



COOK OUT 15 LAURA LANE, SUITE 300 THOMASVILLE, NORTH CAROLINA 27360 TELEPHONE: (336) 215-7025 FAX: (336) 474-1849

SITE ADDRESS: 1200 NORTH ARENDELL AVENUE ZEBULON, NORTH CAROLINA CSD PROJECT NUMBER: OUT-1502

TOWN OF ZEBULON PROJECT NUMBER: 856796

CONTACT INFORMATION WATER: CITY OF RALEIGH PUBLIC UTILITIES 222 W. HARGETT STREET RALEIGH, NC 27601 CONTACT: CESAR SANCHEZ PHONE: 919-996-2673 **EROSION & SEDIMENT CONTROL** WAKE COUNTY GOVERNMENT AND STORMWATER ENVIRONMENTAL SERVICE / WATER QUALITY DIVISION CONTACT: KARYN PAGEAU karyn.pageau@wake.gov PHONE: 919-796-8769 STORM DRAINAGE. WAKE COUNTY STORMWATER DIVISION OF WATER QUALITY 336 FAYETTEVILLE STREET RALEIGH, NC 27602 CONTACT: DEBORAH L. RYALS PHONE: 919-856-7400 SANITARY SEWER: CITY OF RALEIGH PUBLIC UTILITIES 222 W. HARGETT STREET RALEIGH, NC 27601 CONTACT: CESAR SANCHEZ PHONE: 919-996-2673 GAS: PSNC ENERGY CONTACT: BUSINESS SERVICES PHONE: 919-452-2177 ELECTRIC: DUKE ENERGY PROGRESS CONTACT: BUSINESS SERVICES PHONE: 800-452-2777 TELEPHONE: CONTACT: BUSINESS SERVICES PHONE: 800-221-0000 PLANNING / ZONING: TOWN OF ZEBULON PLANNING DEPT. 1003 N. ARENDELL AVENUE ZEBULON, NC 27597 CONTACT: SENIOR PLANNER

PHONE: 919-823-1809

KL

DDH

DDH

DDH

DDH

BY

24 HOUR CONTACT

KYLE ULANDER

CONSTRUCTION MANAGER TELEPHONE: (336) 867-8800

REVISIONS:

NO. DATE

2023-06-08 REVISED PER TOWN

2023-11-06 | TRC AND WAKE COUNTY COMMENTS

2025-04-02 | REVISE BUILDING FOOTPRINT

2025-06-24 | REVISE BUILDING FOOTPRINT

2025-08-28 REVISED PER TOWN COMMENTS

2024-09-26 REV. ENTRANCE DRIVES/ADD TURN LANES

DESCRIPTION

S 	SION CONTROL, STORMWATER
St.	PROVED
	SION CONTROL S-
	RMWATER MGMT. S-
FLO	OD STUDY S
DAT	TE
WAKE	
COUNTY NORTH CAROLINA	ENVIRONMENTAL CONSULTANT SIGNATURE

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer,

permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

and/or reuse, as approved in these plans, is responsible for contacting the Infrastructure Inspections Division and schedule a Pre-construction meeting on the Development Portal prior to beginning any construction. Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

SHEET INDEX

C-1	EXISTING CONDITIONS / DEMOLITION	PLAN			
C-2	SITE PLAN				
C-3	GRADING PLAN				
C-3a	EROSION CONTROL PLAN - PHASE I				
C-3b	EROSION CONTROL PLAN - PHASE 2				
C-3c	EROSION CONTROL PLAN - PHASE 3	<u>6</u>			
C-3d	NPDES STABILIZATION PLAN		~~~~	~~~~	~~~~
<i>C-3e</i>	NPDES STABILIZATION DETAILS	INFRASTRUCTUI	RE INSPECTIONS O	DUANTITIES T	ABLE
C-3f	HWY 96 TURN LANE PLAN	Phase Number(s)	PHASE 1	PHASE 2	PHASE 3
C-4	UTILITY PLAN	Number of Lot (s)	1 N/A	N/A N/A	N/A N/A
C-5	DETAILS	Lot Number (s) by Phase Number of Units	1	N/A N/A	N/A
		Livable Buildings	1 COMMERCIAL	N/A	N/A
C-5a	DETAILS	Open Space?	34,243 SF	N/A	N/A
C-6	DETAILS	Number of Open Space Lots	N/A	N/A	N/A
		Public Water (LF)	223 LF	N/A	N/A
C-6a	DETAILS	Private Water* (LF)	N/A	N/A	N/A
		Public Sewer (LF)	N/A	l N/A l	N/A

CITY OF RALEIGH DETAILS

CITY OF RALEIGH DETAILS

TOWN OF ZEBULON DETAILS

TOWN OF ZEBULON DETAILS

LANDSCAPE DETAILS AND NOTES

JONES STREET PLAN AND PROFILE

SCM DETAILS

SCM DETAILS

LANDSCAPE PLAN

BUILDING ELEVATIONS

BUILDING ELEVATIONS

LIGHTING PLAN

DETAILS

C-10

C-11

C-12

C-13

C-14

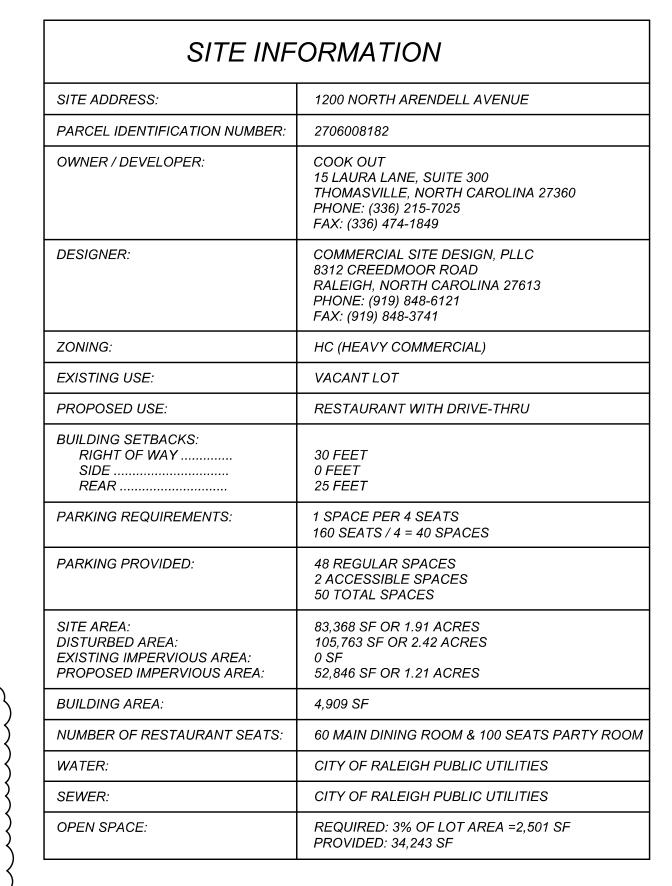
C-15

A-2.0

Phase Number(s)	PHASE 1	PHASE 2	PHASE 3
Number of Lot (s)	1	N/A	N/A
Lot Number (s) by Phase	N/A	N/A	N/A
Number of Units	1	N/A	N/A
Livable Buildings	1 COMMERCIAL	N/A	N/A
Open Space?	34,243 SF	N/A	N/A
Number of Open Space Lots	N/A	N/A	N/A
Public Water (LF)	223 LF	N/A	N/A
Private Water* (LF)	N/A	N/A	N/A
Public Sewer (LF)	N/A	N/A	N/A
Public Force Main (LF)	N/A	N/A	N/A
Private Sewer** (LF)	N/A	N/A	N/A
Public Street (LF) - FULL	227 LF- JONES ST.	N/A	N/A
Public Street (LF) - PARTIAL	280 LF- 2 TURN LANES	N/A	N/A
Public Sidewalk (LF) - FULL	761 LF	N/A	N/A
Public Sidewalk (LF) – PARTIAL	N/A	N/A	N/A
Multi-Use Path*** (LF)	N/A	N/A	N/A
Public Stormdrain (LF)	181 LF	N/A	N/A
Street Signs (LF)	2 (JONES ST)	N/A	N/A
Water Service Stubs	1	N/A	N/A
Sewer Service Stubs	1	N/A	N/A
Average Daily Flow per phase****		N/A	N/A

****Entire Project Flow. Based on 75gpd per bedroom for residential (Apartments, single Family dwelling,

cownhouse, condos), or based on 15A NCAC 02T .0114 Wastewater Design Flow Rates for Commercial and Industrial.







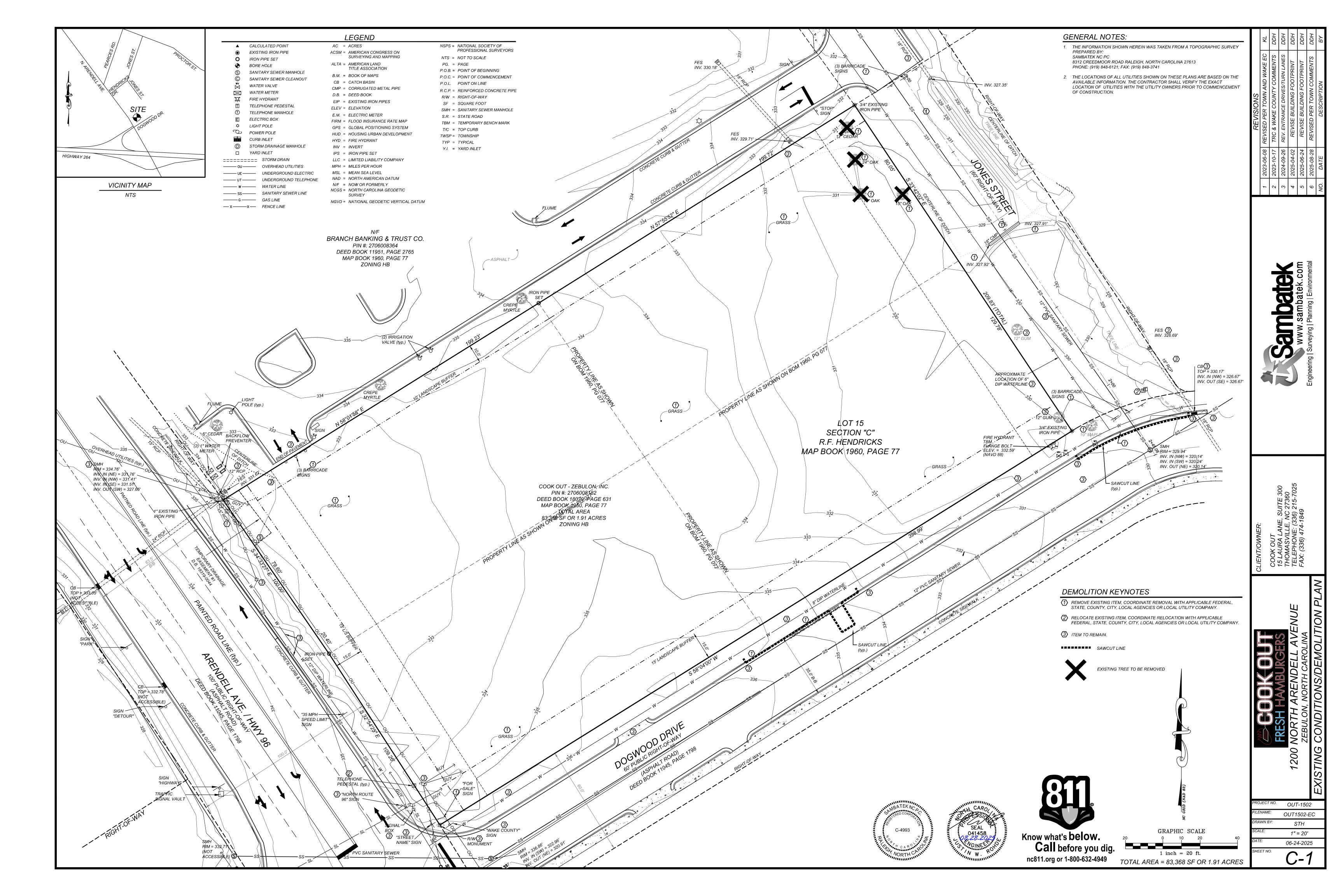


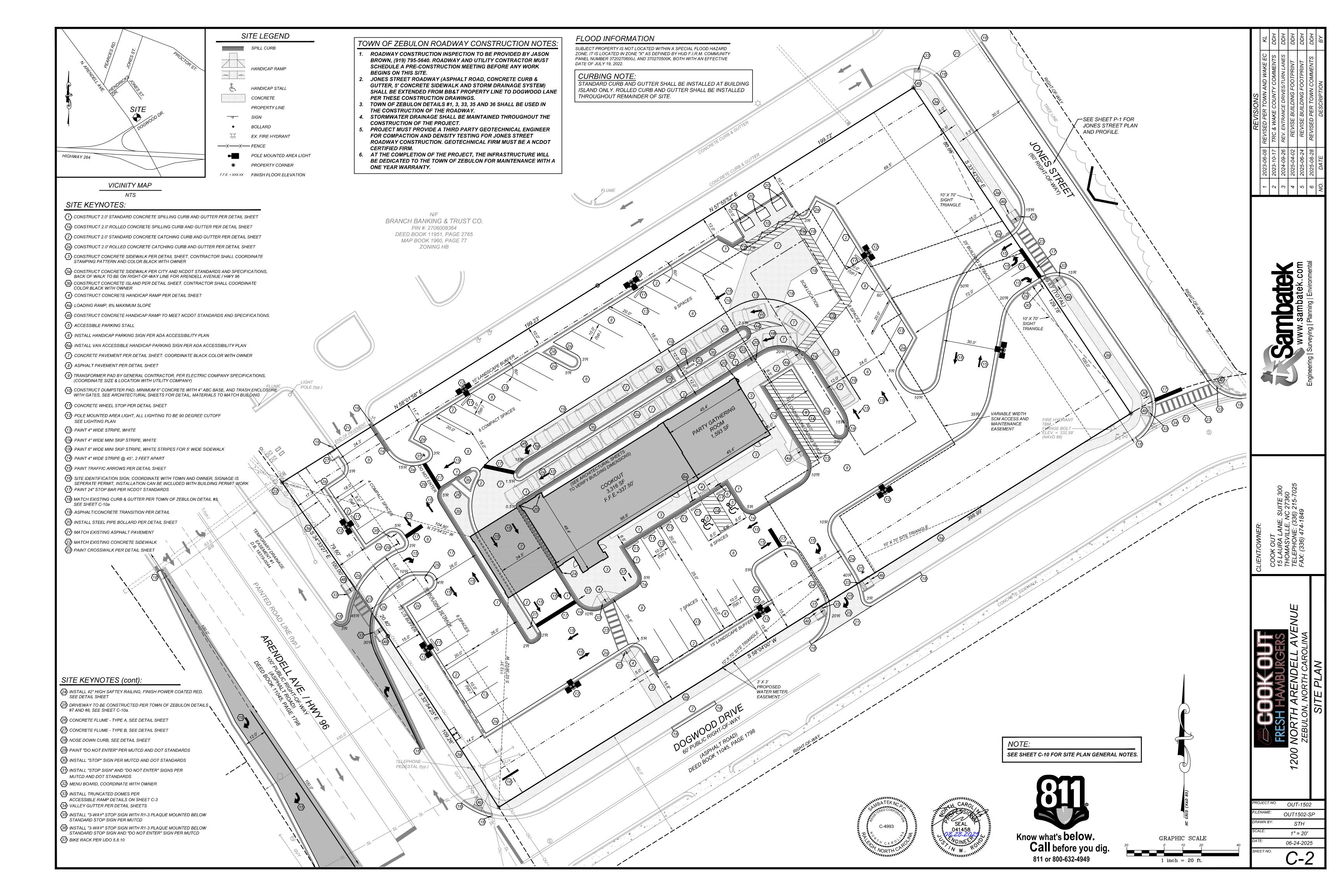
Failure to notify City Departments in advance of beginning	

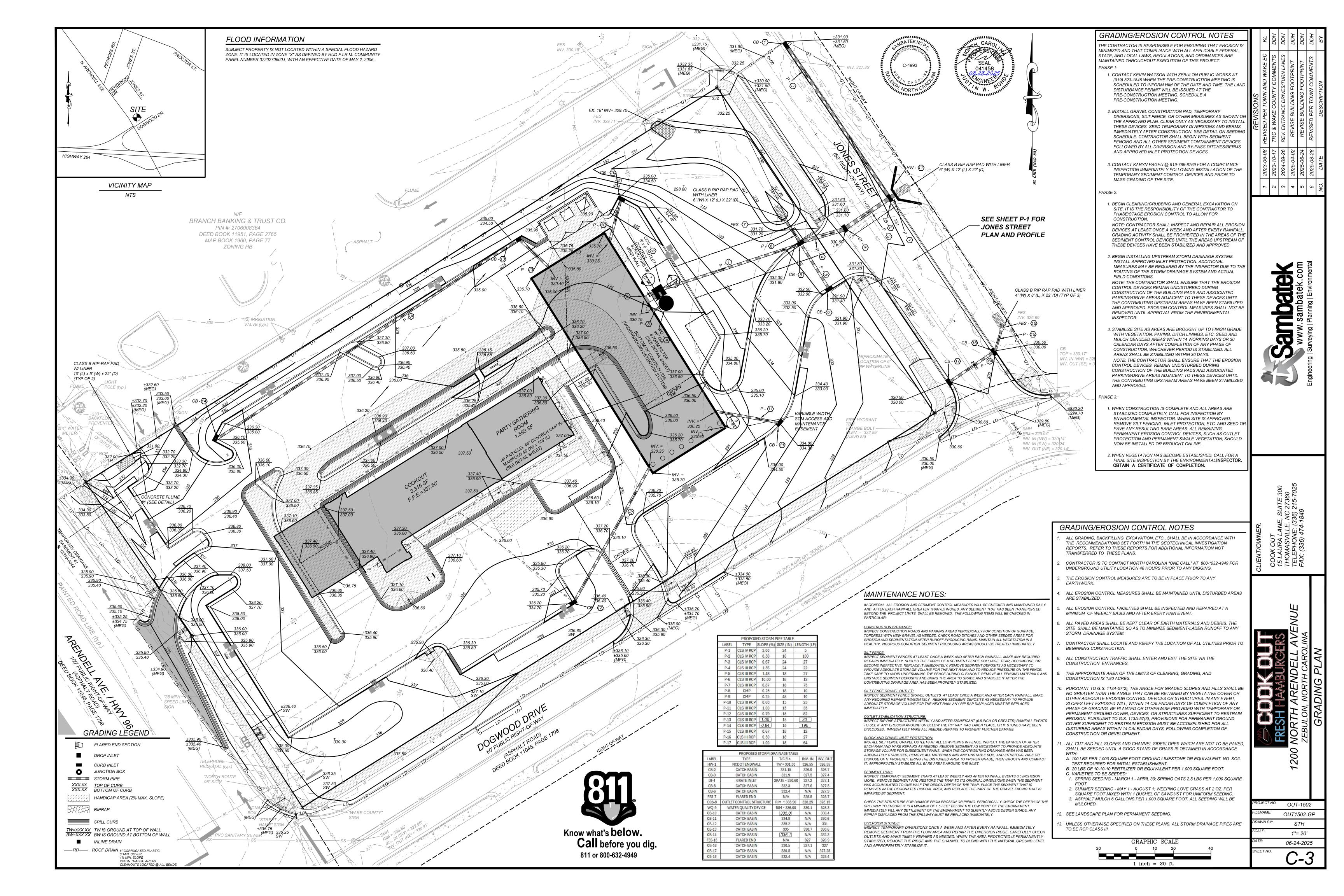
Failure to call for Inspection, install a downstream plug, have

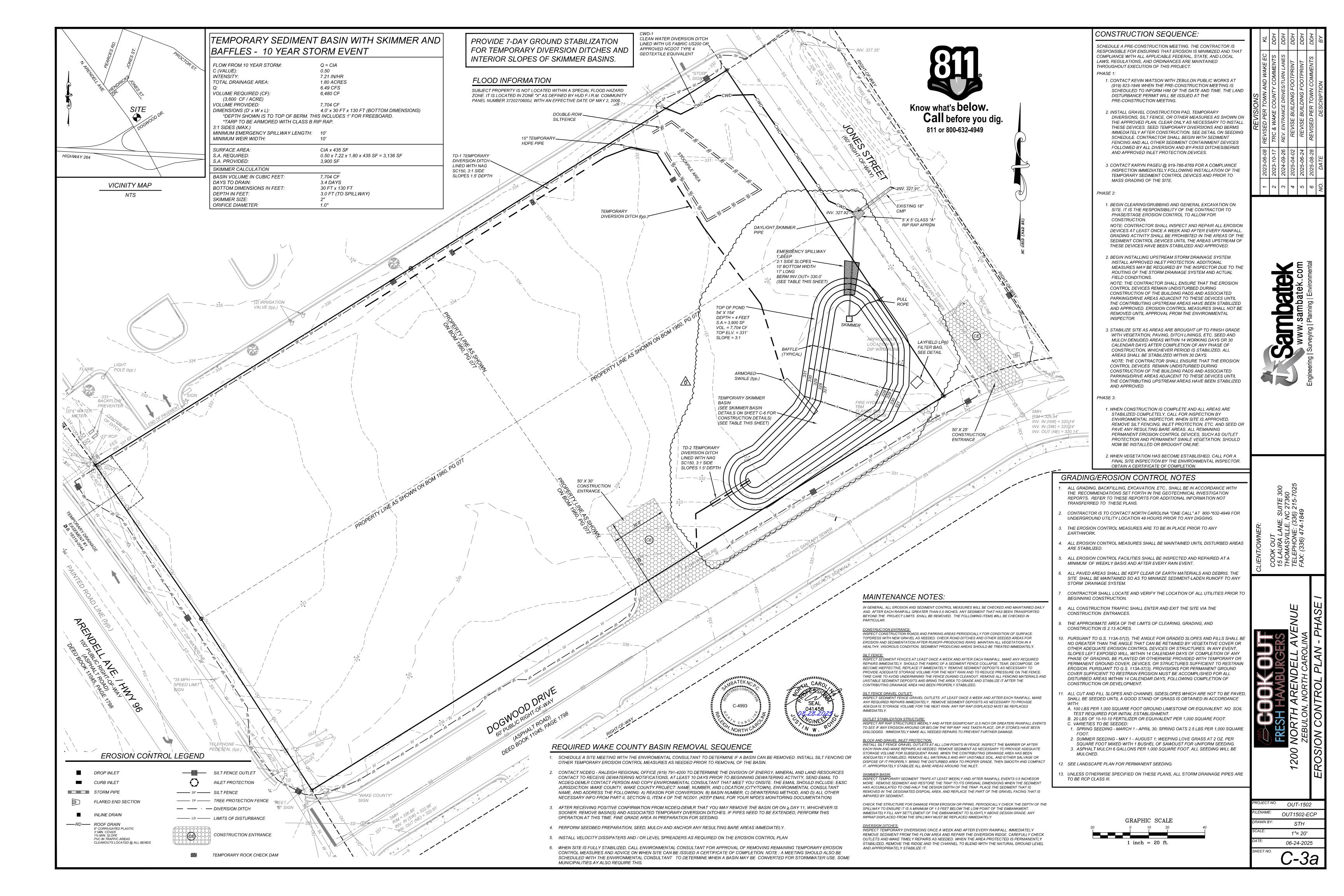


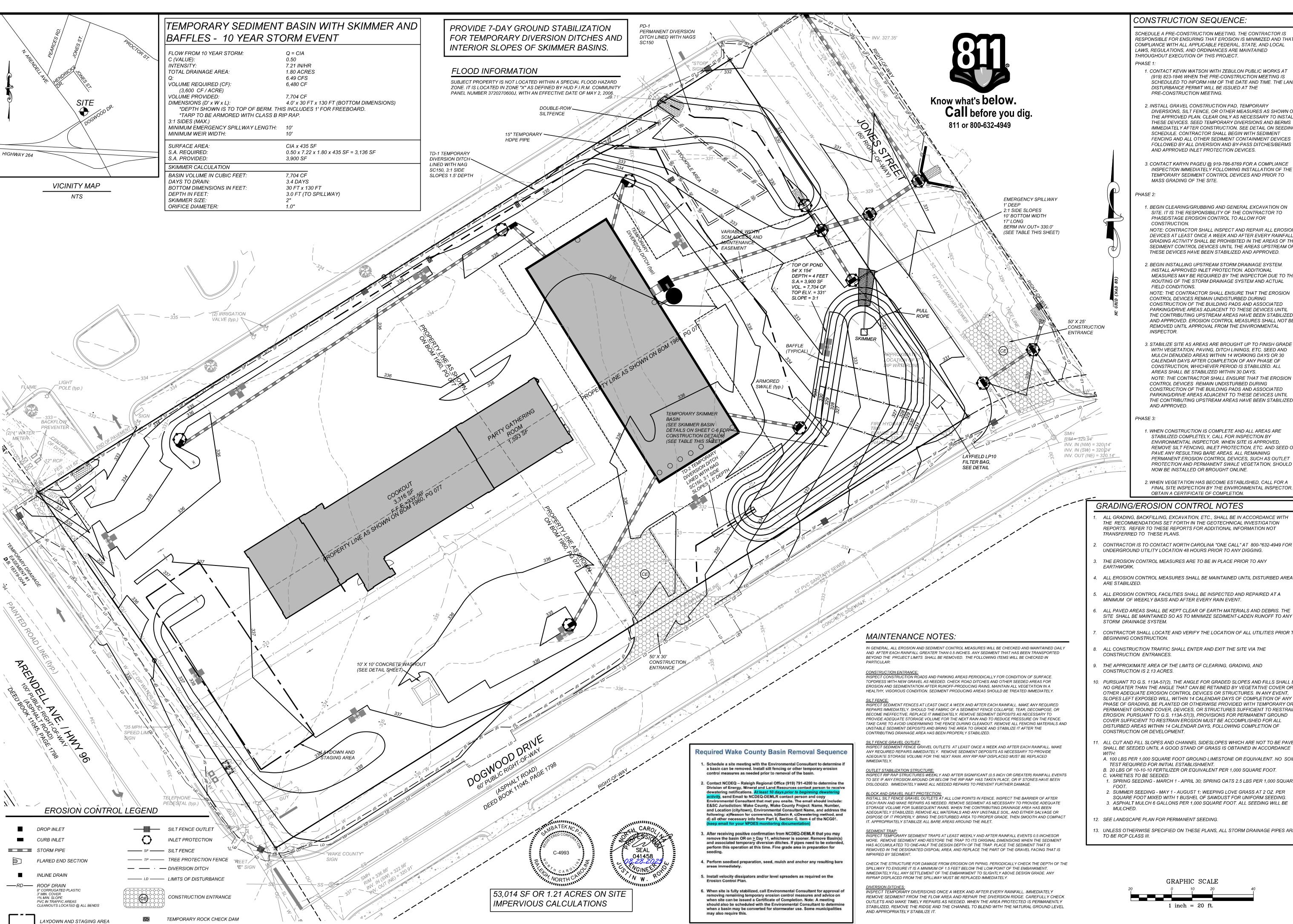












CONSTRUCTION SEQUENCE:

SCHEDULE A PRE-CONSTRUCTION MEETING. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, AND ORDINANCES ARE MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.

