



Major Stormwater Plan Form SW-002

OFFICIAL USE ONLY:	
Permit Number:	_____
Date Filed:	_____
Date Approved:	_____

Contact Information

APPLICANT:

Name: Wilson Ridge of Moyock, LLC
 Address: 227 Caratoke Highway
Moyock, NC 27958
 Telephone: 252435-2718
 E-Mail Address: jold@qhoc.com

PROPERTY OWNER:

Name: Wilson Ridge of Moyock, LLC
 Address: 227 Caratoke Highway
Moyock, NC 27958
 Telephone: 252-435-2718
 E-Mail Address: jold@qhoc.com

Property Information

Physical Street Address: Tulls Creek Road
 Parcel Identification Number(s): 0014-000-0023-0000
 FEMA Flood Zone Designation: X

Request

Project Description: Residential Subdivision
 Total land disturbance activity: 16.92 Ac sf Calculated volume of BMPs: 145,344 cu.ft. sf
 Maximum lot coverage: 10,000 st. ea. lot sf Proposed lot coverage: 11.94 Ac sf

TYPE OF REQUEST

- Major subdivision (10-year, 24-hour rate)
- Major site plan (5-year, 24-hour rate)

METHOD USED TO CALCULATE PEAK DISCHARGE

- Rational Method
- NRCS Method (TR-55 and TR-20)
- Simple volume calculation for small sites (less than 10 acres)
- Alternative stormwater runoff storage analysis
- Downstream drainage capacity analysis
- PCSWMM Model

I hereby authorize county officials to enter my property for the purpose of determining compliance. All information submitted and required as part of this process shall become public record.



[Signature]
Applicant

4-23-26
Date



[Signature]
Property Owner(s)

4-23-26
Date

*NOTE: Form must be signed by the owner(s) of record, contract purchaser(s), or other person(s) having a recognized property interest. If there are multiple property owners/applicants a signature is required for each.

Certificate

22 The major stormwater plan shall contain the following certificate:

I, Justin Old, owner/agent hereby certify the information included on this and attached pages is true and correct to the best of my knowledge.

On the plan entitled Wilson Ridge, stormwater drainage improvements shall be installed according to these plans and specifications and approved by Currituck County. Yearly inspections are required as part of the stormwater plan. The owner is responsible for all maintenance required. Currituck County assumes no responsibility for the design, maintenance, or performance of the stormwater improvements.

Date: 4-23-26 Owner/Agent: _____

Major Stormwater Plan Submittal Checklist

Staff will use the following checklist to determine the completeness of your application. Please make sure all the listed items are included. Staff shall not process an application for further review until it is determined to be complete.

Major Stormwater Plan Form SW-002 Submittal Checklist

Date Received: 4-21-26

Project Name: Wilson Ridge

Applicant/Property Owner: Currituck Homes/Wilson Ridge of Moyock, LLC

Major Stormwater Plan Form SW-002 Submittal Checklist – Documents provided on USB flash drive or CD		
1	Completed Major Stormwater Plan Form SW-002	X
2	Completed Rational Method Form SW-003 or NRCS Method Form SW-004	X
3	Stormwater plan	X
4	NCDENR permit applications, if applicable	

Comments

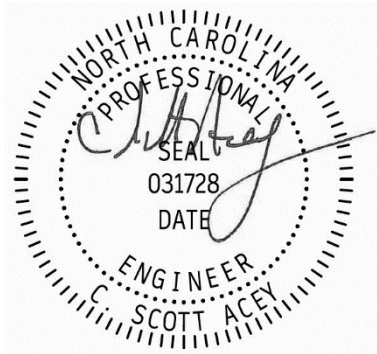
**Stormwater Calculations
For
Wilson Ridge Subdivision
Currituck County, North Carolina**

Prepared For:

**Currituck Homes
101 Oak Street
Currituck County, Moyock, NC 27958**

Prepared By:

**MSA, P.C.
5032 Rouse Drive Suite 200
Virginia Beach, VA 23462
(757) 490-9264**



ENGINEERS | SCIENTISTS | SURVEYORS

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1.0 INTRODUCTION

The proposed project, Wilson Ridge, is located at the intersection of Panther Landing Road and Tulls Creek Road in the City of Moyock, Currituck County, North Carolina. The project will create 13 39,000 SF single-family home lots. Additional construction includes associated infrastructure, including roadway improvements, water and sewer distribution utilities, storm sewer collection systems, and stormwater management facilities. The project area is bound by Tulls Creek Road to the north, single family residences to the east and west, and forested area to the south.

The proposed development is located on a 19.04 acre parcel and consists of largely undeveloped farmland. Existing runoff patterns consist of sheet flow to various onsite farm ditches or to the southern site boundary. The project will disturb 15.68 acres and will increase impervious cover by 2.82 acres. Proposed impervious cover includes new asphalt roadway pavement, curb and gutter, and concrete pedestrian pathways. Farm ditches will be filled and replaced by a proposed storm sewer system and stormwater management facilities. Proposed runoff will be collected by ditches and routed to a pair of interconnected stormwater management ponds. Proposed stormwater ponds have been designed to mitigate post-development runoff to pre-development conditions. The development will maintain existing outfalls.

The pre- and post-development conditions were evaluated using stormwater models developed using PCSWMM hydraulic modelling software as described in this report.

2.0 EXISTING CONDITIONS

The project area is bound by Tulls Creek Road to the north, and forest to the east, south, and west. Current land cover consists of largely undeveloped farmland. The average site elevation is approximately 7.0 feet (NAVD 88) and ranges from approximately 5.6 to 8.0 feet (NAVD 88). Existing runoff patterns consist of sheet flow to various onsite farm ditches or to the southern site boundary. Onsite ditches drain to a roadside ditch along Tulls Creek which discharges to small tributaries via pipe outfalls to the east and west of the site. Site runoff ultimately outfalls to the Albemarle Sound via the Northwest River and Tull Bay. Underlying site soils consist of fine sandy loam. An NRCS soils report is provided in Appendix A.

3.0 DEVELOPED CONDITIONS

The site has been graded to convey proposed runoff via sheet and shallow concentrated flow to various perimeter drainage ditches and a pair of interconnected stormwater ponds. Proposed stormwater ponds have been designed to mitigate post-development runoff to pre-development conditions or better. The development will outfall to an existing roadside ditch north of project site. This project has been designed as a Low Density development.

4.0 METHODOLOGY AND CRITERIA

Model Development:

The project site has been analyzed for stormwater impacts using stormwater models developed using PCSWMM. Separate models were developed to analyze the pre- and post-development scenario including the downstream roadside ditch. Stormwater analysis was extended beyond the limits of the project to evaluate downstream impacts to the roadside ditch. All PCSWMM models use the Modified Green-Ampt methodology and Dynamic Wave routing to generate runoff hydrographs and route runoff.

Rainfall Depths:

All rainfall events used in stormwater analysis were developed using the NOAA Type II rainfall distribution with a 6-minute time interval. Analyzed storm events and associated depth are listed in Table 1 below:

Table 1 – Rainfall Depths

<u>Storm Event</u>	<u>Rainfall Depth (in)</u>
1.5"	1.5
2-Year	3.74
10-Year	5.74
100-Year	9.51

Subcatchment and Soil Parameters:

Subcatchment parameter assignments including subcatchment area, percent impervious area, flow length and width, slope, and Green Ampt soil parameters are listed in Table 1 in Appendix C. Subcatchment areas and percent impervious areas were determined using existing and proposed layout and grading shown on construction plans associated with the project. Flow lengths are the longest typical runoff flow path within a subcatchment. They generally begin at the highest elevation within a subcatchment and end at the subcatchment drainage structure. Subcatchment widths are total areas divided by the flow lengths. Subcatchment slopes are the same flow path slopes.

Green Ampt Soil parameters have been assigned to PCSWMM subcatchments based on existing soil types listed in NRCS soils report for the project area. Soil type specific parameters are listed in Table 1 of Appendix C.

Tailwater Elevations:

A variable depth tailwater time series was developed for the project to simulate rising tailwater elevations generated during rainfall events. Based on FEMA 100-year flood elevation information and observed conditions, tailwater elevations are assumed to vary over a 72 hour period beginning at elevation 1 and maximizing at elevation 4. All modelled storm events and scenarios use the same tailwater time series.

PCSWMM Model Structure:

PCSWMM models were developed using a “node-link” system where “nodes” are junctions and storages representing storm sewer structures and ponds and “links” are conduits and weirs representing pipes, ditches, and overflow. Storm sewer inlets and ponds have been modelled as storages with individual storage curves that account for above ground surface storage of runoff. Storm sewer manholes are modelled as junctions without storage nodes or above ground storage. A value of 10 feet has been added to all storages and junctions to provide “space” for hydraulic grade line (HGL) and flood elevation to accumulate above structure rim and pond top of bank elevations. Storage curves assigned to storage were developed from proposed storm sewer structure elevations and grading as shown on construction plans for the project. Existing ditches were modelled using surveyed cross-sections while proposed ditches were modelled using surveyed cross-sections. Existing ditch cross-sections are spaced approximately 150 feet apart to ensure modelling accuracy.

Runoff generating subcatchments were developed using proposed grading as shown on construction plans for the project and are routed to applicable downstream sewer structures or ponds.

PCSWMM input data and modelling results are included in Appendix C, D and E of this report. Appendix C includes drainage area mapping. Appendix D includes physical subcatchment data and storage curves. Appendix E includes various summary tables and related calculations. Discussion of compliance with specific stormwater criteria is included in Section 4.

5.0 RESULTS

BMP Water Surface Elevation Summary:

A BMP water surface elevation table is provided in Appendix C as Table 7. The table summarizes hydraulic gradeline (HGL) elevations for each proposed pond during design storm events. The table also calculates freeboard for the 10-year storm event, 100-year storm event, and two back-to-back 1.5-inch storm events. The table indicates that the ponds can adequately contain all storm events without flooding and can adequately contain back-to-back small storm events.

APPENDIX A

NRCS Soils Report

Prepared by:



ENGINEERS | SCIENTISTS | SURVEYORS

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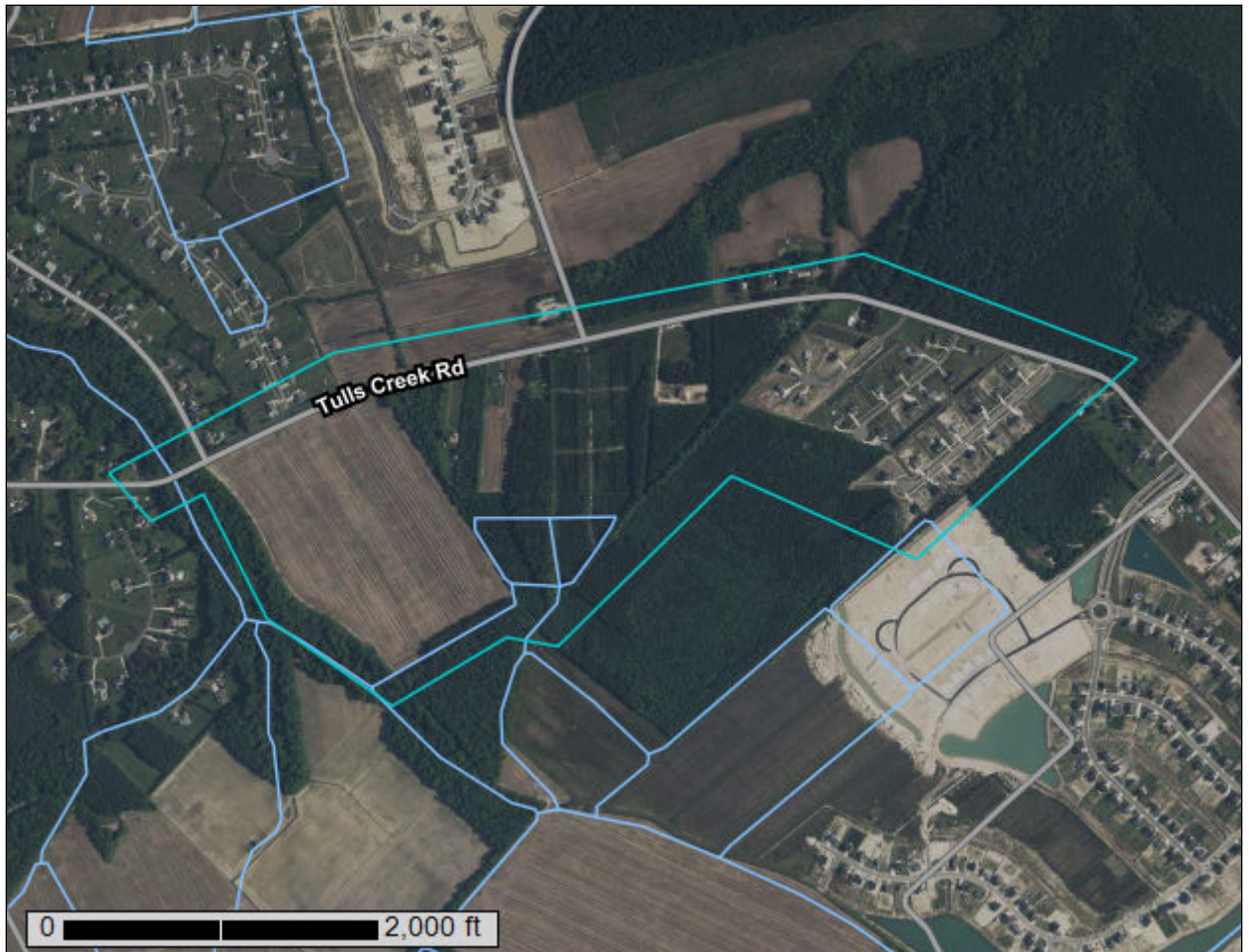
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Currituck County, North Carolina



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

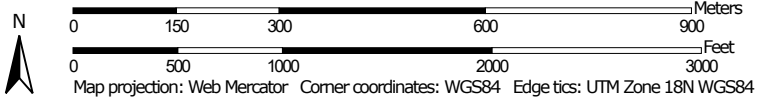
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map




Map Scale: 1:11,000 if printed on A landscape (11" x 8.5") sheet.





MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)




















Soils







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Currituck County, North Carolina
 Survey Area Data: Version 24, Sep 9, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2022—May 31, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AaA	Altavista fine sandy loam, 0 to 2 percent slopes	18.5	8.5%
At	Augusta fine sandy loam	11.5	5.3%
Cb	Conaby muck	7.6	3.5%
Do	Dorovan mucky peat	4.2	2.0%
Ro	Roanoke fine sandy loam	172.7	79.8%
StA	State fine sandy loam, 0 to 2 percent slopes	0.3	0.1%
To	Tomotley fine sandy loam	1.6	0.7%
Totals for Area of Interest		216.4	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

Custom Soil Resource Report

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Currituck County, North Carolina

AaA—Altavista fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 3m7
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Altavista and similar soils: 80 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altavista

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 12 inches: fine sandy loam
BE - 12 to 15 inches: sandy clay loam
Bt - 15 to 35 inches: sandy clay loam
BC - 35 to 42 inches: sandy loam
Cg - 42 to 80 inches: coarse sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: F153AY040NC - Moist Loamy Rises and Flats, F153BY040NC -
Moist Loamy Rises and Flats
Hydric soil rating: No

Minor Components

Tomotley, undrained

Percent of map unit: 5 percent

Landform: Flats on marine terraces, depressions on stream terraces

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F153AY090NC - Flooded Mineral Soil Flood Plains and Terraces,
F153BY060NC - Wet Loamy Flats and Depressions

Hydric soil rating: Yes

At—Augusta fine sandy loam

Map Unit Setting

National map unit symbol: 3m8

Elevation: 0 to 30 feet

Mean annual precipitation: 42 to 58 inches

Mean annual air temperature: 61 to 64 degrees F

Frost-free period: 190 to 270 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Augusta, drained, and similar soils: 80 percent

Augusta, undrained, and similar soils: 10 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Augusta, Drained

Setting

Landform: Depressions on marine terraces, flats on marine terraces

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 5 inches: fine sandy loam

Bt - 5 to 23 inches: loam

BCg - 23 to 31 inches: sandy loam

Cg - 31 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Custom Soil Resource Report

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D

Ecological site: F153AY040NC - Moist Loamy Rises and Flats, F153BY040NC -
Moist Loamy Rises and Flats

Hydric soil rating: No

Description of Augusta, Undrained

Setting

Landform: Depressions on marine terraces, flats on marine terraces

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

A - 0 to 5 inches: fine sandy loam

Bt - 5 to 23 inches: loam

BCg - 23 to 31 inches: sandy loam

Cg - 31 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: B/D

Ecological site: F153AY040NC - Moist Loamy Rises and Flats, F153BY040NC -
Moist Loamy Rises and Flats

Hydric soil rating: No

Minor Components

Tomotley, undrained

Percent of map unit: 5 percent

Landform: Flats on marine terraces, depressions on stream terraces

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F153AY090NC - Flooded Mineral Soil Flood Plains and Terraces,
F153BY060NC - Wet Loamy Flats and Depressions

Hydric soil rating: Yes

Cb—Conaby muck

Map Unit Setting

National map unit symbol: 3rnd
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Conaby, drained, and similar soils: 80 percent
Conaby, undrained, and similar soils: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Conaby, Drained

Setting

Landform: Pocosins, depressions
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Woody and herbaceous organic material over sandy and loamy fluviomarine deposits

Typical profile

Oa - 0 to 13 inches: muck
A - 13 to 21 inches: sand
Bg - 21 to 33 inches: sandy loam
Cg - 33 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F153BY060NC - Wet Loamy Flats and Depressions
Hydric soil rating: Yes

Description of Conaby, Undrained

Setting

Landform: Pocosins, depressions

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Woody and herbaceous organic material over sandy and loamy fluviomarine deposits

Typical profile

Oa - 0 to 13 inches: muck

A - 13 to 21 inches: sand

Bg - 21 to 33 inches: sandy loam

Cg - 33 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: Rare

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: B/D

Ecological site: F153BY060NC - Wet Loamy Flats and Depressions

Hydric soil rating: Yes

Do—Dorovan mucky peat

Map Unit Setting

National map unit symbol: 3rnl

Elevation: 0 feet

Mean annual precipitation: 42 to 58 inches

Mean annual air temperature: 61 to 64 degrees F

Frost-free period: 190 to 270 days

Farmland classification: Not prime farmland

Map Unit Composition

Dorovan, undrained, and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dorovan, Undrained

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Woody organic material

Typical profile

Oe1 - 0 to 3 inches: mucky peat
Oe2 - 3 to 63 inches: mucky peat
C - 63 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 13.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Ecological site: F153AY100NC - Flooded Organic Soil Flood Plains and Terraces,
F153BY100NC - Flooded Organic Soil Flood Plains and Terraces
Hydric soil rating: Yes

Ro—Roanoke fine sandy loam

Map Unit Setting

National map unit symbol: 3rp1
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Roanoke, drained, and similar soils: 80 percent
Roanoke, undrained, and similar soils: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Roanoke, Drained

Setting

Landform: Depressions on marine terraces, flats on marine terraces

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Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Clayey marine deposits and/or fluviomarine deposits

Typical profile

Ap - 0 to 8 inches: silt loam

Btg - 8 to 58 inches: clay

Cg - 58 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: Rare

Frequency of ponding: None

Available water supply, 0 to 60 inches: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Ecological site: F153BY090NC - Flooded Mineral Soil Flood Plains and Terraces,
F153AY065NC - Wet Clay Flats and Depressions

Hydric soil rating: Yes

Description of Roanoke, Undrained

Setting

Landform: Depressions on marine terraces, flats on marine terraces

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Clayey marine deposits and/or fluviomarine deposits

Typical profile

A - 0 to 8 inches: silt loam

Btg - 8 to 58 inches: clay

Cg - 58 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: Rare

Frequency of ponding: None

Available water supply, 0 to 60 inches: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: C/D

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Ecological site: F153BY090NC - Flooded Mineral Soil Flood Plains and Terraces,
F153AY065NC - Wet Clay Flats and Depressions
Hydric soil rating: Yes

StA—State fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 3rp2
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

State and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of State

Setting

Landform: Ridges on marine terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 6 inches: fine sandy loam
E - 6 to 18 inches: sandy loam
Bt - 18 to 44 inches: sandy clay loam
C - 44 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: F153AY030NC - Dry Loamy Rises and Flats, F153BY030NC - Dry
Loamy Rises and Flats
Hydric soil rating: No

To—Tomotley fine sandy loam

Map Unit Setting

National map unit symbol: 3rp4
Elevation: 0 to 30 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Tomotley, drained, and similar soils: 75 percent
Tomotley, undrained, and similar soils: 10 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tomotley, Drained

Setting

Landform: Depressions on stream terraces, flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Btg1 - 7 to 12 inches: fine sandy loam
Btg2 - 12 to 42 inches: sandy clay loam
BCg - 42 to 50 inches: sandy loam
Cg - 50 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F153AY090NC - Flooded Mineral Soil Flood Plains and Terraces,
F153BY060NC - Wet Loamy Flats and Depressions
Hydric soil rating: Yes

Description of Tomotley, Undrained

Setting

Landform: Flats on marine terraces, depressions on stream terraces

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

A - 0 to 7 inches: fine sandy loam

Btg1 - 7 to 12 inches: fine sandy loam

Btg2 - 12 to 42 inches: sandy clay loam

BCg - 42 to 50 inches: sandy loam

Cg - 50 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: B/D

Ecological site: F153AY090NC - Flooded Mineral Soil Flood Plains and Terraces,
F153BY060NC - Wet Loamy Flats and Depressions

Hydric soil rating: Yes

Minor Components

Nimmo, undrained

Percent of map unit: 3 percent

Landform: Flats on marine terraces, depressions on marine terraces

Down-slope shape: Concave

Across-slope shape: Linear

Ecological site: F153AY060NC - Wet Loamy Flats and Depressions,
F153BY060NC - Wet Loamy Flats and Depressions

Hydric soil rating: Yes

Arapahoe, undrained

Percent of map unit: 3 percent

Landform: Depressions, flats

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: F153AY090NC - Flooded Mineral Soil Flood Plains and Terraces,
F153BY060NC - Wet Loamy Flats and Depressions

Hydric soil rating: Yes

Custom Soil Resource Report

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Custom Soil Resource Report

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APPENDIX B

FEMA Flood Mapping

Prepared by:



ENGINEERS | SCIENTISTS | SURVEYORS

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(757) 490-9264**



This digital Flood Insurance Rate Map (FIRM) was produced through a unique cooperative partnership between the State of North Carolina and the Federal Emergency Management Agency (FEMA). The State of North Carolina has implemented a long term approach to floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map flood hazard areas at the local level. As a part of this effort, the State of North Carolina has joined in a Cooperating Technical State agreement with FEMA to produce and maintain this digital FIRM.

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR ZONE DESCRIPTIONS AND INDEX MAP THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTP://FRIS.NC.GOV/FRIS](http://FRIS.NC.GOV/FRIS)

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE)
		With BFE or Depth Zone AE, AO, AH, VE, AR
OTHER AREAS OF FLOOD HAZARD		Regulatory Floodway
		0.2% Annual Chance Flood Hazard, Areas of 1% Annual Chance Flood with Average Depth Less Than One Foot or With Drainage Areas of Less Than One Square Mile Zone X
OTHER AREAS		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee See Notes Zone X
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer Accredited or Provisionally Accredited Levee, Dike, or Floodwall
		Non-accredited Levee, Dike, or Floodwall
OTHER FEATURES		North Carolina Geodetic Survey bench mark
		National Geodetic Survey bench mark
OTHER FEATURES		Contractor Est. NCFMP Survey bench mark
		Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
OTHER FEATURES		Coastal Transect
		Coastal Transect Baseline
OTHER FEATURES		Profile Baseline
		Hydrographic Feature
OTHER FEATURES		Limit of Study
		Jurisdiction Boundary

NOTES TO USERS

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at <https://mfc.fema.gov>. An accompanying Flood Insurance Study report, Letter of Map Revision (LOMR) or Letter of Map Amendment (LOMA) revising portions of this panel, and digital versions of this FIRM may be available. Visit the North Carolina Floodplain Mapping Program website at <http://www.ncfloodmaps.com> or contact the FEMA Map Service Center.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Flood Insurance Study (FIS) means an examination, evaluation, and determination of flood hazards, corresponding water surface elevations, flood hazard risk zones, and other flood data in a community issued by the North Carolina Floodplain Mapping Program (NCFMP). The Flood Insurance Study (FIS) is comprised of the following products used together: the Digital Flood Hazard Database, the Water Surface Elevation Raster, the digitally derived, autogenerated Flood Insurance Rate Map and the Flood Insurance Survey Report. A Flood Insurance Survey is a compilation and presentation of flood risk data for specific watercourses, lakes, and coastal flood hazard areas within a community. This report contains detailed flood elevation data, data tables and FIRM indices. When a flood study is completed for the NFIP, the digital information, reports and maps are assembled into an FIS. Information shown on this FIRM is provided in digital format by the NCFMP. Base map information shown on this FIRM was provided in digital format by the NCFMP. The source of this information can be determined from the metadata available in the digital FLOOD database and in the Technical Support Data Notebook (TSDN).

ACCREDITED LEEVE NOTES TO USERS: If an accredited levee note appears on this panel check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicates the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at <https://www.fema.gov/national-flood-insurance-program>.

PROVISIONALLY ACCREDITED LEEVE NOTES TO USERS: If a Provisionally Accredited Levee (PAL) note appears on this panel, check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicates the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at <https://www.fema.gov/national-flood-insurance-program>.

LIMIT OF MODERATE WAVE ACTION NOTES TO USERS: For some coastal flooding zones the AE Zone category has been divided by a Limit of Moderate Wave Action (LIMWA). The LIMWA represents the approximate landward limit of the 15-foot breaking wave. The effects of wave hazards between the VE Zone and the LIMWA or between the shoreline and the LIMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

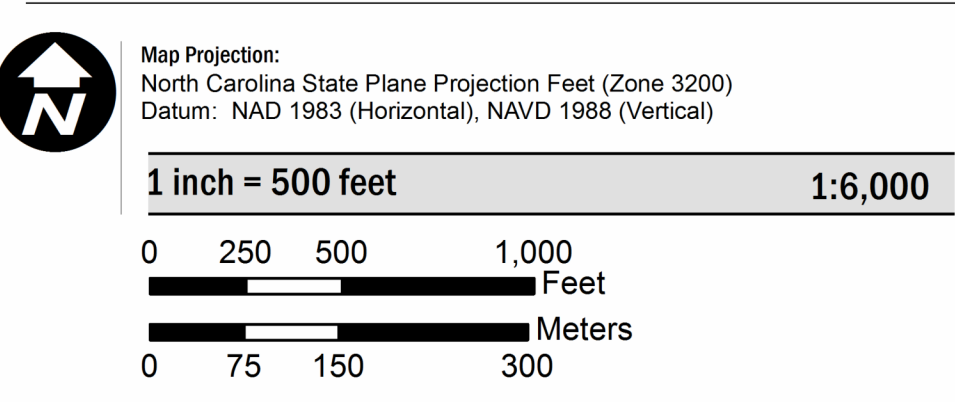
Limit of Moderate Wave Action (LIMWA)

COASTAL BARRIER RESOURCES SYSTEM (CBRS) NOTE

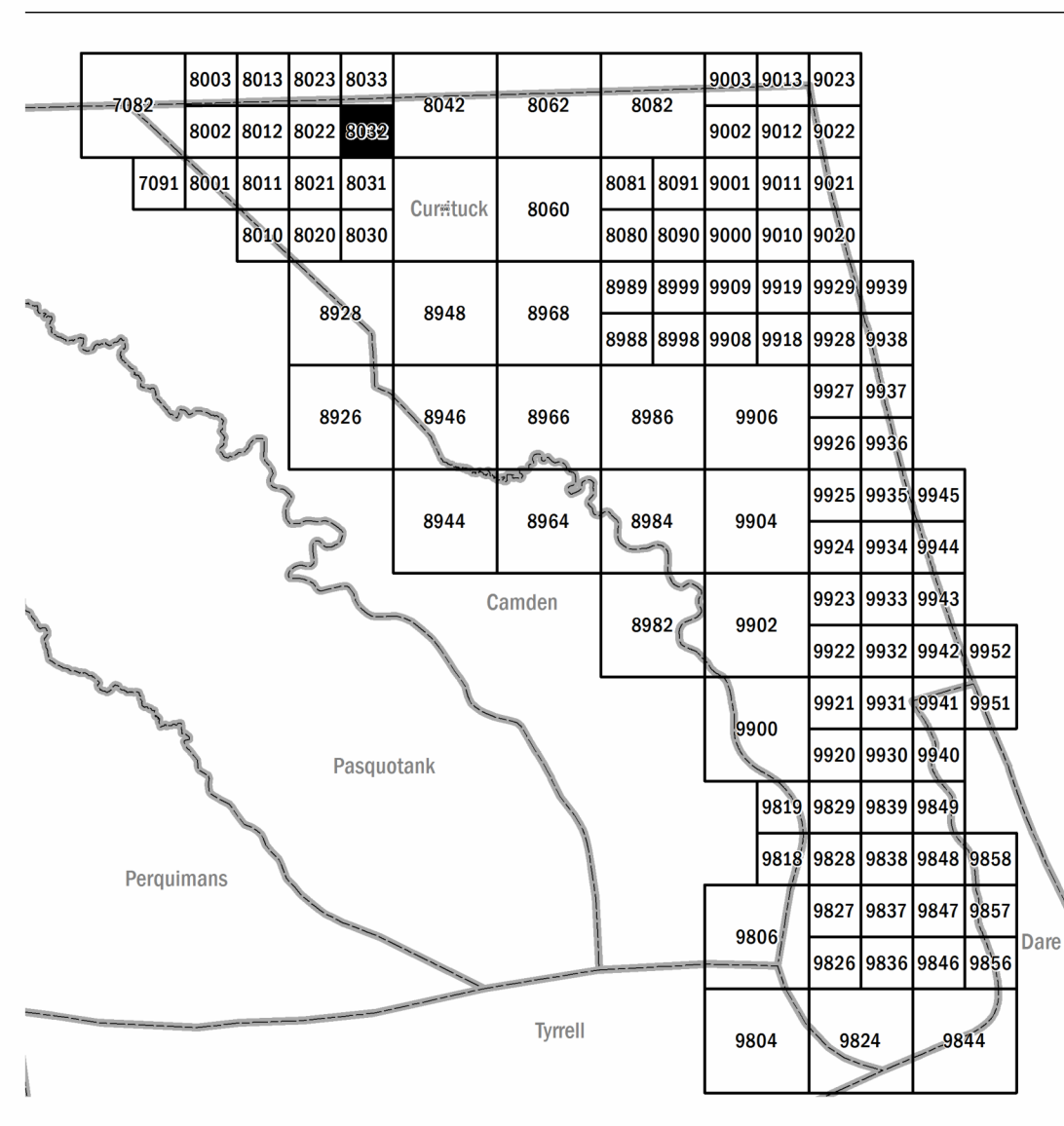
This map may include approximate boundaries of the CBRS for informational purposes only. Flood insurance is not available within CBRS areas for structures that are newly built or substantially improved on or after the date(s) indicated on the map. For more information see <http://www.fws.gov/cbra>, the FIS Report, or call the U.S. Fish and Wildlife Service Customer Service Center at 1-800-344-WILD.

CBRS Area Otherwise Protected Area

SCALE



PANEL LOCATOR



National Flood Insurance Program

NORTH CAROLINA FLOODPLAIN MAPPING PROGRAM

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

NORTH CAROLINA

PANEL 8032

Panel Contains:

COMMUNITY CURRITUCK COUNTY

CID 370078

PANEL SUFFIX 8032

K

VERSION NUMBER

2.3.3.2

MAP NUMBER

3721803200K

MAP REVISED

December 21, 2018

APPENDIX C

Drainage Area Data

Prepared by:



ENGINEERS | SCIENTISTS | SURVEYORS

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Table 1 DRAINAGE AREA CALCULATIONS

CALCULATIONS BY: RWS
 DATE: 3/4/2025
 PROJECT: Wilson Ridge
 PROJECT #: 24100

Existing Condition Drainage Area Calculation Data

SITE									Green Ampt Soil Parameters		
Drainage Area ID	Total Area (SF)	Total Area (AC)	Flow Length (FT)	Width (FT)	Slope (%)	Impervious Area (SF)	Impervious Area (AC)	% IMP	Suction Head (IN)	Conductivity (IN/HR)	Initial Deficit (IN/IN)
EX-1	94775	2.18	304	311.8	1.1	8193	0.19	8.6%	4.33	0.43	0.33
EX-2	108991	2.50	495	220.2	0.8	0	0.00	0.0%	4.33	0.43	0.33
EX-3	94169	2.16	392	240.2	0.1	0	0.00	0.0%	4.33	0.43	0.33
EX-4	74025	1.70	409	181.0	0.9	660	0.02	0.9%	4.33	0.43	0.33
EX-5	82239	1.89	276	298.0	1.3	128	0.00	0.2%	4.33	0.43	0.33
EX-6	219747	5.04	445	493.8	0.5	0	0.00	0.0%	4.33	0.43	0.33
EX-7	16805	0.39	67	250.8	2.8	4407	0.10	26.2%	4.33	0.43	0.33
REAR	192212	4.41	381	504.5	0.1	0	0.00	0.0%	4.33	0.43	0.33
ADJ-1	52,092	1.20	298	174.8	0.5	0	0.00	0.0	4.33	0.43	0.33
ADJ-2	43,269	0.99	84	515.1	1.8	0	0.00	0.0	4.33	0.43	0.33
TOTAL	978,324	22.46				13,388	0.31	1.4			

Proposed Condition Drainage Area Calculation Data

	Drainage Area Drains to BMP 1
	Drainage Area Drains to BMP 2

SITE									Green Ampt Soil Parameters		
Drainage Area ID	Total Area (SF)	Total Area (AC)	Flow Length (FT)	Width (FT)	Slope (%)	Impervious Area (SF)	Impervious Area (AC)	% IMP	Suction Head (IN)	Conductivity (IN/HR)	Initial Deficit (IN/IN)
BMP-1	120624	2.77	193	625.0	0.8	5,577	0.13	4.6	4.33	0.43	0.33
A-1	60,574	1.39	417	145.3	0.4	3,710	0.09	6.1	4.33	0.43	0.33
A-2	62,361	1.43	402	155.1	0.4	4,875	0.11	7.8	4.33	0.43	0.33
A-3	112,688	2.59	715	157.6	0.2	14,980	0.34	13.3	4.33	0.43	0.33
B-1	29,823	0.68	341	87.5	0.4	13,053	0.30	43.8	4.33	0.43	0.33
B-2	28,264	0.65	352	80.3	0.4	11,925	0.27	42.2	4.33	0.43	0.33
B-3	35,166	0.81	354	99.3	0.4	10,644	0.24	30.3	4.33	0.43	0.33
TOTAL	449,500	10.32				64,764	1.49	14.4			
BMP-2	28,794	0.66	26	1107.5	0.1	1,702	0.04	5.9	4.33	0.43	0.33
C-1	39,318	0.90	607	64.8	0.2	12,378	0.28	31.5	4.33	0.43	0.33
C-2	38,548	0.88	431	89.4	0.3	13,240	0.30	34.3	4.33	0.43	0.33
C-3	16,476	0.38	92	179.1	1.6	2,877	0.07	17.5	4.33	0.43	0.33
D-1	67,855	1.56	584	116.2	0.3	6,969	0.16	10.3	4.33	0.43	0.33
D-2	52,772	1.21	523	100.9	0.3	6,501	0.15	12.3	4.33	0.43	0.33
D-3	101,757	2.34	876	116.2	0.2	11,415	0.26	11.2	4.33	0.43	0.33
TOTAL	345,520	7.93				55,082	1.26	15.9			
REAR	49,395	1.13	117	422.2	0.1	0	0.00	0.0	4.33	0.43	0.33
ADJ-1	52,092	1.20	298	174.8	0.5	0	0.00	0.0	4.33	0.43	0.33
ADJ-2	43,269	0.99	84	515.1	1.8	0	0.00	0.0	4.33	0.43	0.33
1-15	13,390	0.31	177	75.6	2.0	5,837	0.13	43.6	4.33	0.43	0.33
2-16	25,158	0.58	227	110.8	2.0	10,607	0.24	42.2	4.33	0.43	0.33

Downstream Roadside Ditch Drainage Area Calculation Data

SITE									Green Ampt Soil Parameters		
Drainage Area ID	Total Area (SF)	Total Area (AC)	Flow Length (FT)	Width (FT)	Slope (%)	Impervious Area (SF)	Impervious Area (AC)	% IMP	Suction Head (IN)	Conductivity (IN/HR)	Intial Deficit (IN/IN)
1-0	26,467	0.61	209	126.6	2.0	2,189	0.05	8.3	4.33	0.43	0.33
1-2	180,845	4.15	451	401.0	1.0	19,661	0.45	10.9	4.33	0.43	0.33
1-4	16,299	0.37	206	79.1	2.0	2,261	0.05	13.9	4.33	0.43	0.33
1-6	3,785	0.09	61	62.0	1.6	594	0.01	15.7	4.33	0.43	0.33
1-8	8,697	0.20	114	76.3	0.9	1,183	0.03	13.6	4.33	0.43	0.33
1-10	17,236	0.40	217	79.4	2.0	3,498	0.08	20.3	4.33	0.43	0.33
1-12	28,693	0.66	237	121.1	2.0	5,837	0.13	20.3	4.33	0.43	0.33
TOTAL	282,022	6.47				35,223	0.81	12.5			

2-0	15,272	0.35	323	47.3	1.0	5,085	0.12	33.3	4.33	0.43	0.33
2-2	28,364	0.65	578	49.1	1.0	9,046	0.21	31.9	4.33	0.43	0.33
2-4	18,247	0.42	338	54.0	1.0	5,967	0.14	32.7	4.33	0.43	0.33
2-6	13,531	0.31	251	53.9	2.0	4,623	0.11	34.2	4.33	0.43	0.33
2-10	19,063	0.44	291	65.5	1.0	5,812	0.13	30.5	4.33	0.43	0.33
2-12	6,334	0.15	120	52.8	3.0	1,729	0.04	27.3	4.33	0.43	0.33
2-14	45,896	1.05	421	109.0	1.0	11,050	0.25	24.1	4.33	0.43	0.33
TOTAL	146,707	3.37				43,312	0.99	29.4			



Table 2 BMP STORAGE CURVES

CALCULATIONS BY: RWS
 DATE: 3/4/2025
 PROJECT: Wilson Ridge
 PROJECT #: 24100

Junction: BMP-1
Subcatchment: BMP-1
Invert: -3.00

Proposed Storage Curve				
Depth (ft)	Elevation (ft)	Area (sf)	Inc Vol (cf)	Cumu Vol (cf)
0.00	-3.00	5,072	0	0
1.00	-2.00	6,460	5,766	5,766
2.00	-1.00	8,021	7,241	13,007
3.00	0.00	10,096	9,058	22,065
4.00	1.00	12,699	11,397	33,462
5.00	2.00	15,674	14,186	47,649
6.00	3.00	20,611	18,142	65,791
7.00	4.00	28,126	24,369	90,160
8.00	5.00	36,600	32,363	122,523
9.00	6.00	46,039	41,319	163,842
9.50	6.50	50,965	24,251	188,093
10.00	7.00	120,624	42,897	230,990
19.50	16.50	120,624	974,043	1,162,136

Bottom of Pond

Bottom of Aquatic Bench
Normal Pool

Top of Bank
Catchment Area
Catchment Area + 10' @ Rim Elevation + 10

Junction: BMP-2
Subcatchment: BMP-2
Invert: -2.00

Proposed Storage Curve				
Depth (ft)	Elevation (ft)	Area (sf)	Inc Vol (cf)	Cumu Vol (cf)
0.00	-2.00	68	0	0
1.00	-1.00	286	177	177
2.00	0.00	644	465	642
3.00	1.00	1,142	893	1,535
4.00	2.00	1,723	1,433	2,968
5.00	3.00	3,036	2,380	5,347
6.00	4.00	5,079	4,058	9,405
7.00	5.00	7,415	6,247	15,652
8.00	6.00	8,692	8,054	23,705
8.50	6.50	10,043	4,684	28,389
9.00	7.00	28,794	9,709	38,098
19.00	17.00	28,794	287,940	326,038

Bottom of Pond

Normal Pool

Top of Bank
Catchment Area
Catchment Area + 10' @ Rim Elevation + 10



Table 3 EXISTING STORAGE CURVES

CALCULATIONS BY:
 DATE:
 PROJECT:
 PROJECT #

ENW
 11/1/2024
 Wilson Ridge
 24100

Subcatchment: ADJ-1
Storage Node: ADJ-1
Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
5.00	5.00	134
6.00	6.00	2,437
7.00	7.00	10,505
8.00	8.00	40,218
9.00	9.00	52,092
19.00	19.00	52,092

Catchment Area
 Catchment Area + 10'

Subcatchment: ADJ-2
Storage Node: ADJ-2
Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
5.00	5.00	1,381
6.00	6.00	9,720
7.00	7.00	27,901
8.00	8.00	43,269
18.00	18.00	43,269

Catchment Area
 Catchment Area + 10'

Subcatchment: EX-1
Storage Node: EX-1
Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
3.00	3.00	649
4.00	4.00	1,465
5.00	5.00	29,651
6.00	6.00	74,025
16.00	16.00	74,025

Catchment Area
 Catchment Area + 10'

Subcatchment: EX-2
Storage Node: EX-2
Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
5.00	5.00	738
6.00	6.00	60,102
7.00	7.00	108,991
17.00	17.00	108,991

Catchment Area
 Catchment Area + 10'

Subcatchment: EX-3
Storage Node: EX-3
Invert: 5.80

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	5.80	7
5.00	10.80	230
6.00	11.80	20,194
7.00	12.80	94,169
17.00	22.80	94,169

Catchment Area
 Catchment Area + 10'

Subcatchment: EX-4
 Storage Node: EX-4
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
3.00	3.00	3,341
4.00	4.00	14,937
5.00	5.00	75,026
6.00	6.00	94,775
16.00	16.00	94,775

Catchment Area
 Catchment Area + 10'

Subcatchment: EX-5
 Storage Node: EX-5
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
3.00	3.00	335
4.00	4.00	1,842
5.00	5.00	29,625
6.00	6.00	82,239
16.00	16.00	82,239

Catchment Area
 Catchment Area + 10'

Subcatchment: EX-6
 Storage Node: EX-6
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
5.00	5.00	1,294
6.00	6.00	72,251
7.00	7.00	219,747
17.00	17.00	219,747

Catchment Area
 Catchment Area + 10'

Subcatchment: EX-7
 Storage Node: EX-7
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
3.00	3.00	625
4.00	4.00	2,180
5.00	5.00	12,300
6.00	6.00	16,805
16.00	16.00	16,805

Catchment Area
 Catchment Area + 10'



Table 4 PROPOSED STORAGE CURVES

CALCULATIONS BY: RWS
 DATE: 3/4/2025
 PROJECT: Wilson Ridge
 PROJECT #: 24100

<u>Subcatchment:</u>	A-1	Proposed Storage Curve			
<u>Storage Node:</u>	A-1-STOR	Depth (ft)	Elevation (ft)	Area (sf)	
<u>Invert:</u>	0.00	0.00	0.00	7	
		5.00	5.00	14,949	
		6.00	6.00	50,531	
		7.00	7.00	60,574	Catchment Area
		17.00	17.00	60,574	Catchment Area + 10'

