

November 22, 2023

Dan Frazier
Town of Bluffton Dept. of Growth Management
20 Bridge Street
Bluffton, SC 29910

Subject: Town of Bluffton Preliminary DRC <u>DP-10-23-018564</u>

**Venture at Okatie Bluffs** 

Ward Edwards Project Number: 220137

We are in receipt of your Staff Report dated 11/09/2023 for Preliminary DRC review. Enclosed please find our response package addressing the provided comments as follows:

#### **Enclosures:**

- 1. Site Plans (Rel C)
- 2. Project Narrative
- 3. Landplan

### Planning Commission Review – (Dan Frazier)

- SCDOT Encroachment Permits for SC Highway 170 and Gibbet Road proposed access points shall be required prior to final development plan approval.
   Noted.
- Label outparcels as "Future Development". Remove all site development plan and narrative references to
  the outparcels as future gas station/convenience store or future office/retail. Site layouts for all parcels
  are subject to full Town review and approval at time of development plan submittal.

  Please see the attached plan set (Site Layout pgs. C401-C402), updated narrative and landplan.
- 3. For consistency with existing multi-use paths, update the narrative and plans, to reference the 10' multi-use path as being constructed of asphalt.

Please see the attached plan set (Site Layout pgs. C401-C402) and updated narrative.

4. Service yard items, such as waste receptacles, air-conditioning equipment, pool equipment, above ground propane tanks, irrigation equipment, utilities and other service-related items shall be screened from view.

Noted. Please see the attached plan set (Site Layout pgs. C401-C402).

5. Provide a dumpster enclosure detail at time of final development plan submittal. **Noted.** 

### **Building Safety Review (Richard Spruce)**

1. Detectable warning devices are required everywhere an accessible path crosses a vehicle pathway per IBC section 1102 and ICC A117.1 2017 edition sections 406.6 and 705.



Please see the attached plan set (Site Layout pgs. C401-C402).

## Fire Department Review (Dan Witse)

Provide Utility Plan with fire hydrant locations
 Please note that full utility plans will be included with the final submittal.

### Planning Review SR (Jordan Holloway)

- 1. Cluster boxes will be required for mail delivery. Show proposed location(s) on site plan. Please see the attached plan set (Site Layout pg. C402).
- 2. Clearly show the proposed trees that are remaining on the site with the site plan. *Please see the attached plan set (Site Layout pgs. C401-C402).*
- 3. Reach out to Jordan Holloway to schedule a site visit to examine trees proposed to be saved.

  Please note that this will take place prior to the stormwater submittal. This will be between the Town of Bluffton and the Landscape Architect.
- All parking spaces are required to have wheel stops.
   Please see the attached plan set (Site Layout pgs. C401-C402).

### Watershed Management Review – (Samantha Crotty)

- At time of stormwater permit submittal: 1. Provide complete compliance calculator (include Site Data page).
   Noted.
- 2. Show location ofdry swale(s) and permeable paving, as stated in the narrative.

  The stormwater treatment system is comprised of bio-retention areas and wet ponds. This verbiage has been removed from the narrative.
- Provide updated stormwater materials reflecting the expanded scope.
   Please note that future developments have been omitted from this submittal. More detail will be included with final DRC.

If you have any questions or comments during your review, please do not hesitate to contact me at (843) 384-2944 or <a href="wpowell@wardedwards.com">wpowell@wardedwards.com</a>.

Sincerely,

**Ward Edwards Engineering** 

Willy Powell, PE Project Manager



Project: <u>Venture at Okatie Bluffs</u>

Gibbet Road and Highway 170

Town of Bluffton, SC

Coordinates: W 80° 51' 32" / N 32° 13' 57"

Date: November 21, 2023

Applicant: Okatie Bluffs Owner LLC

**Adrien Dannemiller** 

9800 Westpoint Drive, Suite 220

Indianapolis, IN 46256

E: adrien@millstonemgmt.com

P: 317-525-9464

Agent: <u>Ward Edwards, Inc.</u>

Primary Contact: Willy Powell

P.O. Box 381 Bluffton, SC 29910

E: wpowell@wardedwards.com

P: 843.384.2944

#### Description

Venture at Okatie Bluffs is a proposed multi-family development located at the Northeastern corner of Gibbet Road and Highway 170 (Okatie Highway) within the Buckwalter Planned Unit Development (PUD) and the Town of Bluffton. The project proposes six multifamily buildings, four garage buildings, a clubhouse, and associated amenities within the Town of Bluffton.

A 5-foot pedestrian sidewalk will be added along Gibbet Road and a 10-foot asphalt multi-use pathway will be added along Highway 170 (across the site frontage) both located within the SCDOT rights-of-way of their respective roadways. This will allow for pedestrian access to the development, as well as improve pedestrian access along the Gibbet Road and Highway 170 corridors. The internal streets will provide access to the site from both roadways and will include interconnections to future developments. Once this project is fully completed, along with the development of the parcels to the north, the internal road network will allow traffic to travel from Gibbet Road to Lawton Boulevard.

The approved Initial Master Plan also includes two future developments adjacent to the site. Those uses are not included in this application and will be designed and permitted separately.



### **Existing Conditions**

The existing site consists of wooded upland area, predominantly containing pine and oak trees, with other tree types mixed in. The southern portion of the parcel contains 4.15 acres of jurisdictional wetlands. The existing parcel is relatively flat, with elevations ranging from 35 feet to 38 feet, with the majority of the site falling between the 37 and 38-foot range.

It should be noted the Gibbet Road and Highway 170 are set at elevations between 38 and 39 feet.

## **Proposed Construction**

The applicant proposes to construct all site infrastructure located within their parcel boundaries, including the internal streetscape, drives, parking, walks, utilities, drainage, and stormwater BMPs, in a single phase.

The project proposes to construct 150 multifamily units across six total residential buildings. The units will be split between 1-bed, 2-bed, & 3-bed options. The property will also include garages, parking, sidewalks, landscaping, clubhouse amenities, a 10-foot-wide multi-use asphalt pathway along Okatie Highway, and other associated infrastructure.

In addition, the applicant proposes to construct the northernmost connection to Highway 170, which requires construction of the future common infrastructure on the northern parcel. Included with the northernmost connection, the applicant proposes to extend water and sewer services to the northern parcel boundary. In addition, the applicant proposes to extend access, water, and sewer infrastructure to a proposed future commercial parcel.

#### **Future Construction**

In addition to the multifamily units, the approved Initial Master Plan included the future development in the northwest corner of the parcel. The future development can be accessed from both external points of access plus two internal points of access that will tie into the multifamily infrastructure. The project will also provide car and pedestrian access to a future development to the North of the parcel.

Connectivity to both future developments are accommodated in the proposed design. In addition, future stormwater generated by the Southwest parcel is proposed to be received and accounted for within the multifamily BMPs. The Northern future development is assumed to be self-sufficient regarding stormwater needs.

### **Tree Removal**

To support the proposed development, some minor tree removal will be necessary. The site plans show each tree to be removed and the landscape plan will elaborate on all proposed plantings and/or mitigation. The proposed layout was designed in a manner to both preserve and accentuate the existing trees onsite.

### **Site Lighting**

The project proposes to utilize electric downlighting as its predominant light fixture. The lighting will either be leased from Palmetto Electric or privately owned.

### **Solid Waste Removal**

The project proposes an enclosed dumpster area for residents to deposit solid waste. The management company will coordinate the removal schedule for the community dumpster enclosure.



#### **Vehicular Access**

The site proposes four access points to the proposed development:

- Primary access on Gibbet Road, to allow for full ingress/egress
  - This access point has been located opposite Estate Drive and is located within a shared access easement with the parcel to the south
  - This access point will serve as the future southern terminus of the interconnection between Gibbet Road and Lawton Boulevard
- Secondary access on Highway 170, to allow for right-in, right-out only
  - o This access point will provide direct connection to the interconnection
- Secondary access on Gibbet Road, to allow for right-in, right-out only
- Secondary access on Highway 170, to allow for right-in, right-out only

#### **Pedestrian Access**

The site proposes four pedestrian access points from the site to the proposed walkways within the SCDOT rights-of-way. Three connections are proposed from the interconnecting roadway to Highway 170 while one connection is proposed from the site to Gibbet Road.

Presently, there are no sidewalks along this portion of Highway 170 or along Gibbet Road. The project plans to construct these pedestrian pathways along each of the roads to make access to the development for pedestrians more available.

#### **Parking**

The project proposes to provide 337 total parking spaces throughout the development to meet the required 337 parking spaces. The provided parking includes 90° stalls, 45° stalls, and four garages. Each building will also be provided with adequate ADA parking stalls.

#### **Drainage**

The project will fall under the Town's SoLoCo Stormwater Ordinance and proposes to utilize multiple stormwater BMPs to meet local and state water quality and quantity regulations. A system of several bioretention areas will be used to treat runoff before it is discharged into the wetland. Any additional water quantity and flood control needs will be achieved using a wet pond. The stormwater system will be designed to fully handle runoff from the future development with all runoff treatment taking place on the multifamily property. The future development on the Northern outparcel will be treated separately from the rest of the project and is not included in this design.

Geotechnical testing reveals the site to contain medium to dense sandy soils. The stormwater BMPs and sandy nature will promote infiltration and attenuation before ultimately discharging excess runoff along the existing flow-path at a rate less than that of existing conditions.

#### **Utilities**

An existing water main is located along the northern side of the parcel and runs parallel to Highway 170. A second water line follows Gibbet Road, along the western edge of the site. Both mains are 24 inches. The project proposes a connection to each main to create a loop through the site. A stub-out will be provided for the future developments to connect to the system. The system will be designed to provide domestic and fire



connections to each building and the clubhouse. Fire hydrants are expected internal to the project and will be located per BJWSA, Bluffton Township Fire District, and system requirements.

A proposed pump station to be located on the parcel will convey wastewater off-site. A gravity sewer system is proposed to collect wastewater from the multifamily units and clubhouse, and route it to the pump station. Once treated by the pump station, a proposed force main ties into an existing BJWSA gravity system located across Gibbet Road that serves Palmetto Business Park. The sewer system will also include a connection point for future developments.

## **Phasing**

The project is proposed to be completed in one phase.

### **Site Maintenance**

The developers will be responsible for site maintenance upon completion.