> 1. CONTACT KEVIN WATSON WITH ZEBULON PUBLIC WORKS AT (919) 823-1846 WHEN THE PRE-CONSTRUCTION MEETING IS SCHEDULED TO INFORM HIM OF THE DATE AND TIME. THE LAND DISTURBANCE PERMIT WILL BE ISSUED AT THE

2. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES SEED TEMPORARY DIVERSIONS AND BERMS IMMEDIATELY AFTER CONSTRUCTION. SEE DETAIL ON SEEDING SCHEDULE. CONTRACTOR SHALL BEGIN WITH SEDIMENT FENCING AND ALL OTHER SEDIMENT CONTAINMENT DEVICES FOLLOWED BY ALL DIVERSION AND BY-PASS DITCHES/BERMS AND APPROVED INLET PROTECTION DEVICES.

3. CONTACT KARYN PAGEU @, 919-786-8769 FOR A COMPLIANCE INSPECTION IMMEDIATELY FOLLOWING INSTALLATION OF THE TEMPORARY SEDIMENT CONTROL DEVICES AND PRIOR TO MASS GRADING OF THE SITE.

1. BEGIN CLEARING/GRUBBING AND GENERAL EXCAVATION ON SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PHASE/STAGE EROSION CONTROL TO ALLOW FOR

NOTE: CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION DEVICES AT LEAST ONCE A WEEK AND AFTER EVERY RAINFALL. GRADING ACTIVITY SHALL BE PROHIBITED IN THE AREAS OF THE SEDIMENT CONTROL DEVICES UNTIL THE AREAS UPSTREAM OF THESE DEVICES HAVE BEEN STABILIZED AND APPROVED.

INSTALL APPROVED INLET PROTECTION. ADDITIONAL MEASURES MAY BE REQUIRED BY THE INSPECTOR DUE TO THE ROUTING OF THE STORM DRAINAGE SYSTEM AND ACTUAL FIELD CONDITIONS.

NOTE: THE CONTRACTOR SHALL ENSURE THAT THE EROSION CONTROL DEVICES REMAIN UNDISTURBED DURING CONSTRUCTION OF THE BUILDING PADS AND ASSOCIATED PARKING/DRIVE AREAS ADJACENT TO THESE DEVICES UNTIL THE CONTRIBUTING UPSTREAM AREAS HAVE BEEN STABILIZED AND APPROVED. EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL APPROVAL FROM THE ENVIRONMENTAL

WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS WITHIN 14 WORKING DAYS OR 30 CALENDAR DAYS AFTER COMPLETION OF ANY PHASE OF CONSTRUCTION, WHICHEVER PERIOD IS STABILIZED. ALL AREAS SHALL BE STABILIZED WITHIN 30 DAYS. NOTE: THE CONTRACTOR SHALL ENSURE THAT THE EROSION CONTROL DEVICES REMAIN UNDISTURBED DURING CONSTRUCTION OF THE BUILDING PADS AND ASSOCIATED PARKING/DRIVE AREAS ADJACENT TO THESE DEVICES UNTIL THE CONTRIBUTING UPSTREAM AREAS HAVE BEEN STABILIZED

1. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL FOR INSPECTION BY ENVIRONMENTAL INSPECTOR, WHEN SITE IS APPROVED. REMOVE SILT FENCING, INLET PROTECTION, ETC. AND SEED OR PAVE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS OUTLET PROTECTION AND PERMANENT SWALE VEGETATION, SHOULD NOW BE INSTALLED OR BROUGHT ONLINE.

2. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ENVIRONMENTAL INSPECTOR.

GRADING/EROSION CONTROL NOTES

ALL GRADING, BACKFILLING, EXCAVATION, ETC., SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL INVESTIGATION REPORTS. REFER TO THESE REPORTS FOR ADDITIONAL INFORMATION NOT

CONTRACTOR IS TO CONTACT NORTH CAROLINA "ONE CALL" AT 800-*632-4949 FOR UNDERGROUND UTILITY LOCATION 48 HOURS PRIOR TO ANY DIGGING.

THE EROSION CONTROL MEASURES ARE TO BE IN PLACE PRIOR TO ANY

ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS

ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED AND REPAIRED AT A MINIMUM OF WEEKLY BASIS AND AFTER EVERY RAIN EVENT.

ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY

CONTRACTOR SHALL LOCATE AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO

THE APPROXIMATE AREA OF THE LIMITS OF CLEARING, GRADING, AND

). PURSUANT TO G.S. 113A-57(2), THE ANGLE FOR GRADED SLOPES AND FILLS SHALL E NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES 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. PURSUANT TO G.S. 113A-57(3), PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS WITHIN 14 CALENDAR DAYS, FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

. ALL CUT AND FILL SLOPES AND CHANNEL SIDESLOPES WHICH ARE NOT TO BE PAVEL SHALL BE SEEDED UNTIL A GOOD STAND OF GRASS IS OBTAINED IN ACCORDANCE

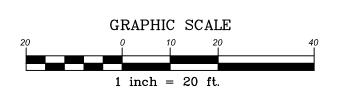
A. 100 LBS PER 1,000 SQUARE FOOT GROUND LIMESTONE OR EQUIVALENT. NO SOIL TEST REQUIRED FOR INITIAL ESTABLISHMENT.

B. 20 LBS OF 10-10-10 FERTILIZER OR EQUIVALENT PER 1,000 SQUARE FOOT.

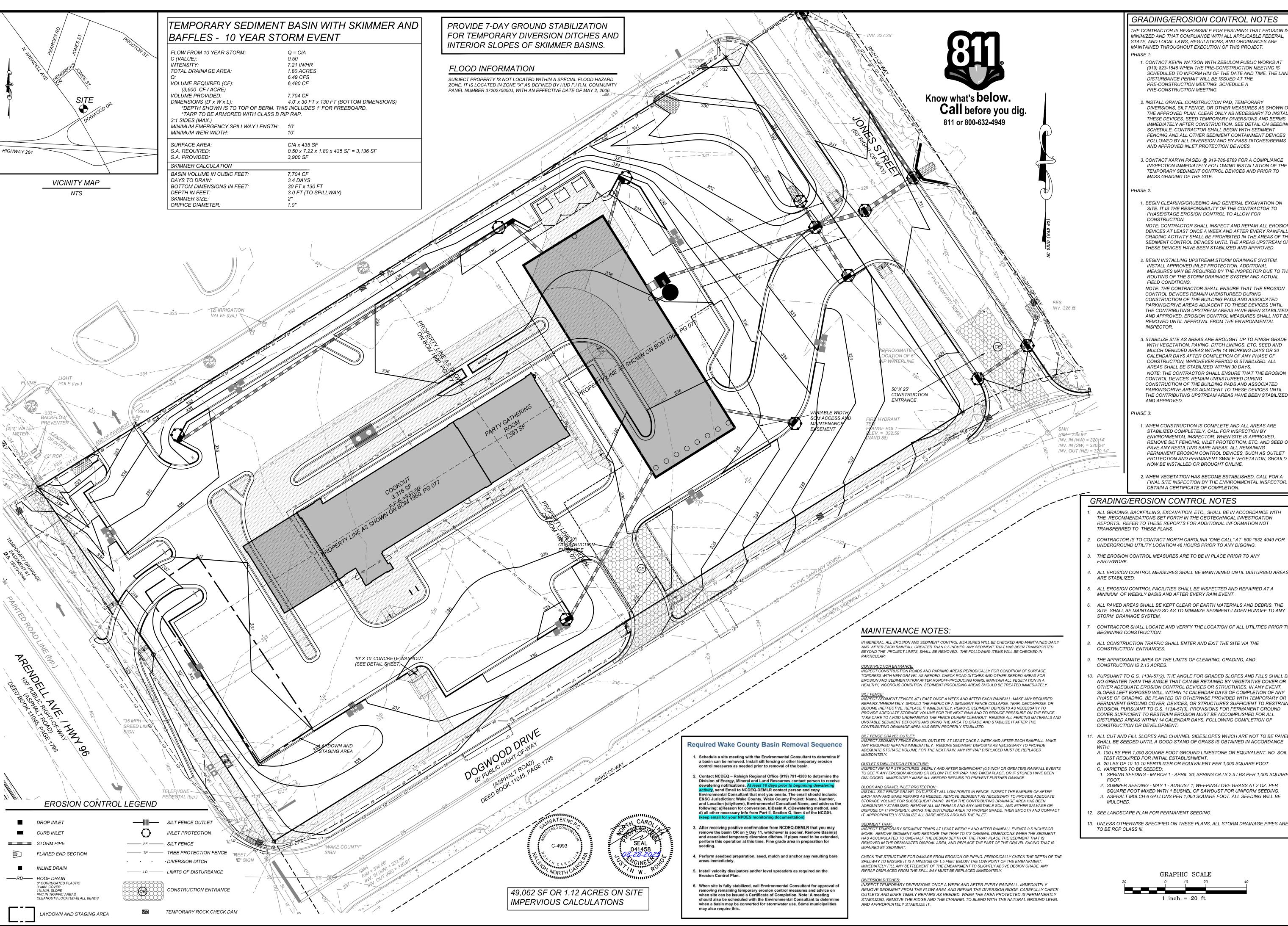
1. SPRING SEEDING - MARCH 1 - APRIL 30; SPRING OATS 2.5 LBS PER 1,000 SQUARE 2. SUMMER SEEDING - MAY 1 - AUGUST 1; WEEPING LOVE GRASS AT 2 OZ. PER SQUARE FOOT MIXED WITH 1 BUSHEL OF SAWDUST FOR UNIFORM SEEDING.

12. SEE LANDSCAPE PLAN FOR PERMANENT SEEDING.

13. UNLESS OTHERWISE SPECIFIED ON THESE PLANS, ALL STORM DRAINAGE PIPES ARE



OUT-1502 OUT1502-ECP2 STH 1"= 20' 06-24-2025



GRADING/EROSION CONTROL NOTES

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2. BEGIN INSTALLING UPSTREAM STORM DRAINAGE SYSTEM. INSTALL APPROVED INLET PROTECTION. ADDITIONAL MEASURES MAY BE REQUIRED BY THE INSPECTOR DUE TO THE ROUTING OF THE STORM DRAINAGE SYSTEM AND ACTUAL

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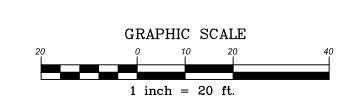
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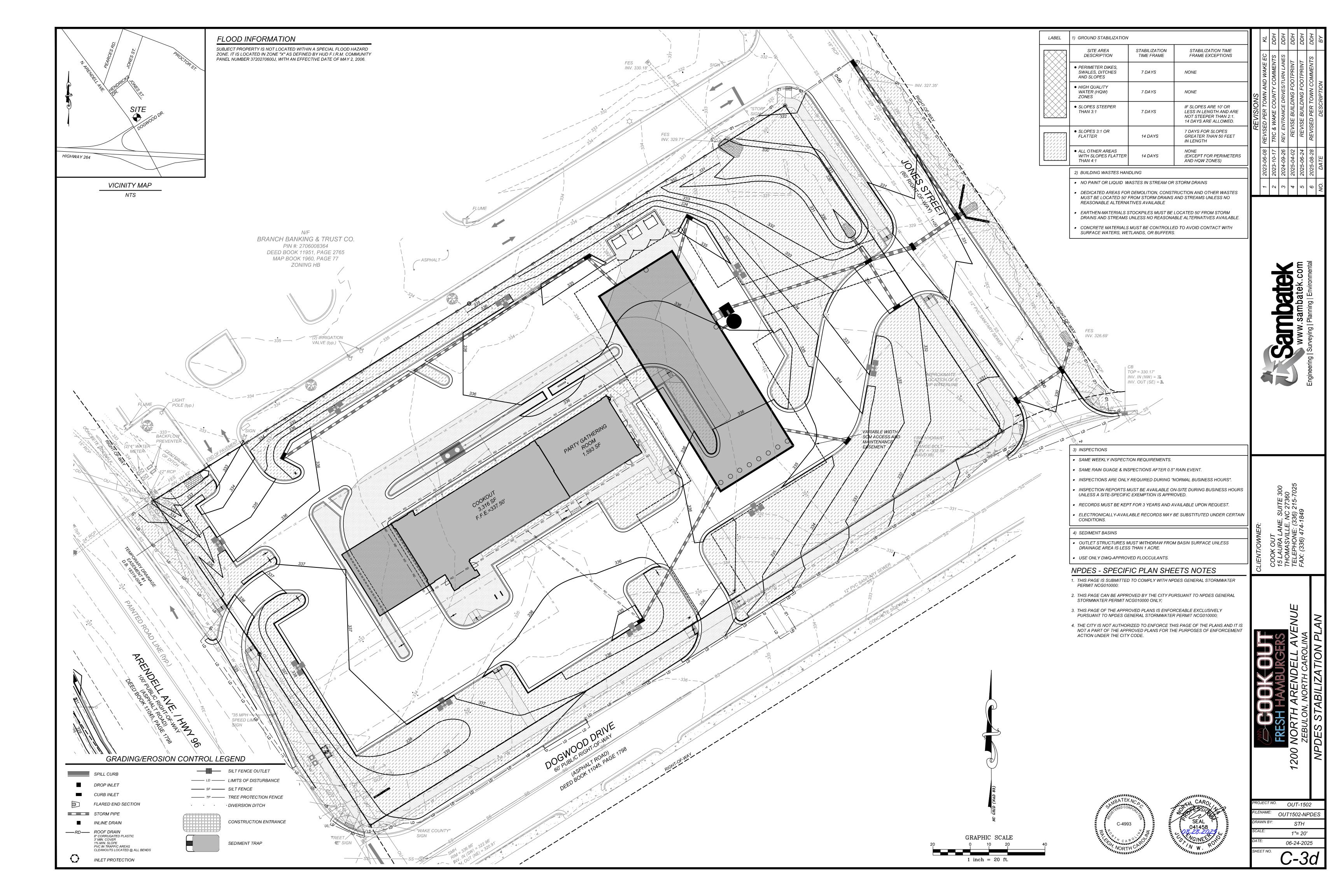
GRADING/EROSION CONTROL NOTES

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- TEST REQUIRED FOR INITIAL ESTABLISHMENT.
- B. 20 LBS OF 10-10-10 FERTILIZER OR EQUIVALENT PER 1,000 SQUARE FOOT.
- 1. SPRING SEEDING MARCH 1 APRIL 30; SPRING OATS 2.5 LBS PER 1,000 SQUARE
- SQUARE FOOT MIXED WITH 1 BUSHEL OF SAWDUST FOR UNIFORM SEEDING. 3. ASPHALT MULCH 6 GALLONS PER 1,000 SQUARE FOOT. ALL SEEDING WILL BE
- 13. UNLESS OTHERWISE SPECIFIED ON THESE PLANS, ALL STORM DRAINAGE PIPES ARE



OUT-1502 OUT1502-ECP3 STH 1"= 20' 0**6-26-202**2



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

mplementing the details and specifications on this plan sheet will result in the constructior 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 					

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 abilize the ground sufficiently so that rain will not dislodge the soil. Use one of the

readilize the ground sufficiently	30 that rain	WIII IIOL	uisiouge	tile som.	OSC OII
echniques in the table below:					

•
Temporary Stabilization
• Temporary grass seed covered with st

- traw or Permanent grass seed covered with straw or other mulches and tackifiers Hydroseeding
- Rolled erosion control products with or without temporary grass seed
- Plastic sheeting
- Appropriately applied straw or other mulch
- Geotextile fabrics such as permanent soil
 - Hydroseeding • Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover

other mulches and tackifiers

sufficient to restrain erosion • Structural methods such as concrete, asphalt or

Permanent Stabilization

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 Store flocculants in leak-proof containers that are kept under storm-resistant cover
- or surrounded by secondary containment structures.

QUIPMENT 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
- 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

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

B. Dispose waste off-site at an approved disposal facility.

Contain liquid wastes in a controlled area.

Never bury or burn waste. Place litter and debris in approved waste containers.

to a recycling or disposal center that handles these materials

- 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.

9. On business days, clean up and dispose of waste in designated waste containers.

- 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.
- 4. 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

- 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
- 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.

- 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 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
- 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.
- 10. 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
- 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.

- 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.

EFFECTIVE: 04/01/19

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

SELF-INSPECTION, RECORDKEEPING AND REPORTING

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 weeker holiday periods, and no individual-day rainfall informatic available, record the cumulative rain measurement for those attended days (and this will determine if a site inspectic needed). Days on which no rainfall occurred shall be recorded "zero." The permittee may use another rain-monitoring diapproved 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	 Identification of the measures inspected, Date and time of the inspection, Name of the person performing the inspection, Indication of whether the measures were operating properly, Description of maintenance needs for the measure, Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	 Identification of the discharge outfalls inspected, Date and time of the inspection, Name of the person performing the inspection, Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, Indication of visible sediment leaving the site, 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 the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has the site limits, 2. Description, evidence, and date of corrective actions taken, 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 o 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, 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this per
(6) Ground stabilization measures	After each phase of grading	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). Documentation that the required ground stabilization measures have been provided within the required.

soon as possible.

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

timeframe or an assurance that they will be provided as

SELF-INSPECTION, RECORDKEEPING AND REPORTING

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

SECTION B: RECORDKEEPING . 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 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.

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 are within 100 feet of surface waters (regardless of volume).

Releases of hazardous substances in excess of reportable quantities under Section 311

They cause sheen on surface waters (regardless of volume), or

- 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

122.41(m)(3)]

may endanger

environment[40

CFR 122.41(I)(7)]

of this permit that

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	Within 24 hours, an oral or electronic notification.
deposition in a stream or wetland	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	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)]	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.

Within 24 hours, an oral or electronic notification.

with the conditions • Within 7 calendar days, a report that contains a description of the

quality and effect of the bypass. (e) Noncompliance • Within 24 hours, an oral or electronic notification

Within 7 calendar days, a report that includes an evaluation 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(I)(6).