<u>Subcatchment:</u>	A-2	Proposed Storage Curve			
<u>Storage Node:</u>	A-2-STOR	Depth (ft)	Elevation (ft)	Area (sf)	
<u>Invert:</u>	0.00	0.00	0.00	7	
		5.00	5.00	5,606	
		6.00	6.00	46,380	
		7.00	7.00	62,361	Catchment Area
		17.00	17.00	62,361	Catchment Area + 10'

<u>Subcatchment:</u>	A-3	Proposed Storage Curve			
<u>Storage Node:</u>	A-3-STOR	Depth (ft)	Elevation (ft)	Area (sf)	
<u>Invert:</u>	0.00	0.00	0.00	7	
		5.00	5.00	3,902	
		6.00	6.00	33,416	
		7.00	7.00	112,688	Catchment Area
		17.00	17.00	112,688	Catchment Area + 10'

<u>Subcatchment:</u>	B-1	Proposed Storage Curve			
<u>Storage Node:</u>	B-1-STOR	Depth (ft)	Elevation (ft)	Area (sf)	
<u>Invert:</u>	0.00	0.00	0.00	7	
		5.00	5.00	4,717	
		6.00	6.00	17,584	
		7.00	7.00	29,823	Catchment Area
		17.00	17.00	29,823	Catchment Area + 10'

<u>Subcatchment:</u>	B-2	Proposed Storage Curve			
<u>Storage Node:</u>	B-2-STOR	Depth (ft)	Elevation (ft)	Area (sf)	
<u>Invert:</u>	0.00	0.00	0.00	7	
		5.00	5.00	2,925	
		6.00	6.00	13,970	
		7.00	7.00	28,264	Catchment Area
		17.00	17.00	28,264	Catchment Area + 10'

<u>Subcatchment:</u>	B-3	Proposed Storage Curve			
<u>Storage Node:</u>	B-3-STOR	Depth (ft)	Elevation (ft)	Area (sf)	
<u>Invert:</u>	0.00	0.00	0.00	7	
		5.00	5.00	1,455	
		6.00	6.00	17,443	
		7.00	7.00	35,166	Catchment Area
		17.00	17.00	35,166	Catchment Area + 10'

Subcatchment: C-1
 Storage Node: C-1-STOR
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
5.00	5.00	5,149
6.00	6.00	25,573
7.00	7.00	39,318
17.00	17.00	39,318

Subcatchment: C-2
 Storage Node: C-2-STOR
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
5.00	5.00	1,936
6.00	6.00	21,143
7.00	7.00	38,548
17.00	17.00	38,548

Subcatchment: C-3
 Storage Node: C-3-STOR
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
5.00	5.00	364
6.00	6.00	9,559
7.00	7.00	16,476
17.00	17.00	16,476

Subcatchment: D-1
 Storage Node: D-1-STOR
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
5.00	5.00	11,970
6.00	6.00	46,642
7.00	7.00	67,855
17.00	17.00	67,855

Subcatchment: D-2
 Storage Node: D-2-STOR
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
5.00	5.00	3,553
6.00	6.00	27,176
7.00	7.00	52,772
17.00	17.00	52,772

Subcatchment: D-3
 Storage Node: D-3-STOR
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	7
5.00	5.00	708
6.00	6.00	10,288
7.00	7.00	101,757
17.00	17.00	101,757

Subcatchment: -
 Storage Node: EX.STORAGE
 Invert: 0.00

Proposed Storage Curve		
Depth (ft)	Elevation (ft)	Area (sf)
0.00	0.00	10
5.00	5.00	10
5.15	5.15	15,568
6.00	6.00	17,916
6.50	6.50	20,367
16.50	16.50	20,367

Additional Impounded Area for
 Flood Storage in Subcatchment D-3



Table 5 DOWNSTREAM DITCH TRANSECTS

CALCULATIONS BY: ENW
 DATE: 11/1/2024
 PROJECT: Wilson Ridge
 PROJECT #: 24100

Ditch ID 1-1:1-0
 Transect ID 1-1:1-0

Station	Elevation
0	3.00
117	2.00
121	0.80
128	1.90
132	2.48
148	2.78

Ditch ID 1-2:1-2
 Transect ID 1-2:1-2

Station	Elevation
0	4.50
111	3.50
116	2.30
122	3.00
130	3.20
144	3.50

Ditch ID 1-2H:1-2I
 Transect ID 1-2H:1-2I

Station	Elevation
0	5.30
110	4.30
114	3.00
123	3.90
130	4.30
141	4.60

Ditch ID 1-2G:1-2H
 Transect ID 1-2G:1-2H

Station	Elevation
0	6.00
106	5.00
111	2.70
119	4.20
124	4.70
138	5.00

Ditch ID 1-2F:1-2G
 Transect ID 1-2F:1-2G

Station	Elevation
0	7.00
104	6.00
110	3.50
115	4.70
120	5.30
134	5.60

Ditch ID 1-2E:1-2F
 Transect ID 1-2E:1-2F

Station	Elevation
0	7.30
101	6.30
106	4.00
112	5.30
117	5.60
130	5.90

Ditch ID 1-2D:1-2E
 Transect ID 1-2D:1-2E

Station	Elevation
0	8.00
101	7.00
105	5.10
110	5.40
113	5.80
126	6.10

Ditch ID 1-2C:1-2D
 Transect ID 1-2C:1-2D

Station	Elevation
0	7.70
97	6.70
102	4.80
105	5.50
108	5.70
122	6.00

Ditch ID 1-2B:1-2C
 Transect ID 1-2B:1-2C

Station	Elevation
0	7.00
81	6.00
85	4.70
90	5.50
94	5.60
107	5.90

Ditch ID 1-2A:1-2B
 Transect ID 1-2A:1-2B

Station	Elevation
0.00	7.10
64	6.10
70	4.60
75	5.70
79	6.10
92	6.40

Ditch ID 1-3:1-2A
 Transect ID 1-3:1-2A

Station	Elevation
0.00	7.60
61	6.60
66	4.60
73	5.80
76	5.90
90	6.20

Ditch ID 1-5:1-4
 Transect ID 1-5:1-4

Station	Elevation
0	7.30
58	6.30
62	4.10
71	6.00
75	6.33
87	6.63

Ditch ID 1-7:1-6
Transect ID 1-7:1-6

Station	Elevation
0	7.40
56	6.40
60	4.30
68	6.10
74	6.50
86	6.80

Ditch ID 1-9:1-8
Transect ID 1-9:1-8

Station	Elevation
0	7.40
53	6.40
58	4.20
66	6.00
71	6.50
83	6.80

Ditch ID 1-11:1-10
Transect ID 1-11:1-10

Station	Elevation
0	7.10
44	6.10
51	4.20
58	5.40
64	6.38
78	6.68

Ditch ID 1-14:1-12
Transect ID 1-14:1-12

Station	Elevation
0.00	6.60
68	5.60
72	4.40
78	5.60
87	6.50
101	6.80

Ditch ID 1-15:1-13
Transect ID 1-15:1-13

Station	Elevation
0	5.90
14	5.30
20	3.60
31	5.70
37	6.10
53	6.40

Ditch ID 1-16:1-17
Transect ID 1-16:1-17

Station	Elevation
0	5.20
13	4.90
18	3.20
27	5.00
33	5.70
46	6.00

Ditch ID 2-1:2-0
Transect ID 2-1:2-0

Station	Elevation
0.00	5.60
0+13	5.30
0+18	5.00
0+25	3.00
0+36	5.70
0+48	6.70

Ditch ID 2-3B:2-2
Transect ID 2-2B:2-2C

Station	Elevation
0	7.50
13	7.20
17	6.90
25	3.60
36	6.90
44	7.30

Ditch ID 2-3A:2-3B
Transect ID 2-2A:2-2B

Station	Elevation
0	7.60
17	7.30
22	7.00
29	5.70
34	6.70
47	7.70

Ditch ID 2-3:2-3A
Transect ID 2-3:2-2A

Station	Elevation
0	7.30
13	7.10
16	7.00
23	5.70
27	6.70
49	7.00

2-5:2-4 Ditch ID 2-4A:2-4
Transect ID 2-4A:2-4A

Station	Elevation
0	6.90
24	6.60
29	6.60
34	6.00
37	6.60
50	7.60

Ditch ID 2-5:2-4A
Transect ID 2-5:2-4A

Station	Elevation
0	7.30
13	7.00
17	6.00
23	5.00
28	6.60
50	7.60

Ditch ID 2-7:2-6
Transect ID 2-7:2-6

Station	Elevation
0	6.90
13	6.60
16	6.60
22	6.00
26	6.60
47	7.60

Ditch ID 2-9:2-8
Transect ID 2-9:2-8

Station	Elevation
0	6.90
13	6.60
16	6.60
21	6.00
26	6.60
50	7.60

Ditch ID 2-10A:2-10
Transect ID 2-11:2-10

Station	Elevation
0	6.70
13	6.40
16	6.20
24	4.60
26	5.80
46	6.20

Ditch ID 2-10B:2-10A
Transect ID 2-11:2-10

Station	Elevation
0	5.90
21	5.60
28	5.60
34	4.50
35	6.60
49	7.60

Ditch ID 2-10C:2-10B
Transect ID 2-11:2-10

Station	Elevation
0	6.70
12	6.30
14	6.10
22	4.40
28	6.50
49	7.00

Ditch ID 2-11:2-10C
Transect ID 2-11:2-10

Station	Elevation
0	6.70
13	6.40
16	6.20
24	4.60
26	5.80
46	6.20

Ditch ID 2-13::2-12
Transect ID 2-13::2-12

Station	Elevation
0	6.70
13	6.40
16	6.20
24	4.80
30	5.80
49	6.80

Ditch ID 2-14A:2-14
Transect ID 2-14C:2-14D

Station	Elevation
0	6.30
13	6.00
16	5.90
23	3.90
30	5.40
54	6.00

Ditch ID 2-14B:2-14A
Transect ID 2-14C:2-14D

Station	Elevation
0	5.50
14	5.20
18	5.00
25	3.00
32	5.70
58	6.00

Ditch ID 2-14C:2-14B
Transect ID 2-14B:2-14C

Station	Elevation
0.00	6.00
28.00	5.00
35.00	4.00
42.00	2.00
46.00	5.60
60.00	5.90

Ditch ID 2-14D:2-14C
Transect ID 2-14A:2-14B

Station	Elevation
0	5.20
13	5.10
16	5.00
27	1.90
35	6.30
60	6.60

Ditch ID 2-15:2-14D
Transect ID 2-15:2-14A

Station	Elevation
0	5.40
14	5.10
19	5.00
28	2.60
35	5.00
60	6.00

Ditch ID 2-17:2-16
Transect ID 2-17:2-16

Station	Elevation
0	5.80
13	5.70
19	5.00
28	3.20
31	4.90
46	5.20

APPENDIX D

Drainage Area Maps

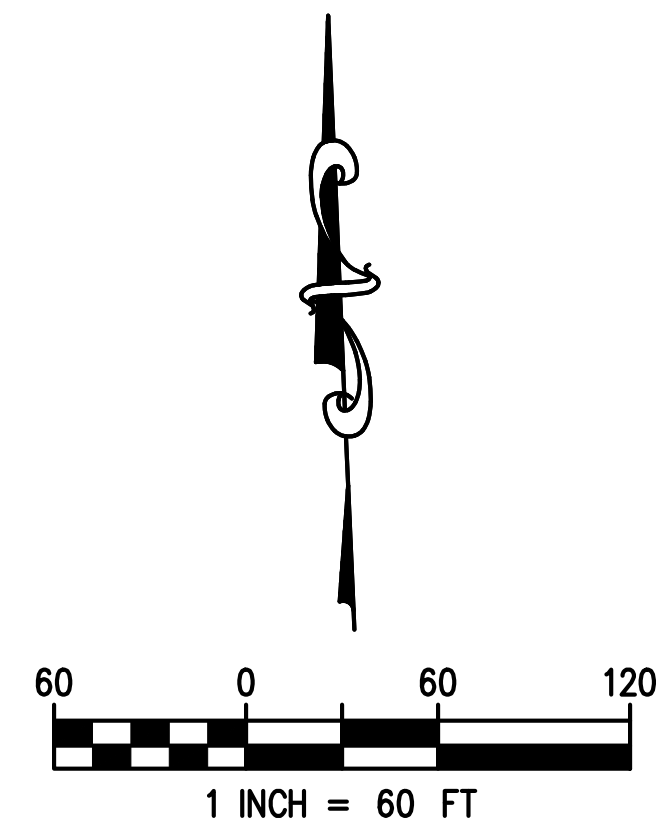
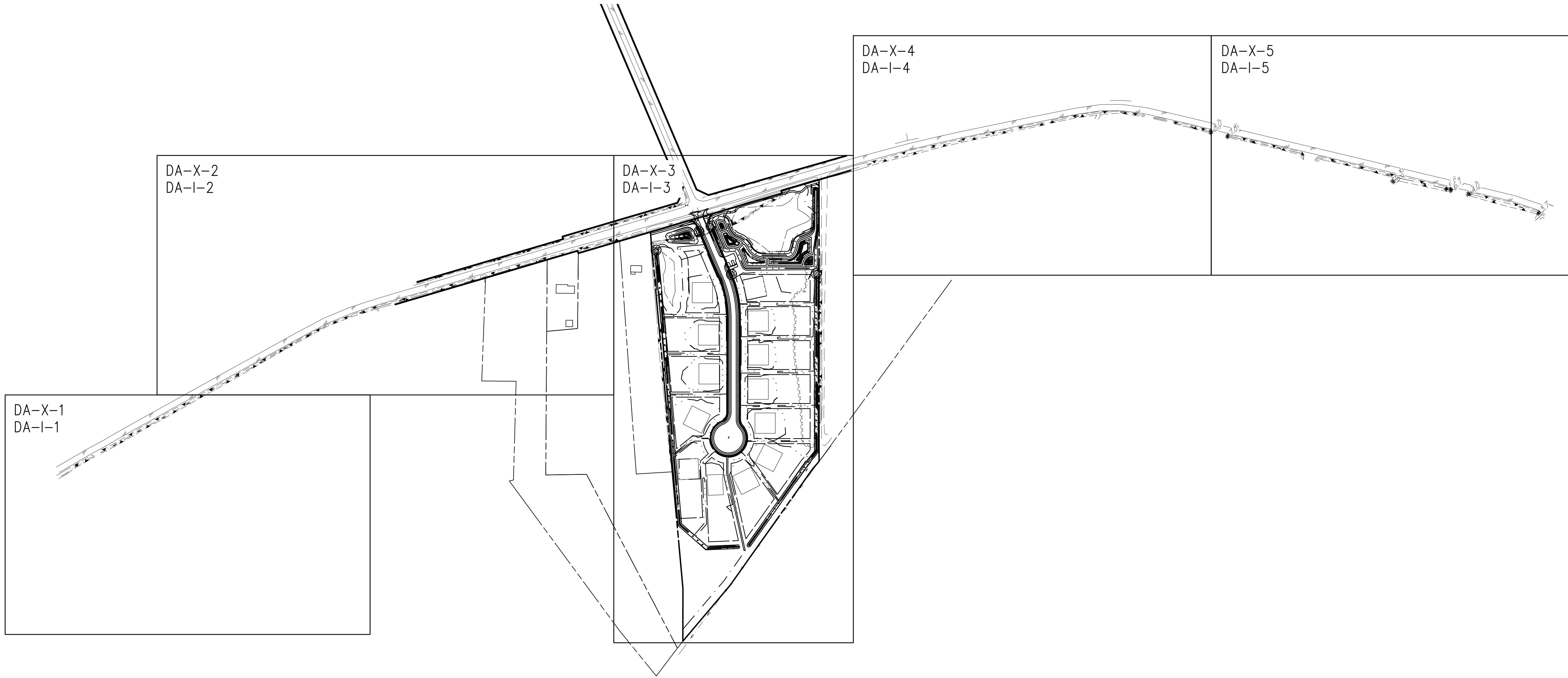
Prepared by:



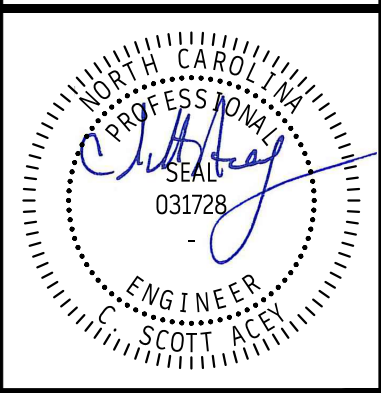
ENGINEERS | SCIENTISTS | SURVEYORS

**5032 Rouse Drive Suite 200
Virginia Beach, VA 23462
(757) 490-9264**

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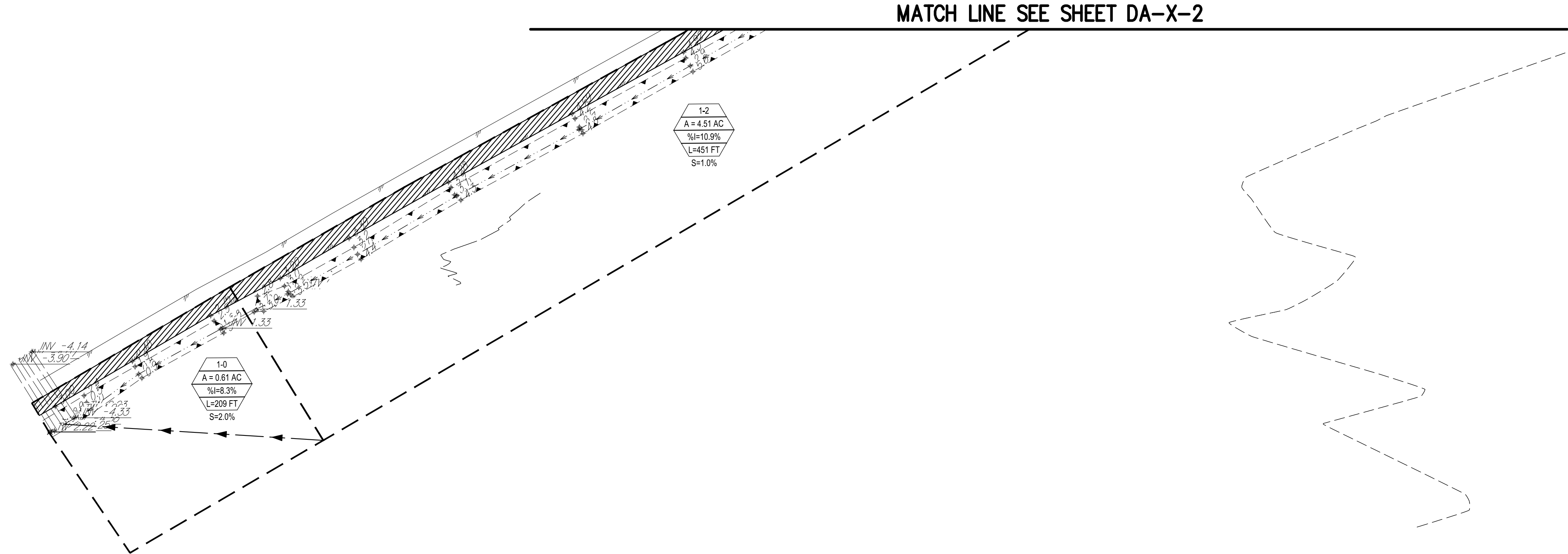


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DRAWN					11/01/24
CHECKED					
APPROVED					

NO.	REVISION	DATE	BY	DESCRIPTION

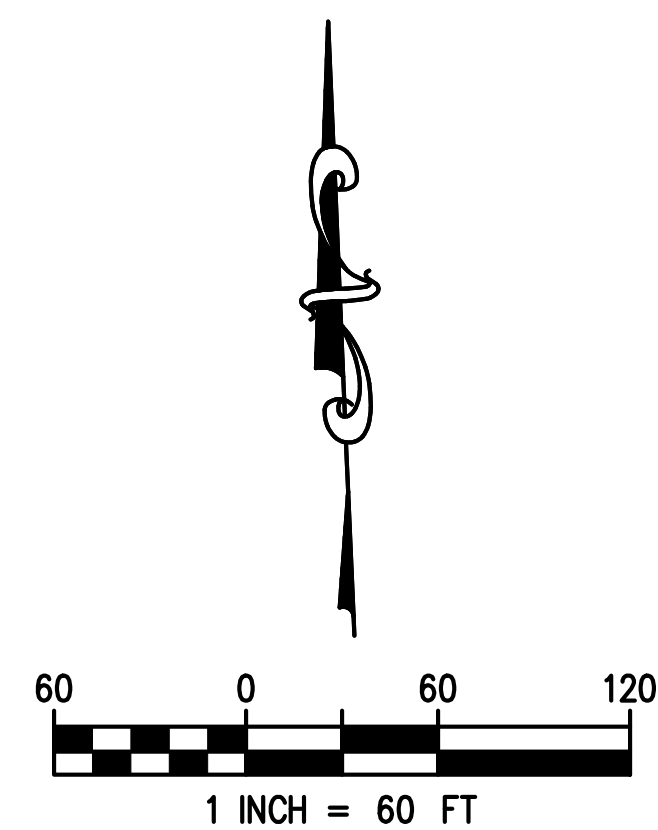
EXISTING CONDITION DRAINAGE AREA MAPS
 OF
WILSON RIDGE
 CURRITUCK COUNTY NORTH CAROLINA
 MOYOCK TOWNSHIP

SHEET
DA-X-1
 2 of 11 Sheets
 SCALE: 1" = 60'
 PROJ. NO.: 24100



LEGEND

- EX-XX
A=XXX Ac
L=XXX FT
MP=X.XX%
s=X.XX%
- SUB-DRAINAGE AREA IDENTIFICATION
- AREA (AC)
- FLOW PATH LENGTH
- PERCENT IMPERVIOUS COVER
- SLOPE
- ▶— FLOW PATH
- DRAINAGE DIVIDE



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Professional Engineer Seal for Scott M. Scott, License No. 031728, State of North Carolina.

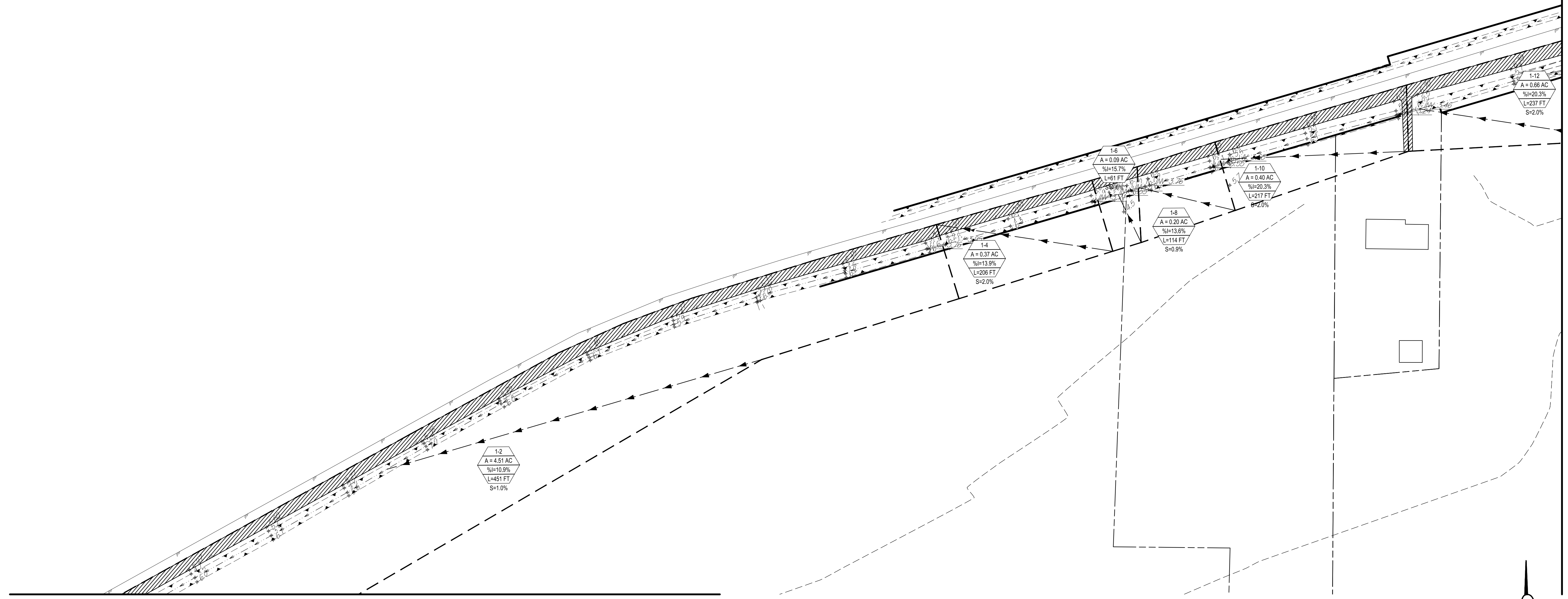
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DRAWN	LDJ
CHECKED	DMW
APPROVED	CSA
DATE	11/01/24

NO.	DATE	DESCRIPTION

EXISTING CONDITION DRAINAGE AREA MAPS
OF
WILSON RIDGE
MORYOCK TOWNSHIP
CURRITUCK COUNTY NORTH CAROLINA

SHEET
DA-X-1
2 of 11 Sheets
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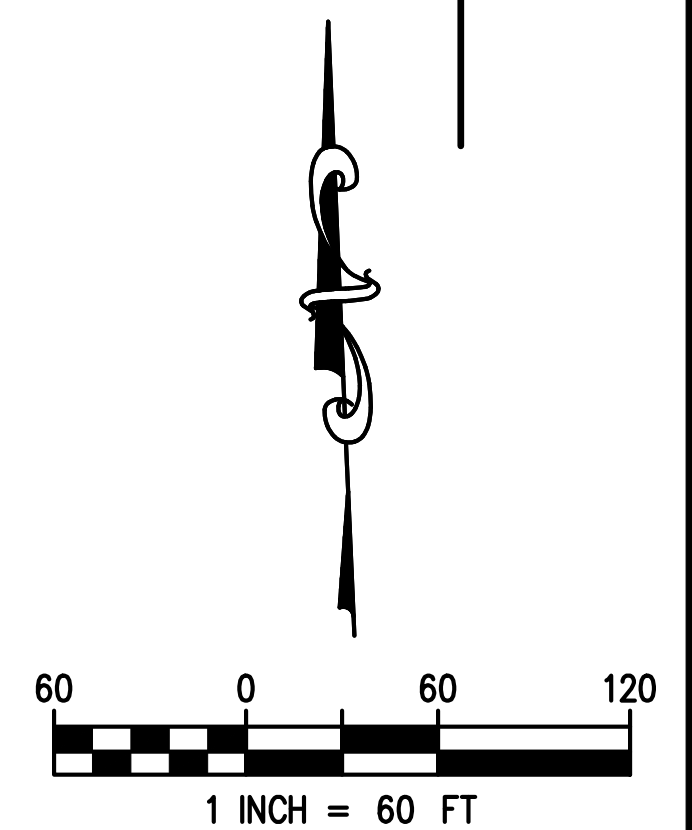


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MATCH LINE SEE SHEET DA-X-3

LEGEND

- EX-XX
A=XXX Ac
L=XXX FT
MP=X.XX%
s=X.XX%
- SUD-DRAINAGE AREA IDENTIFICATION
- AREA (AC)
- FLOW PATH LENGTH
- PERCENT IMPERVIOUS COVER
- SLOPE
- ▶— FLOW PATH
- - - DRAINAGE DIVIDE



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DATE: 11/01/24

REVISION	DATE	DESCRIPTION

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EXISTING CONDITION DRAINAGE AREA MAPS
OF
WILSON RIDGE

CURRITUCK COUNTY NORTH CAROLINA
MOYOCK TOWNSHIP

SHEET
DA-X-2

3 of 11 Sheets

SCALE: 1" = 60'

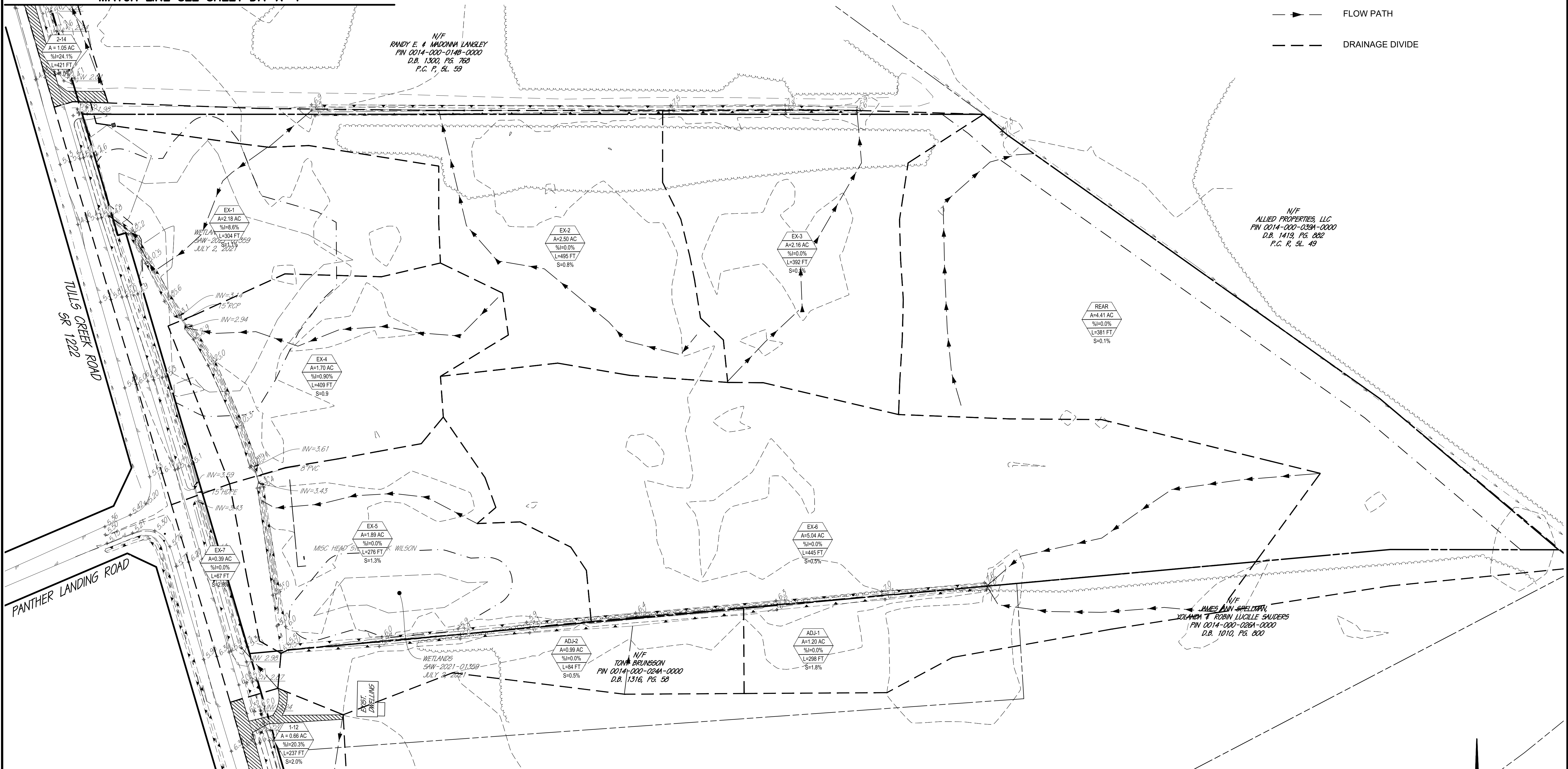
PROJ. NO.: 24100

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LEGEND

- EX-XX
A=XXX AC
L=XXX FT
MP=XX.XX%
S=XX.XX%
- SUD-DRAINAGE AREA IDENTIFICATION
- AREA (AC)
- FLOW PATH LENGTH
- PERCENT IMPERVIOUS COVER
- SLOPE
- ▶— FLOW PATH
- - - DRAINAGE DIVIDE



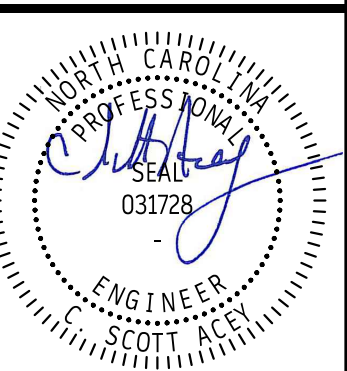
N/F
RANDY E. & MADONNA LANGLEY
PIN 0014-000-0149-0000
D.B. 1300, PG. 763
P.C. P. 5L 59

N/F
ALLIED PROPERTIES, LLC
PIN 0014-000-0394-0000
D.B. 1419, PG. 082
P.C. R. 5L 49

N/F
JAMES ANN SPELTON
YOLANDA T. ROBIN LUCILLE SAUNDERS
PIN 0014-000-0264-0000
D.B. 1010, PG. 000

N/F
TON BRUNSON
PIN 0014-000-0244-0000
D.B. 1316, PG. 58

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SAW-2021-01359
JULY 9, 2021

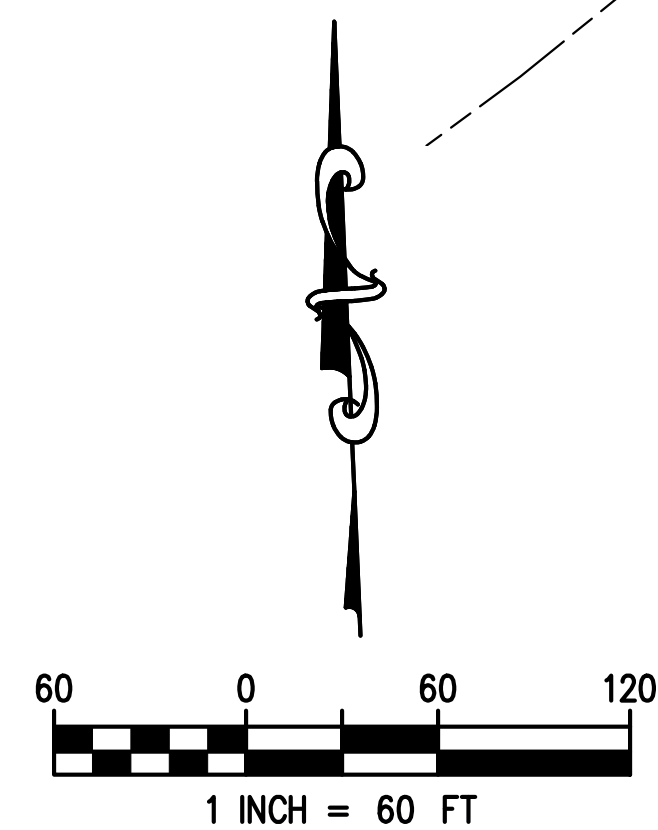


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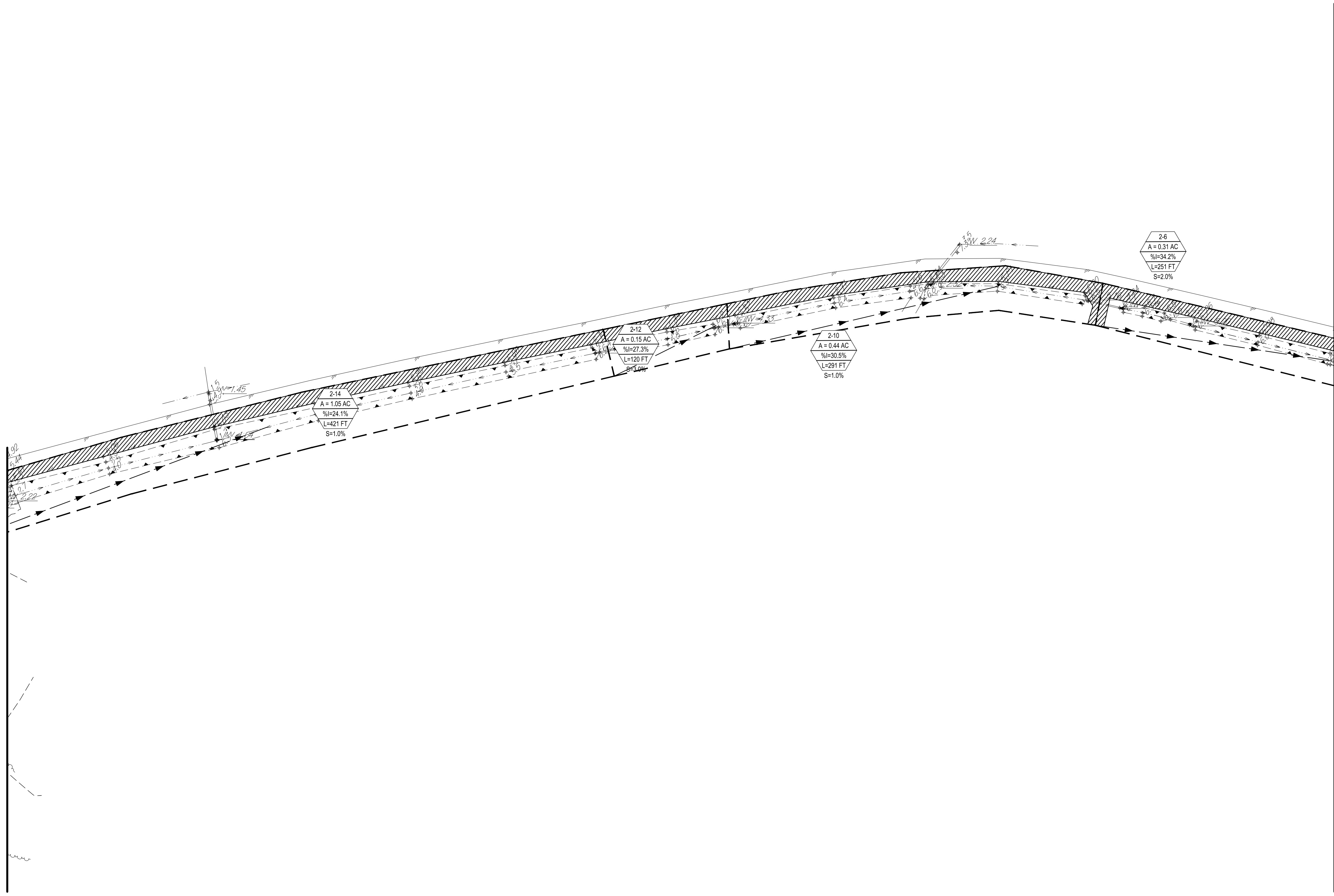
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EXISTING CONDITION DRAINAGE AREA MAPS
OF
WILSON RIDGE
CURRITUCK COUNTY NORTH CAROLINA
MOYOCK TOWNSHIP

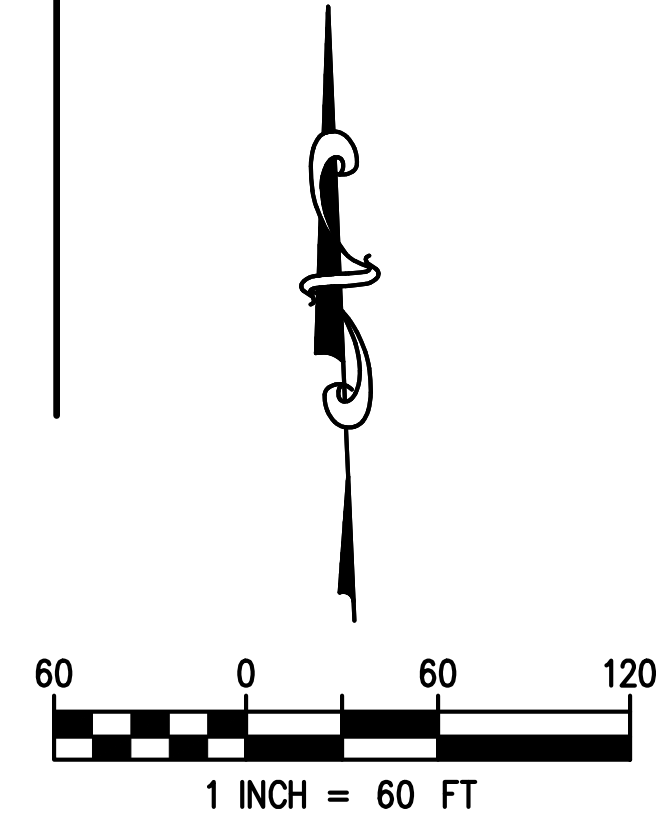
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DA-X-3
4 of 11 Sheets
SCALE: 1" = 60'
PROJ. NO.: 24100



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MATCH LINE SEE SHEET DA-X-5



LEGEND

- EX-XX
A=XXX Ac
L=XX.X FT
MP=X.XX%
s=X.XX%
- SUD-DRAINAGE AREA IDENTIFICATION
- AREA (AC)
- FLOW PATH LENGTH
- PERCENT IMPERVIOUS COVER
- SLOPE
- ▲— FLOW PATH
- - - DRAINAGE DIVIDE



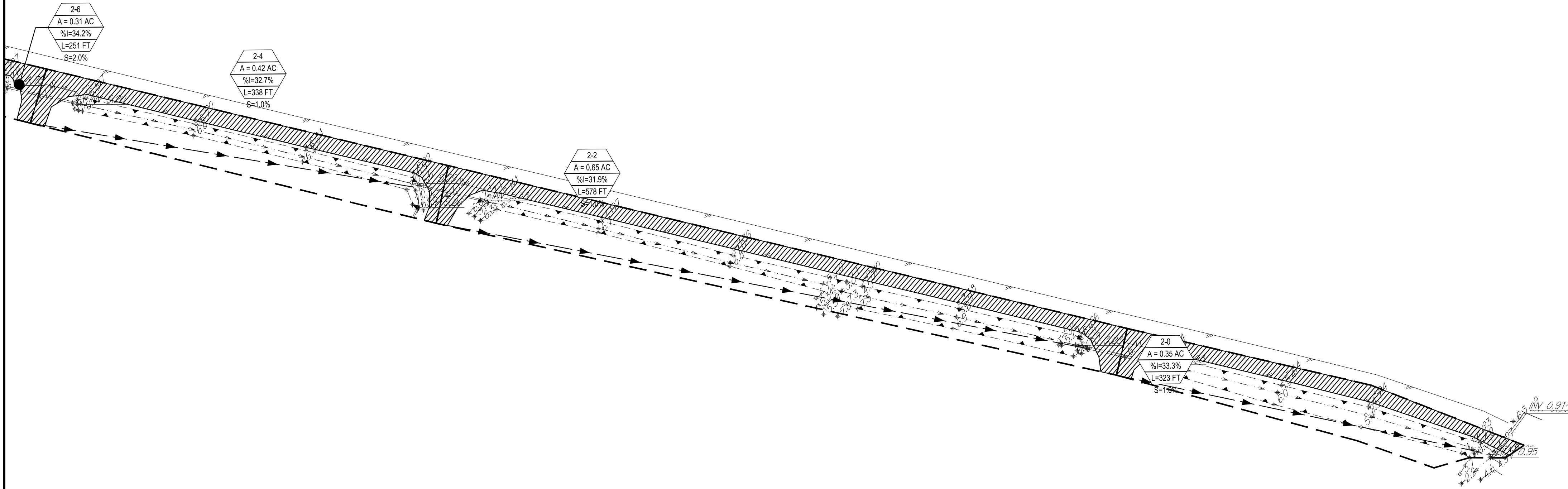
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DRAWN	LDJ
CHECKED	DMW
APPROVED	CSA
DATE	11/01/24

