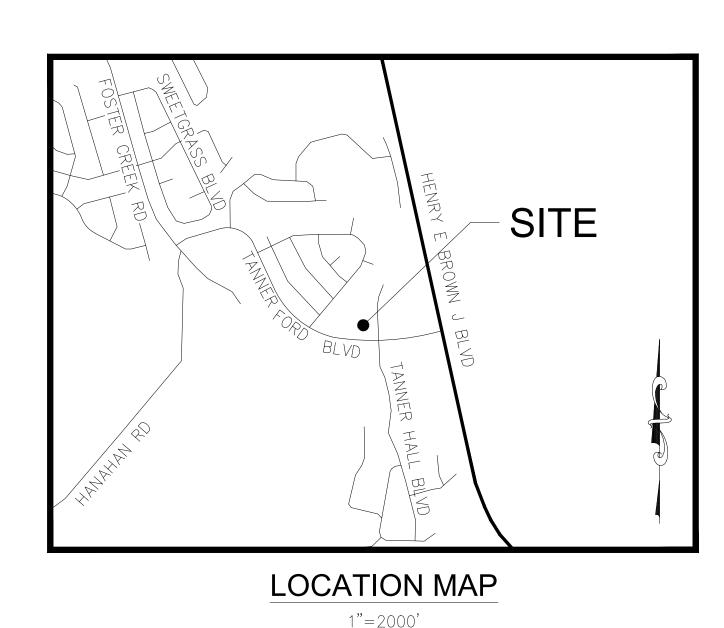
SCDOT

FIRE DEPARTMENT

CITY OF HANAHAN FIRE DEPARTMENT PHONE: 843-576-5869 CONTACT: JOSEPH BOWERS (TO BE CONFIRMED)

WATER COMPANY:

CHARLESTON WATER SYSTEM 103 ST. PHILLIPS STREET CHARLESTON, SC 29401 PHONE: 843-727-6869 CONTACT: LYDIA OWENS TMS 259-00-00-180



		SHEET INDEX
	Page Num.	Description
1	C-0	COVER SHEET
2	1 OF 3	BOUNDARY AND TOPOGRAPHIC SURVEY
3	2 OF 3	BOUNDARY AND TOPOGRAPHIC SURVEY
4	3 OF 3	BOUNDARY AND TOPOGRAPHIC SURVEY
5	C-1	SITE PLAN
6	C-2	GRADING PLAN
7	C-3	UTILITY PLAN
8		TREE PROTECTION PLAN
9		LANDSCAPE PLAN
10		LANDSCAPE DETAILS

ENGINEER-

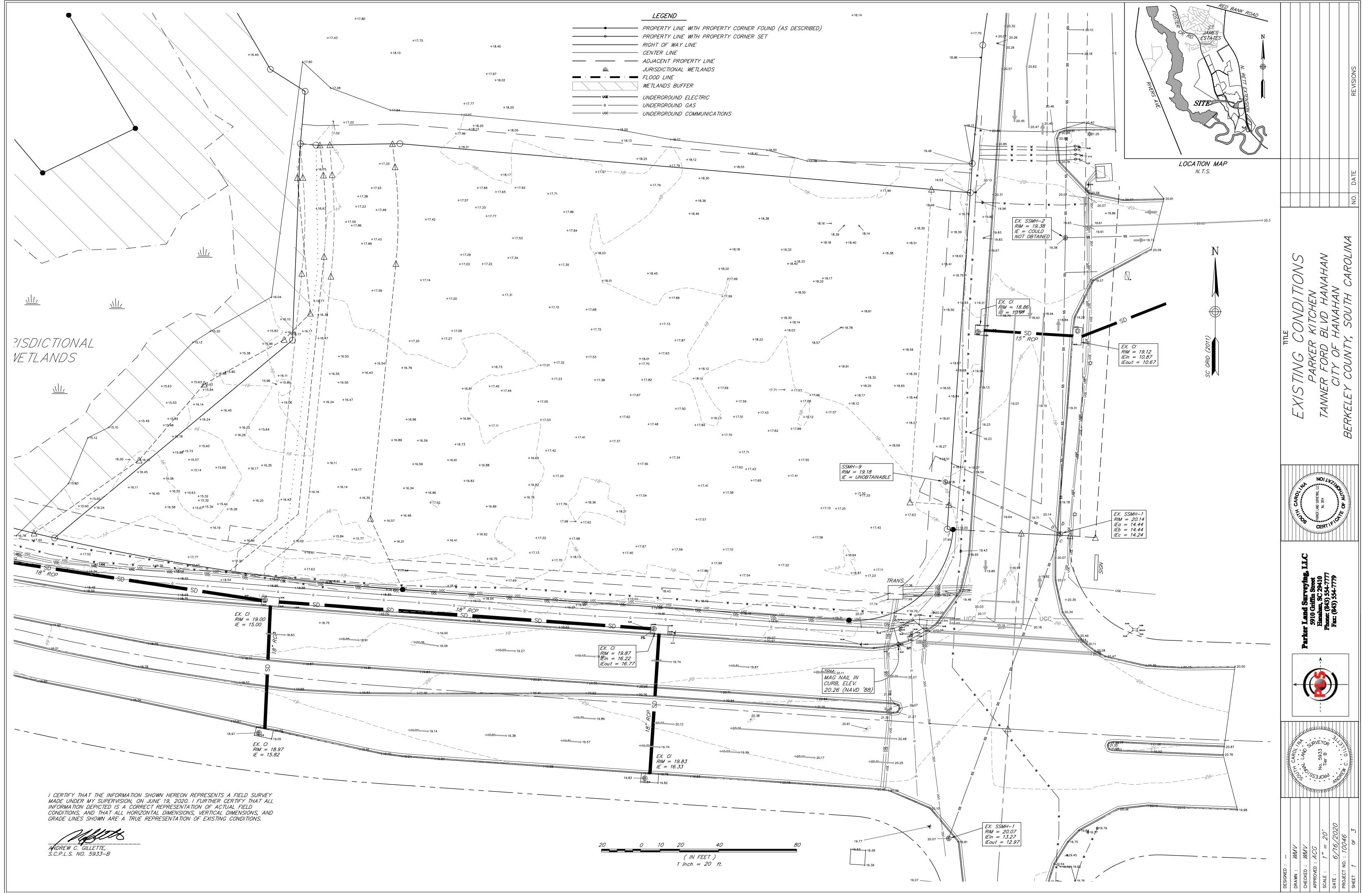


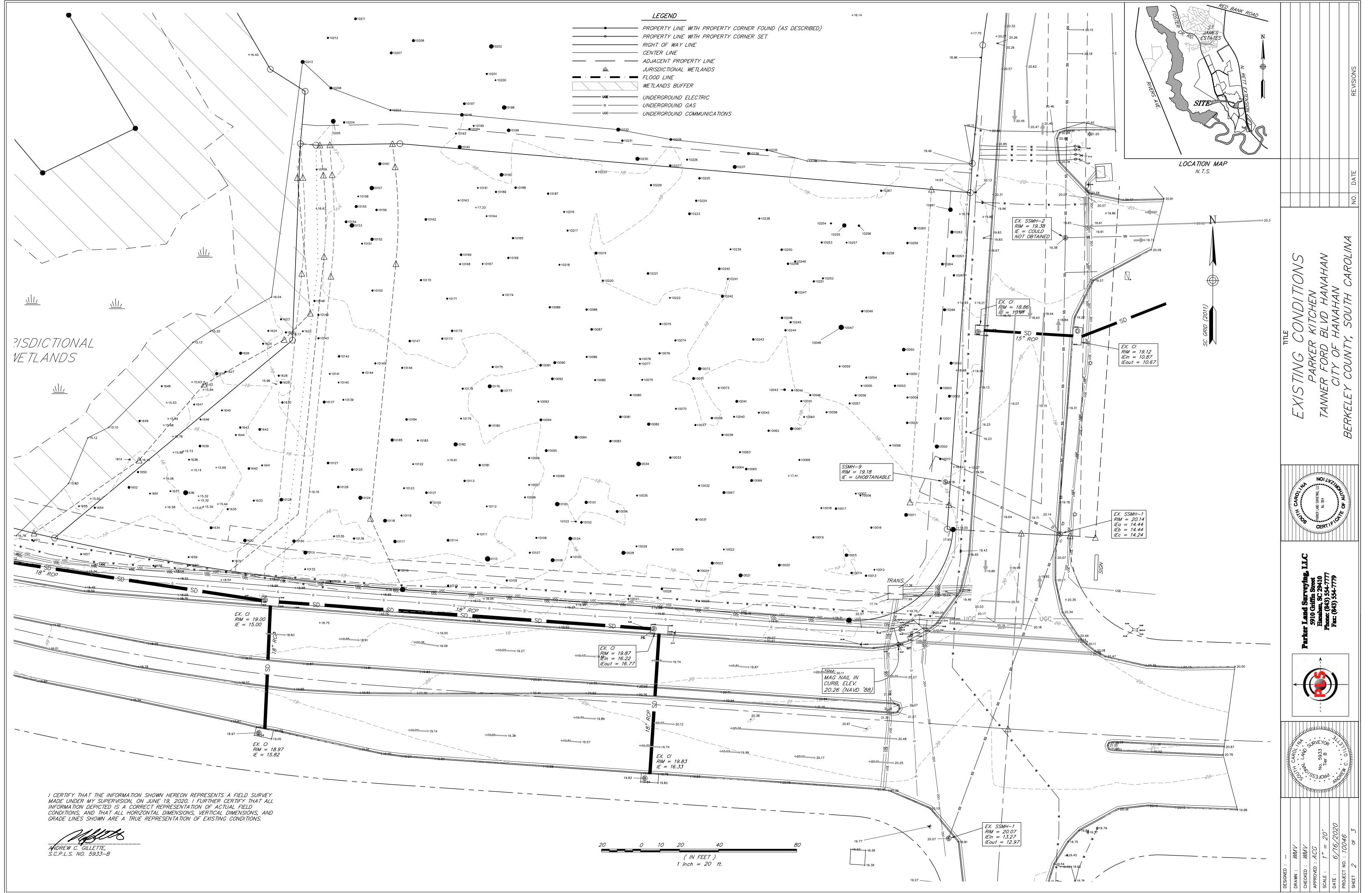
3471 DONAVILLE ST DULUTH, GA 30096 PHONE: 404-567-5701 FAX: 404-567-5703 WWW.BDGSE.COM