• Division staff may waive the requirement for a written report on a



ONSITE CONCRETE WASHOUT

STRUCTURE WITH LINER

BELOW GRADE WASHOUT STRUCTURE

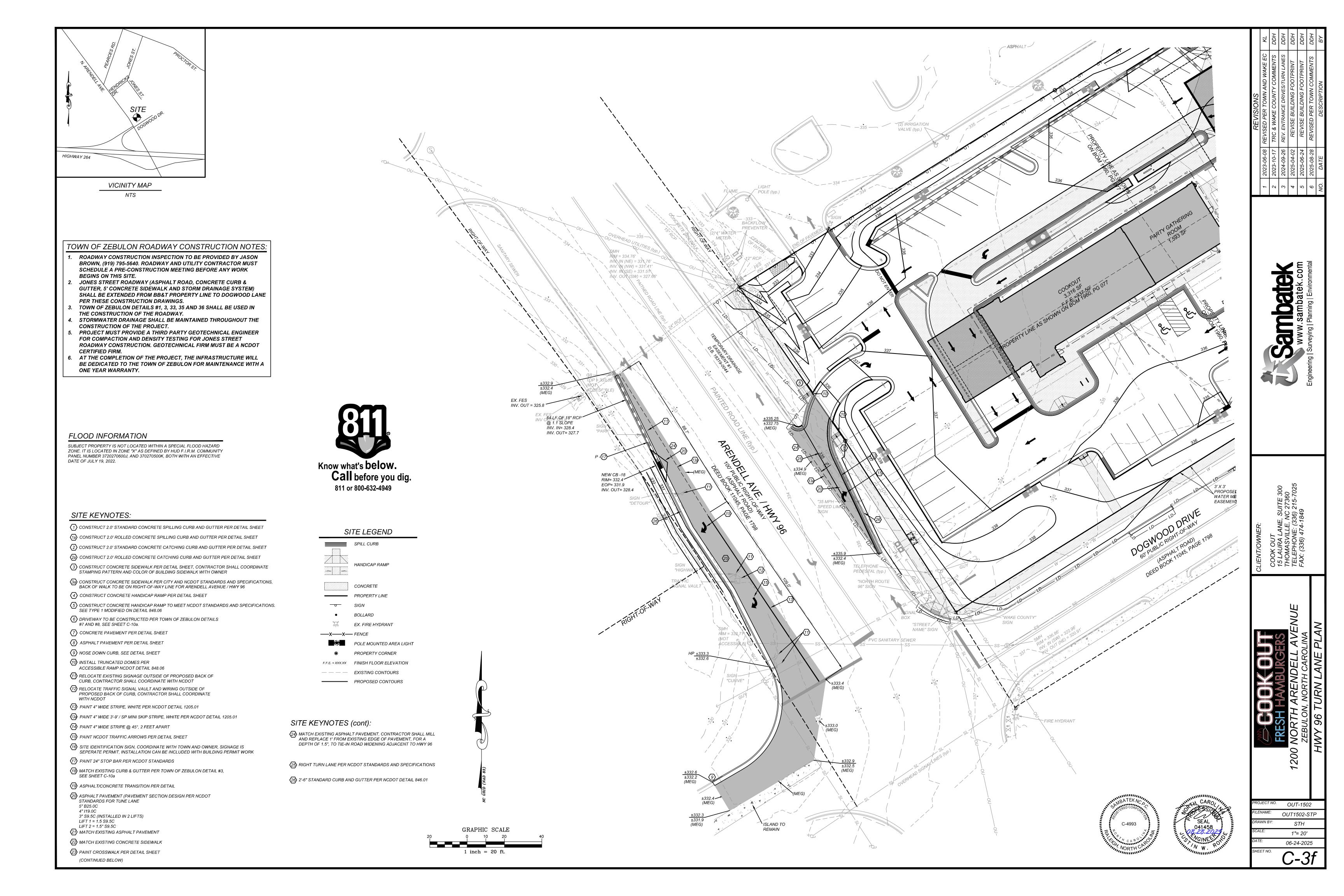


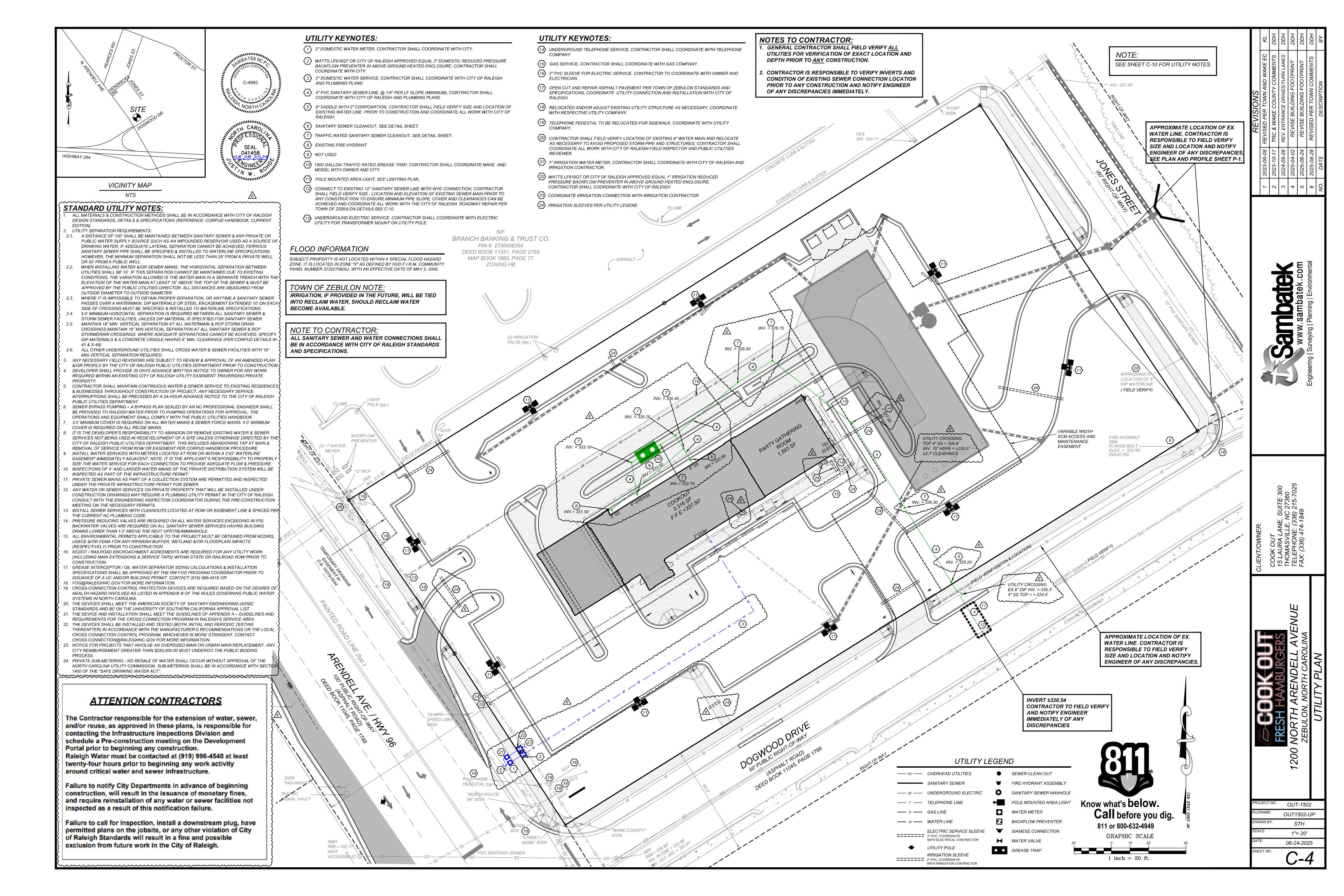


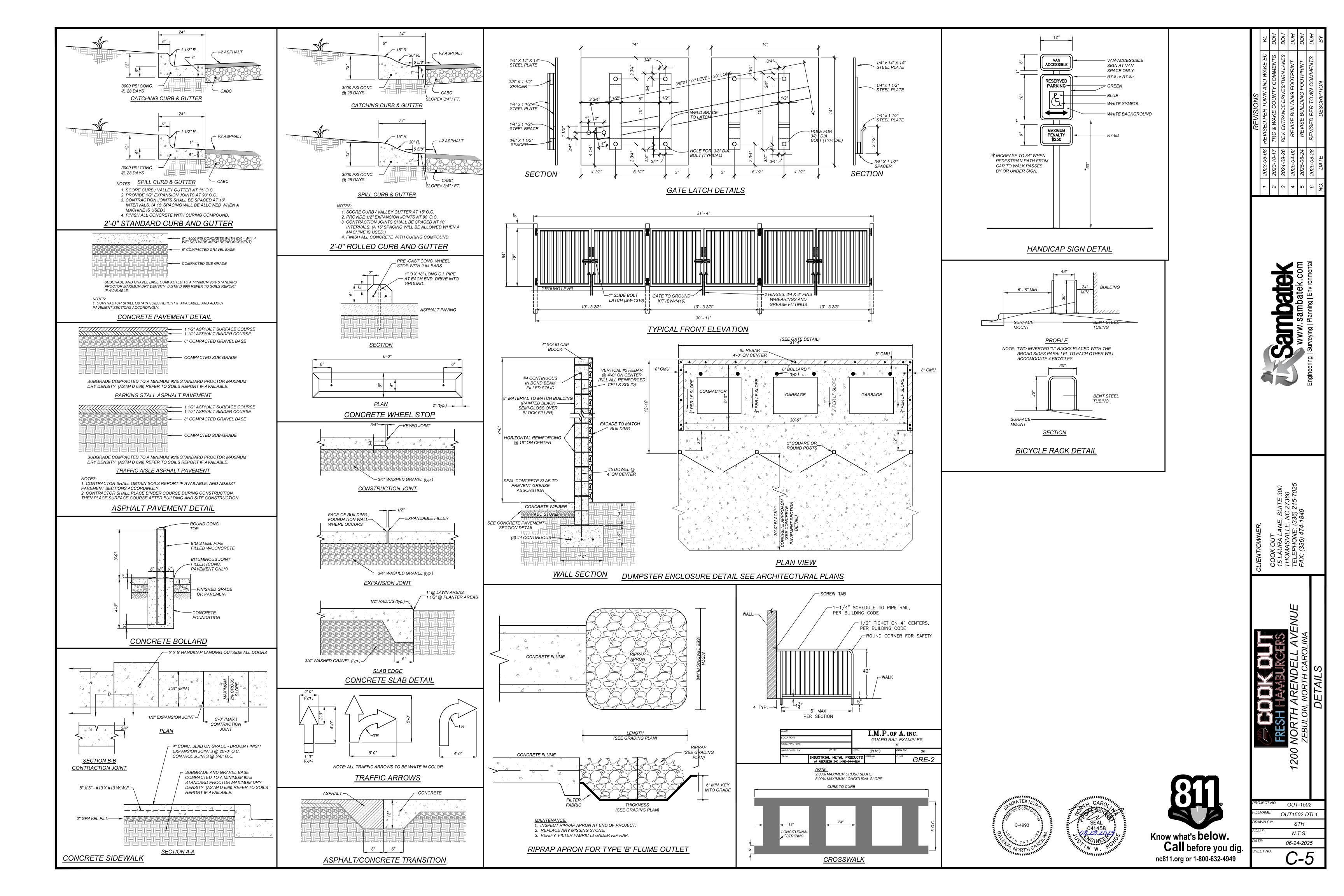
1. ACTUAL LOCATION DETERMINED IN

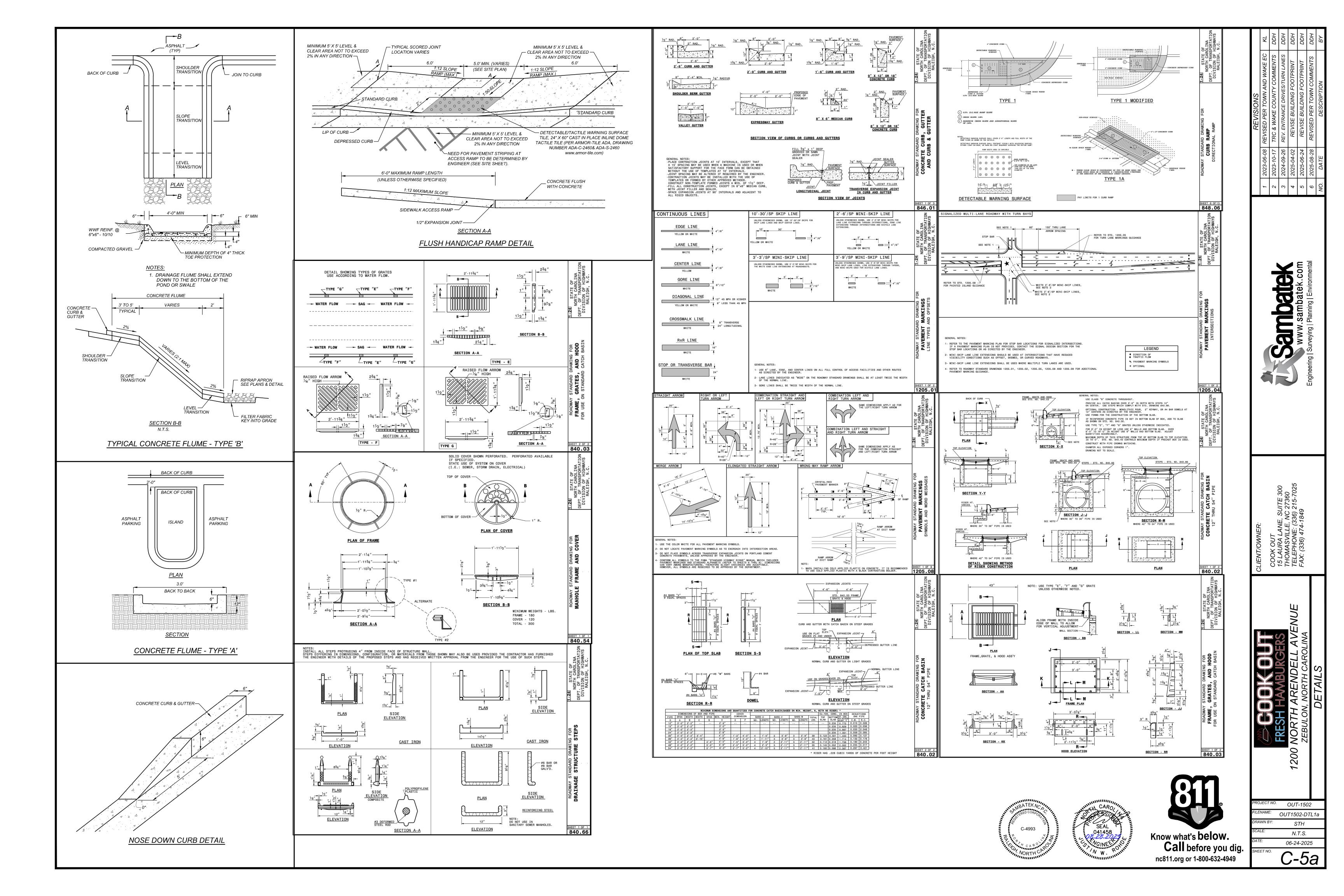


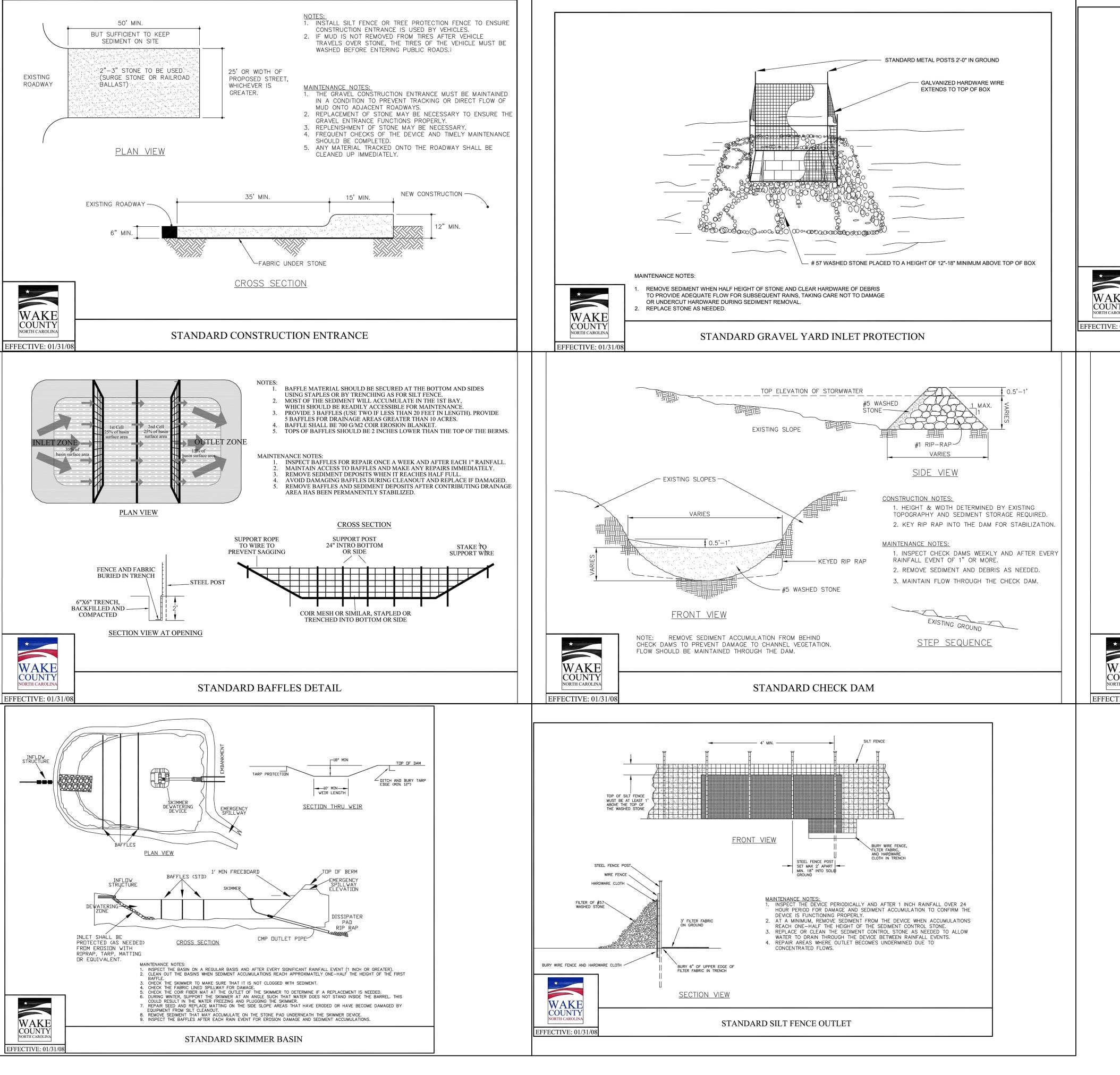
OUT-1502 OUT1502-NPDES STH N.T.S. 06-24-2025

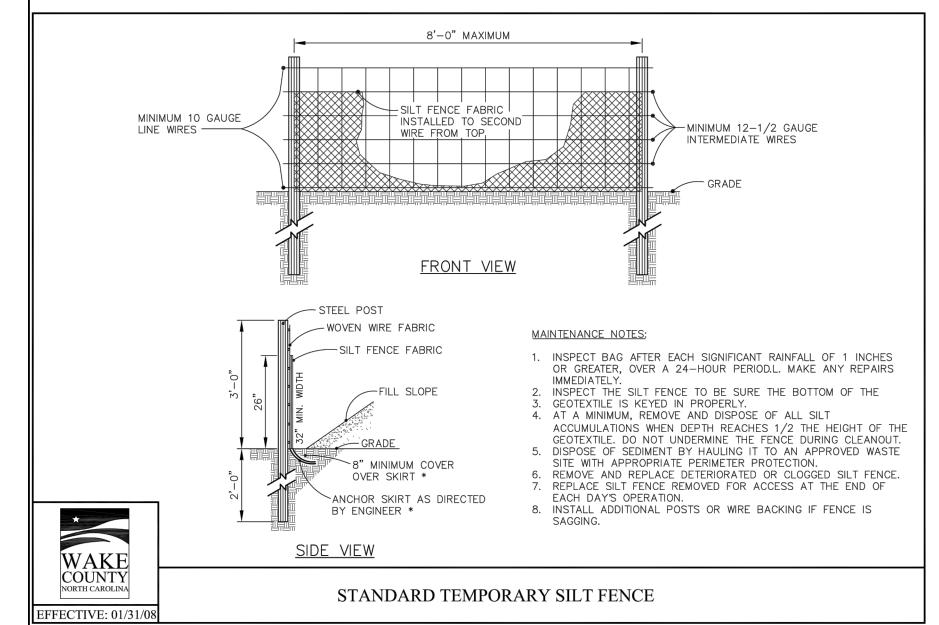


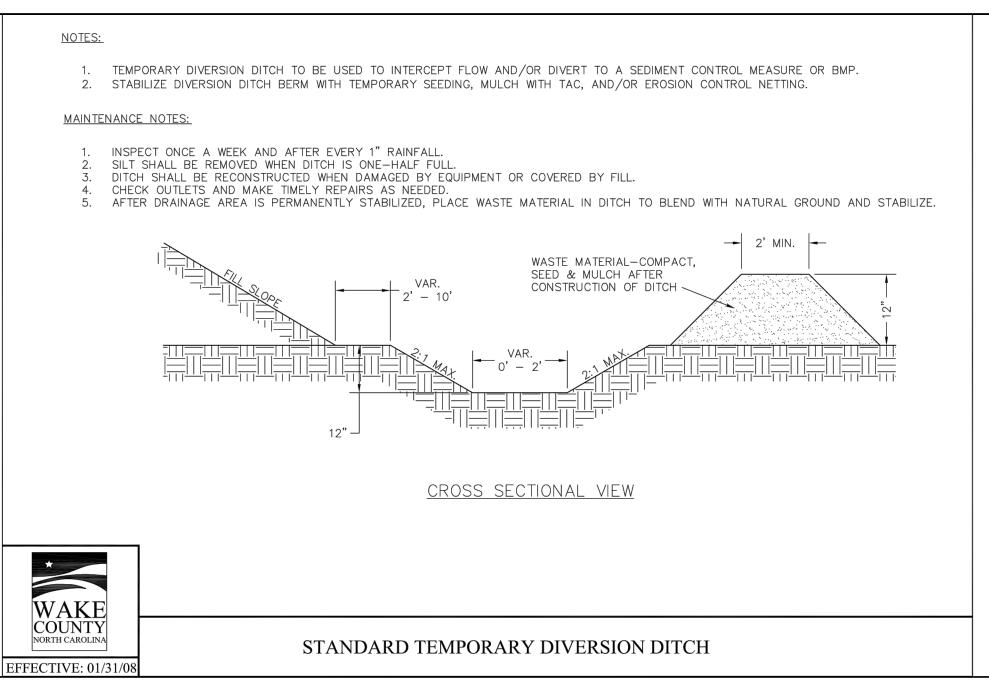




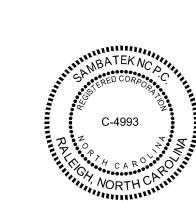










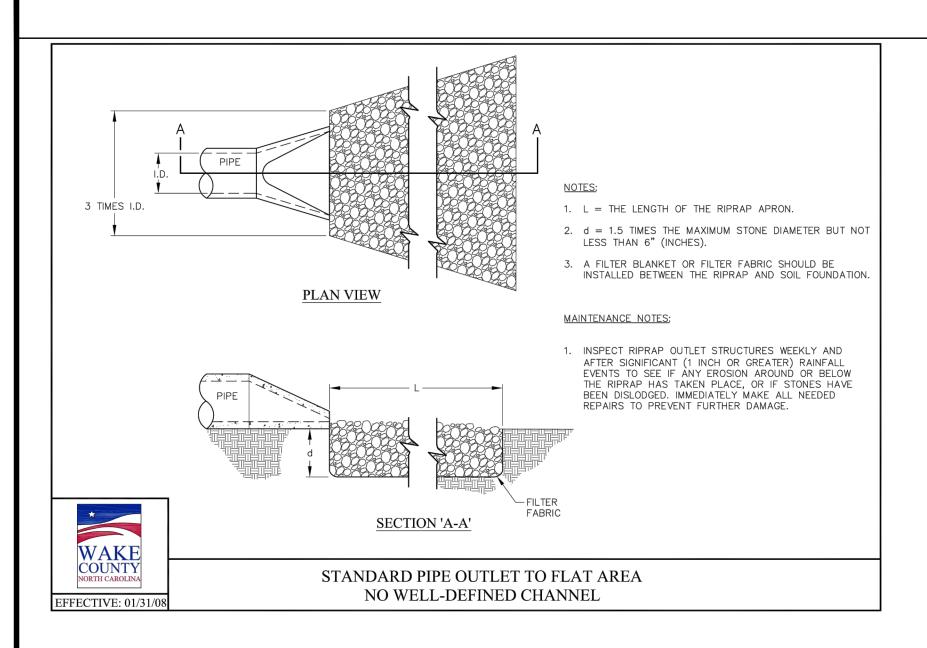


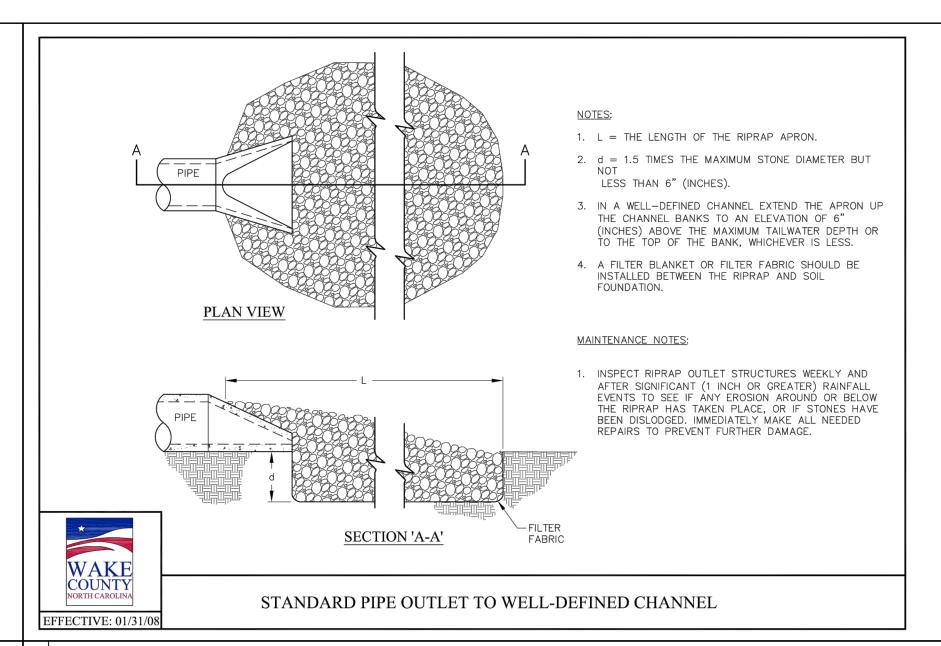


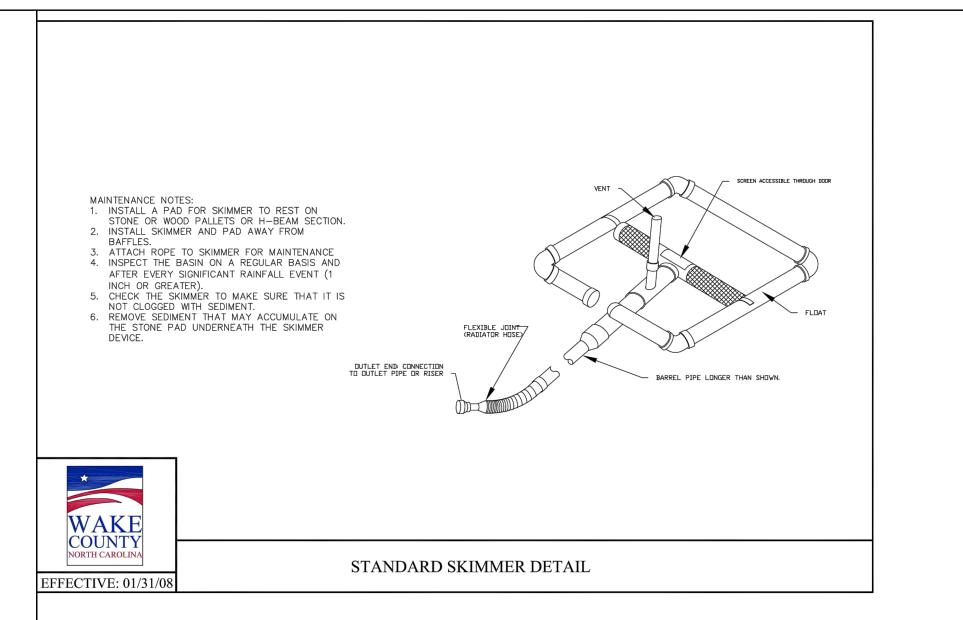
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DRAWN BY:	STH
SCALE:	N.T.S.
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SHEET NO.	C-6

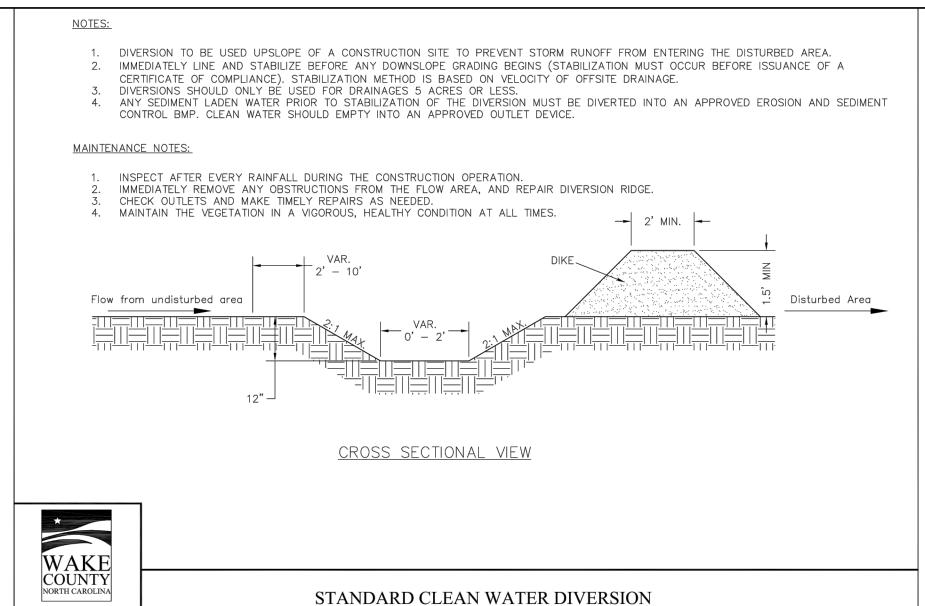
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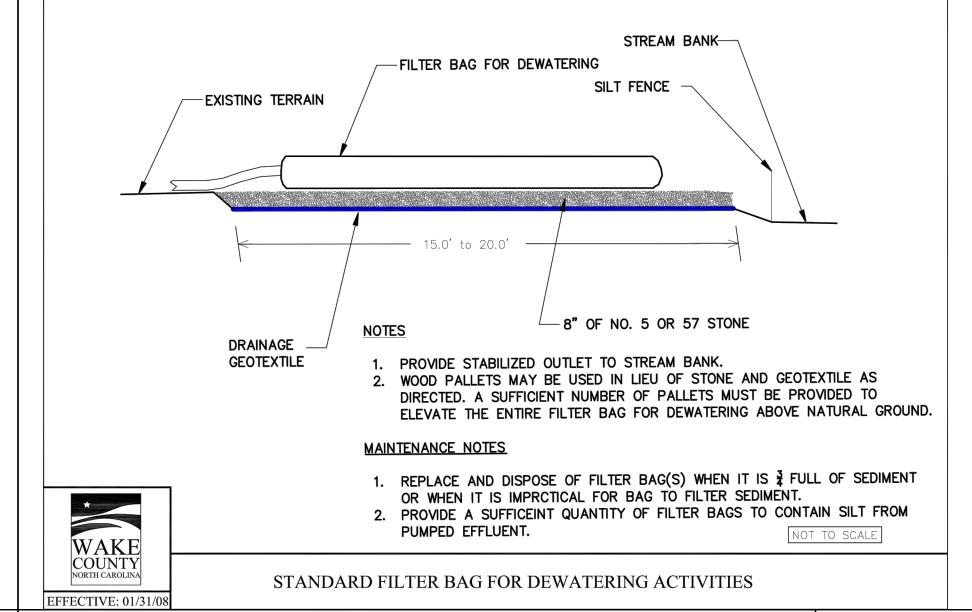