REVISION	DATE	DESCRIPTION

EXISTING CONDITION DRAINAGE AREA MAPS
OF
WILSON RIDGE
MORYOCK TOWNSHIP
CURRITUCK COUNTY NORTH CAROLINA

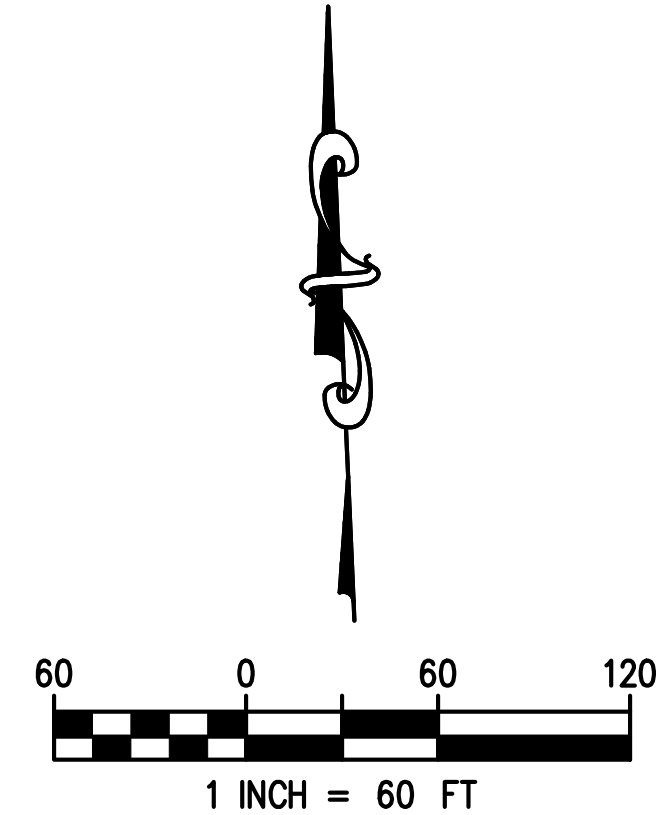
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SCALE: 1" = 60'
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LEGEND

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 AREA (AC)
 FLOW PATH LENGTH
 PERCENT IMPERVIOUS COVER
 SLOPE
- FLOW PATH
- DRAINAGE DIVIDE



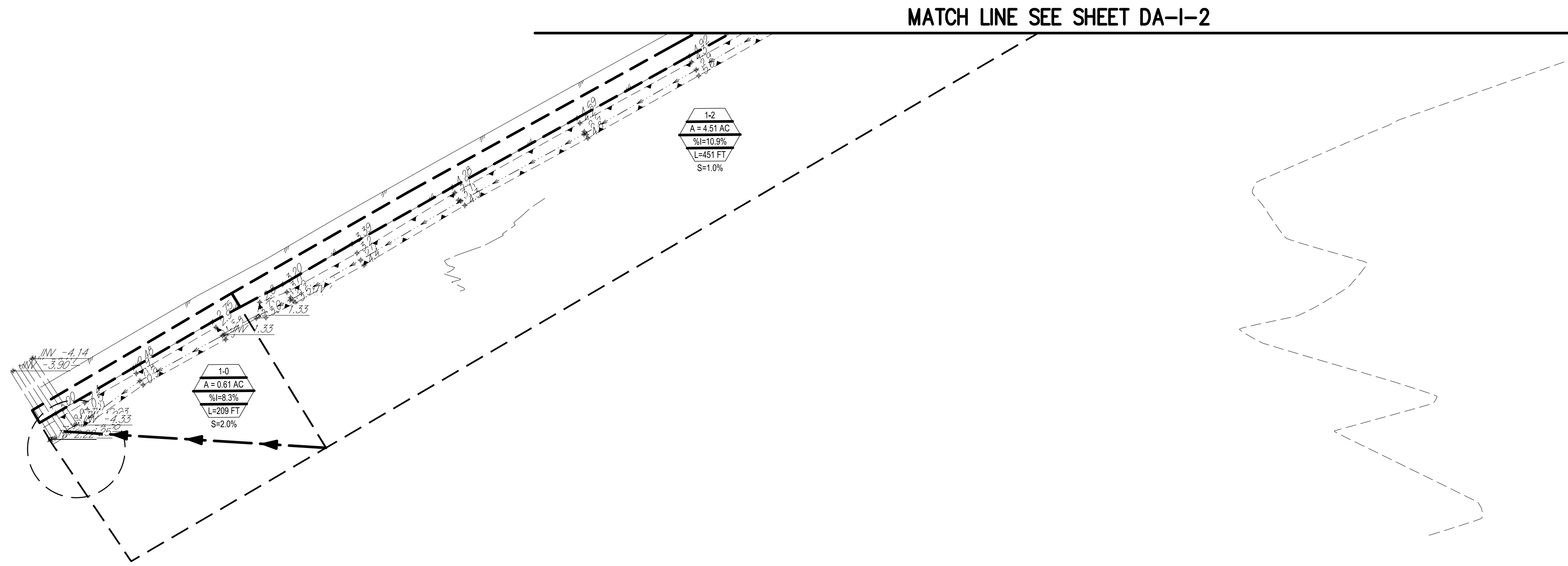
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NO.	DATE	DESCRIPTION

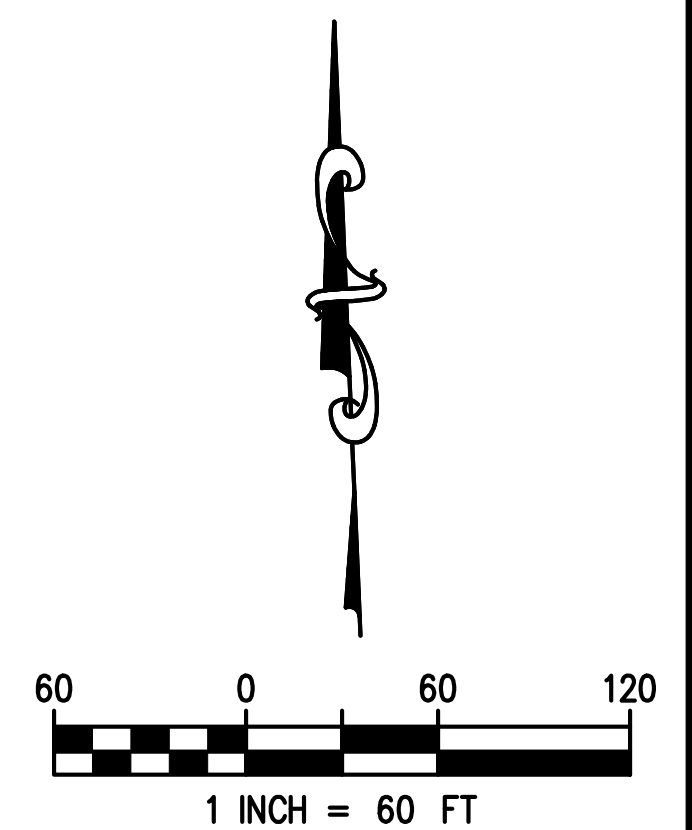
EXISTING CONDITION DRAINAGE AREA MAPS
 OF
WILSON RIDGE
 CURRITUCK COUNTY NORTH CAROLINA
 MOYOCK TOWNSHIP

SHEET
DA-X-5
 6 of 11 Sheets
 SCALE: 1" = 60'
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LEGEND

- SUD-DRAINAGE AREA IDENTIFICATION
 AREA (AC)
 FLOW PATH LENGTH
 PERCENT IMPERVIOUS COVER
 SLOPE
- FLOW PATH
- DRAINAGE DIVIDE



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PROPOSED CONDITION DRAINAGE AREA MAPS
OF
WILSON RIDGE

MOTTOCK TOWNSHIP
CURRITUCK COUNTY NORTH CAROLINA

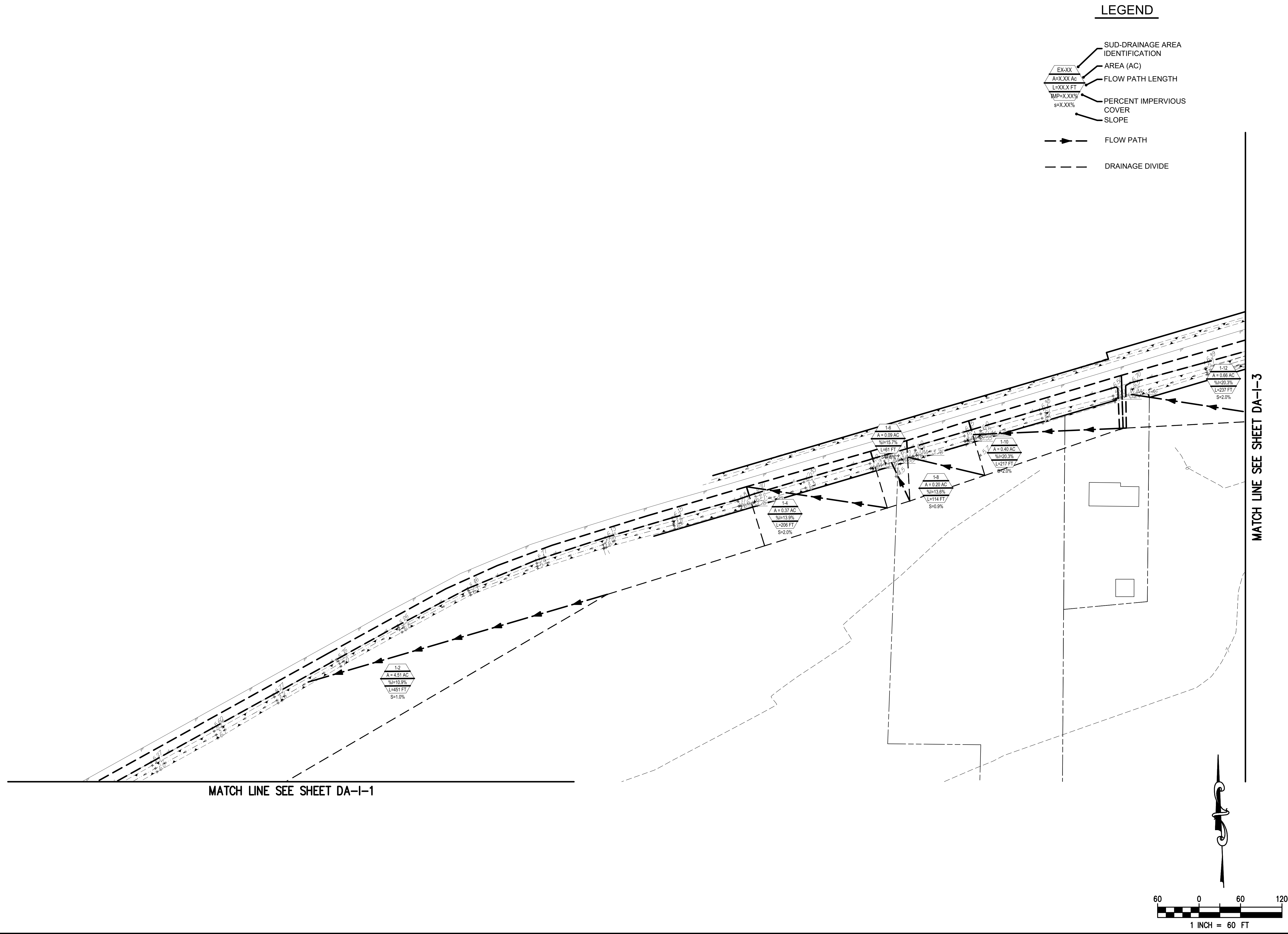
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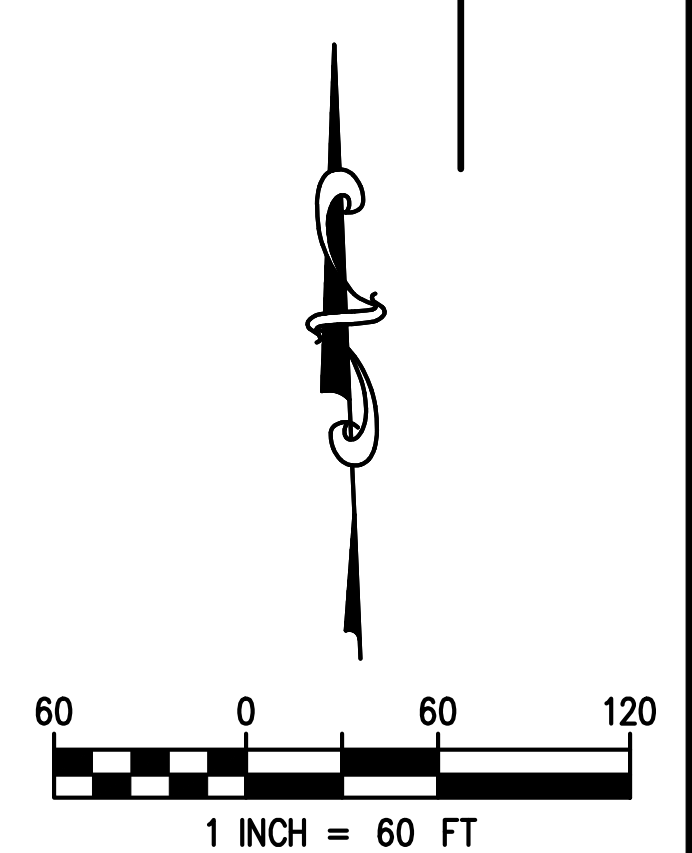
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LEGEND

- EX-XX
A=XXX Ac
L=XXX FT
MP=XXX%
s=XXX%
- SUD-DRAINAGE AREA IDENTIFICATION
- AREA (AC)
- FLOW PATH LENGTH
- PERCENT IMPERVIOUS COVER
- SLOPE
- FLOW PATH
- DRAINAGE DIVIDE



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DATE: 11/01/24

REVISION	DATE	DESCRIPTION

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PROPOSED CONDITION DRAINAGE AREA MAPS
OF
WILSON RIDGE

MOYOCK TOWNSHIP
CURRITUCK COUNTY NORTH CAROLINA

SHEET
DA-I-2
8 of 11 Sheets

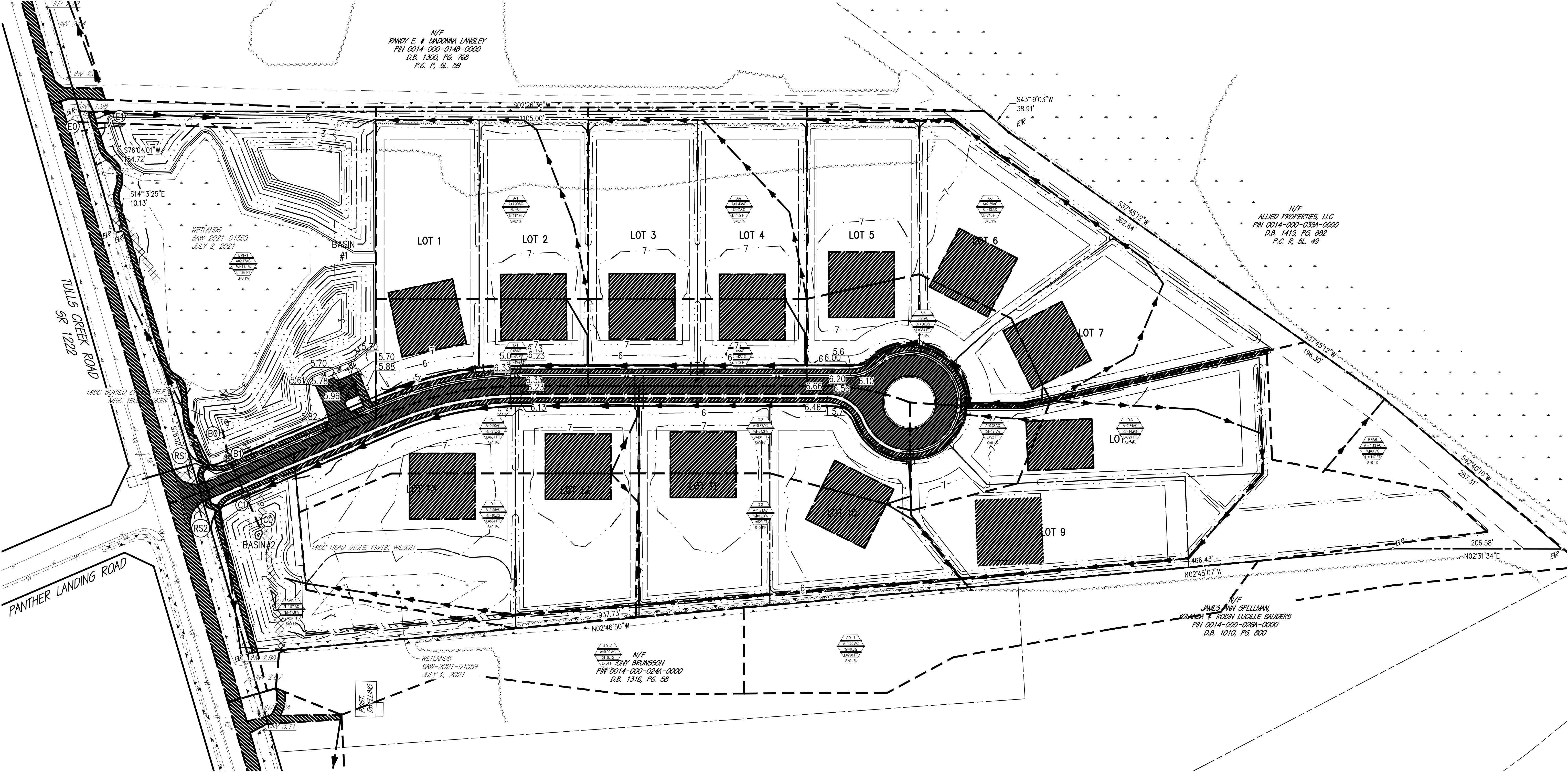
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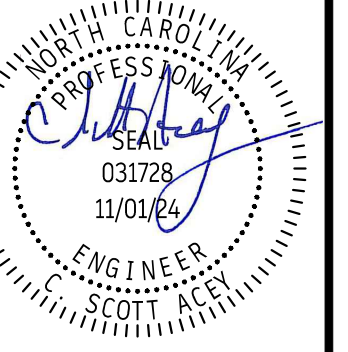
WATER MAIN SPECIFICATIONS AND DETAILS FOR THIS PLAN, INCLUDING ALL MATERIALS AND INSTALLATION METHODS SHALL BE PROVIDED, INSTALLED, TESTED AND ACCEPTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS AND DETAILS FOR THE CURRITUCK COUNTY WATER DEPARTMENT AND THE SOUTHERN OUTER BANKS WATER SYSTEM" AS APPROVED BY NCDEQ-DWR-PWS, SERIAL NUMBER 11-00630, LATEST REVISION.

A MINIMUM OF 36" OF COVER SHALL BE MAINTAINED OVER THE INSTALLED WATER MAIN.

A MINIMUM OF 18" OF SEPARATION SHALL BE PROVIDED FROM BOTTOM OF STORM DRAIN TO TOP OF WATER MAIN.



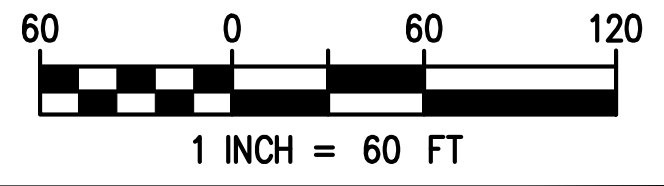
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CHECKED					
APPROVED					

REVISION	DATE	DESCRIPTION

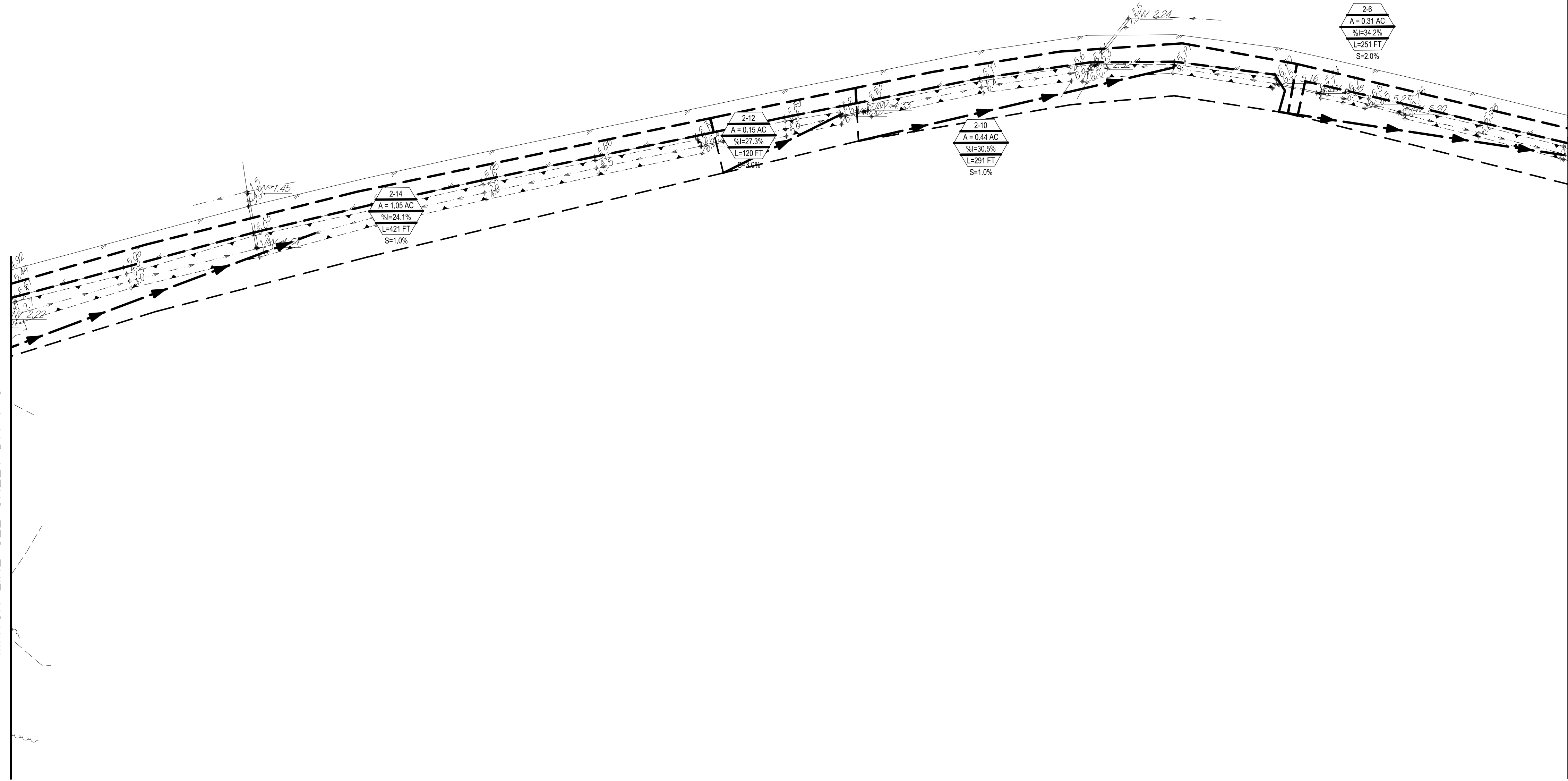
PROPOSED DRAINAGE AREAS OF WILSON RIDGE
 CAMDEN COUNTY NORTH CAROLINA
 MOYOCK TOWNSHIP



SHEET
DA-I-3
 9 of 11 Sheets
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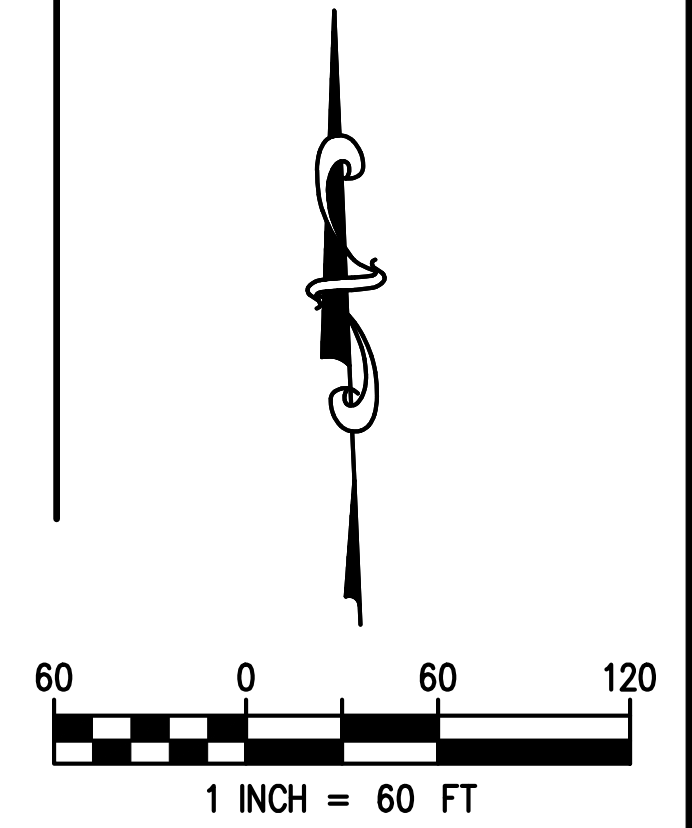
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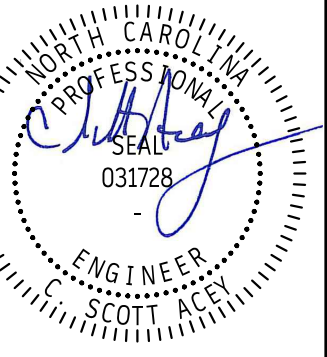
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LEGEND

- EX-XX
A=XXX Ac
L=XXX FT
MP=XX.XX%
s=XX.XX%
- SUD-DRAINAGE AREA IDENTIFICATION
- AREA (AC)
- FLOW PATH LENGTH
- PERCENT IMPERVIOUS COVER
- SLOPE
- ▲— FLOW PATH
- DRAINAGE DIVIDE



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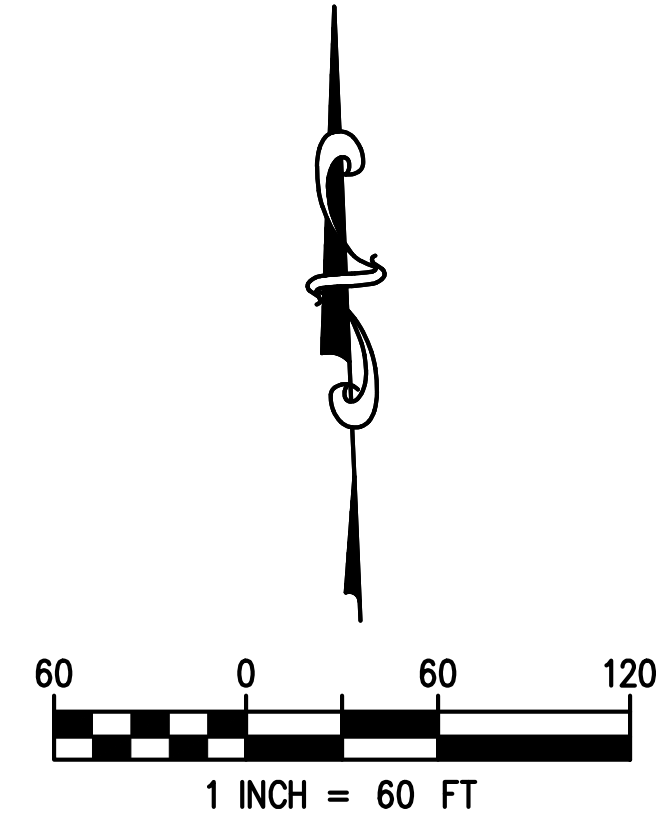
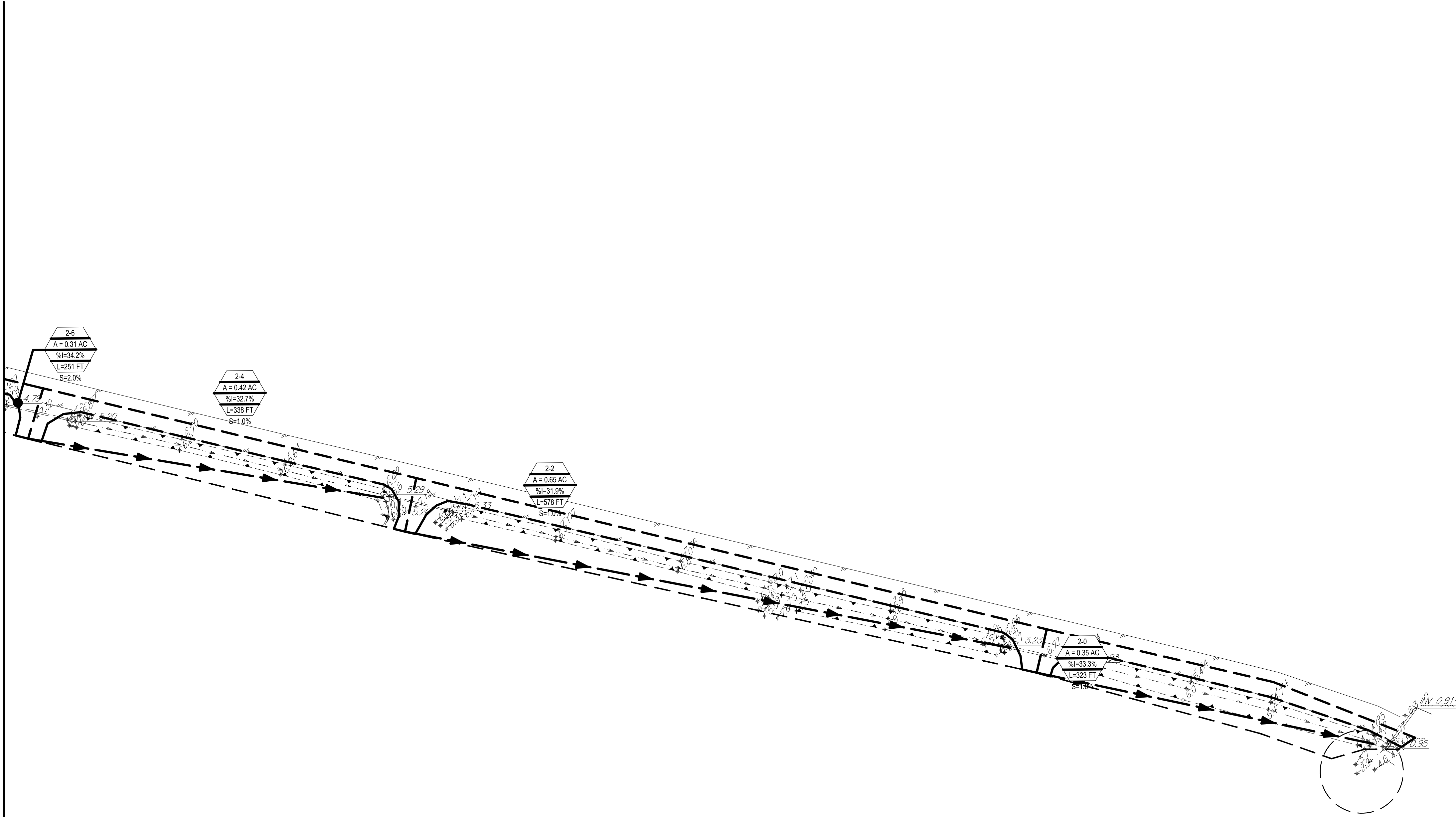
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DRAWN	LDJ
CHECKED	DMW
APPROVED	CSA
DATE	11/01/24

NO.	DATE	DESCRIPTION

PROPOSED CONDITION DRAINAGE AREA MAPS
OF
WILSON RIDGE
MORYOCK TOWNSHIP
CURRITUCK COUNTY NORTH CAROLINA

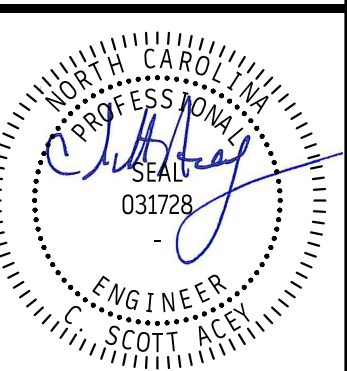
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DA-I-4
10 of 11 Sheets
SCALE: 1" = 60"
PROJ. NO.: 24100

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LEGEND

- SUD-DRAINAGE AREA IDENTIFICATION
 AREA (AC)
 FLOW PATH LENGTH
 PERCENT IMPERVIOUS COVER
 SLOPE
- FLOW PATH
- DRAINAGE DIVIDE



DESIGNED	ENW/RWS	DATE
	LDU	11/01/24
	DMW	
	CSA	
	APPROVED	

REVISION	DATE	DESCRIPTION

PROPOSED CONDITION DRAINAGE AREA MAPS
 OF
WILSON RIDGE
 MOYOCK TOWNSHIP
 CURRITUCK COUNTY NORTH CAROLINA

SHEET
DA-I-5
 11 of 11 Sheets
 SCALE: 1" = 60'
 PROJ. NO.: 24100

APPENDIX E

Stormwater Calculation Summary Tables

Prepared by:



ENGINEERS | SCIENTISTS | SURVEYORS

**5032 Rouse Drive Suite 200
Virginia Beach, VA 23462
(757) 490-9264**



Table 6 PROPOSED HGL SUMMARY

CALCULATIONS BY: RWS
 DATE: 3/4/2025
 PROJECT: Wilson Ridge
 PROJECT #: 24100

	Existing Condition Node
	Proposed Condition Node
	Downstream Existing Ditch

Junction ID	Ditch?	Storage/ Junction	Pre-Dev 10 Yr HGL	Post-Dev 10 Yr HGL	Pre-Dev 100 Yr HGL	Post-Dev 100 Yr HGL	Rim/ Top of Curb Elevation	Curb Flowline Elevation	Top of Bank
EX-4A	Y	J	6.23	-	7.24	-	-	-	5.00
EX-4B	Y	J	6.24	-	7.24	-	-	-	5.00
A-1	N	J	-	5.96	-	6.97	-	-	6.05
B-1	N	J	-	5.64	-	6.44	-	-	6.00
C-1	N	J	-	5.64	-	6.44	-	-	6.05
D-1	N	J	-	5.98	-	6.76	-	-	6.00
E-0	N	J	-	6.12	-	7.13	-	-	7.00
1-17	Y	J	5.74	5.59	6.60	6.29	-	-	5.43
1-16	Y	J	5.74	5.59	6.60	6.28	-	-	4.87
1-15	Y	J	5.74	5.59	6.58	6.26	-	-	4.98
1-14	Y	J	5.73	5.59	6.55	6.24	-	-	5.11
1-13	Y	J	5.74	5.59	6.58	6.26	-	-	5.24
1-12	Y	J	5.73	5.59	6.55	6.24	-	-	5.46
1-11	Y	J	5.73	5.58	6.53	6.23	-	-	5.24
1-10	Y	J	5.73	5.58	6.53	6.23	-	-	5.68
1-9	Y	J	5.72	5.58	6.47	6.19	-	-	5.55
1-8	Y	J	5.72	5.58	6.47	6.19	-	-	5.76
1-7	Y	J	5.71	5.57	6.42	6.15	-	-	5.71
1-6	Y	J	5.71	5.57	6.42	6.15	-	-	5.85
1-5	Y	J	5.64	5.54	5.98	5.86	-	-	5.77
1-4	Y	J	5.63	5.53	5.96	5.84	-	-	5.95
1-3	Y	J	5.62	5.52	5.91	5.80	-	-	5.76
1-2I	Y	J	4.03	4.03	4.21	4.20	-	-	4.00
1-2H	Y	J	4.03	4.03	4.21	4.21	-	-	2.60
1-2G	Y	J	4.03	4.03	4.21	4.21	-	-	5.40
1-2F	Y	J	4.42	4.37	4.63	4.58	-	-	5.90
1-2E	Y	J	4.74	4.67	4.96	4.90	-	-	6.20
1-2D	Y	J	5.12	5.17	5.21	5.30	-	-	6.90
1-2C	Y	J	5.58	5.48	5.85	5.73	-	-	6.80
1-2B	Y	J	5.60	5.49	5.86	5.76	-	-	6.70
1-2A	Y	J	5.61	5.51	5.89	5.78	-	-	6.80
1-2	Y	J	4.03	4.03	4.21	4.21	-	-	3.33
1-1	Y	J	4.00	4.00	4.00	4.00	-	-	3.33
2-17	Y	J	5.76	5.60	6.81	6.45	-	-	5.40
2-16	Y	J	5.76	5.61	6.81	7.30	-	-	3.98
2-15	Y	J	5.76	5.60	6.80	6.39	-	-	4.01
2-14D	Y	J	5.76	5.60	6.80	6.37	-	-	3.19
2-14C	Y	J	5.76	5.60	6.80	6.38	-	-	5.80
2-14B	Y	J	5.76	5.61	6.80	6.38	-	-	6.00
2-14A	Y	J	5.76	5.61	6.80	6.38	-	-	6.90
2-14	Y	J	5.76	5.72	6.80	6.38	-	-	6.58
2-13	Y	J	5.76	5.74	6.77	6.38	-	-	6.26
2-12	Y	J	5.76	5.75	6.77	6.38	-	-	6.37
2-11	Y	J	5.77	5.77	6.75	6.38	-	-	6.33
2-10C	Y	J	5.78	5.77	6.75	6.38	-	-	6.70
2-10B	Y	J	5.79	5.78	6.75	6.38	-	-	6.50
2-10A	Y	J	6.21	6.21	6.76	6.38	-	-	7.70
2-10	Y	J	6.24	6.24	6.86	6.42	-	-	7.16
2-9	Y	J	6.25	6.25	6.72	6.43	-	-	6.98
2-8	Y	J	6.25	6.25	6.73	6.43	-	-	7.23
2-7	Y	J	6.25	6.25	6.72	6.43	-	-	7.20
2-6	Y	J	6.25	6.25	6.72	6.43	-	-	7.10
2-5	Y	J	6.25	6.25	6.70	6.43	-	-	7.20
2-4A	Y	J	6.25	6.25	6.69	6.43	-	-	8.10
2-4	Y	J	6.16	5.99	6.41	6.30	-	-	7.29
2-3B	Y	J	4.37	4.36	4.60	4.60	-	-	5.60
2-3A	Y	J	5.98	4.51	6.11	4.72	-	-	7.60
2-3	Y	J	6.11	5.70	6.28	5.83	-	-	7.33
2-2	Y	J	4.35	4.34	4.58	4.58	-	-	5.23
2-1	Y	J	4.34	4.33	4.52	4.52	-	-	4.98

Junction ID	Ditch?	Storage/ Junction	Pre-Dev 10 Yr HGL	Post-Dev 10 Yr HGL	Pre-Dev 100 Yr HGL	Post-Dev 100 Yr HGL	Rim/ Top of Curb Elevation	Curb Flowline Elevation	Top of Bank
ADJ-1	Y	S	9.53	-	12.94	-	-	-	7.00
ADJ-2	Y	S	7.38	-	9.95	-	-	-	6.50
EX-2	Y	S	6.95	-	9.41	-	-	-	7.00
EX-3	Y	S	7.28	-	10.89	-	-	-	7.00
EX-4	Y	S	6.84	-	8.03	-	-	-	5.00
EX-5	Y	S	6.91	-	8.17	-	-	-	5.00
A-2	Y	S	-	5.32	-	6.17	-	-	6.24
A-3	Y	S	-	5.32	-	6.17	-	-	6.49
A-4	Y	S	-	5.32	-	6.17	-	-	7.14
B-2	Y	S	-	5.90	-	6.17	-	-	6.11
B-3	Y	S	-	6.08	-	6.26	-	-	6.54
B-4	Y	S	-	6.09	-	6.27	-	-	6.95
BMP-1	N	S	-	5.32	-	6.17	-	-	6.50
BMP-2	N	S	-	5.32	-	6.17	-	-	6.50
C-2	Y	S	-	6.28	-	6.51	-	-	6.50
C-3	Y	S	-	6.36	-	6.56	-	-	6.85
C-4	Y	S	-	6.37	-	6.57	-	-	6.97
D-2	Y	S	-	5.77	-	6.40	-	-	6.43
D-3	Y	S	-	5.80	-	6.52	-	-	6.89
D-4	Y	S	-	5.80	-	6.52	-	-	7.24



Table 7 PROPOSED POND HGL SUMMARY

CALCULATIONS BY: RWS
DATE: 3/4/2025
PROJECT: Wilson Ridge
PROJECT #: 24100

Pond ID	Top of Bank (FT)	10-Year HGL (FT)	100-Year HGL (FT)	Double 1.5-inch HGL (FT)	10-Year Freeboard (FT)	100-Year Freeboard (FT)	Double 1.5-inch Freeboard (FT)
BMP1	6.50	5.32	6.17	3.52	1.18	0.33	2.98
BMP2	6.50	5.32	6.17	3.52	1.18	0.33	2.98

APPENDIX F

Rainfall Data

Prepared by:



ENGINEERS | SCIENTISTS | SURVEYORS

**5032 Rouse Drive Suite 200
Virginia Beach, VA 23462
(757) 490-9264**



NOAA Atlas 14, Volume 2, Version 3
 Location name: Moyock, North Carolina, USA*
 Latitude: 36.5237°, Longitude: -76.1515°
 Elevation: 6 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M. Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aerials](#)

