



TOWN OF NAGS HEAD

AGENDA

TOWN OF NAGS HEAD BOARD OF COMMISSIONERS
NAGS HEAD MUNICIPAL COMPLEX - BOARD ROOM
WEDNESDAY, FEBRUARY 5, 2020; 9:00 A.M.

A. CALL TO ORDER / MOMENT OF SILENCE/PLEDGE OF ALLEGIANCE

B. ADOPTION OF AGENDA

C. RECOGNITION

1. RECOGNITION

NEW EMPLOYEE – Police Officer Terrance Flaughter – November 26, 2019
NEW EMPLOYEE – Facilities Maintenance Tech Nehmias Cortez – January 21, 2020
NEW EMPLOYEE – Dep Finance Officer Brooke Norris – January 27, 2020

25 YEARS – Sanitation Equipment Operator Keefe White – January 4, 1995
25 YEARS – Town Clerk Carolyn F Morris – January 23, 1995
Jennette's Pier Annual Update – Director Mike Remige

Documents:

[2 C RECOGNITION SUMMARY.PDF](#)
[2 C JENN PIER PRES.PDF](#)

D. PUBLIC COMMENT

E. CONSENT AGENDA

1. CONSIDERATION OF BUDGET ADJUSTMENT #8 TO FY 19/20 BUDGET

Documents:

[2 E1 BUDGET ADJUSTMENT SUMMARY.PDF](#)
[2 E1 BUD ADJ WORKSHEETS.PDF](#)

2. CONSIDERATION OF TAX ADJUSTMENT REPORT

Documents:

[2 E2 TAX ADJUST REPORT SUMMARY.PDF](#)
[2 E2 MSD TAX ADJ REPORT.PDF](#)
[2 E2 TOWN-WIDE TAX ADJ REPORT.PDF](#)

3. REQUEST TO ADVERTISE DELINQUENT TAXES

Documents:

[2 E3 TAX DELINQ REPORT SUMMARY.PDF](#)

[2 E3 TAX DELINQ REPORT MEMO.PDF](#)

4. CONSIDERATION OF AMENDMENTS TO CONSOLIDATED FEE SCHEDULE

Documents:

[2 E6 CFS MOD SUMMARY.PDF](#)
[2 E6 CFS MODIFIED PAGES.PDF](#)

5. CONSIDERATION OF RESOLUTION UPDATING TOWN OFFICIALS WITH BANKING AUTHORITY

Documents:

[2 E7 BANK OFFICIALS SUMMARY.PDF](#)
[2 E7 BANK OFFICIALS RES.PDF](#)

6. CONSIDERATION OF RESOLUTION CLARIFYING

Dare County Control Group / Town of Nags Head October 2015 Memorandum of Agreement

Documents:

[2 E8 CLARIFY DARE CO MOA SUMMARY.PDF](#)
[2 E8 TOWN AND DC MOA.PDF](#)

7. RATIFICATION OF ACTIONS

from Board of Commissioners January 23-24, 2020 Retreat

Documents:

[2 E9 BOC RETREAT ACTIONS AFFIRM SUMMARY.PDF](#)
[2 E9 BOC RETREAT ACTIONS AFFIRM LIST.PDF](#)

F. PUBLIC HEARINGS

1. PUBLIC HEARING TO CONSIDER A VESTED RIGHT SITE PLAN

for the Outer Banks Hospital, 4923 & 4927 S. Croatan Highway, 4922, 4926 & 4928 Passage Way, submitted by Quible and Associates P.C. on behalf of Outer Banks Hospital; the application involves the demolition of the Urgent Care Facility and construction of a 10,400 square foot addition (Infusion Facility) to the existing Radiation Therapy building. As part of the application, the applicant is seeking a Conditional Use Permit to reduce the number of required parking spaces and modify certain parking requirements, and to rezone the properties at 4922, 4926 & 4928 Passage Way from the SPD-C Single-Family Two District to the SPD-C Hotel District

Documents:

[2 F1 PH OBH CANCER CENTER SUMMARY.PDF](#)
[2 F1 PH OBH CANCER CENTER PN.PDF](#)
[2 F1 PH OBH CANCER CENTER STAFF REPORT.PDF](#)
[2 F1 PH OBH CANCER CENTER BACKUP.PDF](#)
[2 F1 PH OBH CANCER CENTER BACKUP PART 2.PDF](#)

G. REPORTS AND RECOMMENDATIONS FROM THE PLANNING BOARD AND THE PLANNING AND DEVELOPMENT DIRECTOR

1. UPDATE FROM PLANNING DIRECTOR

Documents:

[2 G1 PD UPDATE SUMMARY.PDF](#)
[2 G1 PD UPDATE REPORT.PDF](#)

2. DISCUSSION OF WORKFORCE HOUSING

Documents:

[2 G2 WORKFORCE HOUSING SUMMARY.PDF](#)
[2 G2 WORKFORCE HOUSING BACKUP.PDF](#)

H. NEW BUSINESS

1. COMMITTEE REPORTS

Documents:

[2 H1 COMMITTEE REPORTS SUMMARY.PDF](#)

2. CONSIDERATION OF AUDIT CONTRACT

Documents:

[2 H2 AUDIT CONTRACT SUMMARY.PDF](#)
[2 H2 AUDIT CONTRACT RECOMM MEMO.PDF](#)
[2 H2 AUDIT PROPOSALS RESULTS.PDF](#)

I. ITEMS REFERRED TO AND PRESENTATIONS FROM TOWN ATTORNEY

J. ITEMS REFERRED TO AND PRESENTATIONS FROM TOWN MANAGER

1. BEACH NOURISHMENT

- Report on proposed Municipal Service District (MSD)

Documents:

[2 J1 TM MSD PROPOSAL AGSS.PDF](#)
[2 J1 TM MSD PRESENTATION.PDF](#)

2. SANITATION/RECYCLING

- Consideration of changes to winter sanitation/recycling schedule
- Consideration of ordinance to rescind Town Code 30-6 (e) Storage and removal of trash and recycling carts
- Consideration of modification to contract with Bay Disposal dated Feb 5, 2019 re: curbside recycling

Documents:

[2 J2 TM SAN-RECYCLING SUMMARY.PDF](#)
[2 J2 TM SAN-RECYCLING ATTACHMENT SCHED 1.PDF](#)
[2 J2 TM SAN-RECYCLING RESCIND ORD 2.PDF](#)

K. BOARD OF COMMISSIONERS AGENDA

L. MAYOR'S AGENDA

1. CONSIDERATION OF DATES FOR CIP/BUDGET WORKSHOPS

Documents:

[2 L1 MAYOR CIP-BUDGET WORKSHOP DATE SUMMARY.PDF](#)

2. DISCUSSION OF "ACTIONABLE" ITEMS FROM ENVISIONING EXERCISE
– Future of Nags Head from last week's Board Retreat

Documents:

[2 L2 MAYOR ACTIONABLE ITEMS FROM RETREAT SUMMARY.PDF](#)

M. OTHER BUSINESS

N. ADJOURNMENT

O. FULL AGENDA In .PDF Format With Bookmarks

**5401 S. Croatan Hwy, Nags Head, NC 27959
252-441-5508**



Agenda Item Summary Sheet

Item No: C
Meeting Date: **February 5, 2020**

Item Title: Recognition

Item Summary:

Recognition at the January 8th Board meeting includes the following:

NEW EMPLOYEE – Police Officer Terrance Flaughner – November 26, 2019
NEW EMPLOYEE – Facilities Maintenance Tech Nehmias Cortez – January 21, 2020
NEW EMPLOYEE – Dep Finance Officer Brooke Norris – January 27, 2020

25 YEARS – Sanitation Equipment Operator Keefe White – January 4, 1995
25 YEARS – Town Clerk Carolyn F Morris – January 23, 1995

Jennette's Pier Annual Update – Director Mike Remige

Number of Attachments: 0

Specific Action Requested:

Provided for Board recognition.

Submitted By: Administration

Date: January 29, 2020

Finance Officer Comment:

No unbudgeted fiscal impact.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy

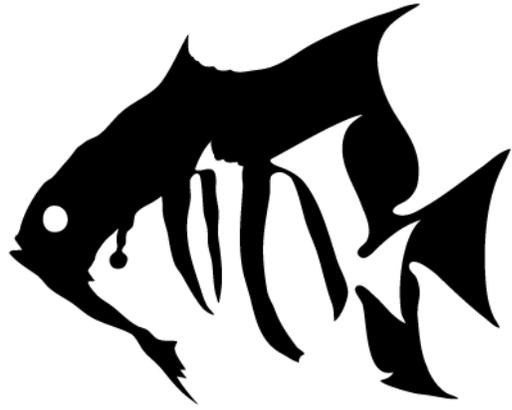
Date: January 29, 2020

Town Manager Comment and/or Recommendation:

N/A

Signature: Cliff Ogburn

Date: January 29, 2020



JENNETTE'S PIER

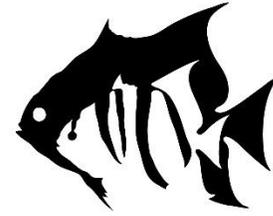


JENNETTE'S PIER – 2019 ANNUAL REVIEW

February 5, 2020

Mike Remige - Director

- Visitation
- Operations
- Projects & Exhibits
- Research & Ocean Observing
- Community Events & Activities
- Facility Rentals
- Education & Outreach
- Conservation & Sustainability
- Highlights & Notables
- 2020



JENNETTE'S PIER





JENNETTE'S PIER

Visitation

2019

- Pier visitors – 178,912
 - Fishing admissions – 28,435
 - Sightseeing admissions – 150,477
- Events and Program participants – 22,903





Pier Shop renovations



Pier Shop renovations





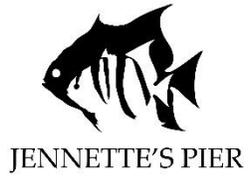
Pier Shop renovations



Pier Shop renovations

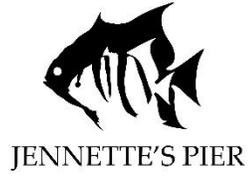


Pier Shop Gross Sales up 16%
Closed from Jan. 1, 2019 – Mar. 12, 2019



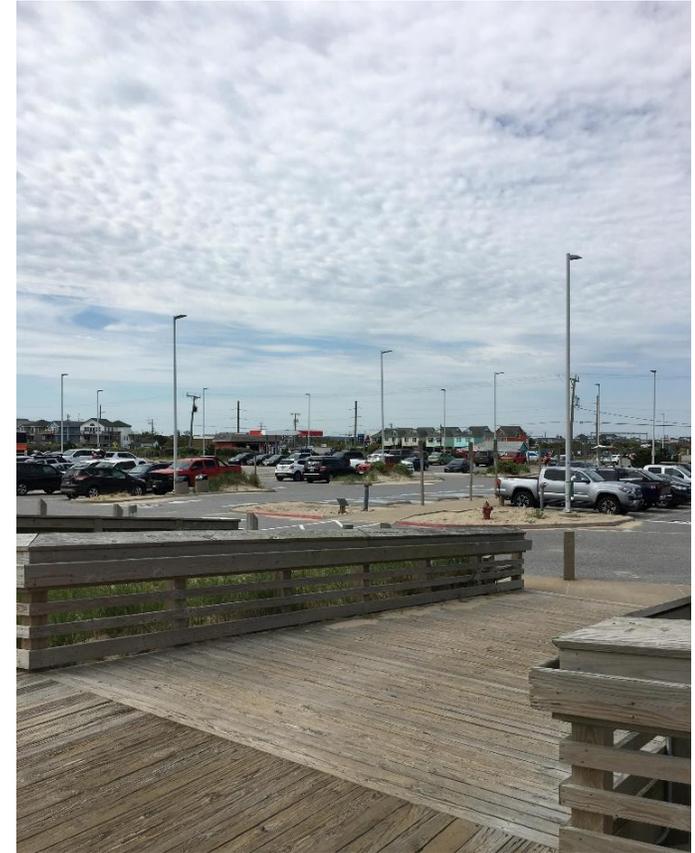
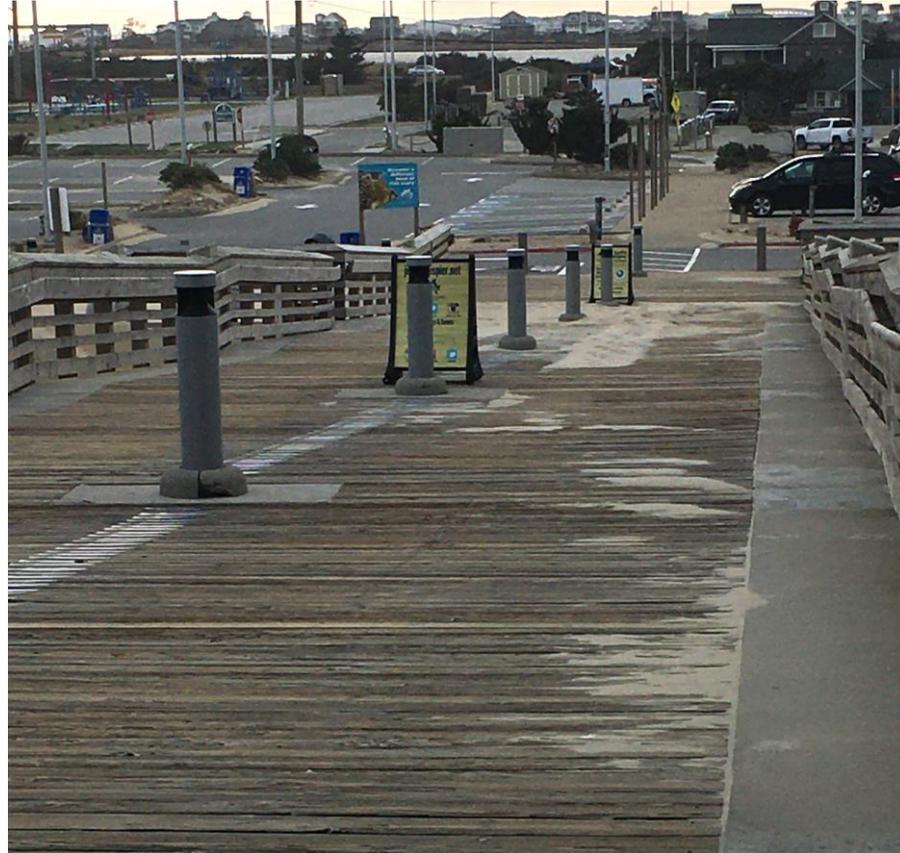
Pier Shop Conservation Efforts

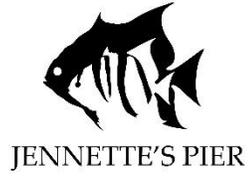




Jennette's Pier Projects

Entrance Lighting

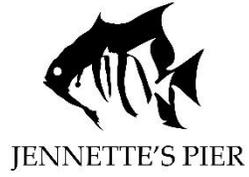




Jennette's Pier Projects

Parking Lot and Stormwater Management

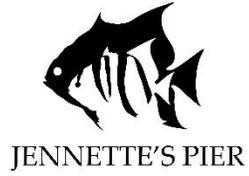




Jennette's Pier Projects

Fire Suppression System

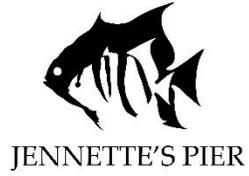




Jennette's Pier Projects

Entrance Branding

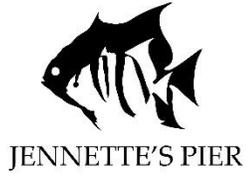




Jennette's Pier Exhibits

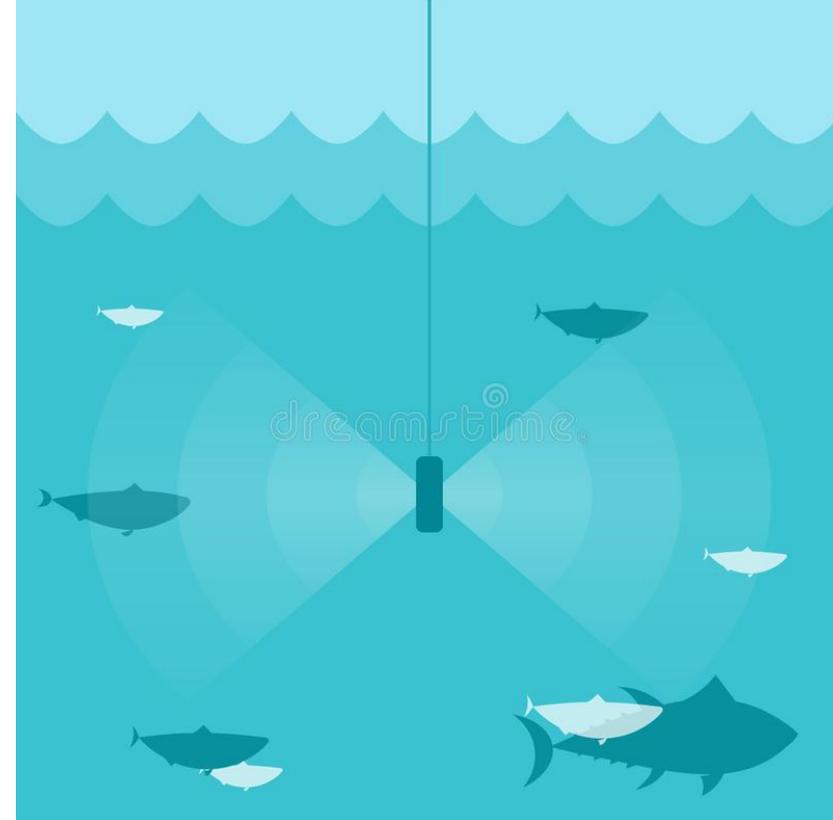
Bottlenose Dolphin Skeleton





Jennette's Pier Research & Ocean Observing

in partnership with the Coastal Studies Institute



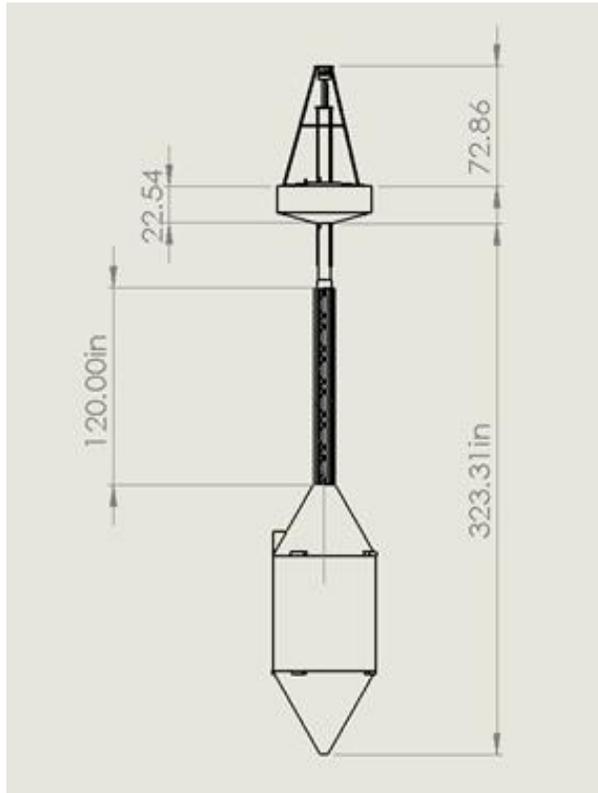
Renewable Ocean Energy Program Collaborative Grants



JENNETTE'S PIER

Jennette's Pier Research & Ocean Observing

in partnership with the Coastal Studies Institute



VA Tech



Triton Systems

Marine Hydrokinetic Equipment Tests



JENNETTE'S PIER

Jennette's Pier Research & Ocean Observing

in partnership with the USACE FRF Duck Pier



#CoastSnap

Utilizing citizen scientists to help us record our ever-changing coastline

SANDIA REPORT

SAND2015-7963
Unlimited Release
Printed September 2015

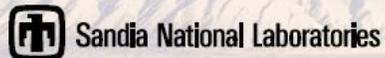
Characterization of U.S. Wave Energy Converter (WEC) Test Sites: A Catalogue of Met-Ocean Data *2nd Edition*

Ann R. Dallman, Vincent S. Neary

Prepared by
Sandia National Laboratories
Albuquerque, New Mexico 87185 and Livermore, California 94550

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

Approved for public release; further dissemination unlimited.



NOTE: This is Part 2 of 'Characterization of U.S. Wave Energy Converter (WEC) Test Sites: A Catalogue of Met-Ocean Data, 2nd Edition' by Ann R. Dallman and Vincent S. Neary. Please see [en.openei.org/wiki/Characterization_of_U.S._Wave_Energy_Converter_\(WEC\)_Test_Sites](http://en.openei.org/wiki/Characterization_of_U.S._Wave_Energy_Converter_(WEC)_Test_Sites) for the other parts of the report.

5. JENNETTE'S PIER WAVE ENERGY TEST CENTER

5.1. Site Description

Jennette's Pier, owned by the State of North Carolina and managed by the NC Aquarium Division, is a unique public facility that provides education and outreach including displays of experimental data and monitoring equipment. The University of North Carolina Coastal Studies Institute (UNC CSI) began a partnership with Jennette's Pier in 2004 to foster research, ocean energy device testing and monitoring, outreach, and education. Part of this partnership is the Jennette's Pier Wave Energy Test Center. The site was used for the first time in December 2011 by Resolute Marine Energy.

The Jennette's Pier Wave Energy Test Facility has two test berth locations, one approximately 80 m north of the pier structure at 6 m water depth (35.9119 N, 75.5933 W) that is called the 'nearshore berth' and one approximately 600 m east of the seaward end of the pier at 11 m depth (35.9123 N, 75.5863 W) that is called the 'offshore berth.' The seabed is sandy at both locations. Figure 33 shows the gently sloping bathymetry around the site, which consists of a wide shelf.

The wave climate at the test site varies seasonally, with calmer seas in the summer compared to more energetic seas in the winter. The wave environment at Jennette's Pier is characterized by an annual average power flux of about 6.08 kW/m at 12.6 m depth.

The nearby University of North Carolina (UNC) Coastal Studies Institute (CSI) offers a wide range of technical and testing infrastructure support services for WEC developers. Jennette's Pier has small scale, shallow water wave energy resources, and is suited for scaled devices.

Jennette's Pier Wave Energy Test Facility

Approach:

- Shallow water platform for testing marine hydrokinetic energy devices and monitoring of the impacts of devices on the surrounding environment

Benefits of Pier partnership:

- Simplified permitting (existing protocols and structure)
- Opportunities for public engagement



Permitted test berths



Jennette's Pier at Nags Head North Carolina Aquarium Division N.C. Dept. of Natural and Cultural Resources

Concrete pier structure opened in 2011

Public facility providing:

- Public access to the oceanfront and recreational fishery
- Public educational programming
- Ocean observing and research platform
- Sustainable technology demonstration (LEED platinum certification)

Located on the Atlantic Ocean in Nags Head, NC (Outer Banks)

400,000+ annual property visitors



Jennette's Pier Wave Energy Test Facility

Presentation to the Water Power Technologies Office, U.S. Dept. Energy

Michael Remige, Director at Jennette's Pier

Michael Muglia, Assistant Director for Science and Research

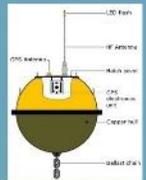
Corey Adams, Research Operations Manager

Lindsay Dubbs, Associate Director

NC Renewable Ocean Energy Program (NCROEP) - Coastal Studies Institute (CSI)

Existing observation assets

- Acoustic Wave and Current Meter (AWAC)
 - directional wave spectra, water temperature, and current profiles
 - collaboration with the US Army Corps of Engineers
- Meteorological station
 - wind velocity, temperature, and humidity
 - in collaboration with Weatherflow Inc.
- Datawell Waverider buoy
 - CDIP buoy 243
 - 26 meter isobath on a Wave Information Study (WIS) test point
 - collaboration with the US Army Corps of Engineers



Vessels

- Duffy - 42'
- Privateer - 28'
- Zodiac - 12'



Program assets

- 34 engineering and science professors from 5 North Carolina institutions
- Wave computational modeling – NCSU (Casey Dietrich and Alejandra Ortiz)
- 40 year wave hindcast dataset – CSI
- Extensive oceanographic field experience – CSI
- Technical diving program - CSI



Deployments at Jennette's Pier Wave Energy Test Facility

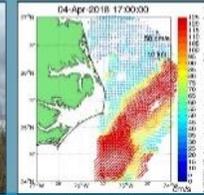
Previous Experiments:

- Resolute Marine Energy (2011) - surge WEC
- SAROS (2013) - wave-powered desalination buoy
- Nortek (2013) - scour monitor validation
- NCSU (2013) - In situ erosion evaluation probe (ISEEP)



Auxiliary observation assets

- Datawell Waverider buoy
 - Coastal Data Information Program (CDIP) buoy 192 (NDBC 44095)
 - 30 km southeast off of Oregon Inlet
- HF radar ocean surface current measurements



Opportunities for public engagement

Research and OE testing spotlighted in permanent Research Center display and temporary deployment-based displays

- Allows public exposure and engagement of Pier visitors - from 2014 to 2018, annual visitation between 172,000 and 189,538 people each year
- Allows agency interactions and exposure
- NC DEQ - interest in learning about environmental synergies and impacts from small-scale deployments
- BOEM - numerous offshore wind public meetings held at Jennette's Pier





Fri 2/8/2019 5:21 PM

Gore, Simon (FELLOW) <Simon.Gore@ee.doe.gov>

[External] DOE Workshop Invitation: Wave Energy-Powered Desalination Prize

To Remige, Michael P; 'dubbs@email.unc.edu'; 'mugliam@ecu.edu'

Cc Spence, Heather (FELLOW); Jenne, Dale (NREL); Garson, Jennifer; Geerlofs, Simon; Lemke, Alexandra (CONTR)

 Follow up. Completed on Monday, February 18, 2019.
You replied to this message on 2/15/2019 7:43 AM.

Suggested Meetings

+ Get more add-ins

Hello Michael, Lindsay, and Mike

The WPTO very much appreciated your presentation on Jeannette's Pier and the Coastal Studies Institute. It was also good for us to vet some questions even if we cannot share all of the details just yet on some of our future work. I'd like to welcome you to participate in a workshop we are planning for March 14th-15th in Golden, CO. See below for an invite message from the WPTO's director and please let me know if you have any questions:

On behalf of the U.S. Department of Energy's Water Power Technologies Office you are invited to join a workshop to help with planning for a potential new prize competition to spur innovation in wave energy-powered desalination systems. We hope to leverage your experience with desalination, marine energy, and water technology systems to inform the design of the Energy Department's first-ever prize on this subject.

Wave and tidal power technologies can provide locally-sourced and reliable energy to coastal communities and ocean industries, particularly where access to electricity is limited or prohibitively expensive. Wave energy is one of the few technologies that can produce clean water without the need to convert energy to electricity. For example, wave energy converters can pump seawater at high pressure and directly drive a reverse osmosis desalination system bypassing the largest cost driver: electricity costs.

This workshop is a unique opportunity to network with a diverse group of professionals, including experts from the Energy Department, national laboratories, and the private sector. Moreover, your valuable input will ensure the Department focuses on areas that would lead to important advances for both the marine energy and desalination industries.

The event will occur over a day and a half, and feature background on the prize, discussion of feasible overall prize structures, important potential technical metrics for competitors, possible competition locations, and most importantly, the prize rules.

We hope you can to attend the workshop at the National Renewable Energy Laboratory in **Golden, Colorado on March 14-15**. **Please confirm by February 18th** by emailing Alexandra Lemke (alexandra.lemke@ee.doe.gov) and Simon Gore (simon.gore@ee.doe.gov). A full agenda and briefing materials will be circulated closer to the event.

We sincerely hope to see you in Golden, CO.

Simon Gore, on behalf of
Alejandro Moreno
Director, Water Power Technologies Office

Simon J Gore

Environmental Science and Policy Specialist
AST Supporting - Water Power Technologies Office

Department of Energy

DOE Announces Prize Competition for Wave Energy Water Desalination

FEBRUARY 25, 2019



[Home](#) » [DOE Announces Prize Competition for Wave Energy Water Desalination](#)

Prize Builds on DOE Efforts to Spur U.S. Innovation through Competition to Accelerate Technology Development

WASHINGTON, D.C. –Today, the U.S. Department of Energy (DOE) announced a prize competition to spur innovation in wave energy-powered desalination systems. The Waves to Water Prize will draw upon U.S. innovators to accelerate technology development through a series of contests to demonstrate small, modular, cost-competitive desalination systems that use the power of the ocean to provide potable drinking water to remote coastal and island communities.

“The United States is committed to meeting the global need for a vital resource – safe, secure, and affordable water,” said Assistant Secretary Daniel Simmons, speaking at Oceanology International: Americas. “The Waves to Water Prize will accelerate the development of next generation desalination technologies through the power of competition amongst the best and brightest. We



U.S. DEPARTMENT OF ENERGY

WAVES TO WATER PRIZE



U.S. DEPARTMENT OF
ENERGY



CONTEST

I CONCEPT

II DESIGN

III CREATE

IV DRINK

Propose a Wave Powered System

Up to 20 Winners (\$200,000 Cash Prize Pool)

Develop Detailed Plan and Model

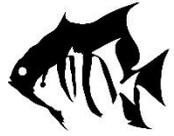
10-20 Winners (\$800,000 Cash Prize Pool)

Demonstrate Working Principles

Up to 10 Winners (\$500,000 Cash Prize Pool)

Test & Demonstrate in the Ocean

Grand Prize up to \$500,000; and
Individual Metrics Prizes up to \$500,000



JENNETTE'S PIER

Jennette's Pier Event Site

in partnership with the Town of Nags Head and the Outer Banks Visitors Bureau

COMMUNITY EVENTS & ACTIVITIES

Official event site for:

- WRV Outer Banks Pro
- Eastern Surfing Association Championships & Mid-Atlantic Regionals
- OBX Running Company "Sunrise 5k/Sunset 5k"
- NHSFC & NCBBA "Fritz Boyden Memorial Youth Fishing Tournament"
- NC Lions Club "Visually Impaired Persons Fishing Tournament"
- Jennette's Pier's "Family Fishing Tournament" & "Red Drum Tournament"
- Surfing for Autism
- Best Day Foundation
- OBX Skim Jam

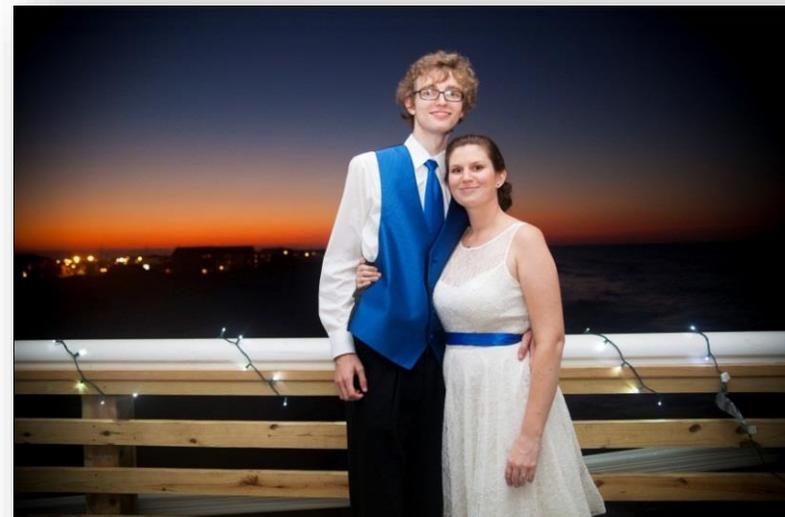


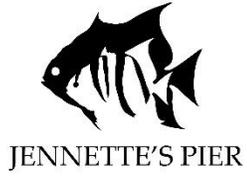


Jennette's Pier Facility Rentals

Total Events – 2020

- Weddings - 33
- Conferences/Meetings/Receptions/Socials/Dances /Concerts/Expos/Memorials - 35





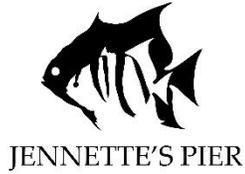
Jennette's Pier Facility Rentals

Recognition



- WeddingWire “Couples’ Choice Award”
2015, 2016, 2017, 2018, 2019, 2020
- The Knot’s “Best of Weddings” Award
2015, 2016, 2017, 2018, 2019, 2020

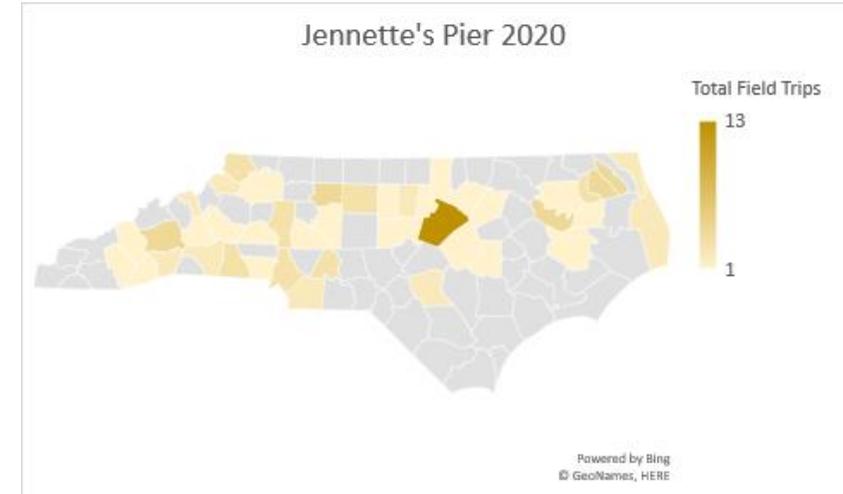


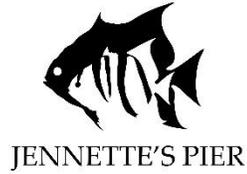


Jennette's Pier Education Department

2019

- Public programs – 80
- Public program attendance – 1,035
- NC school field trips – 118
- NC school programs – 354
- NC school student visits – 9,210 from 43 counties





Jennette's Pier Education Department

Aquarium Scholars

Aquarium Scholars is a partnership between the NC Aquariums, NC public schools and the NC Aquarium Society through which private donors help fund access to **STEM (Science, Technology, Engineering & Math)** based Aquarium education programs for low-income students across the state.

2019

16 school groups

2,034 students

5-Outreach

11-Field Trips





Summer Camps

Lilly Scholarship Fund

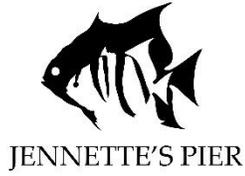
- 17 weeklong summer camps – 214 campers (23 scholarships)
- 2 Exceptional Day camps – 16 campers (16 scholarships)
- 2 overnight camps – 20 campers (20 scholarships)

**Dare County Friends of Youth Sponsor of the Year
2020**

A woman wearing a yellow beanie, sunglasses, a red jacket, and dark overalls stands on a sandy beach. Behind her lies a large, dark whale carcass, likely a humpback whale, with its characteristic ribbed skin. The ocean and a cloudy sky are visible in the background.

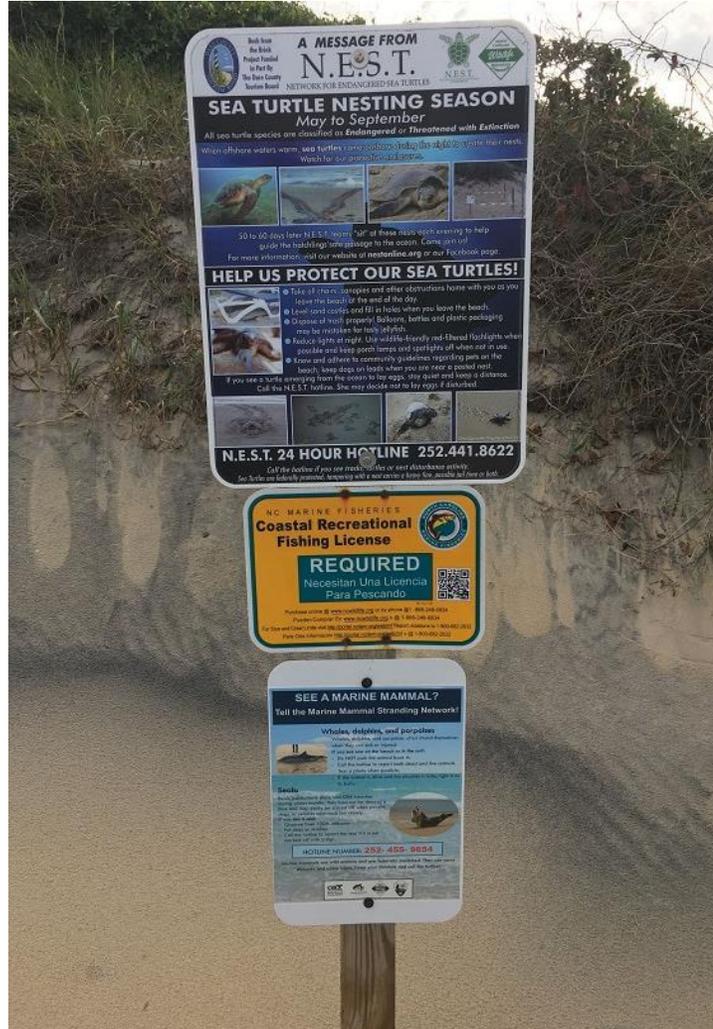
Marine Mammal Stranding Network

Humpback Whales – Pygmy Sperm Whales – Dwarf Sperm Whales – Bottlenose Dolphins – Risso's Dolphin – Common Dolphins – Harbor Porpoises – Harbor Seals – Gray Seals – Harp Seals



Jennette's Pier Wildlife Conservation

OBX Marine Mammal Stranding Network
Public Outreach



Thanks to the Town of Nags Head for partnering with Jennette's Pier's outreach efforts in support of the OBX Marine Mammal Stranding Network!

Seven MMSN information signs have been placed at key beach accesses throughout the Town.

Jennette's Pier Wildlife Conservation

Tagged Sand Tiger Shark Tracking

Acoustic Telemetry

Atlantic Cooperative Telemetry Network - hundreds of researchers and 1000's of acoustic transmitters:

May – October 2019

- Atlantic tarpon
- **Atlantic Sturgeon - 1**
- Black drum
- **Blacktip shark – 1**
- Bull sharks
- **Cownose ray – “LOTS”**
- Finetooth shark
- Gray triggerfish
- Lionfish
- Red snapper
- Red drum
- **Sand Tiger Sharks – 3 Adult Females from Morehead City NC, and 1 Subadult Male from Delaware Bay**
- Speckled trout
- Spiny dogfish
- Spot fish
- Summer flounder
- Thresher shark
- Tripletail
- **Unknown Tag – 1 (not in ACT Network)**

<http://www.theactnetwork.com/>



Responsible
Pier
Initiative

Keep your BUTTS off our BEACH

Cigarette butts contain plastic, are NOT biodegradable, and can be **TOXIC** to fish, birds, and other wildlife.

Please do your part to keep them out of our oceans by always disposing of your butts in proper receptacles.

While at Jennette's Pier, look for marked CIGARETTE BUTT RECYCLING BINS to dispose of your smoking supplies.

Discarded cigarette butts alone create over **90 MILLION POUNDS** of harmful plastic litter each year.

Butts collected at the Pier are sent to TerraCycle, where their components are separated and recycled into useful materials.



Sustainability Projects

Cigarette litter reduction and terra-cycling pilot program

Funded by an NC Aquarium Society Sustainability Grant





Notable:

- Key NCAQ, NCAS & JP vacancies have been filled
 - AQ Division Director – Maylon White
 - Pine Knoll Shores Director – Liz Baird
 - Roanoke Island Director – Larry Warner
 - NCAS President – Jay Barnes
 - NCAS Development Director – Jim Mulvey
 - JP Business Manager – Lorelei Zumbrunnen
- NCAS Board changes –
 - 5 members move to Emeritus (Ray White)
 - 6 new members elected (Ronnie Sloan, Tess Judge, Clark Twiddy)

The
Outer Banks
Hospital

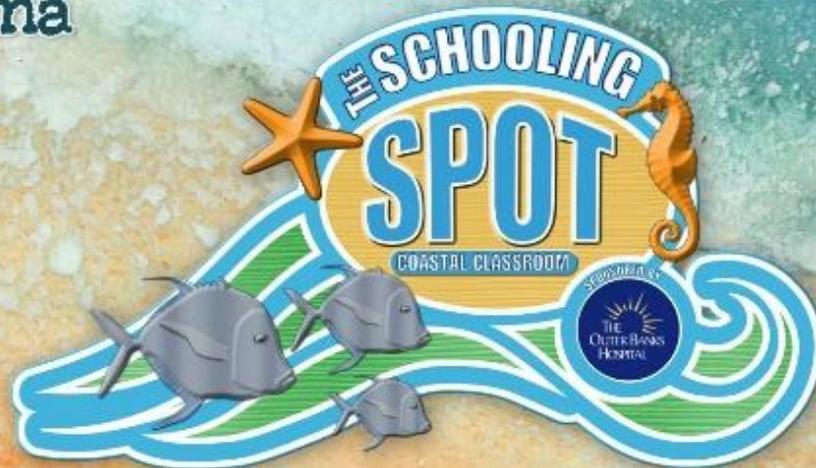
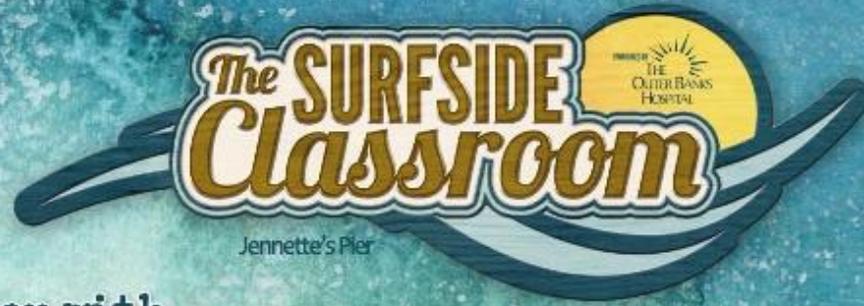
is proud to partner with

the North Carolina
Aquarium on
Roanoke Island

and

Jennette's Pier

by fostering future
ocean ambassadors.



North Carolina Aquarium
on Roanoke Island



Highlight:

The Outer Banks Hospital is partnering with the NCAS to support education efforts at both Jennette's Pier and the NC Aquarium on Roanoke Island



Notable: Hurricane Dorian

CLOSED – Sept. 4-7

Significant damage to all roof structures and wind turbines



HOOK, LINE & SCIENCE

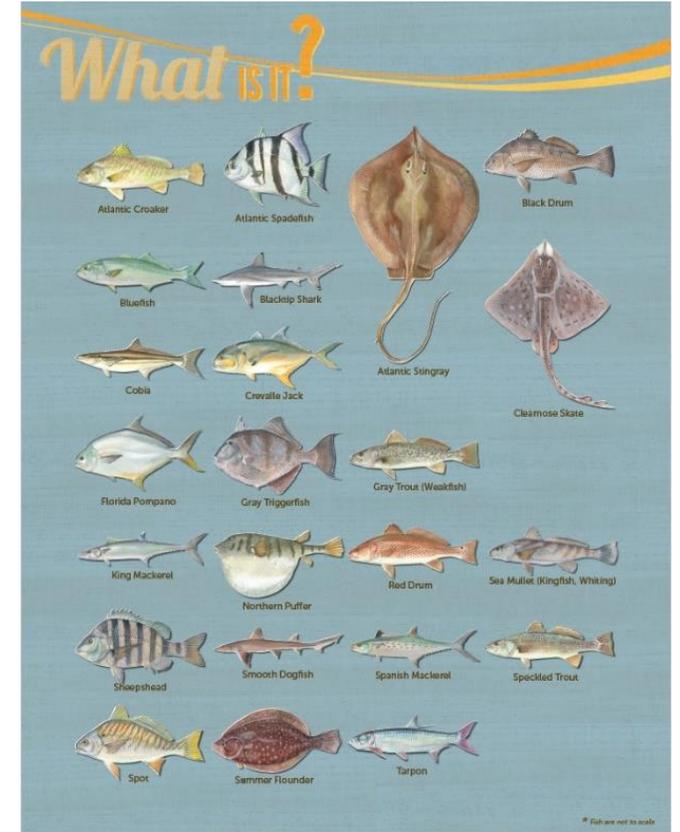
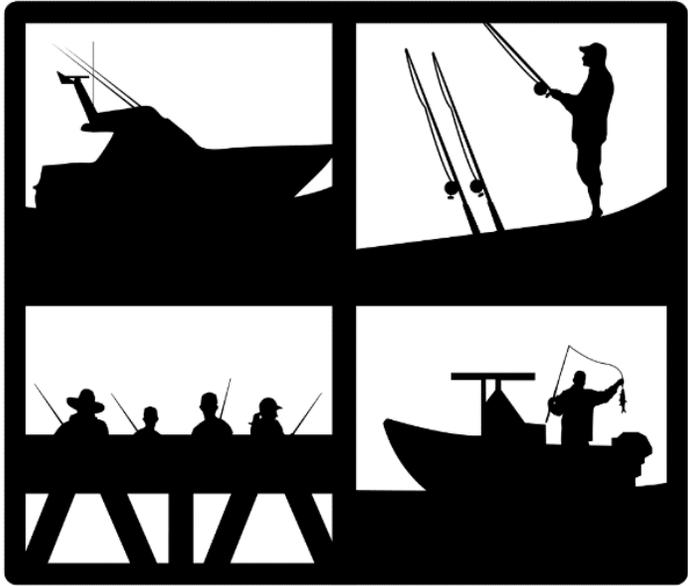


Exhibit Redesigns - 2020



Thank you!