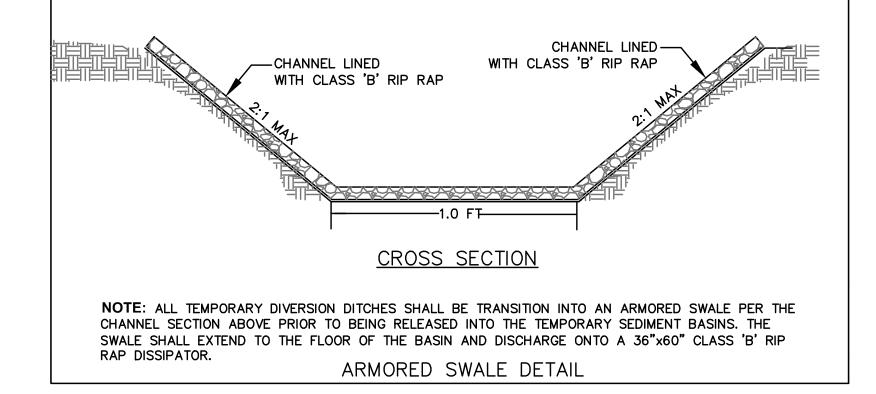




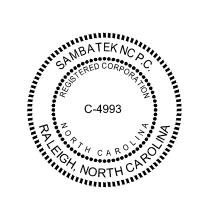


EFFECTIVE: 01/31/08



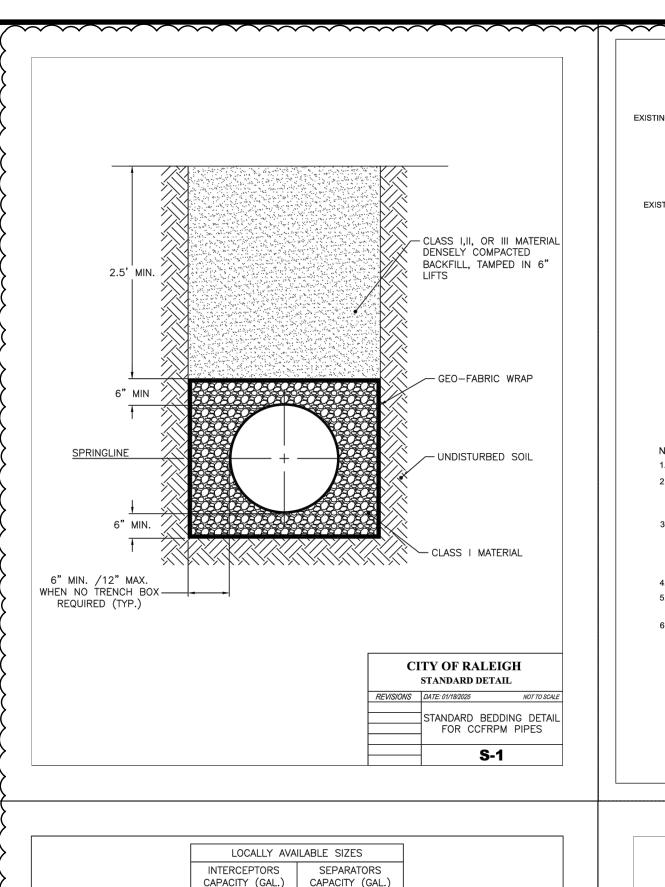


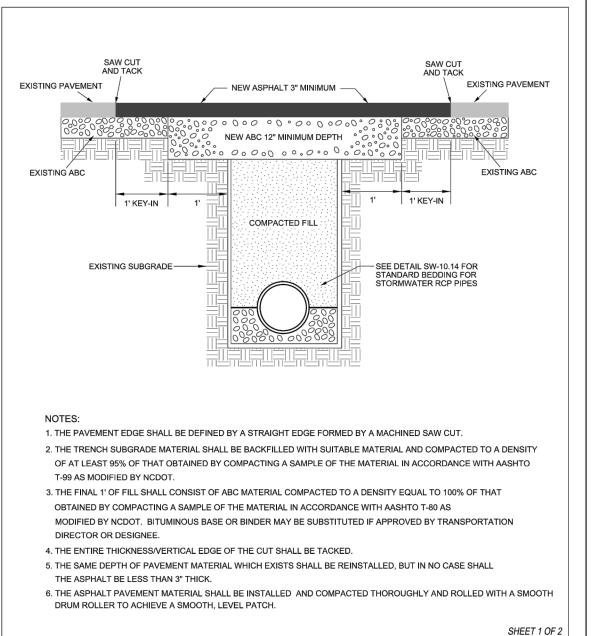






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	SCALE:	N.T.S.	
	DATE:	06-24-202	5
	SHEET NO.	C-6	a



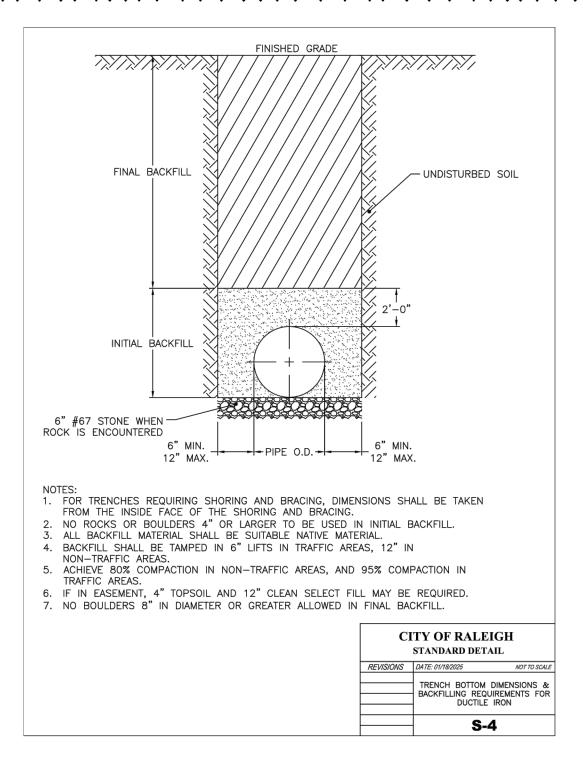


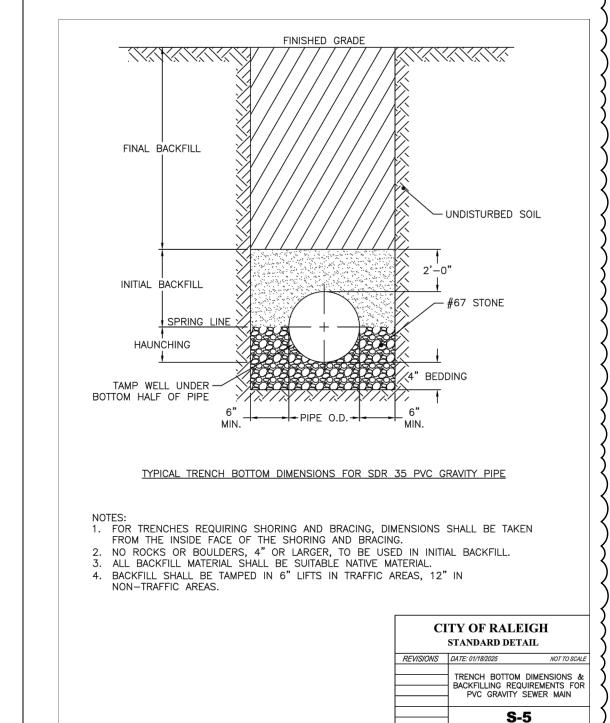
CITY OF RALEIGH

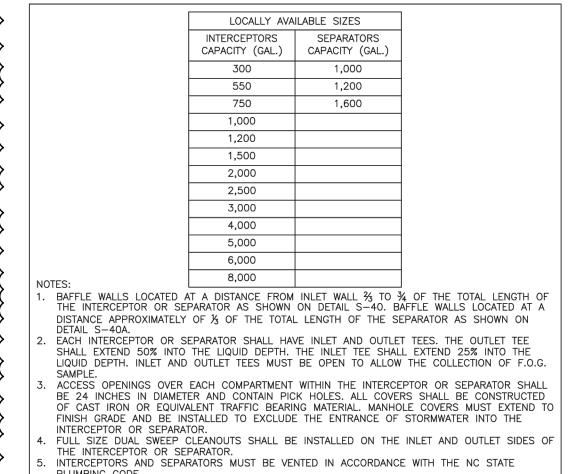
STANDARD DETAIL

ASPHALT PAVEMENT PATCH AND RCP PIPE BACKFILL

T-10.05.1







ASTM C890-06 FOR MINIMAL STRUCTURAL DESIGN LOADING INTERCEPTORS AND SEPARATORS SHALL BE DESIGNED TO WITHSTAND AN H-20 WHEEL LOAD. INTERCEPTORS OR SEPARATORS MADE OF POLYETHYLENE OR FIBERGLASS SHALL INCLUDE A

MINIMUM 12,000 PSI TENSILE STRENGTH, 19,000 PSI FLEXURAL STRENGTH, AND 800,000 PSI

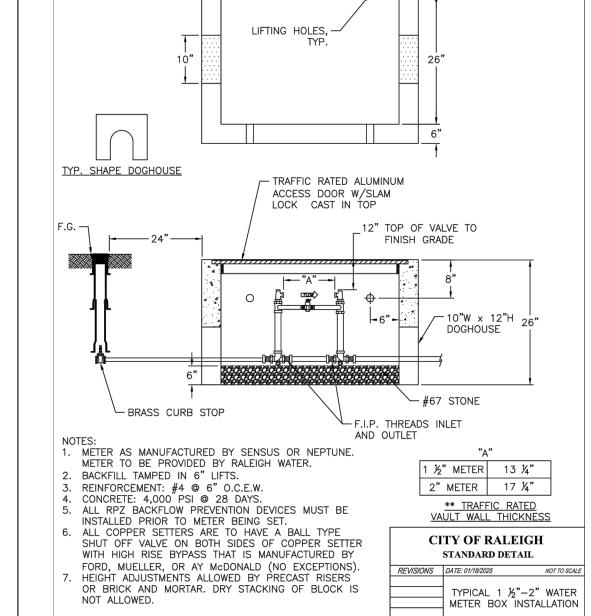
O. ALL INTERCEPTORS AND SEPARATORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

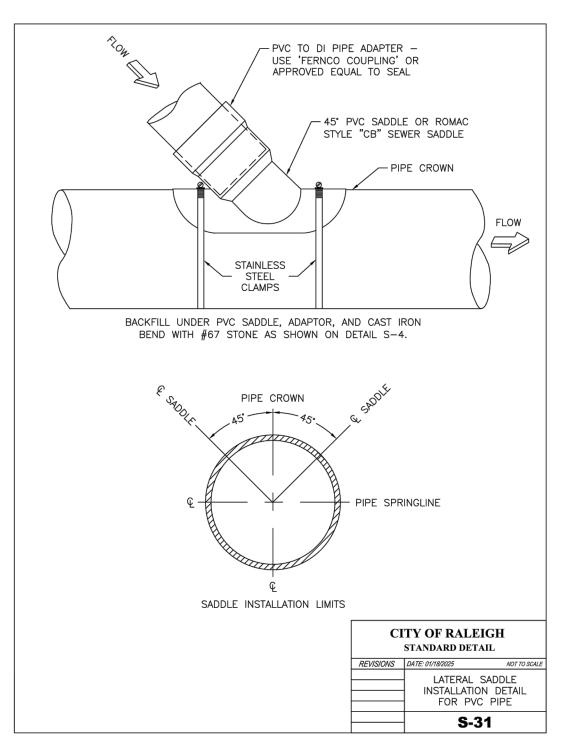
CONCRETE: 4,000 PSI @ 28 DAYS.

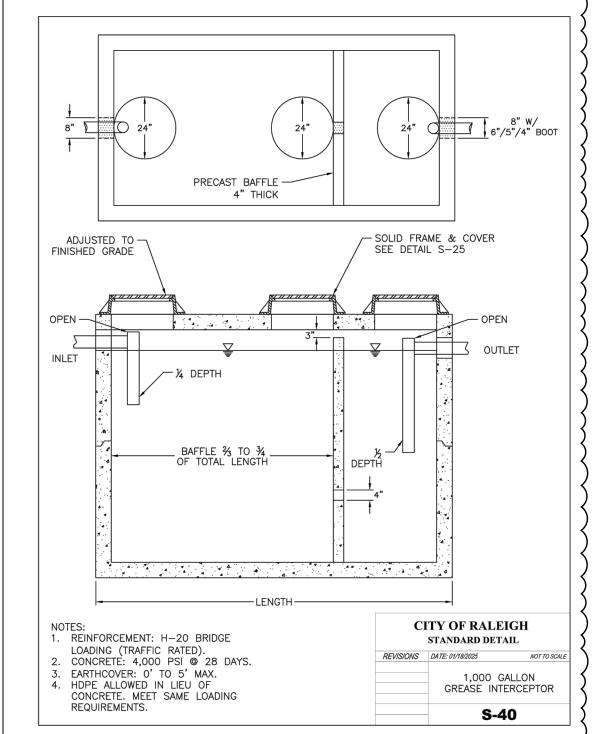
ASTM C1613-06 FOR GREASE INTERCEPTORS

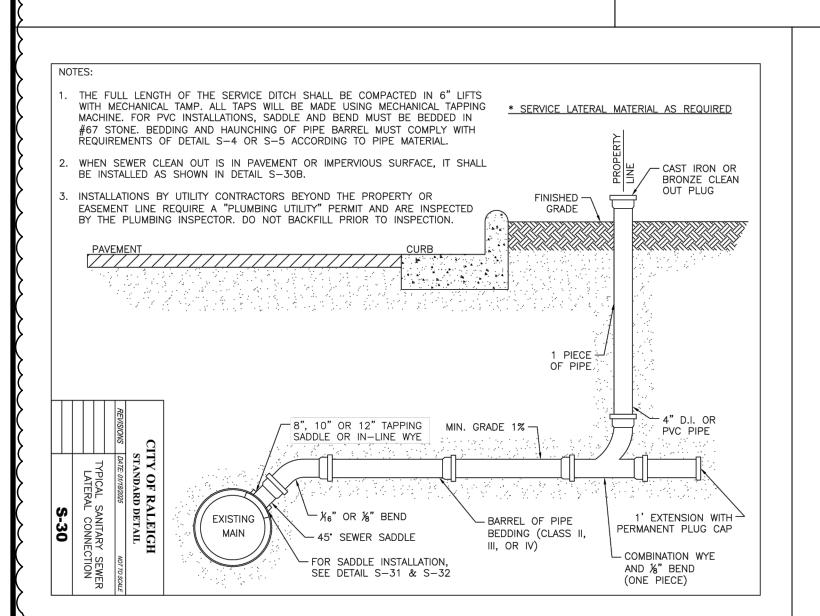
ASTM C913-02 FOR WATER AND WASTEWATER STRUCTURES

DESIGN: ACI 318 BUILDING CODE









CITY OF RALEIGH

REVISIONS DATE: 01/18/2025

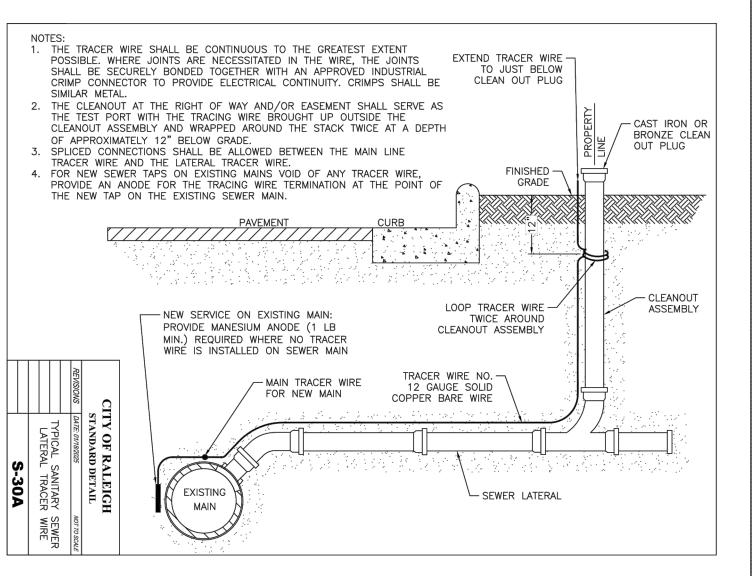
STANDARD DETAIL

DIMENSIONS: GREASE

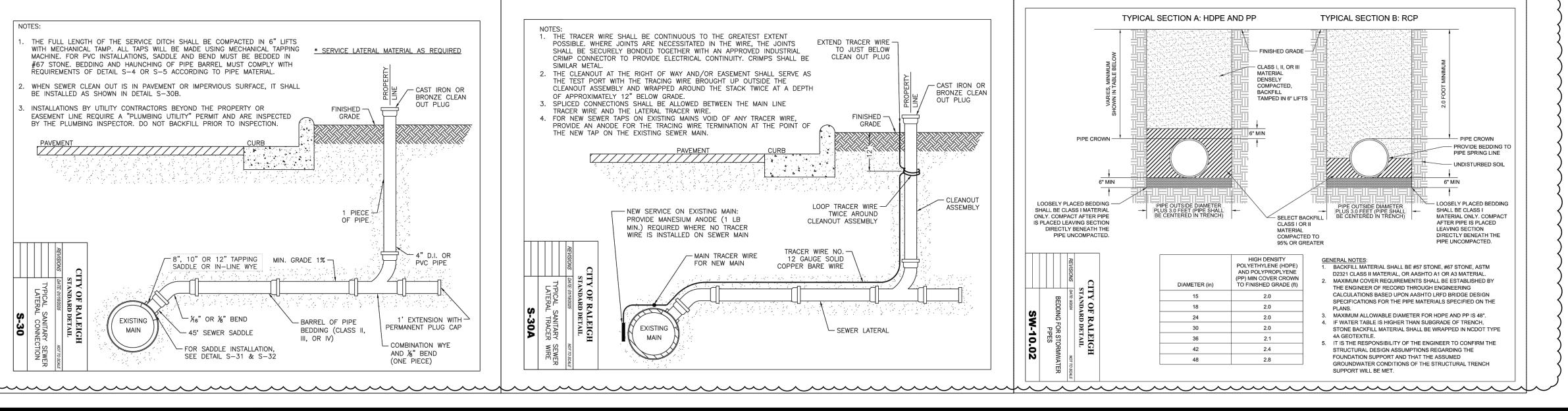
INTERCEPTORS & OIL-WATER

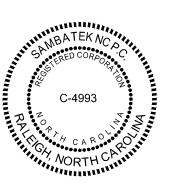
SAND SEPARATORS

S-41



W-31









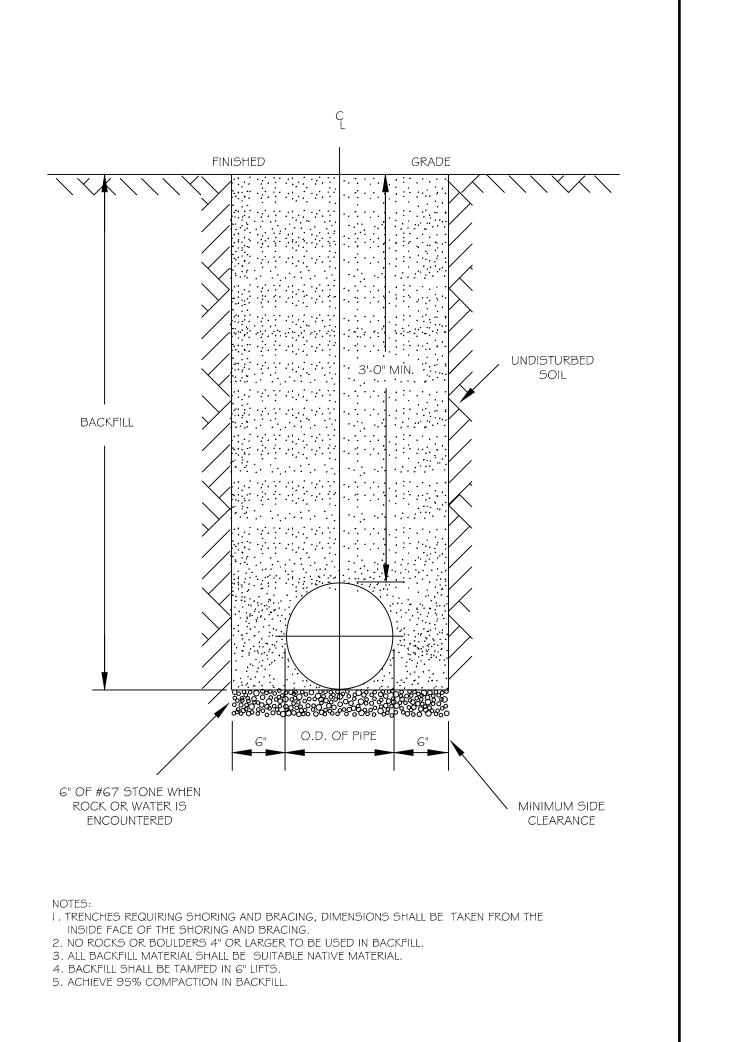
		REVISIONS	
1	2023-06-08	2023-06-08 REVISED PER TOWN AND WAKE EC	
2	2023-10-17	TRC & WAKE COUNTY COMMENTS	
3	2024-09-26	REV. ENTRANCE DRIVES/TURN LANES	
4	2025-04-02	REVISE BUILDING FOOTPRINT	
2	2025-06-24	REVISE BUILDING FOOTPRINT	
9	2025-08-28	REVISED PER TOWN COMMENTS	
NO.	DATE	DESCRIPTION	

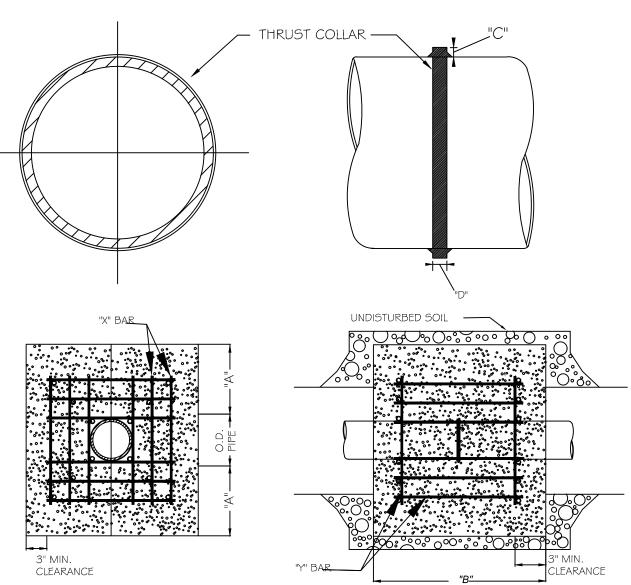


2 OUT-1502

OUT1502-DTL3 STH N.T.S. 06-24-2025 \bigcirc 7

U-1





					"D"	
	"X" BAR "X" BAR "X" BAR	. O.O.	<u>-</u>	-		3" MIN. CLEARANCE
I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6" - 36"	#5	2'-2"+ O.D. PIPE	1.043 LBS/FT	1'-1"	1.1 LBS. EACH	X-24, Y-12
3" & greater	#6	3'-0"+ O.D. PIPE	1.502 LBS/FT	1'-3"	1.9 LBS. EACH	X-24, Y-12
		•				

	THRUST	COLLAR, AND THRU	JST SCHEDULE	
I.D. PIPE	"A"	"B"	"C"	"D"
6" - 16"	1'-4"	1'-7"	2"	3/8"
20" - 24"	1'-4"	1'-7"	3"	1/2"
30" - 36"	1'-4"	1'-7"	4"	5/8"
48" & greater	1'-8"	1'-9"	6"	7/8"

- 1. SEE STANDARD DETAIL W-9 FOR THRUST BLOCK LOCATIONS. 2. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
- 3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER. 4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE
- MINIMUM WIDTH AS SHOWN ON STANDARD DETAIL W-3.
- 5. BACKFILL TAMPED IN 6" LIFTS PER STANDARD DETAIL W-3. 6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