PF tabular

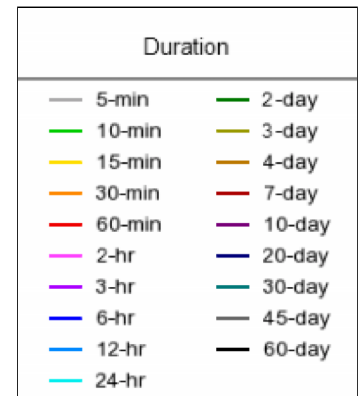
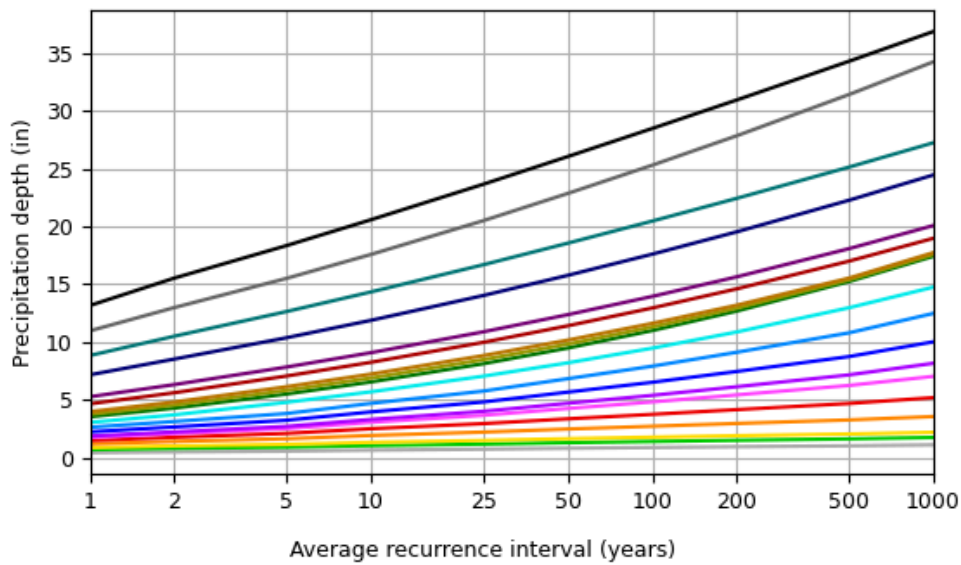
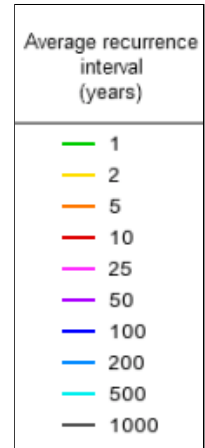
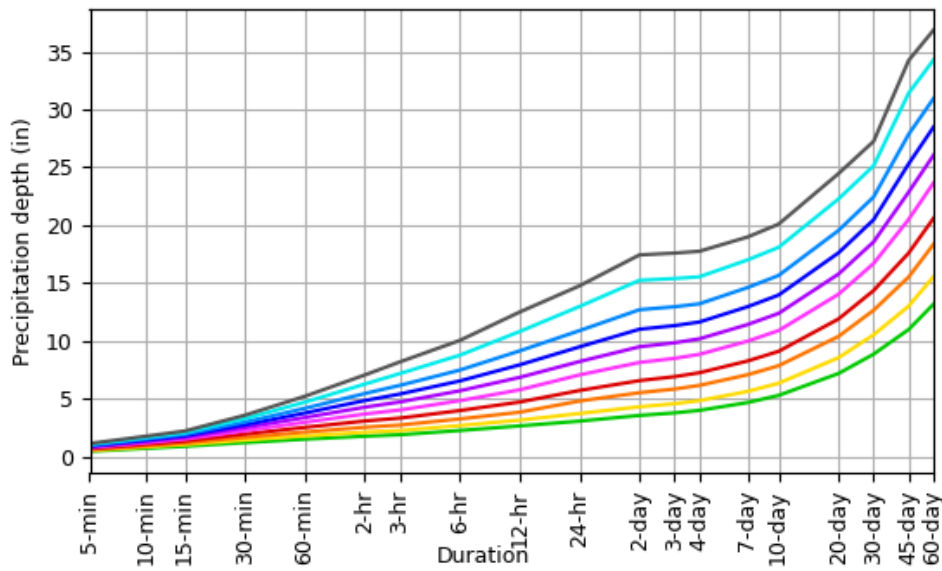
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.436 (0.396-0.481)	0.508 (0.460-0.563)	0.570 (0.516-0.631)	0.657 (0.592-0.728)	0.740 (0.664-0.818)	0.817 (0.731-0.903)	0.885 (0.789-0.978)	0.952 (0.844-1.05)	1.03 (0.907-1.14)	1.11 (0.969-1.23)
10-min	0.697 (0.633-0.768)	0.813 (0.735-0.900)	0.913 (0.826-1.01)	1.05 (0.947-1.16)	1.18 (1.06-1.30)	1.30 (1.16-1.44)	1.41 (1.25-1.56)	1.51 (1.34-1.67)	1.63 (1.43-1.81)	1.75 (1.53-1.94)
15-min	0.871 (0.791-0.961)	1.02 (0.924-1.13)	1.16 (1.04-1.28)	1.33 (1.20-1.47)	1.50 (1.34-1.65)	1.65 (1.47-1.82)	1.78 (1.58-1.96)	1.90 (1.69-2.11)	2.05 (1.80-2.28)	2.20 (1.92-2.44)
30-min	1.19 (1.08-1.32)	1.41 (1.28-1.56)	1.64 (1.48-1.82)	1.93 (1.74-2.13)	2.22 (1.99-2.45)	2.48 (2.22-2.74)	2.72 (2.43-3.01)	2.96 (2.63-3.28)	3.27 (2.87-3.62)	3.56 (3.10-3.95)
60-min	1.49 (1.35-1.64)	1.77 (1.60-1.96)	2.10 (1.90-2.33)	2.51 (2.26-2.78)	2.95 (2.65-3.26)	3.36 (3.01-3.72)	3.75 (3.34-4.15)	4.16 (3.68-4.60)	4.69 (4.12-5.19)	5.20 (4.53-5.76)
2-hr	1.75 (1.58-1.94)	2.09 (1.87-2.32)	2.52 (2.26-2.81)	3.06 (2.74-3.40)	3.67 (3.27-4.07)	4.26 (3.78-4.72)	4.83 (4.26-5.35)	5.44 (4.77-6.03)	6.25 (5.44-6.94)	7.04 (6.07-7.81)
3-hr	1.87 (1.69-2.10)	2.23 (2.00-2.50)	2.71 (2.43-3.04)	3.31 (2.96-3.70)	4.01 (3.56-4.48)	4.70 (4.16-5.24)	5.39 (4.74-6.00)	6.14 (5.35-6.82)	7.16 (6.18-7.96)	8.17 (6.98-9.08)
6-hr	2.24 (2.02-2.50)	2.66 (2.39-2.99)	3.24 (2.90-3.63)	3.96 (3.53-4.43)	4.82 (4.27-5.38)	5.67 (5.00-6.31)	6.52 (5.72-7.25)	7.46 (6.48-8.27)	8.74 (7.51-9.70)	10.0 (8.51-11.1)
12-hr	2.64 (2.37-2.96)	3.13 (2.80-3.53)	3.82 (3.41-4.30)	4.70 (4.18-5.28)	5.76 (5.08-6.44)	6.83 (5.98-7.63)	7.92 (6.88-8.83)	9.12 (7.84-10.2)	10.8 (9.15-12.0)	12.5 (10.4-13.9)
24-hr	3.05 (2.80-3.34)	3.71 (3.41-4.07)	4.79 (4.39-5.26)	5.70 (5.21-6.24)	7.05 (6.39-7.69)	8.20 (7.38-8.95)	9.47 (8.45-10.3)	10.9 (9.60-11.9)	13.0 (11.2-14.2)	14.8 (12.6-16.2)
2-day	3.54 (3.26-3.88)	4.29 (3.95-4.70)	5.51 (5.06-6.02)	6.55 (6.00-7.15)	8.12 (7.38-8.84)	9.48 (8.54-10.3)	11.0 (9.80-12.0)	12.7 (11.1-13.8)	15.2 (13.1-16.7)	17.4 (14.8-19.2)
3-day	3.76 (3.48-4.10)	4.56 (4.21-4.96)	5.82 (5.37-6.34)	6.89 (6.34-7.49)	8.48 (7.73-9.19)	9.82 (8.89-10.6)	11.3 (10.1-12.3)	12.9 (11.4-14.1)	15.4 (13.4-16.8)	17.6 (15.1-19.3)
4-day	3.98 (3.69-4.32)	4.82 (4.47-5.23)	6.14 (5.68-6.65)	7.23 (6.67-7.82)	8.83 (8.08-9.54)	10.2 (9.24-11.0)	11.6 (10.5-12.6)	13.2 (11.8-14.3)	15.5 (13.6-16.9)	17.7 (15.3-19.4)
7-day	4.66 (4.34-5.04)	5.62 (5.24-6.08)	7.06 (6.56-7.62)	8.25 (7.64-8.89)	9.97 (9.18-10.7)	11.4 (10.4-12.3)	12.9 (11.7-14.0)	14.6 (13.1-15.8)	17.0 (15.0-18.5)	19.0 (16.5-20.7)
10-day	5.27 (4.94-5.65)	6.32 (5.92-6.77)	7.84 (7.32-8.39)	9.08 (8.47-9.72)	10.9 (10.1-11.6)	12.4 (11.4-13.2)	13.9 (12.7-15.0)	15.6 (14.2-16.8)	18.1 (16.1-19.5)	20.1 (17.7-21.8)
20-day	7.17 (6.74-7.64)	8.53 (8.03-9.11)	10.4 (9.75-11.1)	11.9 (11.1-12.7)	14.0 (13.1-14.9)	15.8 (14.6-16.8)	17.6 (16.2-18.8)	19.5 (17.8-20.9)	22.3 (20.0-24.0)	24.5 (21.7-26.5)
30-day	8.84 (8.34-9.39)	10.5 (9.92-11.2)	12.6 (11.9-13.4)	14.3 (13.5-15.2)	16.7 (15.6-17.7)	18.5 (17.3-19.7)	20.5 (19.0-21.8)	22.4 (20.6-23.9)	25.1 (22.9-27.0)	27.2 (24.6-29.4)
45-day	11.0 (10.4-11.7)	13.0 (12.3-13.8)	15.5 (14.6-16.5)	17.6 (16.5-18.7)	20.5 (19.2-21.8)	22.8 (21.3-24.3)	25.3 (23.4-26.9)	27.8 (25.6-29.7)	31.4 (28.5-33.6)	34.2 (30.8-36.9)
60-day	13.2 (12.5-13.9)	15.5 (14.7-16.4)	18.3 (17.3-19.4)	20.6 (19.4-21.8)	23.6 (22.2-25.0)	26.0 (24.4-27.6)	28.5 (26.5-30.2)	30.9 (28.7-32.9)	34.3 (31.5-36.6)	36.9 (33.6-39.6)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical

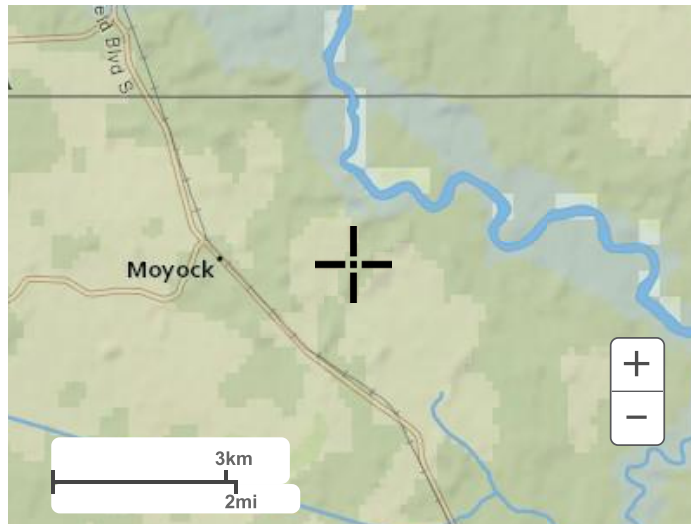
PDS-based depth-duration-frequency (DDF) curves
 Latitude: 36.5237°, Longitude: -76.1515°



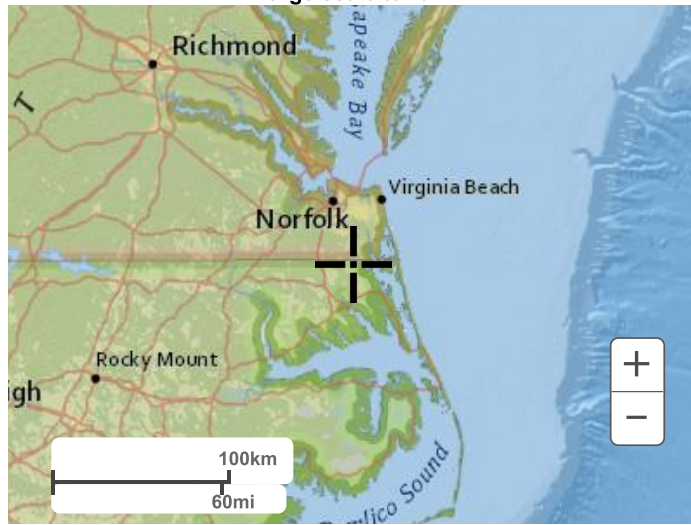
[Back to Top](#)

Maps & aerials

Small scale terrain



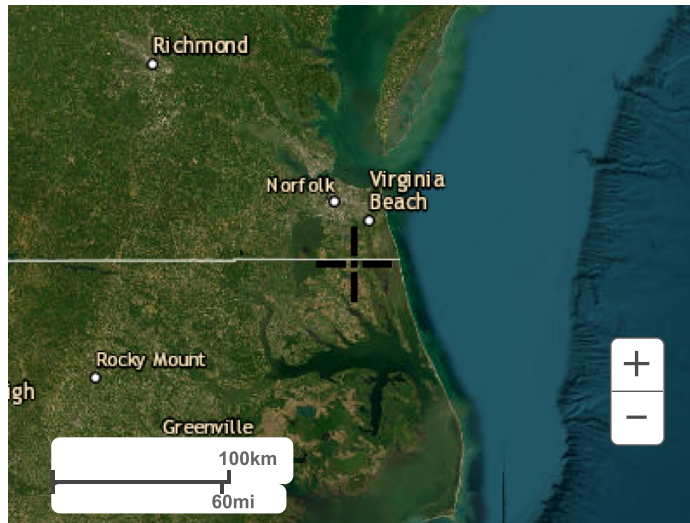
Large scale terrain



Large scale map



Large scale aerial



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[National Weather Service](#)
[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

[Disclaimer](#)

JOSH STEIN

Governor

D. REID WILSON

Secretary

RICHARD E. ROGERS, JR.

Director



NORTH CAROLINA
Environmental Quality

January 20, 2026

CURRITUCK COUNTY
ATTN: REBECCA GAY, COUNTY MANAGER
153 COURTHOUSE ROAD, SUITE 204
CURRITUCK, NC 27929

Re: **Authorization to Construct (This is not a Final Approval)**

Issue Date: January 20, 2026

WILSON RIDGE

Serial No.: 25-01095

Water System No.: NC0427010

Currituck County

Dear Applicant:

This letter is to confirm that a complete Engineer's Report and a Water System Management Plan have been received, and that engineering plans and specifications have been approved by the Department for **WILSON RIDGE, Serial No.: 25-01095**.

The "Authorization to Construct" is valid for 36 months from the issue date. Authorization to construct may be extended if the Rules Governing Public Water Systems [15A NCAC 18C] and site conditions have not changed (see Rule .0305). The "Authorization to Construct" and the engineering plans and specifications approval letter shall be posted at the primary entrance of the job site before and during construction.

Upon completion of the construction or modification, **and prior to placing the new construction or modification into service**, the applicant must submit an Engineer's Certification and Applicant's Certification to the Public Water Supply Section.

- **Engineer's Certification:** in accordance with Rule .0303(a), the applicant shall submit a certification statement signed and sealed by a registered professional engineer stating that construction was completed in accordance with approved engineering plans and specifications, including any provisions stipulated in the Department's engineering plan and specification approval letter.
- **Applicant's Certification:** in accordance with Rule .0303(c), the applicant shall submit a signed certification statement indicating that the requirements for an Operation and Maintenance Plan and Emergency Management Plan have been satisfied in accordance with Rule .0307(d) and (e) and that the system has a certified operator in accordance with Rule .1300. The "Applicant's Certification" form is available at <http://www.ncwater.org/> (click on Public Water Supply Section, Plan Review, Plan Review Forms).

Certifications can be sent by mail or attachment to an e-mail message to PWSSection.PlanReview@deq.nc.gov.

If this "Authorization to Construct" is for a new public water system, the owner must submit a completed **application for an Operating Permit** and the appropriate fee. For a copy of the application for an Operating Permit please call (919) 707-9076.

Once the certifications and permit application and fee (if applicable) are received and determined adequate, the Department will issue a Final Approval letter to the applicant. In accordance with Rule .0309(a), **no portion of this project shall be placed into service until the Department has issued Final Approval**.

Please contact us at (919) 707-9100 if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink that reads "Rebecca Sadosky".

Rebecca Sadosky, Ph.D., Chief
Public Water Supply Section
Division of Water Resources, NCDEQ

cc: JAMIE MIDGETTE, P.E., Regional Engineer
BISSELL PROFESSIONAL GROUP



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1634 Mail Service Center | Raleigh, North Carolina 27699-1634
919.707.9100

North Carolina Department of Environmental Quality
Division of Water Resources

Authorization to Construct

Project Applicant:	CURRITUCK COUNTY
Public Water System Name:	CURRITUCK COUNTY WATER SYSTEM
Water System No.:	NC0427010
Project Name:	WILSON RIDGE
Serial No.:	25-01095
Issue Date:	January 20, 2026
Expiration Date:	36 Months after Issue Date

In accordance with 15A NCAC 18C .0305, this Authorization to Construct must be posted
at the primary entrance to the job site during construction.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

March 24, 2026

**Driveway Permit ID:
D011-027-25-00034**

Subject: Driveway Permit – Wilson Ridge
County: Currituck

Wilson Ridge of Moyock, LLC
417D Caratoke Hwy
Moyock, NC 27958

Dear Applicant,

Attached for your files is a copy of a Commercial Driveway Permit, which has been properly executed. Please note any comments, which may appear on the permit form.

Please feel free to contact the District Office at (252) 621-6400 if you have any questions.

Sincerely,

DocuSigned by:
Caitlin A. Spear
930880FAC40F45A

Caitlin A. Spear, PE
District Engineer

Attachments

Cc: Division Engineer
County Maintenance Engineer



Street and Driveway Access Permit General Provisions

Our mission is to safely and efficiently manage and facilitate, as much as practicable, the accommodation of street and driveway accesses along NCDOT Highways, while protecting our public infrastructure.

Pre-Construction Notices

- PCN 1** Approval may be rescinded upon failure to follow any of the provisions in this permit and may be considered a violation of the Street and Driveway Access Permit.
- PCN 2** Prior to beginning work, the Applicant shall contact the Road Maintenance Supervisor for the corresponding county, to provide or verify the proposed pipe diameter. Please see the last page of the General Provisions for Contact Information
- PCN 3** Prior to beginning work, it is the requirement of the Applicant to contact the appropriate Utility Companies involved and make arrangements to adjust or relocate any utilities that conflict with the proposed work.
- PCN 4** It shall be the responsibility of the Applicant to determine the location of utilities within the permitted area. NCGS § 87-115 through § 87-130 of the Underground Utility Safety and Damage Prevention Act requires underground utilities to be located by calling 811 prior to construction. The Applicant shall be responsible for notifying other utility owners and providing protection and safeguards to prevent damage or interruption to existing facilities and maintain access to them.
- PCN 7** Trenching, bore pits and/or other excavations shall not be left open or unsafe overnight.

Legal & Right-of-Way

- RW 1** This approval and associated plans and supporting documents shall not be interpreted to allow any design change or change in the intent of the design by the Owner, Design Engineer, or any of their representatives. Any revisions or changes to these approved plans or intent for construction must be obtained in writing from the District Engineer's office or their representative prior to construction or during construction, if an issue arises during construction to warrant changes.
- RW 2** NCDOT does not guarantee the right of way on this road, nor will it be responsible for any claim for damages brought about by any property owner by reason of this installation. It is the responsibility of the Applicant to verify the right of way.
- RW 3** Prior to the approval of any privately maintained facility within NCDOT right of way which the State of North Carolina is not the fee simple owner, written permission that each and every property owner affected by the installation shall be provided to NCDOT by the Applicant. (See corresponding attachment.)
- RW 4** Applicant shall be responsible for obtaining all necessary permanent and/or temporary construction, drainage, utility and/or sight distance easements.
- RW 6** No commercial advertising shall be allowed within NCDOT Right of Way.



Street and Driveway Access Permit General Provisions

Our mission is to safely and efficiently manage and facilitate, as much as practicable, the accommodation of street and driveway accesses along NCDOT Highways, while protecting our public infrastructure.

Work Zone Traffic Control

TC 2 WORK ZONE TRAFFIC CONTROL QUALIFICATIONS AND TRAINING PROGRAM

All personnel performing any activity inside the highway right of way are required to be familiar with the NCDOT Maintenance / Utility Traffic Control Guidelines (MUTCG). No specific training course or test is required for qualification in the Maintenance /Utility Traffic Control Guidelines (MUTCG).

All flagging, spotting, or operating Automated Flagger Assist Devices (AFAD) inside the highway right of way requires qualified and trained Work Zone Flaggers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel involved with the installation of Work Zone Traffic Control devices inside the highway right of way are required to be qualified and trained Work Zone Installers. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

All personnel in charge of overseeing work zone Temporary Traffic Control operations and installations inside the highway right of way are required to be qualified and trained Work Zone Supervisors. Training for this certification is provided by NCDOT approved training resources and by private entities that have been pre-approved to train themselves.

For questions and/or additional information regarding this training program please refer to <https://connect.ncdot.gov/projects/WZTC/Pages/Training.aspx> or call the NCDOT Work Zone Traffic Control Section (919) 814-5000.

TC 3 The party of the second part shall employ traffic control measures that are in accordance with the prevailing federal, state, local, and NCDOT policies, standards, and procedures. These policies, standards, and procedures include, but are not limited to the following:

A) Manual on Uniform Traffic Control Devices (MUTCD) – North Carolina has adopted the MUTCD to provide basic principles and guidelines for traffic control device design, application, installation, and maintenance. North Carolina uses the MUTCD as a minimum requirement where higher supplemental standards specific to North Carolina are not established. Use fundamental principles and best practices of MUTCD (Part 6, Temporary Traffic Control).

B) NCDOT Maintenance / Utility Traffic Control Guidelines – This document enhances the fundamental principles and best practices established in MUTCD Part 6, Temporary Traffic Control, incorporating NCDOT-specific standards and details. It also covers important safety knowledge for a wide range of work zone job responsibilities.

TC 4 If the Traffic Control Supervisor determines that portable concrete barrier (PCB) is required to shield a hazard within the clear zone, then PCB shall be designed and sealed by a licensed North Carolina Professional Engineer. PCB plans and design calculations shall be submitted to the District Engineer for review and approval prior to installation.

TC 5 Ingress and egress shall be maintained to all businesses and dwellings affected by the project. Special attention shall be paid to police, EMS and fire stations, fire hydrants, secondary schools, and hospitals.

TC 6 Traffic shall be maintained at all times. All lanes of traffic are to be open during the hours of 7:00 A.M. to 9:00 A.M. and from 4:00 P.M. to 6:00 P.M. Monday through Friday, during any time of inclement weather, or as directed by the District Engineer. Any violation of these hours will result in ceasing any further construction by the Encroaching Party or their contractor.

TC A) The Contractor shall not perform any work on US158 and/or NC12 that would require a lane closure or alter the traffic flow during the following day and time restrictions: May 14th from thirty (30) minutes before sunset to thirty (30) minutes after sunrise October 4th or any other time when traffic is unusually heavy.



Street and Driveway Access Permit General Provisions

Our mission is to safely and efficiently manage and facilitate, as much as practicable, the accommodation of street and driveway accesses along NCDOT Highways, while protecting our public infrastructure.

- TC 9 Work requiring lane or shoulder closures shall not be performed on both sides of the road simultaneously within the same area.
- TC 10 Any work requiring equipment or personnel within 5 feet of the edge of any travel lane of an undivided facility and within 10 feet of the edge of any travel lane of a divided facility shall require a lane closure with appropriate tapers per current NCDOT Roadway Standard Drawings or MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- TC 13 Any pavement markings that are damaged or obliterated shall be restored by the Applicant at no expense to NCDOT.
- TC 14 Sidewalk closures shall be installed as necessary. Pedestrian traffic shall be detoured around these closures and shall be signed appropriately and in accordance with The American with Disabilities Act Accessibility Guidelines. The Applicant must adhere to the guidelines for accommodating pedestrians in encroachment work zones as described in the NCDOT Pedestrian Work Zone Accommodations Training found at <https://www.youtube.com/watch?v=ADuYa5IW3dg&feature=youtu.be>
- TC 15 Parking and material storage shall not be allowed along the shoulders of any NCDOT roadways, any NCDOT roadways along the route and adjacent to the route.
- TC 16 During periods of construction inactivity, place approved traffic control drums 3' minimum from the existing travel way.
- TC 17 Any violation of the Traffic Control provisions will result in the termination of the permit application and liquidated damages in the amount of \$2,000 per hour or any portion thereof and will be assessed by the District Engineer's office.

Environmental Regulations

- EC 1 The Applicant shall comply with all applicable Federal, State and local environmental regulations and shall obtain all necessary Federal, State and local environmental permits, including but not limited to, those related to sediment control, stormwater, wetland, streams, endangered species and historical sites. Additional information can be obtained by contacting the NCDOT Roadside Environmental Engineer regarding the North Carolina Natural Heritage Program or the United States Fish and Wildlife Services. Contact the Division Roadside Environmental Engineer's Office at (252) 621-6310
- EC 2 When surface area in excess of one acre will be disturbed, the Applicant shall submit a Sediment and Erosion Control Plan which has been approved by the appropriate regulatory agency or authority prior to beginning any work on the Right of Way. Failure to provide this information shall be grounds for suspension of operations. Proper temporary and permanent measures shall be used to control erosion and sedimentation in accordance with the approved sediment and erosion control plan.
- EC 3 The Verification of Compliance with Environmental Regulations (VCER-1) form is required for all non-utility permits or any utility permits when land disturbance within NCDOT right of way exceeds 1 acre. The VCER-1 form must be PE sealed by a NC registered professional engineer who has verified that all appropriate environmental permits (if applicable) have been obtained and all applicable environmental regulations have been followed.
- EC 4 All erosion control devices and measures shall be constructed, installed, maintained, and removed by the Applicant in accordance with all applicable Federal, State, and Local laws, regulations, ordinances, and policies. Permanent vegetation shall be established on all disturbed areas in accordance with the recommendations of the Division Roadside Environmental Engineer. All areas disturbed (shoulders, ditches, removed accesses, etc.) shall be graded and seeded in accordance with the latest NCDOT Standards Specifications for Roads and Structures and within 15 calendar days with an approved NCDOT seed mixture (all lawn type areas shall be maintained and reseeded as such). Seeding rates per acre shall be applied according to the Division Roadside Environmental Engineer. Any plant or vegetation in the NCDOT planted sites that is destroyed or damaged as a result of this permit shall be replaced with plants of like kind or similar shape.
- EC 5 No trees within NCDOT shall be cut without authorization from the Division Roadside Environmental Engineer. An inventory of trees measuring greater than 4 caliper inches (measured 6" above the ground) is required when trees within C/A right of way will be impacted by the encroachment installation. Mitigation is required and will be determined by the Division Roadside Environmental Engineer's Office.



Street and Driveway Access Permit General Provisions

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- EC 6 Prior to installation, the Applicant shall contact the District Engineer to discuss any environmental issues associated with the installation to address concerns related to the root system of trees impacted by boring or non-utility construction of sidewalk, roadway widening, etc.
- EC 7 The applicant is responsible for identifying project impacts to waters of the United States (wetlands, intermittent streams, perennial streams and ponds) located within the NCDOT right-of-way. The discharge of dredged or fill material into waters of the United States requires authorization from the United States Army Corps of Engineers (USACE) and certification from the North Carolina Division of Water Quality (NCDWQ). The applicant is required to obtain pertinent permits or certification from these regulatory agencies if construction of the project impacts waters of the United States within the NCDOT right-of-way. The applicant is responsible for complying with any river or stream Riparian Buffer Rule as regulated by the NCDWQ. The Rule regulates activity within a 50-foot buffer along perennial streams, intermittent streams and ponds. Additional information can be obtained by contacting the NCDWQ or the USACE.
- EC 8 The contractor shall not begin the construction until after the traffic control and erosion control devices have been installed to the satisfaction of the District Engineer or their agent.
- EC 9 The contractor shall perform all monitoring and record keeping and any required maintenance of erosion and sediment control measures to maintain compliance with stormwater regulations.
- EC 10 Vegetative cover shall be established on all disturbed areas in accordance with the recommendations of the Division Roadside Environmental Engineer.

General

- G 1 An executed copy of the Street and Driveway Access Permit, provisions and approved plans shall be present at the construction site at all times. If safety or traffic conditions warrant such an action, NCDOT reserves the right to further limit, restrict or suspend operations within the right of way.
- G 2 The Applicant and/or their Contractor shall comply with all OSHA requirements. If OSHA visits the work area associated with this permit, the District Office shall be notified by the encroaching party immediately if any violations are cited.
- G 3 Any REVISIONS marked in RED on the attached non-PE sealed plans shall be incorporated into and made part of the approved permit.
- G 4 All disturbed areas are to be fully restored to current NCDOT minimum roadway standards or as directed by the District Engineer or their representative. Disturbed areas within NCDOT Right-of-Way include, but not limited to, any excavation areas, pavement removal, drainage or other features.
- G 5 The Applicant shall notify the District Engineer or their representative immediately in the event any drainage structure is blocked, disturbed or damaged. All drainage structures disturbed, damaged or blocked shall be restored to its original condition as directed by the District Engineer or their representative.
- G 8 Unless specified otherwise, during non-working hours, equipment shall be located away from the job site or parked as close to the right of way line as possible and be properly barricaded in order not to have any equipment obstruction within the Clear Recovery Area. Also, during non-working hours, no parking or material storage shall be allowed along the shoulders of any state-maintained roadway.
- G 9 No access to the job site, parking or material storage shall be allowed along or from the Control of Access Roadway.
- G 10 Guardrail removed or damaged during construction shall be replaced or repaired to its original condition, meeting current NCDOT standards or as directed by the District Engineer or their representative.
- G 12 Right of Way monuments disturbed during construction shall be referenced by a registered Land Surveyor and reset after construction.
- G 13 All Traffic signs moved during construction shall be reinstalled as soon as possible to the satisfaction of the District Engineer or their representative.



Street and Driveway Access Permit General Provisions

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- G 16 All driveways disturbed during construction shall be returned to a state comparable with the condition of the driveways prior to construction.
- G 17 Conformance with driveway permit review should be required in conjunction with this encroachment agreement. In the event there is a conflict between the driveway permit and the encroachment agreement, the District Engineer should resolve the conflict and notify the parties involved.
- G 18 If the approved method of construction is unsuccessful and other means are required, prior approval must be obtained through the District Engineer before construction may continue.
- G 22 Strict compliance with the Policy on Street and Driveway Access to North Carolina Highways manual shall be required.
- G 23 The Applicant may delegate the performance of certain provisions of this agreement to contractors or other parties. However, this shall not in any way release the Applicant from its obligations to the terms and provisions of the permit.

Engineering

- E 1 All traffic control, asphalt mixes, structures, construction, workmanship and construction methods, and materials shall be in compliance with the most-recent versions of the following resources: ASTM Standards, Manual on Uniform Traffic Control Devices, NCDOT Utilities Accommodations Manual, NCDOT Standard Specifications for Roads and Structures, NCDOT Roadway Standard Drawings, NCDOT Asphalt Quality Management System manual, and the approved plans.

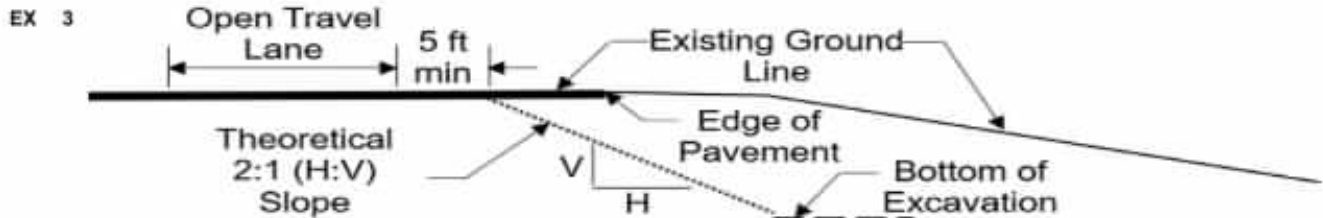
Excavation

- EX 1 Excavation material shall not be placed on pavement.
- EX 2 It is the responsibility of the applicant and their contractor to prevent any mud/dirt from tracking onto the roadway. Any dirt which may collect on the roadway pavement from equipment and/or truck traffic on site shall be immediately removed to avoid any unsafe traffic conditions.
- EX 3 The utility shall be installed within 5 feet of the right of way line and outside the 5-foot minimum from travel lane plus theoretical 2:1 slope from the edge of pavement to the bottom of the nearest excavation wall for temporary shoring. If the 2:1 slope plus 5 feet requirement above is met for traffic, then temporary shoring is typically only necessary to protect roadways from damage when a theoretical 1:1 slope from the edge of pavement intersects the nearest excavation wall. This rule of thumb should be used with caution and does not apply to all subsurface conditions, surcharge loadings and excavation geometries. Situations where this 1:1 slope is not recommended include groundwater depth is above bottom of excavation or excavation is deeper than 10 feet or in Type B or C soils as defined by OSHA Technical Manual. Temporary shoring may be avoided by locating trenches, bore pits, and other excavations far enough away from the open travel lane, edge of pavement and any existing structure, support, utility, property, etc. to be protected. Temporary shoring is required when a theoretical 2:1 slope from the bottom of excavation will intersect the existing ground line less than 5 feet from the outside edge of an open travel lane as shown in the figure below or when a theoretical 2:1 slope from the bottom of excavation will intersect any existing structure, support, utility, property, etc. to be protected.



Street and Driveway Access Permit General Provisions

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EX 4 Temporary shoring shall be designed and constructed in accordance with current NCDOT Standard Temporary Shoring provisions (refer to <https://connect.ncdot.gov/resources/Specifications/Pages/2018-Specifications-and-Special-Provisions.aspx> and see SP11 R002).

A) Temporary excavation shoring, such as sheet piling, shall be installed. The design of the shoring shall include the effects of traffic loads. The shoring system shall be designed and sealed by a licensed North Carolina Professional Engineer. Shoring plans and design calculations shall be submitted to the Division Engineer for review and approval prior to construction. (See NCDOT Utilities Accommodations Manual for more information on requirements for shoring plans and design calculations.) Trench boxes shall not be accepted as temporary shoring and will not be approved for use in instances where shoring is required to protect the highway, drainage structure, and/or supporting pavement or structure foundation.

B) All trench excavation inside the limits of the theoretical one-to-one slope, as defined by the policy, shall be completely backfilled and compacted at the end of each construction day. No portion of the trench shall be left open overnight. Any excavation that is not backfilled by the end of the workday must address any safety and traveling public concerns including accommodations for bicycles, pedestrians and persons with disabilities.

C) At the discretion of the District Engineer, a qualified NCDOT inspector shall be on the site at all times during construction. The applicant shall reimburse NCDOT for the cost of providing the inspector. If NCDOT cannot supply an inspector, the applicant (not the utility contractor) should make arrangements to have a qualified inspector, under the supervision of a licensed North Carolina Professional Engineer, on the site at all times. The Professional Registered Engineer shall certify that the utility was installed in accordance with the permit and that the backfill material meets the Statewide Borrow Criteria.



Street and Driveway Access Permit General Provisions

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- D) The length of parallel excavation shall be limited to the length necessary to install and backfill one joint of pipe at a time, not to exceed twenty-five (25) feet.
- EX 5** The trench backfill material shall meet the Statewide Borrow Criteria. The trench shall be backfilled in accordance with Section 300-7 of the latest NCDOT Standard Specifications for Roads and Structures, which basically requires the backfill material to be placed in layers not to exceed 6 inches loose and compacted to at least 95% of the density obtained by compacting a sample in accordance with AASHTO T99 as modified by DOT.
- EX 6** All material to a depth of 8 inches below the finished surface of the subgrade shall be compacted to a density equal to at least 100% of that obtained by compacting a sample of the material in accordance with AASHTO T99 as modified by the Department. The subgrade shall be compacted at a moisture content which is approximately that required to produce the maximum density indicated by the above test method. The contractor shall dry or add moisture to the subgrade when required to provide a uniformly compacted and acceptable subgrade. The option to backfill any trenches with dirt or either #57 stone or #78 stone with consolidation with a plate tamp and without a conventional density test may be pursued with the written consent of the District Engineer. If this option is exercised, then roadway ABC stone and asphalt repair as required will also be specified by the District Engineer.
- EX 7** All roadway sections, ditch lines and slopes, and shoulders affected by the operations under this encroachment shall be restored to the satisfaction of the District Engineer.

Pavement Repair

- PR 7** Any pavement damaged because of settlement of the pavement or damaged by equipment used to perform the permitted work, shall be re-surfaced to the satisfaction of the District Engineer. This may include the removal of pavement and a 50' mechanical overlay. All pavement work and pavement markings (temporary and final) are the responsibility of the Applicant.

Post-Construction

- I 1** The Applicant shall notify the Roadway Maintenance Supervisor's office within 2 business days after construction is complete. The Roadway Maintenance Supervisor may perform a construction inspection. Any deficiencies may be noted and reported to the Applicant to make immediate repairs or resolve any issues to restore the right-of-way to a similar condition prior to construction, including pavement, signage, traffic signals, pavement markings, drainage, structures/pipes, or other highway design features.

Roadway Maintenance Contact Information by County:

Camden
(252) 621-6420

Currituck
(252) 421-7200

Currituck OBX / Dare
(252) 473-2990

Gates
(252) 401-6050

Pasquotank
(252) 621-6420

Perquimans
(252) 426-4170

APPLICATION IDENTIFICATION		N.C. DEPARTMENT OF TRANSPORTATION STREET AND DRIVEWAY ACCESS PERMIT APPLICATION
Driveway Permit No. D011-027-25-00034	Date of Application: March 24, 2026	
County: Currituck		
Development Name: Wilson Ridge		

LOCATION OF PROPERTY:

Route/Road: SR 1222

Exact Distance at the Intersection of SR1231 and SR1222 Miles Feet N S E W

From the Intersection of Route No. _____ and Route No. _____ Toward _____

Property Will Be Used For: Residential /Subdivision Commercial Educational Facilities TND Emergency Services Other

Property: is is not within Moyock City Zoning Area

AGREEMENT

- I, the undersigned property owner, request access and permission to construct driveway(s) or street(s) on public right-of-way at the above location.
- I agree to construct and maintain driveway(s) or street entrance(s) in absolute conformance with the current "Policy on Street and Driveway Access to North Carolina Highways" as adopted by the North Carolina Department of Transportation.
- I agree that no signs or objects will be placed on or over the public right-of-way other than those approved by NCDOT.
- I agree that the driveway(s) or street(s) will be constructed as shown on the attached plans.
- I agree that that driveway(s) or street(s) as used in this agreement include any approach tapers, storage lanes or speed change lanes as deemed necessary.
- I agree that if any future improvements to the roadway become necessary, the portion of driveway(s) or street(s) located on public right-of-way will be considered the property of the North Carolina Department of Transportation, and I will not be entitled to reimbursement or have any claim for present expenditures for driveway or street construction.
- I agree that this permit becomes void if construction of driveway(s) or street(s) is not completed within the time specified by the "Policy on Street and Driveway Access to North Carolina Highways".
- I agree to pay a \$50 construction inspection fee. Make checks payable to NCDOT. This fee will be reimbursed if application is denied.
- I agree to construct and maintain the driveway(s) or street(s) in a safe manner so as not to interfere with or endanger the public travel.
- I agree to provide during and following construction proper signs, signal lights, flaggers and other warning devices for the protection of traffic in conformance with the current "Manual on Uniform Traffic Control Devices for Streets and Highways" and Amendments or Supplements thereto. Information as to the above rules and regulations may be obtained from the District Engineer.
- I agree to indemnify and save harmless the North Carolina Department of Transportation from all damages and claims for damage that may arise by reason of this construction.
- I agree that the North Carolina Department of Transportation will assume no responsibility for any damages that may be caused to such facilities, within the highway right-of-way limits, in carrying out its construction.
- I agree to provide a Performance and Indemnity Bond in the amount specified by the Division of Highways for any construction proposed on the State Highway system.
- The granting of this permit is subject to the regulatory powers of the NC Department of Transportation as provided by law and as set forth in the N.C. Policy on Driveways and shall not be construed as a contract access point.
- I agree that the entire cost of constructing and maintaining an approved private street or driveway access connection and conditions of this permit will be borne by the property owner, the applicant, and their grantees, successors, and assignees.
- **I AGREE TO NOTIFY THE DISTRICT ENGINEER WHEN THE PROPOSED WORK BEGINS AND WHEN IT IS COMPLETED.**

SIGNATURES OF APPLICANT

	PROPERTY OWNER (APPLICANT)		WITNESS
COMPANY	<u>Wilson Ridge at Maple</u>	NAME	<u>Holly Hartman</u>
SIGNATURE		SIGNATURE	
ADDRESS	_____	ADDRESS	<u>109 Madras Dr.</u>
	Phone No. _____		<u>Camden, NC 27921</u>

	AUTHORIZED AGENT		WITNESS
COMPANY	<u>RPL Inc</u>	NAME	<u>Marci Kessner</u>
SIGNATURE		SIGNATURE	
ADDRESS	<u>PO Box 1069 Kutztown</u>	ADDRESS	<u>PO Box 1069</u>
	Phone No. <u>252 261 3261</u>		<u>Kutztown, NC 27549</u>

APPROVALS

APPLICATION RECEIVED BY DISTRICT ENGINEER

SIGNATURE DATE

APPLICATION APPROVED BY LOCAL GOVERNMENTAL AUTHORITY (when required)

SIGNATURE TITLE DATE

APPLICATION APPROVED BY NCDOT

DocuSigned by:

 _____

SIGNATURE DISTRICT ENGINEER 03/24/2026

TITLE DATE

INSPECTION BY NCDOT

SIGNATURE TITLE DATE

COMMENTS:

The sidewalk will be allowed to stay in the location shown in the typical section, however, this typical section is not approved for any future development(s).

The waterline is to be relocated within 5' of the proposed Right of way.