DEVELOPER-DRAYTON-PARKER COMPANIES, LLC 17 W McDONOUGH ST SAVANNAH, GA 31401 PHONE: (843) 224-4742 CONTACT: THOMAS MATHEWES

TMS 259-00-00-180 STORE REVISION DRAWN **CHECKED** SSUED DATE 7/9/2020 **ISSUED FOR** CONCEPTUAL REVIEW 18-153 FILE 18-153 Main





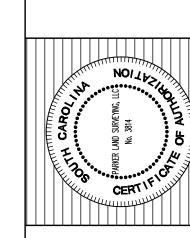
	PARK	ERS KITCHEN T	REE TABLE	
Tree #	NORTH	EAST	Elev.	SIZE & DESC.
1611	401779.84	2306331.51	17.44	10" PINE
1614 1617	401821.07 401865.12	2306381.51 2306426.08	16.00 16.08	10" OAK 18" PINE
1620	401886.23	2306461.56	16.04	11" PINE
1622	401886.80	2306470.21	16.17	8" OAK
1623	401892.93	2306459.07	16.10	10" OAK
1624	401887.02	2306452.50	15.83	9" PINE
1625	401880.39	2306449.86	15.96	10" PINE
1626	401875.55	2306438.35	15.38	17" PINE
1627	401866.03	2306430.59	15.80	10" OAK
1628 1629	401864.04 401860.55	2306457.86 2306459.00	16.11 15.89	11" GUM 14" OAK
1630	401850.32	2306459.76	16.06	12" GUM
1631	401769.09	2306434.37	17.31	9" PINE
1632	401779.60	2306440.54	16.86	15" 5" OAK
1633	401800.03	2306445.09	16.20	10" PINE
1634	401786.14	2306423.22	16.19	16" GUM
1635	401795.65	2306431.71	16.26	11" GUM
1636 1637	401804.07 401804.86	2306410.14	15.63 16.50	28" PINE 8" PINE
1638	401821.00	2306411.90	15.57	9" OAK
1639	401827.99	2306417.49	15.60	14" OAK
1640	401816.48	2306442.58	16.17	14" GUM
1641	401818.09	2306449.32	16.35	9" OAK
1642	401836.49	2306448.12	15.64	14" GUM
1643	401837.48	2306438.15	16.20	11" OAK
1644	401833.62	2306435.89	16.28	9" OAK
1645 1646	401846.27 401841.62	2306428.76 2306417.78	16.45 16.24	9" OAK 9" CHERRY
1647	401849.30	2306414.52	16.14	9" SYCAMORE
1648	401858.66	2306397.95	15.63	9" GUM
1649	401840.86	2306386.59	15.49	12" OAK
1650	401814.66	2306385.75	16.45	11" GUM
1651	401803.65	2306391.89	16.45	8" OAK
1652	401806.81	2306381.12	16.11	15" OAK
1654	401796.42 401797.17	2306363.60 2306355.47	16.24 15.90	11" PINE
1655 1657	401797.17	2306355.47	17.52	8" PINE 8" PINE
1658	401766.71	2306393.70	18.26	10" PINE
1659	401771.08	2306411.71	17.78	9" GUM
1660	401766.94	2306412.34	17.93	8" PINE
10000	401827.76	2306795.07	18.27	5/8/10 OAK
10001	401842.09	2306797.09	18.61	12 PINE
10002	401853.51 401857.69	2306801.54	18.84 18.55	16 PINE
10003	401857.89	2306797.25 2306780.04	18.44	13 PINE 10 PINE
10005	401839.88	2306779.92	18.27	13 PINE
10006	401828.28	2306771.20	18.09	8 OAK
10007	401803.62	2306753.55	17.30	8 PINE
10008	401802.65	2306755.93	17.33	8 PINE
10010	401821.40	2306796.87	18.51	12 PINE
10011	401792.73	2306779.32	17.63	21 PINE
10012 10013	401764.61 401761.56	2306763.10 2306758.80	17.11 17.24	8 PINE 12 PINE
10013	401761.96	2306758.80	16.87	13 PINE
10015	401772.11	2306748.75	16.94	19 PINE
10016	401786.21	2306761.54	17.42	11 PINE
10017	401795.93	2306743.40	17.20	13 PINE
10018	401796.21	2306735.93	17.10	9 PINE
10019	401781.21	2306731.86	17.56	11 OAK
10020	401766.98	2306714.37	17.22	15 OAK 4/8/10 OAK
10021	401761.73	2306694.47	17.54	
10022 10023	401775.02 401767.99	2306685.94 2306680.02	17.10 17.99	8 OAK 17 PINE
10024	401764.12	2306672.92	17.86	13 PINE
10025	401748.53	2306673.23	18.10	9 PINE
10026	401754.81	2306654.20	18.43	13 PINE
10027	401749.65	2306637.03	19.02	9 PINE
10028	401773.27	2306634.49	17.40	5/7/11 OAK
10029	401776.59	2306641.20	17.67	8 OAK
10030 10031	401775.00 401790.33	2306659.83 2306671.91	17.59 17.57	9 OAK 6/6 OAK
	_ 		41.41	-,, w\
10032	401807.69	2306673.28	17.41	9 OAK

10033	401822.08	2306658.57	17.34	12 OAK
10034	401818.83	2306642.21	17.56	9/17 OAK
10035	401802.63	2306641.46	17.54	9 OAK
10036	401794.49	2306631.29	18.21	16 PINE
10037	401838.75	2306671.39 2306679.80	17.85 18.24	11 PINE
10038	401842.31 401833.71	2306685.25	17.70	12 PINE 12 PINE
10040	401842.98	2306691.19	17.51	9 PINE
10041	401850.89	2306692.57	17.59	16 PINE
10042	401845.10	2306703.87	17.43	10 PINE
10043	401856.86	2306717.08	17.71	13 PINE
10044	401856.53	2306720.97	17.93	10 PINE
10045 10046	401851.00 401854.08	2306725.63 2306730.21	17.88 17.96	10 PINE 10 PINE
10048	401834.08	2306746.97	18.78	20 PINE
10048	401888.81	2306746.08	18.58	9/10/11 POPLAR
10049	401897.07	2306756.87	18.61	12 PINE
10050	401877.39	2306778.11	18.59	4/4/5/7 OAK
10051	401864.93	2306780.01	18.35	11 PINE
10052	401870.44	2306802.43	18.67	17 PINE
10053 10054	401858.85 401863.07	2306773.64 2306758.94	18.65 18.32	12 PINE 10 PINE
10055	401858.86	2306756.50	18.25	8 PINE
10056	401853.97	2306753.47	18.17	10 PINE
10057	401849.82	2306750.41	18.12	4/6 OAK
10058	401845.29	2306738.59	17.57	4/6 OAK
10059	401868.80	2306745.29	18.91	8 PINE
10060	401842.89	2306727.07	18.12	8 OAK
10061	401836.87 401835.87	2306720.63	17.89	17 PINE
10062 10063	401835.87	2306708.88 2306694.21	17.62 17.71	12 PINE 10 PINE
10064	401817.08	2306690.74	17.62	12 PINE
10065	401816.21	2306697.42	17.43	14 PINE
10066	401810.33	2306700.18	17.65	16 PINE
10067	401804.16	2306685.98	17.56	16 PINE
10068	401820.89	2306724.67	17.55	10 OAK
10070 10071	401847.08 401862.60	2306661.39 2306670.44	17.50 18.14	9 PINE
10071	401862.60	2306670.44	18.12	16 PINE 18 PINE
10073	401857.79	2306683.32	17.69	8 PINE
10074	401882.13	2306661.15	17.87	11 PINE
10075	401890.50	2306653.48	17.73	11 OAK
10076	401875.52	2306652.99	17.63	6/6 OAK
10077	401870.17	2306642.86	17.70	9 PINE
10078 10079	401872.65 401861.91	2306643.09 2306644.14	18.01 17.82	11 PINE 9 PINE
10079	401854.09	2306638.24	17.67	10 PINE
10081	401842.93	2306632.99	17.62	14 PINE
10082	401839.20	2306647.42	17.48	18 PINE
10083	401830.50	2306627.87	17.37	13 PINE
10084	401832.44	2306610.26	17.42	17 PINE
10085	401861.79	2306619.99	17.38	10 PINE
10086 10087	401873.65 401887.75	2306615.65 2306618.20	17.53 17.72	10 PINE 14 OAK
10087	401887.79	2306615.64	17.68	14 OAK 12 OAK
10089	401899.08	2306596.78	17.15	12 OAK
10090	401870.73	2306599.28	17.33	16 PINE
10091	401869.37	2306592.08	17.01	14 PINE
10092	401862.42	2306598.08	17.23	15 PINE
10093	401850.77	2306590.88	17.05	9 PINE
10094 10095	401841.41 401825.65	2306592.20 2306594.94	17.03 17.42	15 PINE 16 PINE
10095	401821.85	2306586.18	16.69	10 PINE
10097	401808.09	2306586.21	16.82	8 PINE
10098	401801.70	2306584.03	16.76	9 PINE
10099	401812.65	2306598.87	17.20	9 PINE
10100	401798.24	2306600.55	17.79	25 PINE
10101 10102	401799.14 401788.90	2306615.41 2306612.97	18.36 17.62	18 PINE 14 PINE
10102	401788.90	2306612.97	17.62	5/5 OAK
10103	401780.56	2306607.23	17.98	21 PINE
10105	401771.13	2306607.78	18.13	8 OAK
10106	401769.51	2306598.20	17.70	22 PINE
10107	401773.34	2306586.53	17.13	4/6 OAK
10108	401780.95	2306589.89	17.22	10 PINE