Agenda Item Summary Sheet

Item No: **E-1**
Meeting Date: **February 5, 2020**

Item Title: Consideration of Budget Adjustment #8 to FY 19/20 Budget

Item Summary:

Budget Adjustment #8 to the FY 19/20 Budget is provided for Board review and approval at the February 5th Board of Commissioners meeting – and is in accordance with the FY 19/20 Budget Ordinance, adopted at the June 5, 2019 meeting. The worksheets associated with Budget Adjustment #8 are attached.

Number of Attachments: 2

Specific Action Requested:

Request Board approval of attached budget amendment #8.

Submitted By: Administrative Services

Date: January 29, 2020

Finance Officer Comment:

Request Board approval of attached budget amendment.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

I concur with staff's request.

Signature: Cliff Ogburn

A handwritten signature in black ink, appearing to read "Cliff Ogburn", is written over the printed name.

Date: January 29, 2020

**BUDGET AMENDMENT REQUEST
FY 2019-2020**

**BUDGET AMENDMENT NO. 8
AMENDMENT 8.1
USE OF FUNDS**

SOURCE OF FUNDS

CODE	ACCOUNT	AMOUNT		CODE	ACCOUNT	AMOUNT
10-430600	General Fund Revenue Wellness Grant - NC League	1,909.00		440-521300	General Fund Expenditure Admin Services Employee Wellness	1,909.00
TOTAL CHARGES		\$ 1,909.00		TOTAL CREDITS		\$ 1,909.00

JUSTIFICATION

Grant funds received from the NC League of Municipalities towards employee wellness.

ADMINISTRATIVE SERVICES 1/28/2020
RECOMMENDED BY _____ DATE

APPROVED BY BOC: _____ DATE

POSTED TO GENERAL LEDGER:

INITIALS _____

**BUDGET AMENDMENT REQUEST
FY 2019-2020**

**BUDGET AMENDMENT NO. 8
AMENDMENT 8.2
USE OF FUNDS**

SOURCE OF FUNDS

CODE	ACCOUNT	AMOUNT		CODE	ACCOUNT	AMOUNT
	General Fund Expenditure Town Manager				General Fund Expenditure Planning	
420-510200	Salaries	13,000.00		490-510200	Salaries	13,000.00
420-520600	FICA	1,000.00		490-520600	FICA	1,000.00
420-520800	Retirement	1,000.00		490-520800	Retirement	1,000.00
TOTAL CHARGES		\$ 15,000.00		TOTAL CREDITS		\$ 15,000.00

JUSTIFICATION

Move Engineering Technician from Town Manager to Planning Department

ADMINISTRATIVE SERVICES 1/28/2020
RECOMMENDED BY _____ DATE

APPROVED BY BOC: _____ DATE

POSTED TO GENERAL LEDGER:

INITIALS _____



Agenda Item Summary Sheet

Item No: **E-2**
Meeting Date: **February 5, 2020**

Item Title: Consideration of Tax Adjustment Reports

Item Summary:

Attached please find the list of adjustments to the 2019 Tax Levy (per information received from Dare County) for Property and for MSD valuations.

These reports are submitted for your approval at the February 5th Board of Commissioners meeting.

Number of Attachments: 2

Specific Action Requested:

Tax reports provided for Board review and approval.

Submitted By: Linda Bittner, Tax Collector

Date: January 29, 2020

Finance Officer Comment:

No unbudgeted fiscal impact.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

I concur with staff.

Signature: Cliff Ogburn

Date: January 29, 2020

Town of Nags Head, North Carolina
ANALYSIS OF CURRENT 2019 MSD TAX LEVY
As of January 28, 2020 for the February 5, 2020 BOC Mtg

	BEACH NOURISHMENT DISTRICT			MSD Excluding Registered Motor Vehicles	Registered Motor Vehicles
	MSD Valuation	Rate	Total Levy		
Original MSD Levy:					
MSD Beach Nourishment at current year's rate	809,869,299	0.00175	1,417,272.90	1,417,272.90	
Registered Motor Vehicles at current year's rate	691,800.00	0.00175	1,210.69		1,210.69
Registered Motor Vehicles at 2018 year's rate	754,172.00	0.00175	1,319.80		1,319.80
Registered Motor Vehicles at 2017 year's rate	66,748.00	0.00175	116.81		116.81
Penalties			0.00	0.00	
Total	811,382,019		1,419,920.20	1,417,272.90	2,647.30
Discoveries & Adjustments:					
Current year discoveries & adjustments	0.00		0.00	0.00	
Town wide beach nourishment			0.00	0.00	
Penalty Discoveries			0.00	0.00	
Total			0.00	0.00	
Releases & Adjustments:					
Current year releases & adjustments	0.00		0.00	0.00	
Town wide beach nourishment			0.00	0.00	
Penalty Releases			0.00	0.00	
Total			0.00	0.00	
Write-offs or Adjustments:			0.00	0.00	
Total MSD Valuation	811,382,019				
Net levy		1,419,920.20		1,417,272.90	2,647.30
TOTAL UNCOLLECTED MSD AS OF 01/28/20:		(22,918.23)		(22,918.23)	0.00
CURRENT YEAR MSD COLLECTED:		1,397,001.97		1,394,354.67	2,647.30
CURRENT MSD COLLECTION PERCENTAGE:		98.386%		98.383%	100.000%

Town of Nags Head, North Carolina
ANALYSIS OF CURRENT 2019 TAX LEVY
As of January 28, 2020 for the February 5, 2020 BOC Mtg

	Town-Wide Tax		Total Levy		
	Property Valuation	Rate	Total Levy	Property Excluding Registered Motor Vehicles	Registered Motor Vehicles
Original levy:					
Property taxed at current year's rate	2,383,436,490	0.00317	7,555,496.64	7,555,496.64	
Registered Motor Vehicles at current year's rate	13,872,497.00	0.00317	43,667.79		43,667.79
Registered Motor Vehicles at 2018 year's rate	9,371,427.00	0.00307	28,770.28		28,770.28
Registered Motor Vehicles at 2017 year's rate	69,970.00	0.00297	207.81		207.81
Penalties			5,460.81	5,460.81	
Total	2,406,750,384		7,633,603.33	7,560,957.45	72,645.88
Discoveries & Adjustments:					
Current year discoveries & adjustments tax	1,686,283.00		4,309.89	4,309.89	
Town wide beach nourishment tax			455.29	455.29	
Corporate Utilities discoveries & tax	22,078,064.00		64,026.38	64,026.38	
Corporate Utilities beach nourishment tax			5,961.09	5,961.09	
Penalty Discoveries			2,075.47	2,075.47	
Total	23,764,347		76,828.12	76,828.12	
Releases & Adjustments:					
Current year releases & adjustments	(299,582.00)		(868.79)	(868.79)	
Town wide beach nourishment			(80.87)	(80.87)	
Penalty Releases			(573.99)	(573.99)	
Total	(299,582)		(1,523.65)	(1,523.65)	
Write-offs or Adjustments:			0.00	0.00	
Total Property Valuation	2,430,215,149				
Net levy		7,708,907.80		7,636,261.92	72,645.88
Uncollected Taxes		(144,460.77)		(144,460.77)	0.00
Uncollected Town Wide Beach Nourishment		(13,416.52)		(13,416.52)	0.00
TOTAL UNCOLLECTED TAXES AS OF 01/28/20:		(157,877.29)		(157,877.29)	0.00
CURRENT YEAR TAXES COLLECTED:		7,551,030.51		7,478,384.63	72,645.88
CURRENT LEVY COLLECTION PERCENTAGE:		97.952%		97.933%	100.000%



Agenda Item Summary Sheet

Item No: **E-3**
Meeting Date: **February 5, 2020**

Item Title: Consideration of request to advertise delinquent taxes

Item Summary:

At the February 5th Board of Commissioners meeting, Board approval is requested to advertise tax liens in the newspaper on March 18, 2020 in accordance with NCGS 105-369.

In addition, authorization is requested to begin the Foreclosure process on 2019 taxes where necessary, 30 days after advertising. Please see the attached memo for additional information.

Number of Attachments: 1

Specific Action Requested:

Request Board approval to advertise tax liens; request Board authorization to begin foreclosure process on 2019 taxes.

Submitted By: Linda Bittner, Tax Collector

Date: January 29, 2020

Finance Officer Comment:

No unbudgeted fiscal impact.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

I concur with staff's request.

Signature: Cliff Ogburn

Date: January 29, 2020



Town of Nags Head

Post Office Box 99
Nags Head, North Carolina 27959
Telephone 252-441-5508
Fax 252-441-4680
www.nagsheadnc.gov

MEMORANDUM

To: Mayor and Board of Commissioners

From: Linda Bittner, Tax Collector

Date: February 5, 2020

RE: Request for Order of Advertisement and Request to Begin Foreclosures on 2019 Taxes

Request for Approval for Advertisement:

In accordance with NCGS 105-369 advertisement of tax liens on real property for failure to pay taxes ... "The municipal tax collector shall advertise municipal tax liens by posting a notice of the liens at the city or town hall and by publishing each lien at least one time in one or more newspapers having general circulation in the taxing unit. Advertisements of tax liens shall be made during the period of March 1 thru June 30... The posted notice and newspaper advertisement shall set forth the following information: The name of the record owner as of the date the taxes became delinquent for each parcel on which the taxing unit has a lien for unpaid taxes, in alphabetical order; a brief description of each parcel of land to which a lien has attached and a statement of the principal amount of the taxes constituting a lien against the parcel; a statement that the amounts advertised will be increased by interest and costs and that the omission of interest and costs from the amounts advertised will not constitute waiver of the taxing unit's claim for those items; ...a statement that the taxing unit may foreclose the tax liens and sell the real property subject to the liens in satisfaction of its claim for taxes."

With your approval, staff intends to advertise the liens in the newspaper on March 18, 2020 in accordance with NCGS 105-369 for all amounts outstanding as of end of business on March 13, 2020.

Request for Authorization to Begin Foreclosures on 2019 Taxes:

In accordance with NCGS 105-374, "foreclosure of the tax lien on real property by means of an action in the nature of a mortgage foreclosure is a civil action..." and/or NCGS 105-375, In Rem method of foreclosure "docketing certificate of taxes as judgment - in lieu of following the procedure set forth in NCGS 105-374, the governing body of any taxing unit may direct the tax collector to file with the clerk of superior court, no earlier than 30 days after the tax liens were advertised..."

With your direction, staff will begin the foreclosure process where necessary on the 2019 delinquent taxes thirty days after advertising.



Agenda Item Summary Sheet

Item No: **E-6**
Meeting Date: **February 5, 2020**

Item Title: Consideration of modifications to the Consolidated Fee Schedule

Item Summary:

The following modifications/housekeeping changes to the Consolidated Fee Schedule are requested for Board consideration at the February 5th Board of Commissioners meeting:

- Addition of late fee/penalty charges for Delinquent Taxes, Business License/Registration, and Water Rate billing if payment is not received by due date.
- Move *Short-term Rental Registration* from Administrative Services to Planning Miscellaneous Permit Fees

The affected pages to the Fee Schedule - with changes highlighted in red - are attached for your review.

Number of Attachments: 1

Specific Action Requested:

Request Board consideration of attached modifications to the Consolidated Fee Schedule.

Submitted By: Administrative Services

Date: January 29, 2020

Finance Officer Comment:

No new charges are imposed. The CFS mirrors the Town ordinance. This is helpful to staff and customers to have fee information in one consolidated and concise place for reference.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

I concur with staff's request.

Signature: Cliff Ogburn

Date: January 29, 2020

Administrative Services

Tax Rate	\$0.317 per \$100 value
Tax Rate - municipal service districts - additional tax	\$0.175 per \$100 value
Return Check Fee (Excl. Tax Payment)	\$25
Return Check Fee (Tax Payment)	\$25/check or 10% of check, whichever is greater

Delinquent Taxes – Per G.S. 105-360 (a):

Interest accrues on taxes paid on or after January 6 as follows:

- (1) For the period January 6 to February 1, interest accrues at the rate of two percent (2%).
- (2) For the period February 1 until the principal amount of the taxes, the accrued interest, and any penalties are paid, interest accrues at the rate of three-fourths of one percent (3/4%) a month or fraction thereof.

Cable Franchise	Initial	\$2,500
Cable Franchise	Renewal	\$10,000

Permits

Beach driving permit		\$25
Beach driving permit	Duplicate decal	\$2
Bonafide fishing tournament permit	NH Surf Fishing Tournament OB Association of Realtor Fraternal Order of Eagles	N/C
Beach Equipment Vendor	Annual	\$75

Applications

Massage Therapist (business)	Application includes fingerprint fee	\$150
Operator license	w/verification of State License	N/C

Vehicle for Hire (business)

Taxicab or Limousine	Application	\$50
Driver permit	Application includes fingerprint fee	\$65
	Driver permit annual renewal	\$7.50

Administrative Services (cont.)

Farmers Market

Membership Fee	Annual	\$125
Drop-In Fee	Per market date	\$25

Fees for Business License/Registration and Privilege License

Per G.S. 105-113.77:

Privilege License Tax

City Beer On and Off Premises	per location	\$15
City Beer Off Premises only	per location	\$5
City Wine On and Off Premises	per location	\$15
City Wine Off Premises only	per location	\$10
Beer Wholesaler	per location	\$37.50
Wine Wholesaler	per location	\$37.50

Per G.S. 20-97(d):

Privilege License Tax

Taxicabs	per vehicle	\$15
Limousines	per vehicle	\$15
Vehicle for Hire	Application fee only	-

~~Other~~ Business Registration:

Business Registration	per location	\$25
Massage Therapist	with State license	-
Massage Business	Application fee only	-
Short term Rental Registration (Move to Planning Miscellaneous Permit Fees)	Annual	\$25

Licenses/Registrations not renewed by September 1st shall be considered delinquent.

- Business Registrations are subject to a civil penalty of \$50.

- Business Licenses are subject to a penalty of 5%.

Penalties will be assessed on September 2nd.

Planning & Development (cont.)

Multi-family	\$300/unit	min \$1,000
Commercial (per sq. ft.)	\$1.00	min \$1,000
<i>Move Outside AEC</i>		
Single family		\$500/building
Duplex		\$600/building
Hotel	\$75/unit	min \$1000
Multi-family	\$75 unit	min \$1000
Commercial (per sq. ft.)	0.50	min \$1000

Miscellaneous Permit Fees

Bulkhead, dock, pier	See Alteration, Additions, Remodeling section	
Commercial towers/new tower	\$1.00 Lin. Ft. + \$100 for subs	
Electrical inspection	assoc. w/large tent or event	\$50
Fuel pumps	\$25 per pump	min \$50
Fuel storage tank	Per tank	\$200
Hood/duct		\$100
Short-term Rental Registration	Annual	\$25

Water Rates (cont.)**Water Tap Connection**

¾" tap	\$590 + meter dep
1" tap	\$605 + meter dep
1 ½ " tap	\$3255 + meter dep
2" tap	\$3635 + meter dep
Over 2" tap	Cost of materials + 20% + meter dep
Cut-off Tag Fee	\$50

Water Rates/Usage**Year Round Rate**

Minimum 0 - 3,000 gallons	\$37.90 (¾" meter)
3,001 - 15,000 gallons	\$6.60/thousand gallons
15,001 - 40,000 gallons	\$7.40/thousand gallons
40,001 – 75,000 gallons	\$7.90/thousand gallons
75,001 - 200,000 gallons	\$8.70/thousand gallons
200,001 + gallons	\$9.10/thousand gallons

Penalty

Late fee applied after due date	10% of balance
---------------------------------	----------------

Meter Size**Minimum**

¾ " meter	\$37.90
1" meter	\$56.80
1 ½ " meter	\$109.10
2" meter	\$207.70
2 ½ " meter	\$300.30
3" meter	\$394.30
4" meter	\$643.10
6" meter	\$1603.10



Agenda Item Summary Sheet

Item No: **E-7**
Meeting Date: **February 5, 2020**

Item Title: Consideration of resolution updating Town officials with banking authority

Item Summary:

Attached for Board review and adoption is a resolution updating Town signatures for checks, notes, etc. with the Town's financial institution – Southern Bank. The attached resolution includes newly hired Dep Finance Officer Brooke Norris as an authorized signature.

Number of Attachments: 1

Specific Action Requested:

Request Board adoption of attached resolution updating the signatures for Town financial documents.

Submitted By: Amy Miller, Finance Officer

Date: January 29, 2020

Finance Officer Comment:

No unbudgeted costs associated with this agenda item.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

I concur with staff.

Signature: Cliff Ogburn

A handwritten signature in black ink, appearing to read "Cliff Ogburn", written over a horizontal line.

Date: January 29, 2020



**RESOLUTION AND AGREEMENT
FOR DEPOSIT ACCOUNT AND BANK SERVICE
WITH SOUTHERN BANK**

BE IT RESOLVED by the Town of Nags Head Board of Commissioners that Southern Bank be, and hereby is, designated as a depository institution for the Town of Nags Head and that funds so deposited may be withdrawn upon a check, draft, note or order of the Town of Nags Head, AND

BE IT FURTHER RESOLVED that all checks, drafts, notes or orders drawn against said account be signed by any one of the following:

- AMY MILLER, FINANCE DIRECTOR; and countersigned by any one of the following:
- BROOKE NORRIS, DEPUTY FINANCE OFFICER;
- BENJAMIN CAHOON, MAYOR;
- CLIFF OGBURN, TOWN MANAGER;
- CAROLYN F MORRIS, TOWN CLERK;

whose signatures shall be duly certified to said Bank, and that no checks, drafts, notes or orders drawn against said Bank shall be valid unless so signed, AND

BE IT FURTHER RESOLVED that said Bank is hereby authorized and directed to honor and pay any checks, drafts, notes or orders so drawn whether such checks, drafts, notes or orders be payable to the order of any such person signing and/or countersigning said checks, drafts, notes or orders, or any of such persons in their individual capacities or not, and whether such checks, drafts, notes or orders, or to the individual credit of any of the other officers or not. This resolution shall continue in force and said Bank may consider the facts concerning the holders of said offices, respectively, and their signatures to be and continue as set forth in the certificate of the Finance Officer or Town Clerk, accompanying a copy of this resolution when delivered to said Bank or in any similar subsequent certificate, until written notice to the contrary is duly served on said Bank.

Adopted this the 5th day of February 2020.

Benjamin Cahoon, Mayor

ATTEST:

Carolyn F. Morris, Town Clerk



Agenda Item Summary Sheet

Item No: **E-8**
Meeting Date: **February 5, 2020**

Item Title: Consideration of resolution clarifying Dare County Control Group/Town of Nags Head October 2015 Memorandum of Agreement

Item Summary:

Attached for Board review and adoption is a resolution that would ratify the Memorandum of Agreement between Dare County and the Town, dated October 19, 2015, that was never considered/approved by the entire Board of Commissioners. The MOA, also attached, recognizes the collaboration and cooperation between each municipality and the Dare County Control Group in an emergency situation.

Number of Attachments: 2

Specific Action Requested:

Request Board adoption of attached resolution to ratify the 2015 MOA with the county.

Submitted By: Administration

Date: January 29, 2020

Finance Officer Comment:

No unbudgeted costs associated with this agenda item.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

Attorney Leidy has provided input on this issue.

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

I concur with the resolution and encourage its adoption.

Signature: Cliff Ogburn

Date: January 29, 2020

**MEMORANDUM OF AGREEMENT BETWEEN
DARE COUNTY MUNICIPALITIES AND THE COUNTY OF DARE
CONCERNING EMERGENCY COORDINATION**

Dare County and all county Municipalities have a shared responsibility to prevent, prepare for, respond to, and recover from a natural or man-made emergency. This responsibility is found in the North Carolina Emergency Management Act (Chapter 166A). The Act was implemented as "Chapter 92: Emergency Management" in the Dare County Code of Ordinances. In addition, all municipalities have ordinances to address Emergency Management or Civil Emergencies. While all municipalities have the authority to declare and manage an emergency independently; centralized county-wide emergency management is needed when one or more of the following situations is or may occur; an imminent threat to the public safety/health; extensive multi-agency/jurisdiction response and coordination is or may be needed, local resources are or may be overwhelmed and unable to resolve the emergency, and the emergency has or may cross more than one political jurisdiction. When these conditions occur, emergency management efforts within the county will be coordinated by the county, including activities of the municipalities within the county as outlined in Chapter 92.04.

This agreement is designed to bring unity of effort across all Municipalities, Dare County and the State of North Carolina before, during, and after any emergency. Unity of effort brings efficiency and harmony during an emergency particularly when planning and coordination is needed across multiple jurisdictions and/or agencies. The Dare County Emergency Management Plan (DCEMP) prescribed in Chapter 92.08 directs establishment of the Dare County Control Group (DCCG). The DCCG is a collaborative body that convenes to facilitate decision making leading to the setting of objectives and priorities, approving resource sharing as well as policies, strategies and public messaging developed to achieve unity of effort using Incident Command System processes across jurisdictions. The following individuals or their designee comprise the DCCG; the Chairman of the Dare County Board of Commissioner, the six municipal mayors, the Cape Hatteras National Seashore Superintendent, and the Dare County Sheriff.

I. THE MUNICIPALITIES IN DARE COUNTY AGREE:

- a) The Mayor or a designee will serve on the DCCG and be actively engaged, either by a physical or virtual presence in the Emergency Operations Center (EOC) when the DCEMP is activated.
- b) To determine the availability of town personnel and resources to support emergency response and recovery operations that lead to unity of effort and seamless communications across all jurisdictions.

II. DARE COUNTY AGREES:

- a) The Chairmen or a designee will serve on the DCCG and be actively engaged, either by a physical or virtual presence in the EOC when the DCEMP is activated.
- b) To activate the DCEMP when needed and provide EOC assistance to any or all municipalities to prevent, prepare for, respond to, or recover from any emergency.
- c) To determine the availability of County personnel and resources to support emergency response and recovery operations that lead to unity of effort and seamless communications across all jurisdictions.

DURATION: This Agreement will stay enforce until changes are deemed necessary by any Municipal Mayor or the Chairman of the Dare County Board of Commissioners.

DARE COUNTY MUNICIPALITIES AND THE COUNTY OF DARE execute this agreement by signature and date on pages 2-7 with a separate page for each municipality.

**MEMORANDUM OF AGREEMENT BETWEEN
DARE COUNTY MUNICIPALITIES AND THE COUNTY OF DARE
CONCERNING EMERGENCY COORDINATION**

This agreement is entered into this the 19th day of October, 2015.

(X) 

MAYOR, TOWN OF MANTEO

(X) 

CHAIRMAN, DARE COUNTY BOARD OF COMMISSIONERS

**MEMORANDUM OF AGREEMENT BETWEEN
DARE COUNTY MUNICIPALITIES AND THE COUNTY OF DARE
CONCERNING EMERGENCY COORDINATION**

This agreement is entered into this the 19~~th~~ day of October, 2015.

(X) Robert C. Edwards

MAYOR, TOWN OF NAGS HEAD



(X) Keith S. Woodard

CHAIRMAN, DARE COUNTY BOARD OF COMMISSIONERS

**MEMORANDUM OF AGREEMENT BETWEEN
DARE COUNTY MUNICIPALITIES AND THE COUNTY OF DARE
CONCERNING EMERGENCY COORDINATION**

This agreement is entered into this the 19th day of October, 2015.

Sherry F. Davis

(X)

MAYOR, TOWN OF KILL DEVIL HILLS



(X)

Paul H. Woodard

CHAIRMAN, DARE COUNTY BOARD OF COMMISSIONERS

**MEMORANDUM OF AGREEMENT BETWEEN
DARE COUNTY MUNICIPALITIES AND THE COUNTY OF DARE
CONCERNING EMERGENCY COORDINATION**

This agreement is entered into this the 19th day of October, 2015.

(X) Henry L Perry
MAYOR, TOWN OF KITTY HAWK (11-2-15)

(X) Paul H. Wood
CHAIRMAN, DARE COUNTY BOARD OF COMMISSIONERS

**MEMORANDUM OF AGREEMENT BETWEEN
DARE COUNTY MUNICIPALITIES AND THE COUNTY OF DARE
CONCERNING EMERGENCY COORDINATION**

This agreement is entered into this the 19th day of October, 2015.

(X) Shannon M. Bennett

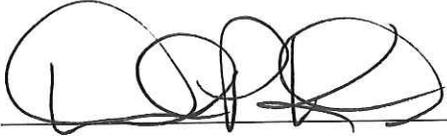
MAYOR, TOWN OF SOUTHERN SHORES

(X) Keith Wood

CHAIRMAN, DARE COUNTY BOARD OF COMMISSIONERS

**MEMORANDUM OF AGREEMENT BETWEEN
DARE COUNTY MUNICIPALITIES AND THE COUNTY OF DARE
CONCERNING EMERGENCY COORDINATION**

This agreement is entered into this the 19th day of October, 2015.

(X)  _____

MAYOR, TOWN OF DUCK



(X)  _____

CHAIRMAN, DARE COUNTY BOARD OF COMMISSIONERS



Agenda Item Summary Sheet

Item No: **E-9**
Meeting Date: **February 5, 2020**

Item Title: Affirmation of January 23-24, 2020 Board Retreat actions

Item Summary:

The actions resulting from the January 23 - 24, 2020 Board of Commissioners Retreat are attached and are provided for Board review and approval at the February 5th Board of Commissioners meeting.

Number of Attachments: 1

Specific Action Requested:

Provided for Board review and approval.

Submitted By: Administration Date: January 29, 2020

Finance Officer Comment:

Insufficient information to determine precise fiscal impact.

Signature: Amy Miller Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy Date: January 29, 2020

Town Manager Comment and/or Recommendation:

I will participate in any discussion as necessary.

Signature: Cliff Ogburn  Date: January 29, 2020



ACTIONS
TOWN OF NAGS HEAD
BOARD RETREAT WORKSHOP
JANUARY 23 - 24, 2020

1. Dare County Control Group MOU – It was Board consensus to prepare a resolution to clarify/ratify the Dare County Control Group MOA - after conversation with Dare County – for consideration at the Feb 5th Board meeting.
2. Working with Planning Board – Planning Board is to bring intended impacts/issues to BOC attention, BOC and Planning Board are to maintain lines of communication such as with lunch or phone calls on a regular basis.
3. Cart Rollback – Rescind the ordinance requiring cart rollback – for consideration at the Feb 5th Board meeting; Inform all homeowner associations of this change.
4. Recycling – It was Board consensus to modify the trash/recycling pickup schedule during the off season (Oct through Apr) for the west side of US 158 to: one day/week trash/recycle pickup using one truck.
5. Reduce carbon footprint – The Town is to reduce its carbon footprint starting by reducing fuel/power/plastic consumption - Utilize the Town committee to come up with ideas on doing this; A town-wide compost was also mentioned.
6. Pavement Condition – In Year 00, the Pavement Condition Plan will be submitted for bid with work to take place in the off season – neighborhood by neighborhood – for less disruption to each community.
7. Stormwater Ordinance - Provide list of items re: stormwater drainage to Planning Board now for their recommendations; Board to ratify below list at the Feb 5th Board meeting:
 - Can our rules acknowledge that there are different conditions – a system with flexibility
 - Retain form of landscape/minimize impact to landscape
 - Look for common sense solutions
 - Don't place unjust burden on property owner
 - Can we offer a "carrot" to go with a stick
 - Do we as a Board need to define flooding – separate between "Nuisance" and "Problem Stormwater" issues
 - Should not create additional problems
 - Should define problem we are trying to solve
8. Future Revenue for Beach Nourishment Projects - MSD creation discussion to take place at the Feb 5th Board meeting along with the MSD Schedule - with the goal of a Board vote to take place at the Jun 2020 meeting.
9. Beach Nourishment Funding - Upcoming Legislative Breakfast would be a good time to speak with Sen. Steinburg re: State funds for Beach Nourishment; Mayor Cahoon said that he will get the ball rolling with other towns east of I-95 as they may want to join in with this effort; An additional step may be to speak to restaurant/lodging associations to help get more funds to this area.
10. Envisioning exercise – Envisioning our legacy for the Town – Mayor Cahoon will present paper on Feb 5th.
11. Determine accountability for project implementation and maintenance - such as for Dowdy Park?



Agenda Item Summary Sheet

Item No: **F-1**
Meeting Date: **February 5, 2020**

Item Title: Public Hearing to consider a Vested Right/Conditional Use/Site Plan Application for the Outer Banks Hospital, 4923 & 4927 S. Croatan Highway and 4922, 4926 & 4928 Passage Way, submitted by Quible and Associates P.C. on behalf of Outer Banks Hospital. The application involves the demolition of the Urgent Care Facility and construction of a 10,400 square foot addition (Infusion Facility) to the existing Radiation Therapy building. As part of the application, the applicant is seeking a Conditional Use Permit to reduce the number of required parking spaces and modify certain parking requirements, and to rezone the properties at 4922, 4926 & 4928 Passage Way from the SPD-C Single-Family-2 District to the SPD-C Hotel District

Item Summary:

A Vested Right Site Plan, Conditional Use Permit, and Rezoning for the Outer Banks Hospital Cancer Center; the scope of the application includes the following:

- Demolition of the existing Urgent Care Facility and construction of a 10,400-sf addition to the existing Radiation Therapy building, along with parking, stormwater, and related improvements.
- A rezoning request for three (3) lots along S. Passage Way from SPD-C/SF-2 to SPD-C/Hotel.
- Consideration of reduced loading zone berth dimensions and reduction of required parking based upon Medical Office use

Staff Recommendation/Planning Board Recommendation

Based upon the analysis presented in the Staff Report, Staff recommends approval of the requested rezoning of parcels located at 4922, 4926 and 4928 S. Passage Way from the SPD-C/SF-2 District to the SPD-C/Hotel District; and, based upon the analysis presented in the Staff Report, and recommended conditions, Staff recommends approval of the proposed Vested Right/Site Plan and Conditional Use Permits.

At their December 17, 2019 meeting the Planning Board voted unanimously to recommend approval of both the Rezoning Request and Conditional Use/Vested Right/Site Plan Amendment application, with conditions, as presented.

Number of Attachments: 7

Specific Action Requested:

Conduct the Public Hearing.

Submitted By: Planning and Development

Date: January 29, 2020

Finance Officer Comment:

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

Signature: Cliff Ogburn

Date: January 29, 2020

**Department of Planning
and Development**



Michael Zehner
Director of Planning
and Development

Town of Nags Head
Post Office Box 99
Nags Head, North Carolina 27959
Telephone 252-441-7016
Fax 252-441-4290
www.nagsheadnc.gov

**NOTICE OF PUBLIC HEARING
TOWN OF NAGS HEAD BOARD OF COMMISSIONERS**

NOTICE IS HEREBY GIVEN that the Nags Head Board of Commissioners will conduct a public hearing on **Wednesday, January 8, 2020** beginning at 9:00 am in the Board Room of the Municipal Complex, 5401 S. Croatan Highway, Nags Head, NC to consider and take action upon the following request:

Public Hearing to consider proposed text amendments to the Unified Development Ordinance pertaining to off-street parking requirements associated with alternative and reduced parking, including bicycle parking, and associated conditional use permitting requirements

A copy of the application request is available for public inspection at the Nags Head Planning and Development Department and the office of the Town Clerk, Town Municipal Complex, 5401 S. Croatan Hwy, Nags Head, NC 27959, telephone (252) 441-5508 during normal business hours.

As a result of this hearing substantial changes may be made in the proposal as advertised to reflect objections, debate and discussion at the hearing. Any person desiring to be heard on the proposal as stated above should appear at the time and place specified above.

This the 20th day of December 2019.

Kelly Wyatt
Deputy Planning Director



STAFF REPORT

Town of Nags Head

Planning & Development Department

To: Board of Commissioners
From: Kelly Wyatt, Deputy Planning Director
Michael Zehner, Director of Planning and Development
Date: January 29, 2020
Subject: Outer Banks Hospital Cancer Center, Rezoning and Conditional Use/Vested Right/Site Plan Application

GENERAL INFORMATION

Applicant: Quible & Associates, P.C. on behalf of Outer Banks Hospital, Inc.

Application Type: Conditional Use/Vested Right/Site Plan Review and Rezoning Application.

Purpose/Request: The scope of work associated with this project request is denoted below:

- Demolition of the existing 3,000 square foot urgent care building at 4923 S. Croatan Highway, the construction of a 10,400 square foot addition to the existing 4,500 square foot radiation therapy building located at 4927 S. Croatan Highway, to house an infusion center, and the development of parking and stormwater improvements.
- The applicant has requested consideration be given to a Conditional Use Permit request to allow a reduced loading zone berth based on the anticipated deliveries to this facility being by cargo van. The applicant has noted that medical supplies and linens will be the primary deliveries to the location and do not require the specified loading zone outlined in Section 10.17 of the UDO, Off-Street Loading. The applicant is seeking to reduce the loading zone berth from 12' x 60' to 20' x 23'.
- The applicant has requested that consideration be given to a reduction of required parking, based on a Medical Office use, as allowed by Conditional Use Permit under Section 10.15.5 and 10.15.6 of the Unified Development Ordinance. The proposed use of an infusion center is unique and not currently covered within Section 10.16 of the UDO, Required Parking by Use.
- In addition to the Site Plan application, a rezoning of three (3) lots along S. Passage Way from SPD-C/SF4 (Special Planned Development – Community District, specifically the Village at Nags Head SPD-C Zoning Ordinance, and Single-Family Four District) to SPD-C/Hotel District is also being requested to

accommodate the use of the site, and specifically the provision of requisite parking to support the use.

Property Location: 4923 and 4927 S. Croatan Highway and 4922, 4926 and 4928 S. Passage Way, Nags Head.

Existing Land Use: Medical Offices and Vacant Lots.

Zoning Classification of Property: 4923 and 4927 S. Croatan Highway is zoned SPD-C/Hotel and 4922, 4926 and 4928 S. Passage Way is zoned SPD-C/SF-2.

Zoning Classification of Surrounding Properties: Properties to the north of the proposed site is zoned SPD-C/Hotel (Outer Banks Center for Women). Properties to the south of the proposed site is zoned SPD-C/Hotel (La Fogata Restaurant). Properties to the east, directly across S. Passage Way is zoned SPD-C/SF-2 and developed residentially. Properties to the west, directly across US Highway 158 is zoned SPD-C/Commercial-1 and is developed with the Outer Banks Mall.

Flood Hazard Zone of Property: The entire project area is located within an AE 9 Flood Zone. The existing Radiation Therapy Facility has a compliant first floor elevation above the regulatory flood protection elevation of 10 feet msl. All new construction will be required to have a first-floor elevation compliant with the regulatory flood protection elevation.

POLICY AND PLAN CONSIDERATIONS

Land Use Plan Map/Policies: The 2017 Comprehensive Plan Future Land Use Map classifies the properties at 4923 and 4927 S. Croatan Highway as General Commercial and they are additionally located within the General Commercial Activity Node. Descriptions of these classifications are below:

General Commercial: General Commercial designation is located throughout the town paralleling US 158 and US 64. The General Commercial designation is intended to foster a thriving commercial business community with a variety of uses, activities, and scales. Form is as important as use within this designation and there should be a high degree of design quality for the building facade. Planned, mixed use developments are encouraged. Best practices for all types of corridors include: driveway consolidation, bicycle/pedestrian accommodations, traffic calming, and buffering/landscaping.

General Commercial Activity Node: General Commercial Activity Nodes are focal points of activity and higher intensity development in the town. These are areas that are anticipated to have future concentrations of uses that serve as destinations or hubs of activity for the town and are appropriate for shopping centers or larger footprint retail stores. General Commercial Activity Nodes are envisioned to be planned commercial development with a range of uses including retail, office, restaurant, banking, personal service establishments, gymnasium, indoor entertainment, gallery/museum, hotel (boutique/small scale), institutional uses, and multi-family. Future development is characterized by compact development patterns, walkability, and a higher standard of architectural and site design. Multiple, smaller structures are preferred over large strip development. Future development should accommodate pedestrian access from

existing pedestrian infrastructure to storefronts. Further, adequate pedestrian infrastructure should be provided to safely traverse and interconnect commercial sites.

The 2017 Comprehensive Plan Future Land Use Map classifies the properties at 4922, 4926 and 4928 S. Passage Way as Planned Unit Development Residential. The description of this classification is below:

The Planned Unit Development (PUD) residential designation is intended to accommodate residential development in the Village at Nags Head Planned Unit Development.

These properties are also located within the Village Municipal Service Character Area and the Village Municipal Service Activity Node. Table 2.4.2.A of the 2017 Comprehensive Plan, Appropriate Land Uses in the Village Municipal Service Character Area lists “Hospital/Medical Care Facilities” as an appropriate and desirable use in this character area.

When determining if the proposal is consistent with the Land Use designation, staff considered the following excerpts and policies as being relevant:

- Page 3-14, LU-5 reads, “Promote contiguous and cohesive nodes of commercial development of appropriate size and massing for the surrounding area”.
- Page 3-20, LU-9 reads, “Encourage land uses that serve the needs of both year-round and seasonal residents in support of the town’s overall vision for the community”.
- Page 3-25, LU-15 reads, “Promote architectural standards for commercial development in keeping with the Nags Head style architecture”.
- Page 3-31, LU-23 reads, “Require sufficient parking for commercial businesses with parking area design regulations that limit impacts on neighbors and surrounding land uses”. LU-23b further reads, “Monitor the use of parking and utilize this information to evaluate changes in parking standards”.
- Page 3-117, EC-3 reads, “Meet the infrastructure and service needs of the community at appropriate levels as the community continues to grow”.

Staff finds that the expansion of medical services to include a cancer center, as well as the rezoning associated with the request, to be consistent with the land use classification and stated Land Use Policies.

SPECIFIC INFORMATION

Applicable Zoning Regulations:

- Use Regulations: Section 9.36, Table of Uses and Activities for the SPD-C District, lists 6.6, Table of Uses and Activities lists “Medical Office” as a Permitted Use within the SPD-C/Hotel District, no supplemental standards are provided.

Note that Staff recommends that the Board first make a recommendation on the rezoning request as the use will not be permissible should the rezoning not occur.

- Lot Coverage: If the parcels are rezoned, they will be combined into one parcel. The SPD-C/Hotel District sets forth maximum allowable coverages based upon area encumbered with specific uses as noted below:

Maximum Allowed Building Coverage: 25%; Proposed: 19% - Compliant.

Maximum Parking Lot Coverage: 45%; Proposed: 31% - Compliant.

Minimum Landscaped Area: 30%; Proposed: 49% - Compliant

Min. Interior Parking Lot Landscaping Required: 1,174 sf. Proposed: 1,491 sf.

- Height: The maximum allowable building height within the Town is 35 feet; however, pursuant to Section 8.2.1, Dimensional requirements, total height may be increased to 42 feet with the use of an 8:12 roof pitch or greater. The applicant has proposed a structure with an overall height of 33.3 feet therefore height is compliant. Note that the roof pitch meets the desired pitch as well with the use of 9:12 roof pitch.
- Architecture Design Standards: Section 10.82, Applicability, of the UDO, states that Commercial Design Standards shall apply to all building construction or remodeling projects requiring a conditional use permit or site plan review. Section 10.83, Design Standards, of the UDO, states that projects adding a total habitable building area of 10,000 square feet or less may elect to comply with the building design requirements by achieving 150 points based on the criteria outlined in the Town of Nags Head Residential Design Guidelines. Projects that elect to comply in this manner shall, in addition to the 150 architectural design points, incorporate specific standards into the design (attached). The proposed architectural design satisfies the minimum standards required by Section 10.83 and additionally achieves 160 architectural design points with the use of a first-floor porch, dormers, minimum 8:12 pitched roof, combination base form, simulated wood shingle siding, single hung windows and other miscellaneous architectural details.

Note that the existing Radiation Therapy Building is compliant at 125 architectural design points as that was the requirement within the Town Code at that time. The 10,400 square foot addition must meet the current code requirements of 150 architectural design points. Staff determined compliance with the UDO based upon the proposed new construction.

- Parking: As noted above under “Purpose/Request” the applicant is requesting that consideration be given to a parking reduction as allowed by Sections 10.15.5 and 10.15.6, of the UDO, *Reduction of Required Parking for Commercial Uses with the Use of Bicycle Racks* and *Modification of Parking Requirements by Conditional Use Permit* respectively. As previously noted, the proposed Infusion Center/Cancer Center use is not specifically addressed within Article 10, Table 10-2, Required Parking by Use, of the UDO, and, while a Dialysis Center use is provided and is likely more consistent with the proposed use, the proposed use more closely meets the definition of Medical Office use.

When applying the Code, a “medical office” shall provide parking at the rate of one parking space for every 300 square feet of gross floor area of each building or portion thereof devoted to medical use, plus one parking space for each employee and for each doctor. The existing Radiation Therapy Building site provides 22 onsite parking spaces. Applying this standard would require an additional 50 parking spaces for an overall parking count of 72 parking spaces.

In support of their request for a parking reduction, the applicant has provided an article from the ITE (Institute of Transportation Engineers) Parking Generation Manual, which has evaluated anticipated parking rates for Outpatient Cancer Centers and supports a rate of 3.5 to 4.5 spaces per 1,000 square feet of floor area. If applying this standard, the proposed site would require between 52 and 67 parking spaces. The applicant is proposing to provide 57 parking spaces. Specifically, the applicant is seeking a reduction of one (1) parking space with a bike rack pursuant to Section 10.15.5 and an additional 14 parking space reduction under Section 10.15.6, and justified by the number of employees, the number of patient/treatment rooms available, the waiting room capacity, and the availability of Dare County Transit services for many of the patients receiving treatment at this facility. With the requested reduction, a total of 57 onsite parking spaces is consistent with the recommended parking ratio for this use in the ITE Manual. Staff recommends approval of the requested parking reduction, however, would recommend a condition that a parking study/assessment be conducted by a third-party, at 6 months and one-year after the issuance of a Certificate of Occupancy, to ensure onsite parking is adequate; if parking is determined to be insufficient, the applicant would be required to install up to 12 additional parking spaces along the shared drive leading to the site.

Additionally, Section 10.92.14.4 requires a minimum of 20% of the surface area of the parking area and drive aisles to be constructed using permeable surface materials. An excess of 20% has been provided and is therefore compliant.

Section 10.17 of the UDO sets forth Off-street Loading Requirements. Commercial structures shall provide at least one loading space with minimum plan dimensions of 12 x 60 feet and a 14-foot overhead clearance. If a reduction in berth of a loading space is requested the Town Engineer shall determine the sufficiency of the proposed loading space.

- Buffering/Landscaping: Several sections of the UDO address Buffering and Landscaping as it applies throughout this proposed site:
 - Section 9.24.10 of the UDO, SPD-C Hotel District, Landscaping requires that all commercial and office uses install a 20-foot wide landscaped or natural buffer area when a commercial use abuts a residential use or designation. A compliant buffer has been shown along the rear property line that abuts a residential subdivision (Moongate Subdivision).
 - Section 10.92.6.2 of the UDO, Parking and Drive Aisle Setbacks, requires that where off-street parking is provided between the building and the street right-of-way line, a parking lot buffer of at least ten (10) feet in width shall be provided between the parking lot and the street right-of-way. This

buffering has not been shown however, it will be a continuation of the existing buffering provided for the Radiation Therapy Facility to the south. work with planning staff to identify the proper plantings prior to the Board of Commissioners review.