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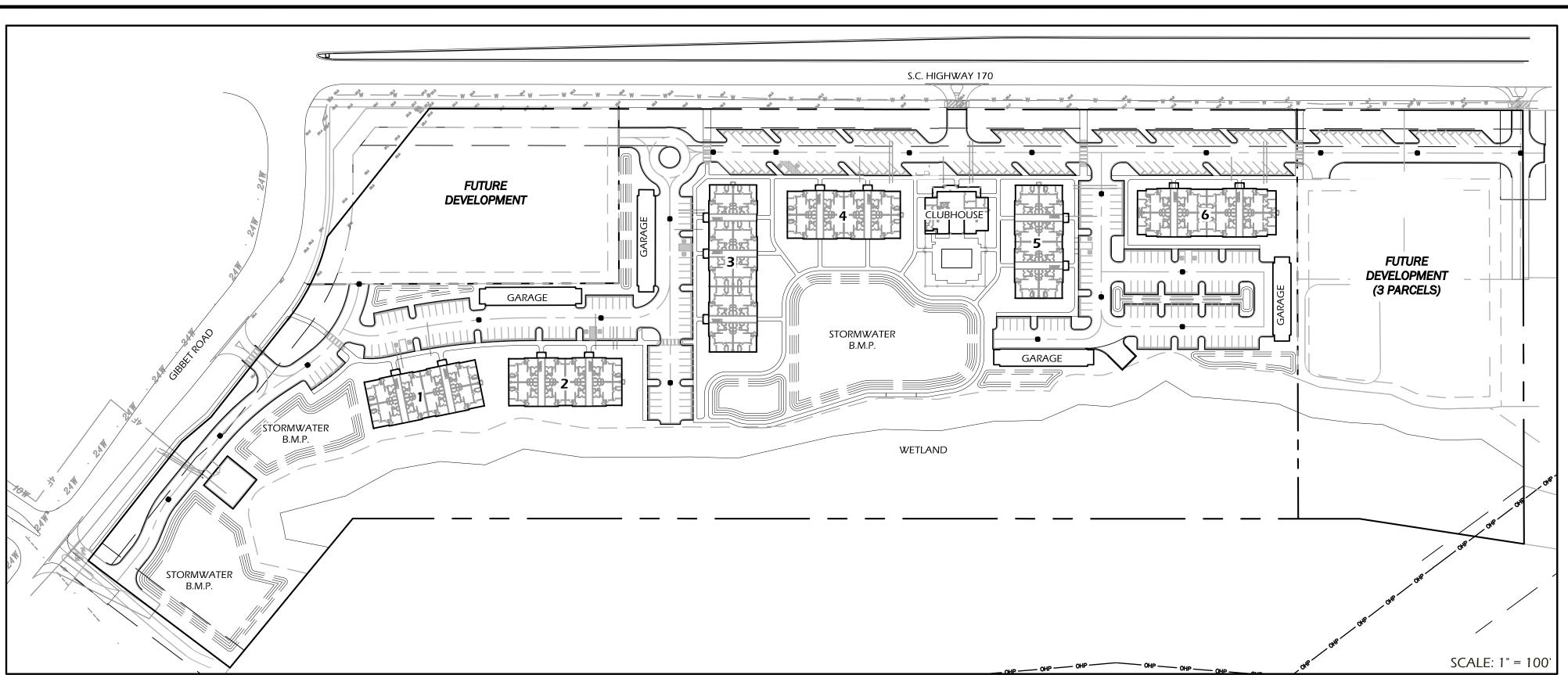
DESIGN CONCEPTS, DRAWING, SHEETS, LOGOS, SPECIFICATIONS, DETAILS, WRITTEN MATERIAL SHALL NOT BE USED OR REPRODUCED IN WHOLE OR IN PART IN ANY FORM WITHOUT PRIOR WRITTEN CONSENT OF WJK LTD.

THIS SHEET TO SCALE AT: 30"X42"

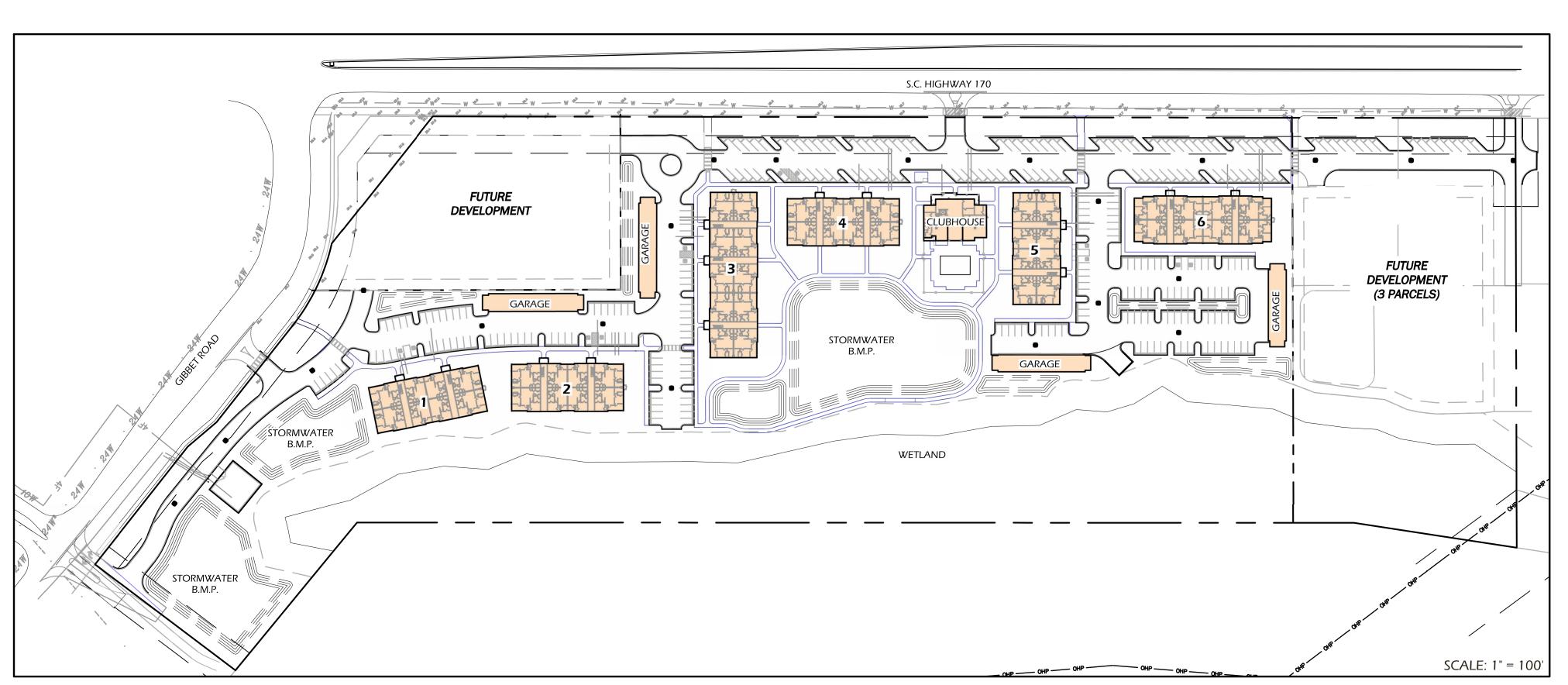
REVISIONS:

DRAWING TITLE REFERENCE PLAN
PROPOSED CONDITIONS

DRAWING NUMBER



SITE INFORMATION	
EXISTING ZONING	LIGHT INDUSTRIAL
TOTAL SITE AREA	21.922 A.C.
TOTAL WETLAND AREA	4.15 A.C.
WETLAND TO BE MITIGATED	NA
EXISTING CANOPY COVERAGE	± 100%



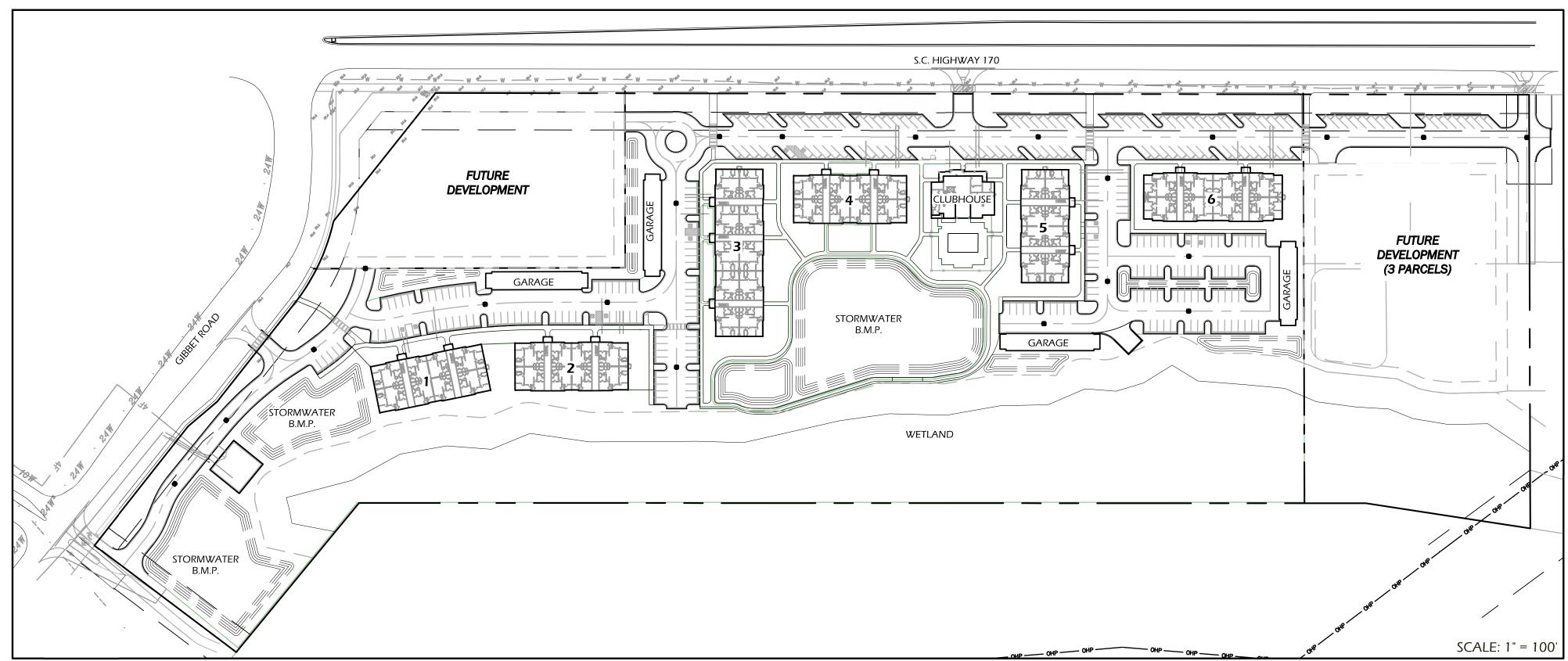
PROPOSED SITE COVERAGE TABLE		
DESCRIPTION	ACTUAL COVERAGE (SF)	
BUILDING FOOTPRINTS	80,718 SF	
IMPERVIOUS SURFACES	168,699 SF	
TOTAL IMPERVIOUS	249,417 SF	
TOTAL SITE AREA	695,050 SF	
% SITE COVERAGE	36%	

REQUIRED PARKING			
DESCRIPTION	UNITS	REQUIREMENTS	PARKING SPACES
MULTI-FAMILY	150	2.25 SPACES/UNIT	338
TOTAL REQUIRED SPACES			338

PARKING SUMMARY		
DESCRIPTION	PARKING SPACES	
STANDARD	276	
ACCESSIBLE CAR / VAN	12	
GARAGE SPOTS	50	
TOTAL PARKING SPACES	338	

NOTE:

1. ONE BICYCLE SPACE REQUIRED PER 15 CARS (REDUCE BY 50% FOR SHARED USE).



GENERAL OPEN SPACE CALCULATION			
DESCRIPTION	AREA	REQUIRED %	PROVIDED %
TOTAL SITE AREA	15.96 AC.		
TOTAL OPEN SPACE %	± 9.8 AC.	20%	± 58%

COMMON OPEN SPACE CALCULATION			
DESCRIPTION	AREA	REQUIRED %	%
TOTAL SITE AREA	15.96 AC.		
TOTAL OPEN SPACE %	± 1.78 AC.	10%	± 11%

GENERAL OPEN SPACE

COMMON OPEN SPACE

Iandscape architecture land planning

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DESIGN CONCEPTS, DRAWING, SHEETS, LOGOS, SPECIFICATIONS, DETAILS, WRITTEN MATERIAL SHALL NOT BE USED OR REPRODUCED IN WHOLE OR IN PART IN ANY FORM WITHOUT PRIOR WRITTEN CONSENT OF WJK LTD.