CONSTRUCTION DRAWINGS OF WILSON RIDGE

A 13 LOT RESIDENTIAL SUBDIVISION MOYOCK TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

CIVIL LEGEND	
EXISTING	NEW
○	MANHOLE
□	SANITARY CLEANOUT
○	VALVE
○	WATER METER
○	FIRE HYDRANT
○	WELL
○	DROP INLET
○	CURB INLET
○	GAS METER
○	POWER POLE
○	LIGHT POLE
○	LIGHT POLE / CONCRETE BASE
○	PEDESTAL
---	CURB AND GUTTER
---	FENCE
---	PROPERTY LINE
---	BUILDINGS
---	STORM SEWER
---	SANITARY SEWER
---	WATER
---	ELECTRIC & TELEPHONE LINE
---	TRAFFIC BOX
---	SIGN
---	TREE
---	BUSH
---	PAVEMENT
---	CONCRETE
---	TEMPORARY BENCHMARK (TBM)
---	ELEVATIONS
---	TOP OF CURB ELEVATIONS
---	TOP OF WALK ELEVATIONS
---	TOP OF BANK
---	TOP OF SLOPE
---	℄ OF DITCH
---	℄ OF SWALE

SHEET INDEX

- C-001 TITLE SHEET
- C-002 EXISTING CONDITIONS
- CD101 DEMOLITION, EROSION & SEDIMENT CONTROL PLAN
- CG101 OVERALL GRADING & DRAINAGE PLAN
- CS101 OVERALL LAYOUT & UTILITY PLAN
- CL101 LANDSCAPING, LIGHTING & SIGNAGE PLAN
- CP101 PLAN & PROFILE
- CP102 PLAN & PROFILE
- C-501 DETAILS
- C-502 DETAILS
- C-503 DETAILS
- C-504 EROSION AND SEDIMENT CONTROL NOTES & DETAILS
- C-505 NCG01-GROUND STABILIZATION & MATERIALS HANDLING
- C-506 NCG01-SELF INSPECTION, RECORDKEEPING & REPORTING

PROJECT DATA

APPLICANT: CURRITUCK HOMES
101 OAK STREET
MOYOCK, NC 27958

OWNER: WILSON RIDGE OF MOYOCK, LLC
417D CARATOKE HIGHWAY
MOYOCK, NC 27958

CIVIL ENGINEER: C. SCOTT ACEY, PE; MSA, PC
5032 ROUSE DRIVE, SUITE 200
VIRGINIA BEACH, VA 23462
(757) 490-9264 OFFICE
scott.acey@msaonline.com

SURVEYOR: BISSELL PROFESSIONAL GROUP
3512 N CROATAN HWY
KITTY HAWK, NC 27949
(252) 261-3266

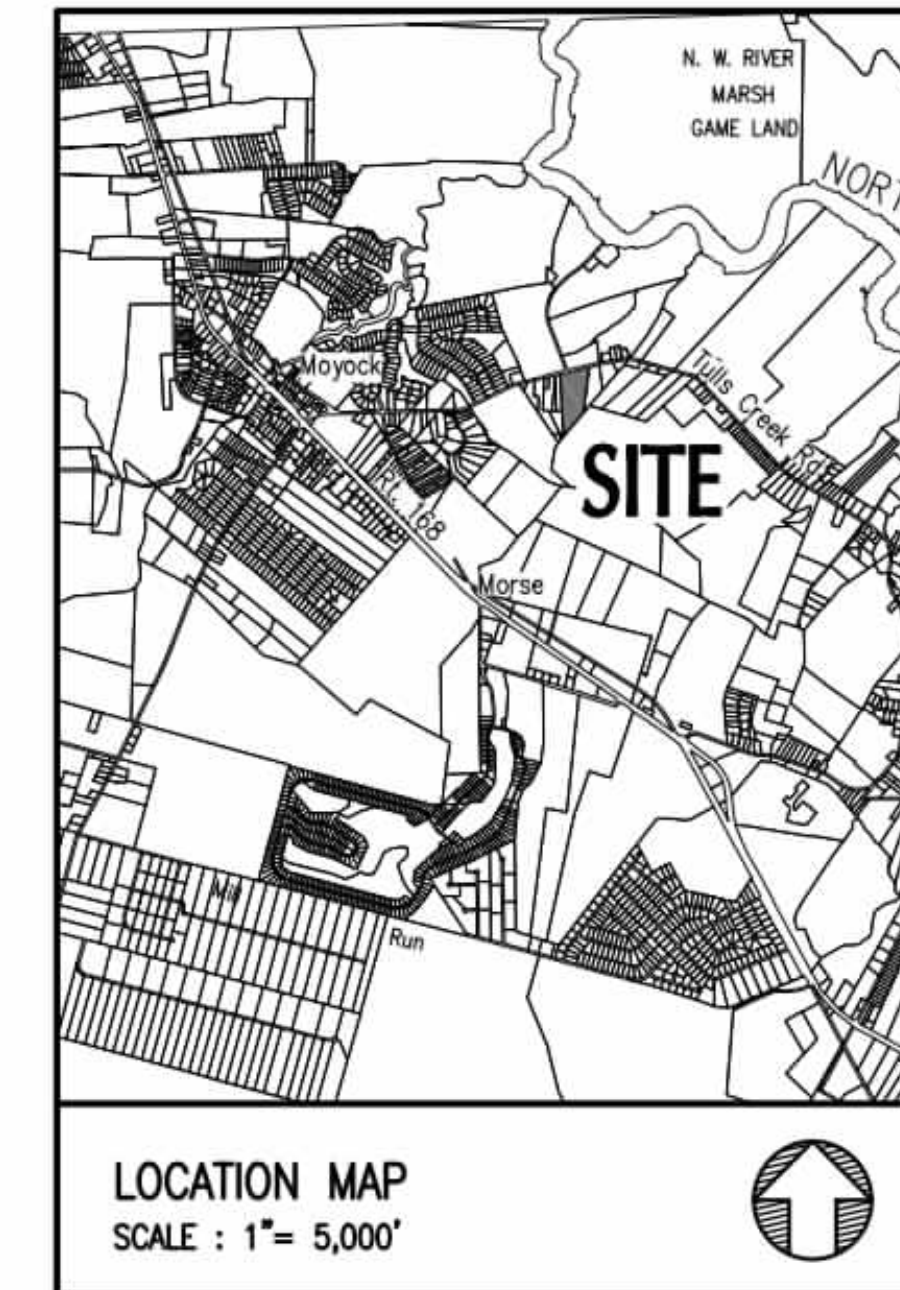
DEVELOPMENT NOTES:

- TOTAL PROPERTY AREA: 19.04 AC.
- DEVELOPMENT SUMMARY
PROPOSED LOT AREA: 11.94 AC.
PROPOSED R/W AREA: 1.32 AC.
PROPOSED OPEN SPACE AREA: 5.78 AC.
TOTAL AREA: 19.04 AC.
OF PROPOSED SINGLE FAMILY LOTS: 13
PROPOSED RIGHT-OF-WAY WIDTH: 50' TYP.
PROPOSED PAVED ROADWAY WIDTH: 20' TYP.
LINEAR FEET OF SUBDIVISION ROADWAY: 892 LF ±
- IMPERVIOUS COVERAGE DATA (BUA):
MAXIMUM TOTAL LOT COVERAGE (25%): 130,000 SF
ROADWAY: 27,260 SF
SIDEWALKS: 16,230 SF
PARKING: 2,046 SF
ALLOWANCE FOR MISC. AMENITIES: 23,505 SF
TOTAL COVERAGE: 199,041 SF (24%)
- DISTURBED AREA SUMMARY:
PROPERTY AREA DISTURBED: 16.60 AC ±
R/W AREA DISTURBED: 0.10 AC ±
TOTAL DISTURBED AREA: 16.70 AC ±

GENERAL NOTES:

- PROJECT NAME: WILSON RIDGE
- APPLICANT: CURRITUCK HOMES
101 OAK STREET
MOYOCK, NC 27958
 - OWNER: WILSON RIDGE OF MOYOCK, LLC
417D CARATOKE HIGHWAY
MOYOCK, NC 27958
 - PROPERTY DATA:
PRIMARY ADDRESS: TULLS CREEK ROAD MOYOCK, NC
PIN: 0014-000-0023-0000
RECORD REFERENCES: DB 1640, PG 829
ACREAGE: 19.04 ACRES
 - PROPERTY ZONING: SFM (SINGLE FAMILY MAINLAND)
 - F.I.R.M. DATA:
ZONE "X" F.E.M.A. F.I.R.M. MAP PANEL 3721803200 X, CID 370078, EFFECTIVE DATE DECEMBER 21, 2018. USE OF LAND WITHIN A FLOODWAY OR FLOOD PLAIN IS SUBSTANTIALLY RESTRICTED BY CHAPTER 7 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.
 - THIS PROPERTY CONTAINS ACOE "404" JURISDICTIONAL WETLANDS PER ACTION ID# SAW 2021-01359, DATED JULY 2, 2021.
 - A 10' EASEMENT FOR UTILITIES AND DRAINAGE ALONG REAR AND SIDE PROPERTY LINES AND A 20' EASEMENT FOR UTILITIES, DRAINAGE, WALKWAYS & STREET TREES ALONG FRONT PROPERTY LINE IS HEREBY ESTABLISHED.
 - A NON-EXCLUSIVE DRAINAGE EASEMENT IS HEREBY DEDICATED ACROSS ALL OPEN SPACE AREAS FOR PURPOSES OF OPERATION AND MAINTENANCE OF STORMWATER MANAGEMENT SYSTEM.
 - EXISTING CONDITION INFORMATION BASED ON A COMBINATION OF THE FOLLOWING:
• 2023 FIELD SURVEY DATA OBTAINED BY BISSELL PROFESSIONAL GROUP.
• FIELD TOPOGRAPHIC SURVEY DATA BY BISSELL PROFESSIONAL GROUP.
• ELEVATIONS ARE REFERENCED TO NAVD 1988 VERTICAL DATUM.
 - SUBDIVISION IS DESIGNED FOR SINGLE FAMILY DWELLINGS OF LESS THAN 4,800 SF AND NO GREATER THAN 2 STORIES.
 - AVAILABLE WATER SUPPLY IS 1299 GPM PER COUNTY GIS.
 - A NON-EXCLUSIVE DRAINAGE EASEMENT IS HEREBY DEDICATED ACROSS ALL OPEN SPACE AREAS. A 25' DRAINAGE EASEMENT IS HEREBY ESTABLISHED FROM THE TOP OF BANK OF ALL DITCHES DRAINING 5 OR MORE ACRES, WHICH MAY EXTEND BEYOND DEDICATED OPEN SPACE AREAS ONTO SOME LOTS, AS SHOWN.
 - A 10 FT. EASEMENT IS HEREBY ESTABLISHED ALONG ALL LOTS ABUTTING A STREET RIGHT-OF-WAY FOR THE PLANTING AND MAINTENANCE OF STREET TREES. (SEE DETAILS SHEET C-501)
 - ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND.
 - A PAYMENT IN LIEU OF RECREATION AND PARK AREA DEDICATION WILL BE PROVIDED IN ACCORDANCE WITH CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE. PAYMENT IN LIEU OF RECEIVED BY THE COUNTY SHALL BE USED ONLY FOR THE ACQUISITION AND DEVELOPMENT OF RECREATION PARK AREAS, AND OPEN SPACE SITES CONSISTENT WITH THE REQUIREMENTS OF THE NORTH CAROLINA GENERAL STATUTES SECTION 160D, OR DEDICATION WILL BE PROVIDED AS SHOWN ON PLAN. (13 LOTS X 0.0255 AC. / LOT = 0.332 AC.)

DEVELOPMENT DATA	
ITEM	VALUE
TOTAL TRACT AREA:	19.04 AC
PROPOSED LOT AREA:	11.94 AC
PROPOSED R/W AREA:	1.32 AC
REQUIRED OPEN SPACE (30%):	5.71 AC
OPEN SPACE PROVIDED:	5.78 AC
LUP CLASSIFICATION:	RURAL
# OF PROPOSED LOTS	13 LOTS
AVERAGE LOT AREA:	40,000 SF
PROPOSED RIGHT-OF-WAY WIDTH:	50 FEET
PROPOSED PAVED ROADWAY WIDTH:	20 FEET (EOP - EOP)
LINEAR FEET OF ON-SITE ROADWAY:	±892 LF
LOT DEVELOPMENT CONFIGURATION	
LOT AREAS: ALL EXACTLY 40,000 SF	
MINIMUM LOT WIDTH:	125 FEET (EXCEPT CUL-DE-SAC LOTS)
SETBACKS:	
FRONT	30 FEET
SIDE	10 FEET
REAR	25 FEET
CORNER SIDE YARD	30 FEET



SURVEY LEGEND	
SCM	SET CONCRETE MONUMENT
ECM	EXISTING CONCRETE MONUMENT
SIR	SET IRON ROD
EIR	EXISTING IRON ROD
EIP	EXISTING IRON PIPE
CP	CALCULATED POINT
M.B.L.	MAXIMUM BUILDING LIMIT
N.T.S.	NOT TO SCALE
P.C.	PLAT CABINET
D.B.	DEED BOOK
SL	SLIDE
SF	SQUARE FEET
AC	ACRES

A STORMWATER MAINTENANCE AND ACCESS EASEMENT ACROSS ALL OPEN SPACE IS TO BE GRANTED TO WILSON RIDGE HOMEOWNERS ASSOCIATION AND TO NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCEM). NCEM WILL NOT ASSUME RESPONSIBILITY FOR MAINTENANCE OF STORMWATER APPURTENANCES. OPERATION AND MAINTENANCE REMAIN THE RESPONSIBILITY OF THE WILSON RIDGE HOMEOWNERS ASSOCIATION, THEIR SUCCESSORS AND ASSIGNS.

NOTE:
EXISTING SITE INFORMATION DESCRIBED HEREON IS BELIEVED TO BE ACCURATE. HOWEVER, BPG INC. MAKES NO WARRANTY AS TO THE ACCURACY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THIS INFORMATION BEFORE RELYING ON IT. THE CONTENT OF THESE DOCUMENTS MAY ALSO INCLUDE TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS. IF SUCH CONDITIONS EXIST, THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER PRIOR TO PROCEEDING WITH THE SCHEDULED WORK AND MAY CONTINUE AFTER AN AUTHORIZATION TO PROCEED HAS BEEN GRANTED.

STORMWATER STATEMENT

NO MORE THAN 30% OF ANY LOT SHALL BE IMPERVIOUS STRUCTURES AND MATERIALS, INCLUDING ASPHALT, GRAVEL, CONCRETE, BRICK STONE, SLATE OR SIMILAR MATERIAL, NOT INCLUDING WOOD DECKING OR THE WATER SURFACE OF SWIMMING POOLS. THIS COVENANT IS INTENDED TO ENSURE COMPLIANCE WITH THE STORMWATER PERMIT NUMBER SW##### ISSUED BY THE STATE OF NORTH CAROLINA. THE COVENANT MAY NOT BE CHANGED OR DELETED WITHOUT THE CONSENT OF THE STATE. FILLING IN OR PIPING OF ANY VEGETATIVE CONVEYANCES (DITCHES, SWALES, ETC.) ASSOCIATED WITH THIS DEVELOPMENT, EXCEPT FOR AVERAGE DRIVEWAY CROSSINGS, IS STRICTLY PROHIBITED BY ANY PERSON. THE LOT COVERAGE ALLOWANCE PROVIDED IN THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE MAY BE DIFFERENT THAN THE NC STATE STORMWATER PERMIT. THE MOST RESTRICTIVE LOT COVERAGE SHALL APPLY.

THE FOLLOWING PERMITS ARE REQUIRED PRIOR TO PROJECT CONSTRUCTION:

PERMIT	AGENCY	REFERENCE NUMBER	DATE OF ISSUANCE
SEDIMENTATION AND EROSION CONTROL PERMIT	N.C.D.E.Q. - DIVISION OF LAND RESOURCES	-	-
STORMWATER MANAGEMENT PERMIT	N.C.D.E.Q. - DIVISION OF LAND RESOURCES	-	-
WATERLINE EXTENSION AUTHORIZATION TO CONSTRUCT	N.C.D.E.Q. - PUBLIC WATER SUPPLY	-	-
DRIVEWAY PERMIT	NCDOT	-	-
ENCROACHMENT AGREEMENT	NCDOT	N/A	N/A
CURRITUCK COUNTY PRELIMINARY PLAT & USE PERMIT	CURRITUCK COUNTY BOARD OF COMMISSIONERS	-	-
CURRITUCK COUNTY CONSTRUCTION AUTHORIZATION	CURRITUCK COUNTY PLANNING STAFF	-	-



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STORMWATER CERTIFICATE

I, _____ OWNER/AGENT HEREBY CERTIFY THE INFORMATION INCLUDED ON THIS AND ATTACHED PAGES IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

ON THE PLAN ENTITLED, CONSTRUCTION DRAWINGS FOR BAXTER STATION - GRADING, DRAINAGE AND STORMWATER MANAGEMENT PLAN, STORMWATER DRAINAGE IMPROVEMENTS SHALL BE INSTALLED ACCORDING TO THESE PLANS AND SPECIFICATIONS AND APPROVED BY CURRITUCK COUNTY. YEARLY INSPECTIONS ARE REQUIRED AS PART OF THE STORMWATER PLAN. THE OWNER IS RESPONSIBLE FOR ALL MAINTENANCE REQUIRED. CURRITUCK COUNTY ASSUMES NO RESPONSIBILITY FOR THE DESIGN, MAINTENANCE, OR PERFORMANCE OF THE STORMWATER IMPROVEMENTS.

DATE _____ OWNER/AGENT _____

PLAN STATUS			WILSON RIDGE
DATE	INITIAL	DESCRIPTION	
03/04/2025	CSA	1st SUBMITTAL	C-001 1 of 14 Sheets PROJ. NO.: 24100

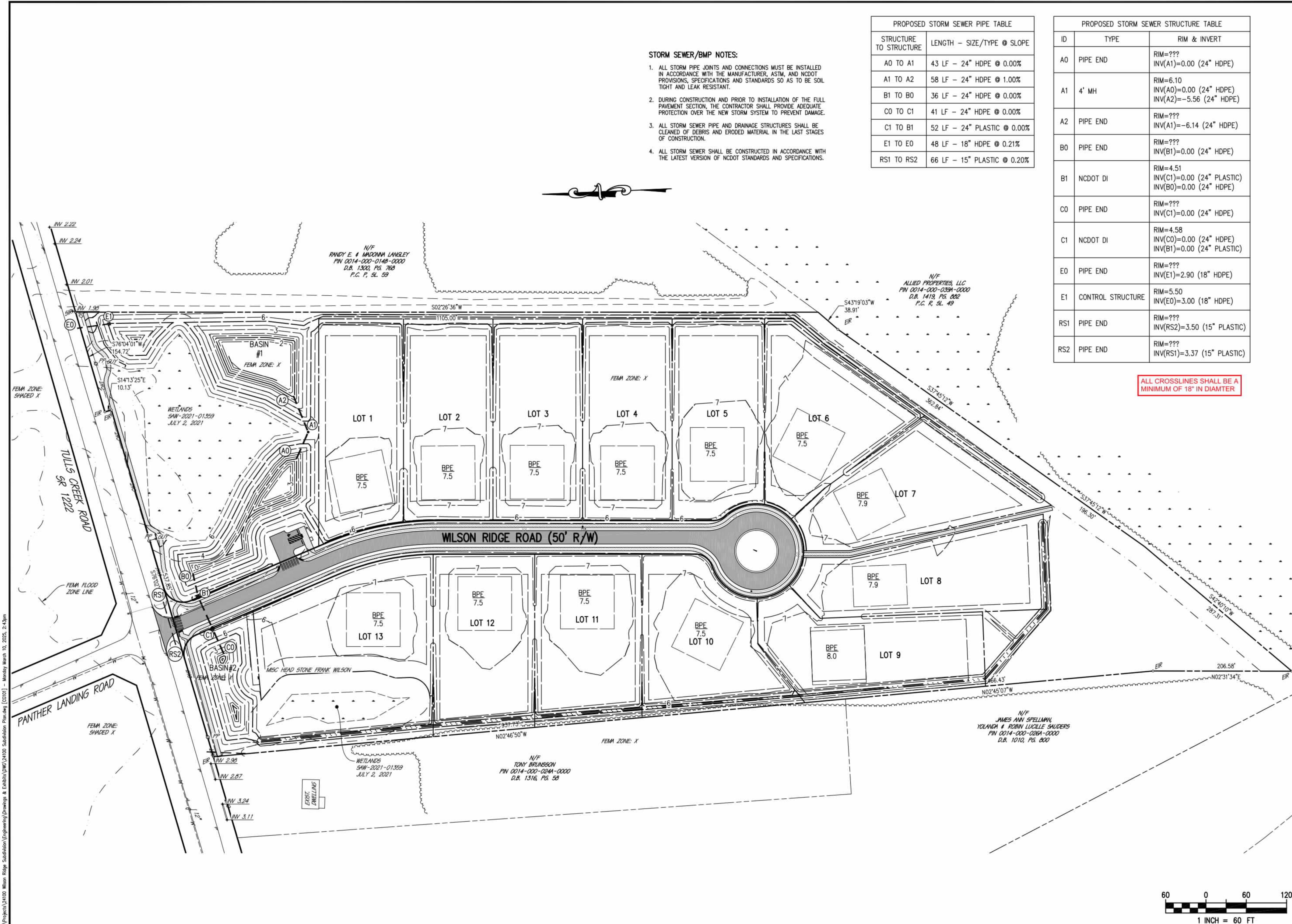
STORM SEWER/BMP NOTES:


1. ALL STORM PIPE JOINTS AND CONNECTIONS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER, ASTM, AND NCDOT PROVISIONS, SPECIFICATIONS AND STANDARDS SO AS TO BE SOIL TIGHT AND LEAK RESISTANT.
2. DURING CONSTRUCTION AND PRIOR TO INSTALLATION OF THE FULL PAVEMENT SECTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION OVER THE NEW STORM SYSTEM TO PREVENT DAMAGE.
3. ALL STORM SEWER PIPE AND DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AND ERODED MATERIAL IN THE LAST STAGES OF CONSTRUCTION.
4. ALL STORM SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF NCDOT STANDARDS AND SPECIFICATIONS.

PROPOSED STORM SEWER PIPE TABLE	
STRUCTURE TO STRUCTURE	LENGTH - SIZE/TYPE @ SLOPE
A0 TO A1	43 LF - 24" HDPE @ 0.00%
A1 TO A2	58 LF - 24" HDPE @ 1.00%
B1 TO B0	36 LF - 24" HDPE @ 0.00%
C0 TO C1	41 LF - 24" HDPE @ 0.00%
C1 TO B1	52 LF - 24" PLASTIC @ 0.00%
E1 TO E0	48 LF - 18" HDPE @ 0.21%
RS1 TO RS2	66 LF - 15" PLASTIC @ 0.20%

PROPOSED STORM SEWER STRUCTURE TABLE		
ID	TYPE	RIM & INVERT
A0	PIPE END	RIM=??? INV(A1)=0.00 (24" HDPE)
A1	4' MH	RIM=6.10 INV(A0)=0.00 (24" HDPE) INV(A2)=-5.56 (24" HDPE)
A2	PIPE END	RIM=??? INV(A1)=-6.14 (24" HDPE)
B0	PIPE END	RIM=??? INV(B1)=0.00 (24" HDPE)
B1	NCDOT DI	RIM=4.51 INV(C1)=0.00 (24" PLASTIC) INV(B0)=0.00 (24" HDPE)
C0	PIPE END	RIM=??? INV(C1)=0.00 (24" HDPE)
C1	NCDOT DI	RIM=4.58 INV(C0)=0.00 (24" HDPE) INV(B1)=0.00 (24" PLASTIC)
E0	PIPE END	RIM=??? INV(E1)=2.90 (18" HDPE)
E1	CONTROL STRUCTURE	RIM=5.50 INV(E0)=3.00 (18" HDPE)
RS1	PIPE END	RIM=??? INV(RS2)=3.50 (15" PLASTIC)
RS2	PIPE END	RIM=??? INV(RS1)=3.37 (15" PLASTIC)


ALL CROSSLINES SHALL BE A MINIMUM OF 18" IN DIAMETER





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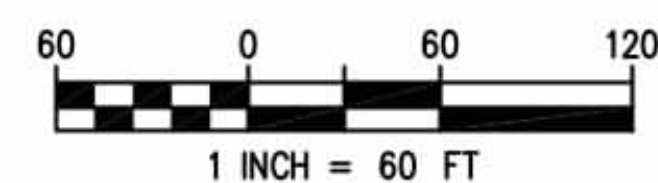


J. Kelly
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03/04/25
ENGINEER
CAROLINA

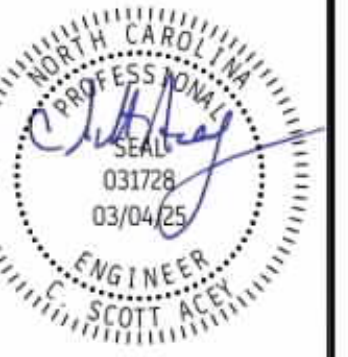
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DRAWN	LDJ		
CHECKED	DMW		
APPROVED	CSA		

OVERALL GRADING & DRAINAGE PLAN
OF
WILSON RIDGE
COURTICK COUNTY NORTH CAROLINA
MOYOCK TOWNSHIP

SHEET
CG101
4 of 14 Sheets
SCALE: 1"=60'
PROJ. NO.: 24100



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APPROVED	CSA
DATE	03/04/25

NO.	DESCRIPTION	DATE

OVERALL LAYOUT & UTILITY PLAN
 OF
WILSON RIDGE
 CURRITUCK COUNTY NORTH CAROLINA

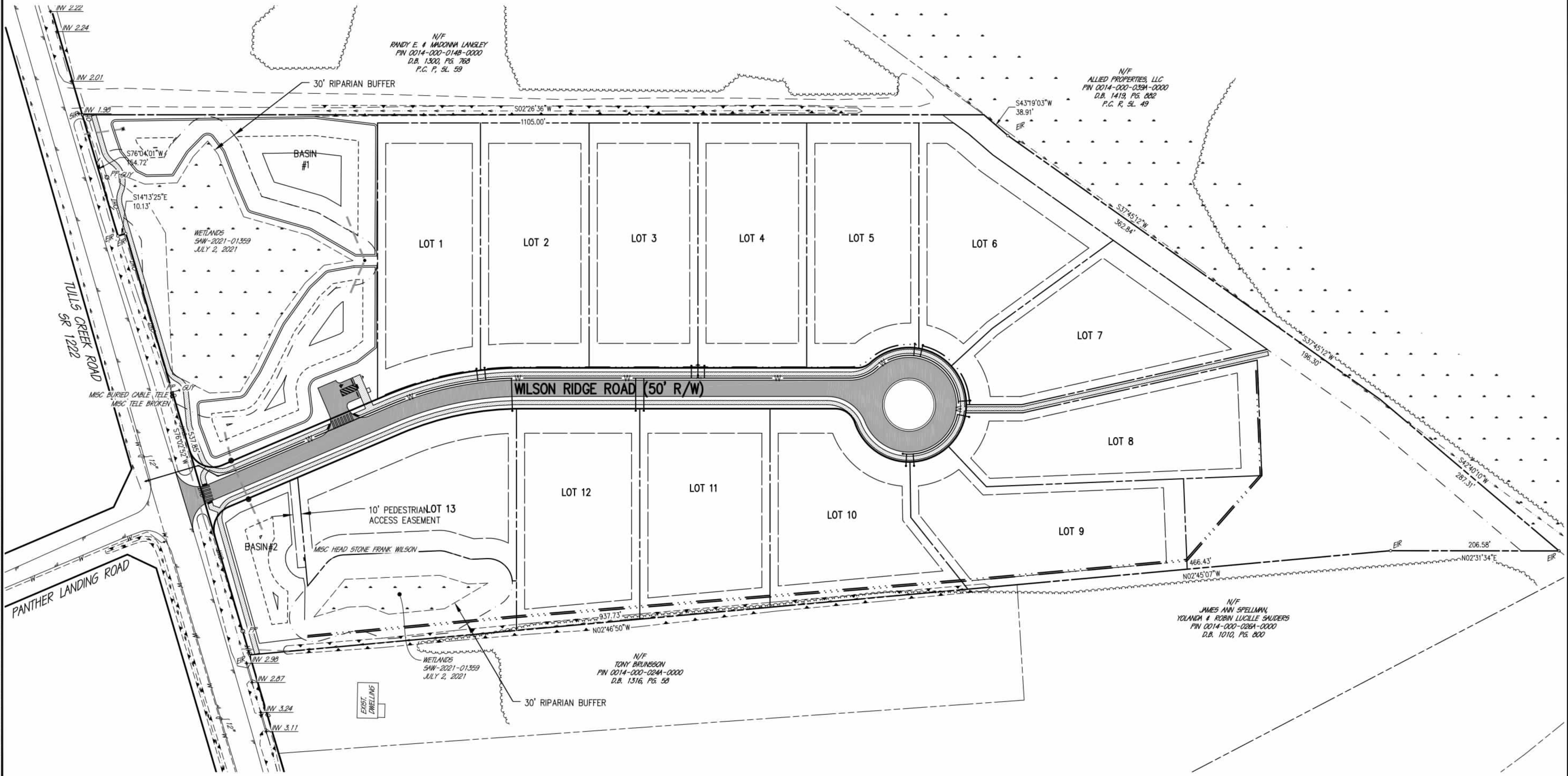
MOYOCK TOWNSHIP

SHEET
CS101
 5 of 14 Sheets
 SCALE: 1"=60'
 PROJ. NO.: 24100

WATER MAIN SPECIFICATIONS AND DETAILS FOR THIS PLAN, INCLUDING ALL MATERIALS AND INSTALLATION METHODS SHALL BE PROVIDED, INSTALLED, TESTED AND ACCEPTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS AND DETAILS FOR THE CURRITUCK COUNTY WATER DEPARTMENT AND THE SOUTHERN OUTER BANKS WATER SYSTEM" AS APPROVED BY NCDEQ-DWR-PWS, SERIAL NUMBER 11-00630, LATEST REVISION.

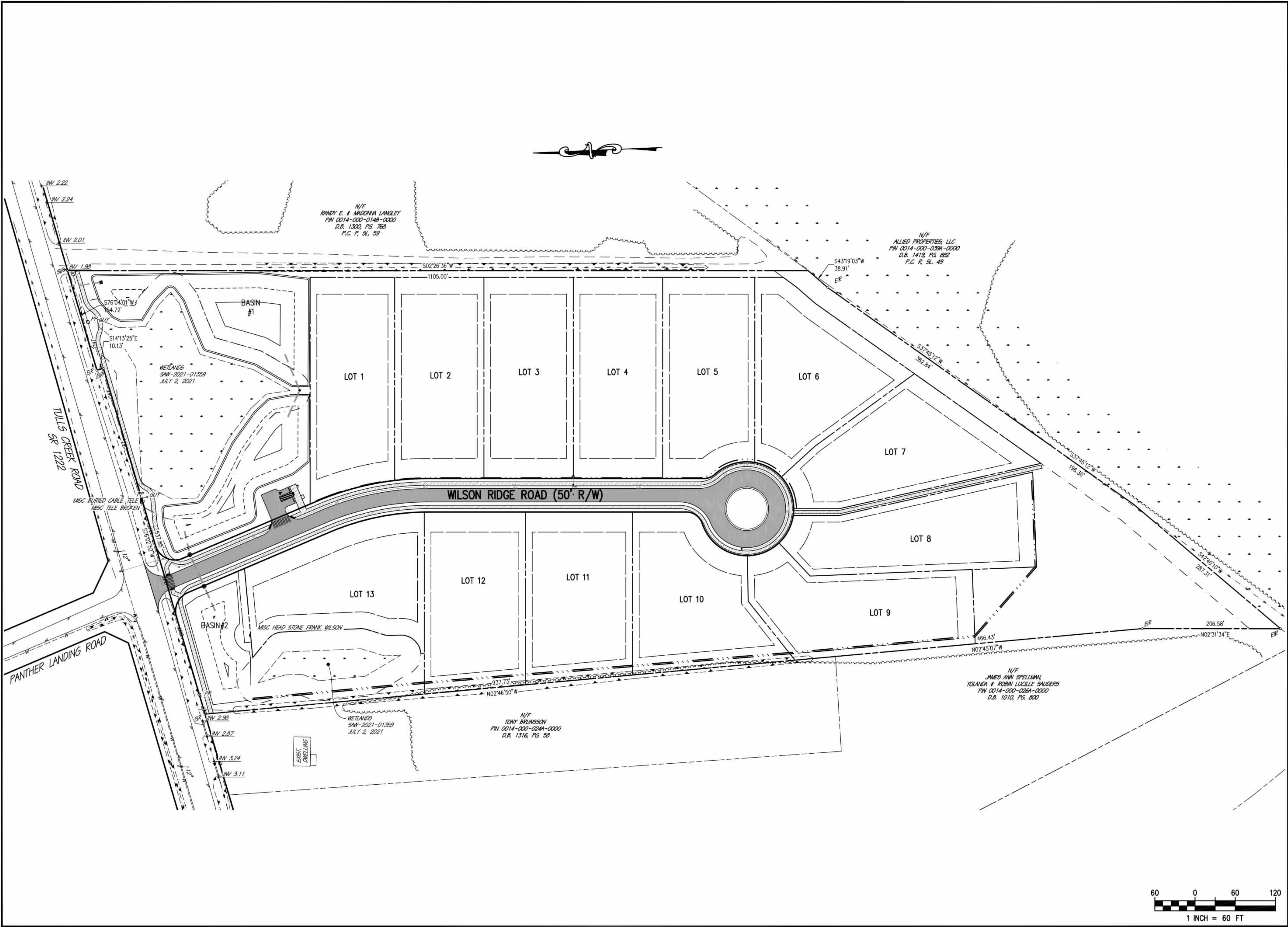
A MINIMUM OF 36" OF COVER SHALL BE MAINTAINED OVER THE INSTALLED WATER MAIN.

A MINIMUM OF 18" OF SEPARATION SHALL BE PROVIDED FROM BOTTOM OF STORM DRAIN TO TOP OF WATER MAIN.



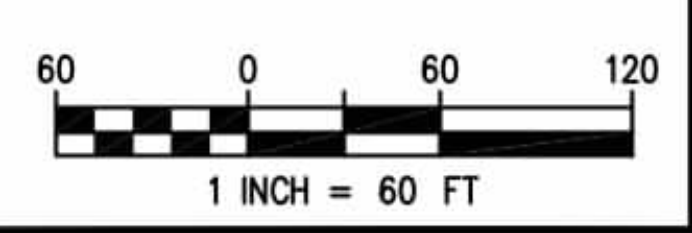
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APPROVED	CSA
DATE	03/04/25

REVISION	DATE	DESCRIPTION



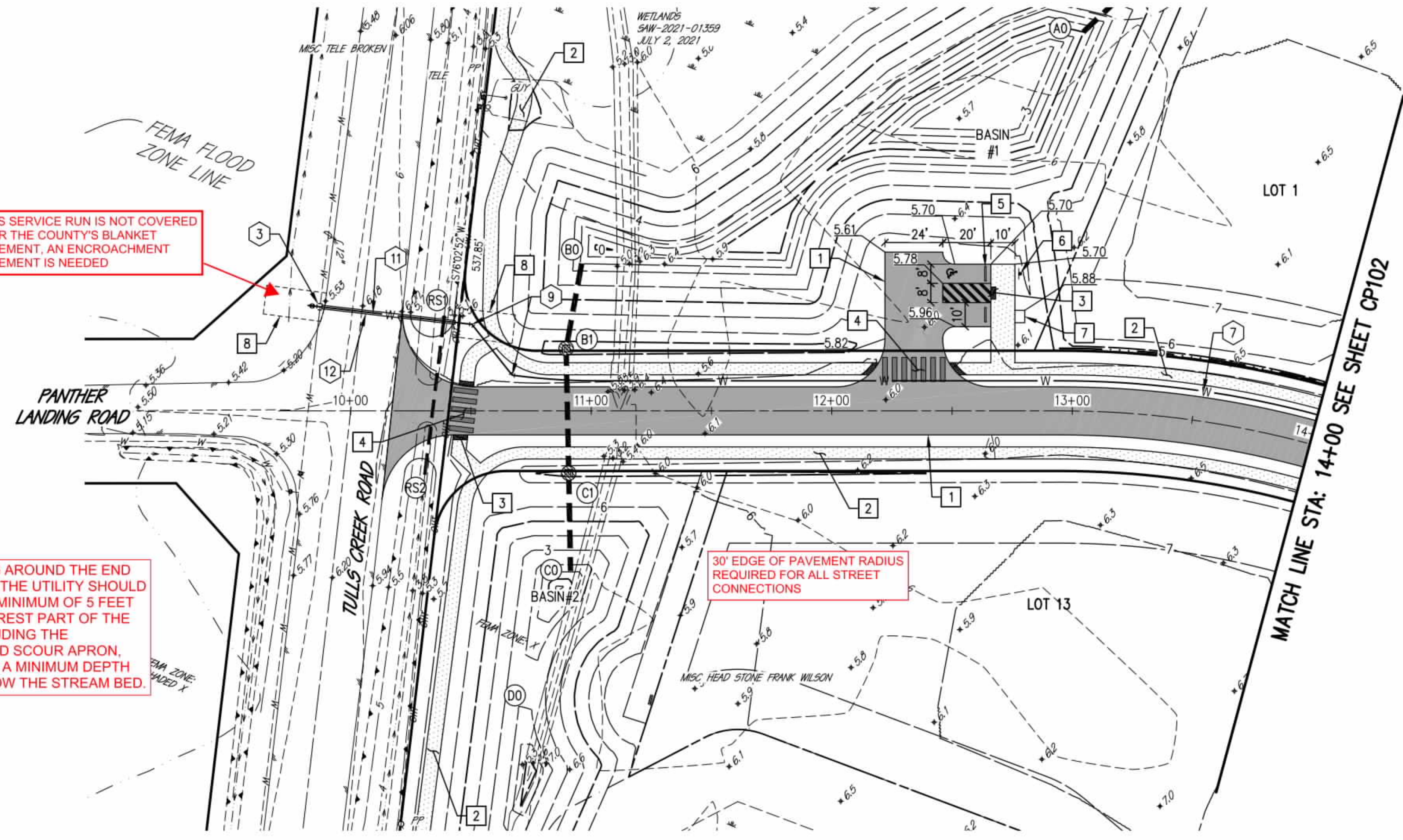


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DATE	03/04/25

REVISION	NO.	DESCRIPTION

PLAN & PROFILE OF
WILSON RIDGE

CURRITUCK COUNTY NORTH CAROLINA
MOYOCK TOWNSHIP



UTILITY KEYNOTES:

1. FIRE HYDRANT ASSEMBLY
2. 8" x 6" TEE & 6" GATE VALVE
3. 12" x 8" TAPPING SLEEVE & 8" GATE VALVE (REVERSE TAP)
4. 3/4" WATER SERVICE (TYP)
5. 2" BLOW OFF VALVE
6. 8" x 4" REDUCER
7. 8" SDR-21 PVC WATER MAIN
8. 4" SDR-21 PVC WATER MAIN
9. 45° BEND
10. BLUE REFLECTOR
11. 8" DIP
12. 18" STEEL CASING PIPE

IF THIS SERVICE RUN IS NOT COVERED UNDER THE COUNTY'S BLANKET AGREEMENT, AN ENCROACHMENT AGREEMENT IS NEEDED

WHEN BURYING AROUND THE END OF A CULVERT, THE UTILITY SHOULD BE LOCATED A MINIMUM OF 5 FEET FROM THE NEAREST PART OF THE CULVERT INCLUDING THE WINGWALLS AND SCOUR APRON, AND BURIED AT A MINIMUM DEPTH OF 2 FEET BELOW THE STREAM BED.