- Section 10.93.3.7 of the UDO, Interior Parking Lot Landscaping, requires parking landscaping be provided at a minimum rate equal to ten percent of the total area of parking spaces. The minimum area necessary for compliance is 1,174 square feet of vegetation. The applicant has proposed 1,491 square feet therefore interior parking lot landscaping is compliant.
- Section 10.93.3.8.2 of the UDO, Vegetation Preservation Requirements, requires that a minimum of 10% of the lots total area be preserved with existing natural vegetation. Approximately 11.5% of the vegetation throughout the site will be maintained therefore this proposal is compliant.
- Lighting: The proposed lighting plan and fixtures are compliant with the requirements of UDO. A light audit will be required prior to issuance of occupancy permits.
- Signage: No additional signage is being proposed at this time.

Water and Sewage Disposal: This development will be served by Carolina Water Service due its location within the Village at Nags Head SPD-C District. Included in your packet is a letter from Carolina Water Service stating their commitment to serve the development as proposed (Appendix D).

Traffic Circulation: Vehicle pathing exhibits have been provided, internal traffic circulation approval is contingent upon the Public Works/Fire Department approval for access of sanitation and emergency vehicles. See memorandum from Town Engineer dated December 13, 2019 (attached).

Stormwater Management: The proposed development plan has been determined to be in accordance with Article 11, Environmental Regulations of the Unified Development Ordinance. A NCDEQ high-density stormwater management permit shall be acquired and submitted to the Town upon issuance and the project shall be designed, constructed, operated and maintained in accordance with Article 11, Environmental Regulations of the UDO. See memorandum from Town Engineer dated December 13, 2019 (attached).

Fire: The project will be required to comply with all applicable NC Fire Prevention Code requirements as part of the building permit application review and issuance.

Public Works: The Public Works Director has reviewed the proposed plan and expressed general concern about the location of the dumpster with regard to the pathing of the refuse truck. The applicant has discussed pick-up at the proposed location with the private carrier that currently serves the hospital and confirmed that this vendor would be able to provide services to the site if necessary. In addition, the plans have been revised to allow for mountable curb to help alleviate the concern for backing onto the curbing.

ANALYSIS

Analysis of Rezoning Request: Staff supports the request to rezone the parcels located at 4922, 4926 and 4928 S. Passage Way from SPD-C/SF-2 to SPD-C/Hotel. This area was originally zoned SPD-C/Hotel however in 2009 the area was rezoned to SPD-C/SF-2 to accommodate the Moongate Subdivision. The applicant has been in communication with the Village at Nags Head Architectural Control Committee, as well as the adjoining property owners, all of whom have expressed support for the development and associated rezoning. Additionally, staff finds that the rezoning is supported by the 2017 Comprehensive Plan with the land area being located within the Village Municipal Service Character Area where medical facilities are considered appropriate uses.

Analysis of Vested Right/Site Plan Application: Staff finds that the proposal is consistent with the applicable use and development standards, as well as relevant land use policies. As required by the UDO, the procedures for consideration of a site-specific, vested right, site plan are those applicable to the issuance of a Conditional Use Permit as outlined in Section 3.8, Conditional Use Permits; therefore, with regard to the affirmative findings of fact for Conditional Use Permits, pursuant to Section 3.8.4.6, Staff is of the opinion that:

1. The use will not materially endanger the public health and safety if located where proposed and developed according to the plan as submitted.
2. The use, as proposed, will not overburden the firefighting capabilities and the municipal water supply capacity of the Town as such facilities and capabilities will exist on the completion date of the conditional use for which application is made.
3. The conditional use will be in harmony with the existing development and uses within the area in which it is to be located.
4. Adequate utilities, access roads, drainage, parking or necessary facilities have been or are being provided.

Analysis of Parking Conditional Use Permit Requests: In addition to the findings noted above, applicable to all Conditional Use Permits, Section 10.15.6. provides specific findings applicable to the requested Conditional Use Permits to reduce required parking and loading zone dimensions; consistent with these findings, Staff is of the opinion that the reduction and parking and loading zone dimensions, with conditions as recommended:

1. Will not result in increased traffic congestion or otherwise negatively impact existing traffic flow or pedestrian and vehicular safety.
2. Will not create parking impacts for adjacent properties or within Town rights-of-way.
3. Will not be contrary to the objectives specified in the Comprehensive Plan.
4. Is necessary to permit the reasonable use of the subject property.

5. Will not adversely impact adjacent property or the surrounding area.

With regard to the reduction of parking, these findings are based upon the information provided identifying a methodology for determining the appropriate ratio of parking for Outpatient Cancer Treatment uses, and a recommended condition requiring the sufficiency of parking to be verified following operation and additional parking to be provided if determined to be necessary. With regard to the reduction of dimensions for the loading zone, these findings are based upon the anticipated type and frequency of deliveries, as well as a recommended condition requiring signage directing deliveries by larger vehicles to the main Outer Banks Hospital.

PLANNING BOARD RECOMMENDATION

At their December 17, 2019 meeting the Planning Board voted unanimously to recommend approval of the Rezoning Request and Vested Right/Site Plan and Conditional Use Permit applications, with conditions, as presented. It is important to note that the Planning Board reviewed a preliminary Sketch Plan for the project, including three concepts for the site based on different parking counts; ultimately, the Planning Board found that providing less parking based on the Outpatient Cancer Treatment use, with the potential to assess and provide more parking if necessary, was the ideal scenario.

STAFF RECOMMENDATION

Recommendation on Rezoning Request: Based upon the analysis above, Staff recommends approval of the requested rezoning of parcels located at 4922, 4926 and 4928 S. Passage Way from the SPD-C/SF-2 District to the SPD-C/Hotel District.

Recommendation on Vested Right/Site Plan Request and Conditional Use Permits: Based upon the above analysis, and the following recommended conditions, Staff recommends approval of the proposed Vested Right/Site Plan and Conditional Use Permits:

1. The site shall be developed in compliance with the plans dated December 05, 2019, revised as necessary to comply with conditions of approval; modifications to the project prior to the issuance of a Certificate of Occupancy shall be considered and processed as Minor Site Plans or Major Site Plans pursuant to Article 4 of the Unified Development Ordinance.
2. At 6 months and 12 months following the issuance of a Certificate of Occupancy, an assessment of the sufficiency of parking shall be conducted by a third-party traffic engineer, engaged and costs borne by the owner/developer of the property, with qualifications acceptable to the Town of Nags Head Director of Planning and Development. This assessment shall determine whether the parking provided on-site is sufficient and does not result in increased traffic congestion or otherwise negatively impact existing traffic flow or pedestrian and vehicular safety, and/or does not create parking impacts for adjacent properties or within Town rights-of-way; further, this assessment shall recommend whether the provision of additional parking spaces is necessary if on-site parking is

determined to be deficient. This assessment shall be presented to the Director of Planning and Development for acceptance and final determination as to whether additional parking is required to be provided, with any determination to be made within eighteen (18) months of the issuance of a Certificate of Occupancy, and any additional parking to be provided within twenty-four (24) months of the issuance of a Certificate of Occupancy.

3. Signage shall be installed on-site, to be approved by the Director of Planning and Development or his/her designee, directing deliveries by vehicles larger than the reduced loading zone can accommodate to the main Outer Banks Hospital located at 4800 S. Croatan Highway.

Attachments: *Conditional Use/Vested Right/Site Plan Review Application, Site Plan and Architectural Elevations, Project Narrative, Carolina Water Approval, Town Engineer Memorandum dated December 13, 2019.*



TOTAL PROPOSED SQUARE FOOTAGE _____ x .50 = \$ _____ +

CONDITIONAL USE (\$200.00)
(Optional) VESTED RIGHT (\$200.00)
(Optional) BOTH (\$300.00)
= TOTAL FEE DUE _____

TOWN OF NAGS HEAD

DATE RECEIVED _____

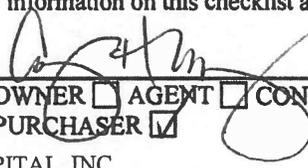
SITE PLAN REVIEW APPLICATION & CHECKLIST FOR CONDITIONAL USES

1. LOCATION AND ZONING INFORMATION

- A. PROJECT TITLE OUTER BANKS HOSPITAL - CANCER CENTER
- B. STREET ADDRESS 4927 S. CROATAN HIGHWAY
- C. SUBDIVISION SMALL VILLAGE HOTEL PARCEL - VILLAGE AT NAGS HEAD & MOONGATE
LOT(S) 26, 27 12,13,14 BLOCK - _____ SECTION - _____
- D. PRESENT ZONING VILLAGE HOTEL AND SF-2
- E. PRESENT USE MEDICAL FACILITIES/URGENT CARE AND VACANT LOTS
- F. EXISTING NONCONFORMITIES URGENT CARE PARKING
- G. ABUTTING PROPERTY ZONING SF-2 (EAST) COMMERCIAL/VILLAGE HOTEL (NORTH & SOUTH)
- H. ABUTTING PROPERTY USE RESIDENTIAL (EAST), RESTAURANT (SOUTH), MEDICAL OFFICE (NORTH)

2. CERTIFICATION AND STANDING

- A. As applicant of standing of the above named project, I certify that the information on this checklist and the site plan is complete and accurate.


 OWNER AGENT CONTRACT
 PURCHASER

- B. APPLICANT/DEVELOPER: NAME THE OUTER BANKS HOSPITAL, INC.
 ADDRESS 4800 S. CROATAN HIGHWAY
NAGS HEAD, NC 27959
 TELEPHONE 252-449-4500
- C. CONTACT PERSON: NAME TODD SKINNER
 ADDRESS P.O. BOX 6028
GREENVILLE, NC 27835
 TELEPHONE _____

3. ADJACENT OWNERSHIP INFORMATION (TO BE SHOWN ON SITE PLAN)

- NAME/ADDRESS (N) _____
- NAME/ADDRESS (S) _____
- NAME/ADDRESS (E) _____
- NAME/ADDRESS (W) _____

(If additional space is needed, please attach separate sheets.)

4. SITE PLAN AND SITE PLAN ATTACHMENT DATA

A. Site plan preparer QUIBLE & ASSOCIATES, P.C. - CATHLEEN M. SAUNDERS Phone # 252-202-7112

NC Registered Engineer Architect Surveyor. License # 043652

B. The design for the attached Stormwater Management Plan includes:

1.5", 2-hour rainfall: retained on-site.

4.3", 2-hour rainfall: no important access or health-related impacts.

5.0", 2-hour rainfall: no unapproved impacts.

Drainage calculations have been prepared YES NO ATTACHED YES NO

Note: Stormwater Management Plan MUST be approved by the Town Engineer prior to Planning Board review for all listed permitted uses in the zoning ordinance.

C. Sewage disposal approval is being submitted in the form of:

Attached tentative approval letter dated 8/14/17 & 09/25/19

Attached final permit dated _____

State County

D. Project involves condominium ownership.

NO YES, Three copies of condominium documents attached.

E. Amount of land-disturbing activity proposed _____ square feet.

A Soil Erosion and Sedimentation Control Plan has been prepared.

NO YES; (1) Copy attached,

(2) Copy submitted to Dare County Soil Conservation Service, Manteo NC 27954.

F. Coastal Area Management Act (CAMA) permit. YES NO

5. INFORMATION TO BE SHOWN ON SITE PLAN

Twelve (12) copies for Planning Board review

A. Property and ownership	YES	COMMENTS
1. Present recorded owner and map book/cabinet reference of the site property.	X	
2. Current PIN Number.	X	
3. Site Address.	X	
4. Owners' names, lot numbers or map book and page reference of all adjacent property owners.	X	
5. Boundary of the entire parcel by course and distance.	X	
6. Widths of the existing rights-of-way that abut the site.	X	
7. Nature or purpose, location and size of existing easements.	X	
8. At all lot corners, points of tangents and any angle point along a given course of the site, iron pins minimum 3/8-inch diameter or 4x4-inch concrete monuments.	X	
9. Plan to at least 1"=50' scale, showing north arrow and whether true or magnetic.	X	SKETCHES PROVIDED AT THIS TIME
10. Signature and seal of preparer.	N/A	
B. Existing features		
1. Streets, curbs, and sidewalks with type and width of pavement.	X	
2. Topographic features of site and existing grades for any streets, storm drainage system including existing grades at four corners of all structures.	X	

	YES	COMMENT
3. Flood zone(s) as determined by latest FEMA Flood Insurance Rate Map, with notation, "flood zone subject to change by FEMA."	X	
4. All underground utilities and facilities including gasoline tanks and existing septic facilities (including tanks and fields).	X	
5. If the lot is within an ocean hazard Area of Environmental Concern, the location of the first line of stable natural vegetation, the CAMA setback line, and contour lines at 2-foot intervals depicting any dunes located within an oceanfront AEC that are to be disturbed by construction.	N/A	
6. The location of any marsh areas or estuarine waters or US Army Corps of Engineers 404 wetlands within or abutting the lot.	N/A	
7. If the lot is within the small surface water supply watershed AEC (within 1,200 feet from the Fresh Water Pond), the distance between the pond and proposed septic or sewage treatment system.	N/A	
8. Percentage of site to be included in calculation for undisturbed vegetation preservation compliance in Section 48-371.	X	
C. Site improvements in accordance with regulations of state of North Carolina, Dare County, and Town of Nags Head		
1. Proposed building type (e.g., concrete or frame), number of floors and dimensions.	X	
2. Proposed building elevations of all sides of building labeled in accordance with proposed architectural design criteria of Section 48-370.	X	ARCHITECTURAL RENDERING PROVIDED AT THIS TIME
3. Total height and number of stories of proposed structure(s). If increased height is being proposed in conjunction with increased setbacks, show increase allowed in tabular form on plan. Note definition of height in Section 48-7 of the Town Code of Ordinances.	X	
4. Existing and proposed ground elevations at the corners of proposed structure(s).	N/A	GRADING AND SANITARY CONNECTIONS TO BE DETERMINED ONCE SKETCH IS REVIEWED
5. Sanitary sewer facilities with connection to sewer system or septic tank.	N/A	
6. Approximate locations of proposed underground utilities and any necessary easements.	N/A	
7. Screened dumpster pad(s) accessible to left-side loaders and sized in accordance with the Town Code of Ordinances.	X	
8. Proposed fire hydrants and extensions of water distribution lines in accordance with size and density requirements found in Section 48-363 of the Town Code of Ordinances.	X	SEE FIRE EXHIBIT
9. Location and height of proposed free-standing signs. See requirements of Chapter 48-Article VIII of the Town Code of Ordinances.	N/A	SIGN PLACEMENT TO BE DETERMINED ONCE SKETCH IS REVIEWED
10. Location of all sidewalks, curbs, drives, and parking within the site and proposed finished elevations.	X	
11. Handicapped parking spaces, walks, ramps, and entrances in accordance with the NC State Building Code. Handicapped parking spaces to be 13 feet wide, marked with a free-standing handicapped sign.	X	
12. The Vegetative Buffer Yard areas have been identified and the proper buffer yard provision(s) have been identified (i.e. Buffer Yard A, B,C,D,E as outlined in Chapter 48 Article XIII of the Town Code of Ordinances.	X	
13. Layout of numbered stalls/loading zones in accordance with Chapter 48 Article V of the Town Code of Ordinances.	X	

Commercial <input checked="" type="checkbox"/>	Parking Spaces Required	Parking Spaces Shown	Loading Spaces
Residential <input type="checkbox"/>			
2 STORY EXPANSION STORIES	CONDITIONAL USE REQUESTED		
BUILDING SQUARE FOOTAGE:			
PRINCIPAL 14,880			
ACCESSORY _____			
TOTAL 14,880			
# EMPLOYEES 22			
# DWELLING/LODGING UNITS N/A			

D. EXPLANATORY NOTES

- Vicinity map.
- Total square feet of land area to undergo land-disturbing activity.
- The total required parking spaces versus the total parking spaces provided. Parking spaces to be numbered.
- Cross-section details of all streets, roads, ditches, and parking lot improvements.
- The number of dwelling/commercial units. If more than one use is proposed (e.g., large hotel with shops, etc.), show breakdown of units or square footage by building.
- If additional height above 35 feet is being proposed, the additional height and increased setbacks shall be laid out in tabular form.
- Total site coverage calculations. (Refer to Zoning Ordinance to calculate lot coverage for lots abutting ocean or sound).
- Components of the lighting plan (pole location, pole height, type of fixture, wattage, source of illumination, etc.). See Chapter 48 Article IX of the Town Code of Ordinances.
- A completed architectural points worksheet for commercial structures subject to residential design criteria.

6. PLAN AND ATTACHMENT PREPARER CERTIFICATION

A. I certify that all information for which I am responsible is complete and accurate.

11/14/19
DATE

M/San ch
SIGNATURE OF ENGINEER ARCHITECT SURVEYOR

B. The following individuals have contributed information or attachments to the plan:

Name	Phone #	Information provided
_____	_____	_____
_____	_____	_____
_____	_____	_____

Site Specific Development Plan Option - Vested Right for Site Plans

Please be advised that as the owner, or agent for the owner, you have the opportunity to apply for and receive a Site Specific Development Plan that will establish a Vested Right for this project for a period of time not to exceed two (2) years from the date the Board of Commissioners approves the plan. You must secure a building permit for this project within two (2) years of the approval date or your Site Specific Development Plan will expire. If you elect not to apply for a Site Specific Development Plan, you must secure a building permit within six (6) months or else your site plan will expire.

If you choose the Site Specific Development Plan option, please keep in mind the following concerns:

1. Although your project may be classified as a permitted use, by requesting a Site Specific Development Plan your project will be processed as a Conditional Use for which a public hearing will be held, and an additional fee of \$200.00 will be charged to process your application.
2. Once your Site Specific Development Plan has been approved with vested rights status no modifications can be made to the plan.

If you wish to take advantage of the Vested Right process please check off the Vested Right box on page one. If you do not then leave the box blank.

**ZONING AMENDMENT APPLICATION
TOWN OF NAGS HEAD, NORTH CAROLINA**

Applicant OUTER BANKS HOSPITAL, INC.

Mailing address P.O. BOX 6028 GREENVILLE, NC 27835

Explanation of request

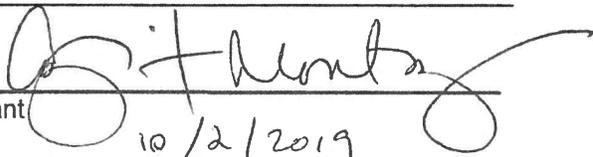
- Zoning Ordinance - Section(s) _____
Attach amendment in ordinance form.
- Zoning Map
Attach copy of current Zoning Map with affected property outlined in red.
Attach names and mailing addresses of the property owners of all parcels of land abutting the parcel in question.

Nature of request

REZONING FROM SF-2 TO VILLAGE HOTEL

Reason for request

The parcels located at 4922, 4926, & 4928 S. Passage Way are currently zoned as single family (SF-2). These parcels were originally zoned as Village Hotel and a rezoning took place in April 2009 to rezone these properties to single family for the Moongate Subdivision. The current proposed development would require rezoning of the existing single family zoning to Special Planned Developed – Community District (SPD-C)(Hotel District Overlay). The proposed rezoning would revert the three parcels back to prior 2009 zoning. This proposed rezoning will allow for expansion of the Cancer Center and required parking.


Applicant _____
Date 10/2/2019

Town of Nags Head Public GIS



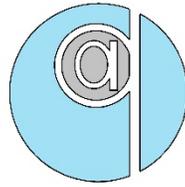
This map service includes GIS data provided by the Town of Nags Head.

100ft

Copyright:© 2013 National Geographic Society, i-cubed | Source: USDA Natural Resources Conservation Service | NCCGIA

Adjacent Parcels:

- 4917 Croatan Highway - Outer Banks Medical Suites, LLC; PO Box 960 Kitty Hawk, NC 27949
- 4933 Croatan Highway - Carlos Angel Fernandez; PO Box 1325 Nags Head, NC 27959
- 4930 S. Passage Way - Moongate Partners, LLC; PO Box 90 Kill Devil Hills, NC 27948
- 4929 S. Passage Way - Margaret K. Galasso; 2403 Hightee Court Crofton, MD 21114
- 4927 S. Passage Way - Moongate Partners, LLC; PO Box 90 Kill Devil Hills, NC 27948
- 4923 S. Passage Way - Moongate Partners, LLC; PO Box 90 Kill Devil Hills, NC 27948
- 4930 S. Passage Way - Moongate Partners, LLC; PO Box 90 Kill Devil Hills, NC 27948



SITE NARRATIVE
Outer Banks Hospital – Cancer Center
Nags Head, Dare County, North Carolina

Prepared for:
Outer Banks Hospital, Inc.
P.O. Box 6028
Greenville, NC 27835

Prepared by:
Quible & Associates, P.C.
PO Drawer 870
Kitty Hawk, NC 27949

November 14, 2019
Revised: December 4, 2019
P17012.1



Overview

The Outer Banks Hospital, Inc. (Applicant) is proposing an expansion of their Cancer Center, which includes the existing Radiation Therapy building and a proposed Infusion Facility located in Nags Head, Dare County, NC. The proposed development will require the recombination of 4923 & 4927 S. Croatan Highway along with 4922, 4926, & 4928 S. Passage Way to create an +/-1.45 acre parcel of land. The Outer Banks Hospital proposes to remove the existing Urgent Care Facility to expand the existing Radiation Therapy building approximately 10,400 sf (two stories), provide associated pedestrian access, and vehicular accommodation areas to serve the proposed outpatient Cancer Center Treatment facility.

The proposed building expansion will require an increase in the existing number of parking spaces, modification of the existing storm sewer system, verification of the Town's water system, and a revised connection into the existing onsite sanitary sewer collection system. As the site disturbance is greater than 1 acre, a State soil erosion and sediment control permit is required. In addition, it is understood that a State high-density stormwater permit will be required prior to any disturbance onsite. The Outer Banks Hospital strives to continue to provide the necessary medical services that benefit the Outer Banks Community.

Rezoning

The parcels located at 4922, 4926, & 4928 S. Passage Way are currently zoned as single family (SF-2). These parcels were originally zoned as Village Hotel and a rezoning took place in April 2009 to rezone these properties to single family for the Moongate Subdivision. The current proposed development would require rezoning of the existing single family zoning to Special Planned Developed – Community District (SPD-C)(Hotel District Overlay). The proposed rezoning would revert the three parcels back to prior 2009 zoning.

The Town of Nags Head Comprehensive Plan shows the existing land use for the subject parcels as vacant. The site is within the Village Municipal Service Character Area, specifically the Village Municipal Activity Node. This area is envisioned to provide commercial services including medical facilities. The proposed use for this site is consistent with the Town of Nags Head Comprehensive Plan based on the proposed development. The proposed structure is just under 15,000 sf, which is encouraged for this area within the comprehensive plan and the building façade will be reviewed by the Villages at Nags Head Architectural Committee to determine compatibility to the surrounding area.

Coverages

The parcels, if rezoned, will be recombined to make one parcel for the proposed development of approximately 1.45 acres. The proposed zoning of Village Hotel will require the following coverages shown within Table 1 (a summary of the proposed coverages is also included):

	Allowable Coverage	Proposed Coverage
Maximum Building Coverage (25%)	<15,755 sq. ft.	12,105 sq. ft.
Minimum Landscaped Area (30%)	>18,906 sq. ft.	31,096 sq. ft.
Minimum Interior Parking Lot Landscaping	1,174 sq. ft.	1,491 sq. ft.
Maximum Parking Coverage (45%)	<28,359 sq. ft.	19,819 sq. ft.

Access

The Cancer Center will be accessed by an existing unnamed access road that connects S. Croatan Highway and S. Virginia Dare Trail. This drive aisle is within an existing 40' wide access and utility easement as defined by PC D, SL 84 and PC E, SL 134. The existing entrance at the Urgent Care building will remain in place with a second proposed access added at the rezoned residential properties (previously Lot 21, Part "A").

We respectfully request a reduced loading and unloading zone be considered. Based on the anticipated use and building size, we are requesting a 20'x23' dedicated loading zone. Because of the low volume of patients and the nature of the treatment, radiation therapy and infusion entail very limited use of non-durable products and generate very limited need for product pick-up and delivery. Given these limited needs, it is reasonable to expect no more than two brief loading or unloading events on any given day. The applicant can accurately anticipate the following events:

- Supplies for medical treatment and administration needs: 1 or 2 visits per week, via Van (Vehicle consistent with a Ford Cargo Transit Van 220" long by 82" wide)
- Clean/soiled linens pick-up and delivery: 1 visit per week, via Van (Vehicle consistent with a Ford Cargo Transit Van, 220" long by 82" wide)

Given the types of frequency of loading/unloading events, the developer proposes to provide a reduced loading berth of 20'x23'.

Parking

As the proposed use of an infusion center addition is unique and not currently covered within the Uniform Development Ordinance (Article V Section 48-167 Table showing Minimum Off-Street Parking Standards) an alternative parking plan is proposed through a Conditional Use Permit per Town Code Section 48-165. Three different alternatives were considered during the sketch plan review process.

The project proposes the addition of a 10,400 sf infusion center. The existing Urgent Care facilities at this location currently provide for 19 parking spaces associated with the Urgent Care facility (per permit documents signed by W.C. Owen issued 6/28/00) and 22 spaces associated with the Radiation Therapy building (per the approved site plan latest revised 8/27/18). The existing Urgent Care Facility is currently under parked at a parking rate of one parking space for every 300 square feet of gross floor area of each building or portion thereof devoted to medical use, plus one parking space for each employee and for each doctor. At 21 employees and 3,000 sf (2-story) the Urgent Care Facility would be required to have 31 parking spaces based on the current Town of Nags Head ordinance. The proposed change in use to an infusion center will improve the available parking at the site as the 19 available spaces will be expanded to provide 35 spaces related to the infusion center addition.

The Town of Nags Head Unified Development Ordinance currently has parking rates available for a "Medical Office" or "Dialysis Center". These two parking rates are the closest comparable to our proposed use of an infusion center. The existing Radiation Therapy building requires 22 parking spaces based on the Town's Medical Office parking rate. In addition, the 10,400 sf infusion center addition will have 15 employees and 10 infusion bays. An infusion center, similar to a dialysis center, can only treat one patient at a time within an infusion bay. At any given time within this building addition only 10 patients can be seen with a waiting area that can seat 12

visitors. We will compare this anticipated maximum capacity with the two parking rates available within the Town of Nags Head Ordinance in the Table below.

Similar Use	Required Parking for Comparable Use Type	# Spaces for Existing Radiation Therapy Building	# Spaces Required (for addition only)	Total # Spaces Required
Dialysis Center	One parking space for each dialysis machine available for treatment, plus one parking space for each staff member.	22	25	47
Medical Office	One parking space for every 300 square feet of gross floor area of each building or portion thereof devoted to medical use, plus one parking space for each employee and for each doctor.	22	50	72

Based on the medical staff available at the proposed Cancer Center, it was decided that the expansion will need to follow the Medical Office parking rate and request a Conditional Use permit for the reduced parking based on the anticipated use.

This parking rate would require 72 total parking spaces (22 spaces for the Radiation Therapy building and 50 spaces for the infusion center expansion). As this parking rate requires more parking spaces than anticipated for use at the infusion center, a reduction of 15 parking spaces is requested by providing 1 bike rack (equal to 1 parking spaces per the Town of Nags Head Ordinance Sect 48-165(e)), and a 14 space reduction for access/use of the bus transit system. A total of 57 parking spaces would be provided for the Cancer Treatment Center.

This parking rate would leave 35 parking spaces allocated to the addition, allowing for 15 employees, 10 patients receiving treatment, and 10 patients within the waiting room. This parking rate would provide more parking spaces than typical capacity of the infusion center.

The proposed building and associated parking, if ever sold in the future, would comply with the following potential uses:

Potential Future Use	Required Parking for Potential Use Type	# Spaces Provided	Allowable Areas
Professional Office	One space per office or workspace plus a minimum of two customer parking spaces.	57	Allows for up to 55 offices within the 14,880 sf
Bank	One parking space for each 500 square feet of gross floor space plus one space for each employee.	57	Allows for up to 27 employees within the 14,880 sf

The proposed Cancer Treatment Center including the proposed infusion addition can be a great asset to The Town of Nags Head and the surrounding area. The Center will help to improve health care for those who require this type of treatment. An infusion center as a standalone facility is a unique use that is not covered by Town Codes and an international parking rate has not been set by International Standards, the American Planning Association, or the Town of Nags Head. Typically, an infusion center is found within a Hospital facility and the parking would be met through Hospital parking standards (ie. a per bed rate). As this standalone use is unique to the Town code, the provided options allow for a parking rate that the Outer Banks Hospital feels are more reflective of the actual use and parking rate of an outpatient cancer treatment center.

The ITE has evaluated anticipated parking rates for Outpatient Cancer centers and supports a parking rate of 3.5-4.5 spaces per 1,000 sf of floor area (**Appendix A**). This study would recommend a parking ratio of 52-67 spaces, which is consistent with our proposed 57 spaces. A condition of approval of the conditional use permit, would require the owner to obtain a third-party parking study 6 months after obtaining the building certificate of occupancy. This study would determine if the provided parking is adequate for the use. If the parking is deemed inadequate, the owner can be required by Town personnel to install up to 11 additional parking spaces.

The proposed drive aisle will be 22' wide and capable of withstanding 75,000 lbs, allowing for fire access to the site. Signage will be provided within the parking area to notify employees and visitors that the drive aisle is a provided fire lane. An exhibit illustrating fire access to an adjacent hydrant has been provided within **Appendix B**.

Stormwater Management Plan

Stormwater to serve the proposed site improvements will continue to be managed by infiltration basins and permeable pavements. The existing basins are to be resized and reshaped to account for the new building footprint. The proposed stormwater management facilities have been designed to provide for greater than 4.3" of storage, which is in agreement with the Town ten-year two-hour storm (4.3") requirement.

The USDA NRCS Soil Survey lists the soil in the vicinity of the stormwater infiltration basin as described below. Geotechnical reports for the site indicate the seasonal high-water table is approximately at elevation 5.8'.

- DtA – Duckston fine sand
This soil typically has 0 to 2 percent slopes. Duckston fine sand typically has a very high runoff rate and is typically well drained. This soil is categorized in Hydrologic Soil Group: A/D
- NeC—Newhan fine sand
This soil typically has 0 to 10 percent slope. Newhan fine sand typically has a very low runoff class and is somewhat poorly drained. This soil is categorized in Hydrologic Soil Group: A.

The infiltration basin along U.S. 158 (Drainage Area #1) will remain as previously designed and permitted during the radiation therapy building site plan. This front basin 1 currently treats stormwater runoff from the parking area in between the building and U.S. 158.

Table 2: Above Grade Storage Calculations For Infiltration Basin 1

Elev (Ft.)	Area (Sf)	Avg Area (Sf)	Volume (Cf)	Cum Vol. (Cf)
6.80	2,139			
		2,235	447	
7.00	2,330			447
		4,050	4,050	
8.00	5,770			4,497 (Vg)

The above grade storage provided within the front infiltration basin is approximately 4,497 cf.

Table 3: Below Grade Storage Calculations For Infiltration Basin 1

Storage Area (A) =	5,770.00 sf
Storage Elev. (E)	8.00 ft
Season High Water Table (Wt) =	5.8 ft
Soil Depth Above Swht (Ds) = B-Wt	2.2 ft
Soil Volume (Sv) = A*Ds-Vg =	8,197 cf
Void Ratio (Vr)=	20%
Subsurface Void Vol. (Vss) = A*Ds*Vr=	1,639 cf

The below grade storage provided within infiltration basin 1 is approximately 1,639 cf. The total storage provided within the front infiltration basin is 6,136 cf. This exceeds the storage required by State regulations (1,796 cf) and Town of Nags Head requirements (5,149 cf). Assuming the minimum allowable infiltration rate for permitted basins, 0.52 in/hr, the anticipated drawdown is calculated at approximately 1.15 days.

Infiltration basins and permeable pavement within drainage area #2 have been sized to store greater than 4.3" of rainfall total (above and below grade). The provided interconnected basins are designed with the following dimensions:

TABLE 4: DIMENSION SUMMARY FOR DRAINAGE AREA #2

	Basin 2	Basin 3	Basin 4
BOTTOM	7.1'	7.1'	7.0'
TOP	9.0'	9.0'	8.5'
SIDE SLOPES	3:1	3:1	3:1
ABOVE GRADE STORAGE (CF)	2,024	1,315	2,002
BELOW GRADE STORAGE (CF)	731	374	788

Detailed calculations for the onsite stormwater storage within these basins are available within **Appendix C**.

The void space under the proposed permeable pavement within drainage area 2 contributes an additional 1,191 cf of storage. See the detailed calculations within **Appendix C** for a breakdown of storage within the aggregate base and soil under the permeable pavement.

The total storage within this drainage area is 8,427 cf. This exceeds the storage required by State regulations (2,922 cf) and Town of Nags Head requirements (8,377 cf). At an infiltration rate of 0.52 in/hr the drawdown in the rear infiltration basins is approximately 1.44 to 1.83 days.

These stormwater management facilities will provide an adequate system to meet State and local requirements for stormwater storage. As the proposed impervious coverage exceeds 10,000 sq. ft., a high-density stormwater permit is required by NC DEQ DEMLR prior to construction.

Utilities

The site has an existing meter and backflow preventer. This service connection will be reused with the existing Radiation Therapy building plumbing. The existing water supply is provided by the Town of Nags Head. The second existing service at the Urgent Care Building will be reused for the building addition. Disturbance is not proposed to the existing waterline within the right-of-way and a permit to construct from NC DEQ Public Water Supply is not required.

The proposed wastewater effluent from the existing radiation therapy building and proposed building expansion will be conveyed via gravity to the existing onsite sanitary manhole. Sanitary sewer flows have been estimated using State regulations (15 NCAC 02T.0114) at 250 gal/practitioner/shift. Twenty-two (22) total employees are anticipated at the proposed building including the expansion, which will require approximately 5,500 gallons per day. A commitment to serve letter has been obtained from Carolina Water Service, Inc. of North Carolina to confirm the system can handle this additional capacity and a copy is included with this site plan package within **Appendix D**. Two commitment to serve letters are included from CWS, Inc. this includes a commitment to serve letter for the existing radiation therapy building and a commitment to serve letter for the proposed addition.

Buffers and Site Vegetation

A 20' landscape buffer is required adjacent to the residential properties to the East and South (zoned SF-2). This buffer has been proposed to require 50% of the buffer be planted with a minimum height of 42". The existing landscaping buffer adjacent to U.S. 158 will remain in place. Approximately 11.5% of the vegetation throughout the site will be maintained, meeting landscaping requirements for the site.

Appendix A
Parking Study

Parking Requirements for Outpatient Cancer Care Centers

A parking demand study of outpatient cancer centers was conducted to determine the peak period range, mean, median, and 85th percentile values of parked cars per 1,000 gross square feet (GSF) of building space. Providing 3.5 or 4.5 spaces per 1,000 GSF for medium/large ($\geq 15,000$ GSF) or small ($< 15,000$ GSF) outpatient cancer centers, respectively, is an 85th percentile recommendation consistent with recognized and published industry standards.

Study Purpose

The development of cancer care centers continues in response to our aging population and consequent increased demands for health care. One particular challenge for planners is to properly determine the number of parking spaces needed without any preexisting or published data regarding parking requirements for outpatient cancer care centers. In response to this challenge, Walker Parking Consultants conducted a study documenting the parking requirements of this land use type. A major component of this study includes new primary research.

This study gathers data from various cancer centers, calculates parking demand ratios per 1,000 gross square feet (GSF), and provides a database that can be used for project planning purposes.

The following are the objectives of this research project:

- To identify and report on outpatient cancer center peak hour parking demand ratios;
- To create a database of outpatient cancer center peak hour parking demand ratios that employ the number of parking spaces needed per 1,000 GSF, the variable most commonly referenced by municipal codes; and
- To summarize findings by mean, median, and 85th percentile values.

Meeting these objectives provides information useful to planners who project outpatient cancer center parking demand.

One limitation of this study is that it focuses on outpatient cancer care center parking demand and not parking demand for other types of cancer care centers. Cancer care centers can be classified into the following three categories:

- National Cancer Institute (NCI)-designated cancer centers are institutions that are dedicated to research into more effective approaches to prevent, diagnose, and treat cancer. Most of

the 67 NCI-designated cancer centers are affiliated with university medical centers, while others are freestanding centers that engage only in cancer research. Their missions typically include cancer research, clinical programs, training for researchers and caregivers, and public education and outreach.

- Community-based outpatient cancer centers, which tend to be smaller, community-based treatment centers that often range from 5,000 to 50,000 ft.² and in some cases are larger. All care is provided on an outpatient basis.
- Cancer hospitals, which tend to be larger, more comprehensive treatment centers that attract patients from several hundred miles and focus on clinical treatment on both an inpatient and outpatient basis. These facilities tend to be about 250,000 ft.². Typical services include surgery, radiation therapy, chemotherapy, and supportive therapies including pain management, nutrition therapy, naturopathic medicine, oncology rehabilitation, mind-body medicine, and spiritual support.

The application of this study's results should be limited to outpatient cancer care centers and should not be used for NCI-designated cancer centers or cancer hospitals.

Methodology

This study is important to health care planners and developers because prior to this study, there were no published data regarding parking requirements for outpatient cancer centers. To complete our primary research, we performed the following steps:

- Identified 53 standalone outpatient cancer centers located throughout the United States.
- Researched the following variables for each property:

BY JOHN W. DORSETT, AICP, CPP

- Freestanding location dedicated exclusively to oncology care;
- City, state, and ZIP code;
- Building GSF; and
- Parking space supply.
- Calculated the number of spaces provided per 1,000 GSF.
- Counted the number of parked vehicles during the peak time of a weekday.
- Determined the number of spaces per 1,000 GSF based on the occupied building GSF and the numbers of vehicles counted at the peak accumulation or occupancy.
- Summarized, by spaces per 1,000 GSF of occupied building space, the mean, median, and 85th percentile, for the following:
 - Parking space supply; and
 - Observed peak period parking occupancy.
- Developed recommendations regarding the number of spaces to be provided by outpatient cancer care centers.

Internet searches were conducted to identify freestanding cancer care centers, which in this study are defined as centers that specialize in cancer care treatment; occupy a building that exclusively houses a cancer care center; and have adjacent parking that meets the parking needs of the cancer care center, while at the same time, is not used by occupants of adjacent buildings. Freestanding centers were identified and selected for study to protect the integrity of the data. Many cancer care centers are integrated into existing medical centers, and it is not practical, and in many cases not feasible, to accurately determine the parking requirements of these integrated centers.

The Internet search focused on metropolitan areas where Walker Parking Consultants has offices. These geographic areas were selected because of the convenient proximity offered to Walker staff members, who then performed field visits to collect the following information: (a) verification of the existence of a freestanding cancer center and confirmation of the likely integrity of the data to be collected; (b) inventory of the existing on-site parking spaces; and (c) count of the number of on-site parked cars between the hours of 10:00 a.m. to noon or 1:00 to 3:00 p.m. on a weekday.

Table 1. Number of outpatient cancer centers by size.

15,000–85,000 GSF	30
< 15,000 GSF	23

Previous studies by Walker indicate that parking demand at medical centers peaks on a weekday during the late morning hours up to the lunch hour and carries on until mid-afternoon. This was confirmed through a parking accumulation study performed at St. Vincent Center for Cancer Care, Indianapolis, IN, USA, on September 25, 2012. During this study, the numbers of parked cars were counted at 9:30 and 11:00 a.m. and 1:30 and 3:00 p.m., with little difference in the four counts.

Data Collection Results Profile of Cancer Centers Included in This Study

Fifty-three freestanding outpatient cancer centers were included within this study. These centers range in size from 3,650 to 85,000 GSF, with properties in Arizona (1), California (3), Colorado (6), Florida (14), Illinois (8), Indiana (6), Maine (1), Massachusetts (1), Michigan (8), New Jersey (1), New York (1), and Texas (3).

The median square footage of the 53 centers is 16,076 GSF. Centers focus on outpatient cancer care, which can include patient consultations and check-ups, chemotherapy, and radiation treatments.

Number of Buildings by Size

The outpatient cancer centers identified were then compared on the basis of occupied GSF. Table 1 shows that 57 percent of the buildings surveyed occupied 15,000 or more GSF of occupied floor area, and 43 percent of the buildings surveyed were less than 15,000 GSF.

Parking Supply

Each individual outpatient cancer center's parking supply was inventoried. The mean, median, and 85th percentile number of parking spaces supplied per 1,000 square feet of GSF were 5.46, 5.02, and 7.81, respectively. Figure 1 illustrates the number of parking spaces supplied per 1,000 GSF.

Most of the facilities surveyed provide an overabundance of parking and sig-

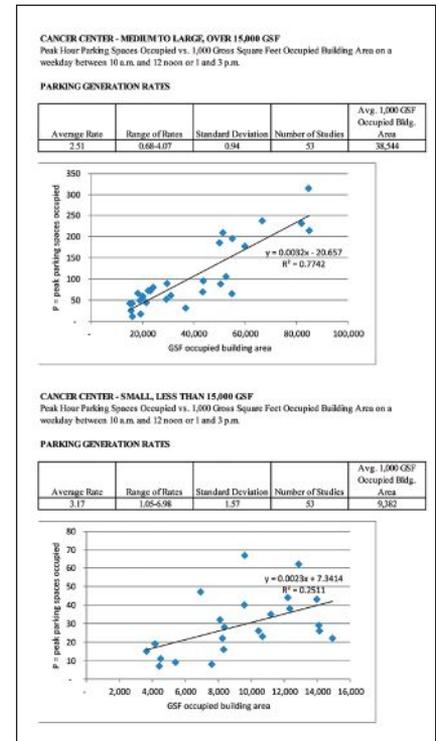


Figure 1. Data plot and statistical summary.

nificantly more spaces than are demanded by users. The mean, median, and 85th percentile parking occupancies recorded for the 53 properties were 55 percent, 54 percent, and 74 percent.

Parking Demand

Parking occupancy counts were recorded for the outpatient cancer center parking spaces to determine parking utilization during the peak period of 10:00 a.m. to noon or 1:00 to 3:00 p.m. Care was taken to avoid the noon lunch hour, as some employees spend their lunch hour off site and the number of patient appointments is fewer. These counts were compared with the occupied GSF of the building.

Table 2 lists the total number of parking facilities surveyed (at the peak hour) by range of occupied parking spaces per 1,000 GSF. Observed peak hour parking demand for the sample ranged from 0.68 to 6.98 spaces per 1,000 GSF. The observed mean and median peak hour parking demand rates were 2.80 and 2.76, respectively. The 85th percentile rate was 3.77 spaces per 1,000 GSF.

The data set shows a significant difference in parking generation rates depending on the size of the facility. Smaller centers, those defined as less than 15,000 GSF of

Table 2. Occupied spaces.

per 1,000 GSF	Number of Facilities
0.00 to 1.00	3
1.01 to 2.00	13
2.01 to 3.00	15
3.01 to 4.00	15
4.01 to 5.00	5
5.01 to 6.00	0
6.01 to 7.00	2

building area, generated more parked cars per thousand square feet of GSF than medium and larger centers, those centers that exceed 15,000 GSF of building area.

Table 3 shows the mean, median, and 85th percentile statistics separated by medium/large centers and small centers.

Parking Requirements for Medical Office Buildings

Walker studies parking demand characteristics of medical office buildings as a routine course of its practice, often when it conducts hospital parking studies. Previously, Walker performed a special study of 50 medical office buildings (MOBs), and the results of this study were published by the Institute of Transportation Engineers in 2007. This study served as the basis for the recommended number of parking spaces for MOBs as documented in the second edition of *Shared Parking*, a joint publication of the Urban Land Institute (ULI) and International Council of Shopping Centers (ICSC), and an industry standard that was vetted and approved by dozens of parking and transportation consulting professionals. *Shared Parking* recommends 4.50 spaces per thousand square feet of gross floor area.¹ The observed mean peak-hour parking accumulation rate for 50 MOBs is 3.17 spaces per 1,000 GSF of occupied building area. These MOB parking generation rates are greater than those parking generation rates observed for medium and large outpatient cancer centers but comparable to the parking generation rates observed for small outpatient cancer centers.

Parking Supply at Cancer Hospitals

Although limited data on parking requirements for cancer hospitals were collected, enough information was collected to de-

Table 3. Parked cars by size of outpatient cancer center

Type of Center	#	Ratio of Peak Period Parked Cars per 1,000 Occupied GSF		
		Mean	Median	85th Percentile
Medium/Large: 15,000–85,000 GSF	30	2.51	2.69	3.55
Small: < 15,000 GSF	23	3.17	3.08	4.44

termine that cancer hospitals should be excluded from the study of outpatient cancer care centers. Five cancer hospitals operated by Cancer Treatment Centers of America (CTCA) were briefly studied, and these fit the previous profile of cancer hospitals.

Based on information obtained through the Internet, including CTCA's website and Google Maps, these facilities provide 1.80 to 2.66 spaces per thousand square feet of building area. This information suggests that this type of facility generates demand for even fewer spaces than an outpatient cancer center. Further study is recommended for this type of cancer center.