THIS SHEET TO SCALE AT: 30"X42"

URE AT OKATIE BLUF

DATE: NOV 21, 2023
PROJECT NO.: 22212.01
DRAWN BY: AK
CHECKED BY: BW

PRELIMINARY
SUBMITTAL PLAN,
NOT FOR
CONSTRUCTION

revisions:

DRAWING TITLE

SITE INFORMATION
& DIAGRAMS

DRAWING NUMBER

L12

Vicinity Map (Not To Scale) Venture at Okatie Bluffs

Schedule of Drawings

Sht No.	Description
C001	Cover Sheet
C002	<b>Construction Notes</b>
C003	Sheet Index
C101-	<b>Existing Conditions Plans</b>
C401-	Site Layout Plans
C701-	Utility Plans

## Release Schedule

Rel#	Description	Date
Α.	TOWN OF BLUFFTON PRELIMINARY DRC	10-05-23
В.	PRELIMINARY BJWSA SET	10-27-23
(	TOWN OF BLUFFTON PRFLIMINARY DRC	11-21-23

Usage (multi-family)

Site Development Plans

for

Town of Bluffton, South Carolina

Tax Map #: R610-028-000-0921-0000

Gibbet Road + SC 170 (Okatie Highway)

GIS coord: N32° 15' 18" W 80° 58' 00"



Design Team

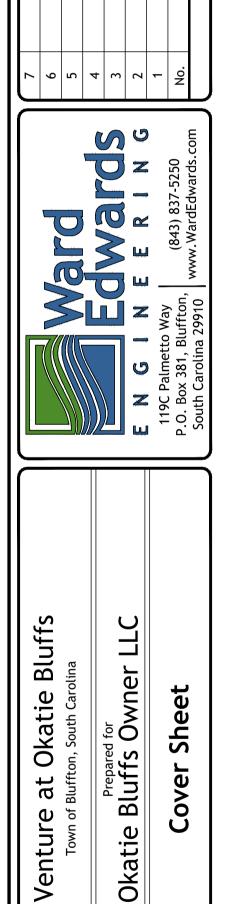
Wetland Consultant: Newkirk Environmental asher@newkirkenv.com 843.388.6585

Geotechnical Engineer: Terracon 843.258.7075 kyle.turner@terracon.com

Landscape Architect: Witmer Jones Keefer Ltd. 843.757.7411 dan@wjkltd.com

Architect: Parks-Player 864.382.5000 rparks@parksplayer.com Land Surveyor: Nandina, inc. 843.681.3248 jkesserling@nandina.com

Developer: Adrien Dannemiller Millstone Management LLC 9800 Westpoint Dr, Indianapolis, IN 46256 317.694.5114



Surveyor's PLS:

Checked by:

Not to Scale

C001

#### **STANDARD** Paving Hatch Legend Limits of Disturbance: ----- NPDES -**ABBREVIATIONS Proposed Concrete Paving** General Notes: Site Grading and Drainage: **Erosion Prevention** All utilities shown are approximate locations. The contractor shall be responsible for providing 72-hour notice to all respective utility companies for field Boundary information provided by (info), dated (date), by (company verification of existing utilities prior to construction. Any damages to existing utilities due to this construction shall be the responsibility of the contractor Topographic data provided by (company), dated (date). Project Information Proposed Pervious Concrete AVERAGE DAILY TRAFFIC Approximate location of certain existing underground utility lines and structures are shown on the plans for information only. Additional underground Temporary control of storm water drainage shall be the responsibility of the contractor. Sequencing and construction techniques shall prevent obstruction of Land Grading: ASPHALT lines or structures may exist that are not shown. Call South Carolina 811 at 811 or 1-888-721-7877 between the hours of 7:00 am and 7:00 pm Monday storm sewers, ponding in traffic areas or rising of water levels which would enter adjacent buildings or structures. Source of Title: Property Owner: . Full width of street and road rights-of-way must be cleared and graded as shown in the details on the drawings. thru Friday at least three working days before commencing construction. Request underground utilities to be located and marked within and near the Proposed Sidewalk/Concrete Okatie Bluffs LLC Surface Roughening: Beaufort county register of deeds, 4. Subgrade preparation: top soil shall be removed from paved areas to a minimum depth as recommended in the project's geotechnical report. All excavation construction site. BENCHMARK deed book 148 page 133 9800 Westpoint Drive, Suite 220, 4. Comply with "South Carolina Underground Facility Damage Prevention Act (effective June 7, 2012). Notification of Intent to excavate may be given by BOB BOTTOM OF BANK shall be to subgrade limits. Indianapolis, IN, 46256 calling the toll free number: 1-800-922-0983. 5. All utility pipe lines, conduits and sleeves under paved areas must be in place prior to completion of the roadway subgrade compaction. opsoiling Reinforced Grass Fire Lane (317)-525-9464 Protect bench marks and property monuments from damage during construction operations. Replace any bench marks or monuments damaged or 6. Finish grading shall include the placement of topsoil over all unpaved areas not occupied by buildings or structures and fine grading around buildings, adjacent Existing: undeveloped BURIED TELEPHONE destroyed as a result of contractor's operations, at no cost to the owner, by a licensed surveyor in the state of South Carolina. to walks, curbs, gutters and structures to assure positive drainage. adrien@millstonemgmt.com Proposed: Multifamily BACK OF CURB ( ts ) emporary Seeding: Off-street parking for the contractor's employees and authorized visitors to the site must be provided and maintained throughout construction. 6 buildings RATE OF CHANGE IN SLOPE The contractor is responsible for adhering to weight limits prescribed for all public roads when hauling equipment and materials to and from the SCDHEC/OCRM Sediment and Erosion Control Standard Notes (Revised Dec-2012): Proposed Aggregate/Stones Flood Zone: CURB AND GUTTER project site. Damages to existing payement due to the contractor's construction operations or improper transportation of materials and equipment CABLE TELEVISION If necessary, slopes, which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats, in addition to hydroseeding. It may be Mulching: WARD Zone X (base flood elev: N/A) Surface Coverage: shall be the responsibility of the contractor. necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is brought to grade. Map Number: 45013C0265G CURB INLET 8. At least one driving lane on public roads shall remain open to traffic at all times. Traffic lanes will only be closed with the express written consent of Proposed Asphalt (light duty) Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased Max impervious allowed: XX % Panel 265 of 506 CLEARANCE OR CENTERLINE ECB or TRM: the agency having jurisdiction over the roadway. Notify agency having jurisdiction at least 5 days before closing any driving lanes to traffic. Provide Min open space required: XX % but in no case more than fourteen (14) days after work has ceased, except as stated below. CONSTRUCTION traffic control devices, signs and flagmen as required to ensure public safety. A. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions stabilization measures must be initiated as soon as practicable. Existing impervious: XX,XXX sq. ft. (XX %) CORR CORRECTION FGM 9. Contractor shall coordinate demolition, clearing and construction of improvements to minimize interference with vehicular and pedestrian traffic and Proposed Asphalt (heavy duty B. Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within 14 days, temporary Property Zoning: CUBIC FEET Proposed impervious: XX,XXX sq. ft. (XX %) with operations of existing facilities. CUBIC YARD stabilization measures do not have to be initiated on that portion of the site. **Buckwalter PUD** Open space provided: XX,XXX sq. ft. (XX %) BFM DRAINAGE AREA All sediment and erosion control devices shall be inspected once every calendar week. If periodic inspection or other information indicates that a BMP has been Wetlands/nat. resource: XX,XXX sq. ft. (XX %) DITCH BOTTOM INLET Water and Sewer Line Construction: inappropriately, or incorrectly installed, the permittee must address the necessary replacement or modification required to correct the BMP within 48 hours of Mill & Overlay Asphalt Site Area: All water and sewer line construction shall conform to applicable state and Beaufort Jasper Water and Sewer Authority (BJWSA) requirements, identification DESIGN HOURLY VOLUME PS Total: 22.0 acres 4. Provide silt fence and/or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleaned, ermanent Seeding: standards and specifications. Parking Summary: DROP INLET Disturbed: 16.9 acres **Proposed Concrete Pavers** graded, and stabilized with grassing immediately after the utility installation. Fill, cover, and temporary seeding at the end of each day are recommended. If . BJWSA will be responsible for inspection and approval of all water and sewer system construction and for acceptance for operation and maintenance. DIA or D DIAMETER Parking use types SO All utilities shown are approximate locations. The contractor is responsible for notification of all utility owners and for field verification of both water is encountered while trenching, the water should be filtered to remove sediment before being pumped back into any waters of the state. DUCTILE IRON PIPE Use type = 2 spaces/dwellling unit horizontal and vertical locations prior to commencing construction. Any damages to existing utilities due to this construction shall be the responsibility All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed Parking required: SUPERELEVATION

Use type = 300 spaces

Total = 334 spaces

Accessible parking required: 8 spaces

Parking provided:

4 Garages

276 Spaces

areas have been stabilized. Additional control devices may be required during construction in order to control erosion and/or offsite sedimentation. All temporary control devices shall be removed once construction is complete and the site is stabilized.

6. The contractor must take necessary action to minimize the tracking of mud onto paved roadway(s) from construction areas and the generation of dust. The contractor shall daily remove mud/soil from pavement, as may be required. Residential subdivisions require erosion control features for infrastructure as well as for individual lot construction. Individual property owners shall follow these plans during construction or obtain approval of an individual plan in accordance with s.c reg. 72-300 et seg. and scr100000.

. Temporary diversion berms and/or ditches will be provided as needed during construction to protect work areas from upslope runoff and/or to divert sediment-laden water to appropriate traps or stable outlets All waters of the state (WOS), including wetlands, are to be flagged or otherwise clearly marked in the field. A double row of silt fence is to be installed in all areas where a 50-foot buffer can't be maintained between the disturbed area and all WOS. A 10-foot buffer should be maintained between the last row of silt existing or proposed sanitary sewer or sanitary sewer force main, the distance being measured in a horizontal plane between the outside surfaces fence and all WOS.

14. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a

10. Litter, construction debris, oils, fuels, and building products with significant potential for impact (such as stockpiles of freshly treated lumber) and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm water discharges. 11. A copy of the SWPPP, inspections records, and rainfall data must be retained at the construction site or a nearby location easily accessible during normal business hours, from the date of commencement of construction activities to the date that final stabilization is reached

12. Initiate stabilization measures on any exposed steep slope (3H:1V or greater) where land-disturbing activities have permanently or temporarily ceased, and will not resume for a period of 7 calendar days 13. Minimize soil compaction and, unless infeasible, preserve topsoil.

sediment basin or alternative control that provides equivalent or better treatment prior to discharge. 15. Minimize the discharge of pollutants from dewatering of trenches and excavated areas. These discharges are to be routed through appropriate BMPs (sedimen basin, filter bag, etc.). 16. The following discharges from sites are prohibited:

A. Wastewater from washout of concrete, unless managed by an appropriate control. B. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials. . Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance. D. Soaps or solvents used in vehicle and equipment washing

17. After construction activities begin, inspections must be conducted at a minimum of at least once every calendar week and must be conducted until final stabilization is reached on all areas of the construction site. 18. If existing BMPs need to be modified or if additional BMPs are necessary to comply with the requirements of this permit and/or SC's water quality standards, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation must be documented in the SWPPP and alternative BMPS must be implemented as soon as reasonably possible

19. A pre-construction conference must be held for each construction site with an approved on-site SWPPP prior to the implementation of construction activities. For non-linear projects that disturb 10 acres or more this conference must be held on-site unless the department has approved otherwise.

Dry Utility Conduits for Electric, Telephone and Cable TV: All dry utility conduit ends shall be capped and marked with a steel rebar stake imbedded one (1) foot below ground surface. 2. 48" Minimum bury depth for all electrical conduits.

4. Maintain minimum 18" horizontal clearance when paralleling water, sewer and storm drain lines. 5. Extend conduit beyond pavement, curb, and sidewalks. 6. The contractor shall be responsible for coordination of the installation of all utility service connections. Refer to approved building plans for the exact location of all service connections. The contractor must install all conduits, as shown on the plans or as required by respective utility companies. The contractor shall be

responsible to ensure strict compliance with all applicable codes and regulations with regards to the installation of utilities and conduit. 7. Locations shown on the plans for proposed dry utility conduits are approximate only. All dimensioning and staking should be based on economical and practical construction. The contractor shall be responsible for coordination with the respective utility representatives, prior to any conduit installation. 8. Transformer pads shall be located as directed by the respective utility representative. The contractor shall be responsible for compliance with applicable code

9. Notify the engineer if conflicts with existing or proposed structures require proposed utilities be relocated

3. Maintain minimum 12" vertical clearance when crossing water, sewer, and storm drain lines.

Site Clearing and Demolition . No clearing shall occur within designated buffer zones, tree protection zones, outside of the property lines or beyond the clearing limits unless otherwise specifically shown on the plans. 2. Only those trees designated on the drawings for removal are to be removed as part of the site clearing operations.

The contractor shall install a continuous line of flagging or fencing along the limits of clearing prior to commencing any clearing, demolition, or construction work on the project. 4. Exercise caution during clearing operations to avoid felling trees into designated tree protection zones. 5. No burning will be allowed within 50 feet of a tree protection zone or tree drip line. Contractor shall coordinate any burning operations with local

iurisdiction and fire departments 6. Selective clearing areas shall be cleared of all brush and understory growth.

1. Contractor shall provide engineer with electronic file of surveyed utility as-built points. Point descriptions shall be clear and understandable. 2. Contractor shall also provide corresponding redline drawing to supplement or clarify electronic file content.

A. Placement or storage of any soil, debris, oils, fuel, paints, building materials or any other materials.

Notify the project engineer if conflicts with existing structures require that proposed utilities be relocated.

All water mains shall be sterilized and pressure tested in accordance with BJWSA specifications.

. The contractor shall cut and patch existing pavement as required for the installation of utility lines.

12. Sanitary manhole rim grades shown are approximate. Adjust rim elevations to be flush with finished grade

The contractor must notify BJWSA forty-eight (48) hours prior to any construction, inspection or testing of the water distribution system.

8. Contractor shall install mechanical restraints on all bends, plugs and tees, 2" or larger, on waterlines and sanitary sewer force mains.

6. Pipe, fittings, valves and appurtenances for water and sewer lines shall all be in accordance with the requirements contained in the BJWSA technical

Installation of water and sewer lines and appurtenances shall be in accordance with the BJWSA standard construction details and specifications.

A. Parallel installation: unless otherwise specifically shown in a special detail on the plans, install water mains at least 10-ft. Horizontally from any

B. Crossings: unless otherwise specifically shown in a special detail on the plans, install water lines crossing sanitary sewers or sanitary sewer force

13. The contractor under this contract shall not make any connections to the existing water or sanitary sewer systems unless expressly authorized to do so

by the BJWSA. all water and sewer improvements under this contract must be constructed complete, tested, inspected and approved by the BJWSA

14. All water mains shall be installed with thirty-six inches (36") minimum cover (from finished grade). Maximum depth shall be five feet (5'). Where water

Contractor shall review and comply with all conditions and special provisions contained in the SCDOT encroachment permit(s) issued for this project.

3. Contractor is responsible for submitting construction notification form (48 hour minimum) and coordination of all work within SCDOT rights-of-way

4. Contractor is responsible for preparing and submitting a traffic control plan to SCDOT for approval minimum 48 hours prior to conducting work in the

All signage, pavement markings, and markers shall conform to current MUTCD guidelines and current SCDOT standard specifications and drawings.

All trees having a trunk diameter of 8-inches (dbh) or larger, and endangered or valued trees having a trunk diameter of 4-inches (dbh) or larger must

The contractor is responsible for marking the trees designated to be preserved in accordance with the requirements contained in the Town of Bluffton

Prior to commencing any clearing or construction operations on the site, the contractor shall erect tree protection barriers around each tree or group

existing tree designated for preservation. The minimum tree protection zone as defined in the ordinance is a circular area centered on the tree and

The area within the tree protection zone must remain open and unpaved. No change of grade will be allowed within the tree protection zone except

for a 2-inch cut or 2-inch fill of topsoil, sod or mulch. Any activity within the tree protection zone is subject to approval by Town of Bluffton. The

Where it is necessary for machinery and equipment to pass within the tree protection zone, approval must be obtained from Town of Bluffton. special

8. The contractor is responsible for obtaining all tree removal permits and for coordinating all inspections required by Town of Bluffton in connection

of trees designated for preservation in accordance with the details on the plans and the requirements contained in the Town of Bluffton unified

. A tree protection zone shall be established in accordance with the provisions contained in the Town of Bluffton unified ordinance 5.3.3 for each

having a radius of the greater of 10-ft. or one and one-half foot per inch dbh (diameter at breast height). The size or configuration of the tree

Where utility lines must pass thru the tree protection zone, they shall be installed by horizontal boring beneath the roots of the tree.

be preserved unless specifically approved for removal in accordance with Town of Bluffton development standards ordinance and indicated on the

All pavement markings in SCDOT right-of-way shall be thermoplastic and conform to current MUTCD guidelines and current SCDOT standard

right-of-way. All traffic control plans shall conform to current MUTCD and current SCDOT guidelines and specifications.

8. Removal of pavement markings shall conform to current SCDOT standard specifications for highway construction section 609.4.1.2.

6. All paving and drainage construction shall conform to current SCDOT standard specifications and drawings.

mains may conflict with other utilities, the water main crossing shall be constructed with ductile iron pipe, mechanical joint 45-deg. bends and

before any authorization to connect will be given. Coordination of testing, inspection and connections with the BJWSA is the responsibility of the

mains to provide a minimum vertical separation of 18-inches between the outside surfaces of the pipes. This shall be the case whether the water

line is above or below the sanitary sewer line. Whenever possible locate the water line above the sewer line. Where a new water line crosses a new

sewer line, place a full length of ductile iron pipe for water line at the crossing with pipe positioned so that the joints are as far as possible from the point of crossing. Where a new water line crosses an existing sewer line, place one full length of ductile iron pipe water line so that the joints

3. Contractor shall schedule surveyor to be present during installation in order to obtain accurate information on underground fittings and sanitary/storm crossing elevations. Multiple surveyor mobilizations may be needed. If surveyor is not present during installation, contractor shall ensure surveyor has access to all utility components listed in these notes.

4. Contractor's surveyor shall be a professional land surveyor licensed in South Carolina. Contractor's surveyor will review and sign the BJWSA certification on the utility as-built drawing prepared by engineer upon completion. 5. Utility as-built points shall be based upon the SC NAD83 coordinate system and the elevations shall be based upon the same vertical datum used in

the engineering plans. 6. As built survey shall include, but not necessarily be limited to, the following: a. GRAVITY SEWER

Manhole locations, frame elevation, all invert elevations

ii. Cleanout locations, ground elevation, invert elevation

iii. Points for permanent visible structures nearby manholes and cleanouts for reference (pavement, buildings, manholes, catch basins, power poles, or property corners) **b. FORCE MAIN** 

i. Elevation on top of force main connection to manhole or force main manifold ii. Air release valves

iii. Simple force main alignments on 100 lf increments iv. Arcs, bends on 50 lf increments

i. Horizontal and vertical location of all valves, bends, tees, and storm/sanitary crossing points (for as-built separation calculations) ii. Fire hydrants iii. Concrete markers, connections to existing lines, backflow preventors, air release valves

iv. Points for permanent visible structures near water system elements described above for reference (pavement, buildings, manholes, catch basins, power poles, or property corners). Two surveyed reference point locations are required for each fitting. d. PUMP STATIONS

Complete layout of pump station ii. Manhole locations, frame elevation, all invert elevations

iii. Fencing & gates, control panel iv. Top of slab (incl. brass benchmark) & bottom of wetwell

 v. Influent line invert vi. Float levels (pump off, pump on, lead/lag, both pumps on, high water) vii. Property corners, yard hydrant, light pole, discharge piping/valves

ix. Electrical power service from meter to transformer

viii.Bypass pump

requirements

saddles for all water laterals

of the contractor.

specifications.

10. Separation of water mains and sewers:

contractor under this contract.

mechanical restraints.

specifications and drawings

Tree Protection-Bluffton

plans to be removed.

ordinance 5.3.3.

Vehicle parking

Trenching for utilities

BJWSA Utility As-Built Survey Requirements

Paving

development standards ordinance.

are as far from the point of crossing as possible.

Work on South Carolina Department of Transportation Right-of-Way:

with the local and/or district SCDOT engineering representative.