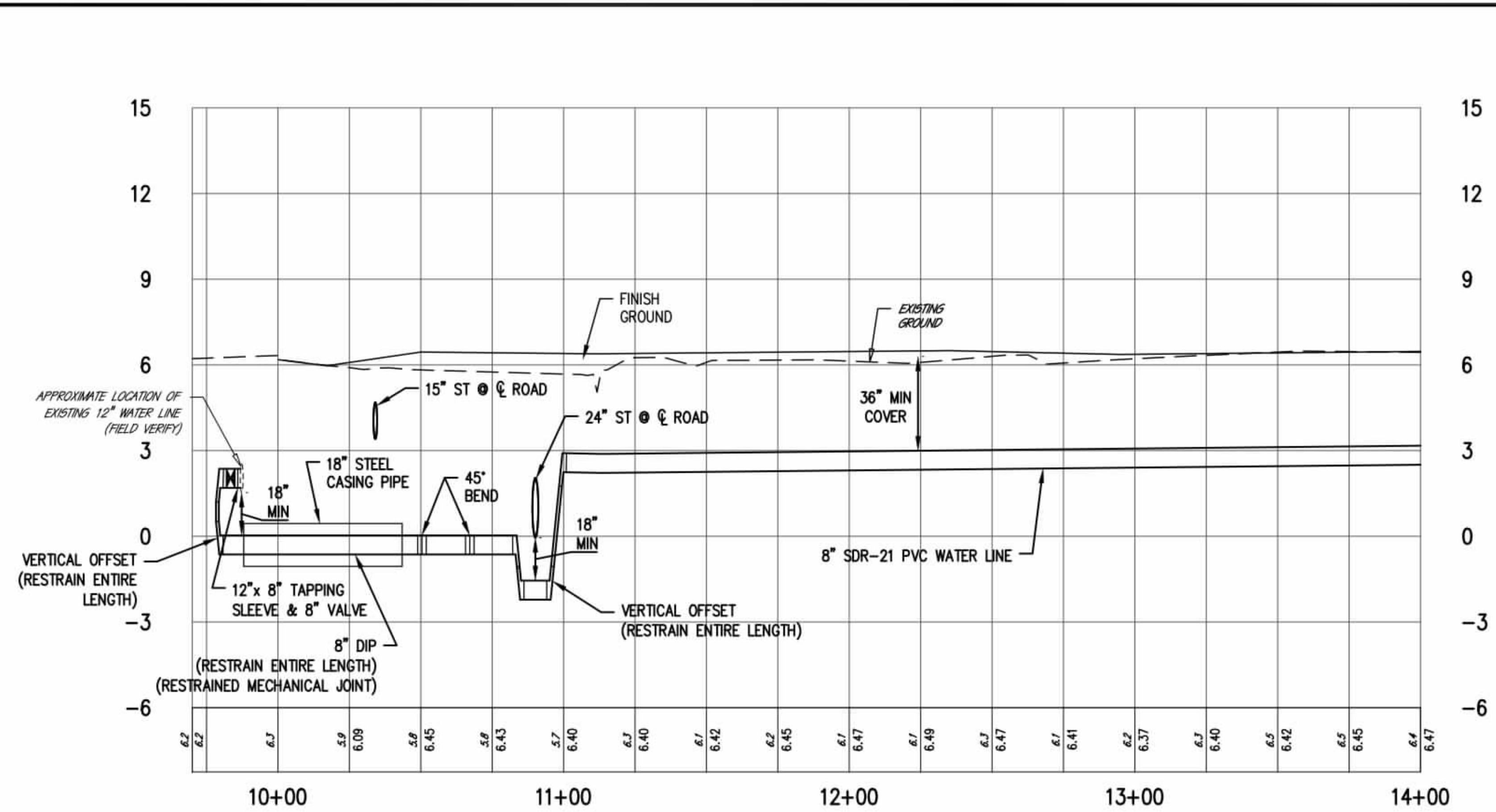
30' EDGE OF PAVEMENT RADIUS REQUIRED FOR ALL STREET CONNECTIONS

NEW WORK KEYNOTES:

1. EDGE OF PAVEMENT
2. 5" CONCRETE SIDEWALK
3. TRUNCATED DOME DETECTABLE WARNING (TYP)
4. PEDESTRIAN CROSSWALK (TYP)
5. WHEELSTOP (TYP)
6. VAN ACCESSIBLE HANDICAP SIGN AS PER ADA STANDARDS
7. MAILBOX KIOSK
8. JACK & BORE PIT

SEE SHEET CG101 FOR STORM SEWER SCHEDULE

WILSON RIDGE ROAD (50' R/W)
SCALE: 1" = 30'



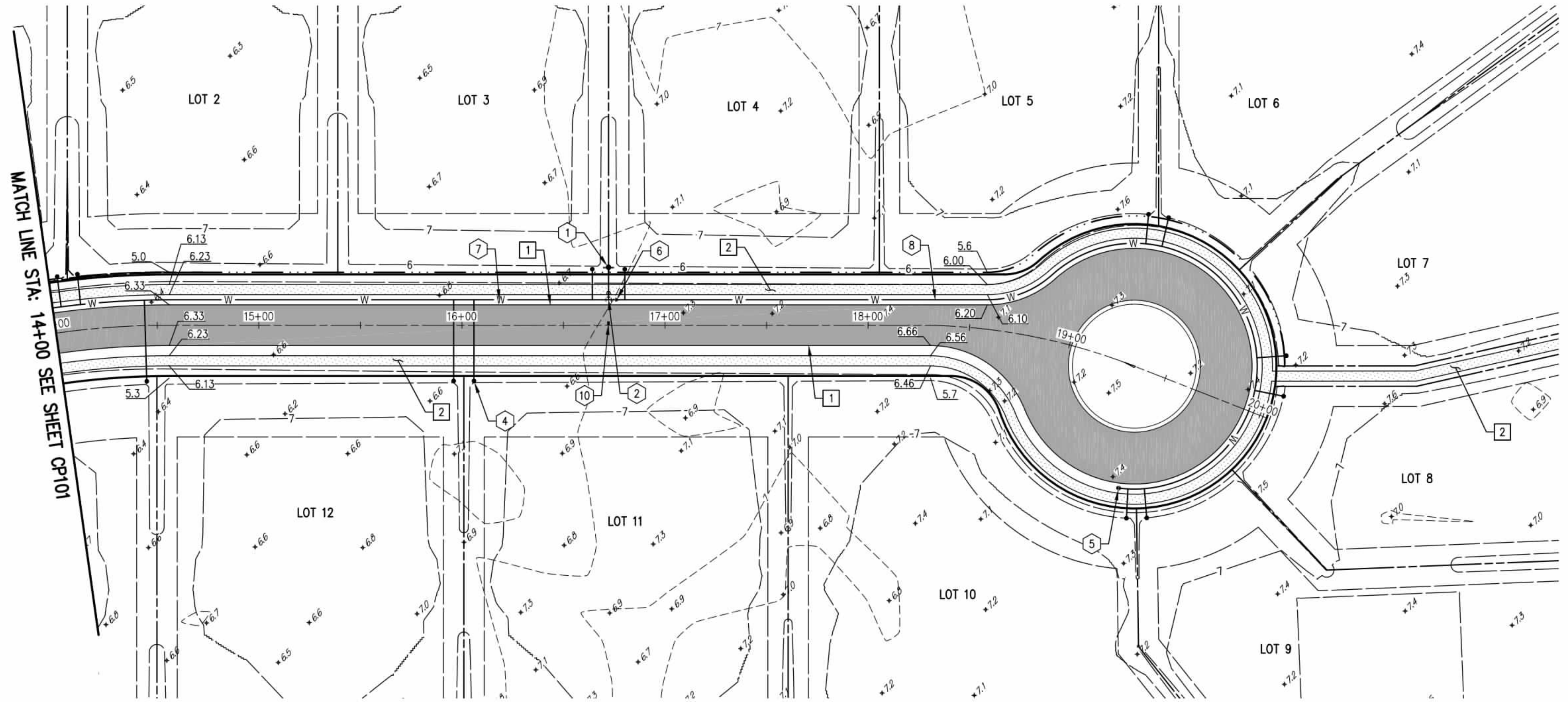
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UTILITY KEYNOTES:

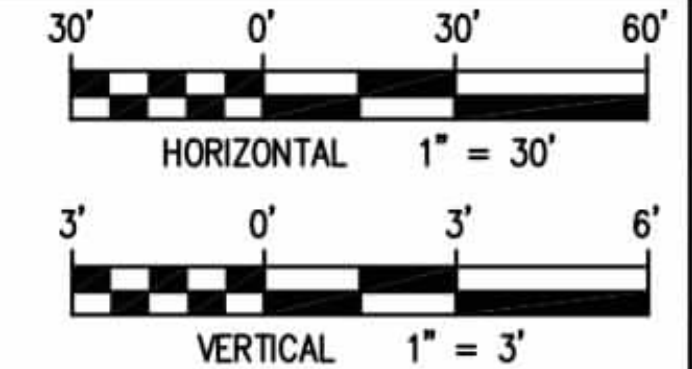
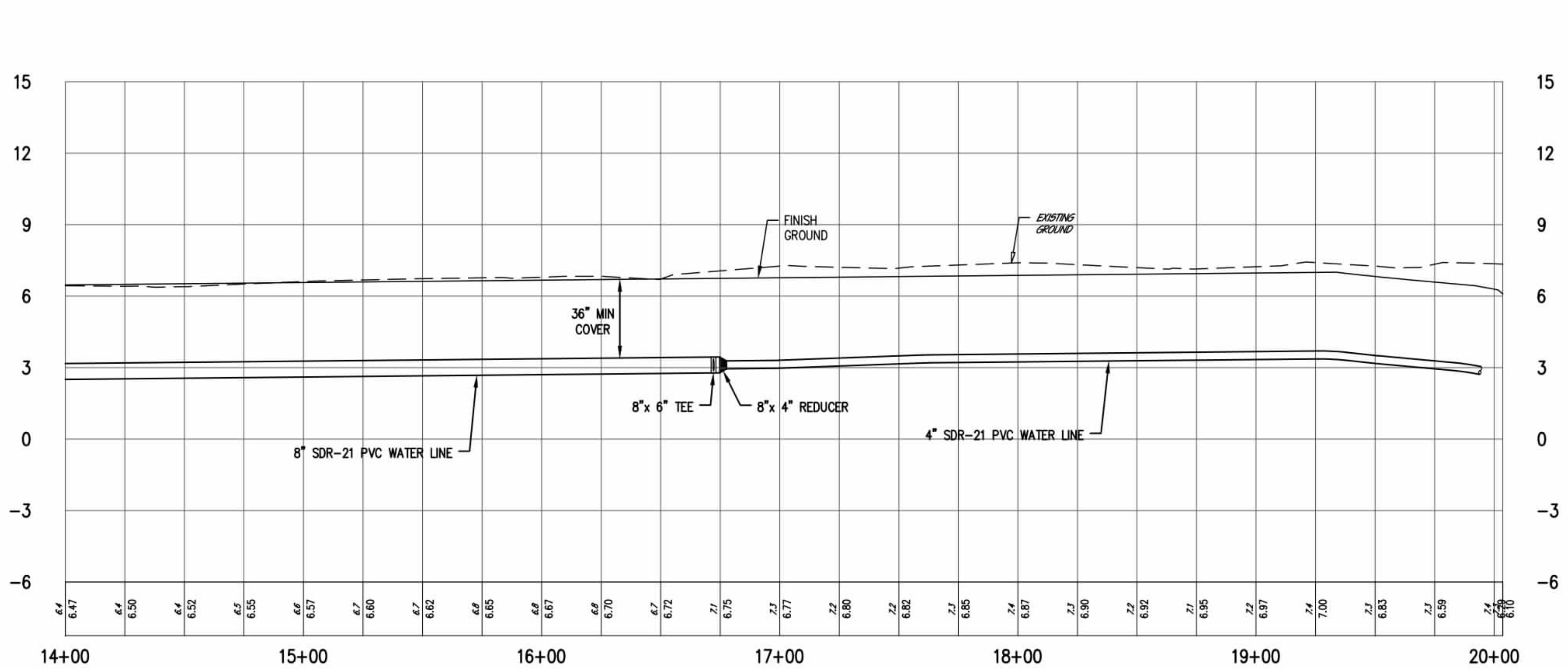
1. FIRE HYDRANT ASSEMBLY
2. 8" x 6" TEE & 6" GATE VALVE
3. 12" x 8" TAPPING SLEEVE & 8" GATE VALVE (REVERSE TAP)
4. 3/4" WATER SERVICE (TYP)
5. 2" BLOW OFF VALVE
6. 8" x 4" REDUCER
7. 8" SDR-21 PVC WATER MAIN
8. 4" SDR-21 PVC WATER MAIN
9. 45° BEND
10. BLUE REFLECTOR
11. 8" DIP
12. 18" STEEL CASING PIPE

NEW WORK KEYNOTES:

1. EDGE OF PAVEMENT
2. 5" CONCRETE SIDEWALK
3. TRUNCATED DOME DETECTABLE WARNING (TYP)
4. PEDESTRIAN CROSSWALK (TYP)
5. WHEELSTOP (TYP)
6. VAN ACCESSIBLE HANDICAP SIGN AS PER ADA STANDARDS
7. MAILBOX KIOSK
8. JACK & BORE PIT



WILSON RIDGE ROAD (50' R/W)
SCALE: 1"=30'

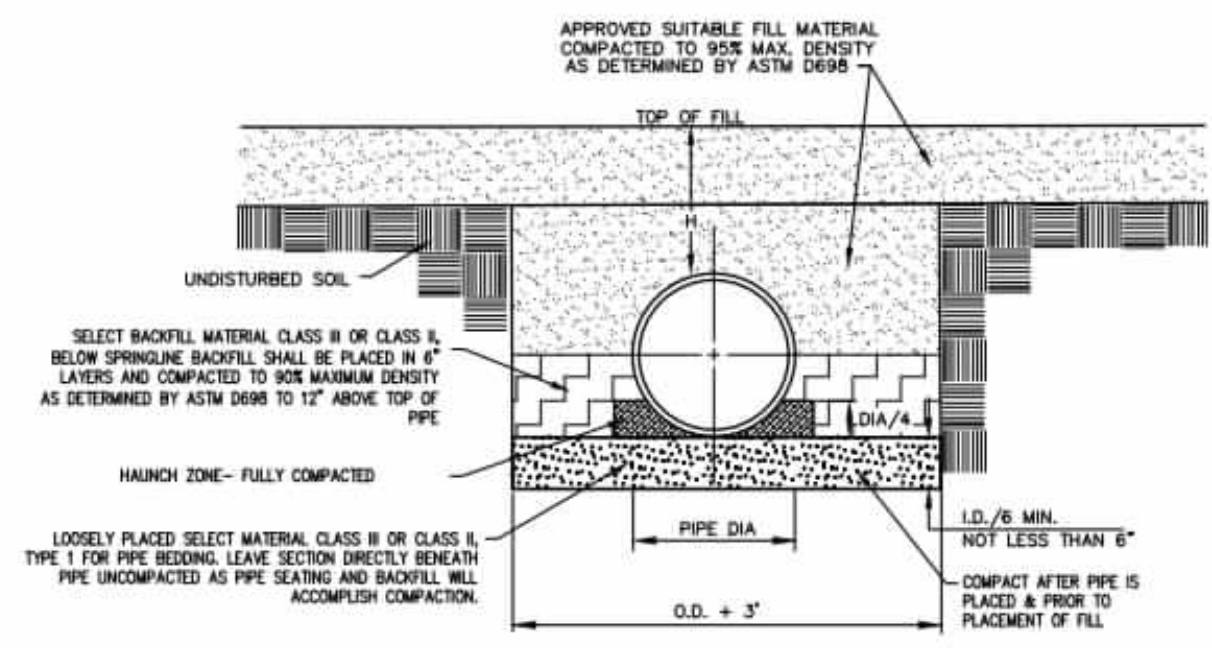


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CHECKED	DMW		
APPROVED	CSA		

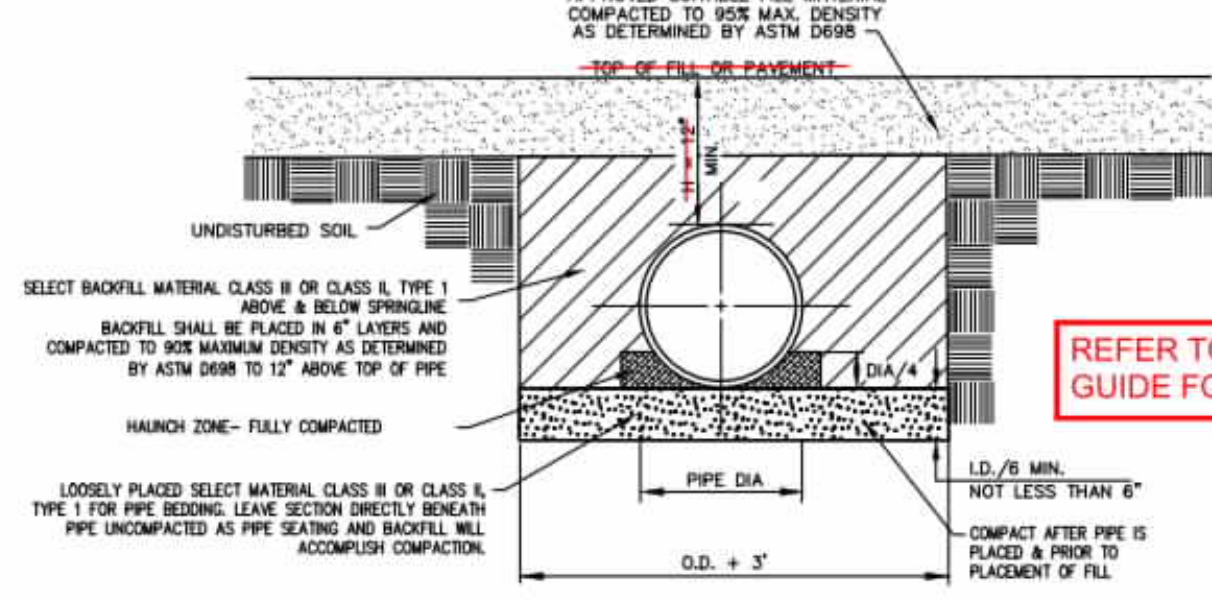
REVISION	DATE	DESCRIPTION

PLAN & PROFILE OF
WILSON RIDGE
CURRITUCK COUNTY NORTH CAROLINA
MOYOCK TOWNSHIP

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STANDARD RIGID PIPE INSTALLATION DETAIL
NOT TO SCALE NCDOT STD. 300001

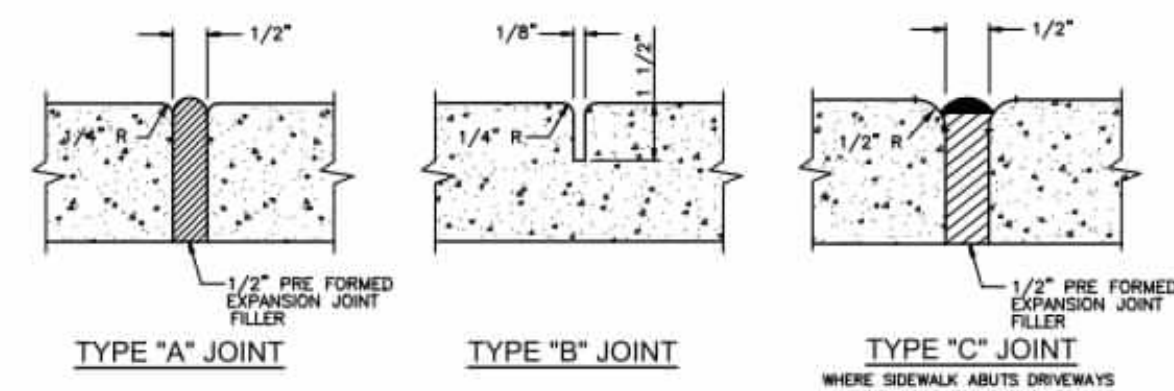


STANDARD FLEXIBLE PIPE INSTALLATION DETAIL
NOT TO SCALE NCDOT STD. 300001

GENERAL PIPE INSTALLATION NOTES:

- ALL EXCAVATIONS SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION STANDARDS FOR EXCAVATIONS IN OSHA "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION" CHAPTER XVIII OF TITLE 29, CFR PART 1926. THE CONTRACTOR SHALL HAVE A COMPETENT PERSON ON THE JOB AT ALL TIMES AND SHALL EMPLOY A PROFESSIONAL ENGINEER TO ACT UPON ALL PERTINENT MATTERS OF THE WORK.
- DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.
- THE PIPE CULVERT INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH NCDOT TYPICAL STANDARD DETAIL 300001.

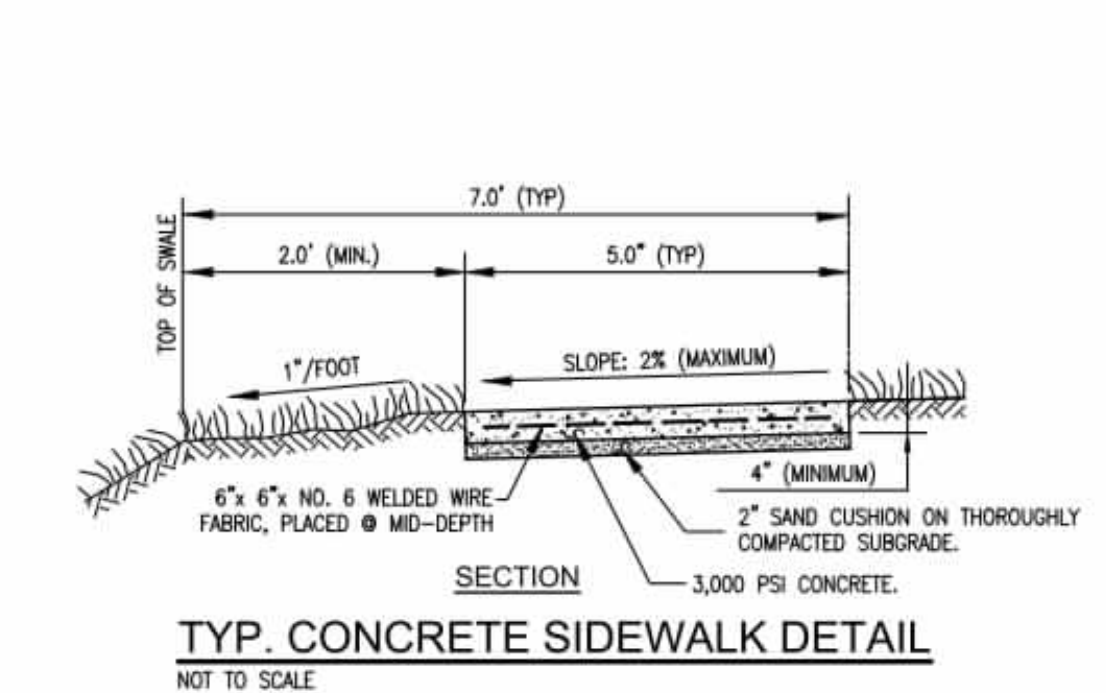
D.O. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT OR THE BOTTOM OF THE PAVEMENT STRUCTURE AT THAT POINT.



SIDEWALK AND WALKING TRAIL NOTES:

- WALKS SHALL HAVE A 4 INCH MINIMUM THICKNESS.
- CONCRETE SHALL BE A MINIMUM OF 3,000 PSI.
- WALKS SHALL HAVE A 5 FOOT MINIMUM WIDTH.
- CROSS SLOPE SHALL BE LIMITED TO A MAXIMUM OF 2%.
- LONGITUDINAL SLOPE SHALL BE LIMITED TO A MAXIMUM OF 1:20 (5%) EXCEPT WHERE ACCESSIBILITY RAMPS ARE PROVIDED AS NOTED.
- ALL SIDEWALKS AND TRAILS SHALL BE COMPLIANT WITH THE LATEST HANDICAP ACCESSIBILITY REQUIREMENTS.

TYPE	LOCATION
"A"	20' CENTER TO CENTER ON SIDEWALKS, P.I.S. AND P.T. OF CURVES, JUNCTION OF EXISTING AND NEW SIDEWALKS, DRIVEWAYS, AND SIMILAR STRUCTURES.
"B"	5' CENTER TO CENTER ON SIDEWALKS.



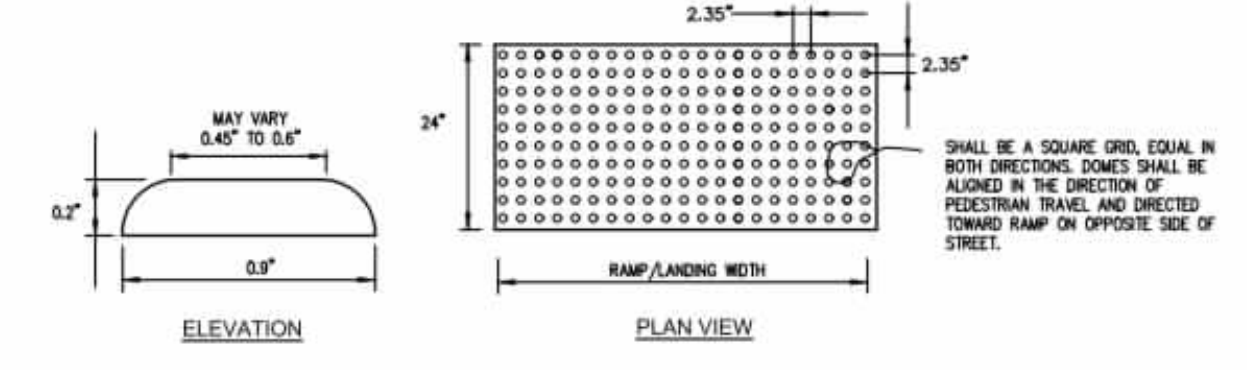
CONVENTIONAL CONCRETE CONTROL JOINT DETAIL
NOT TO SCALE

NOTES:

- MINIMUM PAVEMENT THICKNESS (D) = 6" W/6x6-W2.9 x W2.9 WWF REINFORCEMENT, PLACE 2" BELOW TOP OF SLAB.
- UNDEWELED TRANSVERSE CONTRACTION OR LONGITUDINAL JOINT, SAWED OR PRE-MOLDED. DO NOT DOWEL PAVEMENTS LESS THAN 7" THICK.

CONVENTIONAL CONCRETE SPECIFICATIONS:

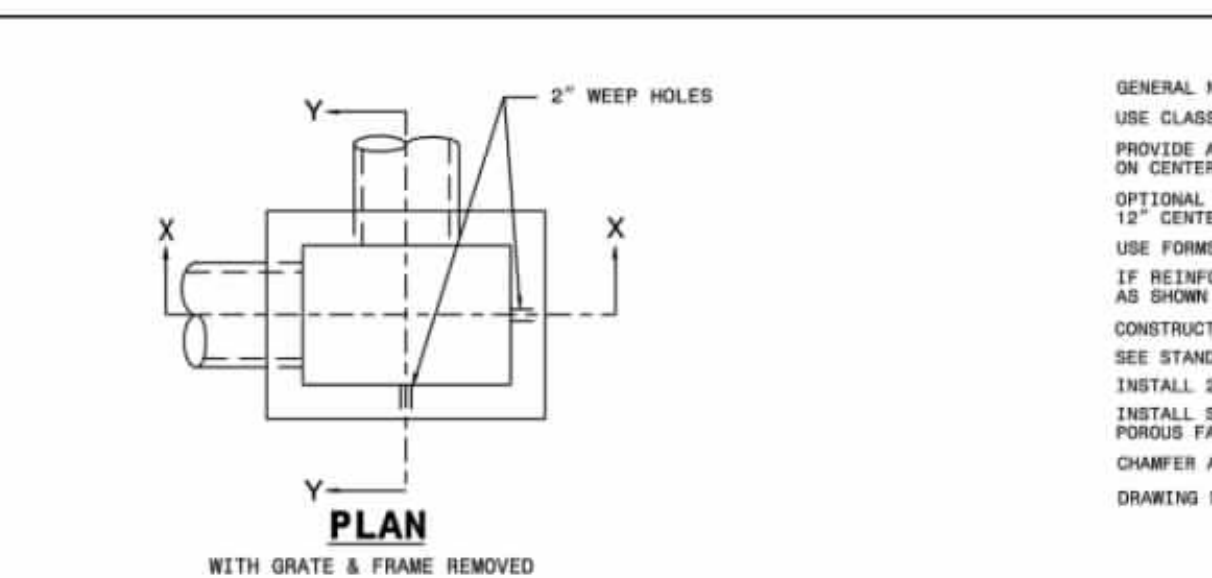
- USE ACI CERTIFIED FLATWORK FINISHER.
- USE ACI 330R-01 GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS.
- USE ACI 330.1-94 STANDARD SPECIFICATION FOR PLAIN CONCRETE PARKING LOTS.
- ALL CONCRETE USED IN PARKING LOT, UNLESS OTHERWISE INDICATED, SHALL HAVE A COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS.
- IF SUBGRADE SOILS ARE FOUND BY THE CONTRACTOR TO BE UNSUITABLE, TESTING AND PREPARATION RECOMMENDATIONS BY A GEOTECHNICAL ENGINEER MUST BE PROVIDED PRIOR TO CONCRETE PLACEMENT.
- IMPORTED SOIL USE FOR BACK FILL SHOULD BE FREE OF HEAVY CLAY, SILTS, STONES, PLANT ROOT OR OTHER FOREIGN MATERIAL GREATER THAN 1" IN DIAMETER IN ORDER TO ACHIEVE ADEQUATE COMPACTION AROUND ANY FIXED OBJECT IN GROUND. ALTERNATE WILL BE TO USE FLOWABLE FILL.
- KEEP ALL JOINTS CONTINUOUS WITH A MAXIMUM JOINT SPACING OF 10 FT.
- CONTROL JOINTS SHALL BE FORMED OR SAWED WITHIN 12 HOURS FROM TIME OF PLACEMENT:
 - SIDEWALK-SPACING SHALL BE SAME AS WIDTH OF PAVEMENT AND LESS THAN 5 FEET IN LENGTH.
 - PAVEMENT-MAXIMUM SPACING SHALL BE 2.5 TIMES THICKNESS IN UNIT OF FEET AND LESS THAN 15 FEET IN LENGTH (E.G. 1x4 INCH SPACING AT 10'x10').
- CURE CONCRETE IMMEDIATELY AFTER FINISHING OPERATION IS COMPLETED BY USING ONE OF THE FOLLOWING METHODS: WATER, PIGMENTED WATER-BASED CURING COMPOUND OR VISQUEEN AND BURLAP.



TRUNCATED DOME DETECTABLE WARNING DETAIL
NOT TO SCALE

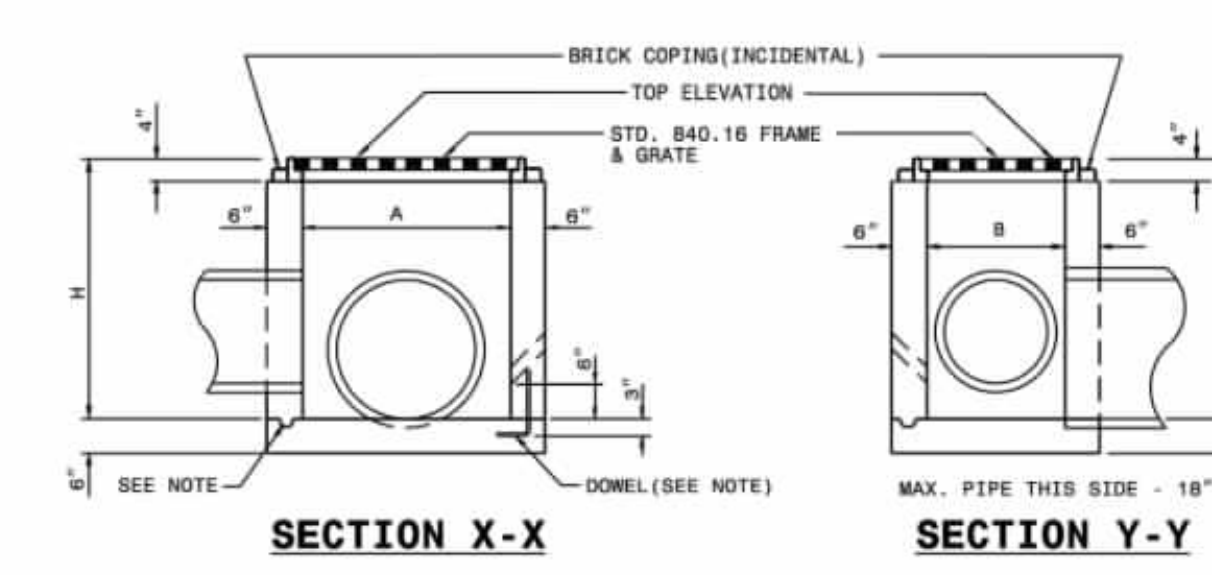
DETECTABLE WARNING GENERAL NOTES:

- DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES MANUFACTURED BY "SAFE-T-TRAX" INDUSTRIES, INC., CALLED "SAFE-T-TRAX", WITH POLYURETHANE COATING "DURABAK", OR APPROVED EQUAL APPLIED ON SMOOTH (NON-GROOVED) CLEAN CONCRETE RAMP, AND SHALL CONFORM TO THE DETAILS IN THE PLANS AND IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
- ALL DETECTABLE WARNING AREAS SHALL START AT BACK OF CURB, BE 24 INCHES IN DEPTH AND COVER THE COMPLETE WIDTH OF THE RAMP AREA 48 INCHES MIN.
- 70% VISUAL CONTRAST IS REQUIRED. THE COLOR SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING MATERIAL, AS SPECIFIED ON THE PLANS. COLOR TO BE DETERMINED BY THE CITY STAFF. SAFETY YELLOW IS THE DEFAULT COLOR.
- THE SMOOTH AND CLEAN CONCRETE UNDER DETECTABLE WARNING DEVICE AREA SHALL BE INCLUDED IN THE COST OF THE CONCRETE CURB RAMP. THE COST OF FURNISHING AND INSTALLING THE DETECTABLE WARNING DEVICE SHALL BE INCLUDED SEPARATELY AS "DETECTABLE WARNING DEVICE" PER SQUARE FOOT OR AS OUTLINED IN THE SPECIFICATIONS.
- DETECTABLE WARNING SURFACE: APPLIED A COATING OF "DURABAK" SLIP-RESISTANT POLYURETHANE COATING TO THE SMOOTH, CLEAN CONCRETE SURFACE. ON TOP OF THE POLYURETHANE COATING APPLY TRUNCATED DOMES FROM A "SAFE-T-TRAX" CONTACT SHEET. ON TOP OF THE TRUNCATED DOMES AND INITIAL POLYURETHANE COATING PLACE THREE ADDITIONAL COATS OF "DURABAK" POLYURETHANE COATING. COLOR TO BE DETERMINED BY CITY STAFF OR AS SPECIFIED ON THE PLANS. SAFETY YELLOW IS A DEFAULT COLOR.
- ALL RAMPS AND DETECTABLE WARNING SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL AND DIRECTED TOWARD RAMP ON THE OPPOSITE SIDE OF STREET.



GENERAL NOTES:

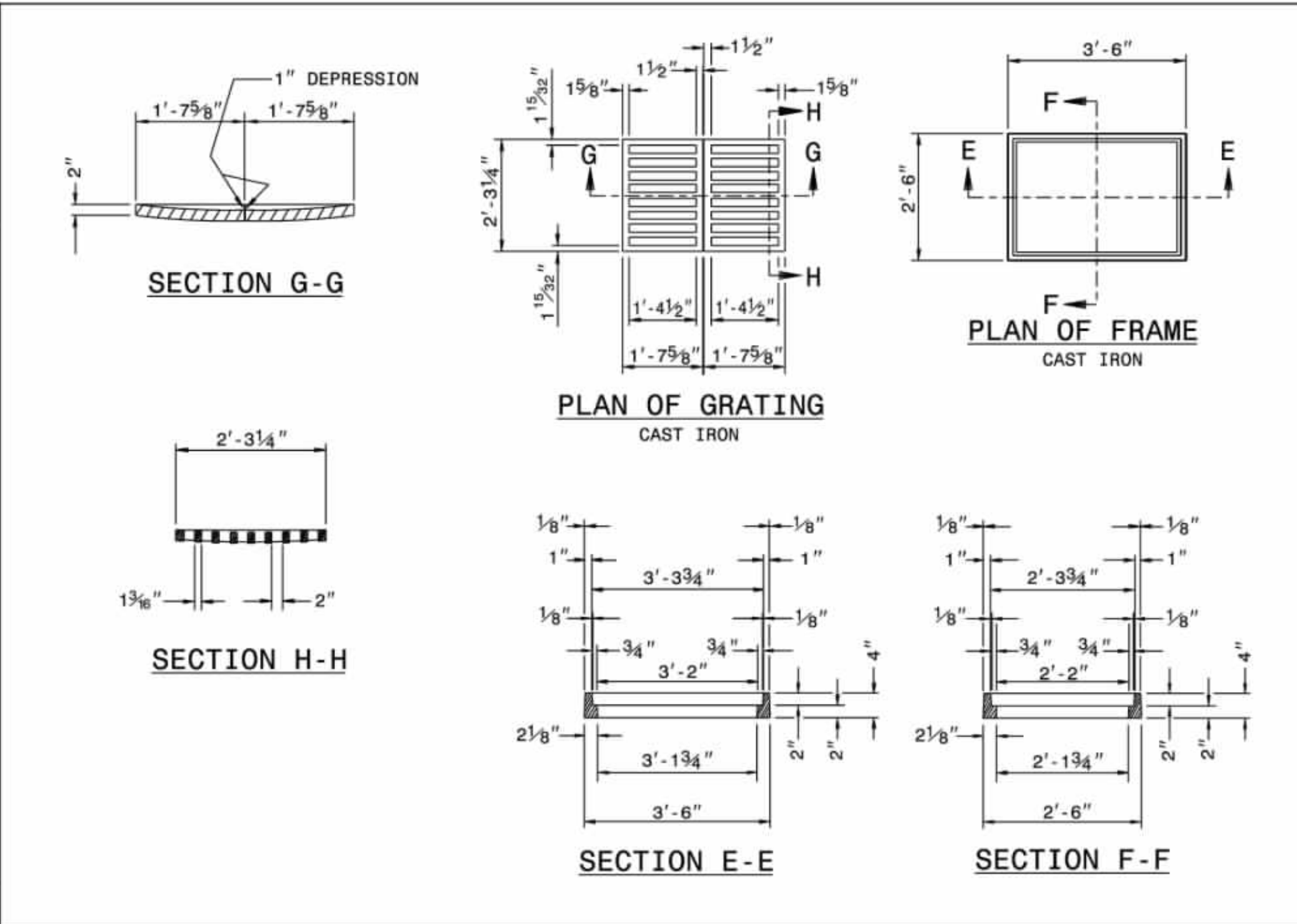
- USE CLASS "B" CONCRETE THROUGHOUT.
- PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
- OPTIONAL CONSTRUCTION - MONOLITHIC REAR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
- USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
- IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.60.
- CONSTRUCT WITH PIPE CROWNS MATCHING.
- SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.
- INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
- INSTALL STONE DRAINS OF A MEMBER OF 1 CUBIC FOOT OF NO. 20M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
- CHAMFER ALL EXPOSED CORNERS 1".
- DRAWING NOT TO SCALE.



DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX		DEDUCTIONS FOR ONE PIPE	
PIPE DIA.	SPAN	WIDTH	MIN. HEIGHT	FT.	HT.	CONC.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015 0.026
15"	/	/	2'-3"	/	/	0.648	0.023 0.036
18"	/	/	2'-6"	/	/	0.703	0.033 0.049
24"	/	/	3'-0"	/	/	0.814	0.059 0.085
30"	3'-0"	2'-0"	3'-6"	0.222	0.222	0.925	0.092 0.127

REFER TO CURRENT NCDOT ROADWAY STANDARD DRAWINGS

1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
ROADWAY STANDARD DRAWING FOR CONCRETE DROP INLET 12" THRU 30" PIPE
SHEET 1 OF 1
840.14



1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
ROADWAY STANDARD DRAWING FOR DROP INLET FRAME AND GRATES FOR USE WITH STD. DWG. S 840.14 AND 840.15
SHEET 1 OF 1
840.16



RWS	LDJ	DMW	CSA	DATE
DESIGNED	DRAWN	CHECKED	APPROVED	03/04/25

NO.	DATE	DESCRIPTION

DETAILS OF WILSON RIDGE
CURRITUCK COUNTY NORTH CAROLINA
MOYOCK TOWNSHIP
SHEET C-502
10 of 14 Sheets
SCALE: AS SHOWN
PROJ. NO.: 24100

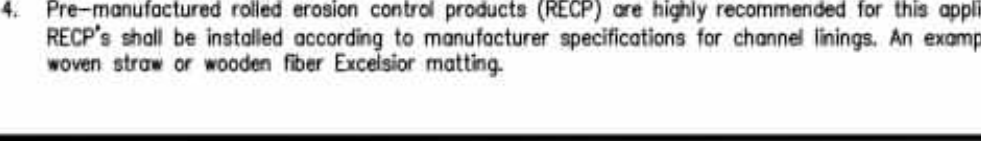
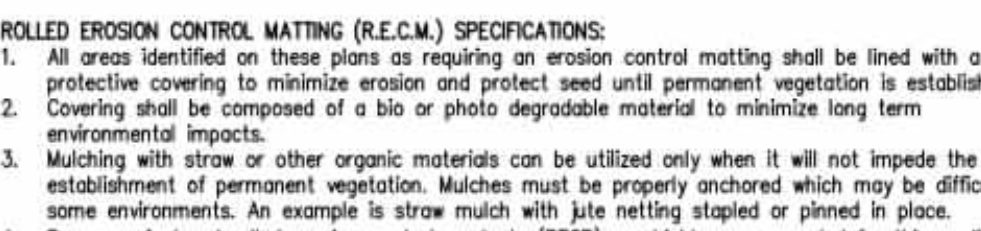
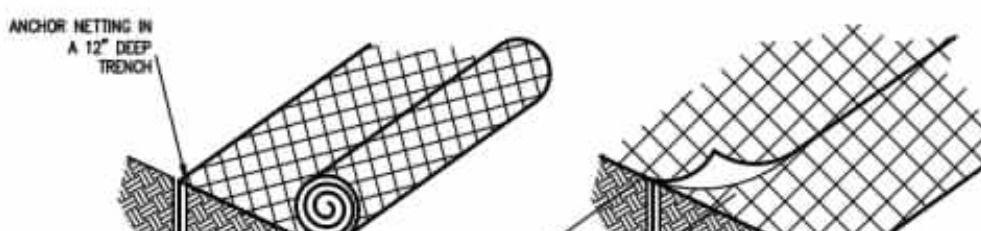
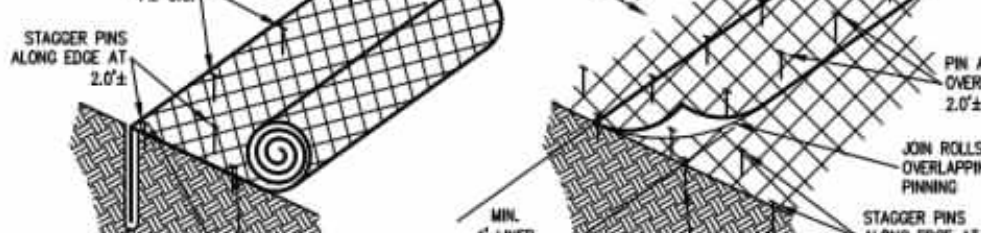
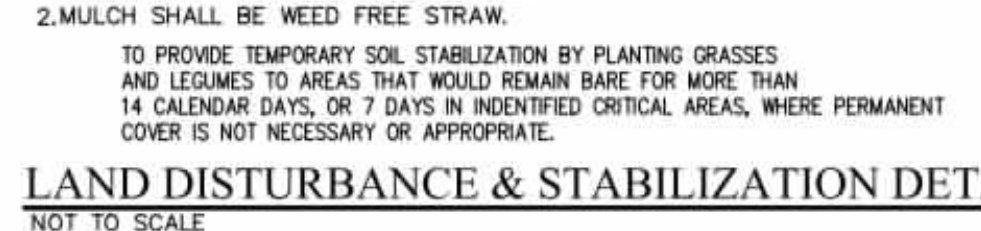
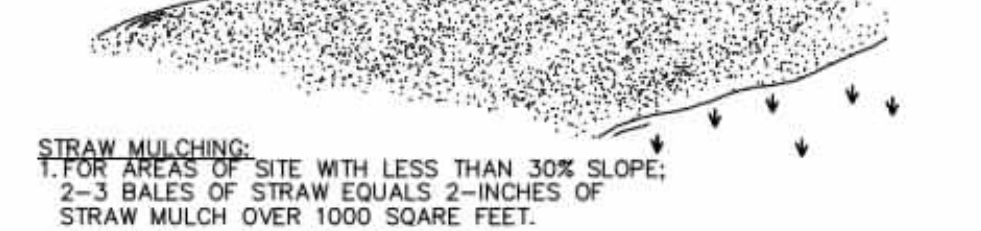
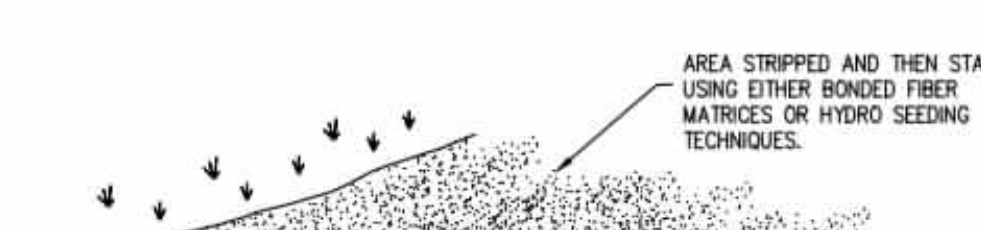
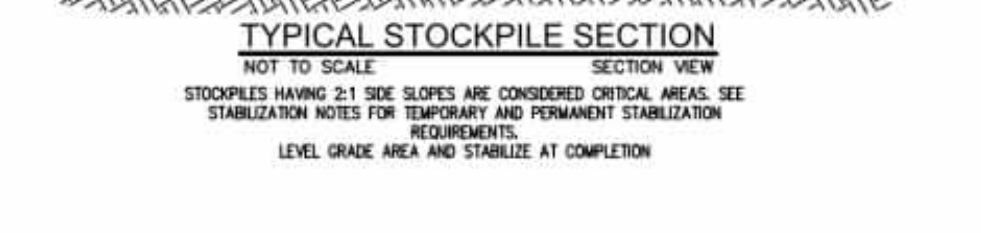
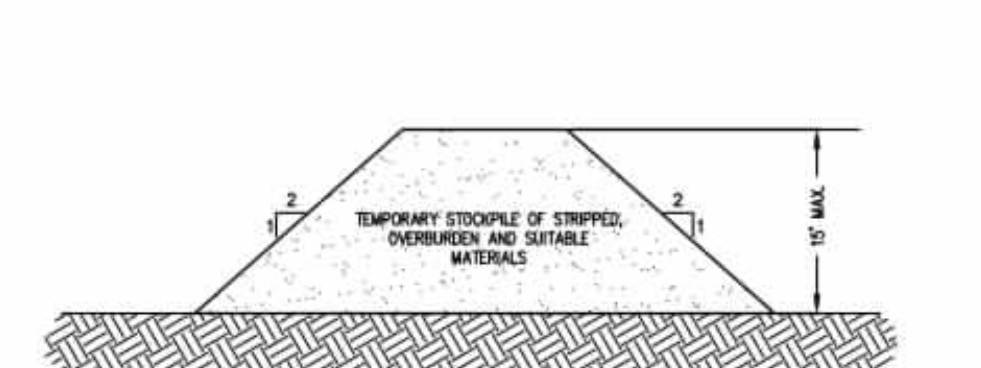
GENERAL PROJECT NOTES:

- PROJECT NAME: WILSON RIDGE
MOYOCK, CURRITUCK COUNTY, NORTH CAROLINA
 - APPLICANT: CURRITUCK HOMES
101 GARDEN STREET
MOYOCK, NC 27558
 - PROJECT DESCRIPTION: 13 LOT RESIDENTIAL SUBDIVISION
 - NEAREST RECEIVING STREAM: MOYOCK RUN 30-1-2-2-1
 - STREAM CLASSIFICATION: C, SW - PASQUOTANK RIVER BASIN
- TOTAL PROPERTY AREA:** ±19.04 AC
TOTAL PROPOSED DISTURBED AREA: ±16.70 AC
- AREA CALCULATION NOTE:**
All areas have been calculated utilizing properties within the Autocad software.
- MATERIAL BALANCE NOTE:**
All excavated material occurring during the course of construction shall remain on-site for roadway construction and lot grading. See SCHEDULE OF LAND DISTURBING ACTIVITIES provided on Sheet 5 of this set for an estimated cut/fill material balance for the project.
- WETLAND NOTE:**
404 jurisdictional wetlands have been identified on the property. Estimated impacts: 0.10 AC.
- STABILIZATION NOTE:**
The angle of graded slopes and fills shall be no greater than the angle that can be retained by vegetative cover or other adequate erosion control devices or structures. In any event, all disturbed areas left exposed will, WITHIN 14 CALENDAR DAYS OF COMPLETION of any phase of grading, be planted or otherwise provided with temporary or permanent ground cover, devices, or structures sufficient to restrain erosion. Additionally, certain critical areas as identified on the plan, such as, but not limited to, perimeter dikes, swales, slopes steeper than 3:1, and areas located within High Quality Water Zones, must be temporarily or permanently stabilized WITHIN 7 CALENDAR DAYS OF COMPLETION of any phase of grading in these areas. A permanent ground cover for all disturbed areas must be provided WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (whichever is shorter) following completion of construction or development.