Conclusions

Fifty-three outpatient cancer centers were surveyed as part of this research. The following is a summary of findings:

- Medium- to large-sized outpatient cancer care centers, defined as those with at least 15,000 GSF of building area, generate parking demand at a rate that is less than the rate generated by the typical medical office building.
- Small outpatient cancer care centers, defined as those with less than 15,000 GSF of building area, generate parking demand at a rate that is similar to typical medical office buildings.
- An industry-standard 85th percentile-type of recommendation for medium/large and small outpatient cancer care centers is 3.5 and 4.5 parking spaces per 1,000 GSF of building area, respectively. This recommendation can be expected to provide sufficient parking for outpatient cancer centers. This recommendation includes an effective supply cushion of spaces equal to about 10 percent of the supply and is necessary for a number of reasons, including user convenience and compensation for the temporary loss of spaces due

to construction, maintenance, and snow removal.

- The numbers of cars parked at outpatient cancer centers during the 10:00 a.m. to 3:00 p.m. peak hours is almost always exceeded by the number of on-site parking spaces. This suggests that most developers are building more parking spaces than most outpatient cancer centers need. The observed mean parking supply ratio for the 30 medium and large and 23 small outpatient cancer centers is 4.77 and 6.35 spaces per 1,000 GSF of occupied building area, respectively.
- The observed mean peak hour parking accumulation rate for the 30 medium and large and 23 small outpatient cancer centers is 2.51 and 3.17 spaces per 1,000 GSF of occupied building area.
- The observed 85th percentile peak hour parking accumulation rate for the 30 medium and large and 23 small outpatient cancer centers is 3.55 and 4.44 spaces per 1,000 GSF of occupied building area. ■

References

1. Smith, M.S. Urban Land Institute and International Council of Shopping Centers. *Shared Parking*, Second Edition, 2005.



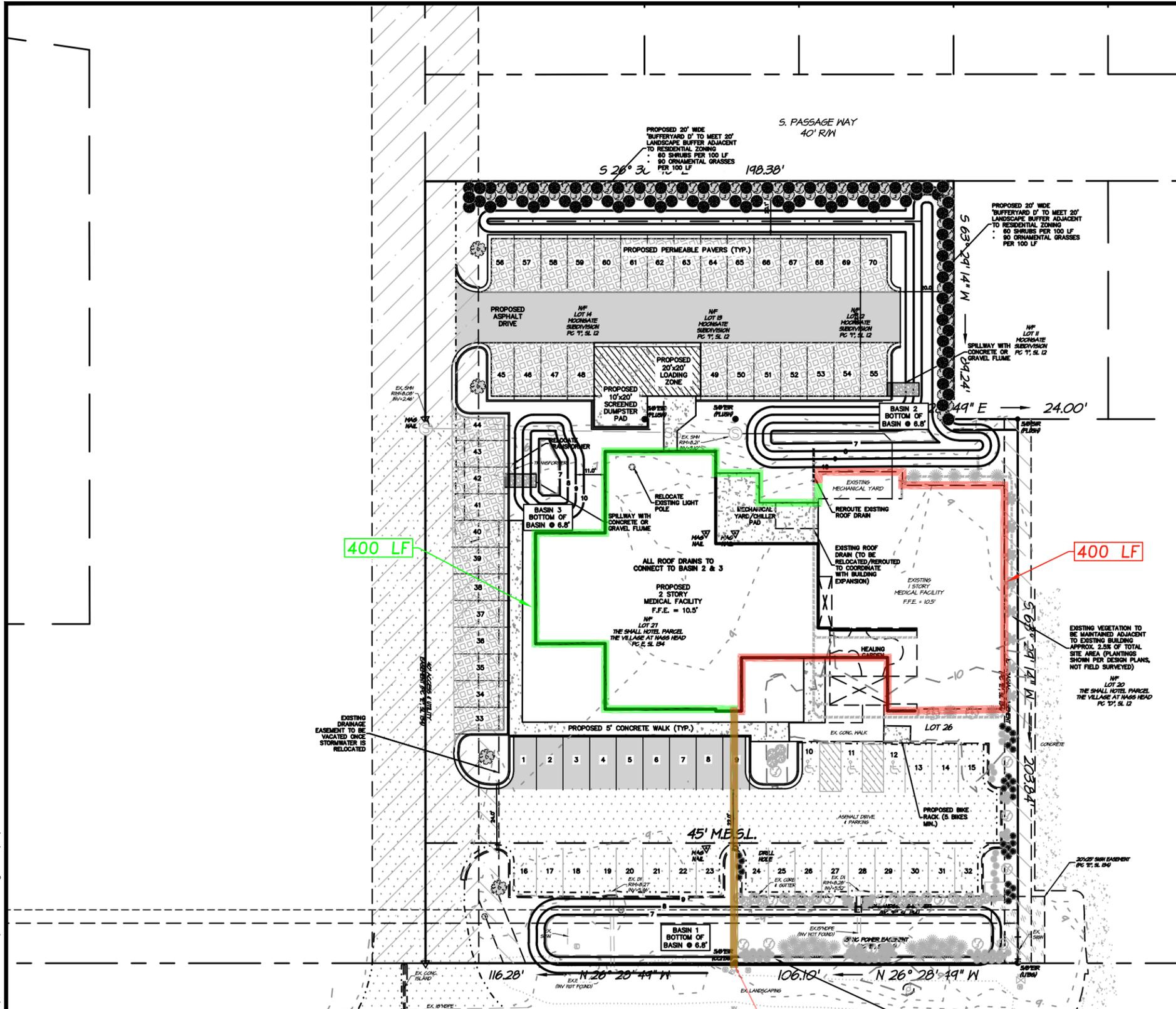
JOHN W. DORSETT,
AICP, CPP, is a senior vice president and shareholder of Walker Parking Consultants. He directs the firm's Consulting Resources Group, which specializes in parking-related engagements including access and revenue control systems, airport landside planning, financial analyses, functional design, operations consulting, planning studies, and traffic engineering. He may be contacted at john.dorsett@walkerparking.com.

Table 4. Outpatient Cancer Center Statistical Data

#	Cancer Ctr. State	Sq. Ft.	Source	# Pkg. Spaces	Spaces/ksf*	Occupancy	Cars/ksf	Count Date	Time of Day	% Occupancy
1	New Jersey	85,000	Assessor's Office	264	3.11	214	2.52	10/11	10:15	81%
2	Massachusetts	84,678	Assessor's Office	550	6.50	315	3.72	10/15	11:00	57%
3	Arizona	82,000	Facility website	409	4.99	231	2.82	11/1	14:00	56%
4	Illinois	66,655	Assessor's Office	416	6.24	237	3.56	10/11	13:00	57%
5	Maine	59,894	Assessor's Office	244	4.07	177	2.96	10/17	11:00	73%
6	Michigan	55,000	Online ad	230	4.18	195	3.55	10/9	15:00	85%
7	Illinois	54,838	Assessor's Office	130	2.37	65	1.19	10/18	15:00	50%
8	Indiana	52,540	Assessor's website	189	3.60	105	2.00	10/8	14:45	56%
9	Indiana	51,327	Assessor's Office	346	6.74	209	4.07	9/25	11:00	60%
10	Florida	50,426	Assessor's website	391	7.75	88	1.75	10/11	14:00	23%
11	New York	50,000	Facility website	284	5.68	185	3.70	10/10	13:00	65%
12	Michigan	43,664	Assessor's Office	184	4.21	95	2.18	10/23	10:00	52%
13	Colorado	43,460	Assessor's Office	383	8.81	69	1.59	10/11	11:00	18%
14	Illinois	36,842	Assessor's Office	92	2.50	31	0.84	10/12	11:15	34%
15	Michigan	31,068	Assessor's Office	88	2.83	61	1.96	10/23	10:30	69%
16	Michigan	29,539	Assessor's website	99	3.35	89	3.01	10/9	10:15	90%
17	Indiana	29,307	Assessor's Office	81	2.76	52	1.77	10/23	10:00	64%
18	Illinois	24,173	Assessor's Office	112	4.63	80	3.31	10/17	13:45	71%
19	Colorado	23,105	Assessor's Office	118	5.11	72	3.12	10/19	11:15	61%
20	Florida	22,216	Assessor's Office	134	6.03	72	3.24	10/24	10:30	54%
21	Florida	21,503	Assessor's Office	126	5.86	44	2.05	10/24	14:30	35%
22	California	20,100	Assessor's website	74	3.68	59	2.94	10/10	10:30	80%
23	Indiana	19,928	Assessor's Office	100	5.02	55	2.76	10/10	10:00	55%
24	Colorado	19,254	Assessor's Office	97	5.04	17	0.88	10/11	13:30	18%
25	Texas	19,000	Houston Chronicle	112	5.89	49	2.58	10/9	11:45	44%
26	Michigan	18,148	Assessor's Office	108	5.95	66	3.64	10/23	10:00	61%
27	Illinois	16,076	Assessor's Office	14	0.87	11	0.68	10/17	13:30	79%
28	Indiana	16,000	Architect factsheet	118	7.38	42	2.63	10/11	10:00	36%
29	Texas	15,514	Costar	53	3.42	25	1.61	10/9	11:00	47%
30	Michigan	15,061	Assessor's Office	68	4.51	42	2.79	10/23	15:00	62%
31	Michigan	14,929	Assessor's Office	155	10.38	22	1.47	10/23	14:45	14%
32	Colorado	14,142	Assessor's Office	71	5.02	26	1.84	10/18	13:15	37%
33	Michigan	14,100	Assessor's Office	64	4.54	29	2.06	10/9	11:00	45%
34	Illinois	13,977	Assessor's Office	112	8.01	43	3.08	10/18	11:00	38%
35	Colorado	12,882	Assessor's Office	85	6.60	62	4.81	10/11	14:15	73%
36	Indiana	12,340	Assessor's Office	71	5.75	38	3.08	10/10	11:45	54%
37	Florida	12,220	Assessor's website	61	4.99	44	3.60	10/11	14:30	72%
38	Colorado	11,185	Assessor's Office	67	5.99	35	3.13	10/11	13:15	52%
39	Illinois	10,681	Assessor's website	101	9.46	23	2.15	10/10	12:30	23%
40	Texas	10,444	Assessor's Office	46	4.40	26	2.49	10/24	11:30	57%
41	Florida	9,600	Assessor's website	83	8.65	67	6.98	10/22	10:00	81%
42	Florida	9,579	Assessor's Office	77	8.04	40	4.18	10/24	11:15	52%
43	Florida	8,372	Assessor's website	55	6.57	28	3.34	10/19	11:15	51%
44	Florida	8,324	Assessor's Office	31	3.72	16	1.92	10/22	14:00	52%
45	Florida	8,249	Assessor's Office	42	5.09	22	2.67	10/22	11:00	52%
46	Florida	8,104	Assessor's website	23	2.84	32	3.95	10/23	11:15	139%
47	California	7,600	Assessor's website	28	3.68	8	1.05	10/10	11:00	29%
48	Florida	6,923	Assessor's website	52	7.51	47	6.79	10/19	10:45	90%
49	Florida	5,401	Assessor's Office	25	4.63	9	1.67	10/24	13:15	36%
50	California	4,500	Assessor's website	19	4.22	11	2.44	10/10	10:00	58%
51	Florida	4,416	Assessor's website	22	4.98	7	1.59	10/11	14:45	32%
52	Florida	4,168	Assessor's website	42	10.08	19	4.56	10/19	11:45	45%
53	Illinois	3,650	Assessor's website	40	10.96	15	4.11	10/10	10:15	38%

* ksf = 1,000 square feet

**Appendix B
Fire Exhibit**



NOTE: THIS DOCUMENT IS PRELIMINARY - NOT FOR CONSTRUCTION, RECORDATION, SALES OR CONVEYANCES - THIS DOCUMENT IS FOR DISCUSSION PURPOSES ONLY! EXISTING INFORMATION SHOWN ON THIS DOCUMENT IS BASED ON BEST AVAILABLE DATA AND IS NOT A CERTIFIED SURVEY. ALL INFORMATION SHOWN ON THIS DOCUMENT IS SUBJECT TO ANY REQUIREMENTS BY ANY REGULATORY AGENCY, ENTITY OR AUTHORITY.

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NOTES:

- PROPERTY OWNERS: MOONGATE PARTNERS, LLC.
PO BOX 129
NAGS HEAD, NC 27959

DOUBLE L CORPORATION
PO BOX 2606
ELIZABETH CITY, NC 27906

UNIVERSITY HEALTH SYSTEMS OF EASTERN CAROLINA
C/O TIM McDONNELL
P.O. BOX 6028
GREENVILLE, NC 27835
- PROPERTY IDENTIFICATION: 4928, 4926 & 4922 S. PASSAGE WAY; 4927 & 4923 SOUTH CROATAN HIGHWAY
PIN#: 0801-1313-8895;
0801-1313-8960;
0801-1313-8936
0801-13-13-7759;
0801-1313-7809
PID#: 02839113; 02839114;
02839115; 027839062;
027839063;
- PARCEL AREA: 63,021 sq.ft. / 1.45 acres (AREAS BY COORDINATE METHOD)
- ZONING CLASSIFICATION: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) (HOTEL DISTRICT OVERLAY)
- REFERENCES: D.B. 1939, PG. 480; P.C. E, SL. 134
- FIELD SURVEY DATES: 06-22-2017. (HORIZONTAL GROUND DISTANCES)
- VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2012)
- PROPERTY IS LOCATED IN F.I.R.M. ZONES "AE" (EL. 9')
PANEL 3730080100J, DATED 09/20/06
FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.

NOTE:
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.



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Phone: (252) 491-8147
Fax: (252) 491-8146
E-Mail: administrator@quible.com

**PRELIMINARY
NOT FOR
CONSTRUCTION**

FIRE HYDRANT EXHIBIT
CANCER TREATMENT CENTER
OUTER BANKS HOSPITAL
DARE COUNTY
NORTH CAROLINA
NAGS HEAD
N 20° 28' 49" W
0 20 40
GRAPHIC SCALE IN FEET 1" = 20'

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NOTED.

PROJECT	P17012.1
DRAWN BY	CMS
CHECKED BY	MWS
DATE	10/03/19

Appendix C
Stormwater Calculations

NCDEQ Stormwater Calculations

Storage Calculations

	DA #1 (FRONT)		DA #2 (REAR)	
	(sq.ft.)	(acre)	(sq.ft.)	(acre)
Drainage Area =	22,266	0.51	41,895	0.96
Open Space =	9,278	0.21	18,259	0.42
Permeable Walks/Parking =	0	0.00	4,514	0.10
Building =	0	0.00	12,105	0.28
Parking =	12,125	0.28	6,431	0.15
Walks =	863	0.02	587	0.01
Offsite Impervious =	0	0.00	0	0.00
Impervious =	12,988	0.30	23,637	0.54
Total Impervious =	12,988	0.30	23,637	0.54

Runoff generated by Rainfall Event (NCDEQ Simplified Method)

la = Impervious Percentage = Impervious Area/Drainage Area

Rv= Runoff Coefficient, 0.05+0.9la

Rd= Rain fall depth

V= Runoff Volume, 3630*Rd*Rv*A

	1 (1.5")	2 (1.5")	1 (4.3")	2 (4.3")
la =	58.3%	56.4%	58.3%	56.4%
Rv=	0.58	0.56	0.58	0.56
Rd (in.)=	1.5	1.5	4.3	4.3
A (ac.)=	0.51	0.96	0.51	0.96
V (cf.)=	1600	2922	4588	8377

Total Storage Required by NCDEQ = 4523 cf

Total Storage Required by Nags Head = 12965 cf

Infiltration Basin Stormwater Calculations for NCDEQ

Above Grade Storage Provided In Infiltration Basin

1 (FRONT) - Above Grade Storage				
Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
6.80	2139			
		2235	447	
7.00	2330			447
		4050	4050	
8.00	5770			4497 (Vg)

Above Grade Storage Provided = 4497 cf

Total Storage Provided (above & below) = 6136 cf

Total Storage Rainfall Equivalent Storage = 5.8 in

2 (REAR) - Above Grade Storage				
Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
7.10	399			0
		703	633	
8.00	1007			633
		1391	1391	
9.00	1775			2024

Above Grade Storage Provided = 2024 cf

3 (SIDE) - Above Grade Storage				
Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
7.10	419			0
		541	486	
8.00	662			486
		829	829	
9.00	996			1315

Above Grade Storage Provided = 1315 cf

1 (FRONT)- Below Grade Storage	
Storage Area (A) =	5770.00 sf
Storage Elev. (E) =	8.00 ft
Season High Water Table (Wt) =	5.80 ft
Soil Depth Above SWHT (Ds) = B-Wt	2.20 ft
Soil Volume (Sv) = A*Ds-Vg =	8197 cf
Void Ratio (Vr)=	20%
Subsurface Void Vol. (Vss) = A*Ds*Vr=	1639 cf

Below Grade (Voids) Storage Provided = 1639 cf

2 (REAR)- Below Grade Storage	
Storage Area (A) =	1775.00 sf
Storage Elev. (E) =	9.00 ft
Season High Water Table (Wt) =	5.80 ft
Soil Depth Above SWHT (Ds) = B-Wt	3.20 ft
Soil Volume (Sv) = A*Ds-Vg =	3656 cf
Void Ratio (Vr)=	20%
Subsurface Void Vol. (Vss) = A*Ds*Vr=	731 cf

Below Grade (Voids) Storage Provided = 731 cf

3 (SIDE)- Below Grade Storage	
Storage Area (A) =	996.00 sf
Storage Elev. (E) =	9.00 ft
Season High Water Table (Wt) =	5.80 ft
Soil Depth Above SWHT (Ds) = B-Wt	3.20 ft
Soil Volume (Sv) = A*Ds-Vg =	1872 cf
Void Ratio (Vr)=	20%
Subsurface Void Vol. (Vss) = A*Ds*Vr=	374 cf

Below Grade (Voids) Storage Provided = 374 cf

Outer Banks Hospital - Cancer Center
 NCDEQ Stormwater Calculations (Cont.)

4 (REAR) - Above Grade Storage				
Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
7.00	492			0
		1050	1050	
8.00	1608			1050
		1905	952	
8.50	2201			2002 (Vg)

Above Grade Storage Provided = 2002 cf

4 (REAR)- Below Grade Storage	
Storage Area (A) =	2201.00 sf
Storage Elev. (E) =	8.50 ft
Season High Water Table (Wt) =	5.80 ft
Soil Depth Above SWHT (Ds) = B-Wt	2.70 ft
Soil Volume (Sv) = A*Ds-Vg =	3940 cf
Void Ratio (Vr)=	20%
Subsurface Void Vol. (Vss) = A*Ds*Vr=	788 cf

Below Grade (Voids) Storage Provided = 788 cf

Permeable Pavement Storage	
Storage Area (A) =	4513.00 sf
Storage Elev. (E) =	9.00 ft
Season High Water Table (Wt) =	5.80 ft
Bedding Thickness (Ds) =	0.66 ft
Soil Volume (Sv) = A*Ds =	2979 cf
Void Ratio (Vr)=	40%
Subsurface Void Vol. (Vss) = A*Ds*Vr=	1191 cf

Bedding (Voids) Storage Provided = 1191 cf

Total Storage Provided (above & below) = 8427 cf
 Total Storage Rainfall Equivalent Storage = 4.3 in

Infiltration Basin 1 Drawdown Calculations

Hydraulic Conductivity = 0.52 in/hr (minimum for permitted basin)
 Max Stored Depth = 14.4 in
 Drawdown Time = Stored Depth / Hydraulic Conductivity
Drawdown Time = 27.69 hrs or 1.15 days

Infiltration Basin 2 Drawdown Calculations

Hydraulic Conductivity = 0.52 in/hr (minimum for permitted basin)
 Max Stored Depth = 22.8 in
 Drawdown Time = Stored Depth / Hydraulic Conductivity
Drawdown Time = 43.85 hrs or 1.83 days

Infiltration Basin 3 Drawdown Calculations

Hydraulic Conductivity = 0.52 in/hr (minimum for permitted basin)
 Max Stored Depth = 22.8 in
 Drawdown Time = Stored Depth / Hydraulic Conductivity
Drawdown Time = 43.85 hrs or 1.83 days

Infiltration Basin 4 Drawdown Calculations

Hydraulic Conductivity = 0.52 in/hr (minimum for permitted basin)
 Max Stored Depth = 18 in
 Drawdown Time = Stored Depth / Hydraulic Conductivity
Drawdown Time = 34.62 hrs or 1.44 days

Appendix D
Wastewater Commitment to Serve



Carolina Water Service of North Carolina™

24 September 2019

Outer Banks Hospital
4800 S. Croatan Hwy.
Nags Head, NC 27959

Re: New Cancer Treatment Center
Sanitary Sewer Service
4,000 Gallons Per Day

To Whom It Many Concern:

Carolina Water Service, Inc. of North Carolina (CWSNC) is a franchised and regulated public utility company in the State of North Carolina that provides sanitary sewer utility service to the Village of Nags Head.

CWSNC is willing and able to provide sanitary sewer utility service to the above referenced property; any and all fees apply.

Our Customer Service Department can be reached at 1-800-525-7990 to make arrangements for service and account setup. If I can be of any assistance, please contact me directly at 252-269-2540 or dana.hill@carolinawaterservicenc.com.

Respectfully,

Dana Hill
Director of Operations

Cc: Bryce Mendenhall
Anthony Chilton
Matthew Palmiter
Donna Stegall



Carolina Water Service of North Carolina™

The Outer Banks Hospital, Inc.

4800 S. Croatan Hwy

Nags Head, NC 27959

Re: New Radiation Therapy Building

4927 S. Croatan Hwy.

Sanitary Sewer Utility Service

1,750 Gallons Per Day

To Whom it may concern,

Carolina Water Service, Inc. of North Carolina ("CWS") provides sanitary sewer utility service to the Village of Nags Head. CWS is a franchised and regulated public utility company in the state of North Carolina.

CWS is willing and able to provide sanitary sewer utility service to the above referenced property (any and all applicable fees apply).

Our Customer Service Department may be reached at 1-800-525-7990 to make arrangements for service and account set up. If I may be of assistance, please do not hesitate to contact me directly at 252-240-1398 or by email at DWLassiter@uiwater.com. Thank you.

Sincerely,

Danny Lassiter

Regional Manager

Cc: Bryce Mendenhall, Ronnie Stanis, Vanessa Robinson, Eddie Baldwin

Geotechnical Engineering Report

OBH Radiation Treatment Center

South Croatan Highway

Nags Head, North Carolina

September 6, 2017

Project No. 72175062

Prepared for:

Vidant Health
Greenville, North Carolina

Prepared by:

Terracon Consultants, Inc.
Winterville, North Carolina

terracon.com

Terracon

Environmental



Facilities



Geotechnical



Materials

September 6, 2017



Vidant Health
Facilities + Properties
PO Box 6028
Greenville, North Carolina 27835-6028

Attn: Mr. J. Todd Skinner
Project Director

Re: Geotechnical Engineering Report
OBH Radiation Treatment Center
South Croatan Highway
Nags Head, North Carolina
Terracon Project No. 72175062

Dear Mr. Skinner:

Terracon Consultants, Inc. (Terracon) has completed the geotechnical engineering services for the above referenced project. This study was performed in general accordance with our proposal P72175062 dated July 21, 2017.

This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs, and pavements for the proposed treatment facility.

We appreciate the opportunity to be of service to you on this project. Materials testing services are provided by Terracon. We would be pleased to discuss these services with you. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants, Inc.

Andrew J. Gliniak, P.E.
Geotechnical Project Engineer
Registered NC 042183

For: Philip C. Lambe, P.E.
Senior Geotechnical Engineer

Enclosures



Terracon Consultants, Inc. 314 Beacon Drive Winterville, North Carolina 28590
P [252] 353 1600 F [252] 353 0002 Terracon.com NC Registration Number F-0869

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APPENDIX A – FIELD EXPLORATION

Exhibit A-1	Site Location Plan
Exhibit A-2	Boring Location Plan
Exhibit A-3	Field Exploration Description
Exhibits A-4 thru A-8	Boring Logs

APPENDIX B – LABORATORY TESTING

Exhibits B-1	Laboratory Test Description
Exhibit B-2	Laboratory Test Data

APPENDIX C – SUPPORTING DOCUMENTS

Exhibit C-1	General Notes
Exhibit C-2	Unified Soil Classification System

EXECUTIVE SUMMARY

The following items represent a brief summary of the findings of our subsurface exploration and recommendations for the proposed treatment facility to be located on South Croatan Highway in Nags Head, North Carolina. A total of 5 borings were advanced to depths of 20 and 40 feet below the existing ground.

- The borings generally encountered loose to medium dense sands underlain by consistently denser sands at depths greater than 13 to 18 feet. Groundwater ranged from 3 to 5 feet below the existing ground surface.
- The majority of the building can be supported by shallow foundations with the exception of the linear accelerator. Deep foundations such as driven timber or concrete piles installed to a depth of about 30 feet below the existing ground surface into the medium dense sands are recommended to support the large wall loads for the linear accelerator
- After site stripping, the exposed subgrade soils in the building footprint and pavement areas should be densified in place using a medium weight vibratory roller.
- After completing the recommended earthwork, shallow foundations bearing on approved native soils or new engineered fill compacted as recommended and sized for a maximum net allowable soil bearing pressure of 2,000 psf.
- An IBC seismic site classification of “D” is appropriate for this site.
- It is the opinion of Terracon that field monitoring of the pile installation is a direct extension of the design process. Driven pile installation techniques must be observed, weighed against the pile driving criteria and evaluated to determine the acceptance of each pile.
- We recommend Terracon be retained to observe and test the foundation bearing materials as well as other construction materials at the site.

This summary should be used in conjunction with the entire report for design purposes. Details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein. The section titled **GENERAL COMMENTS** should be read for an understanding of report limitations.

**GEOTECHNICAL ENGINEERING REPORT
OBH RADIATION TREATMENT CENTER
SOUTH CROATAN HIGHWAY
NAGS HEAD, NORTH CAROLINA**

Terracon Project No. 72175062

September 6, 2017

1.0 INTRODUCTION

We have completed the geotechnical engineering report for the proposed treatment facility to be located on South Croatan Highway in Nags Head, North Carolina. A total of 5 borings were advanced to depths of 20 and 40 feet below the existing ground. Logs of the borings along with site location and boring location plans are included in Appendix A of this report.

The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface Soil Conditions
- Groundwater Conditions
- Earthwork
- Floor slab design and construction
- Foundation recommendations
- Seismic considerations

2.0 PROJECT INFORMATION

2.1 Project Description

ITEM	DESCRIPTION
Site Location	See Appendix A, Exhibit A-1, Site Location Plan
Site layout	See Appendix A, Exhibit A-2, Boring Location Plan
Structure	The proposed single-story radiation treatment facility will have an approximate footprint of 4,000 square feet. The project includes modifications to an existing parking lot located on the side and in front of the facility.
Building Construction	Wood framed with a concrete slab on grade on shallow foundations. Isolated interior steel columns may be required. The project includes a linear acceleration room with 3.5-foot-thick concrete walls.

ITEM	DESCRIPTION
Maximum loads	Columns: 30 kips (assumed) Walls: 16 kips/linear foot (per the structural engineer of the linear accelerator) Floor Slab: 100 psf (assumed)
Finished Floor Elevation	Unknown, no grading plan was provided.
Grading	Not provided, up to two feet of fill required (assumed).

2.2 Site Location and Description

ITEM	DESCRIPTION
Location	The proposed cancer treatment facility will be located on the South Croatan Highway in Nags Head, North Carolina.
Site Coordinates	Latitude: 35.9390° Longitude: -75.6151°
Existing improvements	Undeveloped in the footprint of the proposed building. A building and parking lot adjoin the proposed facility to the northwest.
Current ground cover	Grass.
Existing topography	Relatively level.

3.0 SUBSURFACE CONDITIONS

3.1 Site Geology

The subject site is located in the Coastal Plain Physiographic Province. The Coastal Plain soils consist mainly of marine sediments that were deposited during successive periods of fluctuating sea level and moving shoreline. The soils include sands, silts, and clays with irregular deposits of shells, which are typical of those lain down in a shallow sloping sea bottom. Recent alluvial sands, silts, and clays are typically present near rivers and creeks.

According to USGS Mineral Resources On-Line Spatial Data based on the 1998 digital equivalent of the 1985 Geologic Map of North Carolina updated in 1998, the site is mapped within the Surficial Deposits, Undivided (Quaternary).

3.2 Typical Profile

Based on the results of the borings, subsurface conditions on the project site can be generalized as shown on the following table:

Description	Approximate Depth to Bottom of Stratum (feet)	Material Encountered	Consistency/Density
Stratum 1	13 to 18	Poorly Graded Sand (SP)	Loose to Medium Dense
Stratum 2	Boring Terminated – 40	Poorly Graded Sand (SP), Silty Sand (SM)	Medium Dense

Laboratory tests for moisture content, Atterberg limits, and grain size were conducted on selected soil samples. The test results are presented in the Appendix B of this report and in the boring logs. Stratification boundaries on the boring logs represent the approximate location of changes in soil types; in-situ, the transition between materials may be gradual. For a comprehensive description of the conditions encountered in the borings, refer to the boring logs in Appendix A of this report.

3.3 Groundwater

Mud rotary drilling techniques which can obscure water levels were used to advance the borings. Groundwater during drilling were recorded at a depth of 3 feet and at depths of 4 to 5 feet after 24 hours. Groundwater at the site is anticipated to range in depths from 4 to 5 feet below the existing ground surface.

The groundwater level can change due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

4.0 RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION

4.1 Geotechnical Considerations

The borings generally encountered loose to medium dense sands underlain by consistently denser sands at depths greater than 13 to 18 feet below the ground surface. The majority of the building can be supported by shallow foundations with the exception of the linear accelerator. Deep foundations such as driven timber or concrete piles installed to a depth of about 30 feet below the existing ground surface into the medium dense sands are recommended to support the large wall loads for the linear accelerator.

After site stripping, the subgrade should be densified in place using a medium weight vibratory roller. The purpose of the vibratory rolling is to densify the loose, near surface soils and potentially improve floor slab and foundation support.

Following the recommended site preparation, shallow foundations bearing on approved native soils or new engineered fill compacted as recommended and sized for a maximum net allowable soil bearing pressure of 2,000 psf.

A more complete discussion of these points and additional information is included in the following sections.

4.2 Earthwork

Site preparation should begin with the complete removal of surface vegetation and topsoil within the footprints of the proposed building and pavement areas. A Terracon representative should field verify the stripping depth during construction. Topsoil may be reused in areas of the site to be landscaped but should not be used as structural fill or backfill.

Deeper utility excavations or overexcavation will likely encounter groundwater. The water should be pumped out with well points. Pumping water, as required, should continue until excavations are completely backfilled.

After site stripping, the exposed subgrade soils in the building and pavement footprints should be densified in place using a vibratory roller. The purpose of the vibratory rolling is to densify the exposed subgrade soils for floor slab and pavement support and to potentially improve the foundation bearing soils. The roller should make at least 6 passes across the site, with the second set of 3 passes perpendicular to the first set of 3 passes. If water is brought to the surface by the vibratory rolling, the operation should be discontinued until the water subsides. Vibratory rolling should be completed during dry weather.

After the vibratory rolling, pore pressures should be allowed to dissipate for a minimum of 16 hours prior to placing fill. After the waiting period, proofrolling should be performed on the exposed subgrade soils in areas to receive fill or at the subgrade elevation with fully loaded, tandem-axle dump truck or similar rubber-tired construction equipment. Proofrolling is recommended as a means of detecting areas of soft or unstable subgrade soils. The proofrolling should be performed during a period of dry weather to avoid degrading an otherwise suitable subgrade. The proofrolling operations should be observed by a representative of the geotechnical engineer. Subgrade soils that exhibit excessive rutting or deflection during proofrolling should be repaired as directed by the field representative. Typical repairs include overexcavation followed by replacement with either properly compacted fill or by a subgrade stabilization fabric in conjunction with a sand fill or crushed stone.

Engineered fill should meet the following material property requirements:

Fill Type ¹	USCS Classification	Acceptable Location for Placement
Imported Soil	Sand: SM, SC, SP	All locations and elevations.
On-site Soils ²	Sand: SP	All locations and elevations.

1. Controlled, compacted fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the geotechnical engineer for evaluation.
2. On site soils that meet the above soil classifications are generally suitable for fill if properly moisture conditioned.

4.2.1 Compaction Requirements

We recommend that the engineered fill be placed as recommended in the following table:

ITEM	DESCRIPTION
Fill Lift Thickness	9-inches or less in loose thickness (4" to 6" lifts when hand-operated equipment is used).
Compaction Requirements ¹	Compact to a minimum of 95% of the material's standard Proctor maximum dry density (ASTM D 698). ²
Moisture Content – Structural Fill	Within the range of -2% to +2% of optimum moisture content as determined by the standard Proctor test at the time of placement and compaction.

1. Engineered fill should be tested for moisture content and compaction during placement. If in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the tests should be reworked and retested as required until the specified moisture and compaction requirements are achieved.
2. It is not necessary to achieve 95% compaction on the existing ground prior to placing fill or beginning construction. However, the subgrade should be evaluated by a representative of the geotechnical engineer prior to placing fill or beginning construction.

4.2.2 Grading and Drainage

During construction, grades should be sloped to promote runoff away from the construction area. Final surrounding grades should be sloped away from the structure on all sides to prevent ponding of water. If gutters / downspouts for the proposed building do not discharge directly onto pavement, they should not discharge directly adjacent to the building. This can be accomplished through the use of splash-blocks, downspout extensions, and flexible pipes that are designed to attach to the end of the downspout. Flexible pipe should only be used if it is daylighted in such a manner that it gravity-drains collected water. Splash-blocks should also be considered below hose bibs and water spigots.

4.2.3 Construction Considerations

Performing earthwork operations during warmer periods of the year (May through October) will reduce the potential for problems associated with wet unstable subgrades. Site drying conditions are typically enhanced when it is warm. The moisture sensitivity of the on-site soils does not preclude performing earthwork at other times of the year, but does lead to an increased potential for having to perform some other form of remedial work.

The site should be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become frozen, desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and recompacted.

As a minimum, all temporary excavations should be sloped or braced as required by Occupational Safety and Health Administration (OSHA) regulations to provide stability and safe working conditions. Temporary excavations will most likely be required during grading operations. The grading contractor, by his contract, is usually responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required, to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state and federal safety regulations, including the current OSHA Excavation and Trench Safety Standards.

The geotechnical engineer should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation; vibratory rolling, proofrolling; placement and compaction of controlled compacted fills; and backfilling of excavations.

4.3 Shallow Foundation Recommendations

The column and wall foundations of the building can be designed on shallow foundations following recommend site grading. The foundations of the room for the linear accelerator should bear on driven piles.

4.3.1 Shallow Foundations

The shallow foundations can consist of either isolated column and wall footings or thickened portions of a monolithic slab. Foundations should be independent of the recommended deep foundation system for the linear accelerator. Design recommendations are presented in the following table and paragraphs.

DESCRIPTION	VALUE
Maximum Net allowable bearing pressure ¹	2,000 psf
The required embedment below lowest adjacent finished grade for frost protection and protective embedment ²	12 inches
Minimum width for continuous wall footings	12 inches for thickened slab 16 inches for isolated strip footings
Minimum width for isolated column footings	24 inches
Approximate total settlement ³	Up to 1 inch
Estimated differential settlement ³	Up to 1/2 inch between columns and along 40 feet of wall
Ultimate coefficient of sliding friction ⁴	0.35

1. The recommended net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. The maximum net allowable bearing pressure may be increased by 1/3 for temporary wind loads.
2. For frost protection and to reduce effects of seasonal moisture variations in subgrade soils. For perimeter footings and footings beneath unheated areas.
3. The actual magnitude of settlement that will occur beneath the foundations will depend upon the variations within the subsurface soil profile, the structural loading conditions and the quality of the foundation excavation. The estimated total and differential settlements listed assume that the foundation-related earthwork and the foundation design are completed in accordance with our recommendations.
4. For uplift resistance, use the weight of the foundation concrete plus the weight of the soil over the plan area of the footings. 110 pounds per cubic foot should be used for the density of the soil.

4.3.2 Construction Considerations

The foundation bearing materials should be evaluated at the time of the foundation excavation. This is an essential part of the construction process. A representative of the geotechnical engineer should use a combination of hand auger borings and dynamic cone penetrometer (DCP) testing to determine the suitability of the bearing materials for the design bearing pressure. DCP testing should be performed to a depth of 3 to 5 feet below the bottom of footing excavation. Excessively soft, loose or wet bearing soils should be overexcavated to a depth recommended by the geotechnical engineer. The excavated soils should be replaced with compacted engineered fill or washed, crushed stone (NCDOT No. 57) wrapped in a geotextile fabric (Mirafi 140 N or equivalent). However, footings could bear directly on these soils at the lower level if approved by the geotechnical engineer.

The base of all foundation excavations should be free of water and loose soil prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Should the soils at bearing level become excessively disturbed or saturated, the affected soil should be removed prior to placing concrete.

4.4 Driven Pile Recommendations

We recommend that the linear accelerator be supported on a deep foundation system using driven timber or pre-cast concrete piles. The piles should be installed to an embedment depth of 25 to 30 feet below the existing ground surface into the medium dense sands.

Static pile analyses were used to estimate axial compressive and uplift load capacities of single vertical piles based on a factor of safety of 2 for compression and 2.5 for uplift. The compressive capacity is developed from skin friction and end bearing on the dense/hard layer. The design capacities for the piles are shown on the following table.

Description	Design Axial Capacity	
	Compressive (tons)	Uplift (tons)
Timber Pile with 8 inch minimum tip diameter	30	14
Square, 12-Inch Pre-Cast Concrete Piles	60	20

A lateral load capacity was estimated using a computer generated L-Pile analysis. We have assumed a free-head boundary condition (pile top free to rotate) for a lateral load applied to the top of the pile at the ground surface and a maximum allowable lateral deflection of 1/2-inch. A higher design lateral capacity can be achieved if the pile is allowed to have a higher deflection or if the pile to cap connection is designed to create a “fixed head” condition in which the top of the pile can translate but is not allowed to rotate. Typically, the true condition is between these two design assumptions. For piles acting as a group, the lateral capacity of an individual trailing pile should be reduced 50% to consider group effects. Based on the above assumptions, we recommend design lateral capacities as shown on the following table:

Description	Design Lateral Capacity	
	Fixed Head (kips)	Free Head (kips)
Timber Pile with 8 inch minimum tip diameter	13	5
Square, 12-Inch Pre-Cast Concrete Piles	24	9

The piles should be spaced on-center no closer than the three times the pile butt diameter; a center-to-center spacing of approximately 3 feet. The minimum spacing should be maintained to prevent the pile group compression load capacity from being significantly less than the summation of individual pile capacities. This spacing restriction also serves to limit surface heave and to reduce the possibility of damaging previously installed piles.

Timber piles should be Southern Yellow Pine and CCA pressure treated in accordance with the requirements of AWPA C3.

4.4.1 Construction Considerations

In our opinion, that field monitoring of the pile installation is a direct extension of the design process. Pile installation techniques must be observed, weighed against the pile installation criteria and driving resistance recorded and evaluated to determine the acceptance of each pile.

A series of indicator piles should be installed at the site prior to ordering production piles. We recommend at least three indicator piles be installed around the linear accelerator footprint. The results of the indicator pile installation can be used to evaluate installation methods, driving resistance, develop appropriate termination criteria, and determine pile length. The indicator piles should be installed at design pile locations and are expected to be part of the final pile layout. We recommend that 35 foot long indicator piles be used. Production piles should not be ordered until their length has been determined by the results of driving the indicator piles. Installation of the indicator piles should be observed by a qualified geotechnical engineer or technician.

The timber piles should be driven with a hammer with a minimum energy rating of 15,000 foot-pounds. The timber piles could be damaged driving deeper into the very dense sands encountered in the borings. Timber pile installation should be closely monitored and discontinued after reaching this layer to help prevent damage to the piles. Concrete piles should be driven with a hammer with a minimum energy rating of 22,000 foot-pounds.

For timber piles, we recommend dynamic driving criteria required for the recommended design capacity be developed once the rated energy of the hammer is known. The driving resistance may be determined by either the Engineering News Record Formula or by a wave equation driving analysis performed by the geotechnical engineer.

For concrete piles, we recommend using a pile drive analyzer (PDA) and case pile wave analysis program (CPWAP) analysis for a dynamic strain analysis to determine the pile capacity. .

Driving should be terminated immediately if refusal (i.e., 4 blows per inch for timber) is reached to reduce damaging the piles. In the event the driving criteria are not being reached during the installation of an individual pile, we recommend the pile be left 2 to 3 feet high to allow a “re-strike” 48 hours after the initial driving may be performed. The development of the pile skin friction may be delayed by the build-up of pore water pressures in the soil during driving.

The installation of a pile foundation system should be in accordance with the local and state building code requirements. In addition, pile installation should be monitored by the Geotechnical Engineer’s representative. In general, the representative should:

1. Prepare criteria for final driving.
2. Be present continuously during installation.
3. Record the dimensions of each pile, locate, and report obvious defects.
4. Count and record the blows for each foot of driving, and for the final 6 inches.
5. Record energy rating of hammer.

6. Have knowledge of soil conditions at the site and the minimum required penetration of each pile.
7. Be cognizant of intended support mechanisms of piles on which to base acceptance or rejection, the need to pre-drill, or evaluating the presence of obstructions.
8. Have authority to suspend driving when unanticipated difficulties or conditions are encountered.

4.5 Seismic Considerations

Code Used	Seismic Parameters
2009 International Building Code (IBC) referenced in the 2012 North Carolina State Building Code	Seismic Site Class D $S_s = 0.095$ $S_1 = 0.045$ $S_{ms} = 0.151$ $S_{m1} = 0.107$ $S_{DS} = 0.101$ $S_{D1} = 0.071$

Based on our experience with the geology of the area, it is our opinion that the subsurface characteristics reflect those of Site Class D as described in the 2012 North Carolina State Building Code. Based on the results of the borings, liquefaction is not expected based on the relatively low level of ground motions associated with the design earthquake.

5.0 GENERAL COMMENTS

Terracon should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Terracon also should be retained to provide observation and testing services during grading, excavation, foundation construction and other earth-related construction phases of the project.

The analysis and recommendations presented in this report are based upon the data obtained from the borings performed at the indicated locations and from other information discussed in this report. This report does not reflect variations that may occur between borings, across the site, or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

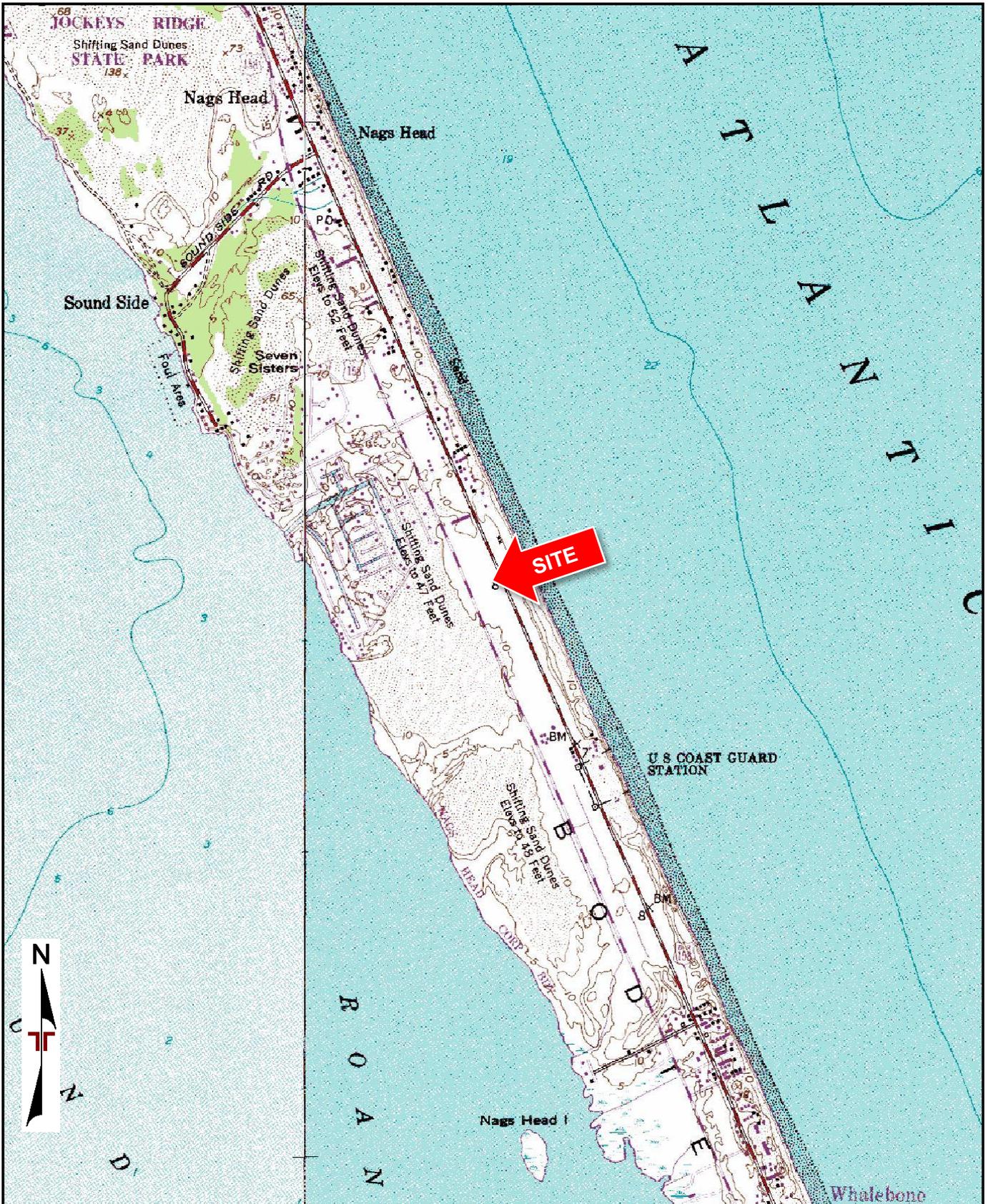
Geotechnical Engineering Report

OBH Radiation Treatment Center ■ Nags Head, North Carolina
September 6, 2017 ■ Terracon Project No. 72175062



This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless Terracon reviews the changes and either verifies or modifies the conclusions of this report in writing.