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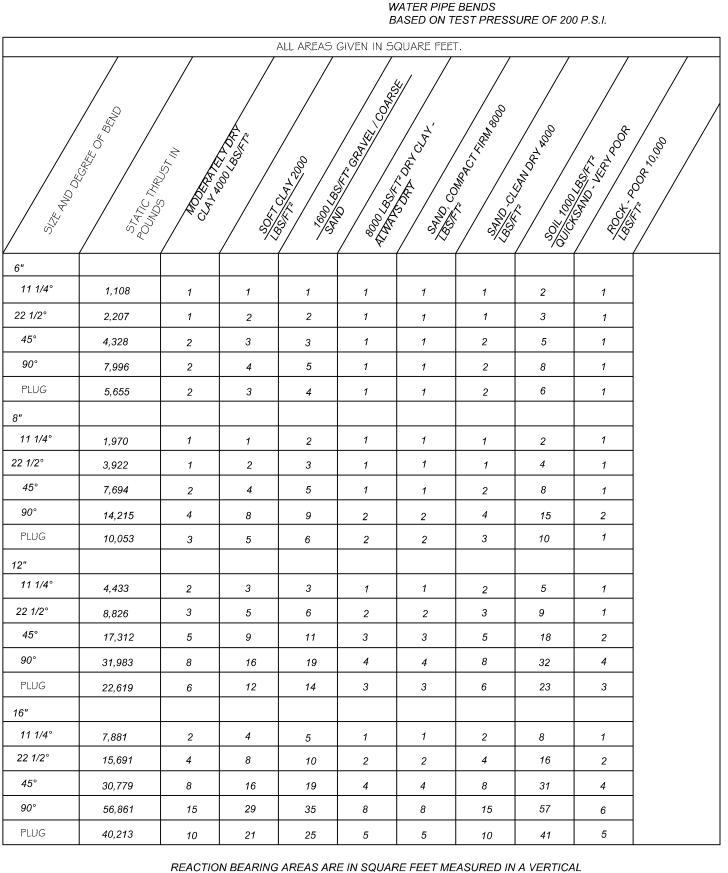
CITY OF RALEIGH

DEPARTMENT OF PUBLIC UTILITIES

THRUST BLOCKING DESIGN DATA

FOR WATER MAINS

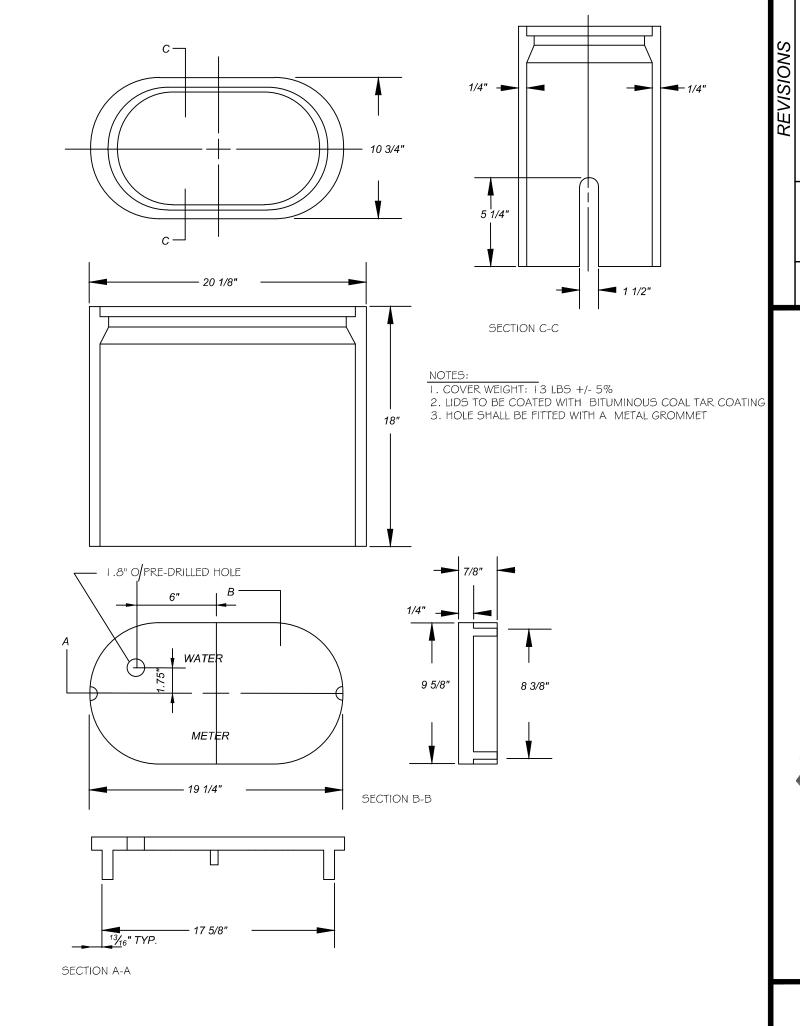
6-18-08

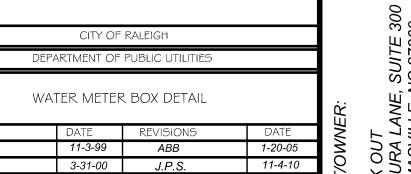


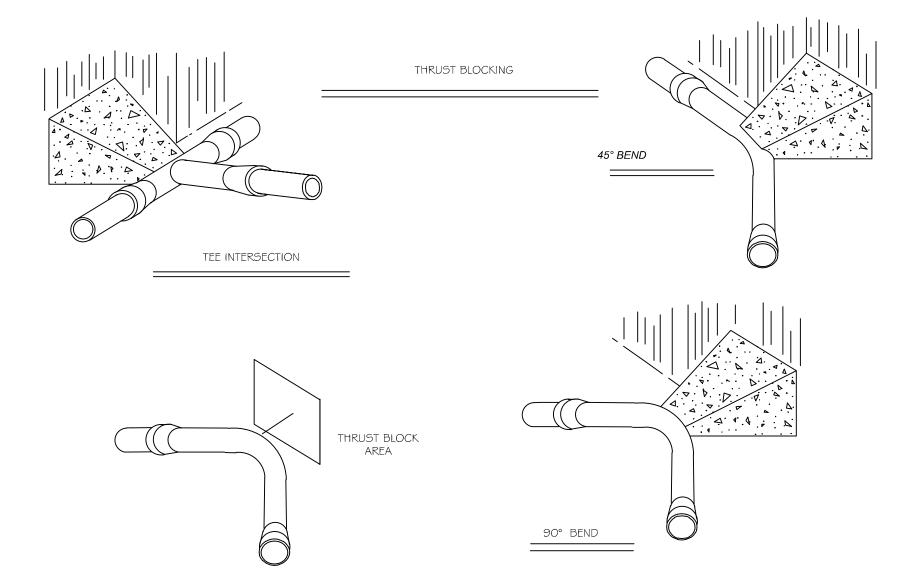
REACTION BEARING AREAS FOR HORIZONTAL

PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR. USE 6" - 90 BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

	CITY OF	RALEIGH	
DE	EPARTMENT OF	PUBLIC UTILITIES	
T		CKING DESIGN TY TABLE	
EVISIONS	DATE	REVISIONS	DATE
D.W.C.	6-23-99	J.P.S.	11-1-10







CITY OF RALEIGH

DEPARTMENT OF PUBLIC UTILITIES

3-31-00 J.P.S.

2-15-05

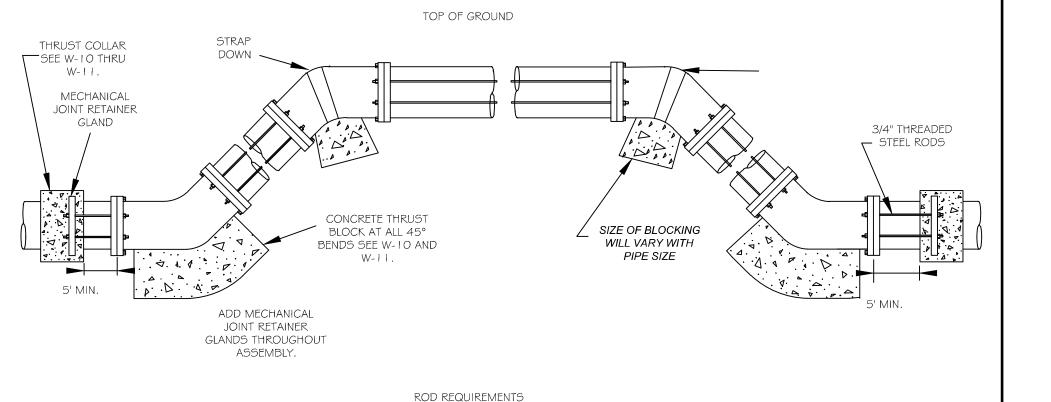
TRENCH BOTTOM DIMENSIONS & BACKFILLING

REQUIREMENTS FOR DUCTILE IRON

NOTES:

- 1. CONCRETE SHALL BE 3000 PSI 2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL
- 3. TRENCHES SHALL CONFORM TO STANDARD DETAIL W-3. 4. SEE STANDARD THRUST BLOCK TABLES, W-10 THRU W-11, FOR AREA
- OF CONCRETE REQUIRED. 5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST

	CITY OF RALEIGH						
	DEPARTMENT OF PUBLIC UTILITIES						
	STANDARD THRUST BLOCKING VIEWS						
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE			
W-9	D.W.C.	3-1-87	RRH	3-31-00			
vv-9	9-7-99 D.H.L. 6-18-08						

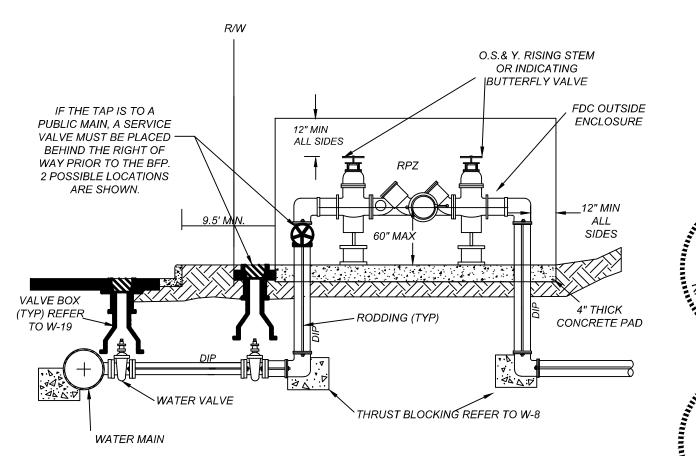


TOD REGULETIO						
SIZE OF 45 BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED				
6"	4,328	2				
8"	7,694	4				
12"	17,312	4				
16"	30,779	8				
24"	69,252	8				

5. 3' MINIMUM COVER MUST BE MAINTAINED ON ALL WATER MAINS

- GENERAL NOTES: 1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
- 2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS. 3. RESTRAINED MECHANICAL GLANDS TO BE USED AT ALL FITTINGS. 4. MUST USE DUCTILE IRON EYE BOLTS WHERE NECESSARY.

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	Di		RALEIGH	
	DE	PARIMENT OF	PUBLIC UTILITIES	
		STAND VERTICAL		
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-12	ABB D.H.L.	4-6-04 6-18-08	J.P.S.	11-1-10



1. ALL ABOVE GROUND ENCLOSURES MUST HAVE ADEQUATE DRAINAGE (TWICE THE DIAMETER OF THE SUPPLY PIPE) 2. REDUCED PRESSURE BACKFLOW PRESENTERS MAY BE LOCATED IN A BUILDING PROVIDED THERE ARE NO OTHER UNPROTECTED TAPS BETWEEN THE MAIN AND THE BUILDING. DRAINAGE IN A BUILDING MUST BE TWICE THE DIAMETER

OF THE SUPPY PIPE. 3. ABOVE GROUND INSULATED VAULTS MUST BE ASSE 1060 APPROVED ABOVE GROUND ENCLOSURES. SEE CROSS CONNECTION MANUAL FOR ENCLOSURE FREEZE PROTECTION AND CERTIFICATION REQUIREMENTS.

4. RESIDENTIAL LAWN IRRIGATION R.P. ASSEMBLIES THAT ARE REMOVED TO PREVENT FREEZING IN THE WINTER

MONTHS MUST BE CAPPED OFF. ALL ABOVE GROUND ASSEMBLIES, EXCEPT RESIDENTIAL LAWN IRRIGATION ASSEMBLIES, MUST BE PROTECTED FROM FROST. 6. FOR ENCLOSURE DIMENSIONS SEE DETAIL W-34.

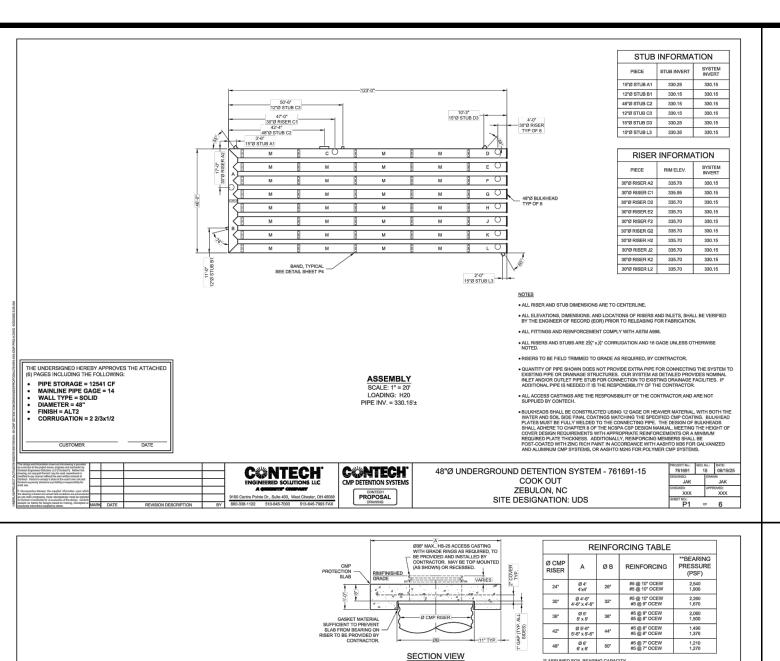
7. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED. 8. ALL ASSEMBLIES MUST BE ON THE CURRENT APPROVAL LIST.

	CITY OF RALEIGH					
	DEPARTMENT OF PUBLIC UTILITIES					
	TYPICAL REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE		
W-36	Y.C.A.	12-31-91	A.B.B.	7-10-04		
00-VV	D.W.C.	11-8-99	D.H.L.	6/18/08		



TL3a
TL3e
TL3e
TL3a
)2

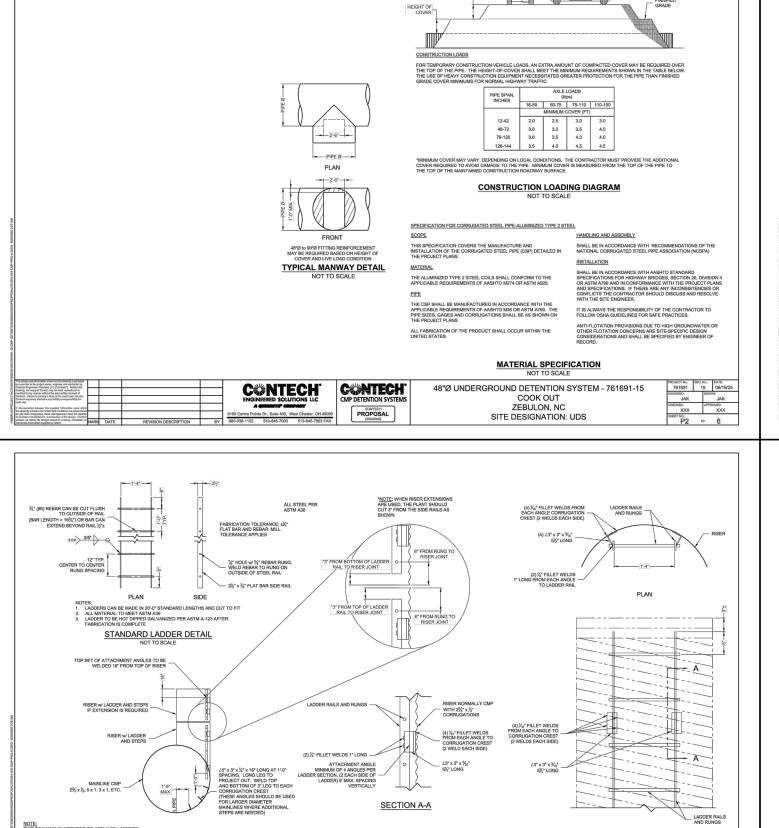
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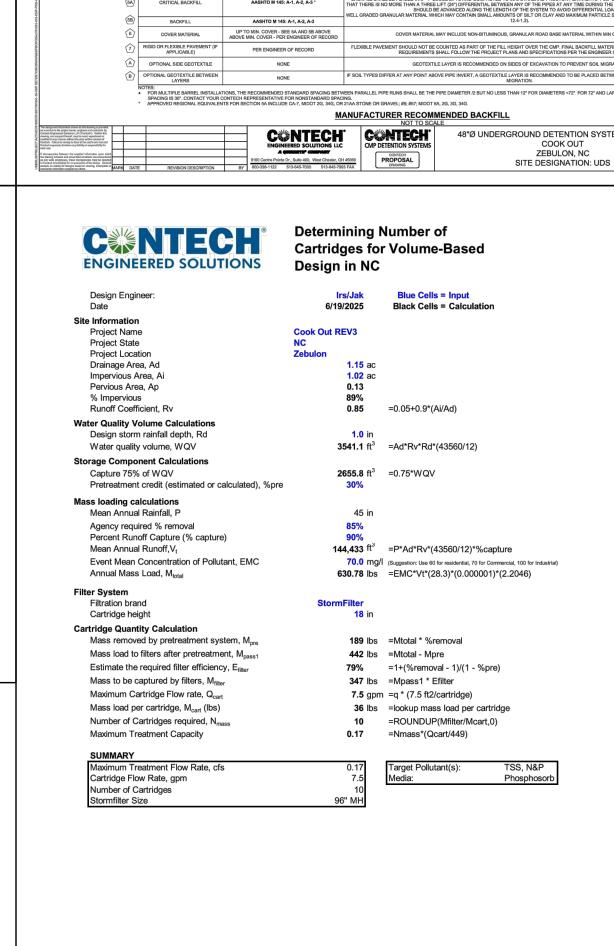


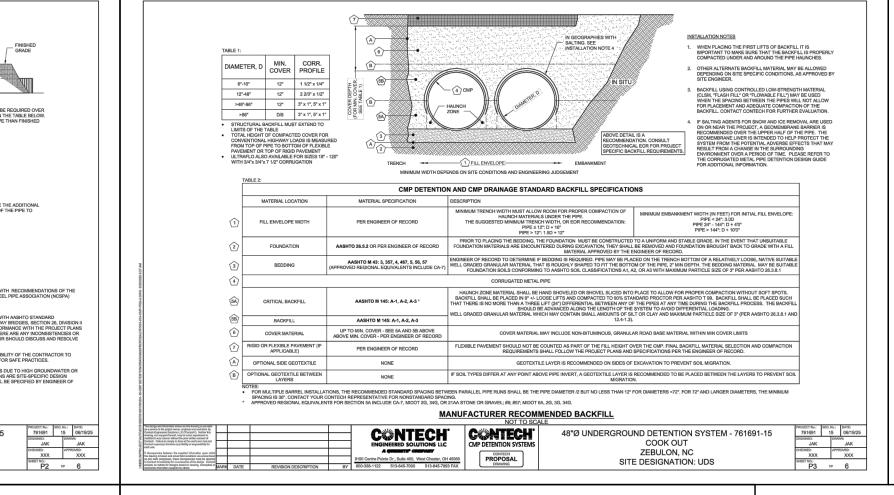
ACCESS CASTING NOT SUPPLIED BY CONTECH

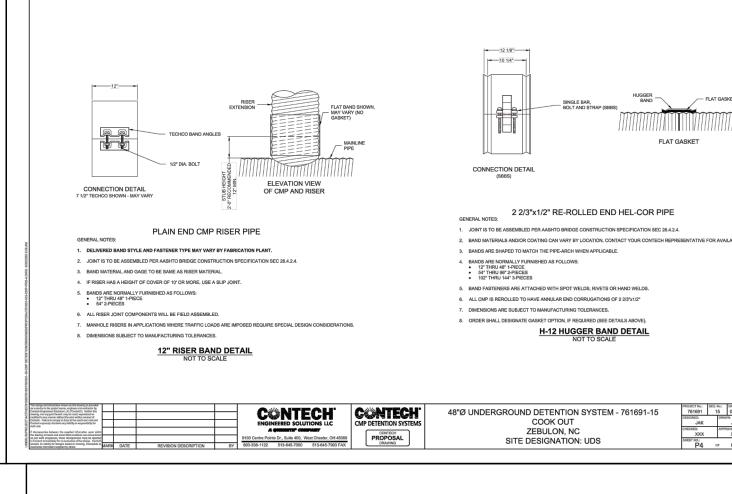
ROUND OPTION PLAN VIEW

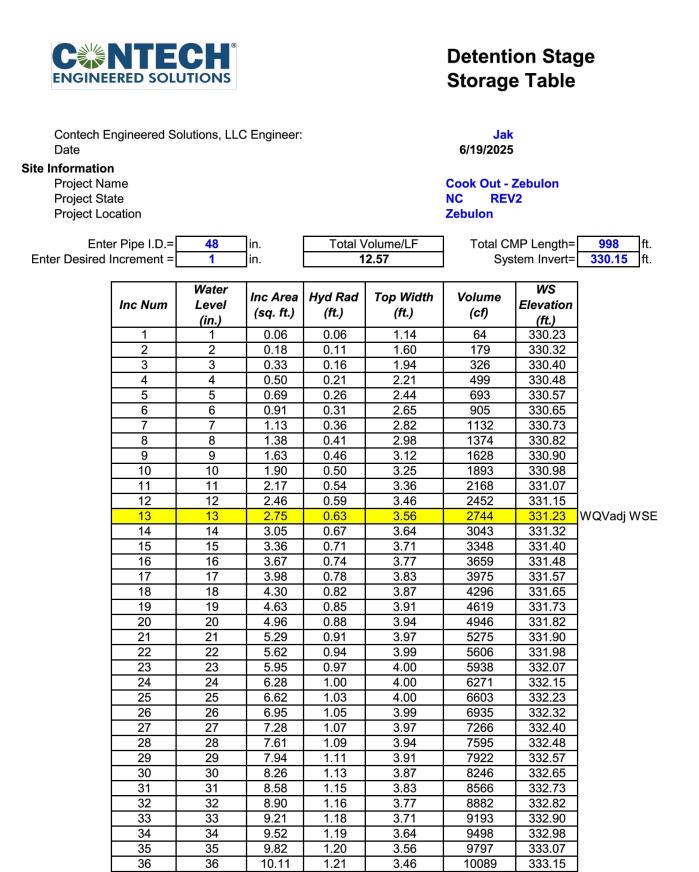
PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.











These results are submitted to you as a guideline only, without liability on the part of CONTECH Construction Products Inc. for accuracy or suitability to any particular application, and are subject to your verification.

37	37	10.39	1.21	3.36	10373	333.23
38	38	10.67	1.22	3.25	10648	333.32
39	39	10.94	1.22	3.12	10913	333.40
40	40	11.19	1.22	2.98	11167	333.48
41	41	11.43	1.21	2.82	11409	333.57
42	42	11.66	1.21	2.65	11636	333.65
43	43	11.87	1.19	2.44	11848	333.73
44	44	12.07	1.18	2.21	12042	333.82
45	45	12.24	1.16	1.94	12215	333.90
46	46	12.39	1.13	1.60	12362	333.98
47	47	12.50	1.10	1.14	12478	334.07
48	48	12.57	1.00	0.00	12541	334.15

CINTECH® ENGINEERED SOLUTIONS

The Stormwater Management StormFilter

48"Ø UNDERGROUND DETENTION SYSTEM - 761691-15

CAST-IN-PLACE MANHOLE CAP DETAIL
NOT TO SCALE

PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.

 DETAIL DESIGN BY DELTA ENGINEERS, ARCHITECTS AND LAND SURVEYORS, ENDWELL, NY.

Volume StormFilter Outflow & Orifice Calculation Zebulon, NC

Input Calculated

Project Name:	Cook Out - Zebulon	Date:	6/19/25
Contech No:	761,691	Ву:	lrs/Jak

2. DESIGN LOAD HS25.

3. EARTH COVER = 1' MAX.

4. CONCRETE STRENGTH = 4,000 psi

5. REINFORCING STEEL = ASTM A615, GRADE 60.

Discharge flow rate from StormFilter:

Restrictor Disc Diameter (in) 0

Restrictor Disc Diameter (in)	0.443
Restrictor Disc Diameter (ft)	0.037

Restrictor Disk Calibration:

The Volume StormFilter restrictor disc is calibrated to flow at 7.5 gpm at 10 feet of head, or 1 gpm/sf or less for all cartridge sizes

Orifice Coefficient	0.61
Area of Restrictor Disc (sf)	0.0011
Head, h (ft)	10
Flow, Q (cfs)	0.017
Flow, Q (gpm)	7.5

 $Q = cA\sqrt{2Gh}$ $Q = (0.61) \left(\frac{0.037^{2}}{4}\pi\right) \sqrt{2(32.2)(10)}$ Q = 0.017 cfs = 7.5 GPM

Cook Out - Zebulon Specific Data:

Max. Head, h, on Cartridges (ft) 5.85

Number of cartridges

During the worst-case scenario, there is 5.85 feet of head available on the orifice.

Flow Rate per Cartridge:	
Flow, Q (cfs)	0.0127
Flow, Q (gpm)	5.69

 $Q = cA\sqrt{2Gh}$

With 5.85 of head available, each cartridge will discharge 5.69 gpm, or 0.0127 cfs. Since 5.69 gpm is less than the 1 GPM/sf flow rate of 7.5 GPM for the 18-inch cartridge, the mass loading calculations are preserved and 10 cartridges are suitable for this site.

Total Unit Outflow:		
Flow, Q (cfs) per cartridge	0.0127	
Flow, Q (cfs) total	0.127	(Q = No. Cartridges x Flow per Cartridge)

With 10 cartridges, the total StormFilter discharge outflow rate is 0.127 cfs during the worst-case scenario.