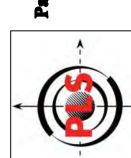
	10109	401759.11	2306574.72	17.69	11 POPCORN
	10110	401770.20	2306564.90	16.75	6/12/13 OAK
	10111	401782.81	2306559.88	16.92	8 OAK
	10112	401797.05	2306564.47	16.89	8 PINE
	10113	401810.15 401779.70	2306553.09 2306544.62	16.83 16.41	12 OAK 15 PINE
	10115	4017756.44	2306544.68	18.41	13 PINE
	10116	401764.18	2306519.35	17.44	11 PINE
	10117	401779.11	2306517.41	16.21	19 PINE
	10118	401789.75	2306512.30	16.57	21 PINE
	10119	401792.40	2306520.79	16.48	10 OAK
	10120	401799.00	2306535.73	17.02	12 OAK
	10121 10122	401804.08	2306533.54	16.87	14 OAK
	10122	401818.74 401806.40	2306528.71	16.60 16.34	8 OAK 9 OAK
	10124	401801.46	2306499.67	16.35	23 OAK
	10125	401815.93	2306495.55	16.17	14 PINE
	10126	401807.01	2306488.38	16.14	14 OAK
	10127	401819.32	2306483.13	16.11	14 PINE
	10128	401800.54	2306459.21	16.43	20 OAK
	10130	401779.28	2306465.67	16.02	19 OAK
	10131 10132	401773.38 401764.87	2306471.51 2306471.39	16.61 17.63	22 PINE 8 PINE
	10132	401758.07	2306480.56	18.19	8 PINE
	10134	401758.70	2306484.39	18.42	10 PINE
	10135	401781.75	2306486.18	15.84	8 OAK
	10136	401780.61	2306496.46	15.77	12 OAK
	10137	401850.53	2306481.15	16.24	16 OAK
	10139	401851.69	2306490.98	16.47	9 OAK
	10140	401860.55	2306488.55	16.55	8 OAK
	10141	401864.99 401873.95	2306484.02 2306488.75	16.55 16.50	8 OAK 13 OAK
	10142	401883.21	2306478.23	16.47	11 OAK
	10144	401865.54	2306501.06	16.43	10 OAK
	10145	401870.32	2306507.37	16.54	10 OAK
	10146	401868.05	2306521.15	16.79	10 OAK
	10147	401881.79	2306524.99	17.20	13 OAK
	10148	401902.31	2306476.21	16.78	11 PINE
	10149 10150	401895.23 401907.63	2306478.19 2306505.91	16.39 17.59	11 PINE 11 OAK
	10150	401907.65	2306500.56	17.99	9 OAK
	10152	401933.92	2306505.68	17.43	18 PINE
	10153	401941.02	2306495.35	17.87	25 PINE
	10154	401942.88	2306492.38	17.59	15 OAK
	10155	401950.70	2306497.56	17.23	17 PINE
	10156	401948.95	2306507.99	17.48	13 PINE
	10157 10158	401960.18 401955.90	2306505.53 2306498.56	17.93 17.38	25 PINE
	10159	401955.90	2306477.33	16.75	8 OAK 8 PINE
	10161	401972.58	2306509.67	17.33	17 PINE
	10162	401944.09	2306533.24	17.42	14 OAK
	10163	401953.84	2306550.05	17.57	8 OAK
	10164	401945.78	2306564.40	17.77	8 OAK
	10165	401934.52	2306577.91	17.53	12 PINE
	10166	401924.40	2306575.55	17.34	12 PINE
	10167 10168	401921.31 401921.21	2306562.36	17.22 17.03	8 OAK 8 PINE
	10169	401926.01	2306551.31	17.29	14 PINE
	10170	401912.99	2306530.75	17.14	11 OAK
	10171	401903.51	2306544.20	17.20	10 OAK
	10172	401887.02	2306546.72	17.09	6/7 OAK
	10173	401883.00	2306541.69	17.27	5/6 OAK
	10174	401905.38	2306572.87	17.31	8 PINE
	10175 10176	401868.51 401858.59	2306567.47 2306565.95	16.73 17.45	11 PINE 22 PINE
	10176	401856.34	2306572.16	17.45	7/8 OAK
	10177	401857.37	2306552.13	16.81	11 PINE
	10179	401842.05	2306551.30	16.84	8 OAK
	10180	401838.45	2306566.01	17.11	13 PINE
	10181	401818.20	2306560.87	16.88	12 OAK
	10182	401828.85	2306548.46	16.73	7/7/9 OAK
	10183	401830.82	2306529.17	16.59	9 OAK
	10184 10185	401841.61 401831.07	2306523.37 2306516.00	16.96 16.89	13 OAK 6/11 OAK
	10187	401957.30	2306595.90	17.71	12 PINE
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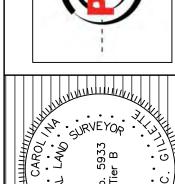
10188	401960.36	2306579.24	17.92	13 PINE
10189	401958.19	2306569.17	17.65	11 PINE
10190 10191	401966.96 401960.26	2306572.01 2306559.89	18.17 17.67	21 PINE 8 OAK
10191	401980.28	2306559.69	18.21	22 PINE
10193	401988.10	2306548.66	17.96	10 OAK
10194	401990.35	2306555.65	18.13	12 PINE
10195	401992.05	2306557.76	18.20	9 PINE
10196	401997.70	2306551.70	17.97	20 PINE
10197	402003.38	2306552.97	17.77	7/8 OAK
10198	402001.46	2306573.37	18.20	25 PINE
10199 10200	401989.75 402015.43	2306575.66 2306568.96	18.05 18.02	20 PINE 8 OAK
10200	402013.45	2306564.46	17.97	11 OAK
10202	402032.73	2306566.76	18.40	25 PINE
10203	402000.06	2306515.11	17.64	10 OAK
10204	401993.81	2306491.36	17.20	12 OAK
10205	401994.39	2306485.81	17.02	7/8/12 OAK
10206	402011.42	2306484.56	17.28	16 OAK
10207 10208	402029.42 402035.71	2306515.52 2306526.87	18.10 17.75	16 OAK 8/9 OAK
10208	402055.71	2306497.21	17.75	15 OAK
10212	402037.11	2306483.07	17.44	11 OAK
10213	402024.80	2306470.08	17.80	22 OAK
10216	401947.96	2306604.11	17.86	9 OAK
10217	401938.38	2306605.87	17.85	10 OAK
10218	401920.87	2306601.70	17.35	9 OAK
10219	401926.85	2306620.42	18.03	16 PINE
10220 10221	401912.69 401916.42	2306623.91 2306647.08	18.01 18.45	11 OAK 14 OAK
10221	401916.42	2306658.32	17.89	8 OAK
10223	401947.00	2306668.35	18.46	15 PINE
10224	401953.67	2306671.80	18.36	12 PINE
10225	401965.18	2306673.46	18.30	13 PINE
10226	401974.70	2306667.12	18.12	10 PINE
10227	401971.67	2306658.49	17.79	3/11 PINE
10228 10229	401985.04 401961.66	2306658.76 2306648.61	18.07 17.79	15 PINE 11 PINE
10229	401961.66	2306641.66	18.25	23 PINE
10231	401984.45	2306633.94	18.13	13 PINE
10232	401990.12	2306631.81	18.00	22 PINE
10233	401968.40	2306620.51	17.97	9 OAK
10235	401979.65	2306708.03	18.50	14 POPLAR
10236	401977.85	2306698.61	18.41	8/9 OAK
10237 10238	401971.00 401944.55	2306691.51 2306704.14	18.55 18.38	22 PINE 10 OAK
10238	401928.77	2306689.39	18.18	9 OAK
10240	401918.80	2306683.61	18.20	5/9 OAK
10241	401913.59	2306687.97	17.99	9 POPLAR
10242	401904.73	2306685.21	17.99	8/9 OAK
10243	401882.62	2306701.05	18.22	13 PINE
10244	401887.31	2306717.53	18.03	12 PINE
10245 10246	401891.41 401893.67	2306720.17 2306715.72	18.14 18.30	11 PINE 13 PINE
10247	401906.71	2306722.91	18.50	15 PINE
10248	401921.39	2306718.81	18.40	13 PINE
10249	401922.54	2306722.50	18.33	11 PINE
10250	401928.58	2306715.59	18.33	5/8 OAK
10251	401912.35	2306732.06	18.20	11 PINE
10252	401913.89	2306736.73	18.17	10 PINE
10253 10254	401932.28 401942.05	2306736.10 2306740.83	18.18 18.16	10 PINE 10 PINE
10255	401941.01	2306747.65	18.39	6/18 PINE
10256	401940.91	2306755.15	18.14	12 PINE
10257	401932.20	2306748.82	18.40	8 PINE
10258	401926.82	2306767.77	18.38	14 PINE
10259	401932.01	2306780.05	18.51	13 PINE
10260	401939.57	2306783.97	18.30	15 PINE
10261	401949.08	2306802.04	18.49	12/14 PINE
10262 10263	401937.60 401925.34	2306802.81 2306803.51	18.39 18.63	4/4/10 OAK 14 PINE
10265	401925.34	2306797.95	18.41	15 PINE
10265	401915.45	2306803.83	18.75	12 PINE
10266	401897.80	2306799.07	18.50	4/6/6 OAK
10267	401958.80	2306766.60	17.96	11 PINE