APPENDIX A
FIELD EXPLORATION



TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
 QUADRANGLES INCLUDE: MANTEO, NC (1/1/1983) and ROANOKE ISLAND NE, NC (1/1/1983).

Project Manager: AJG	Project No. 72175062	 314 Beacon Dr Winterville, NC 28590-7956	SITE LOCATION PLAN	Exhibit
Drawn by: AJG	Scale: 1"=2,000'		OBH Radiation Treatment Center S Croatan Hwy Nags Head, NC	A-1
Checked by: PCL	File Name: 72175062 EXA			
Approved by: AJG	Date: 9/1/17			



APPROXIMATE LOCATION OF PROPOSED RADIATION TREATMENT CENTER



bing

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DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

Project Manager:	AJG
Drawn by:	AJG
Checked by:	PCL
Approved by:	AJG

Project No.	72175062
Scale:	AS SHOWN
File Name:	72175062 EXA
Date:	9/1/17

Terracon
 314 Beacon Dr
 Winterville, NC 28590-7956

BORING LOCATION PLAN

OBH Radiation Treatment Center
 S Croatan Hwy
 Nags Head, NC

Exhibit
A-2

Field Exploration Description

Coordinates of the borings were determined by plotting the points provided on the site plan and referencing existing site features on aerial photography. The boring locations were marked in the field by Terracon using a handheld GPS. The location of the borings should be considered accurate only to the degree implied by the means and methods used to define it.

The soil test borings were performed by a trailer mounted power drilling rig utilizing mud rotary drilling procedures to advance the boreholes. Representative soil samples were obtained at intervals of 2.5 feet above a depth of 10 feet and at 5 foot intervals below 10 feet using split-barrel sampling procedures. In the split barrel sampling procedure, the number of blows required to advance a standard 2 inch O.D. split barrel sampler the 12 inches after the first 6 inches by means of a 140 pound automatic hammer with a free fall of 30 inches, is the standard penetration resistance value (SPT-N). This value is used to estimate the in-situ relative density of cohesionless soils and consistency of cohesive soils.

An automatic SPT hammer was used to advance the split-barrel sampler in the borings performed on this site. A greater efficiency is typically achieved with the automatic hammer compared to the conventional safety hammer operated with a cathead and rope. Published correlations between the SPT values and soil properties are based on the lower efficiency cathead and rope method. This higher efficiency affects the standard penetration resistance blow count (N) value by increasing the penetration per hammer blow over what would be obtained using the cathead and rope method. The effect of the automatic hammer's efficiency has been considered in the interpretation and analysis of the subsurface information for this report.

The samples were tagged for identification, sealed to reduce moisture loss, and taken to our laboratory for further examination, testing, and classification. Information provided on the boring logs attached to this report includes soil descriptions, consistency evaluations, boring depths, sampling intervals, and groundwater conditions.

A field log of each boring was prepared by the drill crew. These logs included visual classifications of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples. Final boring logs included with this report represent the engineer's interpretation of the field logs and include modifications based on laboratory observation and tests of the samples. Additional information provided on the boring logs attached to this report includes soil descriptions, consistency evaluations, boring depths, sampling intervals, and groundwater conditions.

BORING LOG NO. B-1

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.939153° Longitude: -75.615057°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
DEPTH	<p>POORLY GRADED SAND (SP), tannish brown, tannish gray and dark gray, loose to medium dense</p>								
		5	▽	X	3-3-3 N=6	1			
				X	3-4-4 N=8	2			
				X	3-4-5 N=9	3			
			10		X	5-5-6 N=11	4		
					X	3-4-4 N=8	5		
			15						
				X	6-7-8 N=15	6			
		20.0							
Boring Terminated at 20 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

Abandonment Method:
Backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS
▽ While drilling

314 Beacon Dr
Winterville, NC

Boring Started: 08-25-2017	Boring Completed: 08-25-2017
Drill Rig: Trailer	Driller: Carolina Drilling, Inc.
Project No.: 72175062	Exhibit: A-4

BORING LOG NO. B-2

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.939055° Longitude: -75.614986°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH	<p>POORLY GRADED SAND (SP), tannish brown, light tan, tannish gray and dark gray, loose to medium dense</p>									
		5	▽	X	1-2-2 N=4	1	4			
				X	3-4-5 N=9	2	23			
				X	3-2-4 N=6	3	26			
		10		X	4-5-7 N=12	4	26			
		15		X	3-4-5 N=9	5	23	NP	1	
		20		X	4-6-9 N=15	6	23			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

<p>Advancement Method: Mud Rotary</p>	<p>See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.</p>	<p>Notes:</p>
<p>Abandonment Method: Backfilled with soil cuttings upon completion.</p>		
<p>WATER LEVEL OBSERVATIONS</p>	<p>314 Beacon Dr Winterville, NC</p>	
<p>▽ While drilling</p>		
		<p>Boring Started: 08-25-2017 Boring Completed: 08-25-2017</p>
		<p>Drill Rig: Trailer Driller: Carolina Drilling, Inc.</p>
		<p>Project No.: 72175062 Exhibit: A-5</p>

BORING LOG NO. B-2

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER: NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.939055° Longitude: -75.614986°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
	POORLY GRADED SAND (SP) , tannish brown, light tan, tannish gray and dark gray, loose to medium dense (<i>continued</i>)	25		X	6-7-6 N=13	7	26			
		28.0								
	SILTY SAND (SM) , trace mica, dark gray, medium dense	30		X	10-11-9 N=20	8	28			
		35		X	7-9-10 N=19	9	26			
		40.0								
	Boring Terminated at 40 Feet	40		X	8-11-13 N=24	10	26			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Backfilled with soil cuttings upon completion.

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
While drilling



Boring Started: 08-25-2017	Boring Completed: 08-25-2017
Drill Rig: Trailer	Driller: Carolina Drilling, Inc.
Project No.: 72175062	Exhibit: A-5

BORING LOG NO. B-3

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.939077° Longitude: -75.615147°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
	POORLY GRADED SAND (SP) , tannish brown, tannish gray, dark gray and dark brown, loose to medium dense									
		5	▽	X	2-2-2 N=4	1				
				X	4-4-4 N=8	2				
				X	3-3-4 N=7	3	24	NP	1	
		10		X	3-4-4 N=8	4				
		15		X	5-6-7 N=13	5				
		20		X	6-7-7 N=14	6				
	Boring Terminated at 20 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Backfilled with soil cuttings upon completion.

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ After 24 hours



Boring Started: 08-25-2017

Boring Completed: 08-25-2017

Drill Rig: Trailer

Driller: Carolina Drilling, Inc.

Project No.: 72175062

Exhibit: A-6

BORING LOG NO. B-4

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.939096° Longitude: -75.615277°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
	POORLY GRADED SAND (SP) , gray to dark gray and tannish brown, loose to medium dense									
		5	▽	X	3-3-3 N=6	1				
				X	3-2-2 N=4	2				
				X	2-3-2 N=5	3				
		10		X	2-4-5 N=9	4				
		15		X	6-6-8 N=14	5				
		20		X	4-5-8 N=13	6				
	Boring Terminated at 20 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Backfilled with soil cuttings upon completion.

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ After 24 hours



Boring Started: 08-25-2017

Boring Completed: 08-25-2017

Drill Rig: Trailer

Driller: Carolina Drilling, Inc.

Project No.: 72175062

Exhibit: A-7

BORING LOG NO. B-5

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.938999° Longitude: -75.615219°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
DEPTH	<p>POORLY GRADED SAND (SP), gray brown to dark gray and tannish brown, loose to medium dense</p>								
		5	▽	X	3-3-4 N=7	1			
				X	2-2-2 N=4	2			
				X	2-3-3 N=6	3			
			10		X	4-4-5 N=9	4		
			15		X	6-6-6 N=12	5		
			20		X	5-6-6 N=12	6		
	Boring Terminated at 20 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Backfilled with soil cuttings upon completion.

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
▽ While drilling



Boring Started: 08-25-2017	Boring Completed: 08-25-2017
Drill Rig: Trailer	Driller: Carolina Drilling, Inc.
Project No.: 72175062	Exhibit: A-8

APPENDIX B
LABORATORY TESTING

Geotechnical Engineering Report

OBH Radiation Treatment Center ■ Nags Head, North Carolina

September 6, 2017 ■ Terracon Project No. 72175062



Laboratory Test Description

Descriptive classifications of the soils indicated on the boring logs are in accordance with the enclosed General Notes and the Unified Soil Classification System. Also shown are estimated Unified Soil Classification Symbols. A brief description of this classification system is attached to this report. Soils laboratory testing was performed under the direction of a geotechnical engineer and included visual classification, moisture content, grain size analysis, and Atterberg limits testing as appropriate. The results of the laboratory testing are shown on the borings logs and in Appendix B.

The laboratory test methods are described in the ASTM Standards listed below:

ASTM D2216 Standard Test Method of Determination of Water Content of Soil and Rock by Mass

ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)

ASTM D2488 Standard Practice of Description and Identification of Soils (Visual Manual Method)

ASTM D422 Standard Test Method for Particle-Size Analysis of Soils

ASTM D1140 Standard Test Methods for Determining the Amount of Material Finer than No. 200 Sieve in Soils by Washing

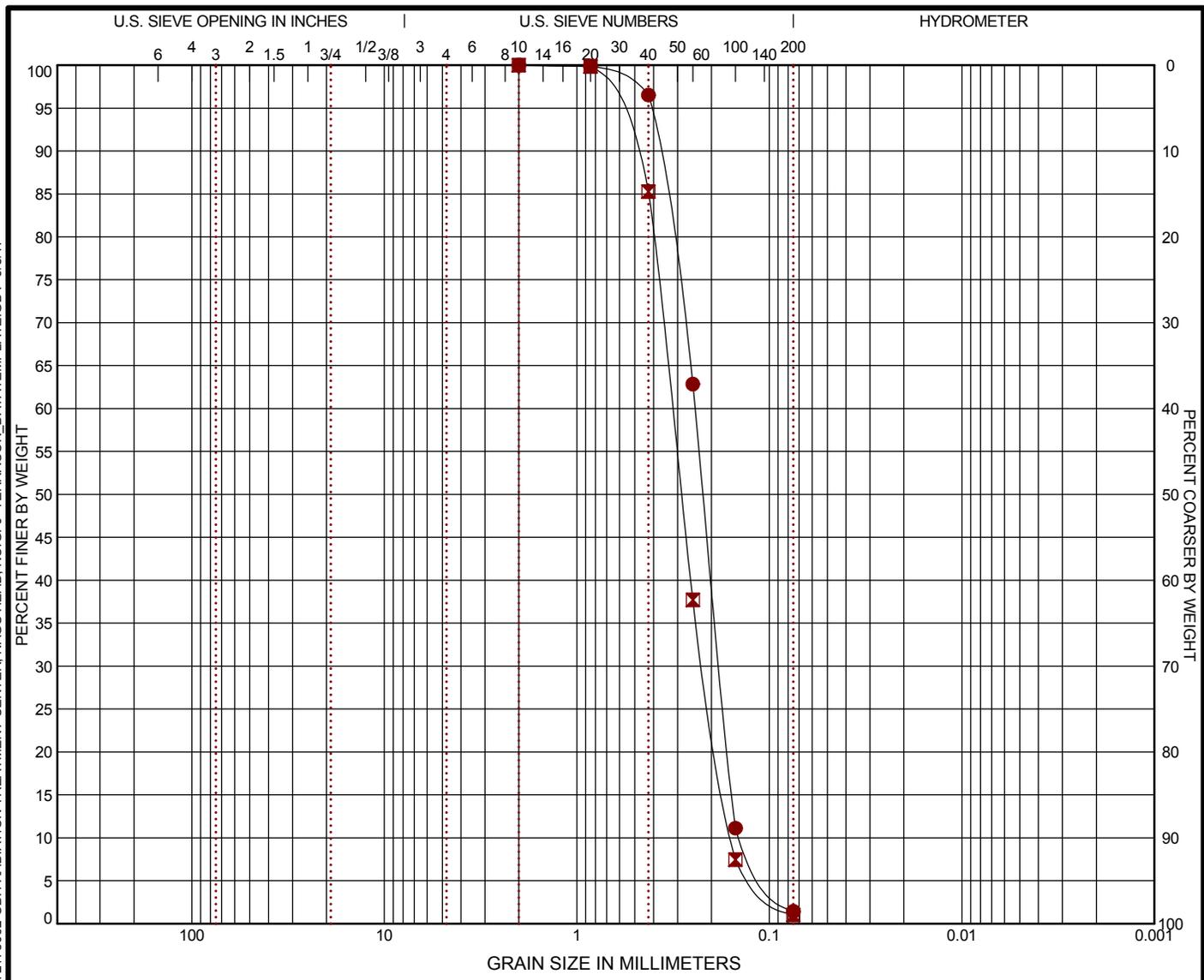
ASTM D4318 Standard Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils

Procedural standards noted above are for reference to methodology in general. In some cases variations to methods are applied as a result of local practice or professional judgment.

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS 1 72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/15/17



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
● B-2	13.5 - 15	0.0	0.0	98.6		1.4		SP
⊠ B-3	6 - 7.5	0.0	0.0	99.0		1.0		SP

<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="4">GRAIN SIZE</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;">●</td> <td style="text-align: center;">⊠</td> <td></td> </tr> <tr> <td>D₆₀</td> <td style="text-align: center;">0.243</td> <td style="text-align: center;">0.321</td> <td></td> </tr> <tr> <td>D₃₀</td> <td style="text-align: center;">0.181</td> <td style="text-align: center;">0.219</td> <td></td> </tr> <tr> <td>D₁₀</td> <td style="text-align: center;">0.138</td> <td style="text-align: center;">0.157</td> <td></td> </tr> <tr> <th colspan="4">COEFFICIENTS</th> </tr> <tr> <td>C_c</td> <td style="text-align: center;">0.97</td> <td style="text-align: center;">0.96</td> <td></td> </tr> <tr> <td>C_u</td> <td style="text-align: center;">1.76</td> <td style="text-align: center;">2.05</td> <td></td> </tr> </tbody> </table>	GRAIN SIZE					●	⊠		D ₆₀	0.243	0.321		D ₃₀	0.181	0.219		D ₁₀	0.138	0.157		COEFFICIENTS				C _c	0.97	0.96		C _u	1.76	2.05		<table border="1" style="width: 100%;"> <thead> <tr> <th>Sieve</th> <th>% Finer</th> <th>Sieve</th> <th>% Finer</th> <th>Sieve</th> <th>% Finer</th> </tr> </thead> <tbody> <tr> <td>#10</td> <td>100.0</td> <td>#10</td> <td>100.0</td> <td></td> <td></td> </tr> <tr> <td>#20</td> <td>99.92</td> <td>#20</td> <td>99.85</td> <td></td> <td></td> </tr> <tr> <td>#40</td> <td>96.52</td> <td>#40</td> <td>85.27</td> <td></td> <td></td> </tr> <tr> <td>#60</td> <td>62.85</td> <td>#60</td> <td>37.7</td> <td></td> <td></td> </tr> <tr> <td>#100</td> <td>11.13</td> <td>#100</td> <td>7.47</td> <td></td> <td></td> </tr> <tr> <td>#200</td> <td>1.43</td> <td>#200</td> <td>1.02</td> <td></td> <td></td> </tr> </tbody> </table>	Sieve	% Finer	Sieve	% Finer	Sieve	% Finer	#10	100.0	#10	100.0			#20	99.92	#20	99.85			#40	96.52	#40	85.27			#60	62.85	#60	37.7			#100	11.13	#100	7.47			#200	1.43	#200	1.02			<p>SOIL DESCRIPTION</p> <ul style="list-style-type: none"> ● POORLY GRADED SAND (SP) ⊠ POORLY GRADED SAND (SP) <p>REMARKS</p> <ul style="list-style-type: none"> ● ⊠
GRAIN SIZE																																																																												
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PROJECT: OBH Radiation Treatment Center	<p>314 Beacon Dr Winterville, NC</p>	PROJECT NUMBER: 72175062
SITE: S Croatan Hwy Nags Head, NC		CLIENT: Vidant Health Greenville, NC
		EXHIBIT: B-2

APPENDIX C
SUPPORTING DOCUMENTS

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING			WATER LEVEL		Water Initially Encountered	FIELD TESTS	(HP) Hand Penetrometer	
	Auger	Split Spoon			Water Level After a Specified Period of Time		(T) Torvane	
					Water Level After a Specified Period of Time		(b/f) Standard Penetration Test (blows per foot)	
	Shelby Tube	Macro Core		Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.			(PID) Photo-Ionization Detector	
							(OVA) Organic Vapor Analyzer	
Ring Sampler	Rock Core							
								
Grab Sample	No Recovery							

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS	RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
	Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength, Qu, psf	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
			Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

<u>Major Component of Sample</u>	<u>Particle Size</u>
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

<u>Term</u>	<u>Plasticity Index</u>
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification			
				Group Symbol	Group Name ^B		
Coarse Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F		
			$Cu < 4$ and/or $1 > Cc > 3$ ^E	GP	Poorly graded gravel ^F		
		Gravels with Fines: More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F,G,H}		
			Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}		
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E	SW	Well-graded sand ^I		
			$Cu < 6$ and/or $1 > Cc > 3$ ^E	SP	Poorly graded sand ^I		
		Sands with Fines: More than 12% fines ^D	Fines classify as ML or MH	SM	Silty sand ^{G,H,I}		
			Fines classify as CL or CH	SC	Clayey sand ^{G,H,I}		
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line ^J	CL	Lean clay ^{K,L,M}		
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K,L,M}		
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay ^{K,L,M,N}	
			Liquid limit - not dried		OH	Organic silt ^{K,L,M,O}	
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K,L,M}		
			PI plots below "A" line	MH	Elastic Silt ^{K,L,M}		
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K,L,M,P}	
			Liquid limit - not dried		OH	Organic silt ^{K,L,M,Q}	
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat		

^A Based on the material passing the 3-inch (75-mm) sieve

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$E \quad Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

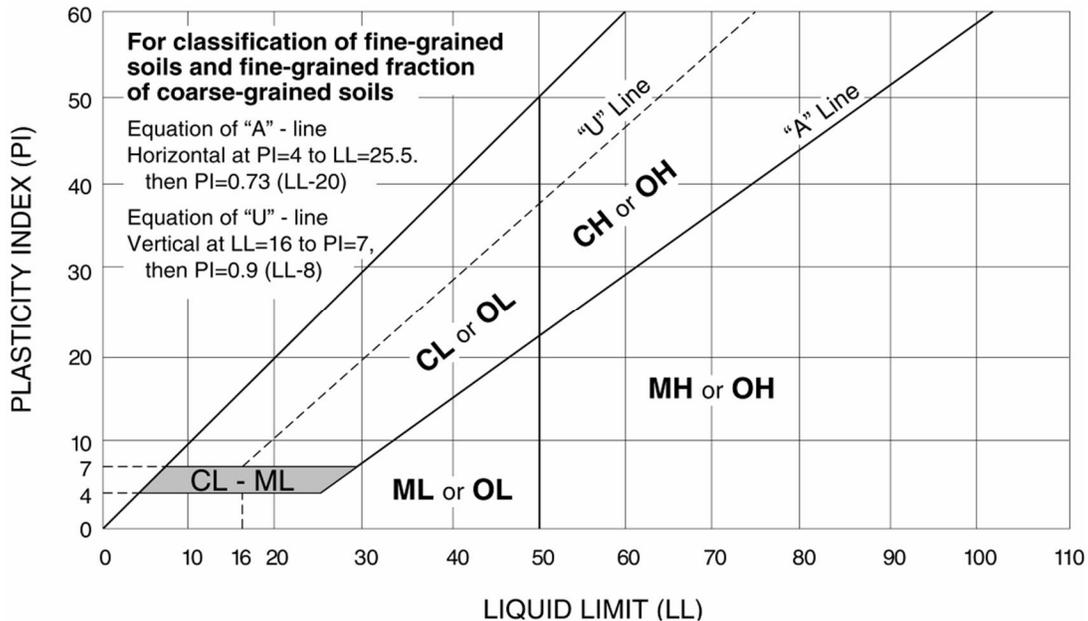
^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



SHEET INDEX

- 1 EXISTING CONDITIONS/DEMOLITION PLAN
- 2 SITE, UTILITY & LANDSCAPING PLAN
- 2 GRADING & DRAINAGE PLAN
- 4 SOIL EROSION & SEDIMENT CONTROL PLAN
- 5 DRAINAGE & SESC DETAILS
- 6 SITE & UTILITY DETAILS

NOTES:

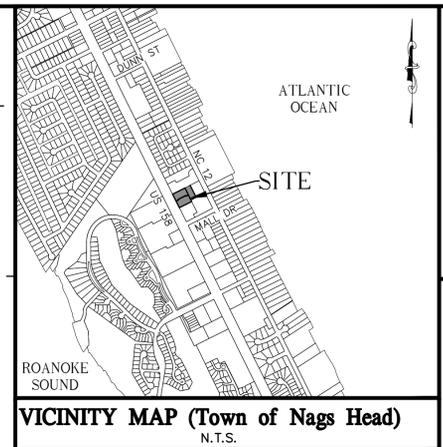
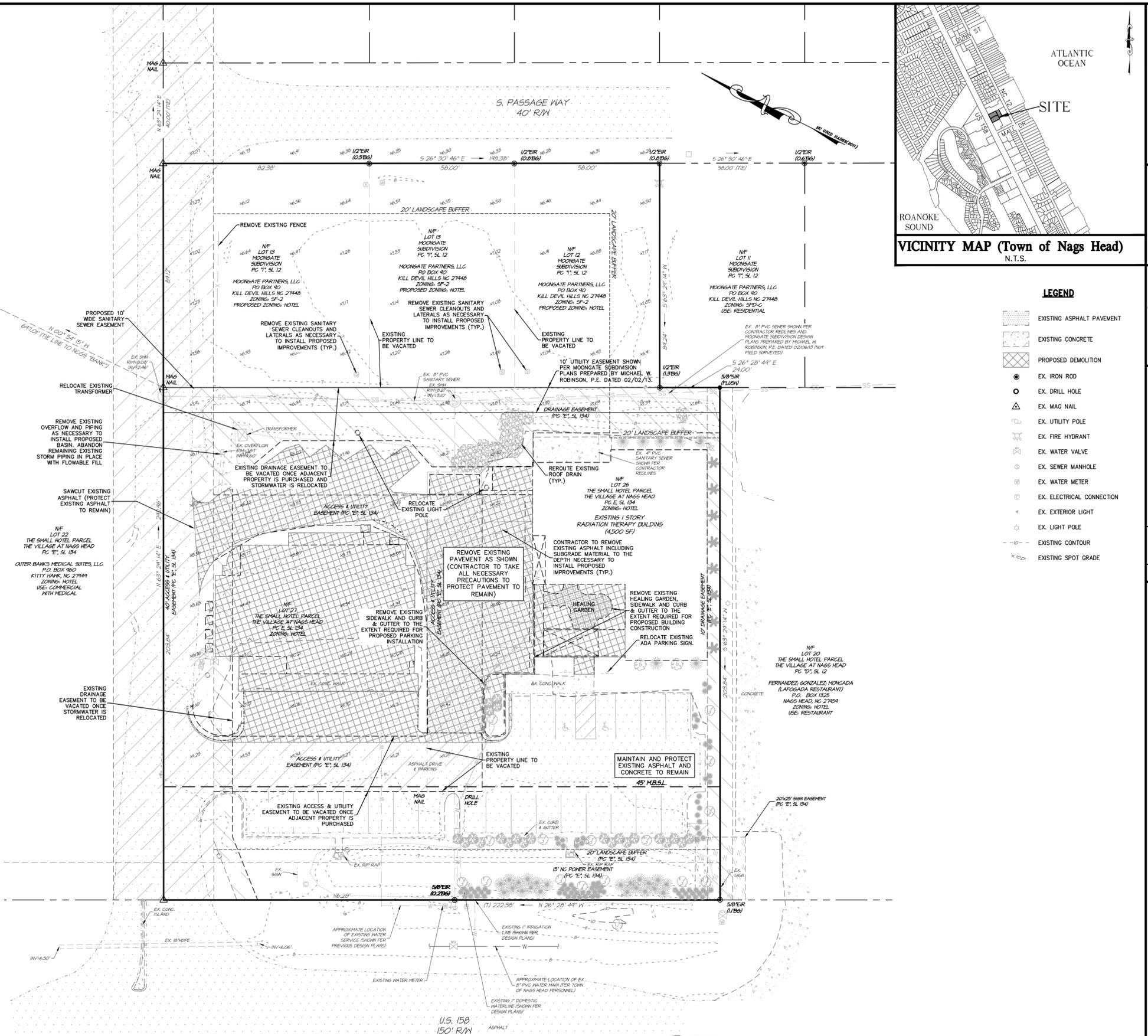
1. PROPERTY OWNERS: MOONGATE PARTNERS, LLC.
PO BOX 129
NAGS HEAD, NC 27859

DOUBLE L CORPORATION
PO BOX 2606
ELIZABETH CITY, NC 27806

UNIVERSITY HEALTH SYSTEMS OF EASTERN CAROLINA
C/O TIM McDONNELL
P.O. BOX 6028
GREENVILLE, NC 27835
2. PROPERTY IDENTIFICATION: 4928, 4926 & 4922 S. PASSAGE WAY
4927 & 4923 SOUTH CROATAN HIGHWAY
PIN# 0801-1313-8885; 0801-1313-8960; 0801-1313-8936
0801-13-13-7759; 0801-1313-7809
PID# 02839113; 02839114; 02839115
027839062; 027839063;
3. PARCEL AREA: 63,021 sq.ft. / 1.45 acres
(AREAS BY COORDINATE METHOD)
4. ZONING CLASSIFICATION: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) (HOTEL DISTRICT OVERLAY)
5. PROPOSED REZONING FOR 4928, 4926 & 4922 S. PASSAGE WAY: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) FROM SF2 (SINGLE FAMILY) ZONING
6. REFERENCES: D.B. 1939, PG. 480; P.C. E, SL. 134
7. FIELD SURVEY BY QUIBLE & ASSOCIATE, P.C. DATES: 06-22-2017, 09-10-2019, & 10-21-2019.
(HORIZONTAL GROUND DISTANCES)
8. VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2012)
9. PROPERTY IS LOCATED IN F.I.R.M. ZONES "AE" (EL. 9')
PANEL 37300801001, DATED 09/20/06
FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.
10. SETBACKS SHOWN ARE PER TOWN OF NAGS HEAD AND DO NOT REFLECT ANY RESTRICTIVE COVENANTS THAT MAY EXIST.
11. PROJECT SCOPE: PERMITTING AND CONSTRUCTION OF A ±10,400 SQ.FT. ADDITION TO THE EXISTING CANCER CENTER WITH ASSOCIATED PARKING AND APPURTENANCES.
12. WASTEWATER: 22 EMPLOYEES @ 250 GPD/EMPLOYEE = 5,500 GPD (WASTEWATER IS PROPOSED TO BE CONVEYED TO CWS WWTP)
13. WATER SUPPLY PER TOWN OF NAGS HEAD. WATER CONNECTION MUST BE MADE IN ACCORDANCE WITH TOWN OF NAGS HEAD SPECIFICATIONS AND SHALL BE PERFORMED BY A LICENSED WATER UTILITY CONTRACTOR. NOTIFY TOWN PRIOR TO INSTALLATION.
14. ALL UTILITIES TO BE PLACED UNDERGROUND UNLESS OTHERWISE NOTED
15. LANDSCAPING AND BUFFERYARDS TO BE IN ACCORDANCE WITH ARTICLE 10 OF THE TOWN OF NAGS HEAD UNIFORM DEVELOPMENT ORDINANCES.
16. SITE WILL BE LIGHTED IN ACCORDANCE WITH ARTICLE 10, PART IV "OUTDOOR LIGHTING" OF THE TOWN OF NAGS HEAD CODE OF ORDINANCES.
17. PRIOR TO LAND DISTURBANCE, A TOWN APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS REQUIRED.
18. NO U.S.A.C.O.E. SECTION 404 JURISDICTIONAL WETLANDS EXIST ON SITE.
19. EXISTING VEGETATION TO BE PRESERVED WHERE POSSIBLE.
20. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.
21. ALL WORK WITHIN THE NC DOT RIGHT-OF-WAY REQUIRES AN APPROVED NC DOT RIGHT-OF-WAY ENCROACHMENT AGREEMENT.
22. A STATE HIGH DENSITY STORMWATER PERMIT IS REQUIRED IN ADVANCE OF ANY ONSITE DISTURBANCE.
23. THIS PLAN SET TO BE UTILIZED FOR THE INSTALLATION OF SITE LAYOUT IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, GRADING & DRAINAGE, INSTALLATION OF SEDIMENT CONTROL MEASURES, WATER SYSTEM AND WASTEWATER CONNECTION. FOR BUILDING DESIGN AND ASSOCIATED PLUMBING, SEE APPROPRIATE SEPARATE PLANS.

DEMOLITION NOTES:

1. CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND SERVICES - TO INCLUDE BUT NOT LIMITED TO ELECTRIC, CABLE, TELEPHONE, GAS, SANITARY SEWER AND WATER - AND SHALL COORDINATE PROPER PROTECTION AND/OR RELOCATE WITH APPROPRIATE OWNER/UTILITY COMPANY.
2. CONTRACTOR SHALL WALK THE SITE AND BE FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND BE UNCLASSIFIED EXCAVATION.
3. DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE CURBS AND GUTTERS, BITUMINOUS CONCRETE PAVEMENTS AND ALL MATERIALS OR VEGETATION CLEARED AND STRIPPED TO THE EXTENT NECESSARY FOR THE INSTALLATION OF NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING. COORDINATE WITH APPROPRIATE DRAWINGS.
4. THE CONTRACTOR SHALL PROTECT ALL PROPERTY AND STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO THE PROPERTY DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO THE OWNER.
5. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM PROJECT AREA.
6. THE CONTRACTOR SHALL PRODUCE A PHOTOGRAPHIC RECORD OF DEVELOPMENT COMMENCING WITH A RECORD OF THE SITE AS IT APPEARS BEFORE DEMOLITION IS BEGUN. AFTERWARDS A PHOTOGRAPHIC RECORD SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS.
7. EXISTING PAVEMENT, CURB AND GUTTER, LIGHTS, FENCES, TREE/VEGETATION AND UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED, AND UNDISTURBED DURING DEMOLITION. CONTRACTOR SHALL COORDINATE THE REMOVAL OF BITUMINOUS CONCRETE PAVEMENTS AND CURB AND GUTTER WITH THE SITE PLAN.
8. SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS TO BE DEMOLISHED SHALL BE PROVIDED.
9. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS AS WELL AS OSHA REGULATIONS.
10. CONTRACTOR'S ACTIVITIES SHALL NOT IMPEDE USAGE OR INGRESS/EGRESS TO ADJACENT PROPERTIES. COORDINATE WITH OWNER MAINTENANCE OF TRAFFIC/PEDESTRIAN CIRCULATION DURING CONSTRUCTION.
11. MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES DURING DEMOLITION.
12. A DEMOLITION PERMIT MUST BE OBTAINED FROM THE TOWN OF NAGS HEAD PRIOR TO DEMOLITION WORK.



NC License# C-0208
SINCE 1959

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CERTIFICATION

REVISIONS

NO.	DATE	PER. TOWN COMMENTS
1	12/05/19	

EXISTING CONDITIONS/DEMOLITION PLAN

**CANCER TREATMENT CENTER
OUTER BANKS HOSPITAL**

NAGS HEAD TOWNSHIP DARE COUNTY NORTH CAROLINA

COMMISSION NO. P17012.1

DESIGNED BY CMS

DRAWN BY JMH/CMS

CHECKED BY MWS

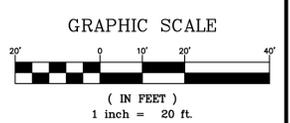
ISSUE DATE 11/12/19

SHEET NO. 1

OF 6 SHEETS



NOTE:
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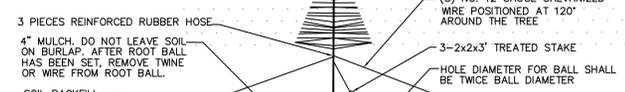
NOTES:

- PROPERTY OWNERS: MOONGATE PARTNERS, LLC, PO BOX 129, NAGS HEAD, NC 27959; DOUBLE L CORPORATION, PO BOX 2606, ELIZABETH CITY, NC 27906; UNIVERSITY HEALTH SYSTEMS OF EASTERN CAROLINA, C/O TIM McDONNELL, P.O. BOX 6028, GREENVILLE, NC 27835.
- PROPERTY IDENTIFICATION: 4928, 4926 & 4922 S. PASSAGE WAY; 4927 & 4923 SOUTH CROATAN HIGHWAY; PIN# 0801-1313-8895; 0801-1313-8960; 0801-1313-7759; 0801-1313-7809; PID# 02839113; 02839114; 02839115; 027839062; 027839063.
- PARCEL AREA: 63,021 sq. ft. / 1.45 acres (AREAS BY COORDINATE METHOD)
- ZONING CLASSIFICATION: SPD-C (SPECIAL PLANNED DEVELOPMENT—COMMUNITY DISTRICT) (HOTEL DISTRICT OVERLAY)
- PROPOSED REZONING FOR 4928, 4926 & 4922 S. PASSAGE WAY: SPD-C (SPECIAL PLANNED DEVELOPMENT—COMMUNITY DISTRICT) FROM SF2 (SINGLE FAMILY) ZONING
- REFERENCES: D.B. 1939, PG. 480; P.C. E, SL 134
- FIELD SURVEY BY QUILBE & ASSOCIATE, P.C. DATES: 06-22-2017, 09-10-2019, & 10-21-2019. (HORIZONTAL GROUND DISTANCES)
- VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2012)
- PROPERTY IS LOCATED IN F.I.R.M. ZONES "AE" (EL. 9') PANEL 3730080100J, DATED 09/20/06. FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.
- SETBACKS SHOWN ARE PER TOWN OF NAGS HEAD AND DO NOT REFLECT ANY RESTRICTIVE COVENANTS THAT MAY EXIST.
- PROJECT SCOPE: PERMITTING AND CONSTRUCTION OF A ±10,400 SQ.FT. ADDITION TO THE EXISTING CANCER CENTER WITH ASSOCIATED PARKING AND APPURTENANCES.
- EXISTING BUILDING COVERAGE: 9,552 SQ.FT.; VEHICULAR USE AREAS COVERAGE: 20,017 SQ.FT.; EXISTING CONC. WALKS & DUMPSTER PAD: 1,072 SQ.FT.; TOTAL EXISTING LOT COVERAGE: 30,641 SQ.FT.; EXISTING COVERAGE REMOVED: 13,817.5 SQ.FT.; TOTAL EXISTING LOT COVERAGE TO REMAIN: 16,823.5 SQ.FT.; PROPOSED COVERAGE: BUILDING (INCLUDES OVERHANG): 7,243 SQ.FT. (19%) [25% MAX]; PERMEABLE PAVEMENT (4,514 SQ.FT. * 0.87): 3,924.4 SQ.FT.; CONCRETE & ASPHALT: 3,044.5 SQ.FT.; TOTAL PROPOSED COVERAGE: 18,311.9 SQ.FT.; TOTAL COVERAGE (EXISTING & PROPOSED): 35,135 SQ.FT. (55.7%) [30% MIN. LANDSCAPING]; TOTAL PROPOSED VEHICULAR USE AREA COVERAGE: 19,819 SQ.FT. (31%) [45% MAX]; *NO REDUCTION FOR PERMEABLE PAVEMENTS HAS BEEN TAKEN FROM THE VEHICULAR USE AREA COVERAGE
- PARKING: RADIATION THERAPY CENTER MEDICAL FACILITY: PARKING REQUIRED = 1 SPACE PER 300 SQ.FT. * 4,500 SQ.FT. = 15 SPACES; 1 SPACE PER EMPLOYEE * 7 EMPLOYEES = 7 SPACES; RADIATION THERAPY PARKING REQUIRED = 22 SPACES; CANCER CENTER EXPANSION: PARKING REQUIRED = 1 SPACE PER 300 SQ.FT. * 10,400 SQ.FT. = 35 SPACES; 1 SPACE PER EMPLOYEE * 15 EMPLOYEES = 15 SPACES; EXPANSION PARKING REQUIRED = 50 SPACES; *CONDITIONAL USE PERMIT FOR REDUCED PARKING DUE TO CAPACITY/TYPE OF USE AND ACCESS TO PUBLIC TRANSIT. TOTAL PARKING REQUIRED = 72 SPACES; TOTAL PARKING PROVIDED = 57 SPACES; SITE SUBJECT TO INDEPENDENT STUDY TO EVALUATE PARKING 6 MONTHS AFTER OBTAINING CERTIFICATE OF OCCUPANCY. SITE SUBJECT TO PROVIDING 11 ADDITIONAL SPACES IF PARKING IS FOUND TO BE INSUFFICIENT DURING INDEPENDENT STUDY.
- WASTEWATER: 22 EMPLOYEES @ 250 GPD/EMPLOYEE = 5,500 GPD (WASTEWATER IS PROPOSED TO BE CONVEYED TO CWS WWTP)
- WATER SUPPLY PER TOWN OF NAGS HEAD. WATER CONNECTION MUST BE MADE IN ACCORDANCE WITH TOWN OF NAGS HEAD SPECIFICATIONS AND SHALL BE PERFORMED BY A LICENSED WATER UTILITY CONTRACTOR. NOTIFY TOWN PRIOR TO INSTALLATION.
- ALL UTILITIES TO BE PLACED UNDERGROUND UNLESS OTHERWISE NOTED
- LANDSCAPING AND BUFFERYARDS TO BE IN ACCORDANCE WITH ARTICLE 10 OF THE TOWN OF NAGS HEAD UNIFORM DEVELOPMENT ORDINANCES.
- SITE WILL BE LIGHTED IN ACCORDANCE WITH ARTICLE 10, PART IV "OUTDOOR LIGHTING" OF THE TOWN OF NAGS HEAD CODE OF ORDINANCES.
- PRIOR TO LAND DISTURBANCE, A TOWN APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS REQUIRED.
- EXISTING VEGETATION TO BE PRESERVED WHERE POSSIBLE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.
- ALL WORK WITHIN THE NC DOT RIGHT-OF-WAY REQUIRES AN APPROVED NC DOT RIGHT-OF-WAY ENCROACHMENT AGREEMENT.
- A STATE HIGH DENSITY STORMWATER PERMIT IS REQUIRED IN ADVANCE OF ANY ONSITE DISTURBANCE.
- THE ENTIRE SITE WILL BE IN FULL COMPLIANCE WITH ALL APPLICABLE NFPA REGULATIONS PERTAINING TO FIRE PROTECTION INCLUDING BUT NOT LIMITED TO NFPA 30 AS WELL AS VOLUME V OF THE NC STATE BUILDING CODE.
- ALL BUILDING SIGNAGE SHALL BE IN ACCORDANCE WITH ARTICLE VIII SECTION 48-284 OF THE TOWN OF NAGS HEAD CODE OF ORDINANCES.
- THIS PLAN SHALL COMPLY WITH VOLUME 1C OF THE NC BUILDING CODE.
- THE PROPOSED BUILDING SHALL COMPLY WITH CHAPTER 10 OF THE TOWN OF NAGS HEAD CODE OF ORDINANCES.
- BUILDING CONSTRUCTION TO CONFORM TO 2018 NC FIRE PREVENTION CODE OR LATEST EDITION.
- THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.
- THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
- THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
- ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
- PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.

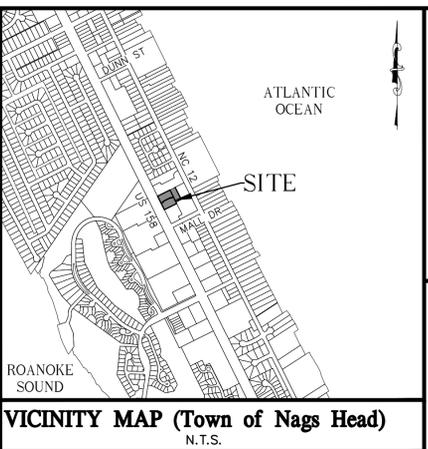
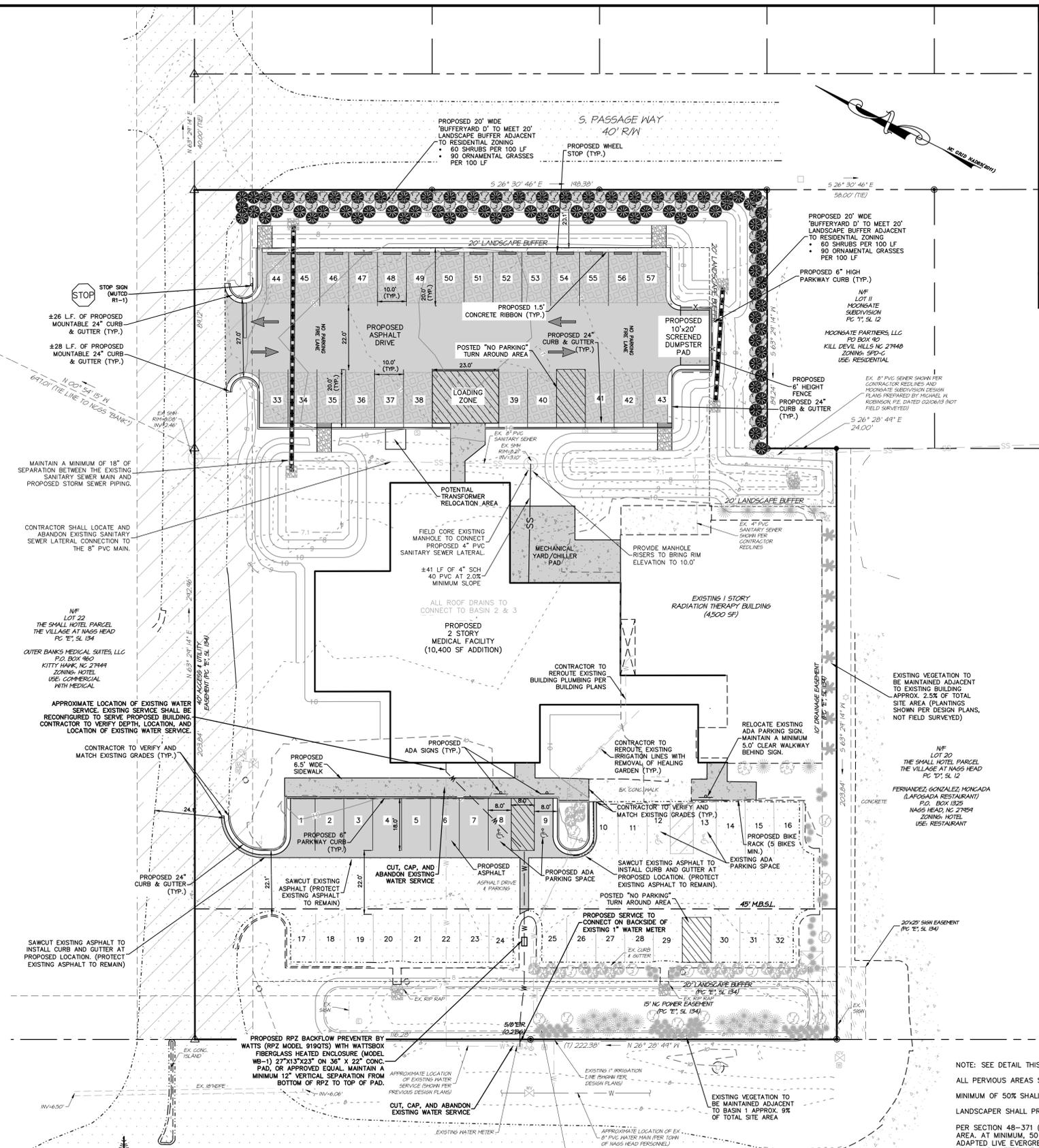
LANDSCAPING NOTES

SYMBOL	QUANTITY	COMMON NAME	HEIGHT	SPREAD	MIN. SIZE @ PLANTING
	168	INDIAN HAWTHORN	4' - 5' HT.	3' O.C.	1.5 FT HT.
	259	PINK MUHLY GRASS	3' - 5' HT.	3' O.C.	1.5 FT HT.