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ELEVATION

48"Ø UNDERGROUND DETENTION SYSTEM - 761691-15

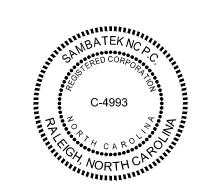
Equivalent Orifice Diameter:

The following equations back-calculate from the total worst-case StormFilter flow rate and head to determine an equivalent orifice diameter that can be used to represent the StormFilter when designed on a volume/mass basis.

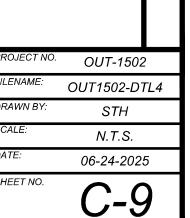
Total Outflow (cfs)	0.127
Orifice Coefficent	0.61
Max. Head on cartridges (ft)	5.85
Equivalent Diameter, D (ft)	0.117
Equivalent Diamter, D (in)	1.402

 $Q = cA\sqrt{2Gh}$ $Q = (0.61)\left(\frac{D^2}{4}\pi\right)\sqrt{2(32.2)h}$ $D = \left(\frac{4Q}{(0.61)(1)\sqrt{2(32.2)h}}\right)^{\frac{1}{2}}$

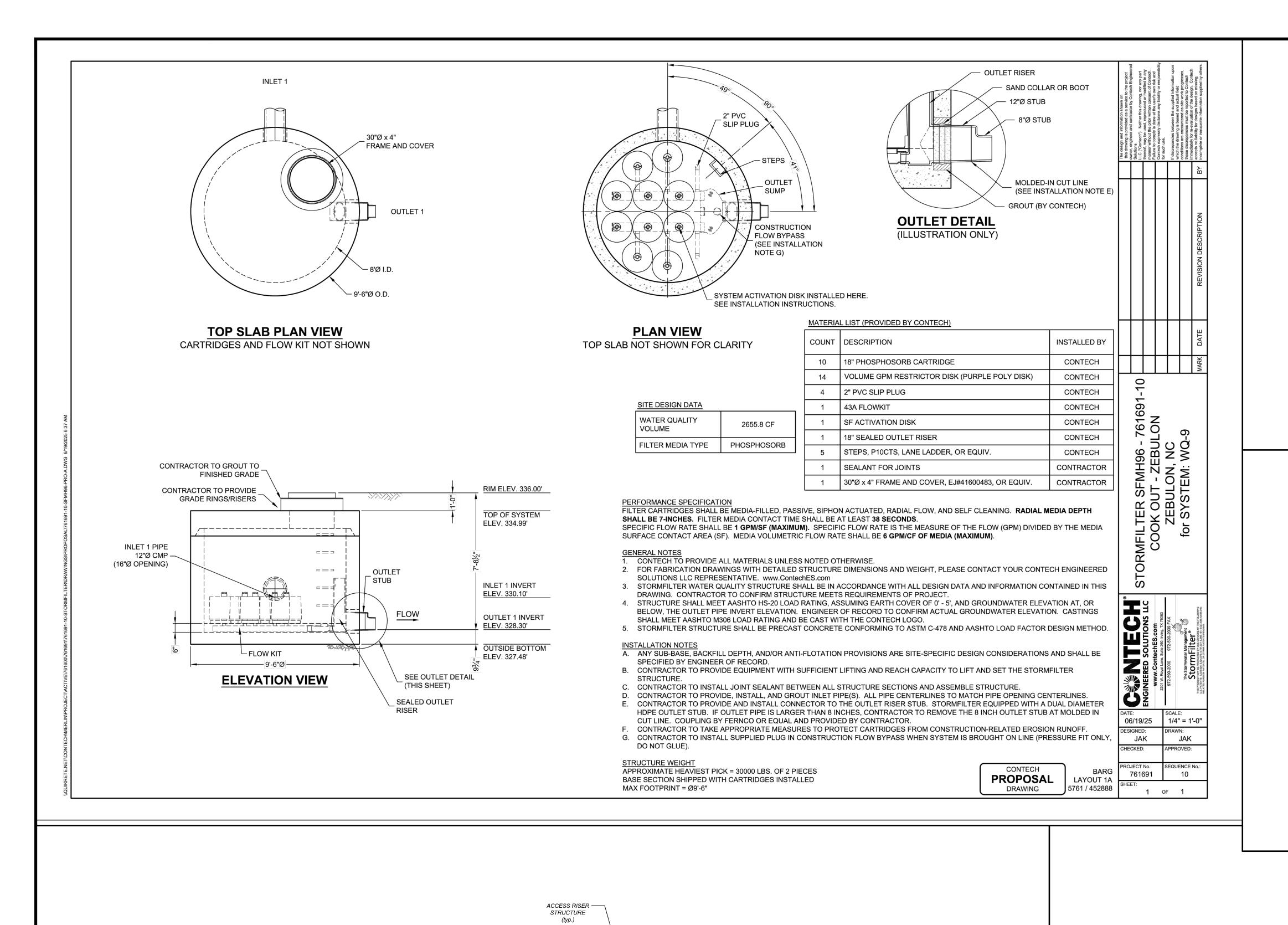
This equivalent orifice, however, it not a physical orifice. It is simply a method for accounting for the flow through the Volume StormFilter in routing calculations when required.







Sambatek.com www.sambatek.com



- 6" CMP OUTLET TO STORMFILTER

INV. = 330.10' (TOP OF CARTRIDGES)

- OUTLET CONTROL STRUCTURE

(SEE DETAIL 1)

ACCESS RISER

(8) 123 LF 48" CMP @ 0.25% WITH MANIFOLD

DETENTION STRUCTURE

(SEE CONTECH DETAILS)

STORMFILTER

WATER QUALITY DEVICE -

STORMFILTER

CARTRIDGE (typ.)

UNDERGROUND DETENTION AND TREATMENT SYSTEM SECTION VIEW

12" CMP OUTLET TO OCS — INV = 328.30 18" LOW DROP

STRUCTURE

ACCESS RISER

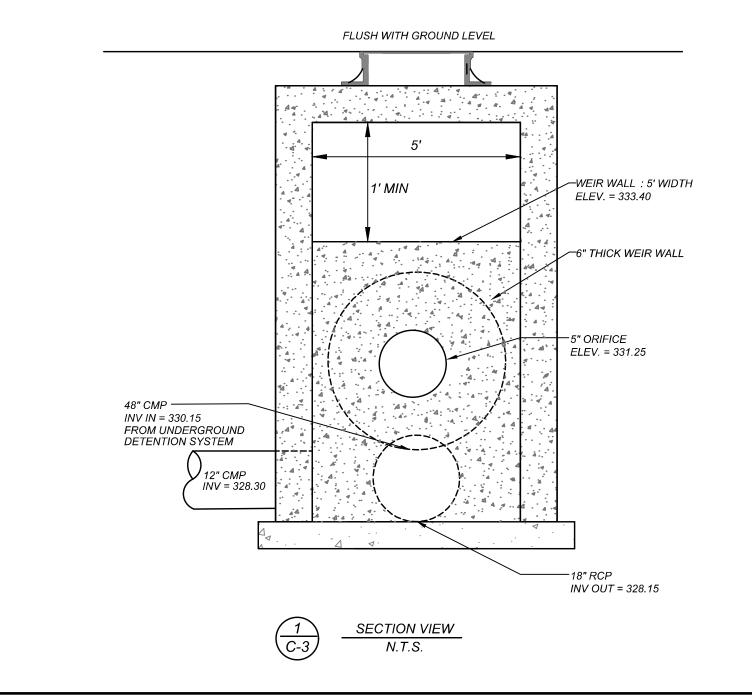
STRUCTURE

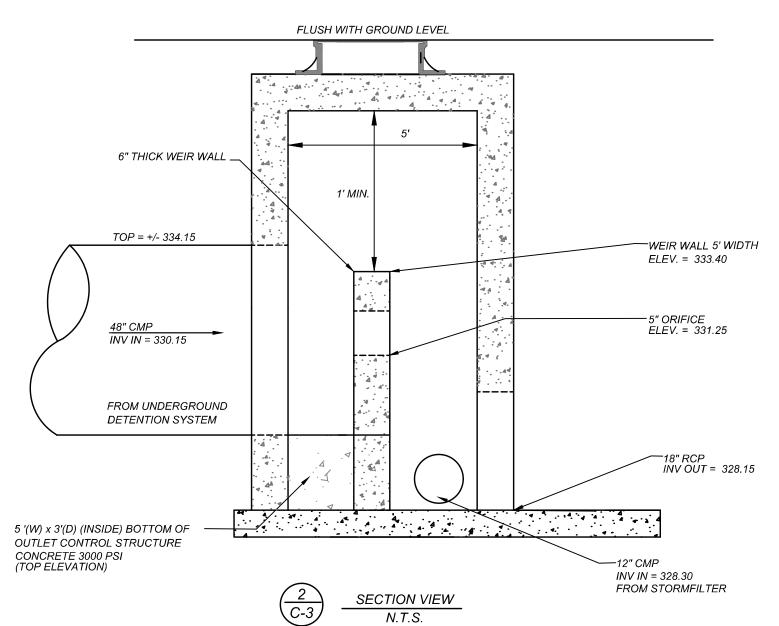
▼ 100 YEAR ELEV. = 334.07

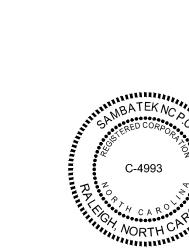
▼ 10 YEAR ELEV. = 333.21

▼ 1 YEAR ELEV. = 331.87 **▼** *WQv, ELEV.* = 331.23

- INV = 330.30'











OUT-1502 OUT1502-DTL4a STH N.T.S. 06-24-2025

SITE PLAN GENERAL NOTES

- 1. THE INFORMATION SHOWN HEREIN WAS TAKEN FROM A TOPOGRAPHIC SURVEY PREPARED BY: COMMERCIAL SITE DESIGN 8312 CREEDMOOR ROAD RALEIGH, NORTH CAROLINA PHONE 919-848-6121; FAX 919-848-3745
- 2. THE LOCATIONS OF ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UTILITIES WITH THE UTILITY OWNERS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 3. ALL HANDICAP SITE FEATURES SHALL BE CONSTRUCTED TO MEET ALL FEDERAL, STATE AND LOCAL CODES.
- 4. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS, AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
- 5. PRIOR TO STARTING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION OF ANY ITEM SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED ALL PLANS AND ANY OTHER DOCUMENTATION FROM ALL OF THE PERMITTING AND ANY OTHER REGULATORY AUTHORITIES. FAILURE OF THE CONTRACTOR TO FOLLOW THIS PROCEDURE SHALL CAUSE THE CONTRACTOR TO ASSUME FULL RESPONSIBILITY FOR ANY SUBSEQUENT MODIFICATION OF THE WORK MANDATED BY ANY REGULATORY AUTHORITY. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY AND LOCAL CODES.
- 6. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHT-OF-WAYS, PUBLIC OR PRIVATE, PRIOR TO WORKING IN THESE AREAS.
- 7. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
- 8. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH RESPECTIVE UTILITY.
- 9. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND/OR MATERIAL INSIDE OR OUTSIDE CONTRACT LIMITS DUE TO CONSTRUCTION OPERATIONS.
- 10. ALL DIMENSIONS ARE TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.
- 11. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
- 12. THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
- 13. THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
- 14. GENERAL CONTRACTOR WILL ERECT AND ILLUMINATE A SITE IDENTIFICATION SIGN, PER OWNER'S SPECIFICATION. COORDINATE LOCATION WITH OWNER'S REPRESENTATIVE
- 15. FINISH CURB AND WALK ELEVATIONS SHALL BE 6" ABOVE FINISH PAVEMENT GRADE UNLESS NOTED DIFFERENT ON PLAN.
- 16. CONTRACTOR SHALL ENSURE THAT ADEQUATE SITE LIGHTING IS PROVIDED PER OWNER'S SPECIFICATIONS.
- 17. ALL RADII DIMENSIONS ARE TO FACE OF CURB.
- 18. ALL UTILITIES TO SERVICE BUILDING SHALL BE UNDERGROUND ON SITE, UNLESS OTHERWISE INDICATED.
- 19. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
- 20. ALL DISTURBED AREAS SHALL HAVE TEMPORARY SEEDING AND MULCHING. ALL AREAS THAT ARE PLANNED TO BE BARE FOR MORE THAN 45 DAYS SHALL BE SEEDED AND MULCHED WITHIN SEVEN (7) DAYS.
- 21. THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON THE PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COSTS HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE, OTHER OBSTRUCTIONS OR FROM ANY DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NON-SUBSCRIBING UTILITIES. THE CONTRACTOR(S) SHALL CONTACT NORTH CAROLINA "ONE CALL" AT 800-632-4949 FOR ASSISTANCE IN LOCATING EXISTING UTILITIES. CALL AT LEAST 48 HOURS PRIOR TO ANY DIGGING.

- 22. ALL LOT STRIPING AND DIRECTIONAL ARROWS TO BE WHITE REFLECTIVE MARKINGS AND SHALL CONFORM TO LOCAL REGULATIONS.
- 23. COMPACTION AND MAINTENANCE OF PROPER MOISTURE CONTENT OF THE SOIL UNDER BUILDINGS AND PAVED AREAS SHALL BE ACCOMPLISHED TO ACHIEVE 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY OR AS RECOMMENDED IN THE SOIL REPORT.
- 24. THE CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
- 25. BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL REVIEW ALL PLANS AND SPECIFICATIONS AND THE JOB SITE. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER WHO PREPARED THE PLANS OF ANY DISCREPANCIES THAT MAY REQUIRE MODIFICATIONS TO THESE PLANS OR OF ANY FIELD CONFLICTS.
- 26. ALL PERMITS RELATIVE TO THE PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY AND LOCAL CODES.
- 27. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS.
- 28. ALL PARKING LOT DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- 29. CONTRACTOR SHALL COORDINATE EXACT SIZE OF HVAC CONCRETE PADS WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL PLANS FOR DETAILS.
- 30. ALL SEEDING, TEMPORARY AND PERMANENT, TO BE INSTALLED TO LOCAL REGULATIONS AND STANDARD PRACTICES.
- 31. ALL ROAD WORK SHALL BE PERFORMED IN ACCORDANCE WITH "THE CURRENT EDITION OF THE STATE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS".
- 32. ANY AND ALL QUANTITIES SHOWN OR IMPLIED ON THESE PLANS ARE FOR ESTIMATION PURPOSES ONLY.
- 33. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE IRRIGATION CONTRACTOR, FOR IRRIGATION SLEEVE SIZE FOR IRRIGATION SYSTEM.
- 34. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD THE OWNER AND DESIGN PROFESSIONAL HARMLESS OF ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, ACCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR DESIGN PROFESSIONAL.

UTILITY PLAN GENERAL NOTES

- 1. UTILITY INFORMATION SHOWN HEREON WAS OBTAINED FROM THE BEST AVAILABLE SOURCE AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT LOCATIONS OF EXISTING UTILITIES AND IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITIES, EITHER PUBLIC OR PRIVATE, SHOWN HEREON OR NOT SHOWN HEREON. ANY REPAIRS SHALL BE DONE TO THE SATISFACTION OF THE APPROPRIATE UTILITY COMPANY.
- 2. THE GENERAL CONTRACTOR SHALL CONFIRM ALL NEW UTILITY TAP LOCATIONS WITH THE UTILITY OWNERS. ALL FEES SHALL BE THE RESPONSIBILITY OF DEVELOPER.
- 3. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.
- 4. NEW LOT LIGHT FOUNDATION BASES, CONDUIT AND WIRING ARE BY THE GENERAL CONTRACTOR. POLES, FIXTURES, ANCHOR BOLTS & HARDWARE SHALL BE COORDINATED WITH THE OWNER AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- 5. ALL NEW LOT LIGHTS AND THE MAIN IDENTIFICATION SIGN SHALL HAVE A MINIMUM 10 FEET CLEARANCE FROM ALL OVERHEAD UTILITIES.
- 6. GENERAL CONTRACTOR IS RESPONSIBLE FOR PERMITS AND/OR APPROVALS NECESSARY FOR ANY WORK IN ROADWAY OR RIGHT-OF-WAY.
- 7. ALL TRENCH EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH TRENCH BACKFILL DETAIL SHOWN ON THESE PLANS.
- 8. MINIMUM COVER FOR CONDUITS SHALL BE 36" UNLESS OTHERWISE SHOWN OR NOTED ON THESE PLANS. 9. ALL MANHOLES, VALVES, AND MONUMENT FRAMES SHALL BE SET TO FINISH
- GRADE AFTER PAVING. 10. THE CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF
- THE STATE CONSTRUCTION SAFETY ORDERS. TRENCHES SHALL BE SHORED IN ACCORDANCE WITH OSHA. 11. THE MINIMUM SLOPE FOR SANITARY SEWER LINES SHALL BE AS FOLLOWS: 1)
- 1/4"/FT FOR 4" LINES AND 2) 1/8"/FT FOR 6" LINES. CLEANOUTS SHALL BE PLACED AT 75' INTERVALS.
- 12. ALL WATER LINES SHALL HAVE A FINAL COVER DEPTH OF 3'-0" IN NON-TRAFFIC AREAS AND 4'-0" MINIMUM IN TRAFFIC AREAS UNLESS SPECIFICALLY NOTED OTHERWISE.
- 13. ALL SEWER LINES SHALL HAVE A FINAL COVER DEPTH 4'-0" IN NON-TRAFFIC AREAS AND 5'-0" MINIMUM IN TRAFFIC AREAS UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS.
- 14. SANITARY SEWER SERVICES SHALL BE PVC SDR 35 TO R/W, THEN PVC SCH. 40 TO BUILDING. WATER SERVICE SHALL BE TYPE "K" COPPER.
- 15. CABLE TV SERVICE ROUTING IS NOT PART OF THIS PLAN, CONTRACTOR TO COORDINATE WITH CABLE COMPANY.
- 16. EXISTING MANHOLES SHOULD BE FIELD VERIFIED FOR RIMS AND INVERTS.
- 17. ALL WORK SHALL BE GOVERNED BY THE LATEST EDITIONS OF THE STATE MECHANICAL, PLUMBING, ELECTRICAL, FIRE PROTECTION, BUILDING CODE, ENERGY CONSERVATION, HANDICAP ACCESSIBILITY, NATIONAL ELECTRICAL CODES AND NATIONAL FIRE PROTECTION ASSOCIATION CODES AND AS ADOPTED BY THE AUTHORITIES HAVING JURISDICTION.
- 18. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS. CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
- 19. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS/METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
- 20. OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING 5 FEET IN DEPTH.
- 21. EXCAVATION EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRES THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.
- 22. EQUIPMENT AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED PROVIDED PRIOR APPROVAL HAS BEEN OBTAINED FROM THE OWNER IN WRITING PRIOR TO ORDERING OR INSTALLATION. THE CONTRACTOR SHALL WAIVE ANY CLAIM FOR ADDITIONAL COST RELATED TO THE SUBSTITUTION OF ALTERNATE EQUIPMENT.
- 23. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
- 24. ONLY SEWAGE NOT CONTAINING GREASE IS ALLOWED TO BYPASS THE
- 25. ALL SANITARY SEWER SERVICES AND STORM DRAIN PIPING 8" IN DIAMETER OR SMALLER SHALL BE SCH. 40 PVC WITH ADHESIVE "WELDED JOINTS, UNLESS SPECIFIED OTHERWISE OR REQUIRED BY LOCAL GOVERNING MUNICIPALITY. MINIMUM SLOPES ON SANITARY SEWER SERVICES: 4" - 1/4"/FT,
- 26. BELOW GRADE WATER SERVICE PIPING SHALL BE TYPE "K" HARD DRAWN COPPER TUBING WITH SILVER SOLDER JOINTS. SOLDERS CONTAINING LEAD SHALL NOT BE USED FOR ANY PURPOSE ON THIS PROJECT, WHERE PIPING IS REQUIRED TO RUN BELOW BUILDING SLAB, IT SHALL BE INSTALLED WITHOUT JOINTS BELOW SLAB.
- 27. WATER PIPING SHALL BE CONNECTED TO BUILDING STUBS, VERIFY LOCATIONS PRIOR TO BEGINNING WATER PIPE INSTALLATION.
- 28. WASTE PIPING SHALL BE CONNECTED TO BUILDING STUBS, VERIFY LOCATIONS AND INVERTS PRIOR TO BEGINNING ANY WASTE PIPE INSTALLATION.
- 29. CONTRACTOR SHALL NOTIFY THE LOCAL LOCATE SERVICE BY CALLING 811 AT LEAST 12 FULL WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENTLY.
- 30. ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF ____ PUBLIC UTILITIES AND CROSS CONNECTION CONTROL REGULATIONS AND STANDARDS.
- 31. SITE UTILITY CONTRACTOR TO PROVIDE WATER, SANITARY SEWER, AND ROOF DRAIN LEADERS TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE SITE PLAN CONNECTIONS WITH THE ARCHITECTURAL

BUILDING PLANS.

- 32. SITE UTILITY CONTRACTOR TO PROVIDE WATER, SANITARY SEWER, AND ROOF DRAIN LEADERS TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE SITE PLAN CONNECTIONS WITH THE ARCHITECTURAL
- 33. SANITARY CLEANOUTS SHALL BE PLACED NO MORE THAN 75 FEET APART. CLEAN OUTS LOCATED IN PAVEMENT AREAS SHALL HAVE HEAVY DUTY TRAFFIC RATED CONSTRUCTION.
- 34. CONNECTION OF SANITARY SEWER SERVICE TO AN EXISTING MANHOLE SHALL COMPLY WITH THE TOWN OF _____ STANDARDS, INCLUDING: CORE DRILL FOR OPENING INTO MANHOLE AND INSTALL WITH FLEXIBLE BOOT. IF PAVEMENT CUT IS REQUIRED, CONTRACTOR SHALL PATCH PAVEMENT WITH A SECTION TO MATCH EXISTING PAVEMENT: 3" I-2, 8" ABC OR BETTER.

- 35. RELATION OF WATER MAINS TO SEWERS:
 - A. LATERAL SEPARATION OF SEWER AND WATER MAINS: WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION, IN WHICH CASE: 1). THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR 2). THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER LINE WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF

UNDISTURBED EARTH, AND ABOVE THE TOP OF THE SEWER.

- B. CROSSING A WATER MAIN OVER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER MAIN, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION - IN WHICH CASE BOTH THE WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
- C. CROSSING A WATER MAIN UNDER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER MAIN BOTH THE WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
- D. CROSSING A SEWER LINE OVER OR UNDER A STORM DRAIN: WHENEVER IT IS NECESSARY FOR A SEWER LINE TO CROSS A STORM DRAIN PIPE, THE SEWER LINES SHALL BE LAID AT SUCH AN ELEVATION THAT THE OUTSIDE OF THE SEWER LINE NEAREST TO THE OUTSIDE OF THE STORM DRAIN PIPE SHALL MAINTAIN A 12 INCH CLEAR SEPARATION DISTANCES, OR ENCASED IN EITHER CONCRETE OR DUCTILE IRON PIPE FOR AT LEAST 5 FEET ON EITHER SIDE OF THE CROSSING.
- 36. UNDERGROUND CONDUITS TO SIGNS, LOT LIGHTS, ETC., SHALL BE PLACED IN GRASS OR LANDSCAPE AREAS WHENEVER POSSIBLE. THE LOCATION OF THE CONDUIT AS SHOWN ON THESE PLANS SHALL BE CONSIDERED TO BE SCHEMATIC WITH ACTUAL LOCATION TO BE VERIFIED BY THE GENERAL CONTRACTOR, PVC SCH. 40 SLEEVES SHALL BE INSTALLED FOR ALL CONDUIT CROSSING UNDER PAVED AREAS.
- 37. SEE ELECTRICAL SHEETS FOR SIZE OF CONDUIT AND WIRE ON ALL ELECTRICAL SERVICES.
- TRANSFORMER BY ELECTRIC COMPANY, GENERAL CONTRACTOR TO PROVIDE PAD. REFER TO ELECTRIC COMPANY SPECIFICATIONS FOR PAD CONSTRUCTION.
- 38. TRANSFORMER BY ELECTRIC COMPANY, GENERAL CONTRACTOR TO PROVIDE PAD, REFER TO ELECTRIC COMPANY SPECIFICATIONS FOR PAD CONSTRUCTION.

DRAINAGE STRUCTURE NOTES

- 1. BOXES SHALL COMPLY WITH LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS.
- 2. ANY NONSTANDARD BOX IS TO BE DESIGNED BY A PROFESSIONAL ENGINEER.
- 3. THE MAXIMUM HEIGHT OF AN UN-REINFORCED MASONRY DRAINAGE STRUCTURE WITH 8" WALLS SHALL BE LIMITED TO 8'-0" FROM INVERT OF THE OUTLET PIPE TO THE TOP OF THE CASTING. DEPTHS GREATER THAN 8'-0" SHALL HAVE WALLS 12" THICK. BASINS OVER 12' IN TOTAL DEPTH SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER. FOUR INCH WALLS ARE NOT ALLOWED ON DRAINAGE STRUCTURES. BOTTOM SLAB ON STRUCTURES SHALL BE REINFORCED WHEN BOX DEPTHS EXCEEDS 8 FT.
- 4. STEPS ARE TO BE PROVIDED ON ALL BASINS DEEPER THAN 42".
- 5. STEPS ARE TO BE PS1-PF AS MANUFACTURED BY M.A. INDUSTRIES OR AN APPROVED EQUAL. LOCATE ON NON-PIPE WALLS.
- 6. MORTAR IN MASONRY BOXES IS TO BE TYPE M.
- 7. CLAY BRICK STRUCTURES ARE NOT ALLOWED.
- 8. CONCRETE PIPE IS TO BE MINIMUM CLASS III.
- 9. CONCRETE BUILDING BRICK IS TO MEET ASTM C-55, GRADE N, TYPE 1.
- 10. BASINS LOCATED IN WET AREAS, OR AS OTHERWISE REQUIRED BY THE TOWN ENGINEER, SHALL HAVE WEEP HOLES AS SHOWN ON DETAILS.
- 11. ALL CAST-IN-PLACE PRECAST CONCRETE DRAINAGE STRUCTURES LOCATED IN PAVED AREAS ACCESSIBLE TO TRUCK LOADINGS TO BE DESIGNED TO MEET AASHTO HS 20-44 LOADING. SEE MANUFACTURERS DETAILS FOR WALL, TOP AND BOTTOM THICKNESS.