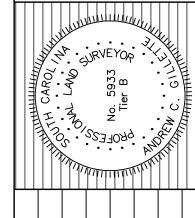
		LOCATION MAP N. T. S.	RED BANK ROAD STER CR. RO. ESTATES N. RETT EXTENSION SITE SITE STATES SITE STATES SITE STATES N. RETT EXTENSION SITE STATES N. RETT EXTENSION SITE STATES SITE STATE	
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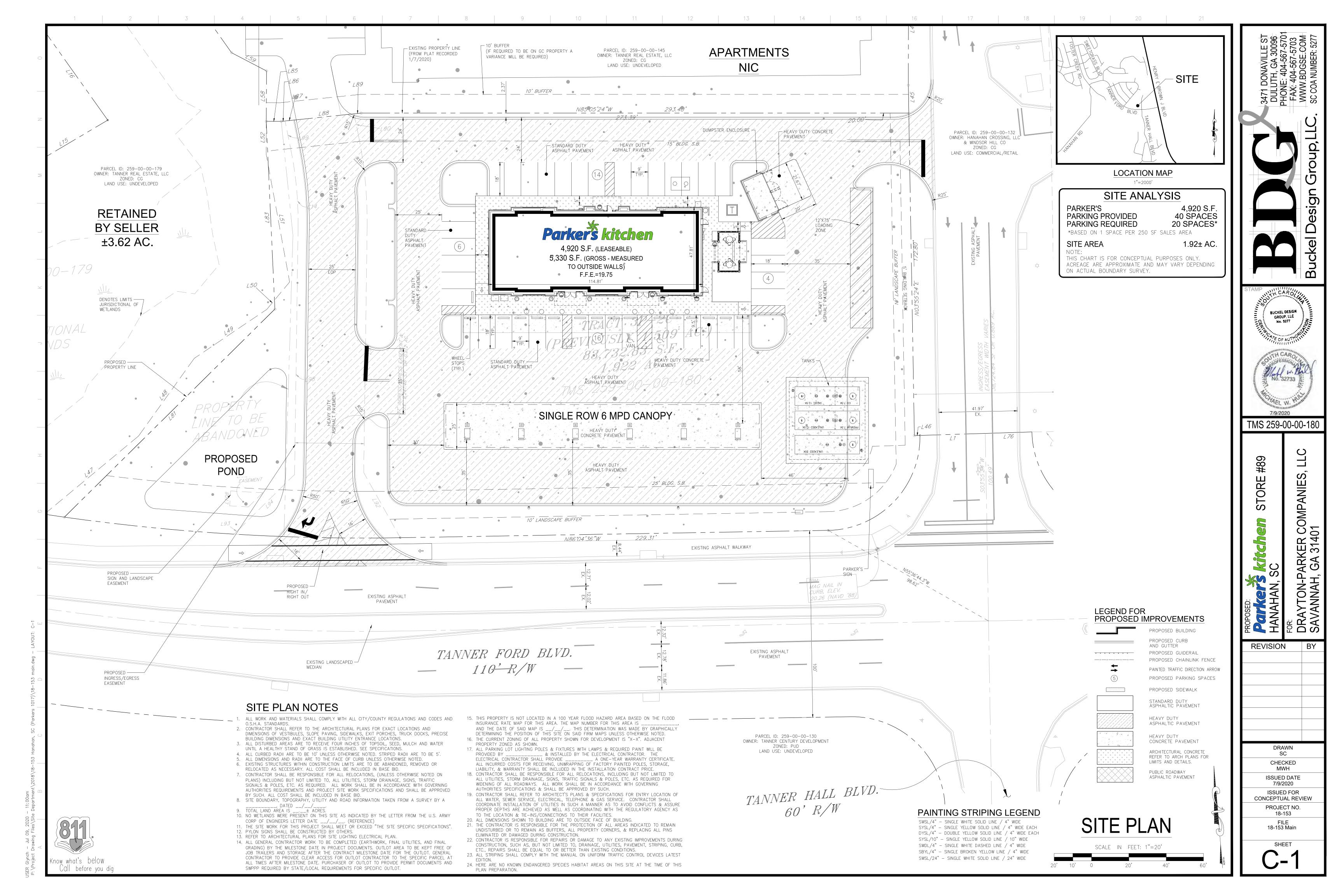


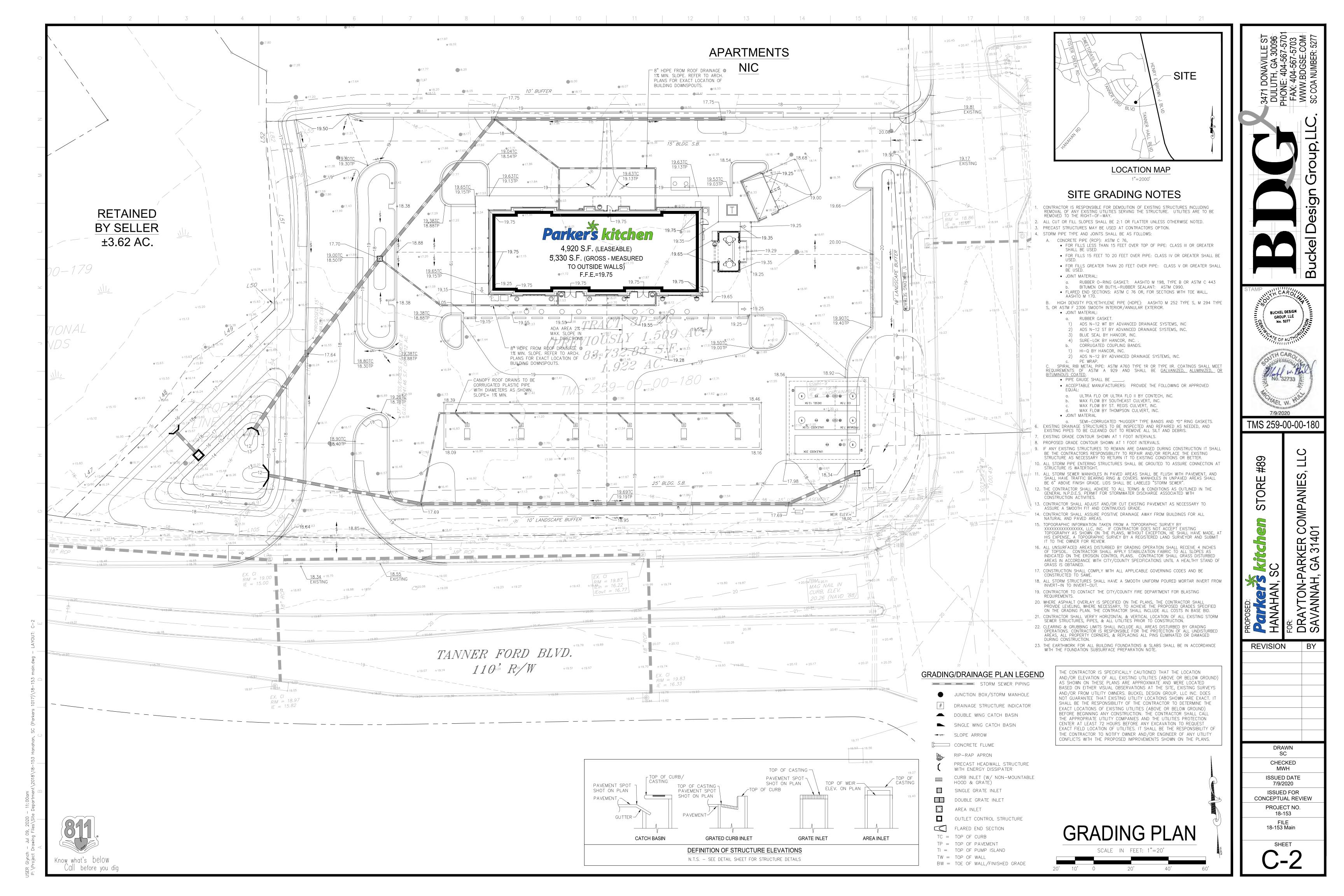


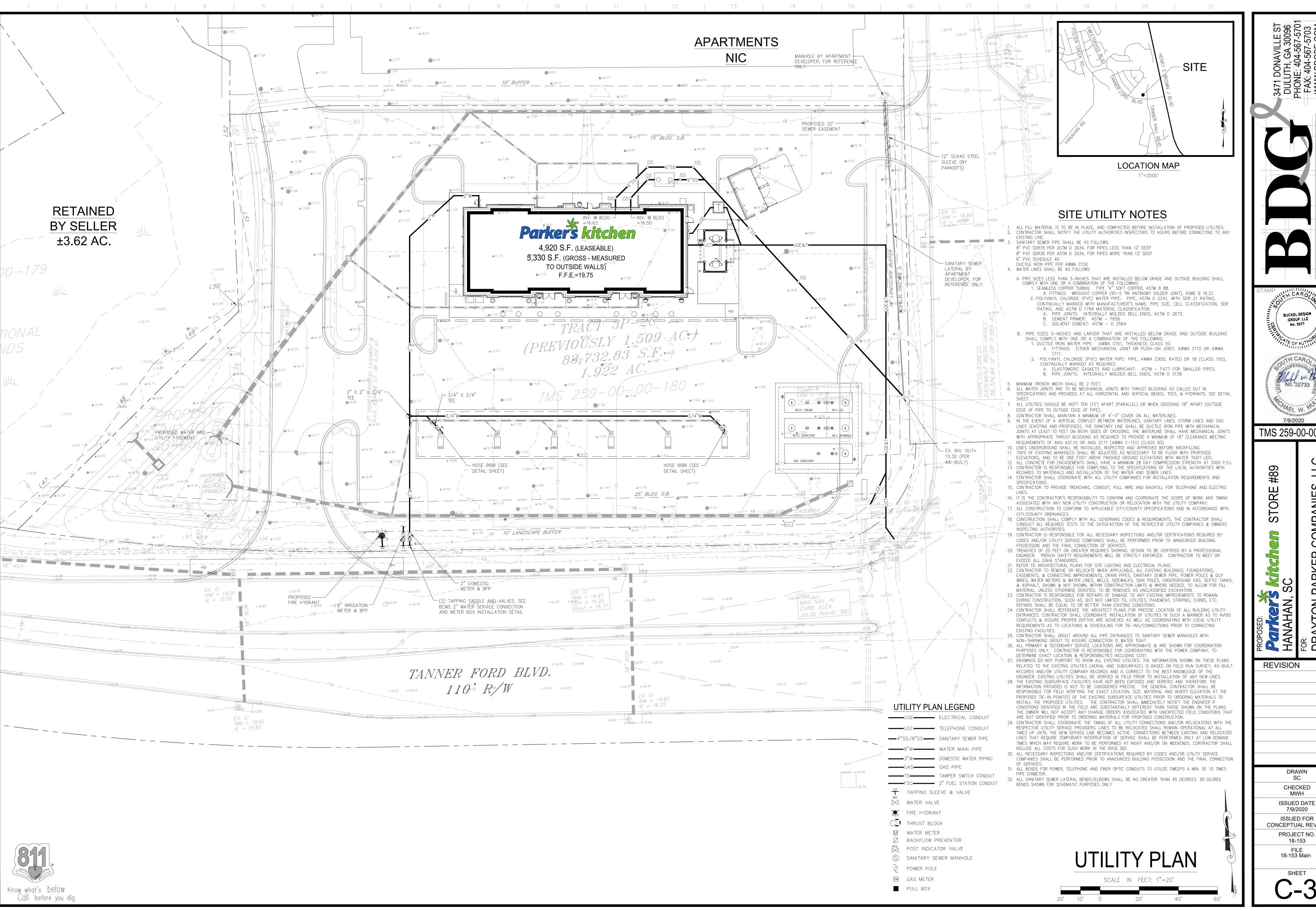


I CERTIFY THAT THE INFORMATION SHOWN HEREON REPRESENTS A FIELD SURVEY MADE UNDER MY SUPERVISION, ON JUNE 19, 2020. I FURTHER CERTIFY THAT ALL INFORMATION DEPICTED IS A CORRECT REPRESENTATION OF ACTUAL FIELD CONDITIONS, AND THAT ALL HORIZONTAL DIMENSIONS, VERTICAL DIMENSIONS, AND GRADE LINES SHOWN ARE A TRUE REPRESENTATION OF EXISTING CONDITIONS.