Contractor to refer to the most current edition of the SCDOT standard drawings.

tion zone may be modified only upon approval by Town of Bluffton

measures will be required to protect the roots from excessive compaction.

following activities are prohibited within the tree protection zone:

with tree preservation and removal activities during construction.

Gate valves shown for graphical purposes only. Contractor

to place all valves at 18" from tee. see BJWSA detail G-15. Contractor to provide 18" of separation between tapping

See construction notes sheet for BJWSA as-built survey

Sequence of Construction Activities

Estimated Start Date: 08-01-24 Estimated Completion Date: 08-01-25 Items must occur in the order listed; items cannot occur concurrently unless specifically noted. Phase 1: (Initial)1. Receive NPDES coverage from DHEC.

2. Hold pre-construction meeting. Notify DHEC EQC regional office or OCRM office 48 hours prior to beginning land-disturbing activities. Installation of construction entrance.

5. Clearing & grubbing only as necessary for installation of perimeter controls. Installation of perimeter controls (e.g. silt fence).

. Install tree protection. 8. Install inlet protection

10. Clearing & grubbing only in areas of basin.

Install sediment tubes

24. Submit notice of termination (NOT) to DHEC as appropriate.

11. Installation of basin and installation of diversions to those structures (outlet structures must be completely installed as shown on the details before proceeding to next step; areas draining to these structures cannot be disturbed until the structures & diversions to the structures are completely installed). Install surface dewatering skimmer prior to moving to next step.

12. Clearing & grubbing of site or demolition (sediment & erosion control measures for these areas must already be installed). 13. Rough grading. 14. Installation of storm drain system and placement of inlet protection as each inlet is installed.

15. Install all required utilities and curbing. 16. Fine grading, paving, etc. 17. Place topsoil & establish finish grades.

18. Permeable pavers shall be laid when all heavy construction is completed. 19. Clean-out of detention basins that were used as sediment control structures and re-grading of detention pond bottoms; if necessary, modification of sediment basin riser to convert to detention basin outlet structure. 20. Install permanent seeding.

21. Flush any sediment from storm sewer pipes and inlets. 22. Removal of temporary sediment & erosion control measures (including skimmer) after entire area draining to the structure is finally stabilized (the department recommends that the project owner / operator have the SWPPP preparer or registration equivalent approve the removal of temporary 23. Perform as-built surveys of all detention structures and submit to DHEC or MS4 for acceptance.

• NOTE: Perform weekly site inspections during land disturbing activities and make recommendations for additional BMPs or maintenance of existing • NOTE: All pumped dewatering shall be performed using an appropriately sized pumped water filter bag.

Accessible parking provided: 12 spaces **Utility Contacts** Palmetto Electric 843-208-5512 1 Cooperative Way, Hardeeville, SC 29927 PO Box 100255 Columbia, SC 29202 Dominion Energy 800-251-7234 **BJWSA** 843-987-9200 6 Snake Road, Okatie, SC 29909 Broad Creek PSD 843-785-7582 PO Box 5878, Hilton Head, SC 29938 South Island PSD 843-785-6224 PO Box 5148, Hilton Head, SC 29938 Hilton Head Island PSD 843-681-5525 PO Box 21264, Hilton Head, SC 29925 Hargray Communications 843-815-1675 PO Box 3380, Bluffton, SC 29910 2127 Boundary ST #16, Beaufort, SC 29902 843-525-0044 Century Link 1 Riverwood Drive, Moncks Corner, SC 29461 Santee Cooper 843-761-8000

Contractor to obtain and become familiar with geotechnical report # HG225042 prepared by Terracon. All work must conform to project technical specifications for Venture at Okatie Bluffs prepared by Ward Edwards Engineering. The contractor is responsible for obtaining a copy of the technical specifications if not provided with the drawings.

Permits Expires Issued Fire Marshal SCDHEC/MS4 Stormwater SCDHEC Water SCDHEC Wastewater SCDOT Encroachment Utility SCDOT Encroachment Driveway Municipality Development **USACE Determination USACE Permit** 

SCDHEC-OCRM Certification:

"I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of title 48, chapter 14 VERT of the code of laws of SC, 1976 as amended, pursuant to regulation 72-300 et seq. (if applicable), and in accordance with the terms and conditions of scr100000."

Storm Sewer/Drainage Legend Proposed ■ DI: A1 Drop Inlet Curb Inlet (with Grate) 副 CI: A1 CI: A1 Type 16 Curb Inlet Valley Gutter Inlet Trench Drain TD: A1 Weir Inlet → YI: A1 Yard Inlet (D) JB: A1 Junction Box CO Cleanout Storm Drain Underdrain \_ - - - - - - - - -Roof Drain Collector \_\_\_\_\_ Flared End Section Headwall with Wings Outlet Control Structure Ditch Centerline  $-\rightarrow --\rightarrow --\rightarrow$ Direction of Flow **─** 

EXISTING GRADE LINE

FURNISH AND INSTALL

FLARED END SECTION

FINISH FLOOR ELEVATION

HIGH DENSITY POLYETHYLENE

HYDRANT OR HYDRAULIC

INSIDE DIAMETER

JUNCTION BOX

LIMIT OF WORK

MITRED END SECTION

MEAN HIGH WATER

MECHANICAL JOINT

NOT IN CONTRACT

OUTSIDE DIAMETER

OVERHEAD POWER

POINT OF CURVATURE

PROFILE GRADE LINE

POINT OF ROTATION

POINT OF TANGENCY

POLYVINYL CHLORIDE

POINT OF VERTICAL INT

POINT OF INTERSECTION

PERFORATED

PROPERTY L'

RADIUS

RIGHT OF WAY

STORM SEWER

SANITARY SEWER

SUBGRADE

SIDEWALK

TOP OF CURB

TOP OF GRATE

TOP OF SIDEWALK

UNDERGROUND ELECTRI INDERGROUND TELEPHON

WATER TABLE OR WEIGHT

WELDED WIRE FABRIC

TOP OF BANK

TYPICAL

UNDERDRAIN

UTILITIES

Underground

WIDTH OR WEST

WATER LINE

WATER MAIN

YARD INLET

WATER VALVE

**TELEPHONE** 

SURVEY

SANITARY

REQ OR REQD REQUIRED

PROFILE GRADE

NORTH BOUND ROADWAY

NATIONAL GEODETIC VERTICAL DA

POINT OF COMPOUND CURVATURE

PROFILE GRADE ELEVATION

POINT OF REVERSE CURVATURE

RATE OF CHANGE IN ELEVATION

REINFORCED CONCRETE PIPE

SPEED OR SOUTH OR SLOPE

SQUARE FOOT OR SILT FENCE

SAND-ASPHALT HOT MIX

SOUTH BOUND ROADWAY

SEASONAL HIGH WATER

SANITARY SEWER MANHOLE

TEMPERATURE OR TEMPORARY

LINEAR FEET

Low Point

INVERT ELEVATION

Demolition

Tree to be Removed

Tree Protection

FIEVATION

Engineer

EASEMENT

EXISTING

FIRE HYDRANT

FORCE MAIN

FOOT OR FEET

GRATE INLET

HEIGHT

HEADWALL

HORIZONTAL

HIGH POINT

HIGHWATER

HIGHWAY

INSTALL

EMBANKMENT

EL or ELEV

EMBK ENGR

EW

EXIST

F & I

H or HT

NGVD

R or RAD

R/W

STA SUBGR

SW or SWK

Sanitary Sewer Legend PEAK DISCHARGE OR FLOW VOLUME (CFS Proposed Sanitary Sewer Manhole (S) MH: A1 Sanitary Sewer Cleanout CO Sanitary Sewer Wye Check Valve in Manhole Plug Valve Air Release Valve Sewer Line —— S — Force Main —— F— Reuse Main —— R— Service Lateral 

Water System Legend TEMPORARY CONSTRUCTION EASEMENT Water Mete Water Valve Reducer Post Indicator Valve Blowoff Hydrant Yard Hydrant Fire Depart. Connection (FDC) Backflow Preventor +**Butterfly Valve** 

Water Line

Service Lateral Grading Legend Proposed ⊗ TP: 22.50 Top of Pavement Elevation ⊗ TW: 22.50 Top of Walk Elevation ⊗ TC: 22.50 Top of Curb Elevation ⊗ FG: 22.5 Finish Grade  $\otimes$  HP High Point ⊗ LP Low Point \_\_\_\_(19)\_\_\_\_ Ditch Centerline  $-\rightarrow --\rightarrow --\rightarrow$ Direction of Flow \_\_\_\_**>** 

Riprap:

Clearing / Demolition Legend Outlet Protection: RIPRAP **Dust Control:** Polyacrylamide (PAM):

Runoff Conveyance Measures Vegetated Channels: <del>,</del> Riprap-Lined Channels: ECB OR TRM-Lined Channels: Paved Channels: PC PC PC Pipe Slope Drains: Temporary Stream Crossing: Temporary Diversion  $\rightarrow$ TD $\rightarrow$ TD $\rightarrow$ Ditch or Swale: Permanent Diversion Ditch: ---PD----PD---Diversion Dike or Berm:  $\rightarrow$ DD $\rightarrow$ DB $\rightarrow$ Level Spreader:  $\rightrightarrows$  SSD  $\rightrightarrows$  SSD  $\rightrightarrows$ Subsurface Drain: Sediment Control

Sediment Basin: Temporary Sediment Trap: Rock Sediment Dike Rock Check Dam: Sediment Tube: Silt Fence: Reinforced Silt Fence: Type A-Fabric Inlet Protection Type A-Sediment Tube Inlet Protection: Type B - Wire Mesh and

Stone Drop Inlet Protection Type C - Block and **Gravel Inlet Protection** Type D -Rigid Inlet Filters: Type E - Surface Course Curb Inlet Filter: Type F - Inlet Tube: Type FC - Filter Bag Curb Inlet Type FB - Filter Bag Grate Inlet Protection: Concrete Washout ADA Accessible Route \_\_\_\_\_W\_\_

> The accessible route shall comply with the current version of the ADA Standards for Accessible Design.