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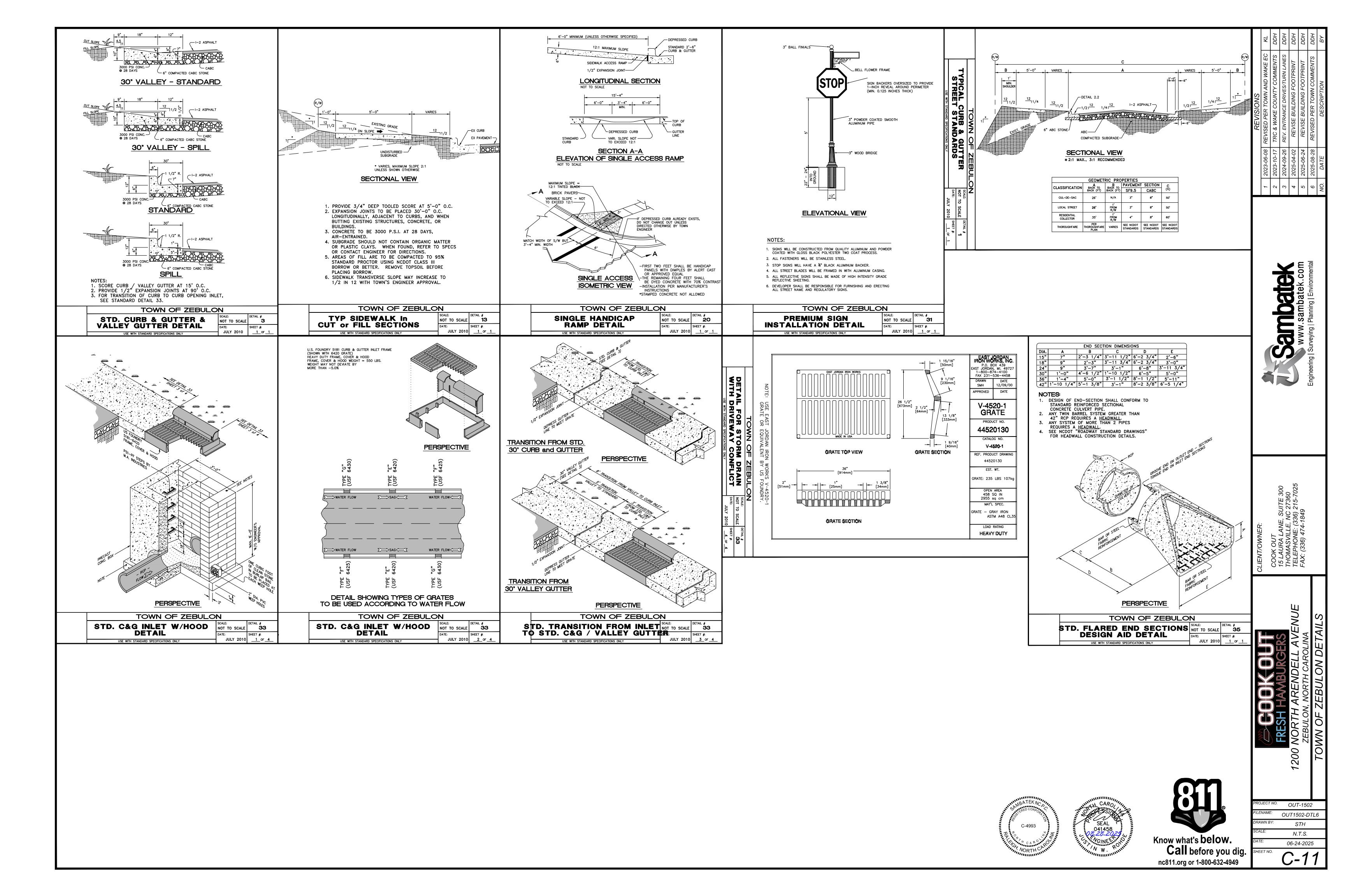
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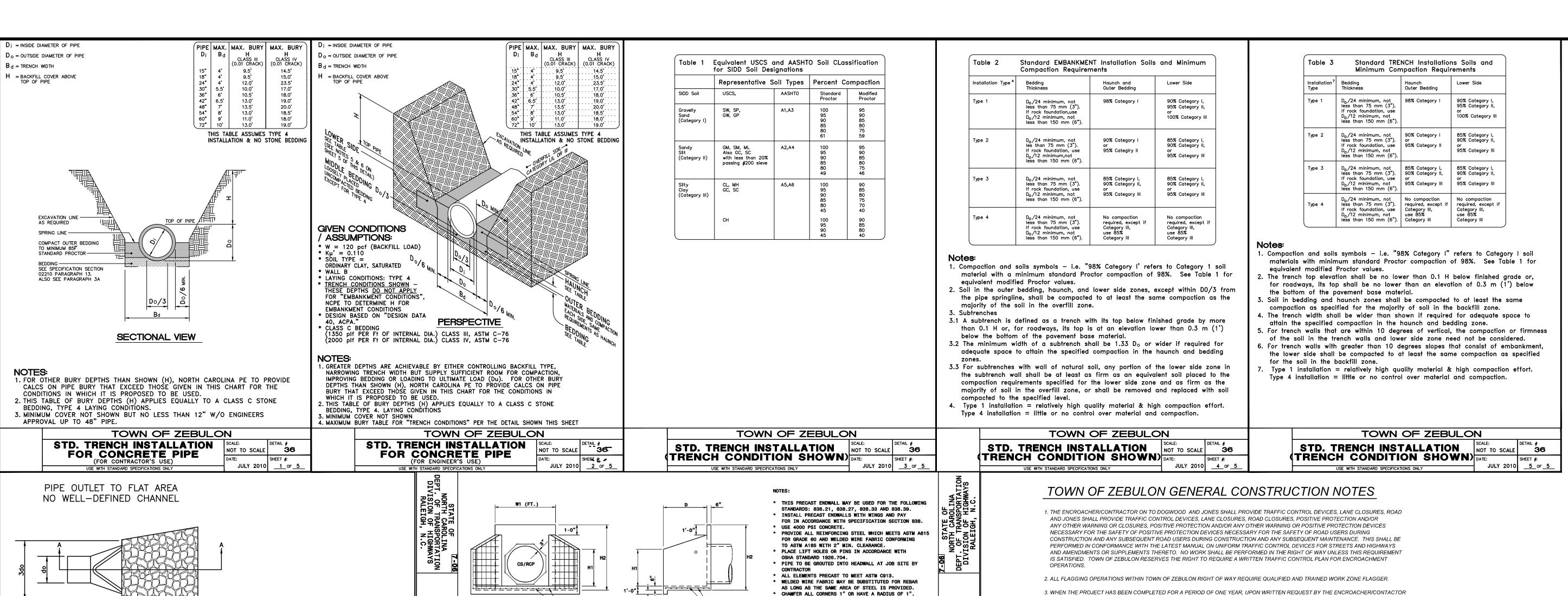
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N.T.S.

06-24-2025

C-10





NOTE: THE MINIMUM BAR SIZE SHALL BE #5 BARS AT 8" CTS.THE CONTRACTOR WILL HAVE THE OPTION TO INCREASE THIS BAR SIZE AS NEEDED.

838.80

SIDE

ENDWALL DIMENSIONS MINIMUM MIN./MAX. MIN./MAX. MIN./MAX. MIN./MAX.

1.0 #5 @ 8" | 1.25/2.00 | 2.00/3.75 | 1.25/1.75 | 3.00/3.75 | 5.50/6.00

1.25 #5 @ 8" | 1.25/2.00 | 3.00/3.75 | 1.25/2.00 | 3.50/3.75 | 6.50/6.75

1.50 | #5 @ 8" | 1.25/2.00 | 3.00/4.25 | 1.50/2.50 | 3.50/3.75 | 6.50/6.75

2.0 | #5 @ 8" | 1.50/2.50 | 4.00/4.75 | 1.75/2.50 | 4.00/4.25 | 7.50/8.25

2.5 | #5 @ 8" | 2.50/3.50 | 4.00/6.00 | 2.00/3.00 | 4.50/5.50 | 10.00/11.50

3.0 | #5 @ 8" | 3.00/3.50 | 5.00/6.00 | 2.75/3.50 | 5.25/5.75 | 11.50/11.75

3.5 | #5 @ 8" | 3.25/4.50 | 6.00/6.75 | 3.25/3.50 | 6.00/6.75 | 12.00/13.25

4.0 #5 @ 8" | 3.50/4.50 | 6.50/7.00 | 3.25/3.50 | 6.50/6.75 | 13.00/13.25 4.5 #5 @ 8" | 4.00/5.00 | 6.50/8.50 | 3.25/4.00 | 7.00/9.25 | 13.50/15.75 5.0 #5 @ 8" 4.50/5.00 7.00/8.50 3.25/4.00 7.25/9.25 13.75/15.75

5.5 #5 @ 8" | 4.50/5.00 | 7.50/8.50 | 3.25/4.00 | 7.25/9.25 | 14.00/15.75 6.0 | #5 @ 8" | 4.50/5.00 | 7.50/8.50 | 3.25/4.00 | 7.75/9.25 | 14.75/16.75

PIPE DIA. BAR SIZE | H1(FT.) | H2(FT.) | D (FT.)

ELEVATION

838.80

1. La IS THE LENGTH OF THE RIPRAP APRON.

NOT LESS THAN 6".

RIPRAP APRON

PIPE OUTLET TO WELL

DEFINED CHANNEL

2. d=1.5 TIMES THE MAXIMUM STONE DIAMETER BUT

3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON

UP THE CHANNEL BANKS TO AN ELEVATION OF 6"

ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE

4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE

TOPO OF THE BANK WHICHEVER IS LESS.

INSTALLED BETWEEN THE RIPRAP AND SOIL

5. SEE SCHEDULE FOR RIPRAP SIZE, WIDTH, &

3. WHEN THE PROJECT HAS BEEN COMPLETED FOR A PERIOD OF ONE YEAR, UPON WRITTEN REQUEST BY THE ENCROACHER/CONTACTOR TO THE DIRECTOR OF PUBLIC WORKS OR CONSTRUCTION INSPECTOR, A FINAL INSPECTION AND REVIEW WILL BE CONDUCTED BY TOWN OF ZEBULON PUBLIC WORKS

4. ANY PERSONNEL OR EQUIPMENT WORKING WITHIN FIVE FEET OF A TRAVEL LANE SHALL REQUIRE A FULL LANE CLOSURE. NO ROADWAY OF TRAFFIC SHALL BE CLOSED OR RESTRICTED BETWEEN THE HOURS OF 6:00 AM TO 8:30 AM AND 4:00 PM TO 6:00 PM MONDAY THROUGH FRIDAY. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.

5. ALL MATERIALS AND CONSTRUCTION ON DOGWOOD LANE AND JONES STREET SHALL BE IN ACCORDANCE TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS.

6. ANY EXISTING DRIVEWAYS, PAVEMENT, SIDEWALK, CURB AND GUTTER OR DRAINAGE STRUCTURES THAT ARE DAMAGED DURING

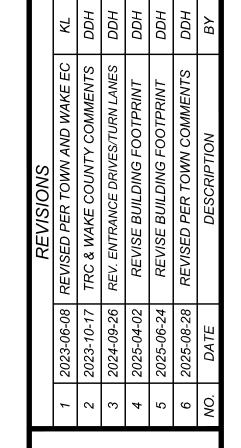
CONSTRUCTION SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION. 7. CONTRACTOR SHALL NOT PLACE EXCAVATED MATERIAL ON THE ROADWAY AT ANY TIME.

8. TOWN OF ZEBULON RESERVES THE RIGHT TO REVISE, RESTRICT, SUSPEND AND/OR VOID RIGHT TO COMPLETE WORK ON TOWN ROW IF THE EXECUTION AND/OR OPERATION OF SAID PERMIT IS FOUND TO BE A HAZARD TO THE TRAVELING PUBLIC.







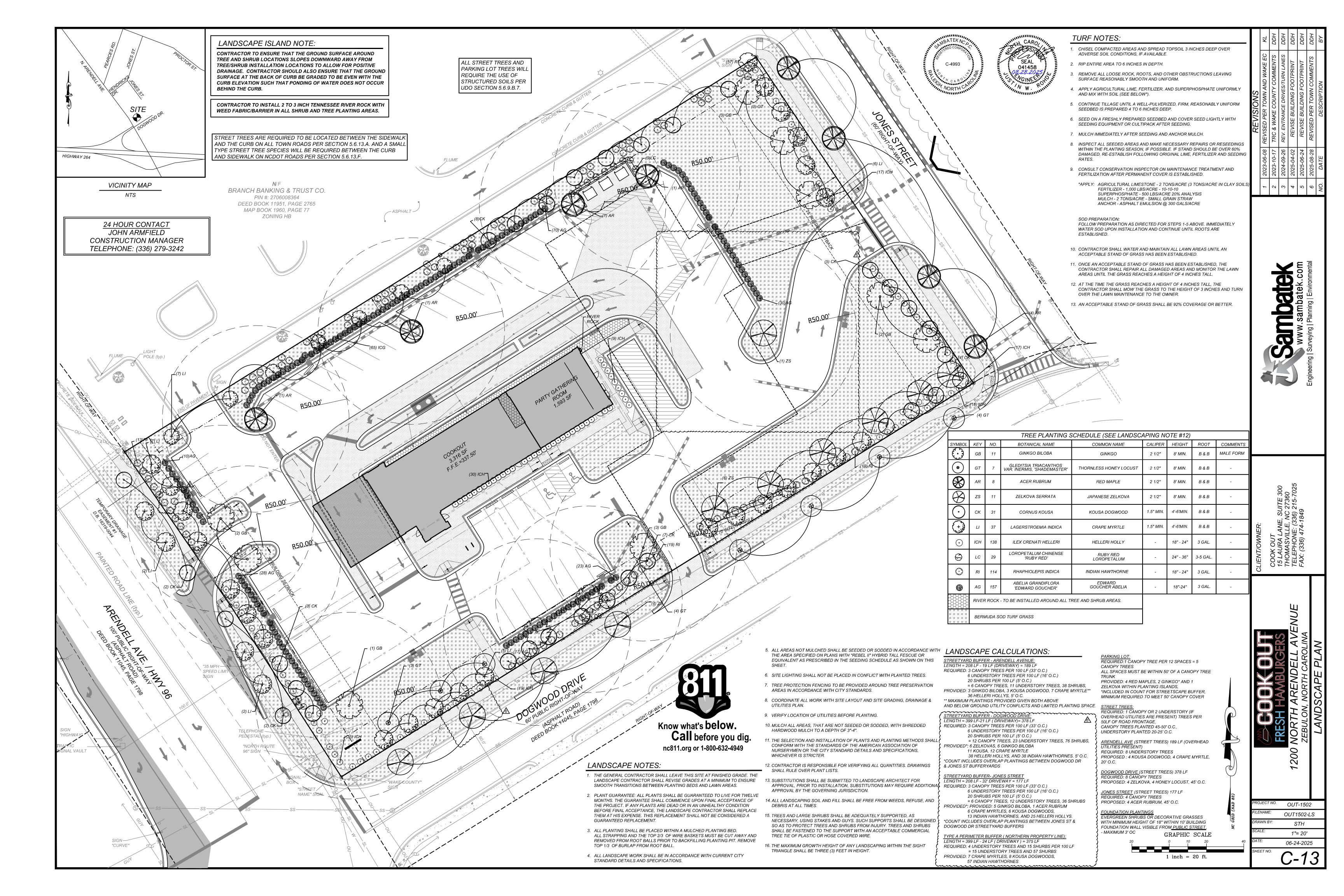


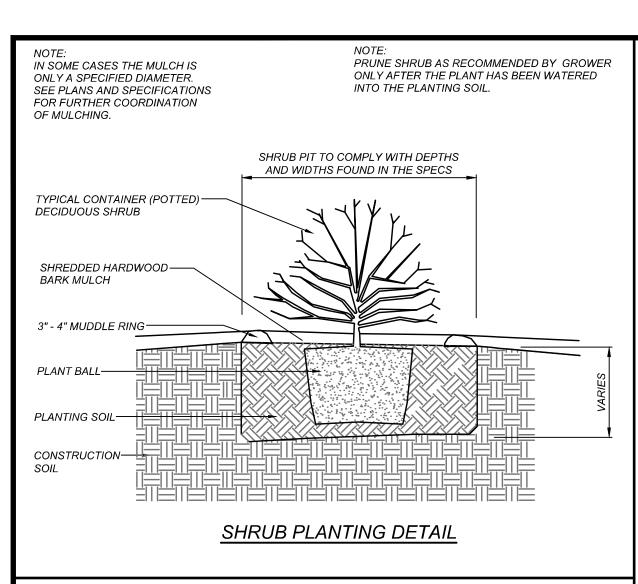


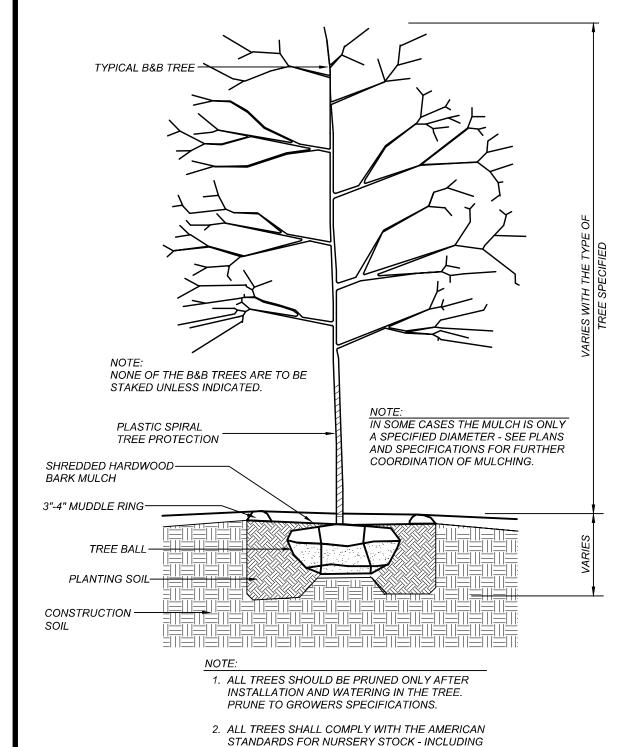
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06-24-2025

Know what's below.







PERMANENT SEEDING IN NORTH CAROLINA (TABLE 6.11s)

TREE PLANTING DETAIL

33 BU/ACRE (SPRIGS)

TREE PIT DEPTH AND WIDTH.

SEEDING MIXTURE

RATE (lb/acre) SPECIES CENTIPEDE GRASS 10-20 LB/ACRE (SEED) OR

SEEDING DATES:

MAR. - JUNE (SPRIGGING CAN BE DONE THROUGH JULY WHERE WATER

IS AVAILABLE FOR IRRIGATION.)

SOIL AMENDMENTS
ALLP LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 300 LB/ACRE 10-10-10.

SPRIGGING
PLANT SPRIGS IN FURROWS WITH A TRACTOR-DRAWN TRANSPLANTER OR BROADCAST BY HAND.

FURROWS SHOULD BE 4-6 INCHES DEEP AND 2 FT APART. PLACE SPRIGS ABOUT 2 FT APART IN THE ROW WITH ONE END AT OR ABOVE GROUND LEVEL. BROADCAST AT RATES SHOWN ABOVE, AND PRESS SPRIGS INTO THE TOP 1/2 - 2 INCHES OF SOIL WITH A DISK SET STRAIGHT SO THAT SPRIGS ARE NOT BROUGHT BACK

MULCH DO NOT MULCH.

TOWARD THE SURFACE.

FERTILIZE VERY SPARINGLY - 20 LB/ACRE NITROGEN IN SPRING WITH NO PHOSPHORUS. CENTIPEDEGRASS CANNOT TOLERATE HIGH PH OR EXCESS FERTILIZER.

ALL STREET TREES AND PARKING LOT TREES WILL REQUIRE THE USE OF STRUCTURED SOILS PER UDO SECTION 5.6.9.B.7.

TURF NOTES:

- 1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
- 2. RIP ENTIRE AREA TO 6 INCHES IN DEPTH.
- 3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- 4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).
- 5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY

UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.

- 6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
- 7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
- 8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, RE-ESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
- 9. CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
- *APPLY: AGRICULTURAL LIMESTONE 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS) FERTILIZER - 1,000 LBS/ACRE - 10-10-10 SUPERPHOSPHATE -500 LBS/ACRE 20% ANALYSIS MULCH - 2 TONS/ACRE - SMALL GRAIN STRAW ANCHOR - ASPHALT EMULSION @ 300 GALS/ACRE

FOLLOW PREPARATION AS DIRECTED FOR STEPS 1-5 ABOVE. IMMEDIATELY WATER SOD UPON INSTALLATION AND CONTINUE UNTIL ROOTS ARE

- 10. CONTRACTOR SHALL WATER AND MAINTAIN ALL LAWN AREAS UNTIL AN ACCEPTABLE STAND OF GRASS HAS BEEN ESTABLISHED.
- 11. ONCE AN ACCEPTABLE STAND OF GRASS HAS BEEN ESTABLISHED. THE CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS AND MONITOR THE LAWN AREAS UNTIL THE GRASS REACHES A HEIGHT OF 4 INCHES TALL.
- 12. AT THE TIME THE GRASS REACHES A HEIGHT OF 4 INCHES TALL, THE CONTRACTOR SHALL MOW THE GRASS TO THE HEIGHT OF 3 INCHES AND TURN OVER THE LAWN MAINTENANCE TO THE OWNER.
- 13. AN ACCEPTABLE STAND OF GRASS SHALL BE 92% COVERAGE OR BETTER.

LANDSCAPE NOTES:

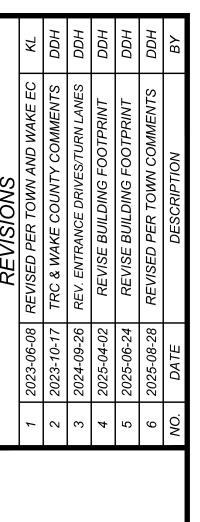
ESTABLISHED.

- I. THE GENERAL CONTRACTOR SHALL LEAVE THIS SITE AT FINISHED GRADE. THE LANDSCAPE CONTRACTOR SHALL REVISE GRADES AT A MINIMUM TO ENSURE SMOOTH TRANSITIONS BETWEEN PLANTING BEDS AND LAWN AREAS.
- PLANT GUARANTEE: ALL PLANTS SHALL BE GUARANTEED TO LIVE FOR TWELVE MONTHS. THE GUARANTEE SHALL COMMENCE UPON FINAL ACCEPTANCE OF THE PROJECT. IF ANY PLANTS ARE DEAD OR IN AN UNHEALTHY CONDITION BEFORE FINAL ACCEPTANCE, THE LANDSCAPE CONTRACTOR SHALL REPLACE THEM AT HIS EXPENSE. THIS REPLACEMENT SHALL NOT BE CONSIDERED A GUARANTEED
- . ALL PLANTING SHALL BE PLACED WITHIN A MULCHED PLANTING BED. ALL STRAPPING AND THE TOP 2/3 OF WIRE BASKETS MUST BE CUT AWAY AND REMOVED FROM ROOT BALLS PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF BURLAP FROM ROOT BALL.
- 4. ALL LANDSCAPE WORK SHALL BE IN ACCORDANCE WITH CURRENT CITY STANDARD DETAILS AND SPECIFICATIONS.
- 5. ALL AREAS NOT MULCHED SHALL BE SEEDED OR SODDED IN ACCORDANCE WITH THE AREA SPECIFIED ON PLANS WITH "REBEL II" HYBRID TALL FESCUE OR EQUIVALENT AS PRESCRIBED IN THE SEEDING SCHEDULE AS SHOWN ON THIS
- 6. SITE LIGHTING SHALL NOT BE PLACED IN CONFLICT WITH PLANTED TREES.
- 7. TREE PROTECTION FENCING TO BE PROVIDED AROUND TREE PRESERVATION AREAS IN ACCORDANCE WITH CITY STANDARDS.
- 8. COORDINATE ALL WORK WITH SITE LAYOUT AND SITE GRADING, DRAINAGE &
- 9. VERIFY LOCATION OF UTILITIES BEFORE PLANTING.
- 10. MULCH ALL AREAS, THAT ARE NOT SEEDED OR SODDED, WITH SHREDDED HARDWOOD MULCH TO A DEPTH OF 3" - 4".
- 11. THE SELECTION AND INSTALLATION OF PLANTS AND PLANTING METHODS SHALL CONFORM WITH THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN OR THE CITY STANDARD DETAILS AND SPECIFICATIONS, WHICHEVER IS STRICTER.
- 12. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES. DRAWINGS SHALL RULE OVER PLANT LISTS.
- 13. SUBSTITUTIONS SHALL BE SUBMITTED TO LANDSCAPE ARCHITECT FOR APPROVAL, PRIOR TO INSTALLATION, SUBSTITUTIONS MAY REQUIRE ADDITIONAL APPROVAL BY THE GOVERNING JURISDICTION.
- 14. ALL LANDSCAPING SOIL AND FILL SHALL BE FREE FROM WEEDS, REFUSE, AND DEBRIS AT ALL TIMES.
- 15. TREES AND LARGE SHRUBS SHALL BE ADEQUATELY SUPPORTED, AS NECESSARY, USING STAKES AND GUYS. SUCH SUPPORTS SHALL BE DESIGNED SO AS TO PROTECT TREES AND SHRUBS FROM INJURY. TREES AND SHRUBS SHALL BE FASTENED TO THE SUPPORT WITH AN ACCEPTABLE COMMERCIAL TREE TIE OF PLASTIC OR HOSE COVERED WIRE.
- 16. THE MAXIMUM GROWTH HEIGHT OF ANY LANDSCAPING WITHIN THE SIGHT TRIANGLE SHALL BE THREE (3) FEET IN HEIGHT.
- 17. PLANTING SOIL TO BE USED SHALL HAVE THE FOLLOWING CHARACTERISTICS: FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMY CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, OBTAINED FROM WELL-DRAINED ARABLE SITE, REASONABLY FREE FROM CLAY, LUMPS, COARSE SANDS, STONES 1 INCH AND LARGER, PLANTS, GRASS, WEEDS, ROOTS, STICKS, AND OTHER FOREIGN MATERIALS, TOPSOIL SHALL CONFORM TO ASTM D5268 WITH A PH RANGE OF 5.5 TO 7, AND A MIN. 4 PERCENT ORGANIC MATERIAL.