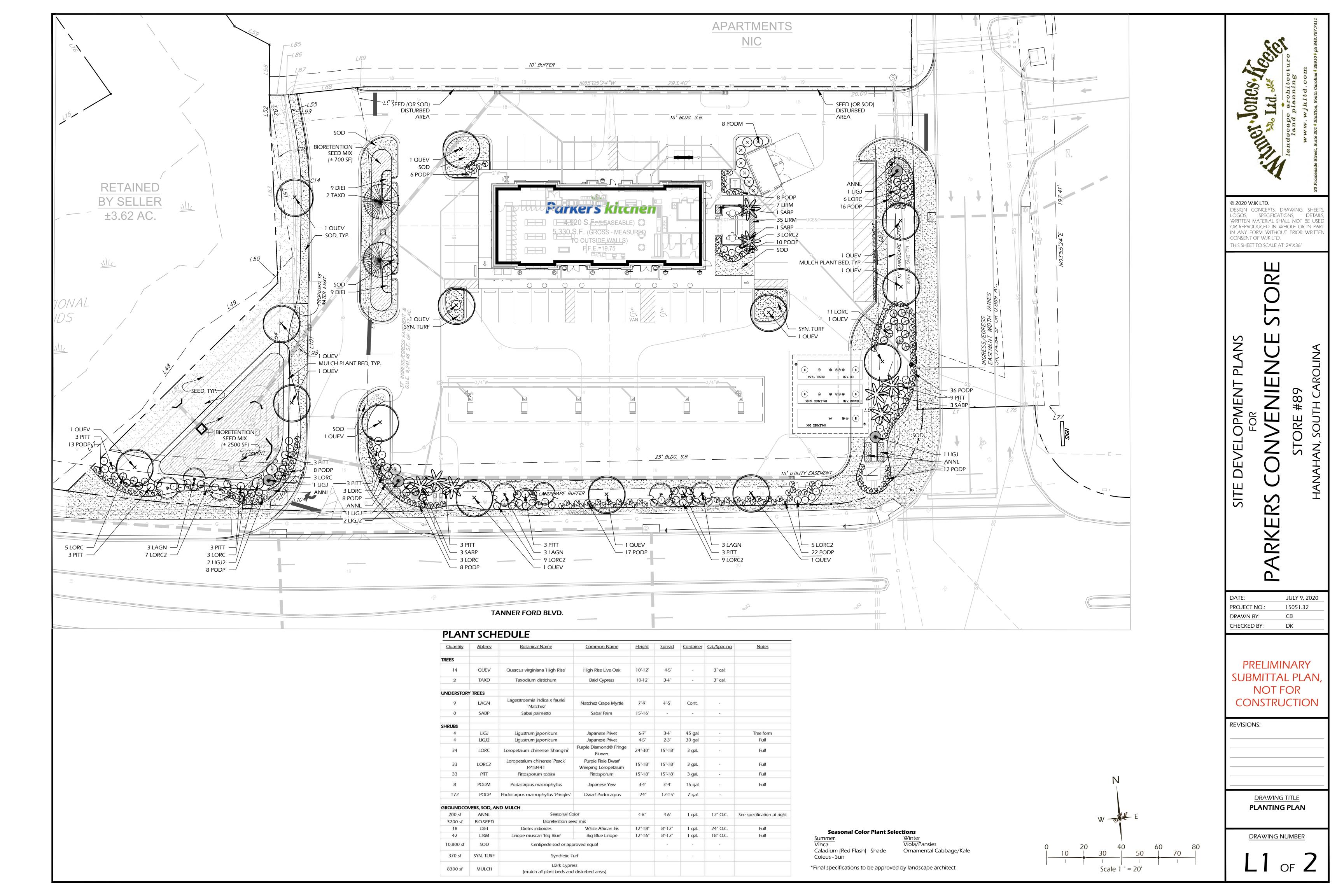
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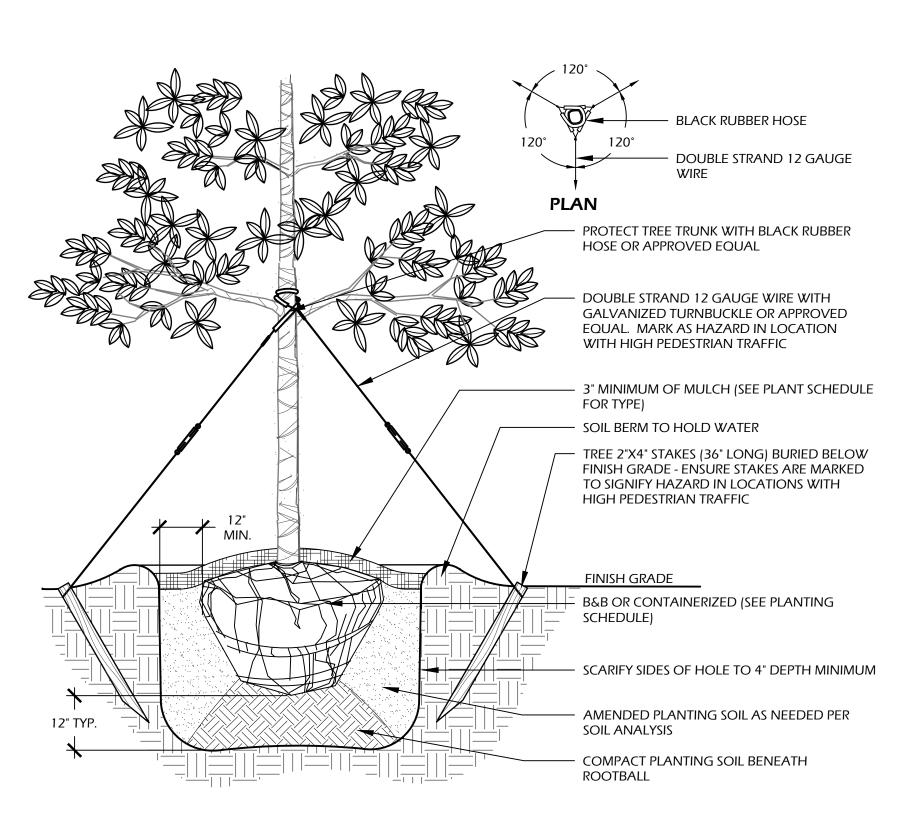
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DRAWN CHECKED ISSUED DATE

7/9/2020 ISSUED FOR CONCEPTUAL REVIEW

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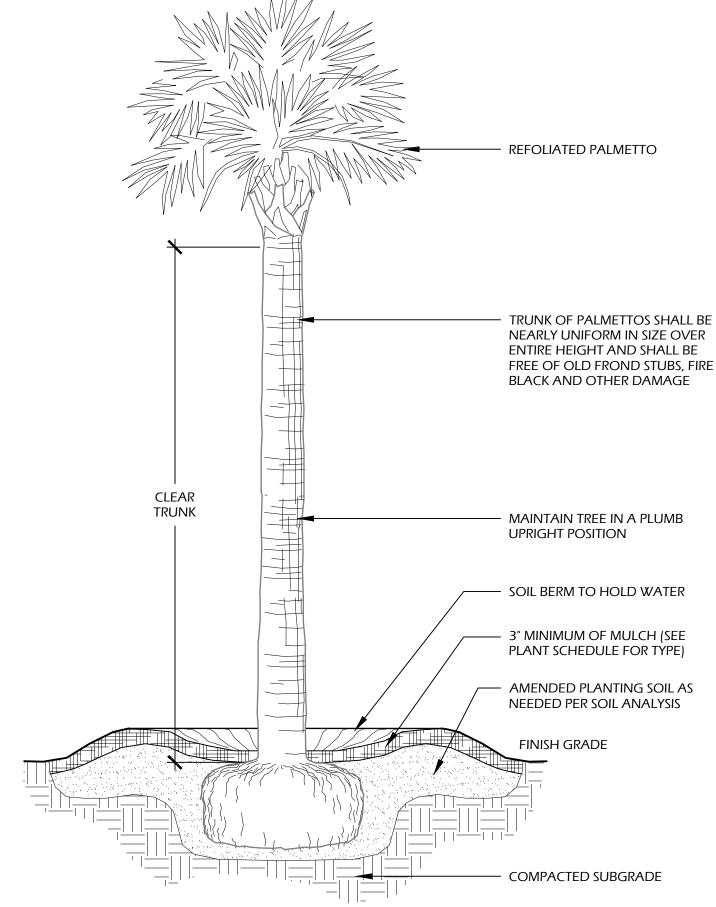




- 1. TREE STAKING OPTIONAL, HOWEVER, LANDSCAPE CONTRACTOR RESPONSIBLE FOR MAINTAINING TREES IN AN UPRIGHT (90 DEGREE, PERPENDICULAR) POSITION FOR 1 YEAR AFTER PLANTING IS COMPLETE OR UNTIL TREE ROOT SYSTEM IS FULLY ESTABLISHED AND STURDY. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER'S REPRESENTATIVE.
- 2. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION. 3. IN SEMI-IMPERVIOUS SOIL CONDITIONS, ROOTBALL ELEVATION SHALL BE 2" ABOVE FINISH GRADE. COORDINATE WITH OWNER'S

TREE PLANTING

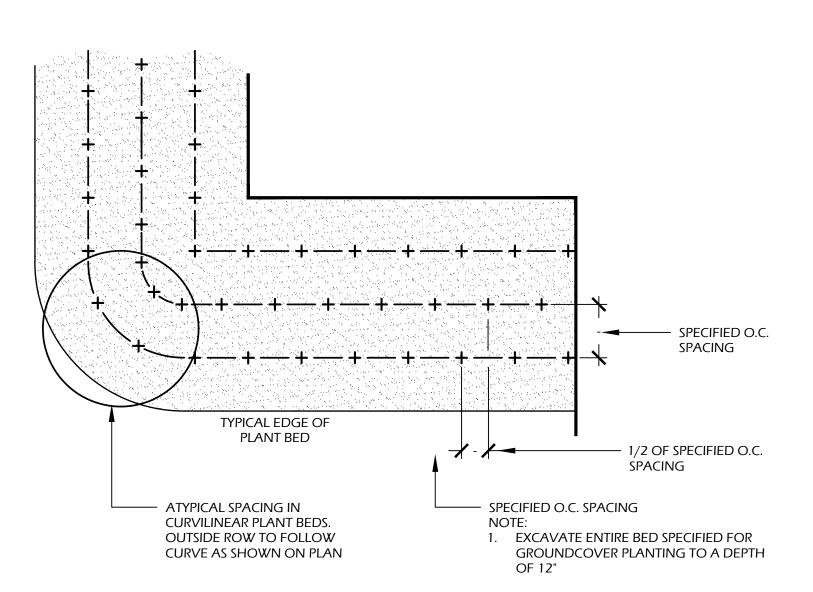
REPRESENTATIVE PRIOR TO SETTING ROOTBALL ELEVATIONS.