FDWARDS, INC No. C00152

OR 🕨

(A)

E

F

FG

cws

Bluff

Okati Bluffs at Okatie

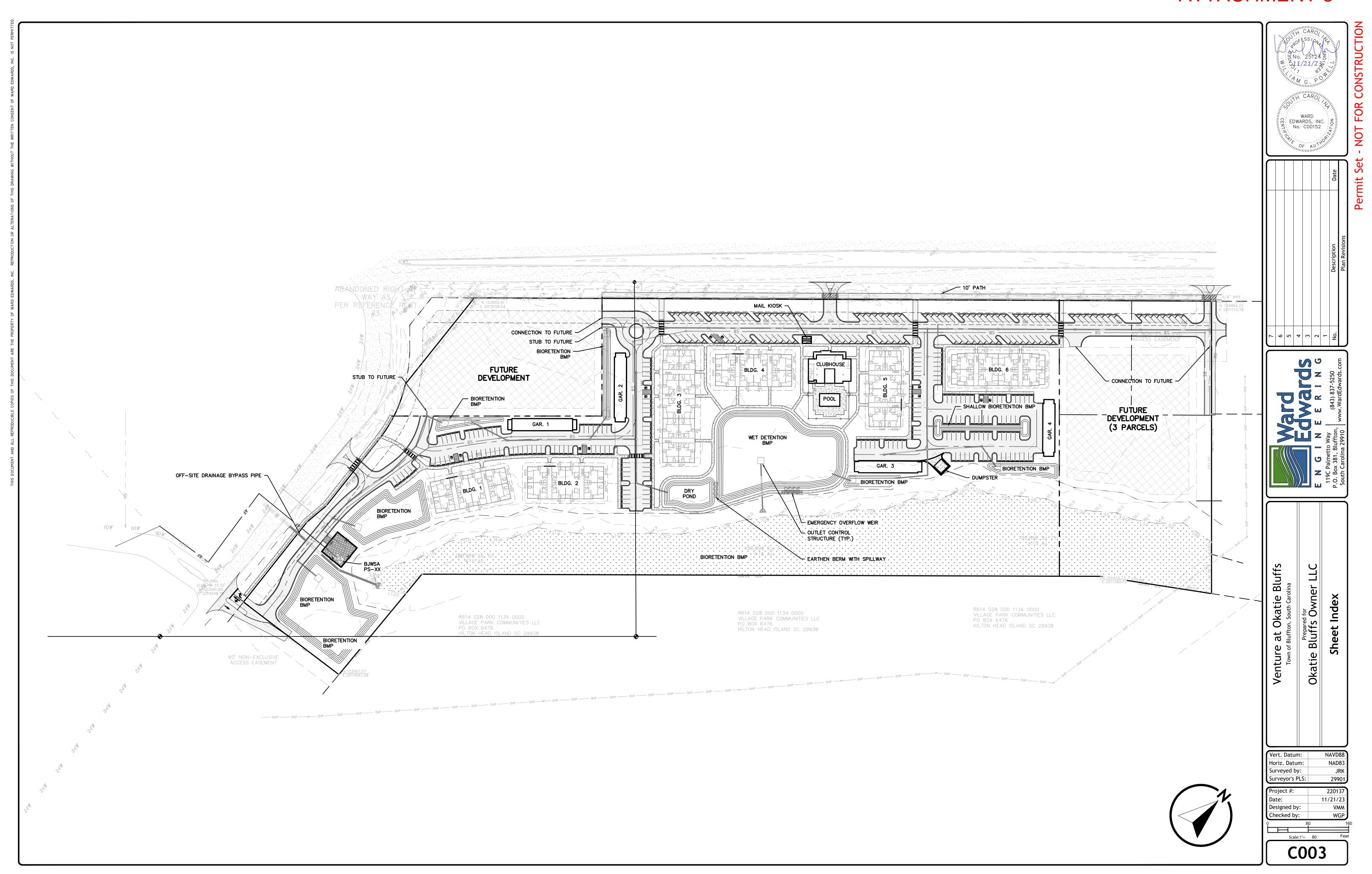
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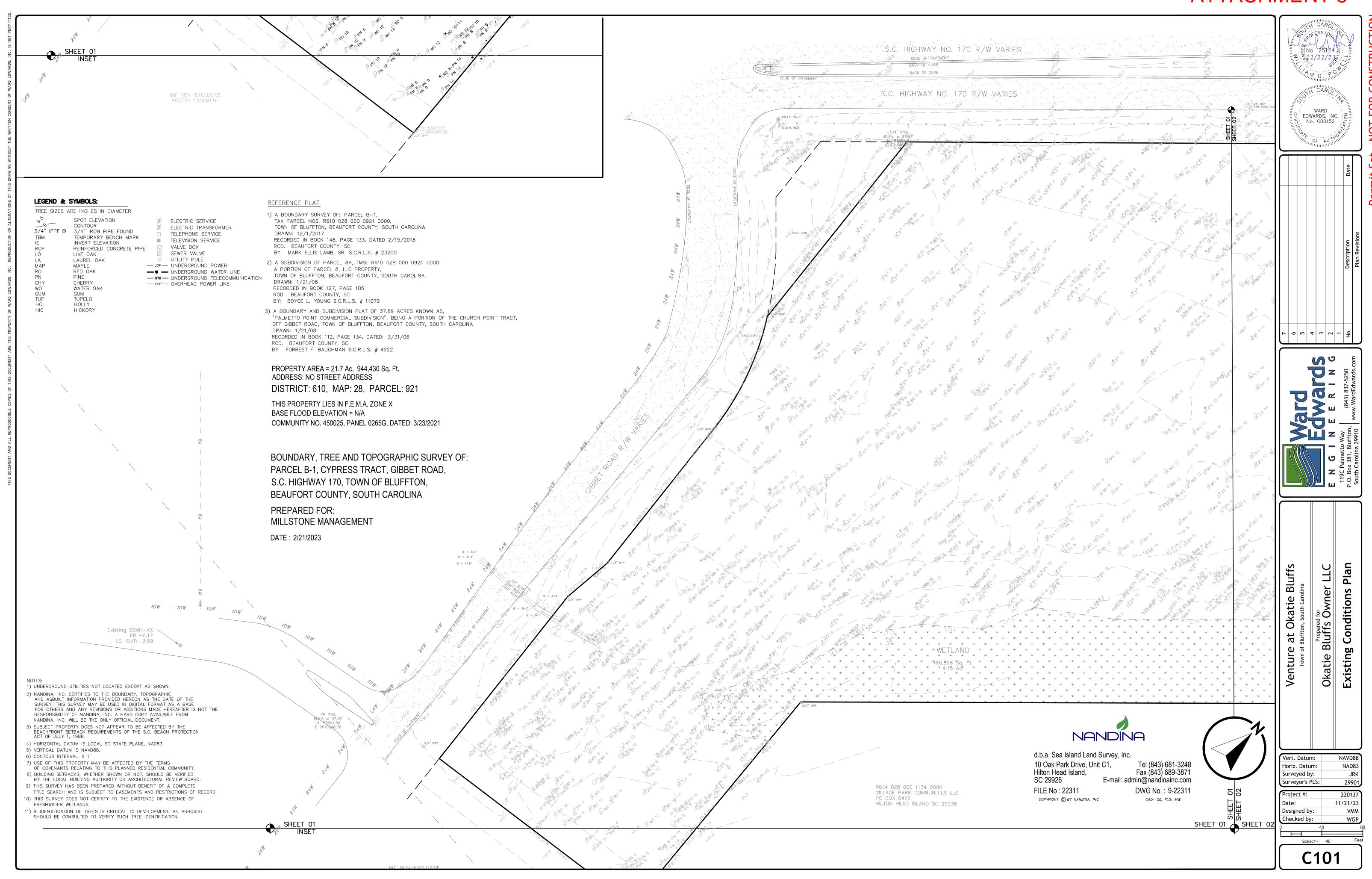
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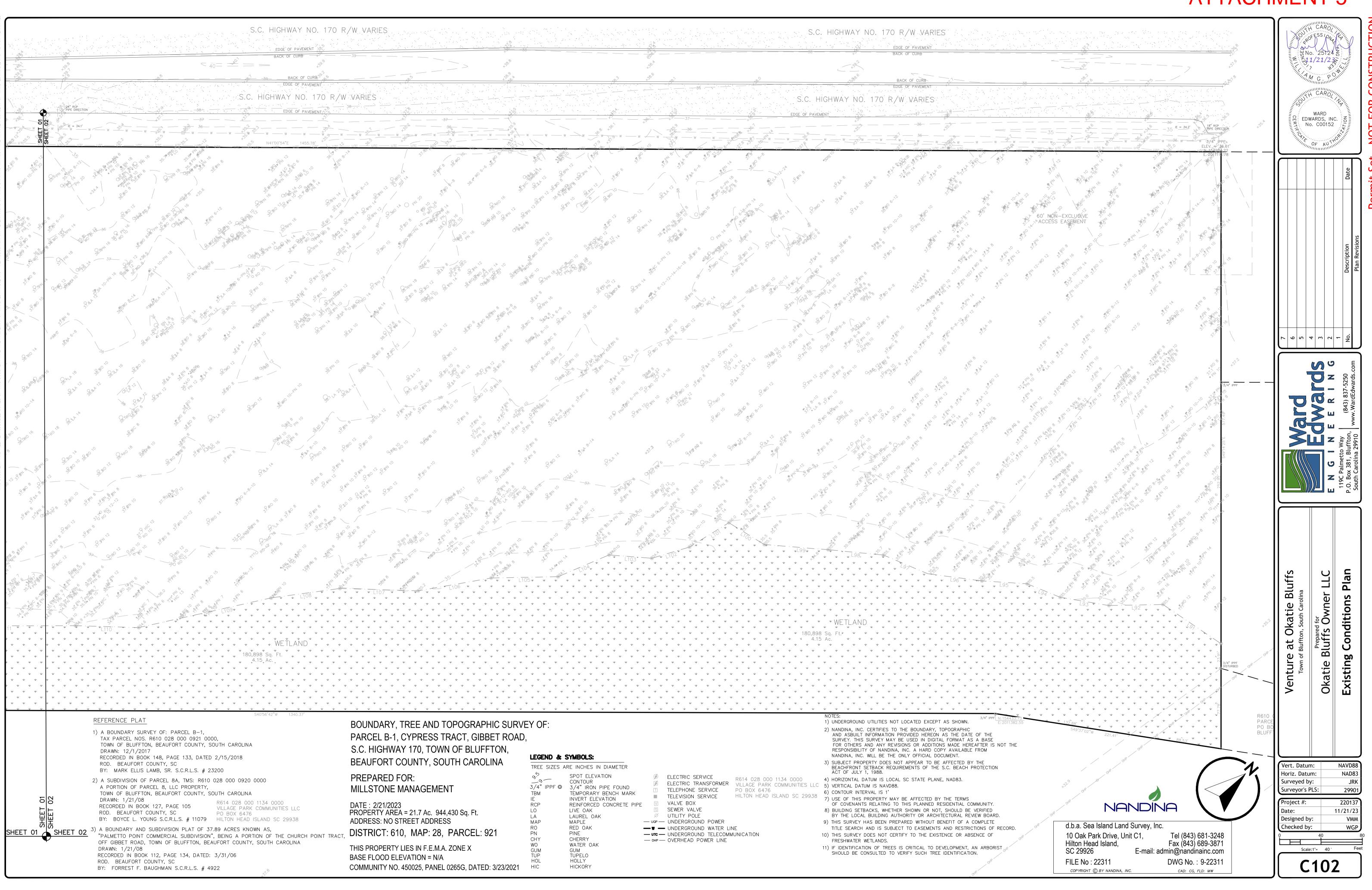
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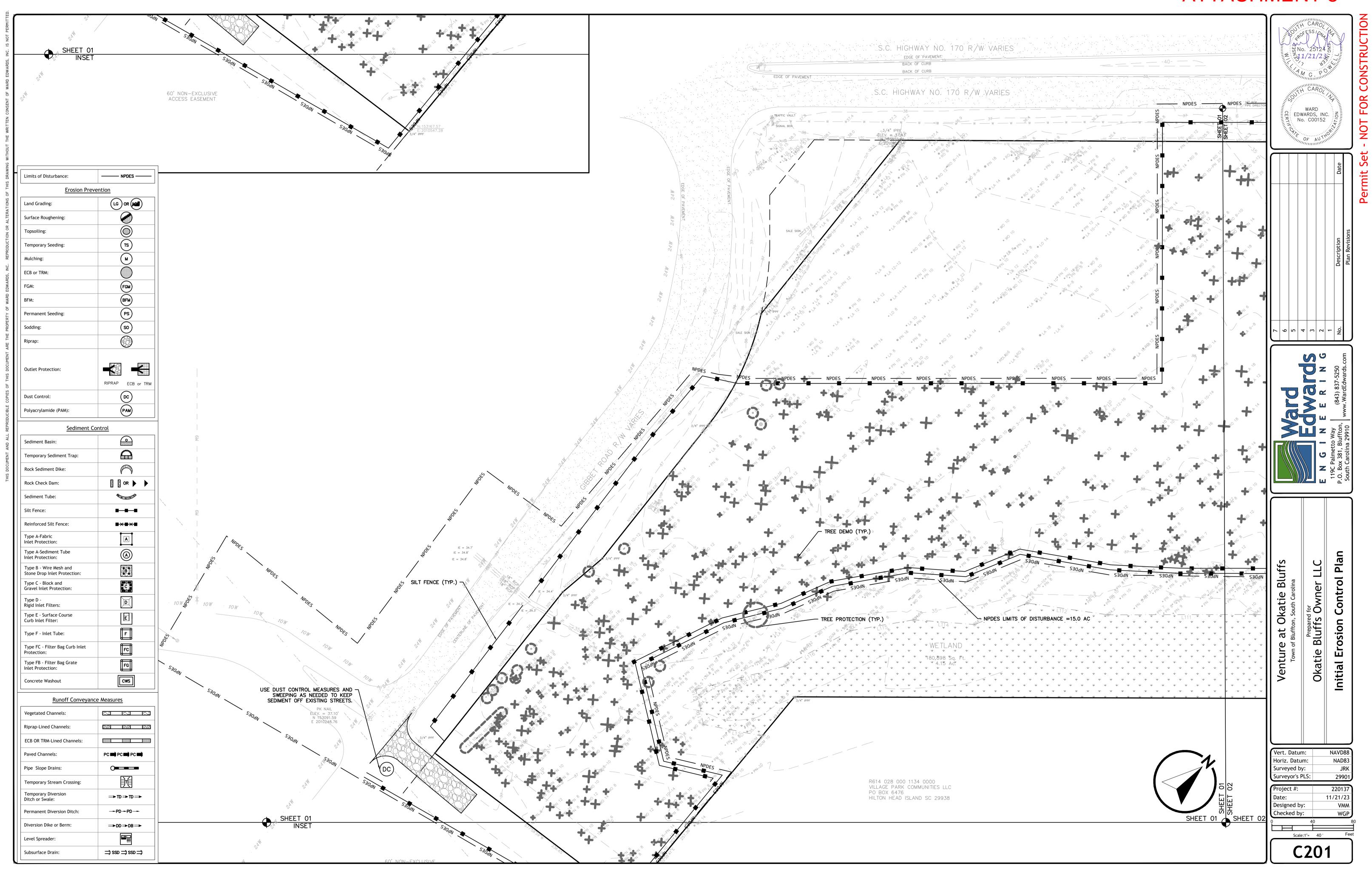
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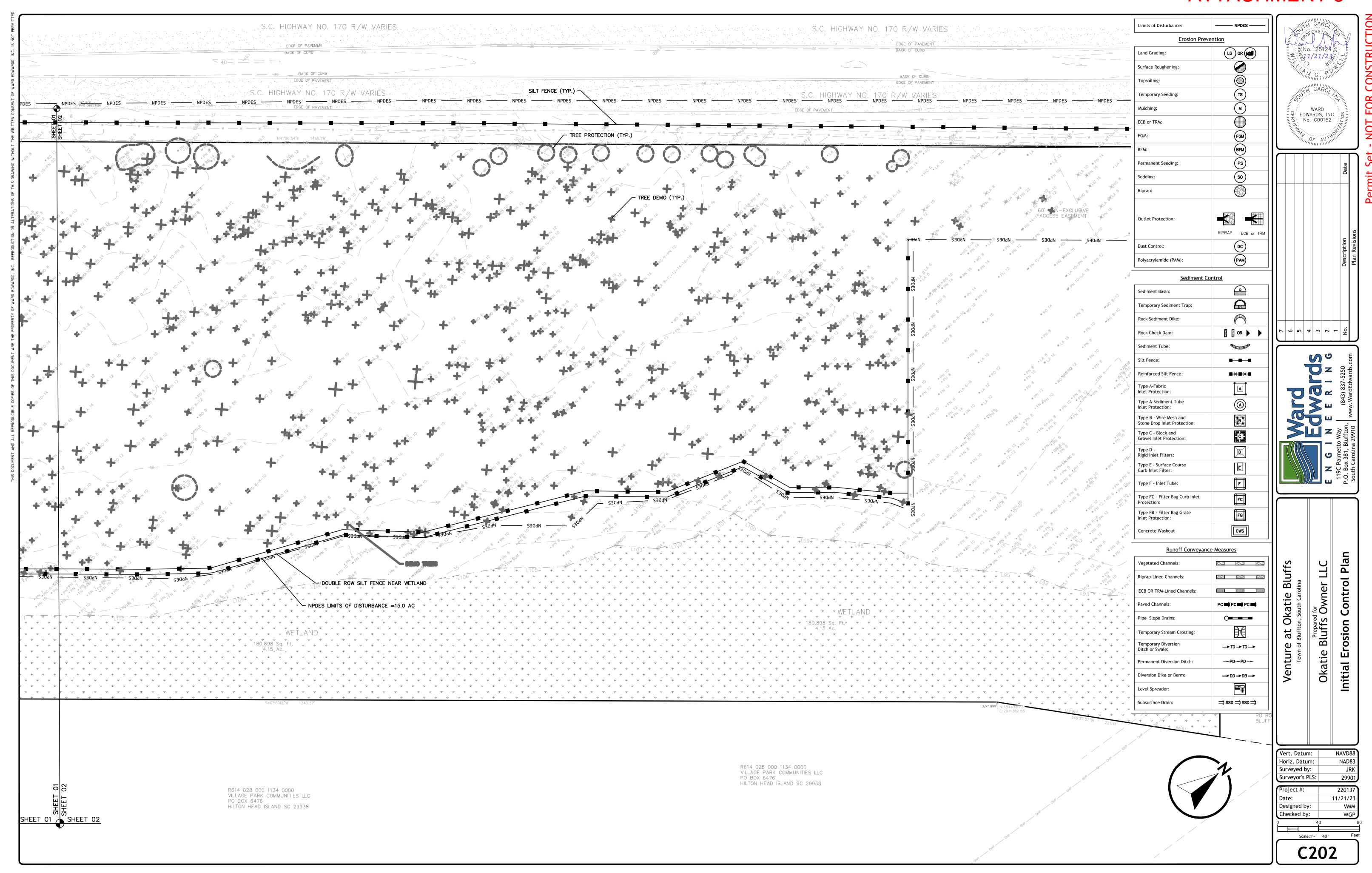
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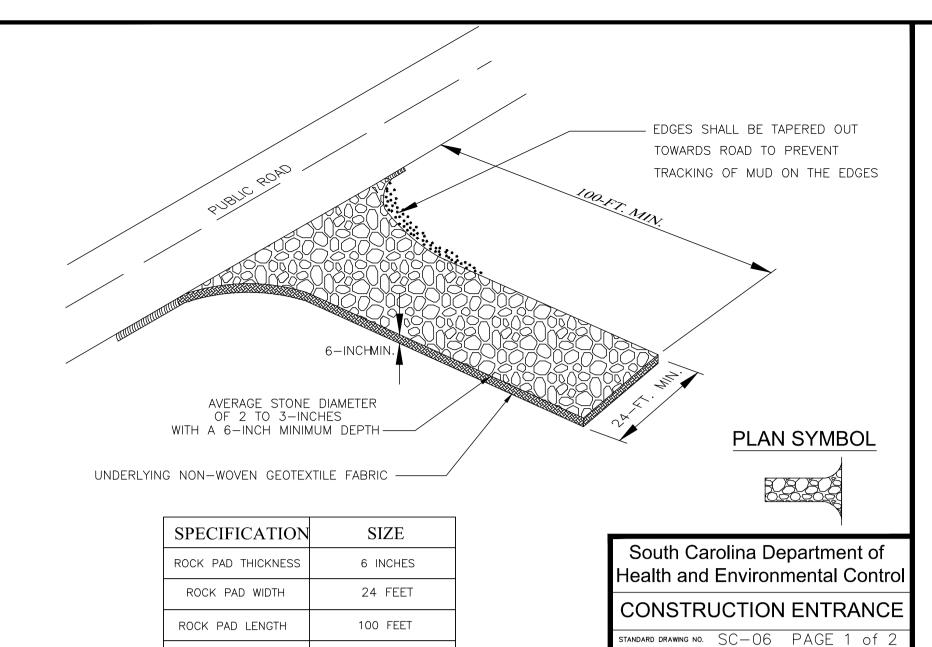