* COORDINATE INSTALLATION WITH OWNER. ORNAMENTAL SHRUB/GRASS SPECIES MAY BE SUBSTITUTED AS APPROVED BY THE TOWN OF NAGS HEAD

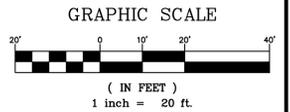


TREE PLANTING DETAIL
N.T.S.



- LEGEND**
- EXISTING ASPHALT PAVEMENT
 - PROPOSED RIP RAP
 - PROPOSED CONCRETE
 - PROPOSED ASPHALT
 - PROPOSED PERMEABLE PAVEMENT
 - EX. IRON ROD
 - EX. DRILL HOLE
 - EX. MAG NAIL
 - EX. UTILITY POLE
 - EX. FIRE HYDRANT
 - EX. WATER VALVE
 - EX. SEWER MANHOLE
 - EX. WATER METER
 - EX. ELECTRICAL CONNECTION
 - EX. EXTERIOR LIGHT
 - EX. LIGHT POLE
 - EX. TREES/SHRUBS
 - PROPOSED 6" CURB (NO GUTTER)
 - PROPOSED CURB AND GUTTER
 - PROPOSED 1.5" CONCRETE RIBBON
 - PROPOSED SPILL CURB AND GUTTER
 - PROPOSED STORM PIPE
 - PROPOSED WATERLINE
 - PROPOSED SANITARY SEWER
 - PROPOSED TREES/SHRUBS

NOTE: SEE DETAIL THIS SHEET FOR PLANTING DETAILS.
ALL PERVIOUS AREAS SHALL BE LANDSCAPED AND RECEIVE SOD WHERE PRACTICAL.
MINIMUM OF 50% SHALL BE LOCALLY ADAPTIVE NATIVE EVERGREEN SPECIES.
LANDSCAPER SHALL PROVIDE IRRIGATION THROUGHOUT LANDSCAPE AREAS.
PER SECTION 48-371 (G) (2) THE PLANTING OF A MINIMUM OF 15 PERCENT OF THE LOT'S TOTAL AREA. AT MINIMUM, 50 PERCENT OF THE REQUIRED LANDSCAPING SHALL CONSIST OF LOCALLY ADAPTED LIVE EVERGREEN TREE SPECIES THAT ARE A MINIMUM HEIGHT OF THREE FEET AND ONE INCH IN DIAMETER MEASURED AT ONE-HALF FOOT ABOVE GRADE WHEN PLANTED. THE REMAINDER OF THE REQUIRED PLANTINGS MAY BE LIVE FORBS AND SHRUBS MEASURING AT LEAST ONE AND ONE-HALF FEET IN HEIGHT WHEN PLANTED. A MINIMUM OF ONE-HALF OF THIS VEGETATION MUST BE LOCATED IN THE FRONT OR SIDE YARDS OF THE PROPOSED DEVELOPMENT.
LANDSCAPING AREA PROVIDED: 26,396 SQ.FT. (41.8% OF LOT AREA)



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REVISIONS

NO.	DATE	PER TOWN COMMENTS
1	12/05/19	

SITE, UTILITY, & LANDSCAPING PLAN
CANCER TREATMENT CENTER
OUTER BANKS HOSPITAL
NORTH CAROLINA
DARE COUNTY
NAGS HEAD TOWNSHIP

COMMISSION NO. P17012.1
DESIGNED BY CMS
DRAWN BY JMH/CMS
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ISSUE DATE 11/12/19
SHEET NO. 2 OF 6 SHEETS

NOTES:

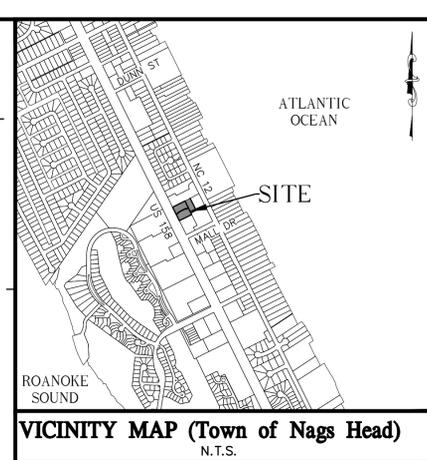
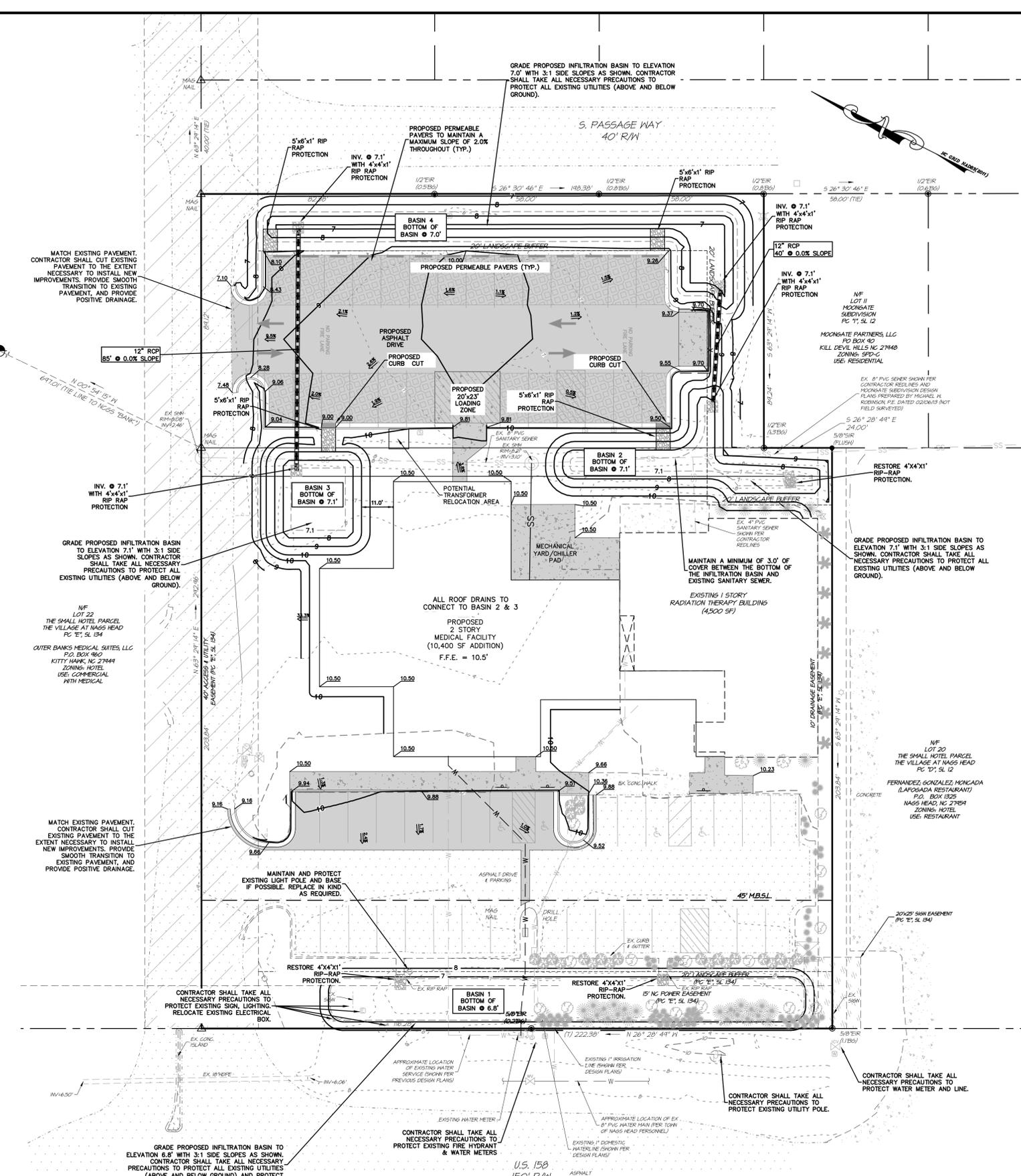
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UNIVERSITY HEALTH SYSTEMS OF EASTERN CAROLINA C/O TM MCDONNELL PO BOX 6028 GREENVILLE, NC 27835
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- REFERENCES: D.B. 1939, PG. 480; P.C. E, SL. 134
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- VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2012)
- PROPERTY IS LOCATED IN F.I.R.M. ZONES "A" (EL. 9') PANEL 3730080100J, DATED 09/20/06. FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.
- PROJECT SCOPE: PERMITTING AND CONSTRUCTION OF A ±10,400 SQ.FT. ADDITION TO THE EXISTING CANCER CENTER WITH ASSOCIATED PARKING AND APPURTENANCES.
- SETBACKS SHOWN ARE PER TOWN OF NAGS HEAD AND DO NOT REFLECT ANY RESTRICTIVE COVENANTS THAT MAY EXIST.
- HANDICAP PARKING SPACES SHALL NOT EXCEED 2% GRADE.
- AREAS OF FILL SHALL BE EXCAVATED TO COMPACTED SUBGRADE AND BACKFILLED IN 6" LIFTS.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, APPLICABLE TOWN OF NAGS HEAD CODES AND ORDINANCES, AND NCDQR DIVISION OF ENERGY, MINERAL AND LAND RESOURCES REGULATIONS.
- THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.
- THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
- THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
- ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
- PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
- ALL PORTIONS OF ROOF DRAIN COLLECTION SYSTEM WITH LESS THAN 36" OF COVER IN TRAFFIC RATED CONDITIONS SHALL BE DUCTILE IRON PIPE.
- TEMPORARY CONSTRUCTION EASEMENT MUST BE OBTAINED PRIOR TO ANY WORK ON ADJACENT PROPERTIES.
- A STATE HIGH DENSITY STORMWATER PERMIT IS REQUIRED IN ADVANCE OF ANY ONSITE DISTURBANCE.

MATCH EXISTING PAVEMENT. CONTRACTOR SHALL CUT EXISTING PAVEMENT TO THE EXTENT NECESSARY TO INSTALL NEW IMPROVEMENTS. PROVIDE SMOOTH TRANSITION TO EXISTING PAVEMENT, AND PROVIDE POSITIVE DRAINAGE.

GRADE PROPOSED INFILTRATION BASIN TO ELEVATION 7.1' WITH 3:1 SIDE SLOPES AS SHOWN. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND).

MATCH EXISTING PAVEMENT. CONTRACTOR SHALL CUT EXISTING PAVEMENT TO THE EXTENT NECESSARY TO INSTALL NEW IMPROVEMENTS. PROVIDE SMOOTH TRANSITION TO EXISTING PAVEMENT, AND PROVIDE POSITIVE DRAINAGE.

GRADE PROPOSED INFILTRATION BASIN TO ELEVATION 6.8' WITH 3:1 SIDE SLOPES AS SHOWN. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND) AND PROTECT EXISTING PAVEMENT AND CURB & GUTTER.



LEGEND

●	EX. IRON ROD	▨	EXISTING ASPHALT PAVEMENT
○	EX. DRILL HOLE	▨	EXISTING CONCRETE
△	EX. MAG NAIL	▨	PROPOSED CONCRETE
□	EX. UTILITY POLE	▨	PROPOSED ASPHALT
⊕	EX. FIRE HYDRANT	▨	PROPOSED PERMEABLE PAVEMENT
⊖	EX. WATER VALVE	▨	PROPOSED RIP RAP
⊗	EX. SEWER MANHOLE	▨	EXISTING CONTOUR
⊙	EX. WATER METER	▨	EXISTING SPOT GRADE
⊕	EX. ELECTRICAL CONNECTION	▨	PROPOSED SPOT GRADE (TOP OF ASPHALT/FLOW LINE UNLESS OTHERWISE NOTED)
⊖	EX. EXTERIOR LIGHT	▨	PROPOSED TOP OF CONCRETE ELEV.
⊙	EX. LIGHT POLE	▨	PROPOSED FLOW DIRECTION AND SLOPE

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REVISIONS

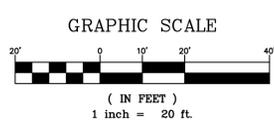
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GRADING & DRAINAGE PLAN
CANCER TREATMENT CENTER
OUTER BANKS HOSPITAL
 NORTH CAROLINA
 DARE COUNTY
 NAGS HEAD TOWNSHIP

COMMISSION NO. P17012.1
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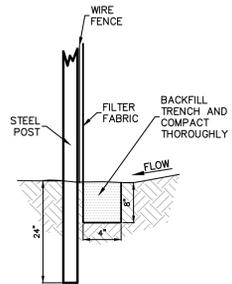


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SOIL EROSION & SEDIMENTATION CONTROL PLAN NOTES:

- AREA TO BE DISTURBED: ±44,827 SQ.FT. (±1.02 ACRES)
- PROVIDE A GROUND COVER STABILIZATION (TEMPORARY OR PERMANENT) ON ALL DENUDED DOWNSTREAM SURFACES FOLLOWING THE COMPLETION OF LAND DISTURBING ACTIVITIES PER THE CRITERIA LISTED BELOW:
 - PERIMETER DIKES, BERMS, SWALES, DITCHES AND SLOPES SHALL BE STABILIZED IN 7 DAYS.
 - HIGH QUALITY WATER (HOW) ZONES SHALL BE STABILIZED IN 7 DAYS.
 - DOWNSTREAM SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED IN 7 DAYS. IF SLOPES ARE 10' OR LESS AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
 - DOWNSTREAM SLOPES 3:1 OR FLATTER AND LESS THAN 50' IN LENGTH SHALL BE STABILIZED IN 14 DAYS. SLOPES 3:1 OR FLATTER EXCEEDING 50' IN LENGTH SHALL BE STABILIZED IN 7 DAYS.
 - ALL OTHER DOWNSTREAM AREAS WITH SLOPES 4:1 OR FLATTER SHALL BE STABILIZED WITHIN 14 DAYS.
 - GROUND COVER SHALL BE PROVIDED ON CUT AND FOR FILL SLOPES WITHIN 21 CALENDAR DAYS AFTER COMPLETION OF ANY PHASE OF GRADING. GROUND COVER OVER OTHER AREAS SHALL BE PROVIDED WITHIN SHORTER OF 15 WORKING OR 90 CALENDAR DAYS (90 DAYS IN HOW ZONES) OF COMPLETION OF CONSTRUCTION OF DEVELOPMENT.
- IF LAND DISTURBING ACTIVITIES OCCUR OUTSIDE THE PERMANENT VEGETATION SEEDING DATES (APR. 1 - SEP.30) THEN TEMPORARY VEGETATION SEEDING SPECIFICATIONS SHALL BE FOLLOWED FOR PLANTING UNTIL THE NEXT APPROPRIATE PERMANENT SEEDING PERIOD, AT WHICH TIME PERMANENT VEGETATION SHALL BE ESTABLISHED ACCORDING TO PERMANENT VEGETATION SEEDING SPECIFICATIONS (SEE PERM. & TEMP. SEEDING SPECIFICATIONS).
- IF EXCESSIVE WIND EROSION OR STORMWATER RUNOFF EROSION DEVELOPS DURING TIME OF CONSTRUCTION ANY LOCATION ON THE PROJECT SITE, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IMMEDIATELY AS DIRECTED BY THE ENGINEER TO ADDRESS THE PROBLEM AREA AND PREVENT DAMAGE TO ADJACENT PROPERTIES.
- SOIL EROSION AND SEDIMENTATION CONTROLS TO BE INSPECTED, MAINTAINED AND REPAIRED AS NECESSARY UNTIL PERMANENT CONTROLS ARE ESTABLISHED.
 - A RAIN GAUGE MUST BE KEPT ON SITE.
 - DEDICATED DEMOLITION AND OTHER WASTE AREAS AND EARTHEN MATERIAL STOCKPILES MUST BE LOCATED AT LEAST 50 FEET FROM DRAINS OR STREAMS UNLESS NO ALTERNATIVE IS FEASIBLE.
 - ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN A HALF INCH (DURING A 24 HOUR PERIOD). IMMEDIATE CORRECTIVE ACTION MUST BE TAKEN FOR ANY DEVICE FAILURE.
 - INSPECT ALL OUTLETS WHERE RUNOFF LEAVES SITE AND EVALUATE EFFECT ON NEARBY STREAMS. TAKE CORRECTIVE ACTION IF NECESSARY.
 - MAINTAIN RECORDS OF INSPECTIONS AND CORRECTIVE ACTIONS.
 - EARTHWORK NOTE: OFFSITE BORROW MATERIAL SHALL COME FROM AN NCDNR LAND QUALITY SECTION APPROVED SITE. OFFSITE DISPOSAL OF EXCESS MATERIAL SHALL BE TO AN NCDNR LAND QUALITY SECTION APPROVED SITE.

NOTE: ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. CONTRACTOR SHALL INSPECT AND MAINTAIN ALL EROSION CONTROL DEVICES ON A WEEKLY BASIS AND AFTER EACH MAJOR STORM EVENT; FAILURE TO KEEP ORDER MAY RESULT IN ISSUANCE OF A STOP WORK ORDER.



SILT FENCE DETAIL
N.T.S.

PERMANENT VEGETATION

SEEDING DATES: APRIL 1 - AUGUST 31:	SEED MIXTURE	APPLICATION RATES/ACRE
	REBEL II FESCUE	130 LBS.
	COMMON BERMUDA 'SAHARA' (HULLED)	215 LBS.
SEEDING DATES: SEPT. 1 - MARCH 31:	SEED MIXTURE	APPLICATION RATES/ACRE
	REBEL II FESCUE	250 LBS.
	COMMON BERMUDA 'SAHARA' (UNHULLED)	215 LBS.

TEMPORARY VEGETATION

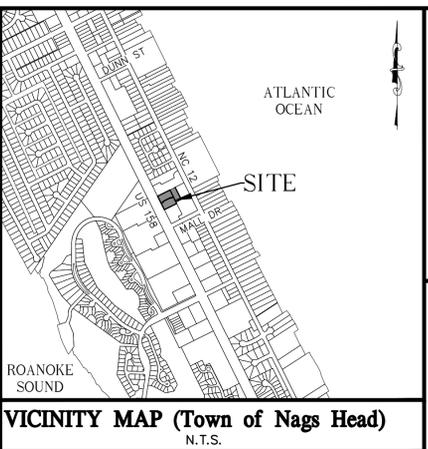
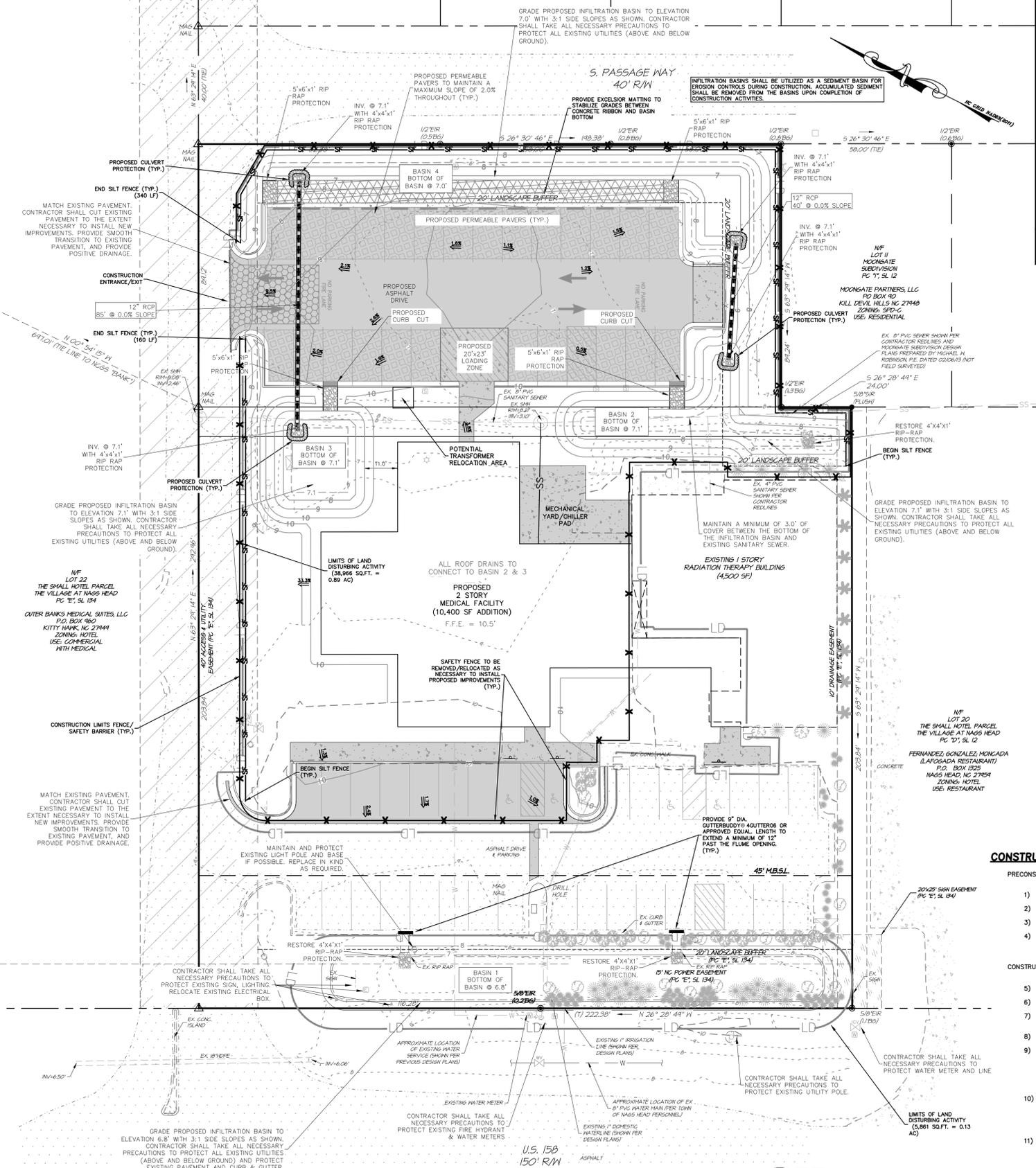
SEEDING DATES: AUG. 16 - APRIL 15:	SEED MIXTURE	APPLICATION RATES/ACRE
	RYE GRASS	120 LBS.
SEEDING DATES: APRIL 16 - AUG. 15:	SEED MIXTURE	APPLICATION RATES/ACRE
	GERMAN MILLET	40 LBS.

SOIL AMENDMENTS:
OBTAIN A SOIL TEST TO DETERMINE APPLICATION RATES AND FOLLOW RECOMMENDATIONS OF SOIL TESTS. WHEN A SOIL TEST IS NOT POSSIBLE, APPLY 3,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 STARTER FERTILIZER.

MULCHING:
APPLY 4,000 LB/ACRE GRASS STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL.

MAINTENANCE:
SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER. EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY AND, IF LEFT UNATTENDED, CAN ALLOW SERIOUS SOIL LOSS FROM AN OTHERWISE STABLE SURFACE. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED, THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLIES DEVELOP, THEY MUST BE FILLED IN, RE-SEED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD.

MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE. (COMPLETE VEGETATIVE COVER IS REQUIRED REGARDLESS OF COUNTY ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND FINAL PAYMENT WILL NOT BE AWARDED UNTIL COMPLETE ESTABLISHMENT OF VEGETATIVE COVER.)
WEAK OR DAMAGED SPOTS MUST BE RELIEM, FERTILIZED, MULCHED, AND RESEEDED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.



VICINITY MAP (Town of Nags Head)
N.T.S.

LEGEND

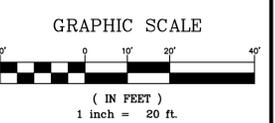
- EX. IRON ROD
- EX. DRILL HOLE
- △ EX. MAG NAIL
- EX. UTILITY POLE
- ⊕ EX. FIRE HYDRANT
- ⊕ EX. WATER VALVE
- ⊕ EX. SEWER MANHOLE
- ⊕ EX. WATER METER
- ⊕ EX. ELECTRICAL CONNECTION
- ⊕ EX. EXTERIOR LIGHT
- ⊕ EX. LIGHT POLE
- ▨ EXISTING ASPHALT PAVEMENT
- ▨ EXISTING CONCRETE
- ▨ PROPOSED CONCRETE
- ▨ PROPOSED ASPHALT
- ▨ PROPOSED EXCELSIOR MATTING
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED FLOW DIRECTION AND SLOPE
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED CULVERT INLET PROTECTION
- PROPOSED FENCE
- PROPOSED SILT FENCE
- PROPOSED CONSTRUCTION LIMITS
- SAFETY BARRIER

CONSTRUCTION SEQUENCE:

- PRECONSTRUCTION:**
- OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
 - FLAG AND/OR ROUGH STAKE WORK LIMITS.
 - FLAG EXISTING VEGETATION TO REMAIN/PROTECT.
 - HOLD PRECONSTRUCTION CONFERENCE (OWNER, CONTRACTOR, ENGINEER, AND APPROPRIATE GOVERNMENT OFFICIALS) AT LEAST ONE WEEK PRIOR TO START OF CONSTRUCTION ACTIVITIES.
- CONSTRUCTION:**
- INSTALL SILT FENCING AT LOCATIONS SHOWN ON PLAN
 - COMPLETE CLEARING, GRUBBING AND DEMOLITION PROCEDURES.
 - GRADE SITE ACCORDING TO PLAN AND BEGIN CONSTRUCTION OF PROPOSED IMPROVEMENTS, INCLUDING UTILITY RECONNECTIONS.
 - INSTALL CONTRIBUTING STORM CONVEYANCES AND ASSOCIATED EROSION CONTROLS.
 - ALL EROSION & SEDIMENTATION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER HEAVY RAINFALL EVENT. NEEDED REPAIRS AND MAINTENANCE WILL BE MADE IMMEDIATELY. FURTHERMORE, IF ANY WIND OR STORMWATER RUNOFF EROSION DEVELOPS DURING THE CONSTRUCTION OF THE PROJECT, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO ADDRESS THE PROBLEM AREA.
 - ONCE THE SITE CONSTRUCTION IS COMPLETE AND DENUDED SURFACES ARE FULLY STABILIZED; ALL STORMWATER CONVEYANCES, STRUCTURES AND PIPING SHALL BE CLEANED OF ALL SILT/DEBRIS WHICH MAY HAVE ACCUMULATED DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY DESIGN GRADES OF ALL STORMWATER CONVEYANCES AND RESTORE TO DESIGN SPECIFICATIONS AS NECESSARY.
 - UPON THE REMOVAL OF ACCUMULATED SEDIMENTS AND SITE STABILIZATION, ALL REMAINING EROSION CONTROLS MAY BE REMOVED FROM THE DEVELOPMENT. ALL DOWNSTREAM EROSION CONTROLS SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF ALL OTHER DEVELOPMENT CONSTRUCTION ACTIVITIES.



NOTE:
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.



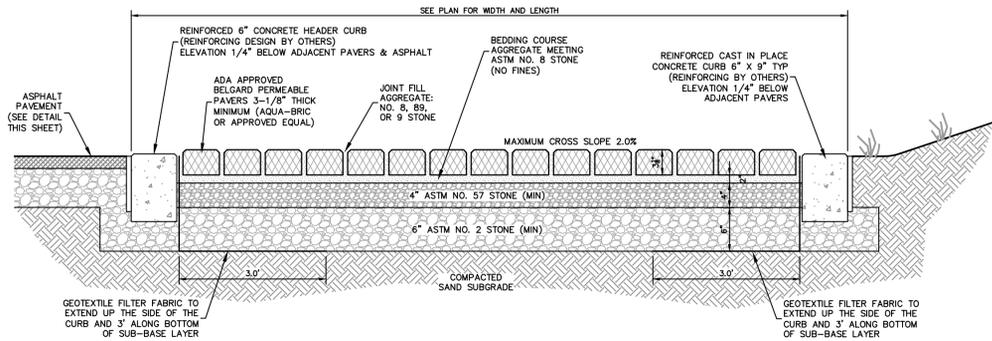
NC License# C-0208
SINCE 1959
Quible & Associates, P.C.
CONSTRUCTION SURVEYING
ENVIRONMENTAL SCIENCES SURVEYING
100 CHURCH STREET, SUITE B
NAGS HEAD, NC 27954
Phone: (252) 491-1427
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REVISIONS:

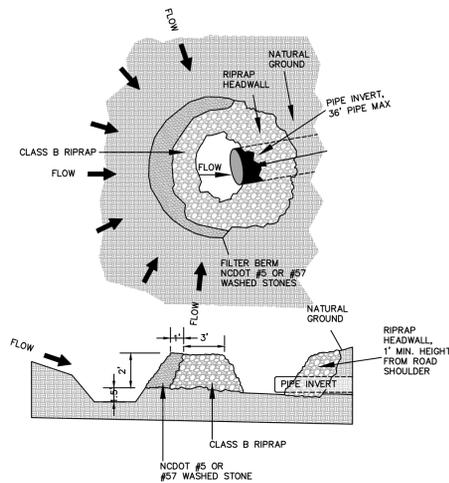
NO.	DATE	DESCRIPTION
1	12/02/19	PER TOWN COMMENTS

COMMISSION NO. P17012.1
DESIGNED BY CMS
DRAWN BY JMH/CMS
CHECKED BY MWS
ISSUE DATE 11/12/19
SHEET NO. 4 OF 6 SHEETS

SOIL EROSION & SEDIMENT CONTROL PLAN
CANCER TREATMENT CENTER
OUTER BANKS HOSPITAL
NORTH CAROLINA
DARE COUNTY
NAGS HEAD TOWNSHIP



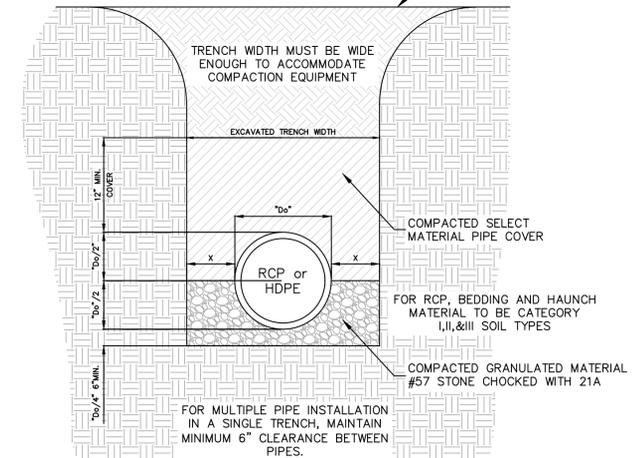
TYPICAL BELGARD® PERMEABLE PAVER INSTALLATION DETAIL
N.T.S.



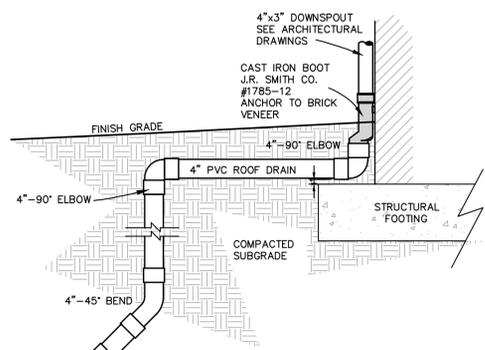
CULVERT INLET PROTECTION
N.T.S.

- HDPE NOTES:**
1. ALL PIPE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THESE SPECIFICATIONS OR AS MODIFIED BY THE OWNER.
 2. TRENCH BOX OR OTHER SHORING METHODS SHALL NOT DISTURB THE PIPE BEDDING AND BACKFILL MATERIAL AFTER THEIR COMPACTION.
 3. WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH INDICATED ON THE DRAWING OR AS DIRECTED BY THE OWNER AND REPLACE WITH BEDDING MATERIAL.
 4. BEDDING MATERIAL SHALL BE CRUSHED STONE OR WASHED #67 STONE, UNLESS OTHERWISE NOTE ON THE DRAWINGS OR REQUIRED BY THE OWNER. MINIMUM BEDDING THICKNESS SHALL BE 6-INCHES.
 5. BACKFILL MATERIAL SHALL CONFORM TO THE FOLLOWING:
 - A. INITIAL BACKFILL: AGGREGATE NO. 25, 26, 21A, OR 21 B; AS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE OWNER, SHALL BE INSTALLED AS INITIAL BACKFILL IN THE PIPE ZONE EXTENDING NOT LESS THAN 12-INCHES ABOVE THE CROWN OF PIPE. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM 02321, LATEST EDITION.
 - B. FINAL BACKFILL: FINAL BACKFILL MATERIALS SHALL BE THE SAME AS THE INITIAL BACKFILL UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR DIRECTED BY THE OWNER.
 6. MINIMUM COVER:
 - TRAFFIC APPLICATIONS - MINIMUM COVER SHALL BE 24", MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF FLEXIBLE PAVEMENT OR TO THE TOP OF RIGID PAVEMENT.
 - NON-TRAFFIC APPLICATIONS - MINIMUM COVER IN GRASS OR LANDSCAPE AREA IS 12-INCHES FROM THE TOP OF THE PIPE TO GROUND SURFACE.

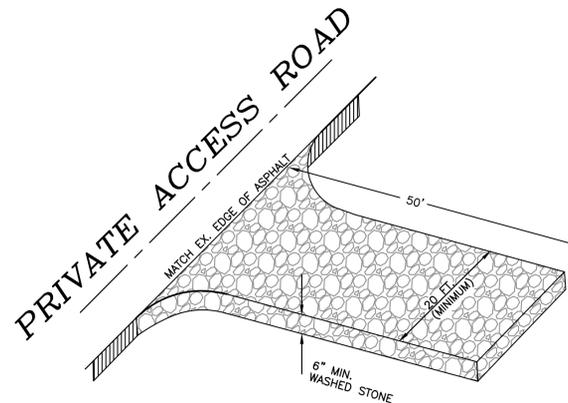
- NOTES:**
1. SELECT MATERIAL PIPE COVER SHALL BE 12" (MINIMUM) DEEP OVER TOP OF PIPE.
 2. SELECT MATERIAL BACKFILL SHALL BE CBR 20 COMPACTED TO 95% DENSITY. BACKFILL COMPACTED IN 12" LIFTS.
- TRENCH SHALL BE BACKFILLED WITH CLEAN SAND AND TOPPED WITH TOP SOIL. IF LOCATED IN PAVEMENT, PAVE PER PAVEMENT SPECIFICATIONS.



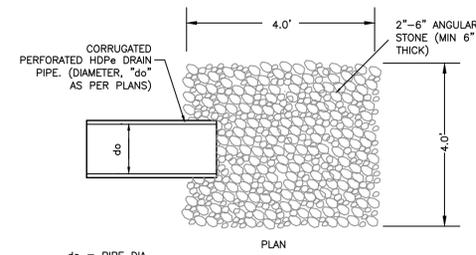
STORM PIPE TRENCH SECTION
N.T.S.



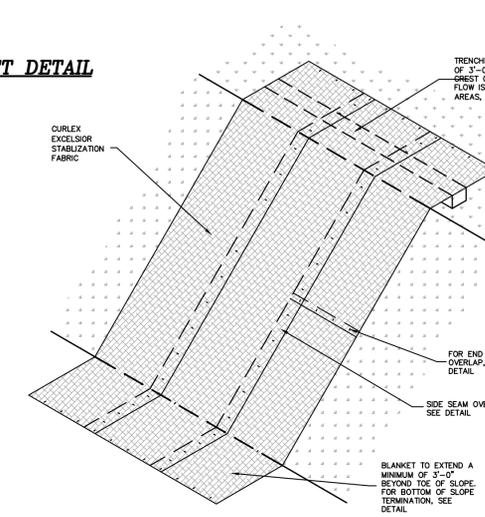
ELEVATION VIEW
CONNECT TO PVC ROOF DRAIN (SEE ARCHITECTURAL PLANS FOR CONTINUATION)



GRAVEL CONSTRUCTION ENTRANCE/EXIT DETAIL
N.T.S.



DRAIN PIPE OUTLET DETAIL
N.T.S.

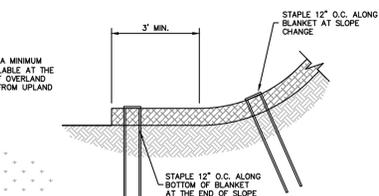


SLOPE DETAIL
N.T.S.

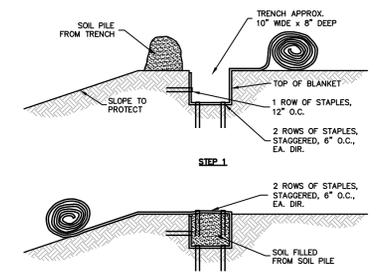
CURLEX® SLOPE APPLICATION DETAIL
AMERICAN EXCELSIOR COMPANY
ARLINGTON, TEXAS

END ROLL OVERLAP
N.T.S.

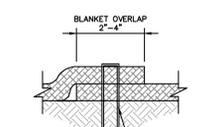
- NOTES:**
1. STAPLE PATTERNS ARE DEPENDENT ON SITE CONDITIONS. SEE CURLEX® STAPLE PATTERN GUIDE FOR DETAILS.



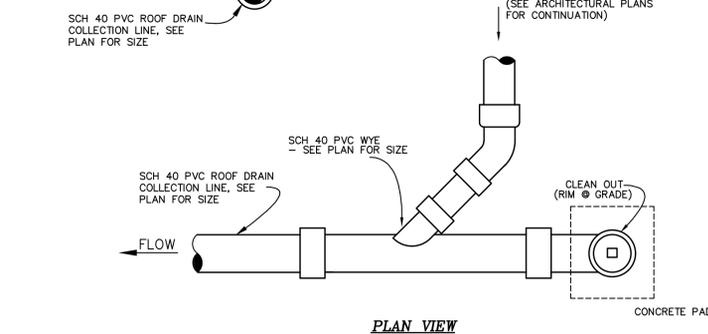
BOTTOM OF SLOPE TERMINATION
N.T.S.



SLOPE TRENCHING METHOD "B"
N.T.S.

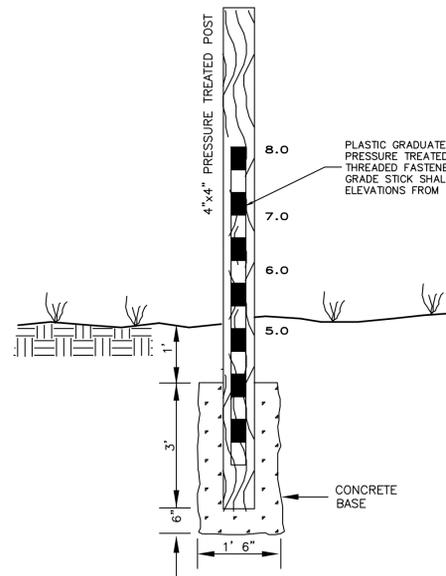


SIDE SEAM OVERLAP STAPLE DETAIL
N.T.S.

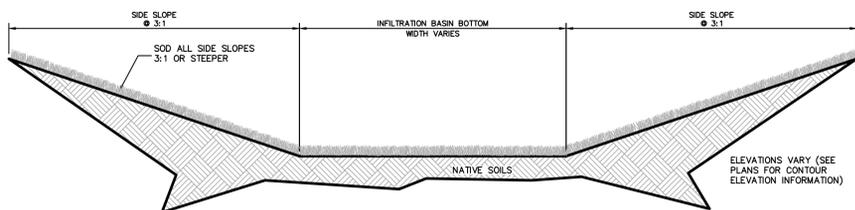


ROOF DRAIN COLLECTION LATERAL
N.T.S.

BASIN	BOTTOM ELEVATION	SEDIMENT SHALL BE REMOVED WHEN THE DEPTH REACHES:	TOP ELEVATION
1 (FRONT)	6.8'	7.3'	8.0'
2 (BLDG)	7.1'	7.6'	9.0'
3 (SIDE)	7.1'	7.6'	9.0'
4 (REAR)	7.0'	7.5'	8.5'



DEPTH BENCHMARK
N.T.S.

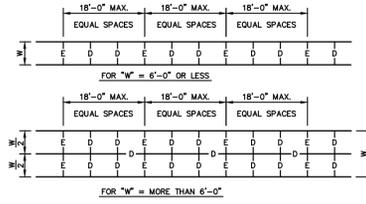


TYPICAL INFILTRATION BASIN CROSS-SECTION DETAIL
N.T.S.

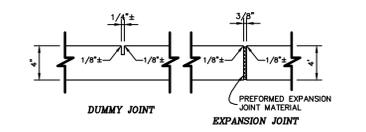
NC License # C-0208
SINCE 1959
Quible & Associates, P.C.
CONSTRUCTION SURVEYING
ENVIRONMENTAL SCIENCE SURVEYING
90 CHURCH STREET, SUITE B
RANDOLPH, NORTH CAROLINA 28134
Phone: (828) 733-0338
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www.quibleandassociates.com

COMMISSION NO. P17012.1
DESIGNED BY CMS
DRAWN BY JMH/CMS
CHECKED BY MWS
ISSUE DATE 11/12/19
SHEET NO. 5 OF 6 SHEETS

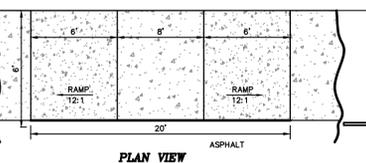
DRAINAGE & SECS DETAILS
CANCER TREATMENT CENTER
OUTER BANKS HOSPITAL
NAGS HEAD TOWNSHIP DARE COUNTY NORTH CAROLINA



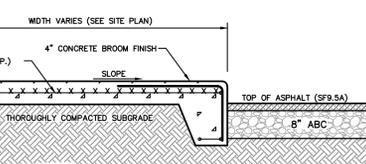
NOTES:
EXCEPT WHERE SHOWN IN THE PLAN, ALL NEW CONC. WALKS SHALL HAVE JOINTS SPACED AS SHOWN IN THESE DETAILS.
AN EXPANSION JOINT SHALL BE USED TO SEPARATE THE NEW CONC. WALK FROM OTHER NEW OR EXISTING CONCRETE CONSTRUCTION.



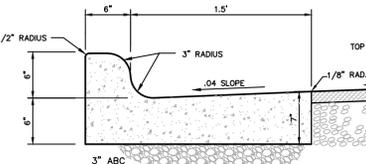
SIDEWALK JOINTS
N.T.S.



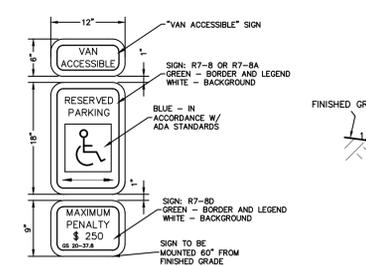
WHEELCHAIR RAMP
N.T.S.
1. USE ADJACENT TO ALL HANDICAPPED SPACES



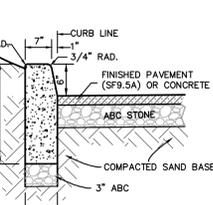
RAISED CURB SIDEWALK/ASPHALT SECTION
N.T.S.



CURB & GUTTER CROSS SECTION (1.5\"/>



ADA RESERVED PARKING SIGN DETAIL
N.T.S.

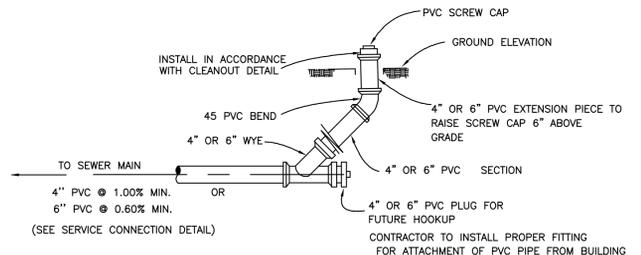


PARKWAY CURB
N.T.S.