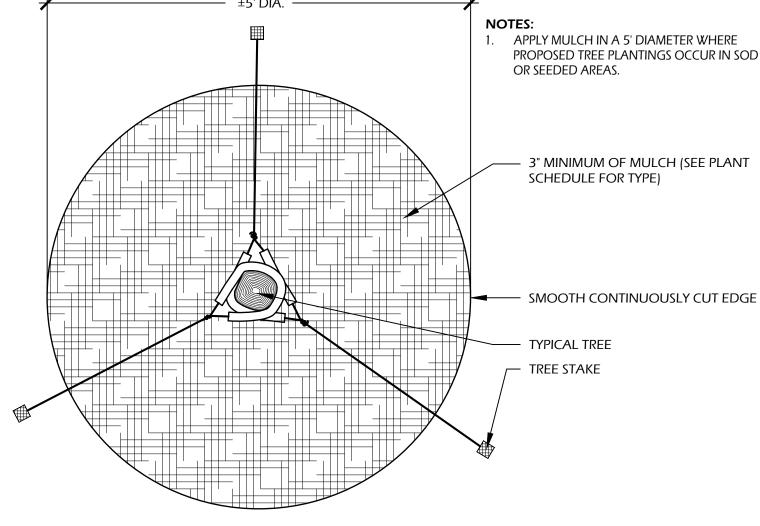
- FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE,
- CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION. SABAL PALMETTOS SHALL BE REFOLIATED, PROTECT CABBAGE HEAD FROM DAMAGE.

PALM TREE PLANTING

TREE STAKING



GROUND COVER PLANTING



PROPOSED TREE PLANTINGS OCCUR IN SOD SMOOTH CONTINUOUSLY CUT EDGE

3" MINIMUM OF MULCH (SEE PLANT SCHEDULE FOR TYPE) SOIL BERM TO HOLD WATER B&B OR CONTAINERIZED (SEE PLANTING SCHEDULE) AMENDED PLANTING SOIL AS NEEDED PER SOIL ANALYSIS ROOTBALL, TYP.

- 1. WHEN GROUNDCOVERS AND SHRUBS ARE USED IS MASSES, ENTIRE BED TO BE EXCAVATED TO RECEIVE PLANTING SOIL AND
- CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
- 3. IN SEMI-IMPERVIOUS SOIL CONDITIONS, ROOTBALL ELEVATION SHALL BE ;2" ABOVE FINISH GRADE. COORDINATE WITH OWNER'S REPRESENTATIVE PRIOR TO SETTING ROOTBALL ELEVATIONS

SHRUB PLANTING

PLANTING NOTES:

- 1. CONTRACTOR IS RESPONSIBLE FOR INSPECTION OF EXISTING CONDITIONS, INCLUDING UTILITIES, AND PROMPTLY REPORTING ANY DISCREPANCIES OR CONFLICTS WITH PLANTING AREAS. REPORT INFORMATION TO OWNER, OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
- 2. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE AND MAKE REPAIRS THAT MAY OCCUR TO EXISTING UTILITIES IN ACCORDANCE WITH NATIONAL, STATE
- 3. LANDSCAPE PLANTING AND / OR MULCHED AREAS TO BE FINE GRADED, HAND RAKED SMOOTH AND
- 4. CONTRACTOR TO PERFORM SOIL TESTS AS NECESSARY TO ASSURE PLANT HEALTH AND GROWTH.
- 5. MULCH ALL PLANTING BEDS TO A MIN. 3" DEPTH WITH MULCH SPECIFIED IN PLANT SCHEDULE. 6. CONTRACTOR VERIFIES THAT ALL PLANT MATERIAL IS DETERMINED AVAILABLE AS SPECIFIED WHEN BID
- / PROPOSAL IS SUBMITTED. 7. PLANT SCHEDULE WAS PREPARED FOR ESTIMATING PURPOSES ONLY. CONTRACTOR SHALL MAKE OWN
- QUANTITY TAKEOFFS USING DRAWINGS TO DETERMINE QUANTITIES TO HIS SATISFACTION, REPORTING PROMPTLY ANY DISCREPANCIES WHICH MAY AFFECT BIDDING.
- 8. GALLON SIZES ARE FOR PRICING PURPOSES ONLY. PLANT MUST MEET HEIGHTS AND WIDTHS SPECIFIED
- 9. ROOT TYPE MAY BE FREELY SUBSTITUTED IN CASE OF BALLED AND BURLAPPED OR CONTAINER GROWN, OTHER SPECIFICATIONS REMAINING UNCHANGED, EXCEPT IN THE CASE OF CONTAINER GROWN
- SPECIMEN TREES AS INDICATED IN THE TREE PLANTING SCHEDULE. 10. ANY SIGNIFICANT ROOTS ENCOUNTERED 2" DIA. AND LARGER SHALL BE DUG OUT BY HAND AND CLEANLY CUT BACK IN THE FOOTING / FOUNDATION AREA TO PROMOTE ROOT RE-GROWTH AND HELP
- PREVENT ROOT DIEBACK. 11. ALL PLANT MATERIAL (EXCEPT SEASONAL COLOR) SHALL BE GUARANTEED AND REPLACED AS
- NECESSARY BY THE CONTRACTOR FOR ONE YEAR. 12. ALL SEASONAL COLOR SHALL BE GUARANTEED AND REPLACED AS NECESSARY BY THE CONTRACTOR

SOIL AMENDMENT NOTES:

FOR THREE MONTH TIME FRAMES.

- 1. TOPSOIL SHALL CONSIST OF THE NATURAL LOAM, SANDY LOAM, SILT LOAM, OR CLAY LOAM HUMUS BEARING SOILS, ADAPTED TO THE SUSTENANCE OF PLANT LIFE, WITH THE FOLLOWING TEXTURE: 1.1. ORGANIC MATERIAL - TWO (2) TO TWENTY (20) PERCENT BY MASS
- 1.2. SAND CONTENT TWENTY (20) TO SIXTY (60) PERCENT BY MASS
- 1.3. CLAY-SILT CONTENT THIRTY FIVE (35) TO SEVENTY (70) PERCENT BY MASS.
- 1.4. TOPSOIL PH SHALL BE BETWEEN FIVE (5) AND SEVEN (7).
- 2. TOPSOIL SHALL BE OF UNIFORM QUALITY AND FREE FROM FOREIGN MATERIAL SUCH HARD CLODS, SOD, STIFF CLAY, HARD PAN, STONES LARGER THAN ONE (1) INCH DIAMETER, LIME CEMENT, ASHES, SLAG, CONCRETE, TAR RESIDUES, TARRED PAPER, BOARDS, CHIPS, STICKS, OR OTHER UNDESIRABLE
- MATERIALS. IT SHALL ALSO BE REASONABLY FREE FROM WEEDS AND OBJECTIONABLE PLANT MATERIAL. AFTER ALL DEMOLITION, CLEARING AND DISPOSAL IS COMPLETED, THE CONTRACTOR SHALL STRIP FROM THE TOP OF THE EXISTING GROUND ALL TOPSOIL IN ALL AREAS TO BE GRADED.
- 4. PRIOR TO STOCKPILING OF TOPSOIL, TOPSOIL SHALL BE SCREENED WITH A ONE HALF (1/2) INCH SIZE SIEVE. STOCKPILE TOPSOIL IN DESIGNATED OR APPROVED LOCATIONS WITH PROPER DRAINAGE AND WHERE IT WILL NOT INTERFERE WITH THE WORK. AFTER TOPSOIL HAS BEEN STOCKPILED, CONTRACTOR SHALL QUANTIFY THE AMOUNTS AT NO ADDITIONAL COST TO THE OWNER. QUANTITIES SHALL BE GIVEN TO THE ARCHITECT, OWNER AND SITE DESIGN PROFESSIONAL.
- 5. IF AMOUNT OF SCREENED TOPSOIL STOCKPILED FROM STRIPING OPERATIONS IS INSUFFICIENT TO PROVIDE THE NECESSARY AMOUNTS (4" MINIMUM DEPTH), IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN (FROM OFF-SITE SOURCE) THE NECESSARY AMOUNT OF SCREENED TOPSOIL TO COMPLETE THE PROJECT.
- 6. SCREENED TOPSOIL SHALL BE DISTRIBUTED WITH A MINIMUM DEPTH OF FOUR (4) INCHES TO ALL GRADED AREAS (NOT INCLUDING BUILDING, PAVED, SYNTHETIC TURF, PERVIOUS PAVEMENT, ETC.) AND / OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE. GROUND SHALL BE SCARIFIED BEFORE PLACING TOPSOIL. AREAS WHERE SCREENED TOPSOIL IS DISTRIBUTED SHALL BE STABILIZED WITH TEMPORARY AND/OR PERMANENT VEGETATION (SEASON DEPENDENT) OR TEMPORARY MULCH WITHIN FOURTEEN (14) CALENDAR DAYS OF DISTRIBUTION.