WARD

EDWARDS, INC.

No. C00152

70 Z



PLAN SYMBOL

—SF —SF —

HEAVY DUTY PLASTIC TIE

FOR STEEL POSTS

8-INCHES OF FABRIC)

D = 2-3 INCHES

ROCK PAD STONE SIZE

SILT FENCE INSTALLATION

1.25 LB./LINEAR FT. STEEL POSTS

USE EITHER FLAT-BOTTOM

OR V-BOTTOM TRENCH SEE DETAILS -

FILTER FABRIC

BACKFILL TRENCH WITH

COMPACTED EARTH

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

- Install a non-woven geotextile fabric prior to placing any
- Install a culvert pipe across the entrance when needed to provide positive drainage.
- The entrance shall consist of 2—inch to 3—inch D50 stone placed at a minimum depth of 6—inches.
- Minimum dimensions of the entrance shall be 24-feet wide by 100—feet long, and may be modified as necessary to accommodate site constraints.
- The edges of the entrance shall be tapered out towards the road to prevent tracking at the edge of the entrance.
- Divert all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.
- Limestone may not be used for the stone pad.

LT FENCE — POST REQUIREMENTS
Silt Fence posts must be 48-inch long steel posts that meet, at a minimum,

- Composed of a high strength steel with a minimum yield strength of 50,000 psi.