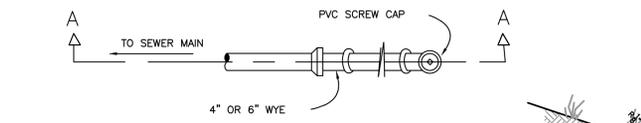
TYPICAL SPECIFICATIONS

SPECIFICATIONS FOR SIDEWALKS, CURBS, ALLEYS, CONCRETE PAVEMENT
ALL REINFORCING STEEL SHALL BE GRADE 60 (ASTM A615)
ALL WELDED WIRE FABRIC SHALL BE 6 x 6, W1.4 x W1.4 (ASTM A185)
A 1-1/2" CLEAR CONCRETE COVER SHALL BE MAINTAINED ON ALL REINFORCEMENT
ALL CONCRETE SHALL BE 3000 PSI FIBER MESH UNLESS OTHERWISE NOTED SPECIFICATIONS OF ASPHALT
ALL ABC STONE SHALL BE COMPACTED TO 100% OF STANDARD PROCTOR (ASTM D698)
ASPHALT SHALL BE 2" SF9.5A

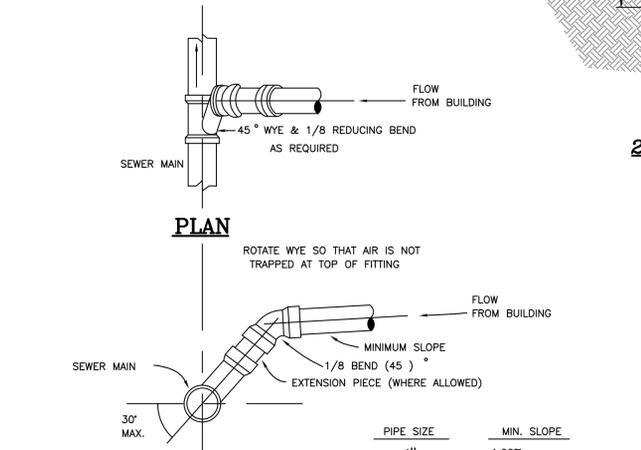
SPECIFICATIONS FOR SUBBASE
ALL SUBBASE SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR (ASTM D698)



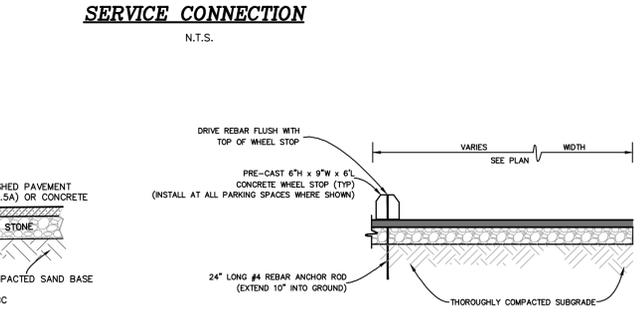
SECTION A



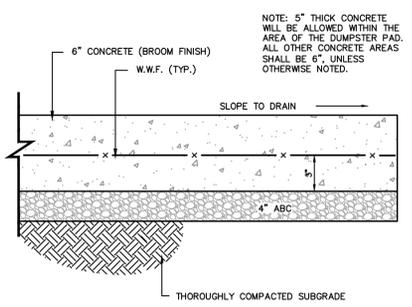
PLAN VIEW SINGLE SERVICE LATERAL CONNECTION
N.T.S.



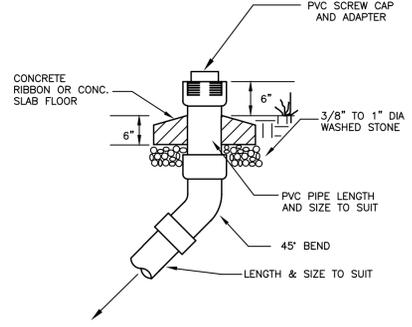
SERVICE CONNECTION
N.T.S.



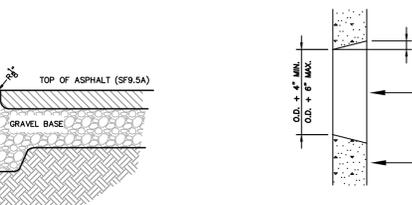
WHEEL STOP DETAIL
N.T.S.



CONCRETE PAVEMENT SECTION
N.T.S.

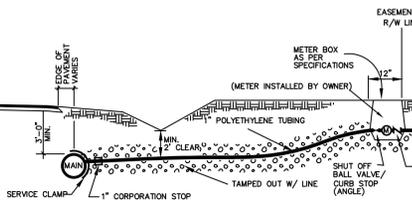


TYPICAL SEWER CLEAN-OUT
N.T.S.

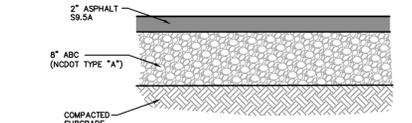


IN FIELD PIPE OPENINGS
N.T.S.

2' CONCRETE MOUNTABLE CURB & SPILL GUTTER
N.T.S.
MODIFIED NCDOT STANDARD 846.01



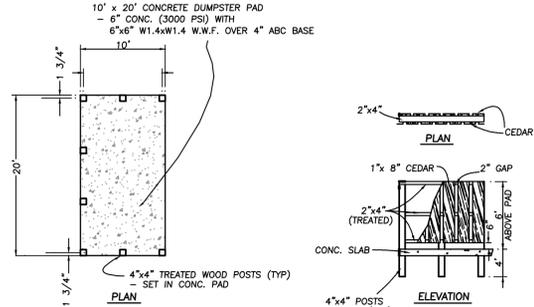
STANDARD 1" SERVICE LINE AND METER BOX INSTALLATION
N.T.S.



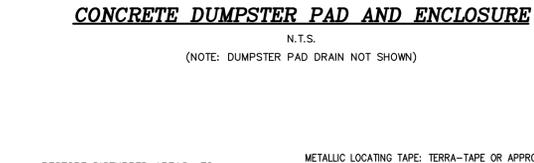
TYPICAL ASPHALT SECTION
N.T.S.

COMPACTION NOTES:
1. PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
2. COMPACT BACKFILL AND SUBGRADE TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) ALL BACKFILL MATERIAL SHALL BE SELECT BACKFILL UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
3. SELECT FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES (SW, SP, SP-SM, SM) HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.

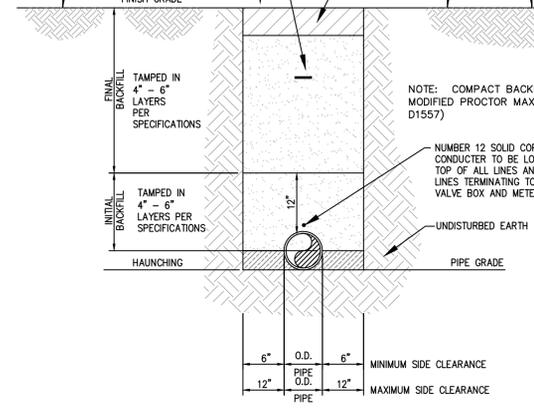
COMPACTION NOTES



DUMPSTER PAD

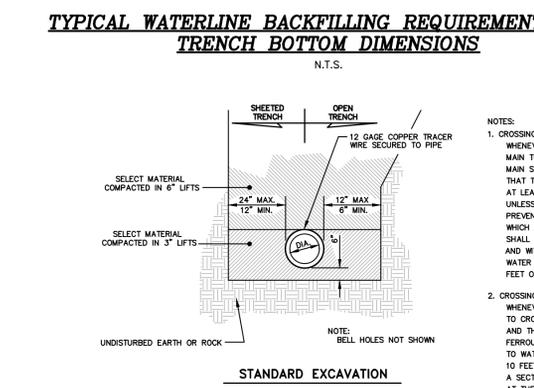


CONCRETE DUMPSTER PAD AND ENCLOSURE
N.T.S.



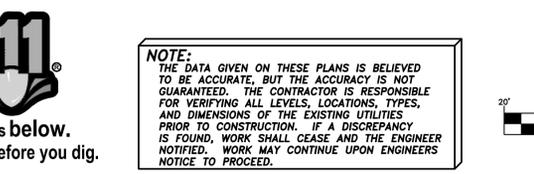
TYPICAL WATERLINE BACKFILLING REQUIREMENTS AND TRENCH BOTTOM DIMENSIONS
N.T.S.

- NOTES:
- FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING
 - NO ROCKS OR BOULDERS 4" AND LARGER SHALL BE USED IN INITIAL BACKFILL AREA.
 - ALL BACKFILL MATERIAL SHALL BE SATISFACTORY SOIL MATERIALS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER. (SATISFACTORY SOIL FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES [SW, SP, SP-SM, SM] HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.)



STANDARD EXCAVATION
N.T.S.

TYPICAL SANITARY SEWER TRENCHING
N.T.S.



NOTE:
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.



NC License# C-0208
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Quible & Associates, P.C.
CONSTRUCTION SURVEYING
ENVIRONMENTAL SCIENCE
ENGINEERING/SURVEYING NOT OFFERED AT BLACK MOUNTAIN OFFICE
8446 CAROLINA HWY. SUITE B
90 CHURCH STREET, SUITE 11
FARMINGTON, NC 27834
Phone: (252) 491-8446
Fax: (252) 491-8447
www.quibleandassociates.com



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NO.	DATE	PER TOWN COMMENTS
1	12/05/19	

SITE & UTILITY DETAILS
CANCER TREATMENT CENTER
OUTER BANKS HOSPITAL
NORTH CAROLINA
DARE COUNTY
NAGS HEAD TOWNSHIP

COMMISSION NO. P17012.1
DESIGNED BY CMS
DRAWN BY JMH/CMS
CHECKED BY MWS
ISSUE DATE 11/12/19

SHEET NO. **6**
OF 6 SHEETS

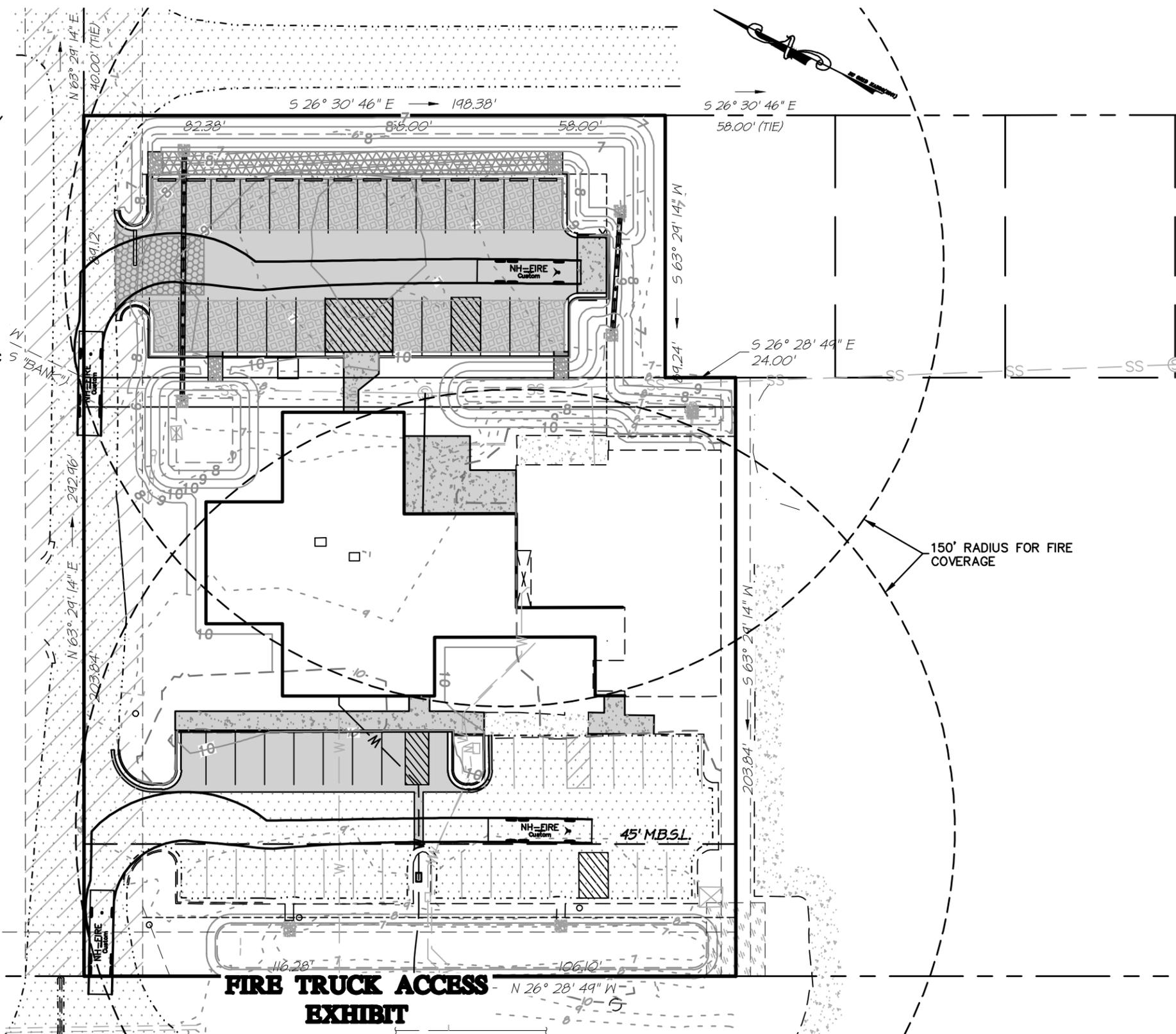
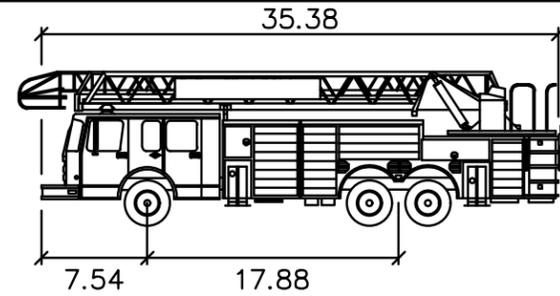
NOTES:

- PROPERTY OWNERS: MOONGATE PARTNERS, LLC.
PO BOX 129
NAGS HEAD, NC 27959

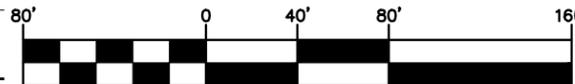
DOUBLE L CORPORATION
PO BOX 2606
ELIZABETH CITY, NC 27906

UNIVERSITY HEALTH SYSTEMS OF EASTERN CAROLINA

C/O TIM MCDONNELL
PO BOX 6028
GREENVILLE, NC 27835
- PROPERTY IDENTIFICATION: 4928, 4926 & 4922 S. PASSAGE WAY
4927 & 4923 SOUTH CROATAN HIGHWAY
PIN#: 0801-1313-8895;
0801-1313-8960; 0801-1313-8936
0801-13-13-7759;
0801-1313-7809
PID#: 02839113; 02839114; 02839115
027839062; 027839063;
- PARCEL AREA: 63,021 SQ.FT. / 1.45 ACRES
(AREAS BY COORDINATE METHOD)
- ZONING CLASSIFICATION: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) (HOTEL DISTRICT OVERLAY)
- PROPOSED REZONING FOR 4928, 4926 & 4922 S. PASSAGE WAY: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) FROM SF2 (SINGLE FAMILY) ZONING
- REFERENCES: D.B. 1939, PG. 480; P.C. E, SL. 134
- FIELD SURVEY BY QUIBLE & ASSOCIATE, P.C. DATES: 06-22-2017, 09-10-2019, & 10-21-2019.
(HORIZONTAL GROUND DISTANCES)
- VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2012)
- PROPERTY IS LOCATED IN F.I.R.M. ZONES "AE" (EL. 9')
PANEL 3730080100J, DATED 09/20/06
FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.



GRAPHIC SCALE



(IN FEET)
1 inch = 80' ft.

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Quible & Associates, P.C. SINCE 1959
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
ENG./SUR. NOT OFFERED AT BLACK MTN. OFFICE
8466 Carotake Hwy, Powells Point, NC 27966
Phone: (252) 491-8147 Fax: (252) 491-8146
90 Church St., Ste. B, Black Mountain, NC 28711
Phone: (828) 793-0398 Fax: (252) 491-8146
administrator@quible.com

**PRELIMINARY
NOT FOR
CONSTRUCTION**

FIRE ROUTING EXHIBIT
**CANCER CENTER
OUTER BANKS HOSPITAL**
DARE COUNTY
TOWN OF NAGS HEAD
NORTH CAROLINA
0 40 80
GRAPHIC SCALE IN FEET 1"=40'

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PROJECT
P17012.1
DRAWN BY
CMS
CHECKED BY
CMS/MWS
DATE
12/04/19

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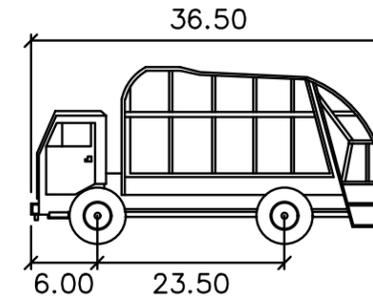
NOTES:

- PROPERTY OWNERS: MOONGATE PARTNERS, LLC.
PO BOX 129
NAGS HEAD, NC 27959

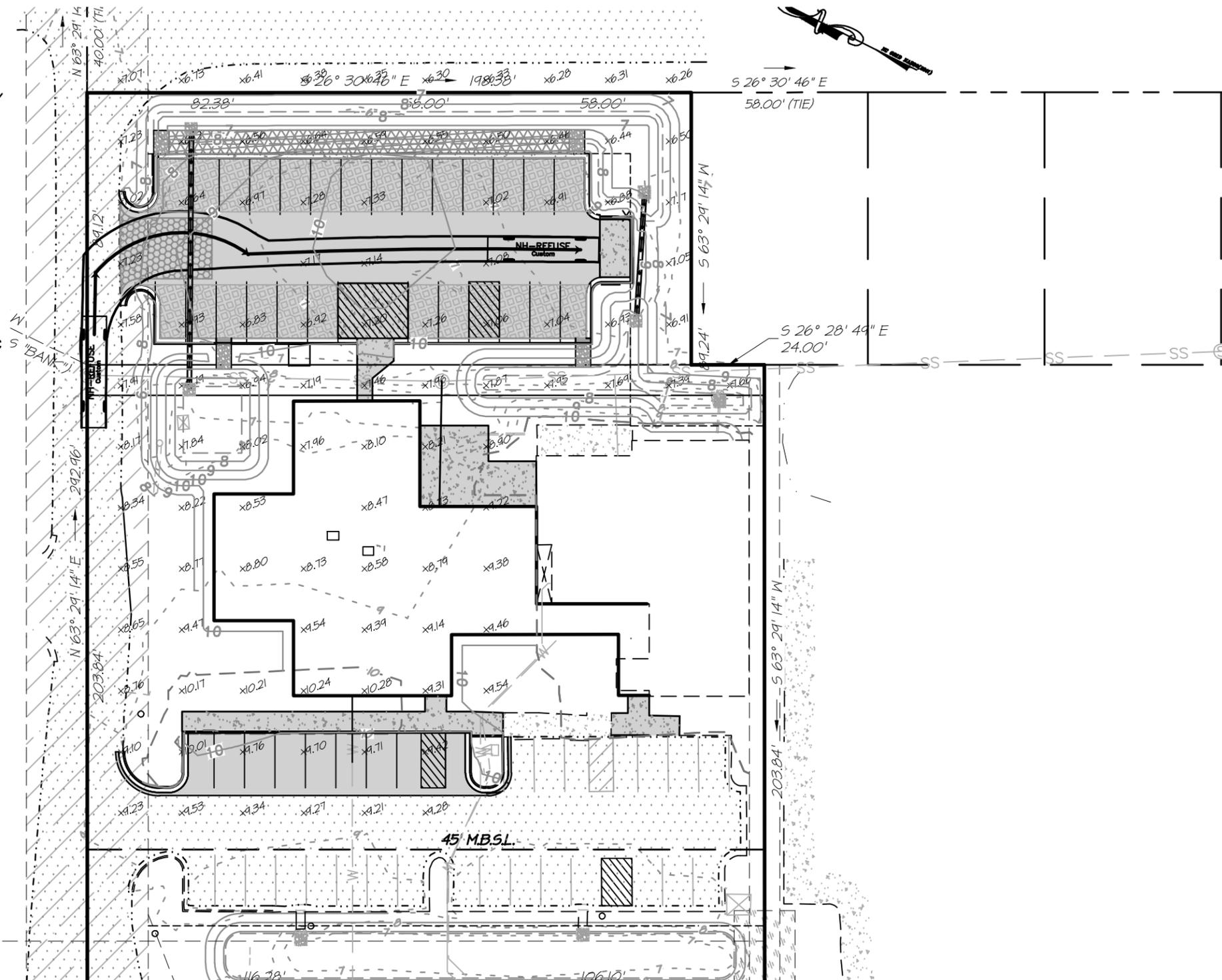
DOUBLE L CORPORATION
PO BOX 2606
ELIZABETH CITY, NC 27906

UNIVERSITY HEALTH SYSTEMS OF EASTERN CAROLINA

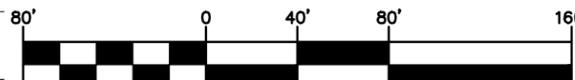
C/O TIM MCDONNELL
PO BOX 6028
GREENVILLE, NC 27835
- PROPERTY IDENTIFICATION: 4928, 4926 & 4922 S. PASSAGE WAY
4927 & 4923 SOUTH CROATAN HIGHWAY
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PANEL 3730080100J, DATED 09/20/06
FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.



NH REFUSE feet
 Width : 8.00
 Track : 8.00
 Lock to Lock Time : 6.0
 Steering Angle : 40.0



GRAPHIC SCALE



(IN FEET)
 1 inch = 80' ft.

**REFUSE TRUCK
 ACCESS EXHIBIT**

NC License#: C-0208
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& Associates, P.C.
 ENGINEERING** * CONSULTING * PLANNING
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 ENG./SUR. NOT OFFERED AT BLACK MTN. OFFICE
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 90 Church St., Ste. B, Black Mountain, NC 28711
 Phone: (828) 793-0398 Fax: (252) 491-8146
 administrator@quible.com

**PRELIMINARY
 NOT FOR
 CONSTRUCTION**

REFUSE ROUTING EXHIBIT
**CANCER CENTER
 OUTER BANKS HOSPITAL**
 DARE COUNTY
 TOWN OF NAGS HEAD
 NORTH CAROLINA
 0 40 80
 GRAPHIC SCALE IN FEET 1"=40

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PROJECT	P17012.1
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DATE	11/14/19

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A



B



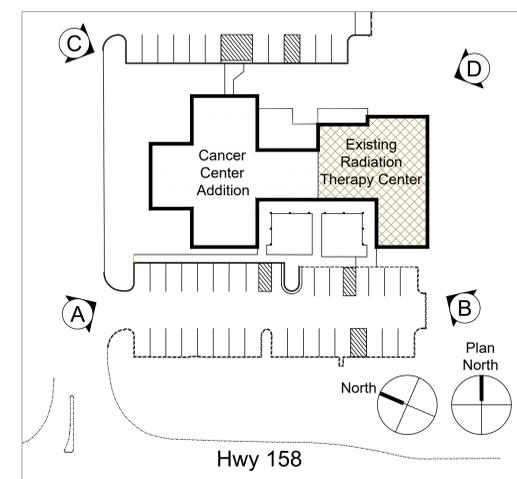
C



D

Exterior Sketch Images

Materials, colors, profiles, and details will match the existing Radiation Therapy Center



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VIDANT HEALTH
 THE OUTER BANKS HOSPITAL
 4800 South Croatan Highway
 Nags Head, NC 27959
 252-489-9111

THE EAST GROUP P.A.
 REGISTERED PROFESSIONAL ARCHITECTS
 50213
 SOUTH CAROLINA
 GREENVILLE, S.C.
PRELIMINARY DESIGN DOCUMENTS
 NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	BY	CHK	COL
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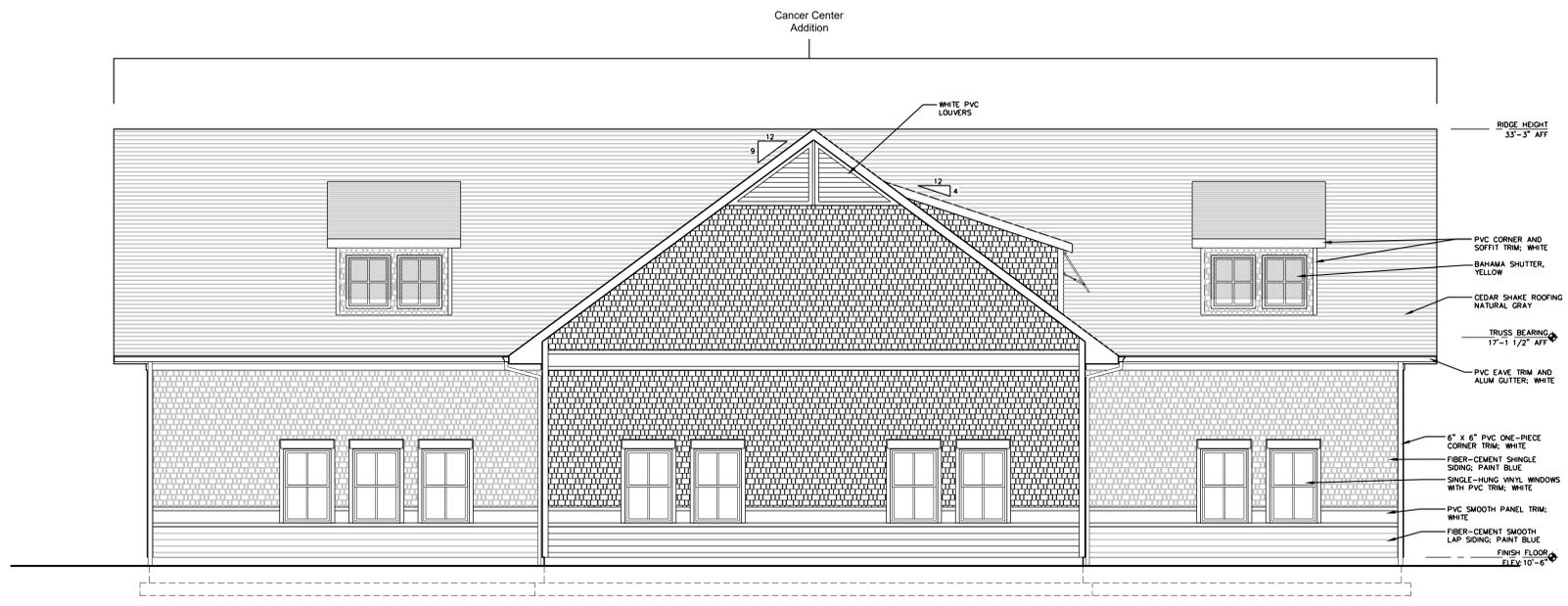
REG PROJECT NO. 20190179
 CLIENT PROJECT NO. -
 PROJECT TITLE
OBH CANCER CENTER
 DRAWING TITLE
EXTERIOR IMAGES
 DRAWING NO.
A6.3

REV	DATE	DESCRIPTION
0	12-06-2019	PRELIMINARY DRAWING - NOT FOR CONSTRUCTION

REG PROJECT NO.	20190179
CLIENT PROJECT NO.	
PROJECT TITLE	OBH CANCER CENTER
DRAWING TITLE	BUILDING ELEVATIONS
DRAWING NO.	A6.1



1 PLAN-SOUTH ELEVATION
 SCALE: 3/16" = 1'-0"

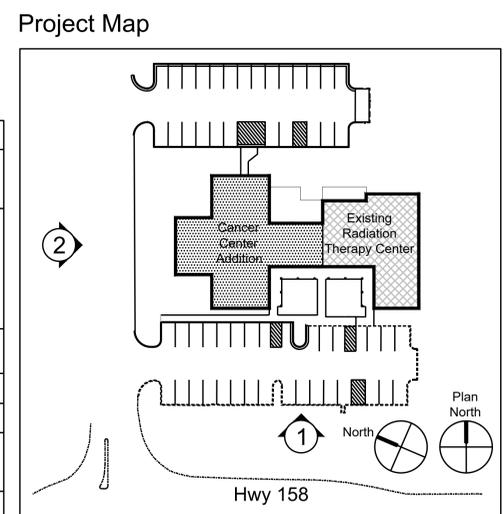


2 PLAN-WEST ELEVATION
 SCALE: 3/16" = 1'-0"

Town of Nags Head Architectural Style Points Schedule
 (applied to building addition only)

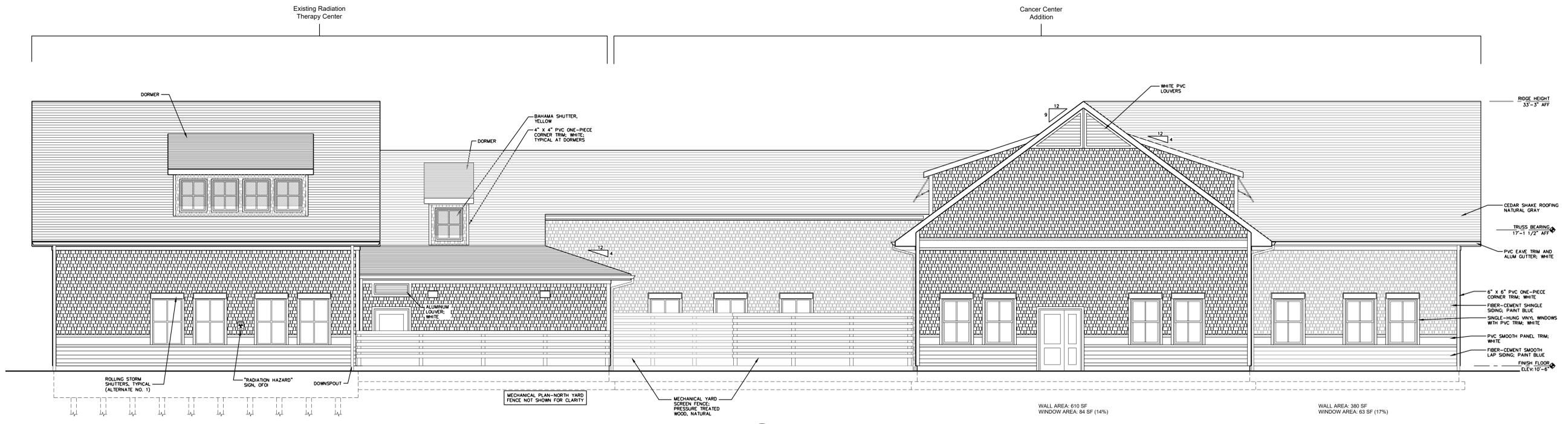
Design Element	Formula/Element Provided	Points Earned
Porches	1st Floor Porch - $p1/b1 \times 150 =$ $p1 = \text{perimeter of 1st floor with Porch} = 72'$ $b1 = \text{perimeter of 1st floor} = 379'$	28
Dormers	$n = \text{number of dormers} = 9 \quad 9 \times 5 = 45$ 1 - 17-foot wide shed dormer $(1 \times 10) + 5 = 15$ $45 + 15 = 60$ 25 point maximum score	25
Roofs	Compliant Form and Pitch (Minimum 6:12 pitch for commercial buildings)	25
Building Form	Combination Base Form	40
Siding Materials	Simulated Shingle Siding	12
Miscellaneous Details	Beauty Bands - 5 Porch Column Trim - 5 Windows (single-hung) - 20	30
	Total Points Earned	160

Exterior Appearance:
 Materials, colors, profiles, and details will match the existing Radiation Therapy Center

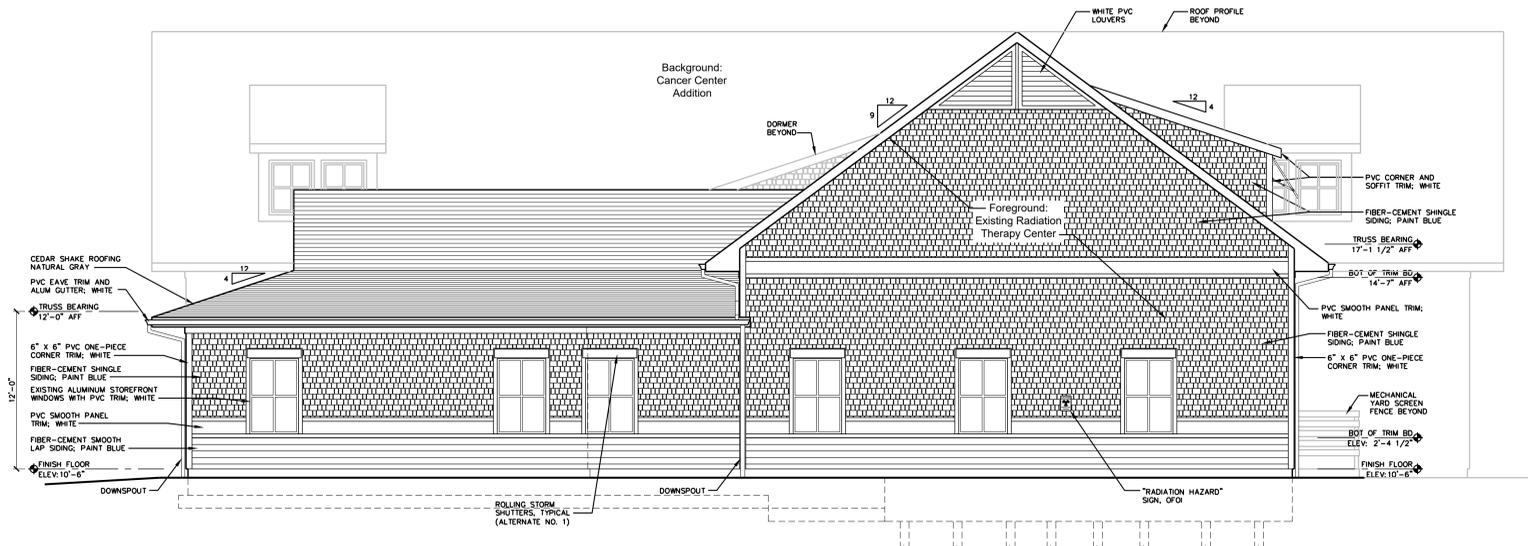


REV	DATE	DESCRIPTION
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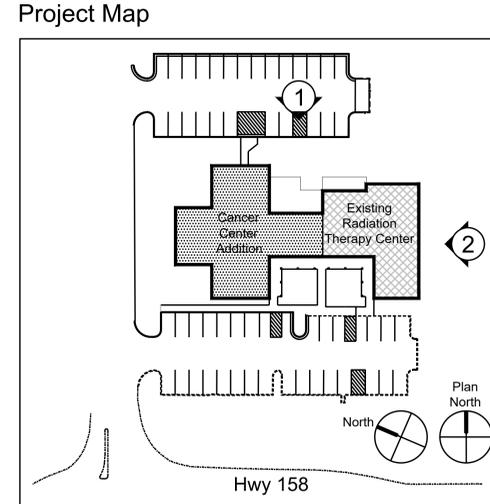
REG PROJECT NO.	20190179
CLIENT PROJECT NO.	
PROJECT TITLE	OBH CANCER CENTER
DRAWING TITLE	BUILDING ELEVATIONS
DRAWING NO.	A6.2



1 PLAN-NORTH ELEVATION
SCALE: 3/16" = 1'-0"



2 PLAN-EAST ELEVATION
SCALE: 3/16" = 1'-0"



Exterior Appearance:
 Materials, colors, profiles, and details will match the existing Radiation Therapy Center

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REV	DATE	DESCRIPTION
0	11-14-2019	PRELIMINARY DRAWING - NOT FOR CONSTRUCTION

REG PROJECT NO. 20190179

CLIENT PROJECT NO. -

PROJECT TITLE

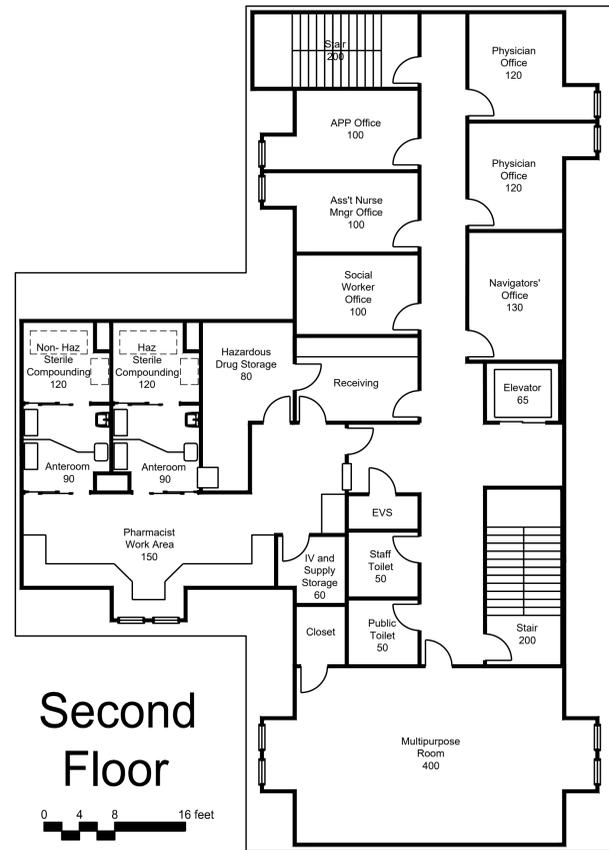
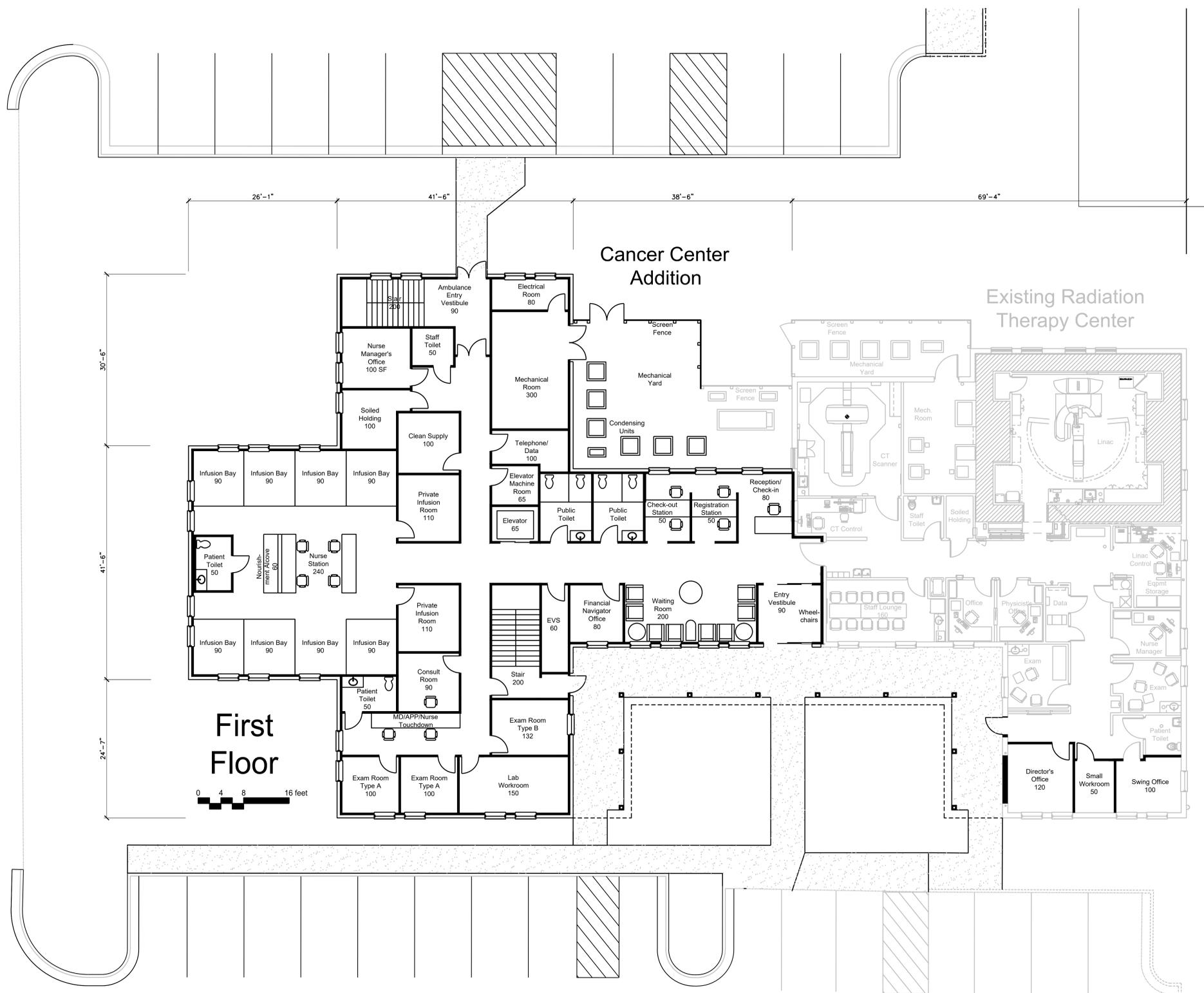
OBH CANCER CENTER

DRAWING TITLE

**FLOOR PLANS:
FIRST FLOOR
AND
SECOND FLOOR**

DRAWING NO.