TURF AND GRASSING NOTES:

- 1. AFTER TOPSOIL HAS BEEN INSTALLED, AND BEFORE ANY SOD IS LAID, CORRECT ALL SOFT SPOTS AND IRREGULARITIES IN GRADE. THE SOD SHALL BE BE LAID BY BUTTING THE ENDS AND SIDES UP EVENLY AND STAGGERING THE ROLLS OF SOD. CONTRACTOR SHALL NOT OVERLAP SOD. AS SOON AS THE SOD IS LAID OR AS IT IS BEING LAID ROLL OVER WITH A LIGHT ROLLER, MAKING CERTAIN THAT ALL OF THE SOD IS IN CONTACT WITH THE SOIL. THE COMPLETED SODDED AREAS SHALL BE TRUE TO FINISH GRADE, EVEN AND FIRM AT ALL POINTS.
- 2. UPON COMPLETION OF PLANTINGS ALL EXCESS SOIL STONES AND DEBRIS WHICH HAS NOT PREVIOUSLY BEEN CLEANED UP SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AS DIRECTED BY THE OWNER'S REPRESENTATIVE
- 3. ALL LAWN AREAS THAT DO NOT SHOW SATISFACTORY GROWTH WITHIN (18) DAYS AFTER PLANTING SHALL BE RE-PLANTED AND RE-FERTILISZED AS SPECIFIED UNTIL A SATISFACTORY LAWN IS ESTABLISHED. THE LAWN SHALL BE CONSIDERED ESTABLISHED WHEN ITS REASONABLY FREE FROM WEED, GREEN IN APPEARANCE AND THE SPECIFIED GRASS IS VIGOROUS AND GROWING WELL ON EACH SQ. FT. OF LAWN
- 4. LAWN SHALL BE PROTECTED AND MAINTAINED BY WATERING, MOWING, AND REPLANTING, OVERSEEING, AS NECESSARY FOR AS LONG AS IS NECESSARY TO ESTABLISH A UNIFORM STAND. SCATTERED BARE SPOTS, NONE OF WHICH IS LARGER THAN ONE SQ. FT., WILL BE ALLOWED UP TO MAXIMUM OF THREE PERCENT OF ANY LAWN AREA. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR ANY EROSIONAL DAMAGE TO THE LAWN AREA. FULL COVERAGE IS REQUIRED IN SIXTY DAYS.
- 5. MAINTENANCE OF GRASSED AREAS SHALL CONSIST OF MOWING, WATERING AND FERTILIZING. ALL GRASSED AREAS SHALL BE MAINTAINED AT A HEIGHT NOT TO EXCEED 6" ABOVE FINISHED GRADE.
- 6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL GRASSED AREAS UNTIL ACCEPTANCE BY OWNER AT END OF PROJECT. LAWN MAINTENANCE SHALL OCCUR AT A MINIMUM OF ONCE PER SEVEN CALENDAR DAYS.



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THIS SHEET TO SCALE AT: 24"X36"

JULY 9, 2020

15051.32

CB

CHECKED BY: DK **PRELIMINARY**

DATE:

PROJECT NO.:

DRAWN BY:

REVISIONS:

SUBMITTAL PLAN, **NOT FOR** CONSTRUCTION

DRAWING TITLE PLANT DETAILS

DRAWING NUMBER



CITY COUNCIL
JEFF C. CHANDLER, MAYOR PRO-TEM
MIKE DYSON
KEVIN HEDGPETH
JOEL E. HODGES
DAN OWENS
MICHAEL SALLY

Staff Report

To: The Hanahan Planning Commission Cc: Larry Sturdivant, Building Official

From: Jeff Hajek, Planner/Economic Development Director

Date: August 4, 2020

Re: Zoning Text Amendment to Section 4.3 (Land Use Table) Requesting to Make

Food Manufacturing a Conditional Use in the Town Center (TC) District

General Information

Applicant/Owner: The City of Hanahan

Location: N/A

Tax Map Number(s): N/A

Approval Requested: Zoning Amendment to Section 4.3 (Land Use Table)

Existing Zoning: N/A

Background, Context and Intent

This zoning text amendment is a request to amend the use of the land use classification "Manufacturing—Food, Textiles and related products" from a prohibited use to a conditional use, under Section 4.3 of the Land Use Table, within the Town Center (TC) district. The proposed zoning text amendment was initiated by several small business owners in the TC district, who either currently operate in a non-conforming capacity (existed as a business before the adoption of the 2008 Zoning Ordinance) or businesses who are seeking to operate as a food manufacturer.

Currently, there are two (2) food manufacturing businesses who operate in a non-conforming capacity, a bakery, and a food sauce manufacturer. The other mentioned small business is an espresso machine repair service, who wants to create a coffee roasting business.

The food sauce manufacturer is looking to expand their building footprint by adding additional warehousing to their site, but is currently unable to do so because of the Nonconformity ordinance (Section 9.3.2(B)). The Non-Conforming Land Uses ordinance states that:

CITY ADMINISTRATOR MIKE COCHRAN



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Property restoration, rehabilitation, retrofit, and replacement shall be allowed, provided, neither gross square footage of structures nor the number of dwelling units is increased.

Essentially, even though the business is "grandfathered" into the district since their company has been in operation prior to the 2008 Zoning Ordinance, they are not allowed to expand and increase their current state of non-conformity.

Analysis

Overview of "Manufacturing—Food, Textiles, and related products" Land Classification and Proposed Revisions

Under the American Planning Association's (APA) Land Based Classification Standards (LBCS), which is how the Zoning Ordinance's Land Use Table is formed, "3100: Manufacturing—Food, textiles and related products" are:

Establishments in this category primarily produce food products for intermediate or final consumption in a process that primarily uses raw materials from livestock or agricultural products. This category also includes establishments that produce tobacco, textiles, and leather products.

This zoning text amendment seeks to amend *only* the subsection of Section 3100, specifically Section 3110 (Food and Beverages). This subsection includes:

Establishments in the food and beverage subcategory transform livestock and produce into products for intermediate or final consumption; or they manufacture beverages. These products are typically sold to wholesalers or retailers; however, also included here are bakery and candy establishments that produce on the premises for later consumption. Beverage manufacturing includes the manufacture of nonalcoholic and fermented and distilled alcoholic beverages. Ice manufacturing, while not a beverage, is also included because it uses the same production process as water purification.

The other uses related to Section 3100, textiles, tobacco, etc., do not apply to the applicants business and these other types of manufacturing are not compatible as a byright use in the TC district.



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Overview of Manufacturing as a Conditional Use

With the proposal of allowing food manufacturing as a conditional use in the TC district, there are specific requirements that are already prescribed in the Zoning Ordinance, in which the prospective business owner will need to meet. Under Section 5 (Supplemental Review, Design and Performance Standards For Conditional and Special Exception Uses), "Performance standards and criteria for manufacturing and processing plants" (Section 5.4) lays a framework to ensure that surrounding land uses are not adversely impacted by a proposed manufacturing facility.

The following performance standards are required to be met for a manufacturer to receive a conditional use permit and operate. The ordinance in its entirety is attached to this report to provide the specific requirements for the following performance standards:

- 1. Vibration
- 2. Fire and Explosive
- 3. Air Pollution
- 4. Odor
- 5. Glare
- 6. Noise
- 7. Fumes and Vapors
- 8. Heat, Cold, Dampness, Movement of Air
- 9. Toxic Matter
- 10. Exterior Illumination
- 11. Maximum Intensity of Light Sources
- 12. Waste Matter and Storm Drainage

Additionally, this ordinance requires the subject business to agree and sign a "Compliance Guarantee" (Section 5.4.13), which essentially states that the proposed manufacturer must meet said performance standards, or will be treated accordingly with City violations and potential subsequent fines.

Lastly, should the city planner/zoning administrator analyze said conditions with a proposed manufacturing facility and sees that these conditions are not met, they have the ability to deny or forward to the Board of Zoning Appeals (BZA) for a decision.

Additional Rationale for Proposed Food Manufacturing Zoning Text Amendment

Given that there have been three local businesses who have submitted support of a zoning text amendment to allow food manufacturing, the City is keen to hear said requests and propose an adjustment to allow this use specifically and only in the TC

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district. As previously mentioned, this amendment will specifically allow food manufacturing only, as a conditional use, not any other manufactured products listed under Section 3100 of the LBCS.

Finally, the City, from an economic development perspective, seeks to preserve its existing and long-standing businesses in this district, as well as provide opportunities for growth in others. These are actual goals of the 2012 Comprehensive Plan, which will be described in further detail in the next section of this report.

The intent of the TC district is to "build over time a mixed-use environment that uses land efficiently and generates significant positive revenue for the City of Hanahan." Furthermore, this amendment would also create opportunities to enhance the TC by allowing redevelopment of parcels into potential gathering or community hubs, such as a brewery or gastropub; uses that currently are not permitted in this district, but add value financially (creation of jobs, property values, etc.) and socially to the City's fabric.

Consistency with the Comprehensive Plan and Other Considerations

According to the City of Hanahan 2012 Comprehensive Plan (the City's current guiding document), this proposed zoning amendment is within compliance of this guiding document. Firstly, in the "Overall Vision and Guiding Principles" section, the rezoning would meet two of the five principles. These principles include:

 Hanahan will promote reinvestment and revitalization efforts in its existing residential and commercial areas

Furthermore, in Section I: Issues, Goals and Policies of the comprehensive plan, this zoning amendment would be compliant with a list of goals set forth in the document. These include:

Economic Goals and Policies

GOAL 1: Hanahan will protect and support its existing economic base and viability of existing businesses.

1. The City will develop strategies to encourage retention and expansion of existing quality businesses and industries

GOAL 2: Hanahan will promote a more diversified economic base by attracting new industries and more, higher paying jobs to the community, thereby expanding the City's tax base



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1. The City will seek to attract businesses and industries, that complement, as well as expand, the existing commercial and industrial economic base.

GOAL 3: Hanahan will continue to establish its Town Center to serve as a community focal point while providing a variety of services for the local citizens.

1. The City continue to focus efforts on redeveloping the Town Center as a pedestrian friendly area to serve residents with places to eat, shop at local businesses and gather for community events.