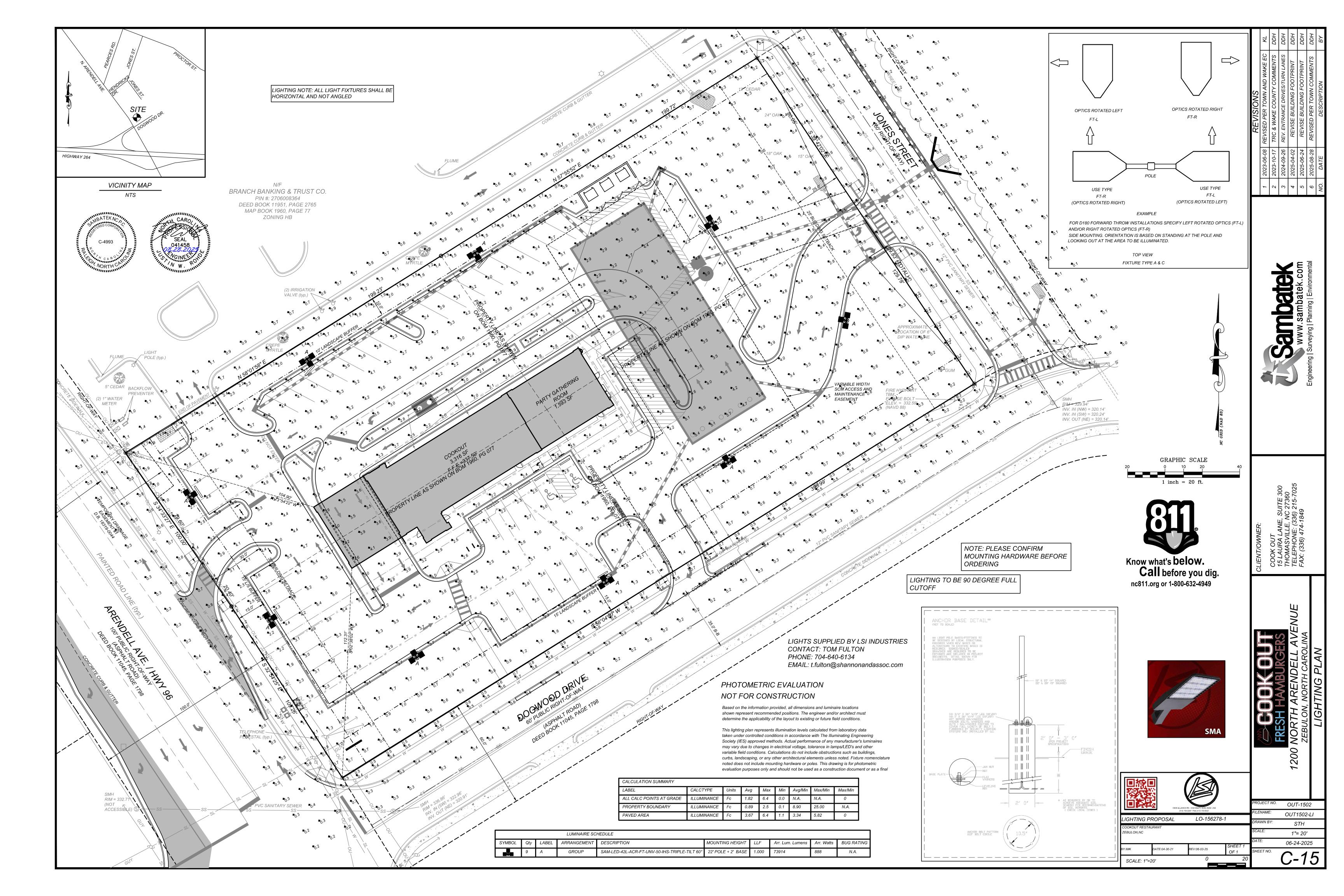


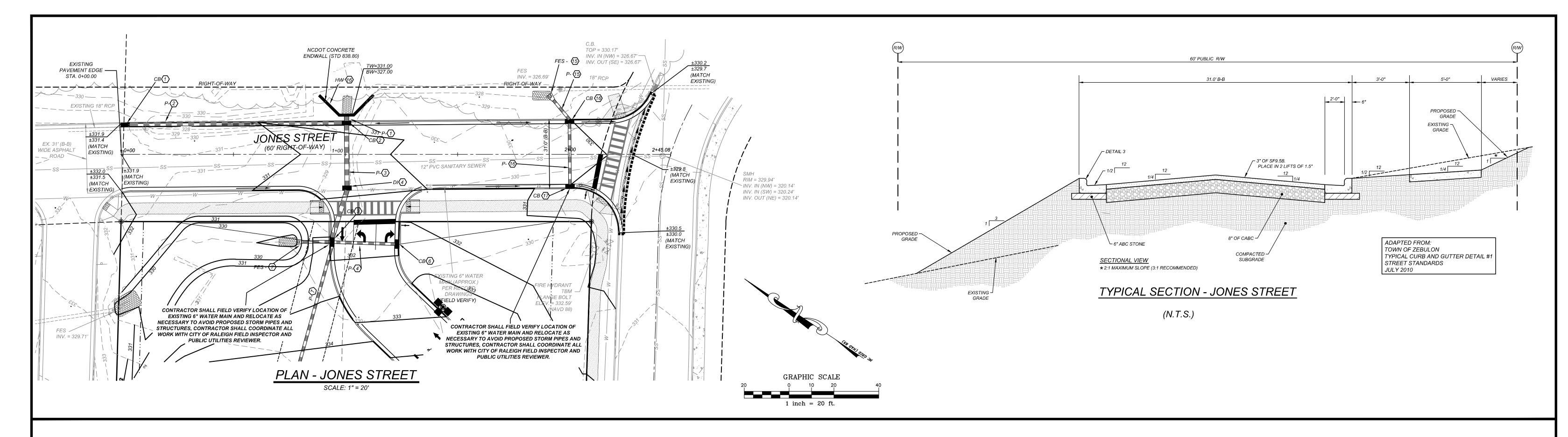


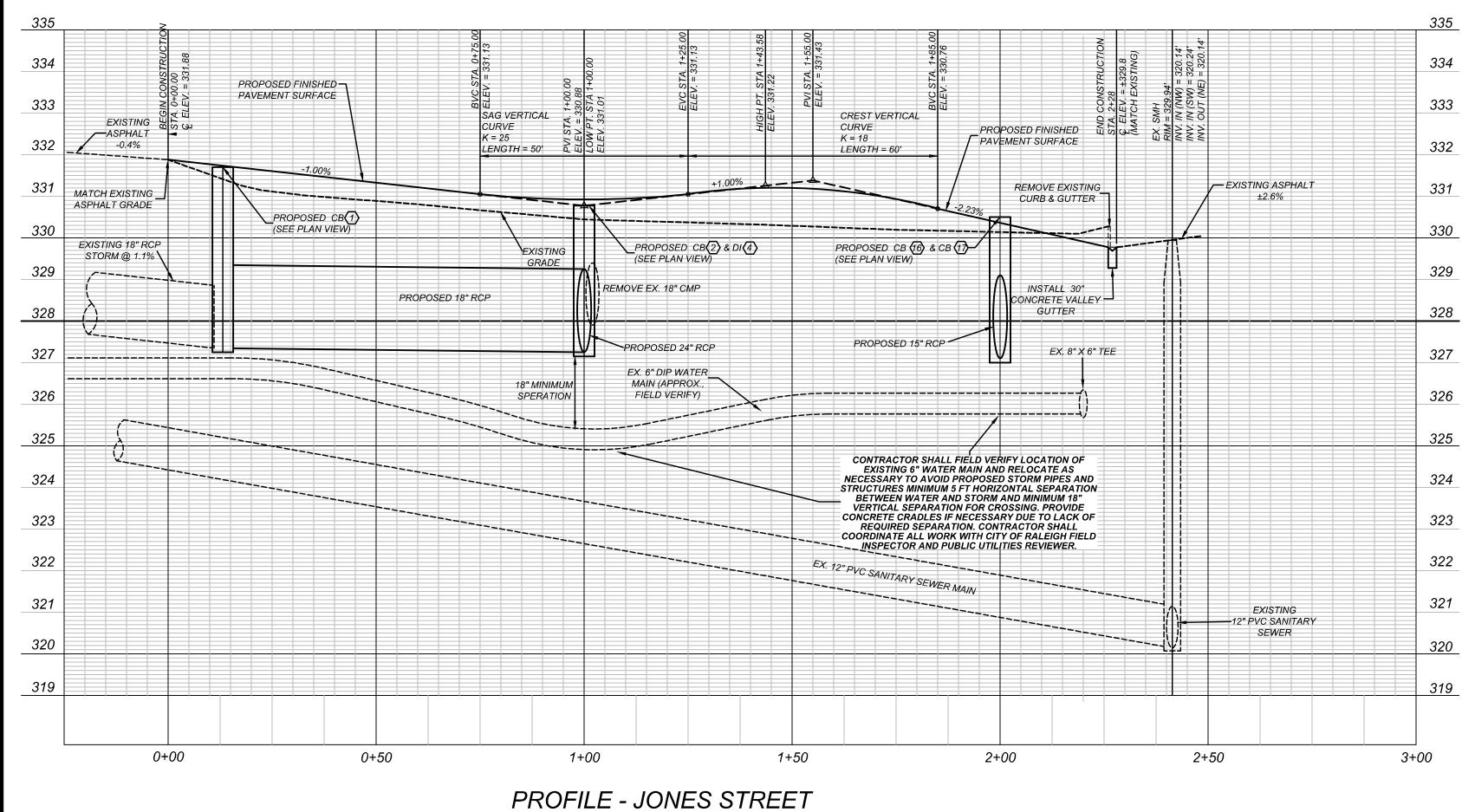


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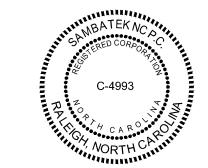




ALL STREET AND STORM CONSTRUCTION SHALL COMPLY WITH TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS.

ALL WATER CONSTRUCTION SHALL COMPLY WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL SIDEWALKS SHALL BE ADA COMPLIANT.





 REVISIONS

 1
 2023-06-08
 REVISED PER TOWN AND WAKE EC
 KL

 2
 2023-10-17
 TRC & WAKE COUNTY COMMENTS
 DDH

DESCRIPTION

DATE

Sambatek
www.sambatek.com
Engineering | Surveying | Planning | Environmental

HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1" = 2'

COOK OUT
1200 ARENDELL AVENUE
ZEBULON, NORTH CAROLINA

PLAN AND PROFILE - JONES STREET
STATION 0+00.00 THRU 2+45.08

CLIEN	T:
	COOK OUT
	15 LAURA LANE, SUITE 30
	THOMASVILLE, N.C. 2736
	PHONE: (336) 215-7025

FAX: (336) 474-1849

OJECT NO.	OUT-1502	
^{ENAME:} C	OUT1502-PP1	
AWN BY:	RCN	
SIGNED BY:	WBB	
RIZONTAL SCALE:	1" = 20'	
RTICAL SCALE:	1" = 2'	
TE:	10-07-15	

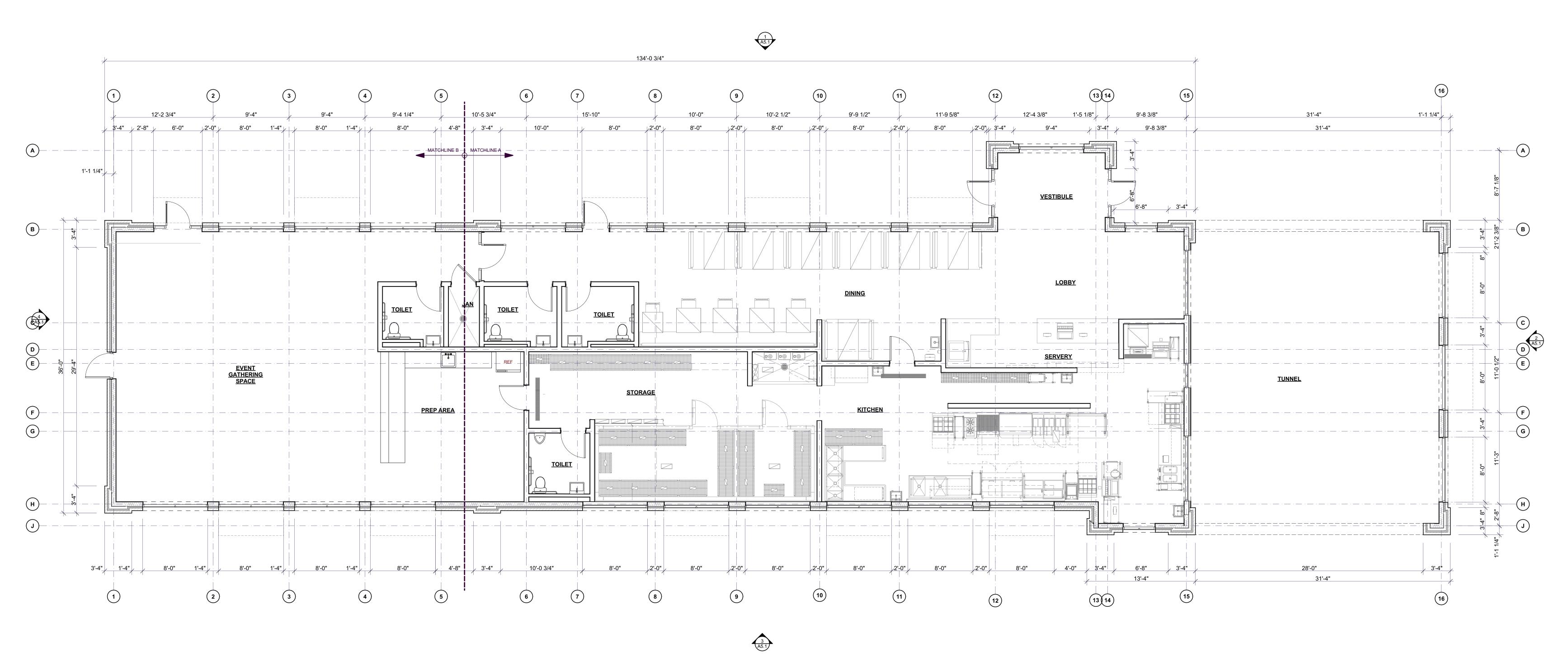
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SHEET NO.



ZEBULON WAKE COUNTY

1200 NORTH ARENDELL AVE. ZEBULON, NC



1 FRAMING PLAN
A2.0 SCALE: 3/16" = 1'-0"

PRELIMINAR CONSTRUCTION

PRELIMINAR CONSTRUCTION

PRELIMINAR CONSTRUCTION

ISSUE DATE: 06-13-2025

OVERALL FLOOR
PLAN

A2.0



EXTERIOR PERSPECTIVE

__ SLOPED BRICK

ROWLOCK

_ALÙMINÚM

PARAPET CAP

_ 3" (GOLD)

SIDE ELEVATION

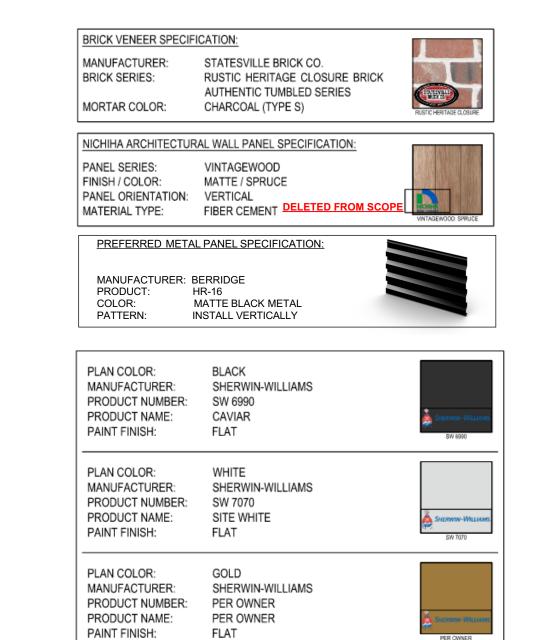
SCALE: 1/8" = 1'-0"

ALUMINUM PARAPET CAP

L........ ALUMIUM STOREFRONT ENTRY SYSTEM WITH

TRANSPARENT GLAZING

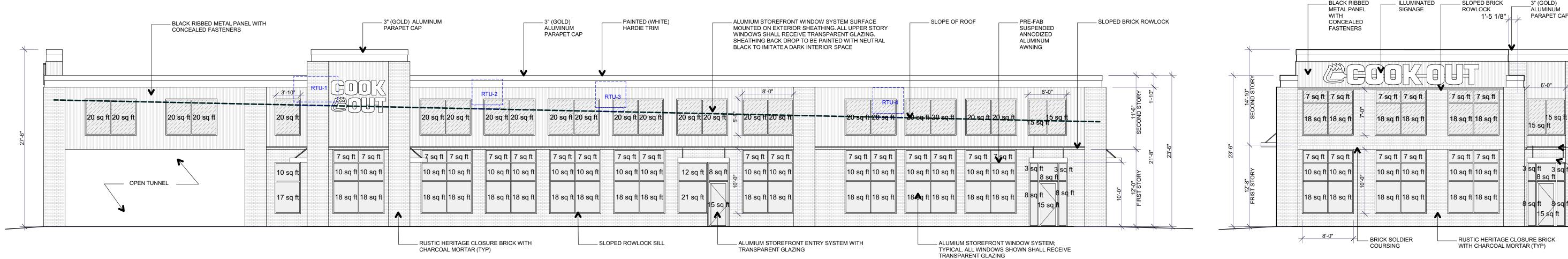
NOT TO SCALE





ZEBULON WAKE COUNTY

1200 NORTH ARENDELL AVE ZEBULON, NC



SIDE (STREET) ELEVATION SCALE: 1/8" = 1'-0" SCALE: 1/8" = 1'-0" FIRST STORY SURFACE AREA: FIRST STORY SURFACE AREA: 1,660 sq ft FIRST STORY TRANSPARENCY: 758 sq ft FIRST STORY TRANSPARENCY: PERCENTAGE OF TRANSPARENCY: 45.6% PERCENTAGE OF TRANSPARENCY: COMPLIES WITH MINIMUM 40% TRANSPARENCY 1,902 sq ft SECOND STORY SURFACE AREA: SECOND STORY SURFACE AREA: SECOND STORY TRANSPARENCY: 490 sq ft SECOND STORY TRANSPARENCY: PERCENTAGE OF TRANSPARENCY: 25.7% PERCENTAGE OF TRANSPARENCY: COMPLIES WITH MINIMUM 25% TRANSPARENCY

SLOPE OF ROOF

PRE-FAB SUSPENDED ALUMINUM

ALUMIUM STOREFRONT WINDOW SYSTEM SURFACE

PAINTED WITH NEUTRAL BLACK TO IMITATE A DARK

MOUNTED ON EXTERIOR SHEATHING. ALL UPPER STORY

TRANSPARENT GLAZING. SHEATHING BACK DROP TO BE

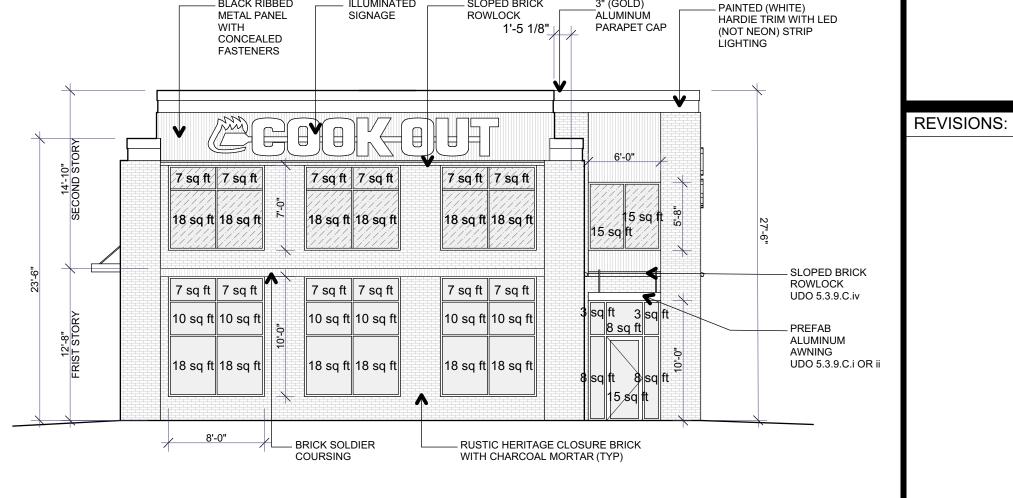
WINDOWS AND WINDOWS AT KITCHEN WALL SHALL RECEIVE

_ PAINTED (WHITE)

HARDIE TRIM WITH LED

RUSTIC HERITAGE CLOSURE BRICK WITH CHARCOAL MORTAR (TYP)

(NOT NEON) STRIP



FRONT (STREET) ELEVATION 599 sq ft 255 sq ft 42.5% COMPLIES WITH MINIMUM 40% TRANSPARENCY 718 sq ft 180 sq ft 25.0% COMPLIES WITH MINIMUM 25% TRANSPARENCY

___ BLACK RIBBED METAL PANEL WITH

CONCEALED FASTENERS

____ DRIVE THROUGH WINDOW

OPEN TUNNEL

EXTERIOR MATERIAL LEGEND

INTERIOR SPACE

INDICATES RIBBED METAL PANEL WITH CONCEALED

DROP PAINTED NEUTRAL BLACK TO IMITATE A DARK

INDICATES TRANSPARENT GLAZING WITH SHEATHING BACK

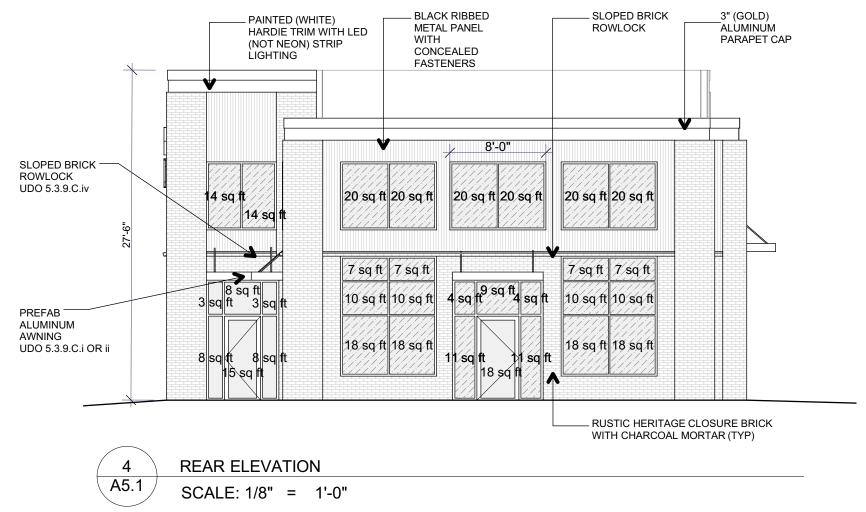
INDICATES TRANSPARENT GLAZING INTO INTERIOR SPACE

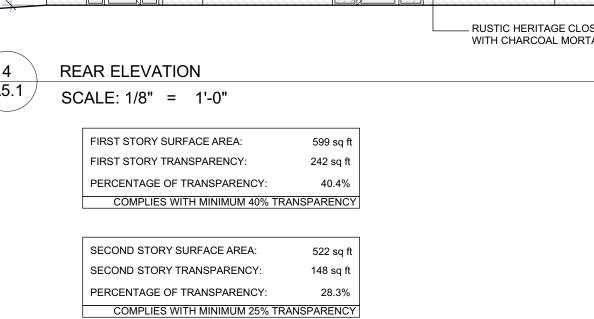
INDICATES WOOD ARCHITECTURAL PANEL; SEE FINISH

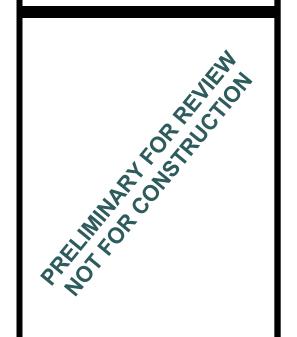
INDICATES BRICK VENEER; SEE FINISH SPECIFICATIONS

SPECIFICATIONS DELETED FROM SCOPE

FASTENERS; SEE FINISH SPECIFICATIONS







ISSUE DATE: 08-29-2025

SHEET TITLE **EXTERIOR ELEVATIONS**