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

Steel posts may need to have a metal soil stabilization plate welded near the

bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17—square inches and be composed

Install posts to a minimum of 24-inches. A minimum height of 1- to 2-

of 15 gauge steel, at a minimum. The metal soil stabilization plate should be

inches above the fabric shall be maintained, and a maximum height of 3 feet

Silt fence must be composed of woven geotextile filter fabric that consists of

least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability

Use only fabric appearing on SC DOT's Qualified Products Listing (QPL),

the SC DOT Standard Specifications for Highway Construction.

- Composed of fibers consisting of long chain synthetic polymers of at

- Free of any treatment or coating which might adversely alter its physical

pproval Sheet #34, meeting the requirements of the most current edition of

12—inches of the fabric should be placed within excavated trench and toed in

Filter Fabric shall be purchased in continuous rolls and cut to the length of

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

Free of any defects or flaws that significantly affect its physical and/or

- Include a standard "T" section with a nominal face width of 1.38-inches

the following physical characteristics.

shall be maintained above the ground.

the following requirements:

relative to each other;

properties after installation

when the trench is backfilled.

the barrier to avoid joints.

filtering properties; and, — Have a minimum width of 36—inches.

and a nominal "T" length of 1.48—inches.

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

LT FENCE - FABRIC REQUIREMENTS

Weigh 1.25 pounds per foot (± 8%)

- CONSTR. ENTRANCE INSPECTION & MAINTENANCE 1. The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.
- 2. Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
- 3. During regular inspections, check for mud and sediment buildup and pad integrity. Inspection frequencies may need to be more frequent during long periods of wet weather.
- 4. Reshape the stone pad as necessary for drainage and runoff
- 5. Wash or replace stones as needed and as directed by site inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off—site by vehicles. Frequent washing will extend the useful life of stone pad.
- 6. Immediately remove mud and sediment tracked or washed onto adjacent impervious surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a
- 7. During maintenance activities, any broken pavement should be repaired immediately.
- 8. Construction entrances should be removed after the site has reached final stabilization. Permanent vegetation should replace areas from which construction entrances have been removed, unless area will be converted to an impervious surface to post-construction.

South Carolina Department of Health and Environmental Control

WATERPROOF MATERIAL.

## CONSTRUCTION ENTRANCE andard drawing no. SC-06 PAGE 2 of

GENERAL NOTES FEBRUARY 2014
DATE

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

The key to functional silt fence is weekly inspections, routine maintenance, and

SILT FENCE — INSPECTION & MAINTENANCE

regular sediment removal.

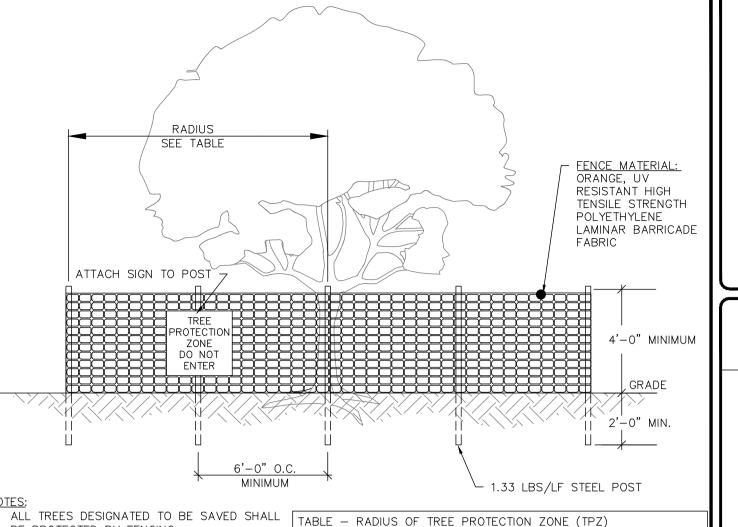
- across disturbed area. Stabilize the removed sediment after it is relocated.
- silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie-backs and/or reinstall silt fence,
- decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence
- and once it is removed, the resulting disturbed area shall be permanently

- 3. Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when
- 4. Remove accumulated sediment when it reaches 1/3 the height of the silt
- 5. Removed sediment shall be placed in stockpile storage areas or spread thinly
- Check for areas where stormwater runoff has eroded a channel beneath the
- 7. Check for tears within the silt fence, areas where silt fence has begun to
- 8. Silt fence should be removed within 30 days after final stabilization is achieved

## South Carolina Department of Health and Environmental Control

SILT FENCE

tandard drawing no. SC-03 PAGE 2 of GENERAL NOTES FEBRUARY 2014
DATE



BE PROTECTED BY FENCING. INSTALL TREE PROTECTION FENCE TO RADIUS INDICATED IN TABLE UNLESS OTHERWISE INDICATED ON PLANS. WARNING SIGNS TO BE MADE OF DURABLE

- ALL WARNING SIGN LETTERS TO BE AT LEAST 3 INCHES HIGH, CLEARLY LEGIBLE AND SPACED A MINIMUM OF ONE EVERY 40 FT. FOR PROTECTION AREAS LESS THAN 40 FT IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER SIDE. THE SIZE OF EACH WARNING SIGN MUST BE
- BOTH SIDES OF THE FENCE. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
- THERE SHALL BE NO STORAGE OF MATERIAL WITHIN THE BOUNDARIES OF THE TREE PROTECTION FENCING.
- TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. FENCING MUST REMAIN UPRIGHT AND SLACK FREE.

RADIUS OF CIRCULAR TPZ JURISDICTION FOOT PER INCH OF TRUNK DBH BEAUFORT COUNTY BEAUFORT CO. DEV. CODE 5.11.100 1.5 FEET PER INCH OF TRUNK DBH OF TOWN OF BLUFFTON 10 FEET WHICHEVER IS GREATER UDO 5.3.3 FENCING AT DRIP LINE FOR ALL TOWN OF HILTON HEAD TREES TO BE RETAINED \_MO 16-6-104, J-3A A MINIMUM OF 2' x 2' AND BE VISIBLE FROM 0.5 FOOT PER INCH OF TRUNK DBH CITY OF BEAUFORT BEAUFORT CODE 5.3.3 JASPER COUNTY FENCING AT DRIP LINE FOR ALL TREES ZONING ORD. ART. 13.5 TO BE RETAINED 1.5 FEET PER INCH OF TRUNK DBH OR TOWN OF PORT ROYAL PORT ROYAL CODE 5.7.70 5 FEET WHICHEVER IS GREATER FENCING AT DRIP LINE FOR ALL TREES CITY OF HARDEEVILLE TO BE RETAINED MZ&DO 4.8, F-3

DBH = TRUNK DIAMETER AT BREAST HEIGHT

## TREE PROTECTION FENCE

DETAIL #02915-008

ADHESIVE	WATER DILUTION	NOZZLE TYPE	APPLICATION (GAL./ACRE)
ANIONIC ASPHALT EMULSION	7:1*	COARSE SPRAY	1,200
LATEX EMULSION	12.5:1*	FINE SPRAY	235
RESIN-IN- WATER EMULSION	4:1*	FINE SPRAY	300

\*USE MANUFACTURER'S RECOMMENDATIONS WHEN AVAILABLE.

 PROHIBIT TRAFFIC ON SURFACE AFTER SPRAYING. SUPPLEMENT SURFACE COVERING AS NEEDED.

INSTALLATION: APPLY ACCORDING TO APPROVED PLAN.

- MULCH DISTURBED AREAS AMD TACKIFY WITH RESINS SUCH AS ASPHALT, CURASOL OR TERRATACK ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT VEGETATION.
- IRRIGATE DISTURBED AREAS UNTIL SURFACE IS WET.
- COVER SURFACES WITH CRUSHED STONE OR GRAVEL APPLY CALCIUM CHLORIDE AT A RATE TO KEEP SURFACES
- APPLY SPRAY-ON ADHESIVES TO MINERAL SOILS (NOT MUCK SOILS) AS DESCRIBED IN TABLE 1.

DUST CONTROL ON DISTURBED AREAS

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Surveyed by:	JRK
Surveyor's PLS:	29901
Project #:	220137

Bluff

Okatie

at

70

Initial

Bluffs

Okatie

11/21/23 Designed by: Checked by:

Not to Scale

C203

SILT FENCE — GENERAL NOTES 1. Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs. Maximum sheet or overland flow path length to the silt fence shall be 100-feet. Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1 Silt fence joints, when necessary, shall be completed by one of the following options: - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot BURY FILTER FABRIC - Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll is AT LEAST 12-INCHES attached. Attach old roll to new roll with heavy-duty plastic ties; or, - Overlap entire width of each silt fence roll from one support post to the next support post. South Carolina Department of Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8—inches of the fabric. Health and Environmental Control Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanou SILT FENCE Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt standard drawing no. SC-03 Page 1 of NOT TO SCALE DATE **EXCAVATED PIT CONCRETE WASHOUT** \_EDGE OF PLASTIC LINER EARTHEN BERM. PLASTIC LINER\_ OVER BERM GRAVEL-FILLED BAG-**SECTION B-B** TOP OF CUT\_ NOT TO SCALE EARTHEN PLASTIC LINER \_ OVER BERM -PLASTIC LINER OVER BERM EARTHEN BERM\_ \_EARTHEN BERM GRAVEL-FILLED\_ LINER ✓ EARTHEN BERM VPLASTIC LINER PLACED UNDER BERM (ENTRY SIDE ONLY) SECTION A-A NOT TO SCALE TYPE "EXCAVATED PIT" NOTES:

EARTHEN BERM \_PLASTIC LINER PLACED UNDER BERM (ENTRY SIDE ONLY) \_ORIGINAL GROUND GRAVEL-FILLED BAG V\_ORIGINAL GROUND 1. ACTUAL LAYOUT DETERMINED IN FIELD. 6. SILT FENCE SHALL BE INSTALLED AROUND LETTERS A MINIMUM\_ PERIMETER OF CONCRETE WASHOUT AREA OF 5" IN HEIGHT EXCEPT FOR THE SIDE UTILIZED FOR 2. INSTALL CONCRETE WASHOUT SIGN (24"X24", ACCESSING THE WASHOUT. MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY. CONCRETE 7. A ROCK CONSTRUCTION ENTRANCE MAY BE WASHOUT NECESSARY ALONG ONE SIDE OF THE TEMPORARY WASHOUT AREA MUST BE AT LEAST WASHOUT TO PROVIDE VEHICLE ACCESS. 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.

CLEAN OUT CONCRETE WASHOUT AREA WHEN

5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS

AND REGULAR CLEAN OUT.

IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE

50% FULL.

CONCRETE WASHOUT SIGN DETAIL

NOT TO SCALE

COMPACTED EARTH (

RUNOFF

FILTER FABRIC

COMPACTE

RUNOFF

FLAT-BOTTOM TRENCH DETAIL

V-SHAPED TRENCH DETAIL

HEAVY DUTY PLASTIC TII

HEAVY DUTY PLASTIC TIES

18-IN. TO 24-IN.

South Carolina Department of Health and Environmental Contro CONCRETE WASHOUT

NOT TO SCALE FEBRUARY 2014

DATE

EXCAVATED PIT dard drawing no. RC-08 PAGE 1 of 1