Lastly, the Future Land Use map (Figure 1) from the Comprehensive Plan highlights the Town Center district as a Downtown Mixed Use (DMU). DMU's intent is "to promote a mixture of commercial and residential land uses with varying forms of structural intensity and residential density. Downtown is the core of the City and should remain the activity and cultural hub, where traditional patterns of buildings close to the sidewalk and a lively streetscape should be respected and encouraged." The proposed amendment would add to the stated purpose and intent of this future land use.

Recommendations

Based upon staff's review, it is recommended that the Planning Commission *approve* the amendment to Section 4.3 (Land Use Table) of the 2008 Zoning Ordinance to allow food manufacturing to be allowed to operate in the TC district, on the basis of conditional approval from the zoning administrator, for the following reasons:

- 1. The proposed amendment will provide retention of existing business owners to allow them to improve or expand their organizations
- 2. The proposed amendment will promote the creation of new, diverse businesses that will add to the TC district as a whole
- 3. The proposed amendment will benefit the economic well-being of the City and its residents by providing a variety of commercial services to its residents
- 4. The propose amendment will aid in the continued redevelopment of the TC district



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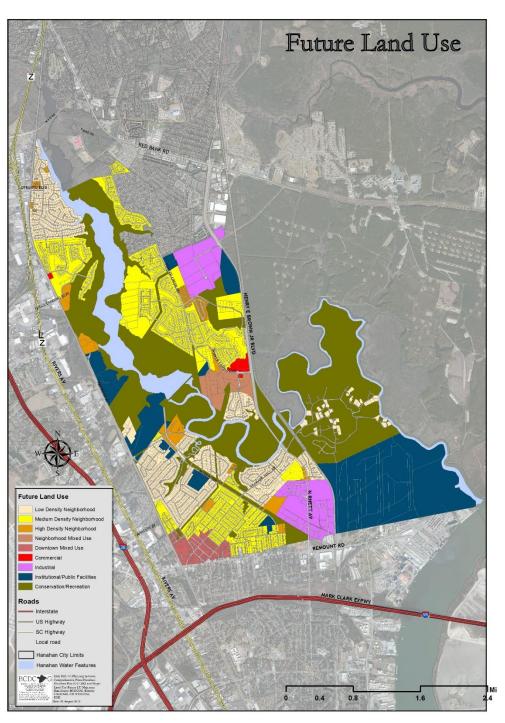


Figure 1: 2012 Future Land Use Map



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5.4. - Performance standards and criteria for manufacturing and processing plants.

The purpose of this section is to prevent land or building from being used or occupied in any manner so as to create any dangerous, injurious, noxious or otherwise objectionable or hazardous condition. Toward this end, the operational characteristic of all manufacturing and processing uses shall be measured for conformance with the provisions of this section.

5.4.1. Vibration.

No vibration shall be produced which is transmitted through the ground and is discernible without the aid of instruments at any point beyond the lot line; nor shall any vibration produced exceed the following particle velocity levels, measured with a vibration monitor in inches per second at the nearest;

- (A) Residential property line: 0.02
- (B) Non-residential property line: 0.10
- (C) Vibration emanating from construction activities between 7:00 am and 9:00 pm. shall be exempt from these regulations.

5.4.2. Fire and explosive.

All activities and all storage of flammable and explosive material shall be provided with the adequate safety devices against the hazards of fire and explosion including adequate fire fighting and fire suppression equipment, as prescribed by the National Fire Protection Association (which standards are hereby incorporated by reference and made part of this ordinance).

5.4.3. Air pollution.

- (A) The emission of visible smoke, dust, dirt, fly ash, particulate matter from any pipes, vents, or other openings, or from any other source into the air, shall comply with the regulation of the South Carolina Pollution Control Authority.
- (B) Air pollution emanating from construction activities between 7:00 a.m. and 9:00 p.m. shall be exempt from these requirements.

5.4.4. Odor.

There shall be no emission of odorous gases or other odorous matter in such quantities as to be offensive at the property line. Any process, which may involve the creation, or emission of any such odor, shall be provided with both a primary and a secondary safeguard system so that control may be maintained in the event of failure of the primary safeguard system.



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5.4.5. Glare.

There shall be no direct or sky reflected glared, whether from floodlights, high temperature processing, and combustion, welding or otherwise, so as to be visible in any residence.

5.4.6. Noise.

- (A) All noise shall be muffled so as not to be objectionable due to intermittence, beat frequency or shrillness. In no event shall the sound pressure level of noise radiated continuously from a facility exceed at the lot line the values given in tables below, "Nighttime Schedule" and "Daytime Schedule" in any octave band or frequency. South pressure level shall be measured with a sound level meter and an octave band analyzer that confirms to specifications published by the American Standards Association.
- (B) Noise emanating from construction activities between 7:00 a.m. and 9:00 p.m. shall be exempt from these requirements.
- (C) Nighttime schedule. Maximum permissible sound pressure levels at the lot line for noise radiated continuously from a facility between the hours of 9:00 p.m. and 7:00 a.m.

Frequency Band (In Cycles per Second)	At Non-Residential Lot Line	At Residential Lot Line
20—75	69 decibels	65 decibels
75—150	60	50
150—300	56	43
300—600	51	38
600—1,200	42	33
1,200—2,400	40	30



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2,400—4,800	38	28
4,800—10,000	35	20

(D) **Daytime schedule.** Maximum permissible sound pressure levels at the lot line for noise radiated from a facility between the hours of 7:00 a.m. and 9:00 a.m. shall not exceed the limits of the preceding table except as specified and corrected below.

Type of Operation in	>Correction
Character of Noise	(In Decibel)
Daytime Operation only	Plus 5
Noise source operated less than 20% of any one-hour period	Plus 5
Noise source operated less than 5% of any one-hour period	Plus 10
Noise source operated less than 1% of any one-hour period	Plus 15
Noise of impulsive character (hammering, etc)	Minus 5
Noise of periodic character (hum, speech, etc.)	Minus 5

5.4.7. Fumes and vapors.

There shall be no emission of any fumes or vapors of a noxious, toxic, or corrosive nature, which can cause damage or irritation to health, animals, vegetation, or to any form of property.



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5.4.8. Heat, cold, dampness or movement of air.

Activities which could produce any adverse affect on the temperature, motion, or humidity of the atmosphere beyond the lot line shall not be permitted.

5.4.9. Toxic matter.

The release of any airborne toxic matter shall not exceed the quantities permitted for those materials currently listed in Threshold Limit Values, adopted by the American Conference of Governmental Industrial Hygienists. If a toxic substance is not contained in said listing, the applicant shall satisfy the planning commission that the proposed levels will be safe to the general population. The measurement of toxic matter shall be at ground level or habitable elevation and shall be the average of any twenty-four-hour sampling period.

5.4.10. Exterior illumination.

All operations, activities, and uses shall be conducted so as to comply with the performance standards governing exterior illumination prescribed below. In general, the pattern of light pooling from each light source shall be carefully considered to avoid throwing light onto adjacent properties. Light sources visible in residential or medical areas comply with the light intensities indicated in Column A below.

5.4.11. Maximum intensity of light sources.

Illumination shall be measured from any point outside the property. Illumination levels shall be measured with a photoelectric having a special response similar to that of the human eye, following the standard luminous efficiency curve adopted by the International Commission of Illumination.

	Column A	>Column B
Bare incandescent bulbs	15 watts	40 watt
Illuminated buildings	15 ft. candles	30 ft. candles
Back lighted or luminous background signs	150 ft. lamberts	250 ft. lamberts
Outdoor illuminated signs & poster panels	25 ft. candles	110 ft. candles
Any other unshielded sources, intrinsic		

CITY ADMINISTRATOR MIKE COCHRAN



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Brightness	50 candela per sp. Centimeter	50 candela per sq. Centimeter

5.4.12. Waste matter and storm drainage.

- (A) No use shall accumulate or discharge beyond the lot lines any waste matter, whether liquid or solid, in violation of the applicable standards and regulations of the South Carolina Department of Health and Environmental Control, or in such a manner as to endanger the public health, safety, or general welfare; or cause injury to property.
- (B) Plans and specifications for all proposed industrial waste treatment and disposal facilities shall be submitted to and written approval obtained from the South Carolina Department of Health and Environmental Control prior to the issuance of a zoning permit.

5.4.13. Compliance guarantee.

The applicant of a permit for a manufacturing or processing plant which would produce any of the above "objectionable elements" shall acknowledge in writing his understanding of the performance standards applicable to the proposed use and shall submit with the permit application, an agreement to conform with such standards at all times. Any violation of the agreement shall constitute a violation of this ordinance and shall be treated accordingly.

RESOLUTION NO. 5-2020

A RESOLUTION FOR THE CITY OF HANAHAN PLANNING COMMISSION TO RECOMMEND TO CITY COUNCIL CONSIDERATION AND ADOPTION OF AMENDING THE CITY OF HANAHAN'S ZONING ORDINANCE

WHEREAS, the City of Hanahan City Council adopted a comprehensive plan for the City of Hanahan in 2012 and a zoning code in 2008; and

WHEREAS, Section 2.4 (Amendments) of the City of Hanahan Zoning Ordinance provides a procedure for amending the ordinance; and,

WHEREAS, the City of Hanahan Planning Commission, along with the City Planner, has recommended changes to the City's Zoning Ordinance and has made its findings to City Council; and,

WHEREAS, a public hearing on these proposed changes was held by the Planning Commission on August 4th, 2020 after due publication of notice of said public hearing as required by law; and,

WHEREAS, after hearing all who wished to be heard on this matter and upon review of the findings and recommendations of the Planning Commission, City Council now wishes to act on this matter;

NOW, THEREFORE, BE IT RESOLVED by the City of Hanahan Planning Commission that the following amendments be recommended:

Section 4.3 (Land Use Table):

Adding "Manufacturing—Food and Beverages" (Land Use Code 3110) to the Land Use Table, as a conditional use in the Town Center (TC) zoning district. The proposed use will be required to meet Section 5.4 (Performance standards and criteria for manufacturing and processing plants.) for the conditional use permit to be issued.

DONE IN COMMISSION ASSEMBLED THIS 4TH DAY OF AUGUST, 2020

Pat Eckstine, Chair

ATTEST:

Jeff Harek, Planner/Economic Development Director