SEDIMENTATION AND EROSION CONTROL NOTES:

- A. NARRATIVE AND SITE DATA**
- WILSON RIDGE IS A RESIDENTIAL SUBDIVISION DEVELOPMENT SITED FOR CONSTRUCTION ON A 19.04 ACRE TRACT OF LAND LOCATED DUE SOUTH FROM THE INTERSECTION OF PANTHER LANDING ROAD & TULLS CREEK ROAD IN THE MOYOCK TOWNSHIP OF CURRITUCK COUNTY. THE DEVELOPMENT PLAN INCLUDES 13 SINGLE FAMILY HOME LOTS SERVED BY PROPOSED ROADWAY, DRAINAGE AND UTILITY IMPROVEMENTS.
- THE SITE'S EXISTING TOPOGRAPHY IS GENERALLY FLAT, WITH SLOPES RANGING BETWEEN 0-2% AND ELEVATIONS RANGING BETWEEN 2-7 FT MSL IN THE AREA OF CONSTRUCTION. THE PROPERTY IS BOUNDED TO THE NORTH BY TULLS CREEK ROAD, TO THE EAST AND WEST BY SINGLE FAMILY MANLAND LOTS, TO THE SOUTH BY A DRAINAGE CANAL. AN EXISTING USE OF THE LAND IS AGRICULTURAL AND SURROUNDING DEVELOPMENT IS PRIMARILY RESIDENTIAL SINGLE FAMILY HOMES.
- A SYSTEM OF TYPICAL FARM DITCHES DRAIN THE SITE TO AN EXISTING DRAINAGE CANALS RUNNING ALONG THE SOUTHERN AND SOUTHERN PROPERTY BOUNDARY. BOTH OF THESE DITCHES DRAIN EAST AND ULTIMATELY CONNECT TO TULL BAY.
- PURSUANT TO THE USDA SOIL SURVEY MANUAL OF CURRITUCK COUNTY, SITE SOILS ARE COMPOSED OF PRIMARILY ROANOKE FINE SANDY LOAM, ROANOKE SERIES SOILS ARE DESCRIBED AS BEING POORLY DRAINED WITH SLOW PERMEABILITY RATES RANGING LESS THAN 0.20 IN/HR.

- TEMPORARY STOCKPILE OF STRIPPED, OVERBURDEN, STABILIZABLE MATERIALS
- STOCKPILES HAVING 2:1 SIDE SLOPES ARE CONSIDERED CRITICAL AREAS. SEE STABILIZATION NOTES FOR TEMPORARY AND PERMANENT STABILIZATION REQUIREMENTS.
- LEVEL GRADE AREA AND STABILIZE AT COMPLETION



CONSTRUCTION SEQUENCE SCHEDULE

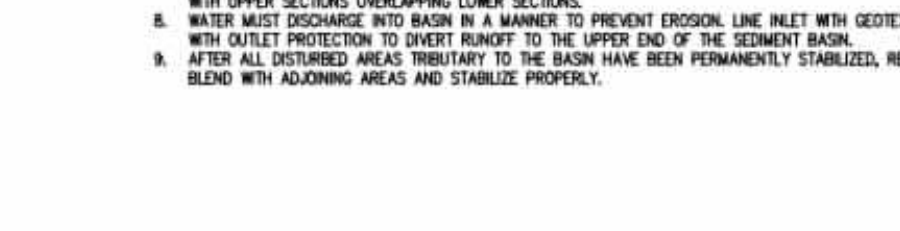
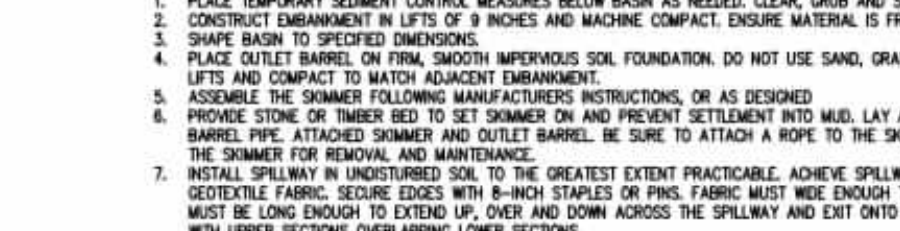
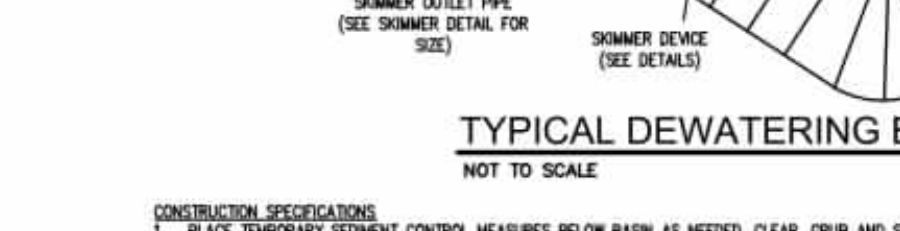
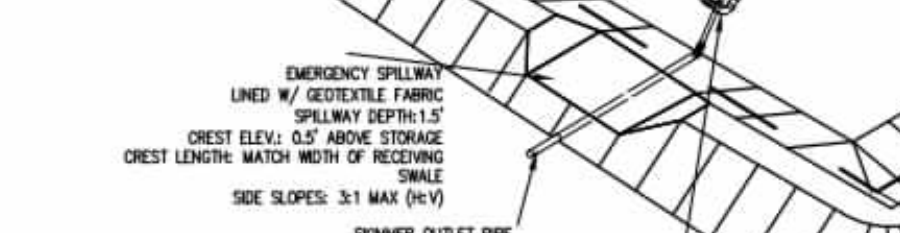
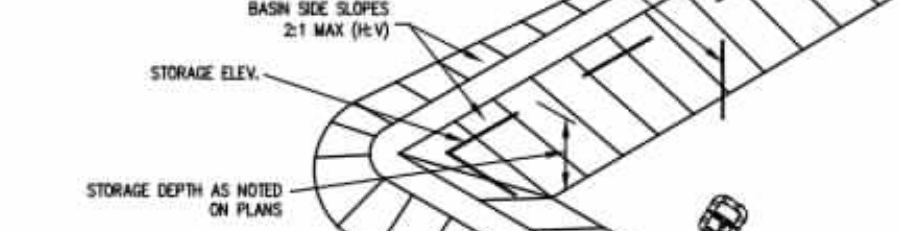
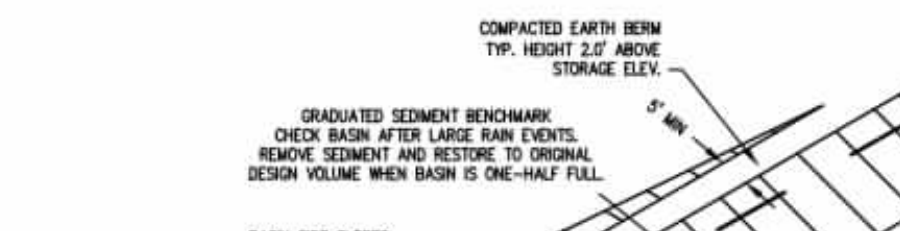
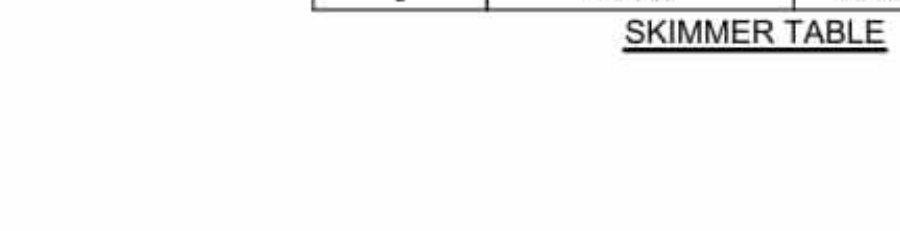
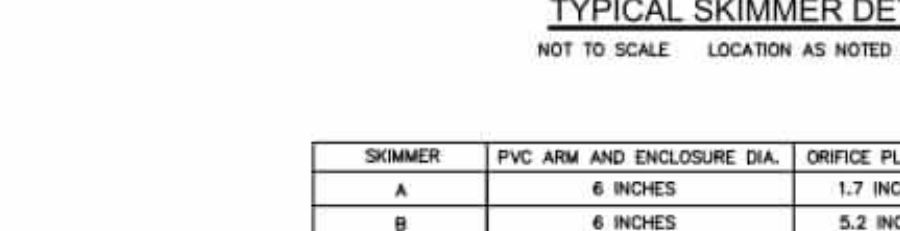
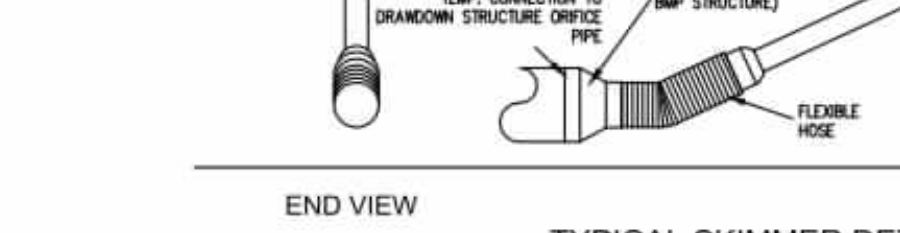
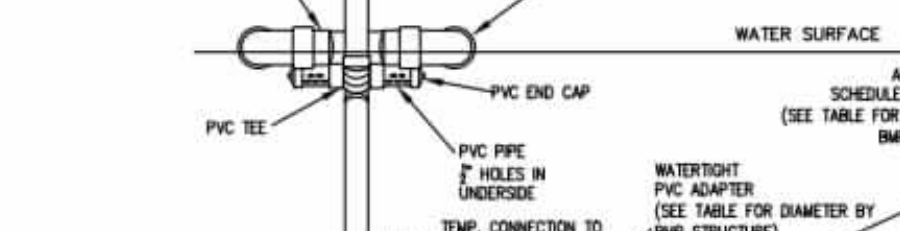
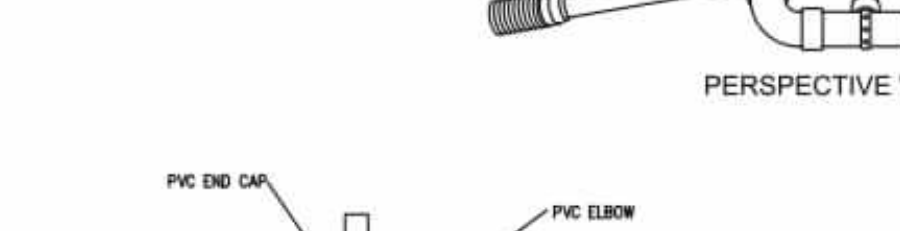
- CONSTRUCTION ACTIVITY**
Construction Access—Construction entrance, construction roads, equipment parking areas
- Sediment Traps & Barriers**
Basin traps, sediment fences, & outlet protection
- Runoff Control—**
Diversion, perimeter dikes, water bars, and outlet protection
- Runoff Conveyance System—**
Stabilize stream banks, storm drains, channels, inlet & outlet protection, slope drains
- Land Clearing & Grading—**
Site preparation—cutting, filling & grading, sediment traps, barriers, diversions, drains, surface roughening
- Surface Stabilization—**
Temporary & permanent seeding, mulching, sodding, rip rap.
- Building Construction—**
Buildings, utilities, paving.
- Landscaping & Final Stabilization—**
Topsoiling, trees & shrubs, permanent seeding, mulching, sodding, rip rap.

LAND GRADING CONSTRUCTION SPECIFICATIONS

- Construct & maintain all erosion & sedimentation control practices & measures in accordance with the approved sedimentation control plan and construction schedule.
- Remove good topsoil from areas to be graded and filled, and preserve it for use in finishing the grading of all critical areas.
- Scarify areas to be topsoiled to a minimum depth of 2 inches before placing topsoil.
- Clear & grub areas to be filled to remove trees, vegetation, roots, or other objectionable material that would affect the planned stability of fill.
- Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.
- Place all fill in layers not to exceed 9 inches in thickness, and compact the layers as required to reduce erosion, slippage, settlement, or other related problems.
- Do not incorporate frozen material or soft, mucky, or highly compressible materials into fill slopes.
- Do not place fill on a frozen foundation, due to possible subsidence and slippage.
- Keep diversions and other water conveyance measures free of sediment during all phases of development.
- Handle seeps or springs encountered during construction in accordance with approved methods.
- Following completion of any phase of grading, provide a groundcover (temporary or permanent) on all exposed slopes within 14 calendar days, or 7 calendar days in critical areas identified on the plan; and, a permanent groundcover for all disturbed areas within 15 working days or 90 calendar days (whichever is shorter) following completion of construction or development.
- Provide adequate protection from erosion for all topsoil stockpiles, borrow areas, and spoil areas.

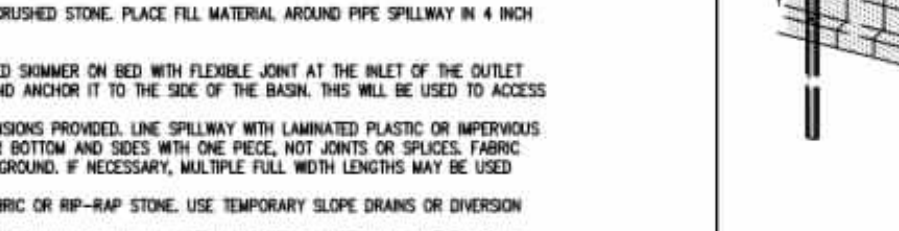
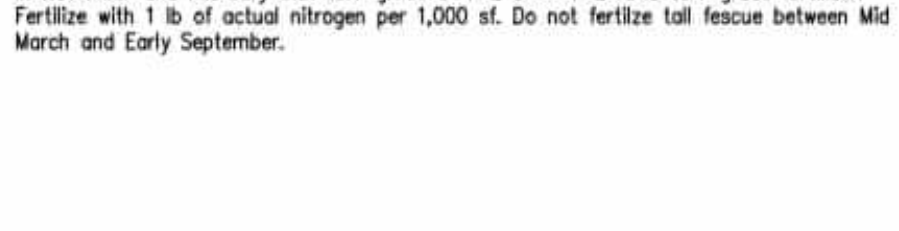
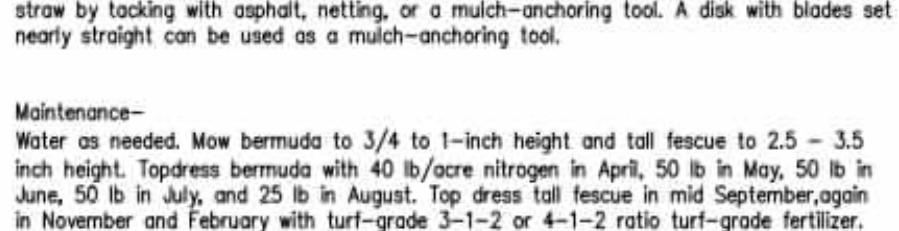
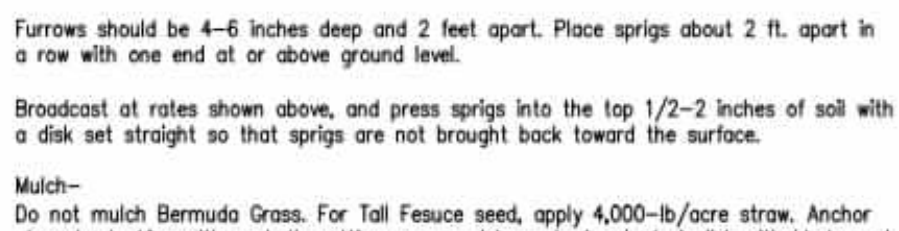
PERMANENT SEEDING

- The purpose of permanent seeding is to reduce erosion and decrease sediment yield from disturbed areas, and to permanently stabilize such areas in a manner that is economical, adapts to site conditions, and allows selection of the most appropriate plant materials. These areas must be seeded or planted within 15 working days or 90 calendar days after final grade is reached, unless temporary stabilization is applied.
- PERMANENT SEEDING SPECIFICATIONS**
Seeding Recommendations for Summer
SEEDING DATES—April to July
SEEDING MIXTURE
Species Rate
Common bermudagrass 10/1,000 of (sprigs)
1-2 lb/1,000 of (seed)
500 (See Sodding Notes)



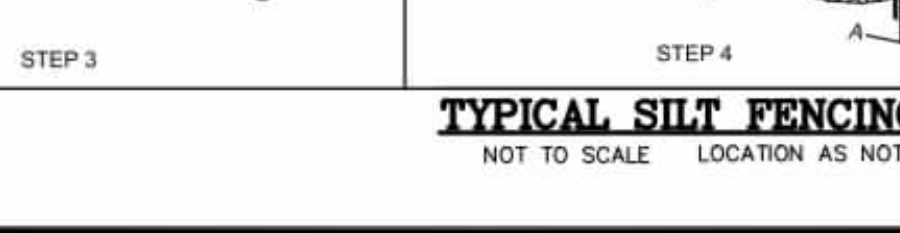
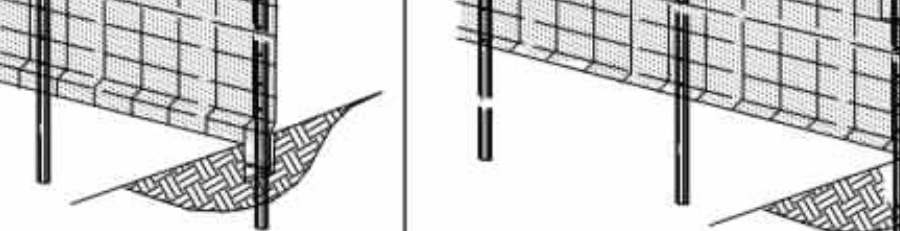
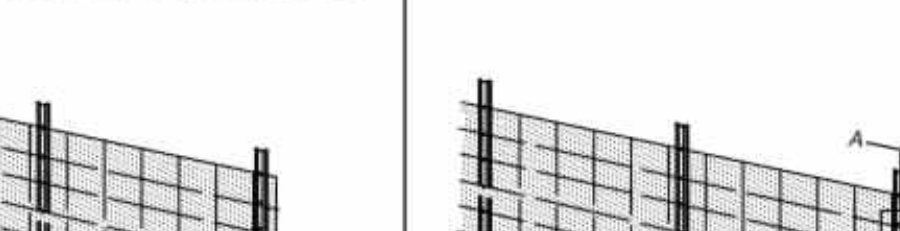
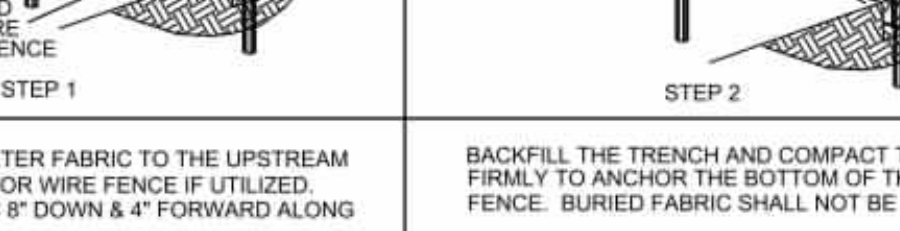
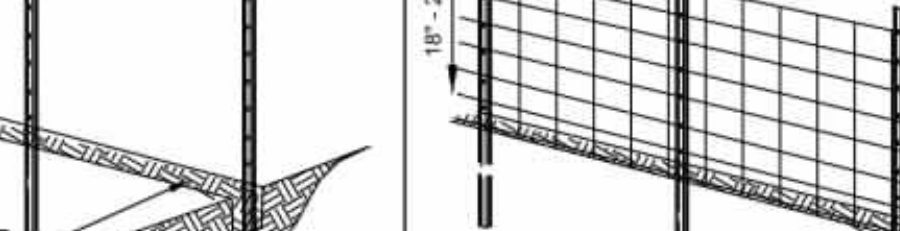
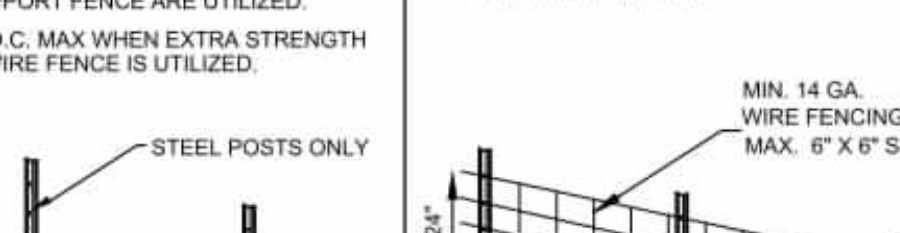
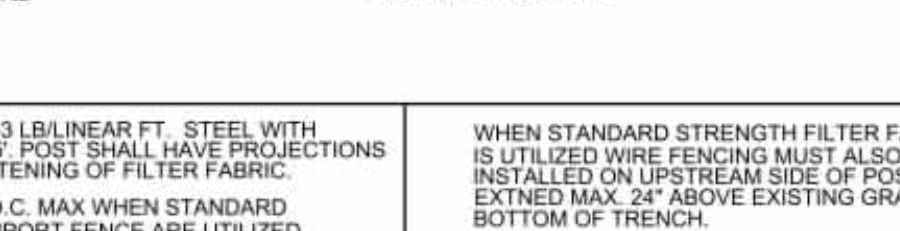
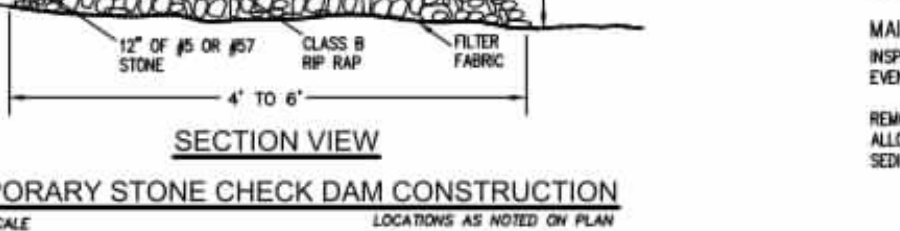
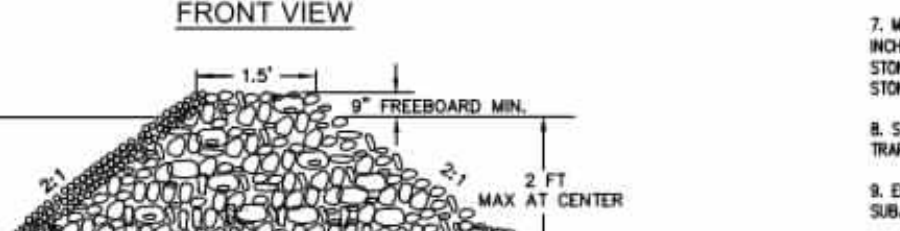
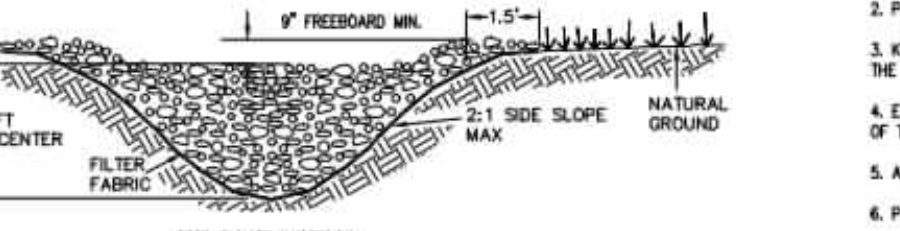
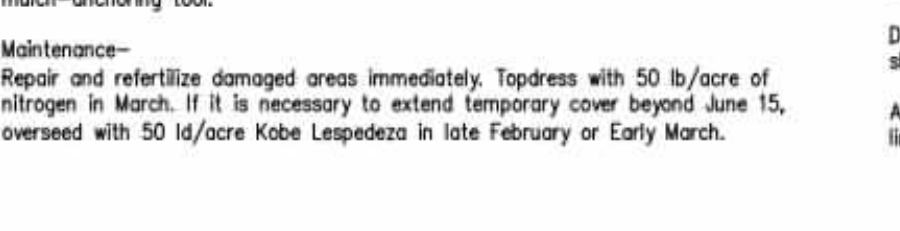
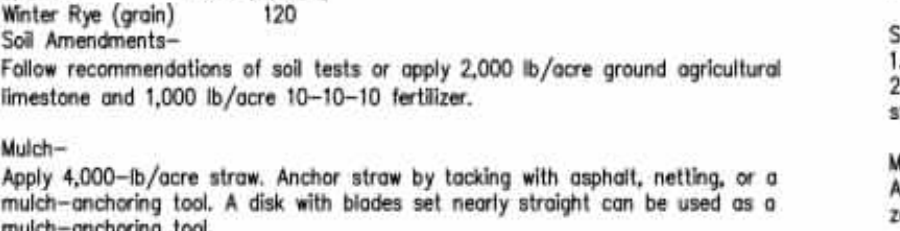
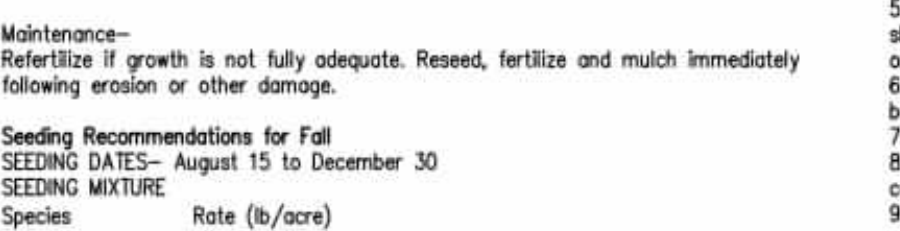
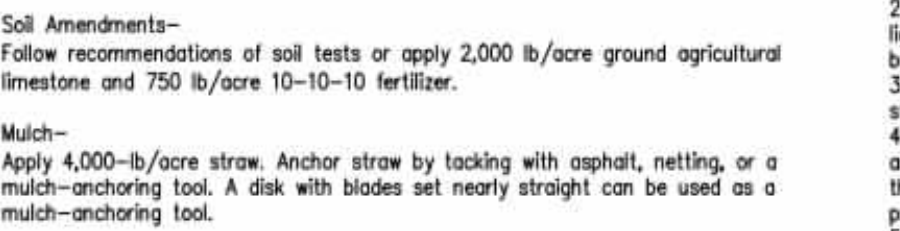
TEMPORARY SEEDING

- The purpose of temporary seeding is to temporarily stabilize denuded areas that will not be brought to final grade or permanently seeded for a period of more than 14 calendar days, or 7 days in critical areas identified on the plan.
- TEMPORARY SEEDING SPECIFICATIONS**
Seeding Recommendations for Late Winter & Early Spring
SEEDING DATES—December 1 to April 15
SEEDING MIXTURE
Species Rate (lb/acre)
Wheat Rye (grain) 120 (Annual Ryegrass shall not be used)
Annual Lespedeza 50
(Kobe)
*Omit Annual Lespedeza when duration of temporary cover is not to extend beyond June



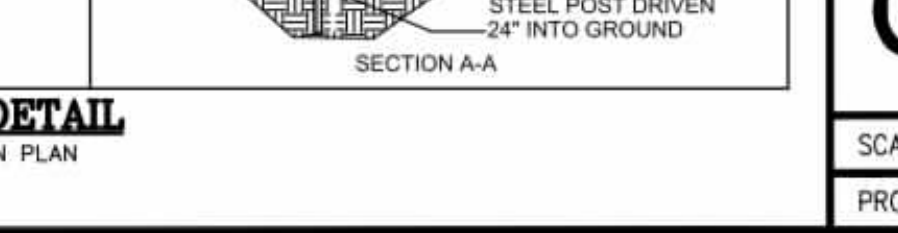
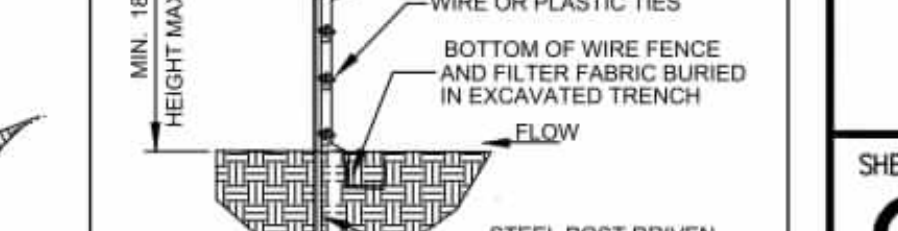
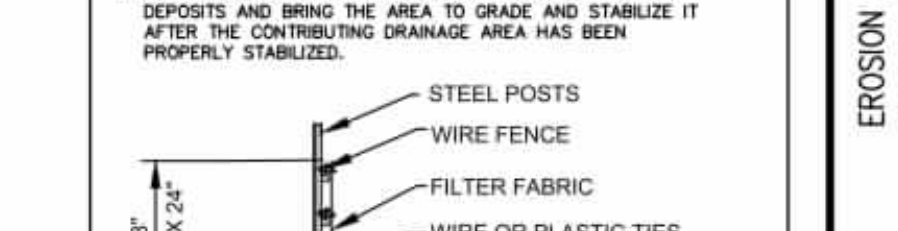
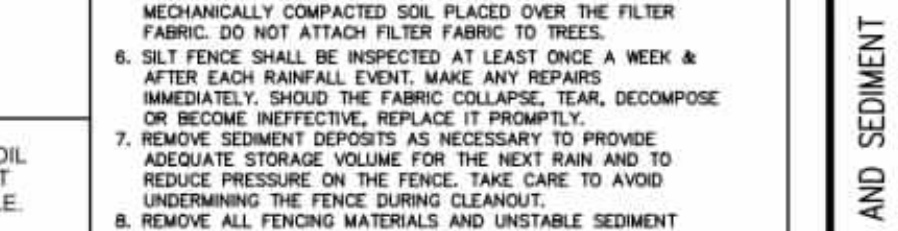
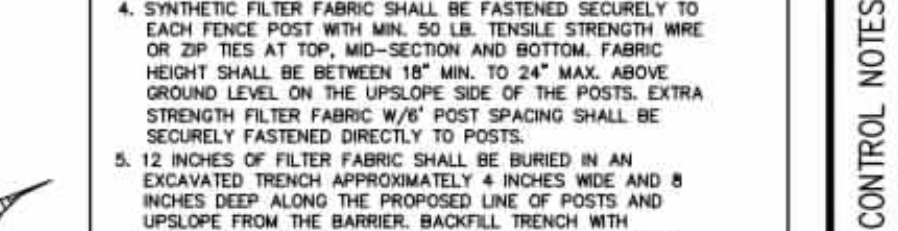
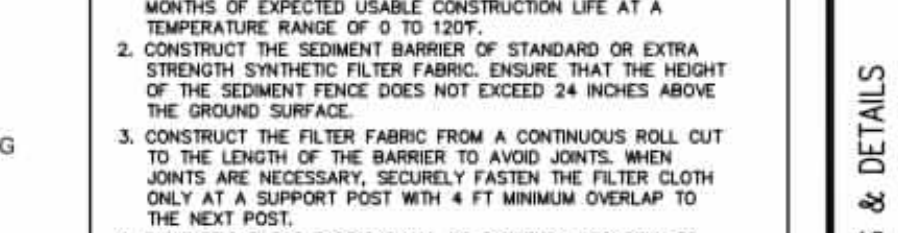
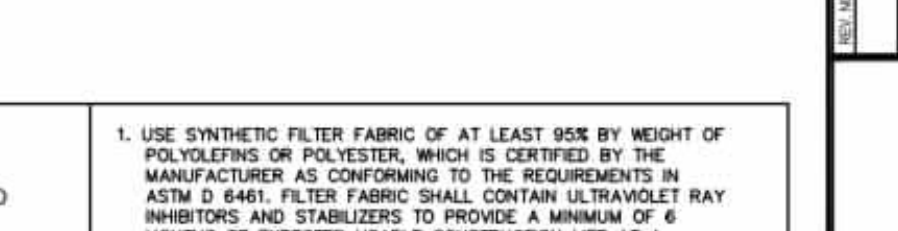
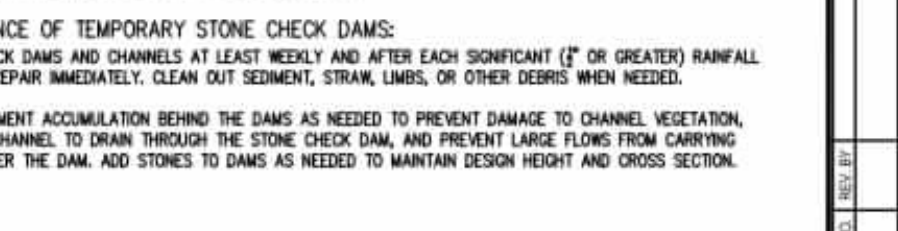
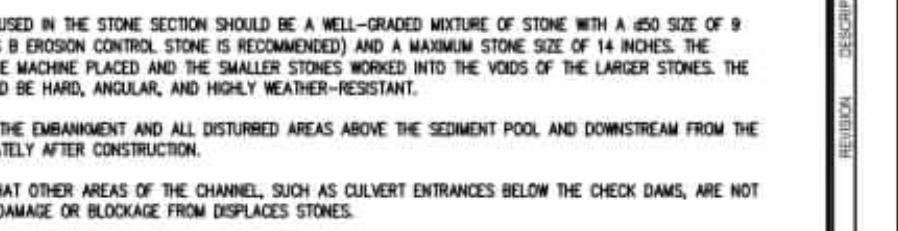
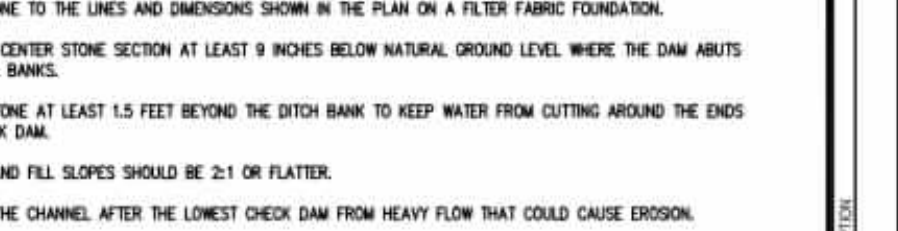
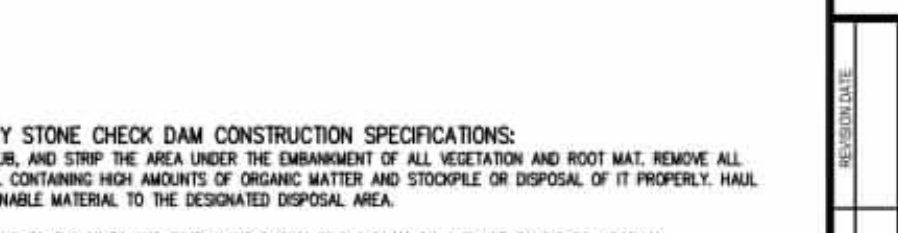
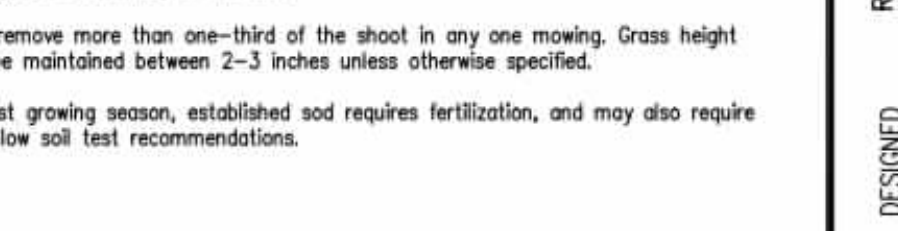
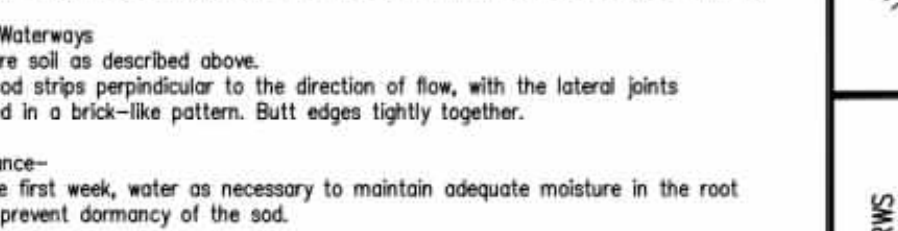
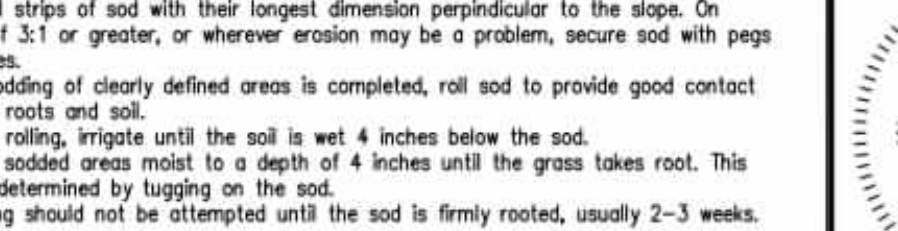
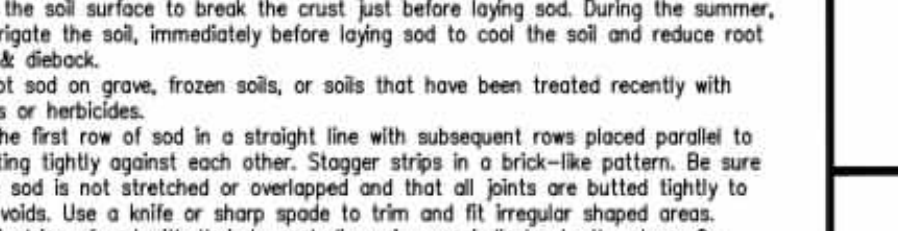
TEMPORARY STONE CHECK DAM CONSTRUCTION SPECIFICATIONS

- CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING ORGANIC MATTER AND STOCKPILE OR DISPOSAL OF IT PROPERLY. HAIL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA.
- PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.
- KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.
- EXTEND STONE AT LEAST 15 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM OUTFLOW AROUND THE ENDS OF THE CHECK DAM.
- ALL OUT AND FILL SLOPES SHOULD BE 2:1 OR FLATTER.
- PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.
- MATERIAL USED IN THE STONE SECTION SHOULD BE A WELL-GRADED MIXTURE OF STONE WITH A 40 SIZE OF 9 INCHES OR LESS. STONE SHOULD BE WASHED AND CLEAN. STONE SHOULD BE PLACED AND THE SMALLER STONES WORKED INTO THE JOINTS OF THE LARGER STONES. THE STONE SHOULD BE HARD, ANGULAR, AND HIGHLY WEATHER-RESISTANT.
- STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL, AND DOWNSTREAM FROM THE DAM IMMEDIATELY AFTER CONSTRUCTION.
- INSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS GULCH ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACES STONES.



TEMPORARY STONE CHECK DAM CONSTRUCTION SPECIFICATIONS

- USE SYNTHETIC FILTER FABRIC OF AT LEAST 80% BY WEIGHT OF POLYESTER OR POLYPROPYLENE WHICH IS CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6841. FILTER FABRIC SHALL CONTAIN ULTRAHIGH RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE FROM 0 TO 120°F.
- CONSTRUCT THE SEDIMENT BARRIER OF STANDARD OR EXTRA STRENGTH SYNTHETIC FILTER FABRIC. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE.
- CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL OUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FT MINIMUM OVERLAP TO THE NEXT POST.
- SYNTHETIC FILTER FABRIC SHALL BE FASTENED SECURELY TO EACH POST WITH MIN. 50 LB. TENSILE STRENGTH WIRE OR ZIP TIES AT TOP, MID-SECTION AND BOTTOM. FABRIC HEIGHT SHALL BE BETWEEN 18" MIN. TO 24" MAX. ABOVE GROUND LEVEL ON THE UPSLOPE SIDE OF THE POSTS. EXTRA STRENGTH FILTER FABRIC W/16" POST SPACING SHALL BE MECHANICALLY FASTENED DIRECTLY TO POSTS.
- 12 INCHES OF FILTER FABRIC SHALL BE BURIED IN AN EXCAVATED TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER. BACKFILL TRENCH WITH MECHANICALLY COMPACTED SOIL PLACED OVER THE FILTER FABRIC. DO NOT ATTACH FILTER FABRIC TO TREES.
- SILT FENCE SHALL BE INSPECTED AT LEAST ONCE A WEEK & AFTER EACH RAINFALL EVENT. MAKE ANY REPAIRS IMMEDIATELY. SHOULD THE FABRIC COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
- REMOVE SEDIMENT ACCUMULATION AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
- REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



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DESIGNED: RWS
DRAWN: LDJ
CHECKED: DMW
APPROVED: CSA
DATE: 03/04/25

EROSION AND SEDIMENT CONTROL NOTES & DETAILS
OF
WILSON RIDGE
CURRITUCK COUNTY NORTH CAROLINA
MOYOCK TOWNSHIP

SHEET
C-504
12 of 14 Sheets
SCALE: AS SHOWN
PROJ. NO.: 24100

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1
		-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Rolled erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

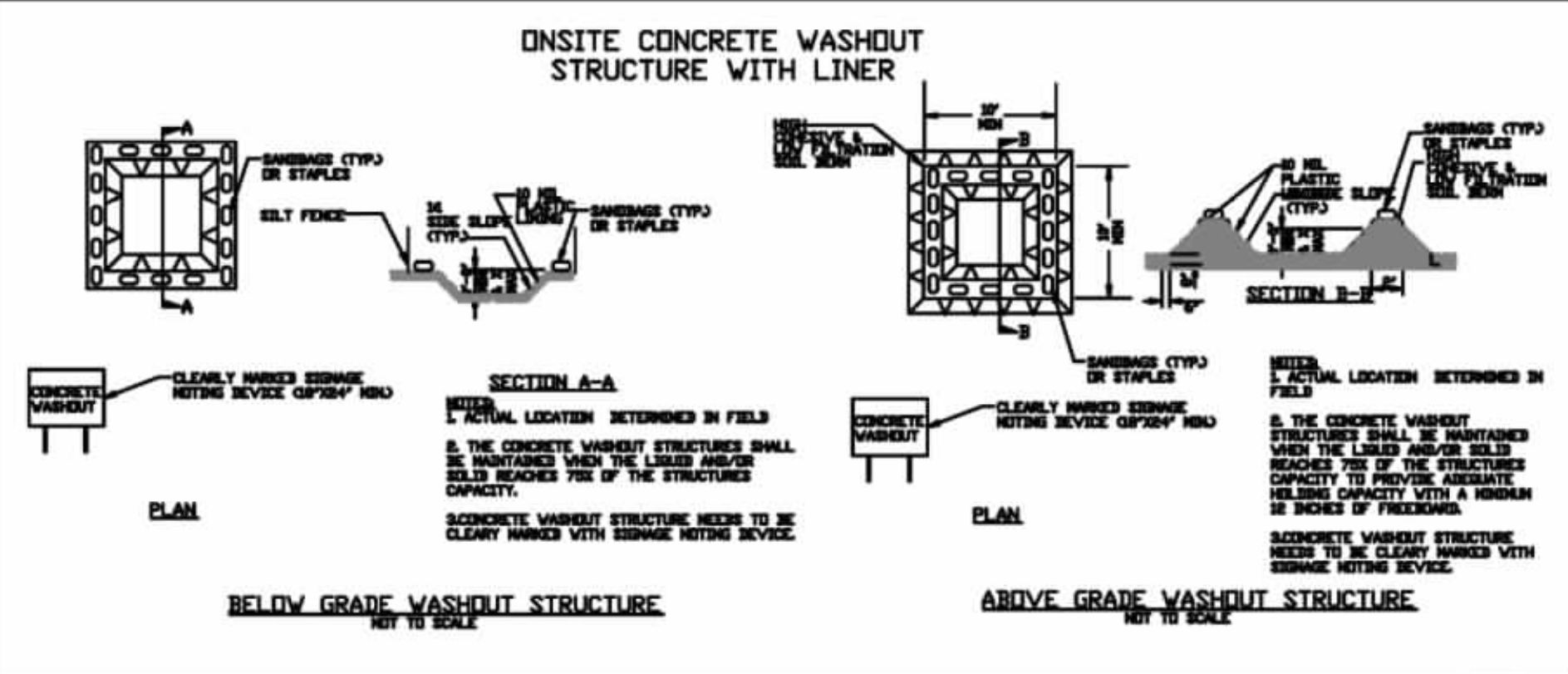
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.



RWS	LDJ	DMW	CSA	03/04/25
DESIGNED	DRAWN	CHECKED	APPROVED	DATE

REVISION	DATE	BY	DESCRIPTION

WILSON RIDGE OF
CURRITUCK COUNTY NORTH CAROLINA

MOYOCK TOWNSHIP

I:\Projects\24100 Wilson Ridge Station\Substation\Drawings & Exhibits\NCEM\24100 Cover & Detailing [C-505] - Monday March 10, 2025, 2:44pm

**PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDCs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

**PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This General Permit as well as the Certificate of Coverage, after it is received.
- (b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

**PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
- (b) Oil spills if:
 - They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
- (c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- (d) Anticipated bypasses and unanticipated bypasses.
- (e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> • Within 24 hours, an oral or electronic notification. • Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> • Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> • A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> • Within 24 hours, an oral or electronic notification. • Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	<ul style="list-style-type: none"> • Within 24 hours, an oral or electronic notification. • Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6)]. • Division staff may waive the requirement for a written report on a case-by-case basis.

**PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT**

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- (a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
- (b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
- (c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
- (d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
- (e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- (f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.



NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19



ENGINEERS | SCIENTISTS | SURVEYORS
5032 ROUSE DRIVE, SUITE 200 | VIRGINIA BEACH, VA 23462 | 757.490.9264 | MSAONLINE.COM



RWS LDU DMW CSA
DESIGNED DRAWN CHECKED APPROVED
DATE 03/04/25

REVISIONS	DATE	DESCRIPTION

WILSON RIDGE
OF
CURRITUCK COUNTY NORTH CAROLINA

MOYOCK TOWNSHIP

SHEET
C-506
14 of 14 Sheets
SCALE: AS SHOWN
PROJ. NO.: 24100

JOSH STEIN
Governor

D. REID WILSON
Secretary

WILLIAM E. TOBY VINSON, JR.
Director



08-28-2025

LETTER OF APPROVAL

Wilson Ridge of Moyock
227 Caratoke Highway
Moyock, NC 27958

RE: Project Name: Wilson Ridge
Permit Number: CURRI-2026-0141
Acres Approved: 17
County: Currituck
City: Moyock
Address: Tulls Creek Rd
River Basin: Pasquotank
Stream Classification: C: Aquatic Life, Secondary Contact Recreation, Fresh water;
SW: Swamp Waters
Plan Type: New Plan (roads and infrastructure)

Dear Wilson Ridge of Moyock,

This office has received and reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The enclosed Certificate of Approval must be posted at the job site. This plan shall expire three (3) years following the date of approval, if no land disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0129.

As of April 1, 2019, all new construction activities are required to complete and submit an electronic Notice of Intent (eNOI) form requesting a COC under the NCG010000 Construction Stormwater General Permit. You must apply for coverage by submitting a "Construction Stormwater - NCG01 (Subject to the SPCA) in the [AccessDEQ Portal](#). Once your application is complete, you will receive an invoice for the \$127 annual permit fee and can submit payment through the AccessDEQ Portal. Once the fee is processed and the application approved, you will receive the COC via email. As the Financially Responsible Party shown on the FRO form submitted for this project, you MUST obtain the COC prior to commencement of any land disturbing activity. Please direct questions about the eNOI form to the [Stormwater Program staff](#) in the Raleigh central office. If the owner/operator of this project changes in the future, the new responsible party must obtain a new COC.



North Carolina Department of Environmental Quality
Division of Energy, Mineral and Land Resources
512 North Salisbury Street | 1612 Mail Service Center
Raleigh, North Carolina 27699-1612

Title 15A NCAC 4B .0118(a) and the NCG01 permit require that the following documentation be kept on file at the job site:

1. The approved E&SC plan as well as any approved deviation.
2. The NCG01 permit and the COC, once it is received.
3. Records of inspections made during the previous 12 months.

Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to ensure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statute 113A-51 through 66), this office may require revisions to the plan and implementation of the revisions to ensure compliance with the Act.

Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form and on the plan, which you provided. You are requested to file an amended form if there is any change in the information included on the form.

Your cooperation is appreciated.

Sincerely,

Robert Pullinger

Land Quality Section

General Comments

1. This permit allows for a land disturbance, as called for on the application plan, not to exceed **17.0 acres**. Exceeding that acreage will be a violation of this permit and would require a revised plan and additional application fee. Any addition in impervious surface, over that already noted on the approved plan, would also require a revised plan to verify the appropriateness of the erosion control measures and stormwater retention measures (NCGS 113A-54.1(b)).
2. Additional measures may be required - the applicant is responsible for the control of sediment on-site. If the approved erosion and sedimentation control measures prove insufficient, the applicant must take those additional steps necessary to stop sediment from leaving this site (NCGS 113A-57(3); 15A NCAC 4B .0115). Each sediment storage device must be inspected after each storm event (NCGS 113A54.1(e)). Maintenance and/or clean out is necessary anytime the device is at 50% capacity. All sediment storage measures will remain on site and functional until all grading and final landscaping of the project is complete (15A NCAC 04B .0113).
3. The applicant is responsible for obtaining any and all permits and approvals necessary for the development of this project prior to the commencement of this land disturbing activity. This could include our agency's Stormwater regulations and the Division of Water Resources' enforcement requirements within Section 401 of the Clean Water Act, the U.S. Army Corps of Engineers' jurisdiction of Section 404 of the Clean Water Act, the Division of Coastal Management's CAMA requirements, the Division of Solid Waste Management's landfill regulations, the Environmental Protection Agency and/or The U.S. Army Corps of Engineers jurisdiction of the Clean Water Act, local County or Municipalities' ordinances, or others that may be required. This approval cannot supersede any other permit or approval; however, in the case of a Cease-and-Desist Order from the Corps of Engineers, that Order would only apply to wetland areas. All highlands would still have to be in compliance with the N.C. Sedimentation Pollution Control Act.
4. If any area on site falls within the jurisdiction of Section 401 or 404 of the Clean Water Act, the applicant is responsible for compliance with the requirements of the Division of Water Resources (DWR), the Corps of Engineers and the Environmental Protection Agency (EPA) respectively. Any erosion control measures that fall within jurisdictional wetland areas must be approved by the aforementioned agencies prior to installation. The Land Quality Section must be notified of a relocation of the measures in question to the transition point between the wetlands and the uplands to assure that the migration of sediment will not occur. If that relocation presents a problem or contradicts any requirements of either DWR, the Corps, or the EPA, it is the responsibility of the applicant to inform the Land Quality Section regional office so that an adequate contingency plan can be made to assure sufficient erosion control remains on site. Failure to do so will be considered a violation of this approval (NCGS 113A-54.1(b)).
5. Any off-site borrow and waste required for this project must come from a site with an approved erosion control plan, a site regulated under the Mining Act of 1971, or a landfill regulated by the Division of Solid Waste Management. Trash/debris from demolition activities or generated by any activities on site must be disposed of at a facility regulated by the Division of Solid Waste Management or per Division of Solid Waste Management or Division of Water Resources rules and regulations. [15A NCAC 4B .0110]

6. If sediment traps and basins are shown on the plan as the primary sedimentation and erosion control devices on this project, it is necessary that the traps and basins and their collection systems be installed before any other grading takes place on site, and that every structure that receives more than one acre of drainage is built so that each dewater only from the surface (NCG010000). If that proves to be impractical, a revised plan must be submitted and approved that addresses erosion and sediment control needs during the interim period until the traps and basins are fully functioning (113A-54.1(b)).
7. Any and all existing ditches on this project site are assumed to be left undisturbed by the proposed development unless otherwise noted. The removal of vegetation within any existing ditch or channel is prohibited unless the ditch or channel is to be regraded with side slopes of 2 horizontal to 1 vertical or less steep (15A NCAC 04B .0124 (d)). Bank slopes may be mowed but stripping of vegetation is considered new earth work and is subject to the same erosion control requirements as new ditches (NCGS-113A52(6)).
8. As a condition of the NPDES General Stormwater Permit (NCG010000), the financially responsible party shall comply with the NCG01 Ground Stabilization and Materials Handling requirements that became effective April 1, 2019. The NCG01 Ground Stabilization and Materials Handling standard detail can be printed from the deq.nc.gov/NCG01website.
9. As a condition of the NPDES General Stormwater Permit (NCG010000), the financially responsible party shall comply with the NCG01 Self-Inspection, Recordkeeping and Reporting requirements that became effective April 1, 2019. The NCG01 Self-Inspection, Recordkeeping and Reporting standard details can be printed from the [deq.nc.gov/NCG01 website](http://deq.nc.gov/NCG01website).
10. As a part of routine monitoring of the approved land-disturbing activity, the financially responsible party shall assure inspections of the area covered by the approved plan after each phase of the plan has been completed and after establishment of temporary ground cover in accordance with North Carolina General Statute 113A-54.1(e).
11. The NCG01 has a \$127 yearly fee and our office often receives closure inspection requests days prior to yearly NCG01 fee payment due dates. Be advised the project requires a closure inspection report by DEMLR prior to filing the Notice of Termination (NOT) to terminate NCG01 coverage. The closure inspection should not be requested until after the site has achieved full vegetative stabilization and measures have been removed. The removal of temporary ESC measures, including basins, requires prior approval. Often, a full growing season is necessary between initial seeding/mulching and removal of measures. Please plan your construction accordingly to avoid contacting our office prematurely for a closure inspection. Also be advised that you may be asked for representative site pictures prior to a close-out inspection.

DEPARTMENT OF TRANSPORTATION

THREE PARTY RIGHT OF WAY
ENCROACHMENT AGREEMENT ON
PRIMARY AND SECONDARY SYSTEM

-AND-

Wilson Ridge of Moyock, LLC

Moyock, NC

-AND-

Cumtuck County

Moyock, NC

THIS AGREEMENT, made and entered into this the 21 day of May, 2025, by and between the Department of Transportation, party of the first part; and Wilson Ridge of Moyock, LLC party of the second part; and Cumtuck County party of the third part,

WITNESSETH

THAT WHEREAS, the party of the second part desires to encroach on the right of way of the public road designated as Route(s) SR 1222 and, located .36 miles from the intersection of SR 1222 and SR 1545

with the construction and/or erection of: waterline

WHEREAS, it is to the material advantage of the party of the second part to effect this encroachment, and the party of the first part in the exercise of authority conferred upon it by statute, is willing to permit the encroachment within the limits of the right of way as indicated, subject to the conditions of this agreement;

NOW, THEREFORE, IT IS AGREED that the party of the first part hereby grants to the party of the second part the right and privilege to make this encroachment as shown on attached plan sheet(s), specifications and special provisions which are made a part hereof upon the following conditions, to wit:

That the installation, operation, and maintenance of the above described facility will be accomplished in accordance with the party of the first part's latest UTILITIES ACCOMMODATIONS MANUAL, and such revisions and amendments thereto as may be in effect at the date of this agreement. Information as to these policies and procedures may be obtained from the Division Engineer or State Utilities Manager of the party of the first part.

That the said party of the second part binds and obligates himself to install and maintain the encroaching facility in such safe and proper condition that it will not interfere with or endanger travel upon said highway, nor obstruct nor interfere with the proper maintenance thereof, to reimburse the party of the first part for the cost incurred for any repairs or maintenance to its roadways and structures necessary due to installation and existence of the facilities of the party of the second part, and if at any time the party of the first part shall require the removal of or changes in the location of the said facilities, that the said party of the second part binds himself, his successors and assigns, to promptly remove or alter the said facilities, in order to conform to the said requirement, without any cost to the party of the first part.

That the party of the second part agrees to provide during construction and any subsequent maintenance proper signs, signal lights, flagmen and other warning devices for the protection of traffic in conformance with the latest Manual on Uniform Traffic Control Devices for Streets and Highways and Amendments or Supplements thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first.

That the party of the second part hereby agrees to indemnify and save harmless the party of the first part from all damages and claims for damage that may arise by reason of the installation and maintenance of this encroachment.

That the party of the second part agrees to restore all areas disturbed during installation and maintenance to the satisfaction of the Division Engineer of the party of the first part. The party of the second part agrees to exercise every reasonable precaution during construction and maintenance to prevent eroding of soil; siltling or pollution of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces or other property; or pollution of the air. There shall be compliance with applicable rules and regulations of the North Carolina Division of Environmental Management, North Carolina Sedimentation Control Commission, and with ordinances and regulations of various counties, municipalities and other official agencies relating to pollution prevention and control. When any installation or maintenance operation disturbs the ground surface and existing ground cover, the party of the second part agrees to remove and replace the sod or otherwise reestablish the grass cover to meet the satisfaction of the Division Engineer of the party of the first part.

That the party of the second part agrees to assume the actual cost of any inspection of the work considered to be necessary by the Division Engineer of the party of the first part.

That the party of the second part agrees to have available at the construction site, at all times during construction, a copy of this agreement showing evidence of approval by the party of the first part. The party of the first part reserves the right to stop all work unless evidence of approval can be shown.

Provided the work contained in this agreement is being performed on a completed highway open to traffic; the party of the second part agrees to give written notice to the Division Engineer of the party of the first part when all work contained herein has been completed. Unless specifically requested by the party of the first part, written notice of completion of work on highway projects under construction will not be required.

That in the case of noncompliance with the terms of this agreement by the party of the second part, the party of the first part reserves the right to stop all work until the facility has been brought into compliance or removed from the right of way at no cost to the party of the first part.

That it is agreed by both parties that this agreement shall become void if actual construction of the work contemplated herein is not begun within one (1) year from the date of authorization by the party of the first part unless written waiver is secured by the party of the second part from the party of the first part.

During the performance of this contract, the second party, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor"), agrees as follows:

- a. **Compliance with Regulations:** The contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U. S. Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- b. **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- c. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- d. **Information and Reports:** The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
- e. **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to,
 - (1) withholding of payments to the contractor under the contract until the contractor complies, and/or
 - (2) cancellation, termination or suspension of the contract, in whole or in part.
- f. **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs "a" through "f" in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Department of Transportation to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

That when title to the subject that constitutes the aforesaid encroachment passes from the party of the second part and vests in the party of the third part, the party of the third part agrees to assume all responsibilities and rights and to perform all obligations as agreed to herein by the party of the second part.

R/W (166) : Party of the Second Part certifies that this agreement is true and accurate copy of the form R/W (166) incorporating all revisions to date.

IN WITNESS WHEREOF, each of the parties to this agreement has caused the same to be executed the day and year first above written.

DEPARTMENT OF TRANSPORTATION

BY: _____
DIVISION ENGINEER

WITNESS:

Holly Hartman
Holly Hartman
5.22.2025

Justin Old
[Signature]
Second Party

WITNESS:

Jessica Timmons
Currituck County, NC
153 Courthouse Rd
Currituck, NC 27929
[Signature]

Currituck County
Robert L G
County Manager
7/21/2025
Third Party

JOSH STEIN

Governor

D. REID WILSON

Secretary

WILLIAM E. TOBY VINSON, JR

Director



NORTH CAROLINA
Environmental Quality

July 22, 2025

Wilson Ridge of Moyock, LLC
Attn: Justin M. Old – Registered Agent
227 Caratoke Hwy
Moyock, NC 27958

**Subject: State Stormwater Management Permit No. SW7250608
Wilson Ridge
Low Density Subdivision Project
Currituck County**

Dear Justin Old:

The Washington Regional Office received a complete State Stormwater Management Permit Application for the subject project on June 30, 2025. Staff review of the plans and specifications has determined that the project, as proposed, complies with the Stormwater Regulations set forth in 15A NCAC 2H.1000 amended on January 1, 2017 (2017 Rules). We are hereby forwarding Permit No. SW7250608 dated July 22, 2025, for the construction of the built-upon areas (BUA) and vegetated conveyances associated with the subject project.

This permit shall be effective from the date of issuance until rescinded and the project shall be subject to the conditions and limitations as specified therein and does not supersede any other agency permit that may be required. Failure to comply with these requirements will result in future compliance problems. Please note that this permit is not transferable except after notice to and approval by the Division.

This cover letter, attachments, and all documents on file with DEMLR shall be considered part of this permit and is herein incorporated by reference.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing by filing a written petition with the Office of Administrative Hearings (OAH). The written petition must conform to Chapter 150B of the North Carolina General Statutes and must be filed with the OAH within thirty (30) days of receipt of this permit. You should contact the OAH with all questions regarding the filing fee (if a filing fee is required) and/or the details of the filing process at 6714 Mail Service Center, Raleigh, NC 27699-6714, or via telephone at 919-431-3000, or visit their website at www.NCOAH.com. Unless such demands are made this permit shall be final and binding.

If you have any questions concerning this permit, please contact Denis Hyska in the Washington Regional Office, at (252) 948-3973 or denis.hyska@deq.nc.gov.

Sincerely,


Denis Hyska, CAPM
Division of Energy, Mineral and Land Resources

Enclosures: Attachment A – Max Allowable BUA per Lot
Attachment B – Designer's Certification Form
Application Documents

cc: Ryan Shrader, PE – MSA. (ryan.shrader@msaonline.com)
Currituck County – Jennie Turner (jennie.turner@currituckcountync.gov)
Washington Regional Office



North Carolina Department of Environmental Quality | Division of Energy, Mineral and Land Resources
Washington Regional Office | 943 Washington Square Mall | Washington, North Carolina 27889
252.946.6481

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENERGY, MINERAL AND LAND RESOURCES

STATE STORMWATER MANAGEMENT PERMIT

LOW DENSITY SUBDIVISION DEVELOPMENT

In compliance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations promulgated and adopted by the North Carolina Environmental Management Commission, including 15A NCAC 02H.1000 amended on January 1, 2017 (2017 Rules), the "stormwater rules"),

PERMISSION IS HEREBY GRANTED TO

Wilson Ridge of Moyock, LLC

Wilson Ridge

South of intersection of Panther Landing Rd and Tulls Creek Rd

Moyock, Currituck County

FOR THE

construction, management, operation and maintenance of built-upon area (BUA) for a 24% low density subdivision project (the "low density area") discharging to Class C, Cw waters as outlined in the application, approved stormwater management plans, supplements, calculations, operation and maintenance agreement, recorded documents, specifications, and other supporting data (the "approved plans and specifications") as attached and/or on file with and approved by the Division of Energy, Mineral and Land Resources (the "Division" or "DEMLR"). The project shall be constructed, operated and maintained in accordance with these approved plans and specifications. The approved plans and specifications are incorporated by reference and are enforceable parts of this permit.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the following specified conditions and limitations. The permit issued shall continue in force and effect until the permittee files a request with the Division for a permit modification, transfer, or rescission; however, these actions do not stay any condition. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit for cause as allowed by the laws, rules, and regulations contained in 15A NCAC 2H.1000 and NCGS 143-215.1 et.al.

1. BUA REQUIREMENTS. The maximum amount of BUA allowed for the entire project is 199,041 square feet. The BUA requirements and allocations for this project are as follows:
 - a. LOW DENSITY AREA BUA LIMITS. The low-density area, in the approved plans and specifications, must not exceed 24% per the requirements of the stormwater rules. Within this low-density area, this permit approves a percent BUA of 16.52% and the construction of a total of 104,579 square feet of BUA. This permit does not provide any allocation of BUA for future development within this low-density area.
 - b. BUA FOR INDIVIDUAL LOTS. Each of the ten (10) lots are limited to a maximum of BUA, as indicated in the approved plans and specifications. **The maximum BUA assigned to each lot via this permit and the recorded deed restrictions and protective covenants may not be increased or decreased by either the individual lot owner or the permittee unless and until the permittee notifies the Division and obtains written approval from the Division.**
2. PERVIOUS AREA IMPROVEMENTS. At this time, none of the pervious area improvements listed in G.S. 143-214.7(b2) or the Stormwater Design Manual have been proposed for this project. Pervious area improvements will be allowed in this project if documentation is provided demonstrating those improvements meet the requirements of the stormwater rule.
3. LOW DENSITY AREA REQUIREMENTS. The low-density area requirements for this project are as follows:
 - a. LOW DENSITY AND CONVEYANCE DESIGN. The low-density area is permitted based on the design criteria presented in the sealed, signed and dated supplement and as shown in the approved plans and specifications. This low-density area and conveyances must be provided and maintained at the design condition.
 - b. PIPING. Other than the piping shown on the approved plans, only minimal amounts of piping under driveways and roads is allowed within the low-density area when it cannot be avoided. No additional piping is allowed.
 - c. DISPERSED FLOW. The low-density area has maximized dispersed flow of stormwater runoff through vegetated areas and minimized the channelization of flow.
 - d. VEGETATED CONVEYANCES. Stormwater runoff that could not be released as dispersed flow may be transported by vegetated conveyances with minimum side slopes of 3:1 (H:V) designed to not erode during the peak flow from the 10-year storm event as defined in the stormwater rules and approved by the Division
4. NON-ENFORCEABLE SCMS. The two wet ponds shown on the plans are **not** required by the Division and have not been demonstrated to meet the Minimum Design Criteria and therefore are not considered a part of the approved stormwater treatment system. These additional measures are incorporated only by reference and are not enforceable parts of the permit.

5. **VEGETATED SETBACKS.** A 50-foot wide vegetative setback must be provided and maintained in grass or other vegetation adjacent to all surface waters as shown on the approved plans. The setback is measured horizontally from the normal pool elevation of impounded structures, from the top of bank of each side of streams or rivers, and from the mean high waterline of tidal waters, perpendicular to the shoreline.
 - a. **RELEASE OF STORMWATER NOT TREATED IN A STORMWATER CONTROL MEASURE (SCM).** Stormwater that is not treated in an SCM, such as in the low-density area (including roof drains), must be released at the edge of the vegetated setback and allowed to flow through the setback as dispersed flow.

6. **RECORDED DOCUMENT REQUIREMENTS.** The stormwater rules require the following documents to be recorded with the Office of the Register of Deeds prior to the sale of individual lots or groups of lots:
 - a. **ACCESS AND/OR EASEMENTS.** The entire stormwater conveyance system and maintenance accesses must be located in public rights-of-way, dedicated common areas that extend to the nearest public right-of-way, and/or permanent recorded easements that extend to the nearest public right-of-way for the purpose of inspection, operation, maintenance, and repair.
 - b. **OPERATION AND MAINTENANCE AGREEMENT.** The operation and maintenance agreement must be recorded with the Office of the Register of Deeds.
 - c. **FINAL PLATS.** The final recorded plats must reference the operation and maintenance agreement and must also show all public rights-of-way, dedicated common areas, and/or permanent drainage easements, in accordance with the approved plans.
 - d. **DEED RESTRICTIONS AND PROTECTIVE COVENANTS.** Recorded deed restrictions and protective covenants must include, at a minimum, the following statements related to stormwater management:
 - i. The following covenants are intended to ensure ongoing compliance with State Stormwater Management Permit Number SW7240606, as issued by the Division of Energy, Mineral and Land Resources (the "Division") under 15A NCAC 02H.1000, effective January 1, 2017.
 - ii. The State of North Carolina is made a beneficiary of these covenants to the extent necessary to maintain compliance with the Stormwater Management Permit.
 - iii. These covenants are to run with the land and be binding on all persons and parties claiming under them.
 - iv. The covenants pertaining to stormwater may not be altered or rescinded without the express written consent of the Division.
 - v. Alteration of the drainage as shown on the approved plans may not take place without the concurrence of the Division.
 - vi. The maximum built-upon area (BUA) per lot is **15,000** square feet. This allotted amount includes any BUA constructed within the lot property boundaries, and that portion of the right-of-way between the front lot line and the edge of the pavement not shown on the approved plans. BUA has the same meaning as G.S. 143-214.7, as amended.
 - vii. The maximum allowable BUA shall not be exceeded on any lot until the permit is modified to ensure compliance with the stormwater rules, permit, and the approved plans and specifications.
 - viii. Filling in, piping or altering any vegetated conveyances (ditches, swales, etc.) associated with the development, except for average driveway crossings, is prohibited by any persons.

- ix. A 50-foot wide vegetative setback must be provided and maintained adjacent to all surface waters in accordance with 15A NCAC 02H.1003(4) and the approved plans.
 - x. All roof drains shall be released no closer than at the edge of the 50-foot wide vegetated setback and allowed to flow through the setback as dispersed flow. At no time shall stormwater runoff be piped into or through the setback.
 - xi. Any individual or entity found to be in noncompliance with the provisions of a stormwater management permit or the requirements of the stormwater rules is subject to enforcement procedures as set forth in NCGS 143, Article 21.
- e. DEEDS FOR INDIVIDUAL LOTS. The permittee shall record deed restrictions and protective covenants prior to the issuance of a certificate of occupancy to ensure the permit conditions and the approved plans and specifications are maintained in perpetuity.
7. CONSTRUCTION. During construction, erosion shall be kept to a minimum and any eroded areas of the on-site stormwater system will be repaired immediately.
- a. PROJECT CONSTRUCTION, OPERATION AND MAINTNEANCE. During construction, all operation and maintenance for the project and stormwater system shall follow the Erosion Control Plan requirements until the Sediment-Erosion Control devices are no longer needed.
 - b. FINAL GRADING. The vegetated areas and vegetated conveyances shall be entirely constructed and vegetated. Once the final grading is completed and the site is stabilized, the permittee shall provide and perform the operation and maintenance as outlined in the applicable section below.
8. MODIFICATIONS. No person or entity, including the permittee, shall alter any component shown in the approved plans and specifications, except for minimum driveway crossings. Prior to the construction of any modification to the approved plans, the permittee shall submit to the Director, and shall have received approval for modified plans, specifications, and calculations including, but not limited to, those listed below. For changes to the project that impact the certifications, a new or updated certification(s), as applicable, will be required and a copy must be submitted to the appropriate DEQ regional office upon completion of the modification.
- a. Any modification to the approved plans and specifications, regardless of size including the BUA, details, etc.
 - b. Redesign or addition to the approved amount of BUA.

- c. Further development, subdivision, acquisition, lease or sale of any, all or part of the project and/or property area as reported in the approved plans and specifications.
 - d. The construction of any permeable pavement, #57 stone area, public trails, or landscaping material within the common areas to be considered a permeable surface that were not included in the approved plans and specifications.
 - e. Altering, modifying, removing, relocating, redirecting, regarding, or resizing of any component of the approved stormwater collection system and/or vegetative conveyance shown on the approved plan, except for minimum driveway crossings within the low density area.
 - f. The construction of any allocated future BUA.
 - g. Adding the option to use permeable pavement or #57 stone within the lots as a permeable surface. The request may require a proposed amendment to the deed restrictions and protective covenants for the subdivision to be submitted and recorded.
 - h. Other modifications as determined by the Director.
9. DESIGNER'S CERTIFICATION. Upon completion of the project, the permittee shall determine if the project is in compliance with the approved plans and take the necessary following actions:
- a. If the permittee determines that the project is in compliance with the approved plans, then within 45 days of completion, the permittee shall submit to the Division one hard copy and one electronic copy of the following:
 - i. The completed and signed Designer's Certification provided in Attachment A noting any deviations from the approved plans and specifications. Deviations may require approval from the Division.
 - ii. A copy of the recorded operation and maintenance agreement.
 - iii. Unless already provided, a copy of the recorded deed restrictions and protective covenants; and
 - iv. A copy of the recorded plat delineating the public rights-of-way, dedicated common areas and/or permanent recorded easements, when applicable.
 - b. If the permittee determines that the project is not in compliance with the approved plans, the permittee shall submit an application to modify the permit within 30 days of completion of the project or provide a plan of action, with a timeline, to bring the site into compliance.

10. OPERATION AND MAINTENANCE. The permittee shall provide and perform the operation and maintenance necessary, as listed in the signed operation and maintenance agreement to assure that all components of the permitted on-site stormwater system are maintained at the approved design condition. The approved operation and maintenance agreement must be followed in its entirety and maintenance must occur at the scheduled intervals.
 - a. CORRECTIVE ACTIONS REQUIRED. In the event that the low-density area fails to meet the requirements of low density, the permittee shall take immediate corrective actions. This includes actions required by the Division and the stormwater rules such as the construction of additional or replacement on-site stormwater systems. These additional or replacement measures shall receive a permit from the Division prior to construction.
 - b. MAINTENANCE RECORDS. Records of maintenance activities must be kept and made available upon request to authorized personnel of the Division. The records will indicate the date, activity, name of person performing the work and what actions were taken.
11. CURRENT PERMITTEE NAME OR ADDRESS CHANGES. The permittee shall submit a completed Permit Information Update Application Form to the Division within 30 days to making any one or more of the following changes:
 - a. A name change of the current permittee;
 - b. A name change of the project;
 - c. A mailing address change of the permittee.
12. TRANSFER. This permit is not transferable to any person or entity except after notice to and approval by the Director. Neither the sale of the project and/or property, in whole or in part, nor the conveyance of common area to a third party constitutes an approved transfer of the permit.
 - a. TRANSFER REQUEST. The transfer request must include the appropriate application, documentation and the processing fee as outlined in 15A NCAC 02H.1045(2) and must be submitted upon occurrence of any one or more of the following events:
 - i. The sale or conveyance of the project and/or property area in whole or in part, except in the case of an individual residential lot sale that is made subject to the recorded deed restrictions and protective covenants;
 - ii. The assignment of declarant rights to another individual or entity;
 - iii. The sale or conveyance of the common areas to a Homeowner's or Property Owner's Association, subject to the requirements of NCGS 143-214.7(c2);
 - iv. Dissolution of the partnership, corporate, or LLC entity, subject to NCGS 55-14-05 or NCGS 57D-6-07 and 08;
 - v. Bankruptcy.
 - vi. Foreclosure, subject to the requirements of Session Law 2013-121;
 - b. TRANSFER INSPECTION. Prior to transfer of the permit, a file review and site inspection will be conducted by Division personnel to ensure the permit conditions have been met and that the project and the on-site stormwater system complies with the permit conditions. Records of maintenance activities performed to date may be requested. Projects not in compliance with the permit will not be transferred until all permit and/or general statute conditions are met.

13. COMPLIANCE. The permittee is responsible for complying with the terms and conditions of this permit and the approved plans and specifications until the Division approves the transfer request.
 - a. REVIEWING AND MONITORING EACH LOT FOR COMPLIANCE. The permittee is responsible for verifying that the proposed BUA on each individual lot, within each drainage area and for the entire project does not exceed the maximum amount allowed by this permit. The permittee shall review all individual lot plans for new construction and all subsequent modifications and additions for compliance. The plans reviewed must include all proposed BUA, grading, and driveway pipe placement. The permittee shall not approve any lot plans where the maximum allowed BUA limit has been exceeded or where modifications are proposed to the grading and/or to the stormwater collection system and/or to the vegetated conveyance unless and until a permit modification has been approved by the Division. The permittee shall review and routinely monitor the project and each lot to ensure continued compliance with the conditions of the permit, the approved plans and specifications, and the recorded deed restrictions and protective covenants. The permittee shall notify any lot owner that is found to be in noncompliance with the conditions of this permit in writing and shall require timely resolution.
 - b. ARCHITECTURAL REVIEW BOARD (ARB) OR COMMITTEE (ARC). The permittee may establish an ARB or ARC to conduct individual lot reviews. However, any approval given by the ARB or ARC on behalf of the permittee does not relieve the permittee of the responsibility to maintain compliance with the conditions of the permit and the approved plans and specifications.
 - c. APPROVED PLANS AND SPECIFICATIONS. A copy of this permit, approved plans, application, supplements, operation and maintenance agreement, all applicable recorded documents, and specifications shall be maintained on file by the permittee at all times.
 - d. MAINTENANCE ACCESS. SCMs, stormwater collection systems, and vegetated conveyances must be accessible for inspection, operation, maintenance and repair as shown on the approved plans.
 - e. DIVISION ACCESS. The permittee grants Division Staff permission to enter the property during normal business hours to inspect all components of the permitted project.
 - f. ENFORCEMENT. Any individual or entity found to be in noncompliance with the provisions of a stormwater management permit or the requirements of the stormwater rules is subject to enforcement procedures as set forth in NCGS 143 Article 21.
 - g. ANNUAL CERTIFICATION. The permittee shall electronically submit to the Division an annual certification completed by either the permittee or their designee confirming the projects conformance with permit conditions.
 - h. OBTAINING COMPLIANCE. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of modified plans and certification in writing to the Director that the changes have been made.

- i. OTHER PERMITS. The issuance of this permit does not preclude the permittee from obtaining and complying with any and all other permits or approvals that are required for this development to take place, as required by any statutes, rules, regulations, or ordinances, which are imposed by any other Local, State or Federal government agency having jurisdiction. Any activities undertaken at this site that cause a water quality violation or undertaken prior to receipt of the necessary permits or approvals to do so are considered violations of NCGS 143-215.1, and subject to enforcement procedures pursuant to NCGS 143-215.6.

The permit was issued this the 22nd day of July 2025.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



For Toby Vinson, Director
Division of Energy, Mineral and Land Resources
By Authority of the Environmental Management Commission

Permit Number SW7250608

Attachment A

Maximum Allowable BUA for Each Lot

LOT No.	LOT AREA (ft²)	MAX ALLOWABLE BUA (ft²)
1	40,000	10,000
2	40,000	10,000
3	40,000	10,000
4	40,000	10,000
5	40,000	10,000
6	40,000	10,000
7	40,000	10,000
8	40,000	10,000
9	40,000	10,000
10	40,000	10,000
11	40,000	10,000
12	40,000	10,000
13	40,000	10,000
Total	520,000	130,000

Attachment B

Certification Forms

The following blank Designer Certification forms are included and specific for this project:

- As-Built Permittee Certification
- As-Built Designer's Certification for Low Density Projects

A separate certification is required for each SCM. These blank certification forms may be copied and used, as needed, for each SCM and/or as a partial certification to address a section or phase of the project.

AS-BUILT PERMITTEE CERTIFICATION

I hereby state that I am the current permittee for the project named above, and I certify by my signature below, that the project meets the below listed Final Submittal Requirements found in NCAC 02H.1042(4) and the terms, conditions and provisions listed in the permit documents, plans and specifications on file with or provided to the Division.

- Check here if this is a partial certification. Section/phase/SCM #? _____
 Check here if this is part of a Fast Track As-built Package Submittal.

Printed Name _____ Signature _____

I, _____, a Notary Public in the State of _____

County of _____, do hereby certify that _____

personally appeared before me this _____ day of _____, 20 _____

and acknowledge the due execution of this as-built certification. (SEAL)

Witness my hand and official seal

 My commission expires _____

Permittee's Certification NCAC .1042(4)	Completed / Provided	N/A
A. DEED RESTRICTIONS / BUA RECORDS		
1. The deed restrictions and protective covenants have been recorded and contain the necessary language to ensure that the project is maintained consistent with the stormwater regulations and with the permit conditions.	Y or N	
2. A copy of the recorded deed restrictions and protective covenants has been provided to the Division.	Y or N	
3. Records which track the BUA on each lot are being kept. (See Note 1)	Y or N	
B. MAINTENANCE ACCESS		
1. The SCMs are accessible for inspection, maintenance and repair.	Y or N	
2. The access is a minimum of 10 feet wide.	Y or N	
3. The access extends to the nearest public right-of-way.	Y or N	
C. EASEMENTS		
1. The SCMs and the components of the runoff collection / conveyance system are located in recorded drainage easements.	Y or N	
2. A copy of the recorded plat(s) is provided.	Y or N	
D. SINGLE FAMILY RESIDENTIAL LOTS - Plats for residential lots that have an SCM include the following:	Y or N	
1. The specific location of the SCM on the lot.	Y or N	
2. A typical detail for the SCM.	Y or N	

3. A note that the SCM is required to meet stormwater regulations and that the lot owner is subject to enforcement action as set forth in NCGS 143 Article 21 if the SCM is removed, relocated or altered without prior approval.	Y or N	
E. OPERATION AND MAINTENANCE AGREEMENT	Y or N	
1. The O&M Agreement is referenced on the final recorded plat.	Y or N	
2. The O&M Agreement is recorded with the Register of Deeds and appears in the chain of title.	Y or N	
F. OPERATION AND MAINTENANCE PLAN - maintenance records are being kept in a known set location for each SCM and are available for review.	Y or N	
G. DESIGNER'S CERTIFICATION FORM - has been provided to the Division.	Y or N	

Note 1- Acceptable records include ARC approvals, as-built surveys, and county tax records.

Provide an explanation for every requirement that was not met, and for every "N/A" below. Attach additional sheets as needed.

AS-BUILT DESIGNER'S CERTIFICATION FOR LOW DENSITY PROJECTS

I hereby state that I am a licensed professional and I certify by my signature and seal below, that I have observed the construction of the project named above to the best of my abilities with all due care and diligence, and that the project meets all of the MDC found in 15A NCAC 02H.1003, in accordance with the permit documents, plans and specifications on file with or provided to the Division, except as noted on the "AS-BUILT" drawings, such that the intent of the stormwater rules and the general statutes has been preserved.

- Check here if this is a partial certification. Section or phase _____
- Check here if this is part of a Fast-Track As-Built Package Submittal per 15A NCAC 02H .1044(3).
- Check here if the Designer did not observe the construction but is certifying the project.
- Check here if pictures of the project are provided.

Printed Name _____ Signature _____

NC Registration Number _____ Date _____

SEAL:

Consultant's Mailing Address:

City: _____ State: _____ Zip: _____

Phone: (____) _____

Consultant's Email address:

- ① Circle N if the as-built value differs from the Plan/permit. If N is circled, provide an explanation on page 3.
 ② N/E = Not Evaluated (provide explanation on page 2). ③ N/A = Not Applicable to this project/plan.

Consultant's Certification (MDC 15A NCAC 02H .1003)			
Project Density and Built-Up Area	①As-built	②N/E	③N/A
1. The project has areas of high density based on natural drainage area boundaries, variations in land use or construction phasing.	Y or N		
2. The project's built-upon area does not exceed the maximum limit specified in the permit.	Y or N		
Dispersed Flow	①As-built	②N/E	③N/A
1. The project maximizes dispersed flow through vegetated areas and minimizes channelized flow.	Y or N		

Vegetated Conveyances	①As-built	②N/E	③N/A
1. Stormwater that is not released as dispersed flow is transported by vegetated conveyances.	Y or N		
2. The project has a minimal amount of non-vegetated conveyances to reduce erosion.	Y or N		
3. Other than minimal piping under driveways and roads, no piping has been added beyond what is shown on the approved plans.	Y or N		
4. Side slopes are no steeper than 3H:1V.	Y or N		
5. The conveyance does not erode in response to the peak flow from the 10-year storm.	Y or N		
Curb outlet systems (if applicable)	①As-built	②N/E	③N/A
1. The swale or vegetated area can carry the peak flow from the 10-year storm at a non-erosive velocity.	Y or N		
2. The longitudinal slope of the swale or vegetated areas does not exceed 5%.	Y or N		
3. The swale has a trapezoidal cross-section and a minimum bottom width of two feet.	Y or N		
4. The minimum length of the swale or vegetated area is 100 feet.	Y or N		
5. Side slopes are no steeper than 3H:1V.	Y or N		
6. The project utilizes treatment swales designed per Section .1061 in lieu of the curb outlet system requirements.	Y or N		
Vegetated Setbacks (if applicable)	①As-built	②N/E	③N/A
1. The width of the vegetated setback is at least 50'.	Y or N		
2. The width of the vegetated setback has been measured from the normal pool of impounded waters, the MHW line of tidal waters, or the top of bank of each side of rivers or streams.	Y or N		
3. The vegetated setback is maintained in grass or other vegetation.	Y or N		
4. BUA that meets the requirements of NCGS 143-214.7(b2)(2) is located in the setback.	Y or N		
5. BUA that does NOT meet the requirements of NCGS 143-214.7(b2)(2) located within the setback and is limited to: <ul style="list-style-type: none"> • Publicly-funded linear projects (road, greenway, or sidewalk) • Water dependent structures • Minimal footprint uses such as poles, signs, utility appurtenances, and security lights. 	Y or N		
6. The amount of BUA within the setback is minimized, and channeling of the runoff from the BUA has been avoided.	Y or N		

7. Stormwater is not discharged (via swale or pipe) through a vegetated setback. Stormwater is released at the edge of the setback and allowed to flow through the setback as dispersed flow.	Y or N		
Outlets	①As-built	②N/E	③N/A
1. Stormwater outlets do not cause erosion downslope of the discharge point during the peak flow from the 10-year storm.	Y or N		
Variations	①As-built	②N/E	③N/A
1. The project has variations from the MDC that were not previously approved. (Modification may be required.)	Y or N		
Deed restrictions (if applicable)	①As-built	②N/E	③N/A
1. Deed restrictions are recorded and ensure that the project and the BUA will be maintained in perpetuity consistent with the permit, approved plans, and specifications.	Y or N		
For Subdivisions Only (Residential or Commercial)	①As-built	②N/E	③N/A
1. The number of platted lots is consistent with the approved plans.	Y or N		
2. The project area is consistent with the approved plans.	Y or N		
3. The layout of the lots and streets is consistent with the approved plan.	Y or N		
4. The width / radius of streets, paved accesses, cul-de-sacs and sidewalk is consistent with the approved plan.	Y or N		
5. No piping, other than those minimum amounts needed under a driveway or under a road, has been added.	Y or N		
6. The lot grading, road grading, vegetated conveyances, piping, inverts, and elevations are consistent with the approved plans.	Y or N		

Provide an explanation for every requirement that was not met, and for every "N/A" below. Attach additional sheets as needed.