A2.1



First Floor



Second Floor



Building Area

Radiation Therapy:	4,500 SF
Addition First Floor:	6,414 SF
Addition Second Floor:	3,966 SF
Total:	14,880 SF

Allowable Area Calculation:

NCSBC Table 506.2, B occupancy, Type V-B Construction, Non-sprinklered: 9,000 SF allowable area

NCSBC 506.2.3: Area for Single-occupancy Multistory Buildings

$[9000 + (9000 \times 41\%)] \times 2 = 25,380 \text{ SF allowable area}$

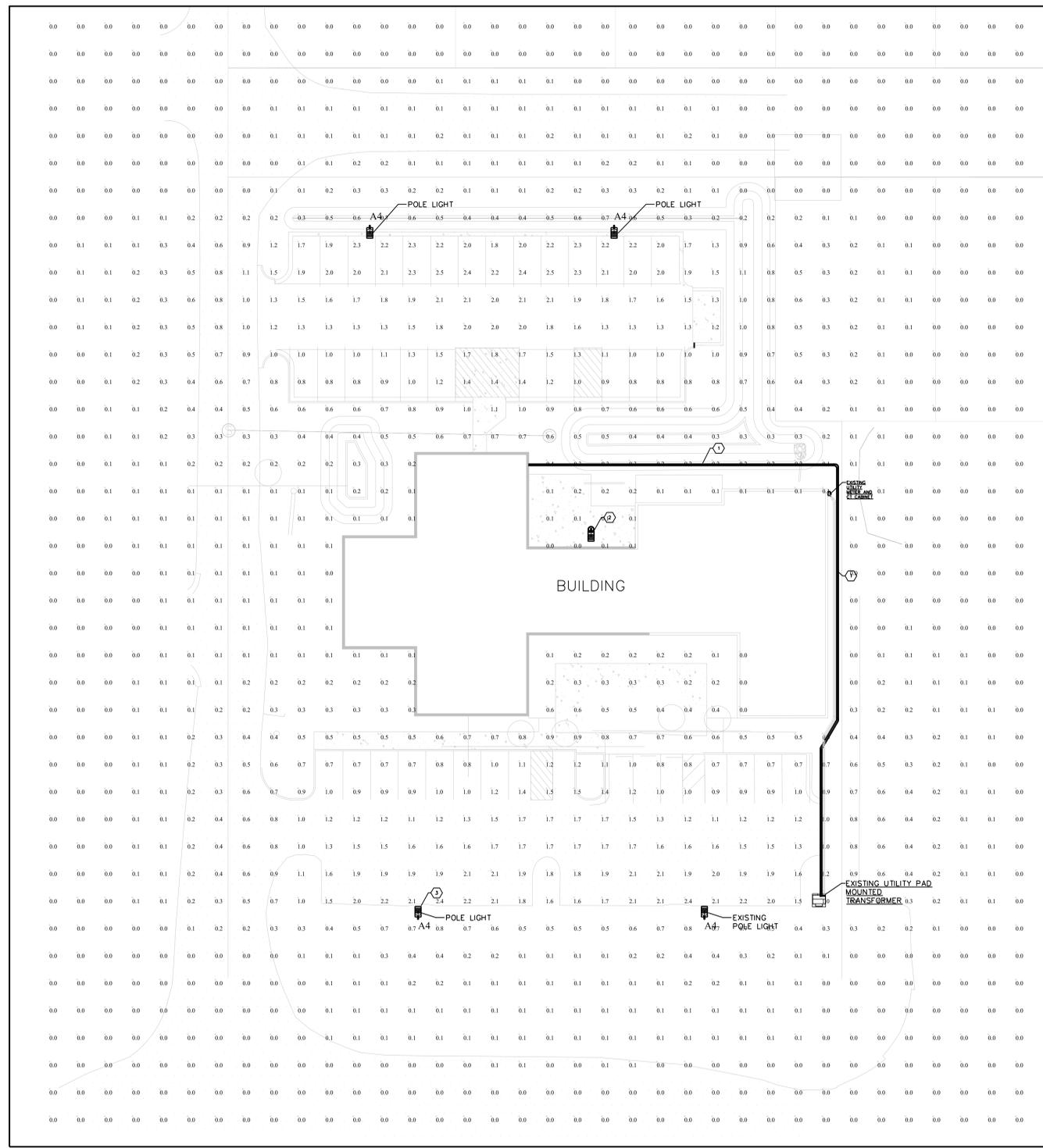
$A_t \quad NS \quad I_f \quad S_a \quad A_a$

NCSBC 506.3: Frontage Increase

$(427 / 647 - 0.25) \times 30 / 30 = 41\% \text{ increase}$

$F \quad P \quad W \quad I_r$

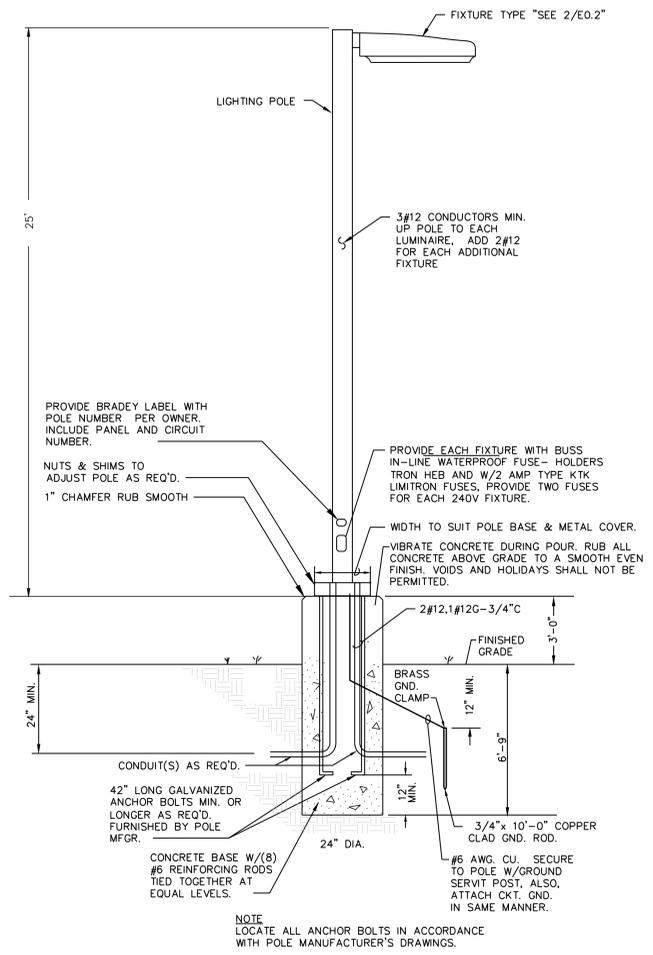
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1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'

Symbol	Qty	Label	Mounting Height	LLF	Lum. Lumens	Lum. Watts	Description
	4	A4	25' - 0" AFG	0.900	14931	136	VP-L-64L-136-3K7-4W

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Overall Area	Illuminance	Fc	0.37	2.5	0.0	N.A.	N.A.
Parking Area	Illuminance	Fc	1.53	2.5	0.7	2.19	3.57



2 AREA POLE LIGHT DETAIL
SCALE: N.T.S.

GENERAL NOTES:

- PLANS ARE GENERALLY DIAGRAMMATIC. NECESSARY OFFSETS IN CONDUITS, ETC., REQUIRED TO INSTALL EQUIPMENT SHALL BE PROVIDED WITH NO ADDITIONAL EXPENSE TO THE OWNER.
- PROVIDE ALL CUTTING AND REPAIRING OF SIDEWALKS, PAVEMENT, ETC. NECESSARY FOR THE INSTALLATION OF WORK. ANY CUTTING OF STRUCTURAL MEMBERS OR FINISHED WORK SHALL HAVE PRIOR APPROVAL OF ARCHITECT/ENGINEER.
- ALL JUNCTION BOX COVERS AND POLE BASES ARE TO BE LABELED TO IDENTIFY SYSTEM, BOXES CONTAINING POWER CIRCUITS ARE TO BE LABELED USING PANELBOARD DESIGNATION AND CIRCUIT NUMBER (I.E., "BMA-10"). OUTSIDE OF BOX COVER SHALL BE LABELED WITH BLACK PLASTIC LAMINOL TAGS WITH 1/4" HIGH WHITE LETTERS FASTENED WITH BRASS SCREWS. THIS LABELING SHALL BE PROVIDED BY THE CONTRACTOR.
- ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ALL UNDERGROUND ELBOWS SHALL BE SCHEDULE 40 PVC. ALL UNDERGROUND CONDUIT SHALL BE A MINIMUM OF 24" DEPTH TO TOP OF CONDUIT. ALL ABOVE GROUND CONDUIT SHALL BE ALL FLEX SHALL BE SEALTITE G.R.C.
- ALL SPLICES IN UNDERGROUND JUNCTION BOXES SHALL BE WATERPROOF.
- GROUNDING SHALL BE IN ACCORDANCE WITH NEC, ARTICLE 250. ALL CONDUITS AND LIGHT POLES SHALL HAVE A GREEN EQUIPMENT GROUNDING CONDUCTOR, #12 MINIMUM.
- ALL INGROUND HANDHOLE/PULLBOXES AND COVERS SHALL BE QUARTZITE, ANSI TIER 15 MINIMUM, UL LISTED, WITH COVERS MARKED ELECTRICAL OR DATA. ALL COVERS SHALL BE LOCKABLE AND REQUIRE A SPECIAL TOOL TO OPEN. ALL BOXES SHALL BE SET ON A MINIMUM 8" DEEP BED OF GRAVEL SPREAD 6" IN ALL DIRECTIONS AROUND HANDHOLE/PULLBOX.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO DIGGING. EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON ELECTRICAL SITE PLANS.
- IF REQUIRED, ALL EXISTING ASPHALT SHALL BE NEATLY SAW CUT.
- IF REQUIRED, ALL EXISTING ASPHALT AND CONCRETE SHALL BE PATCHED TO MATCH EXISTING. REPAINT ANY EXISTING PARKING LOT STRIPING DISTURBED BY TRENCHING.
- DO NOT TRENCH IN EXISTING TREE ROOT ZONES.
- KEEP PANELS, PULLBOXES, AND CONTACTORS CLOSED AND LOCKED AT ALL TIMES.

- NOTES KEYED TO PLAN:**
- REFER TO ELECTRICAL RISER
 - REMOVE AND RELOCATE EXISTING SITE LIGHT ASSEMBLY.
 - RELOCATED SITE LIGHT ASSEMBLY.

VIPER L STRIKE
LARGE VIPER LUMINAIRE

SPECIFICATIONS
Intended Use:
The Beacon Viper Luminaire is available in two sizes with a wide choice of different LED wattage configurations and optical distributions designed to replace HID lighting up to 1000W MH or HPS. Luminaires are suitable for wet locations.

Construction:

- Manufactured with die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two piece silicone and masticular polyurethane foam gasket ensures a weather-proof seal around each individual optic.

Electrical:

- Luminaire accepts 100V through 277V, 50 Hz to 60 Hz (LV), 347V, or 480V three phase.
- Power factor is > .90 at full load.
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls.
- Component to component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 800 VAC, 15A or higher.
- Plug disconnects are certified by UL for use at 600 VAC, 15A or higher.
- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- Optional 7-pin ANSI C136.41 2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Ambient operating temperature -40°C to 40°C.
- Surge protection - 20kA.
- LifeGuard™ Circuit - protects luminaires from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fall off", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

BEACON STRIKE

Approvals

PRODUCT IMAGE(S)

DIMENSIONS

A	B	C	D	Weight	EPA
29.9"	24.19"	14.25"	4.13"	25.0 lbs	1.2 ft ²
(741 mm)	(614 mm)	(362 mm)	(105 mm)	(11.3 kg)	

MOUNTING OPTIONS

- Rectangular Arm (A)
- Accepts 2-3/8" OD fitters, min 4" long.
- 2-3/8" OD Slip Fitter (A&F)
- 2-3/8" Adjustable Fitter (A)
- Wall Bracket (WB)
- AD Decorative Arm

CERTIFICATIONS/LISTINGS

- UL LISTED
- ETL LISTED
- DA
- DLC
- BEACON
- HUBBELL Lighting

Beacon Products • 2041 88th Avenue Circle East, Bradenton, FL 34203 • Phone: 800-345-4928
Due to our continued efforts to improve our products, product specifications are subject to change without notice.
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3 POLE LIGHT
SCALE: N.T.S.

THE EAST GROUP

Engineering Architecture
Surveying Technology

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www.eastgroup.com

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Raleigh, NC 27607
Tel 919.784.9330 Fax 919.784.9331

NC Engineering License No. C-0206
NC Architectural License No. 50213
NC Landscape Architectural License No. C-427

VIDANT HEALTH™

THE OUTER BANKS HOSPITAL

4800 South Croatan Highway
Nags Head, NC 27959
252-489-9111

PRELIMINARY DESIGN DOCUMENTS

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REV	DATE	DESCRIPTION	BY	CHK	APP
0	11-14-2019	PRELIMINARY DRAWING - NOT FOR CONSTRUCTION	CCM	DD	

REG. PROJECT NO. **20190179**

CLIENT PROJECT NO. -

PROJECT TITLE **OBH CANCER CENTER**

DRAWING TITLE **ELECTRICAL SITE PLAN**

DRAWING NO. **E0.2**

Ben Cahoon
Mayor

Susie Walters
Mayor Pro Tem

Cliff Ogburn
Town Manager



Town of Nags Head

Post Office Box 99
Nags Head, NC 27959
Telephone 252-441-5508
Fax 252-441-0776
www.nagsheadnc.gov

M. Renée Cahoon
Commissioner

J. Webb Fuller
Commissioner

Michael Siers
Commissioner

Date: December 13, 2019

To: Kelly Wyatt, Deputy Planning Director

From: David Ryan, P.E.

RE: OB Hospital Cancer Center -Town Engineer Plan Review Comments

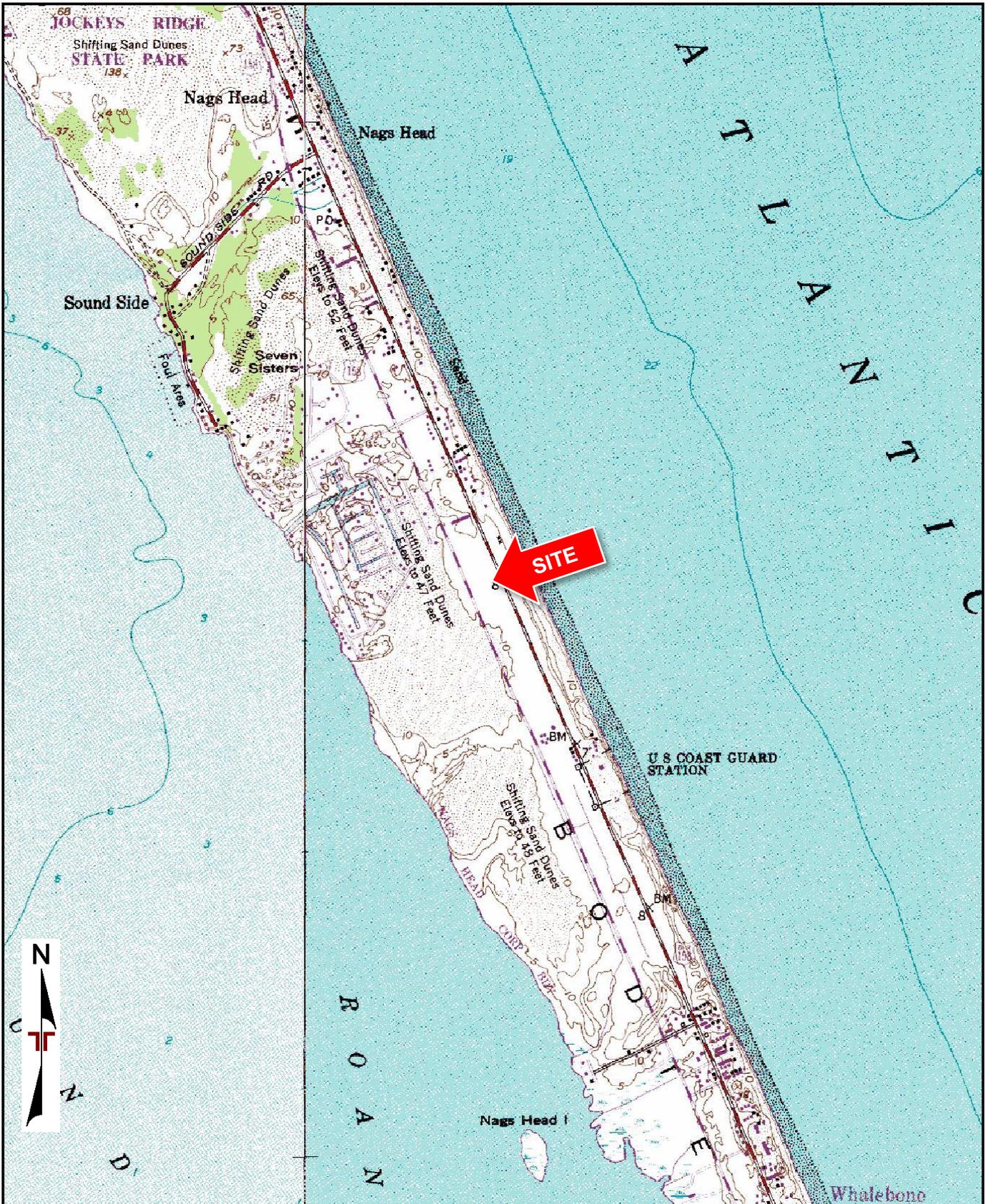
Internal Traffic Circulation Review

1. Vehicle pathing exhibits have been provided which depict the routing of emergency and sanitation vehicles. The internal traffic circulation approval is contingent on the Public Works/Fire Department approval for access of sanitation and emergency vehicle access.

Stormwater Management Review

1. A NCDEQ high-density stormwater management permit shall be acquired for this application and submitted to the Town upon issuance. **This shall be a condition of approval.**
2. The project shall be designed, constructed, operated and maintained in accordance with Article 11. Environmental Regulations of the Town of Nags Head Unified Development Ordinance. **This shall be a condition of approval.**
3. The submitted site development plan has been determined to be in accordance with Article 11. Environmental Regulations of the Unified Development Ordinance.

APPENDIX A
FIELD EXPLORATION



TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
 QUADRANGLES INCLUDE: MANTEO, NC (1/1/1983) and ROANOKE ISLAND NE, NC (1/1/1983).

Project Manager:	AJG
Drawn by:	AJG
Checked by:	PCL
Approved by:	AJG
Project No.:	72175062
Scale:	1"=2,000'
File Name:	72175062 EXA
Date:	9/1/17

Terracon
 314 Beacon Dr
 Winterville, NC 28590-7956

SITE LOCATION PLAN

OBH Radiation Treatment Center
 S Croatan Hwy
 Nags Head, NC

Exhibit
A-1



APPROXIMATE LOCATION OF PROPOSED RADIATION TREATMENT CENTER



bing

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DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

Project Manager: AJG	Project No. 72175062	Terracon 314 Beacon Dr Winterville, NC 28590-7956	BORING LOCATION PLAN	Exhibit
Drawn by: AJG	Scale: AS SHOWN		OBH Radiation Treatment Center S Croatan Hwy Nags Head, NC	A-2
Checked by: PCL	File Name: 72175062 EXA			
Approved by: AJG	Date: 9/1/17			

Field Exploration Description

Coordinates of the borings were determined by plotting the points provided on the site plan and referencing existing site features on aerial photography. The boring locations were marked in the field by Terracon using a handheld GPS. The location of the borings should be considered accurate only to the degree implied by the means and methods used to define it.

The soil test borings were performed by a trailer mounted power drilling rig utilizing mud rotary drilling procedures to advance the boreholes. Representative soil samples were obtained at intervals of 2.5 feet above a depth of 10 feet and at 5 foot intervals below 10 feet using split-barrel sampling procedures. In the split barrel sampling procedure, the number of blows required to advance a standard 2 inch O.D. split barrel sampler the 12 inches after the first 6 inches by means of a 140 pound automatic hammer with a free fall of 30 inches, is the standard penetration resistance value (SPT-N). This value is used to estimate the in-situ relative density of cohesionless soils and consistency of cohesive soils.

An automatic SPT hammer was used to advance the split-barrel sampler in the borings performed on this site. A greater efficiency is typically achieved with the automatic hammer compared to the conventional safety hammer operated with a cathead and rope. Published correlations between the SPT values and soil properties are based on the lower efficiency cathead and rope method. This higher efficiency affects the standard penetration resistance blow count (N) value by increasing the penetration per hammer blow over what would be obtained using the cathead and rope method. The effect of the automatic hammer's efficiency has been considered in the interpretation and analysis of the subsurface information for this report.

The samples were tagged for identification, sealed to reduce moisture loss, and taken to our laboratory for further examination, testing, and classification. Information provided on the boring logs attached to this report includes soil descriptions, consistency evaluations, boring depths, sampling intervals, and groundwater conditions.

A field log of each boring was prepared by the drill crew. These logs included visual classifications of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples. Final boring logs included with this report represent the engineer's interpretation of the field logs and include modifications based on laboratory observation and tests of the samples. Additional information provided on the boring logs attached to this report includes soil descriptions, consistency evaluations, boring depths, sampling intervals, and groundwater conditions.

BORING LOG NO. B-1

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.939153° Longitude: -75.615057°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
	POORLY GRADED SAND (SP) , tannish brown, tannish gray and dark gray, loose to medium dense			X	3-3-3 N=6	1				
		5	▽	X	3-4-4 N=8	2				
				X	3-4-5 N=9	3				
			10		X	5-5-6 N=11	4			
					X	3-4-4 N=8	5			
			15		X	6-7-8 N=15	6			
		20.0								
	Boring Terminated at 20 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Backfilled with soil cuttings upon completion.

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ While drilling



Boring Started: 08-25-2017

Boring Completed: 08-25-2017

Drill Rig: Trailer

Driller: Carolina Drilling, Inc.

Project No.: 72175062

Exhibit: A-4

BORING LOG NO. B-2

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.939055° Longitude: -75.614986°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH	<p>POORLY GRADED SAND (SP), tannish brown, light tan, tannish gray and dark gray, loose to medium dense</p>									
		5	▽	X	1-2-2 N=4	1	4			
				X	3-4-5 N=9	2	23			
				X	3-2-4 N=6	3	26			
		10		X	4-5-7 N=12	4	26			
		15		X	3-4-5 N=9	5	23	NP	1	
		20		X	4-6-9 N=15	6	23			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

Abandonment Method:
Backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS

▽ While drilling



Boring Started: 08-25-2017

Boring Completed: 08-25-2017

Drill Rig: Trailer

Driller: Carolina Drilling, Inc.

Project No.: 72175062

Exhibit: A-5

BORING LOG NO. B-2

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER: NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.939055° Longitude: -75.614986°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
	POORLY GRADED SAND (SP) , tannish brown, light tan, tannish gray and dark gray, loose to medium dense (<i>continued</i>)	25		X	6-7-6 N=13	7	26			
		28.0								
	SILTY SAND (SM) , trace mica, dark gray, medium dense	30		X	10-11-9 N=20	8	28			
		35		X	7-9-10 N=19	9	26			
		40.0								
	Boring Terminated at 40 Feet	40		X	8-11-13 N=24	10	26			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Backfilled with soil cuttings upon completion.

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

While drilling



Boring Started: 08-25-2017

Boring Completed: 08-25-2017

Drill Rig: Trailer

Driller: Carolina Drilling, Inc.

Project No.: 72175062

Exhibit: A-5

BORING LOG NO. B-3

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.939077° Longitude: -75.615147°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
	POORLY GRADED SAND (SP) , tannish brown, tannish gray, dark gray and dark brown, loose to medium dense			X	2-2-2 N=4	1				
		5	▽	X	4-4-4 N=8	2				
				X	3-3-4 N=7	3	24	NP	1	
			10		X	3-4-4 N=8	4			
			15		X	5-6-7 N=13	5			
			20		X	6-7-7 N=14	6			
	Boring Terminated at 20 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Backfilled with soil cuttings upon completion.

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
▽ After 24 hours



Boring Started: 08-25-2017	Boring Completed: 08-25-2017
Drill Rig: Trailer	Driller: Carolina Drilling, Inc.
Project No.: 72175062	Exhibit: A-6

BORING LOG NO. B-4

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.939096° Longitude: -75.615277°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
	POORLY GRADED SAND (SP) , gray to dark gray and tannish brown, loose to medium dense									
		5	▽	X	3-3-3 N=6	1				
				X	3-2-2 N=4	2				
				X	2-3-2 N=5	3				
		10		X	2-4-5 N=9	4				
		15		X	6-6-8 N=14	5				
		20		X	4-5-8 N=13	6				
	Boring Terminated at 20 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Backfilled with soil cuttings upon completion.

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ After 24 hours



Boring Started: 08-25-2017

Boring Completed: 08-25-2017

Drill Rig: Trailer

Driller: Carolina Drilling, Inc.

Project No.: 72175062

Exhibit: A-7

BORING LOG NO. B-5

PROJECT: OBH Radiation Treatment Center

**CLIENT: Vidant Health
Greenville, NC**

**SITE: S Croatan Hwy
Nags Head, NC**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/5/17

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 35.938999° Longitude: -75.615219°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	SAMPLE	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
DEPTH										
	POORLY GRADED SAND (SP) , gray brown to dark gray and tannish brown, loose to medium dense		▽	X	3-3-4 N=7	1				
		5		X	2-2-2 N=4	2				
				X	2-3-3 N=6	3				
		10		X	4-4-5 N=9	4				
		15		X	6-6-6 N=12	5				
		20		X	5-6-6 N=12	6				
	Boring Terminated at 20 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:
Backfilled with soil cuttings upon completion.

See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
▽ While drilling



Boring Started: 08-25-2017	Boring Completed: 08-25-2017
Drill Rig: Trailer	Driller: Carolina Drilling, Inc.
Project No.: 72175062	Exhibit: A-8

APPENDIX B
LABORATORY TESTING

Geotechnical Engineering Report

OBH Radiation Treatment Center ■ Nags Head, North Carolina

September 6, 2017 ■ Terracon Project No. 72175062



Laboratory Test Description

Descriptive classifications of the soils indicated on the boring logs are in accordance with the enclosed General Notes and the Unified Soil Classification System. Also shown are estimated Unified Soil Classification Symbols. A brief description of this classification system is attached to this report. Soils laboratory testing was performed under the direction of a geotechnical engineer and included visual classification, moisture content, grain size analysis, and Atterberg limits testing as appropriate. The results of the laboratory testing are shown on the borings logs and in Appendix B.

The laboratory test methods are described in the ASTM Standards listed below:

ASTM D2216 Standard Test Method of Determination of Water Content of Soil and Rock by Mass

ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)

ASTM D2488 Standard Practice of Description and Identification of Soils (Visual Manual Method)

ASTM D422 Standard Test Method for Particle-Size Analysis of Soils

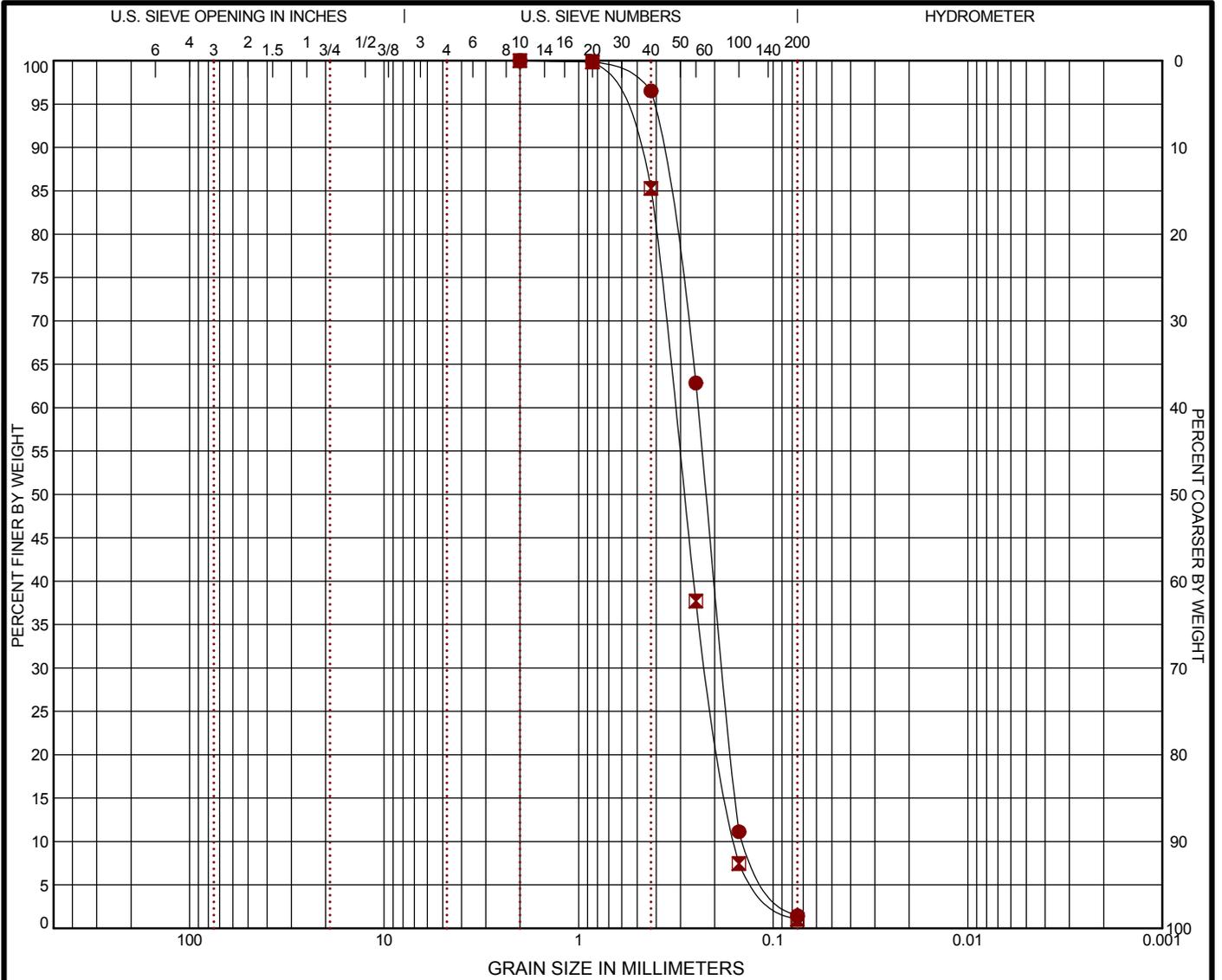
ASTM D1140 Standard Test Methods for Determining the Amount of Material Finer than No. 200 Sieve in Soils by Washing

ASTM D4318 Standard Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils

Procedural standards noted above are for reference to methodology in general. In some cases variations to methods are applied as a result of local practice or professional judgment.

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
●	B-2	13.5 - 15	0.0	0.0	98.6	1.4		SP
☒	B-3	6 - 7.5	0.0	0.0	99.0	1.0		SP

GRAIN SIZE				SOIL DESCRIPTION	
	●	☒		Sieve	% Finer
D ₆₀	0.243	0.321	#10	100.0	100.0
D ₃₀	0.181	0.219	#20	99.92	99.85
D ₁₀	0.138	0.157	#40	96.52	85.27
			#60	62.85	37.7
			#100	11.13	7.47
			#200	1.43	1.02
COEFFICIENTS				REMARKS	
C _c	0.97	0.96			● POORLY GRADED SAND (SP)
C _u	1.76	2.05			☒ POORLY GRADED SAND (SP)

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS 1 72175062 OBH RADIATION TREATMENT CENTER; NAGS HEAD, NC.GPJ TERRACON_DATATEMPLATE.GDT 9/15/17

PROJECT: OBH Radiation Treatment Center

SITE: S Croatan Hwy
Nags Head, NC



PROJECT NUMBER: 72175062

CLIENT: Vidant Health
Greenville, NC

EXHIBIT: B-2

APPENDIX C
SUPPORTING DOCUMENTS

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING			WATER LEVEL		Water Initially Encountered	FIELD TESTS	(HP) Hand Penetrometer
	Auger	Split Spoon			Water Level After a Specified Period of Time		(T) Torvane
					Water Level After a Specified Period of Time		(b/f) Standard Penetration Test (blows per foot)
	Shelby Tube	Macro Core		Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.			(PID) Photo-Ionization Detector
							(OVA) Organic Vapor Analyzer
							
Grab Sample	No Recovery						

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS	RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
	Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength, Qu, psf	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
			Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

<u>Major Component of Sample</u>	<u>Particle Size</u>
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

<u>Term</u>	<u>Plasticity Index</u>
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification			
				Group Symbol	Group Name ^B		
Coarse Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F		
			$Cu < 4$ and/or $1 > Cc > 3$ ^E	GP	Poorly graded gravel ^F		
		Gravels with Fines: More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F,G,H}		
			Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}		
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E	SW	Well-graded sand ^I		
			$Cu < 6$ and/or $1 > Cc > 3$ ^E	SP	Poorly graded sand ^I		
		Sands with Fines: More than 12% fines ^D	Fines classify as ML or MH	SM	Silty sand ^{G,H,I}		
			Fines classify as CL or CH	SC	Clayey sand ^{G,H,I}		
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line ^J	CL	Lean clay ^{K,L,M}		
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K,L,M}		
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay ^{K,L,M,N}	
			Liquid limit - not dried		OH	Organic silt ^{K,L,M,O}	
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K,L,M}		
			PI plots below "A" line	MH	Elastic Silt ^{K,L,M}		
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K,L,M,P}	
			Liquid limit - not dried		OH	Organic silt ^{K,L,M,Q}	
					PT	Peat	
Highly organic soils: Primarily organic matter, dark in color, and organic odor				PT	Peat		

^A Based on the material passing the 3-inch (75-mm) sieve

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$E \quad Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

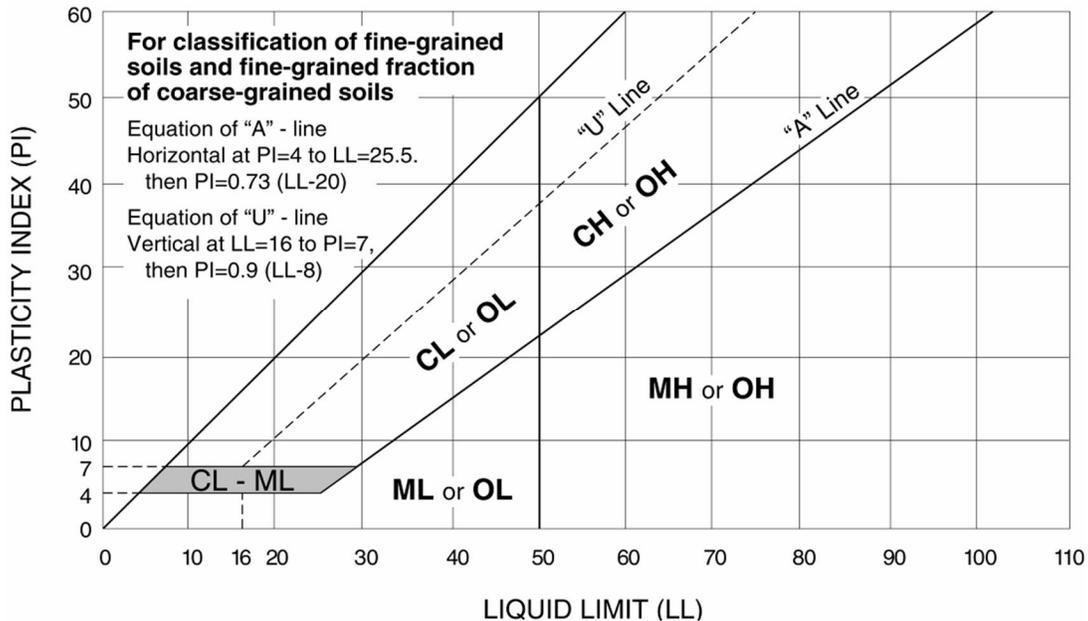
^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



SHEET INDEX

- 1 EXISTING CONDITIONS/DEMOLITION PLAN
- 2 SITE, UTILITY & LANDSCAPING PLAN
- 2 GRADING & DRAINAGE PLAN
- 4 SOIL EROSION & SEDIMENT CONTROL PLAN
- 5 DRAINAGE & SESC DETAILS
- 6 SITE & UTILITY DETAILS

NOTES:

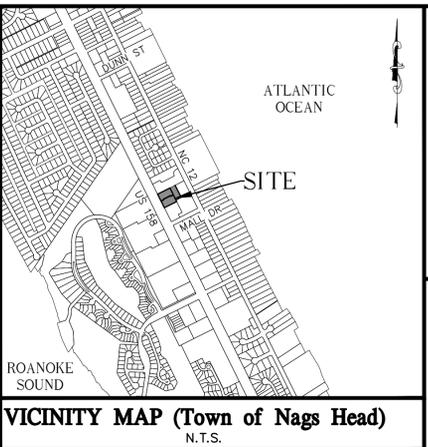
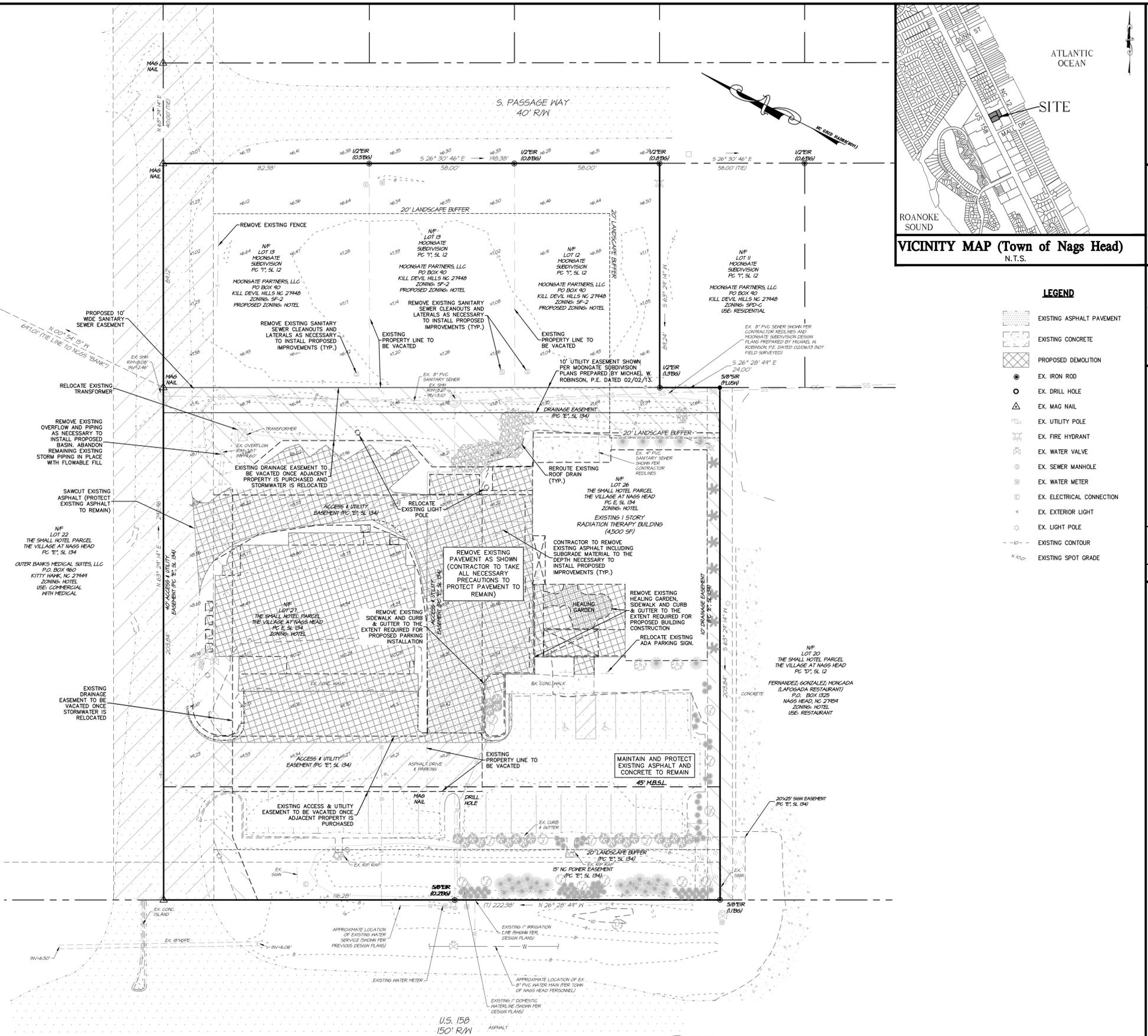
1. PROPERTY OWNERS: MOONGATE PARTNERS, LLC.
PO BOX 129
NAGS HEAD, NC 27859

DOUBLE L CORPORATION
PO BOX 2606
ELIZABETH CITY, NC 27906

UNIVERSITY HEALTH SYSTEMS OF EASTERN CAROLINA
C/O TIM McDONNELL
P.O. BOX 6028
GREENVILLE, NC 27835
2. PROPERTY IDENTIFICATION: 4928, 4926 & 4922 S. PASSAGE WAY
4927 & 4923 SOUTH CROATAN HIGHWAY
PIN# 0801-1313-8885; 0801-1313-8960; 0801-1313-8936
0801-13-13-7759; 0801-1313-7809
PID# 02839113; 02839114; 02839115
027839062; 027839063;
3. PARCEL AREA: 63,021 sq.ft. / 1.45 acres
(AREAS BY COORDINATE METHOD)
4. ZONING CLASSIFICATION: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) (HOTEL DISTRICT OVERLAY)
5. PROPOSED REZONING FOR 4928, 4926 & 4922 S. PASSAGE WAY: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) FROM SF2 (SINGLE FAMILY) ZONING
6. REFERENCES: D.B. 1939, PG. 480; P.C. E, SL. 134
7. FIELD SURVEY BY QUIBLE & ASSOCIATE, P.C. DATES: 06-22-2017, 09-10-2019, & 10-21-2019.
(HORIZONTAL GROUND DISTANCES)
8. VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2012)
9. PROPERTY IS LOCATED IN F.I.R.M. ZONES "AE" (EL. 9')
PANEL 37300801001, DATED 09/20/06
FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.
10. SETBACKS SHOWN ARE PER TOWN OF NAGS HEAD AND DO NOT REFLECT ANY RESTRICTIVE COVENANTS THAT MAY EXIST.
11. PROJECT SCOPE: PERMITTING AND CONSTRUCTION OF A ±10,400 SQ.FT. ADDITION TO THE EXISTING CANCER CENTER WITH ASSOCIATED PARKING AND APPURTENANCES.
12. WASTEWATER: 22 EMPLOYEES @ 250 GPD/EMPLOYEE = 5,500 GPD (WASTEWATER IS PROPOSED TO BE CONVEYED TO CWS WWTP)
13. WATER SUPPLY PER TOWN OF NAGS HEAD. WATER CONNECTION MUST BE MADE IN ACCORDANCE WITH TOWN OF NAGS HEAD SPECIFICATIONS AND SHALL BE PERFORMED BY A LICENSED WATER UTILITY CONTRACTOR. NOTIFY TOWN PRIOR TO INSTALLATION.
14. ALL UTILITIES TO BE PLACED UNDERGROUND UNLESS OTHERWISE NOTED
15. LANDSCAPING AND BUFFERYARDS TO BE IN ACCORDANCE WITH ARTICLE 10 OF THE TOWN OF NAGS HEAD UNIFORM DEVELOPMENT ORDINANCES.
16. SITE WILL BE LIGHTED IN ACCORDANCE WITH ARTICLE 10, PART IV "OUTDOOR LIGHTING" OF THE TOWN OF NAGS HEAD CODE OF ORDINANCES.
17. PRIOR TO LAND DISTURBANCE, A TOWN APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS REQUIRED.
18. NO U.S.A.C.O.E. SECTION 404 JURISDICTIONAL WETLANDS EXIST ON SITE.
19. EXISTING VEGETATION TO BE PRESERVED WHERE POSSIBLE.
20. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.
21. ALL WORK WITHIN THE NC DOT RIGHT-OF-WAY REQUIRES AN APPROVED NC DOT RIGHT-OF-WAY ENCROACHMENT AGREEMENT.
22. A STATE HIGH DENSITY STORMWATER PERMIT IS REQUIRED IN ADVANCE OF ANY ONSITE DISTURBANCE.
23. THIS PLAN SET TO BE UTILIZED FOR THE INSTALLATION OF SITE LAYOUT IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, GRADING & DRAINAGE, INSTALLATION OF SEDIMENT CONTROL MEASURES, WATER SYSTEM AND WASTEWATER CONNECTION. FOR BUILDING DESIGN AND ASSOCIATED PLUMBING, SEE APPROPRIATE SEPARATE PLANS.

DEMOLITION NOTES:

1. CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND SERVICES - TO INCLUDE BUT NOT LIMITED TO ELECTRIC, CABLE, TELEPHONE, GAS, SANITARY SEWER AND WATER - AND SHALL COORDINATE PROPER PROTECTION AND/OR RELOCATE WITH APPROPRIATE OWNER/UTILITY COMPANY.
2. CONTRACTOR SHALL WALK THE SITE AND BE FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND BE UNCLASSIFIED EXCAVATION.
3. DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE CURBS AND GUTTERS, BITUMINOUS CONCRETE PAVEMENTS AND ALL MATERIALS OR VEGETATION CLEARED AND STRIPPED TO THE EXTENT NECESSARY FOR THE INSTALLATION OF NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING. COORDINATE WITH APPROPRIATE DRAWINGS.
4. THE CONTRACTOR SHALL PROTECT ALL PROPERTY AND STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO THE PROPERTY DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO THE OWNER.
5. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM PROJECT AREA.
6. THE CONTRACTOR SHALL PRODUCE A PHOTOGRAPHIC RECORD OF DEVELOPMENT COMMENCING WITH A RECORD OF THE SITE AS IT APPEARS BEFORE DEMOLITION IS BEGUN. AFTERWARDS A PHOTOGRAPHIC RECORD SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS.
7. EXISTING PAVEMENT, CURB AND GUTTER, LIGHTS, FENCES, TREE/VEGETATION AND UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED, AND UNDISTURBED DURING DEMOLITION. CONTRACTOR SHALL COORDINATE THE REMOVAL OF BITUMINOUS CONCRETE PAVEMENTS AND CURB AND GUTTER WITH THE SITE PLAN.
8. SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS TO BE DEMOLISHED SHALL BE PROVIDED.
9. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS AS WELL AS OSHA REGULATIONS.
10. CONTRACTOR'S ACTIVITIES SHALL NOT IMPEDE USAGE OR INGRESS/EGRESS TO ADJACENT PROPERTIES. COORDINATE WITH OWNER MAINTENANCE OF TRAFFIC/PEDESTRIAN CIRCULATION DURING CONSTRUCTION.
11. MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES DURING DEMOLITION.
12. A DEMOLITION PERMIT MUST BE OBTAINED FROM THE TOWN OF NAGS HEAD PRIOR TO DEMOLITION WORK.



VICINITY MAP (Town of Nags Head) N.T.S.

LEGEND

- [Pattern] EXISTING ASPHALT PAVEMENT
- [Pattern] EXISTING CONCRETE
- [Pattern] PROPOSED DEMOLITION
- [Symbol] EX. IRON ROD
- [Symbol] EX. DRILL HOLE
- [Symbol] EX. MAG NAIL
- [Symbol] EX. UTILITY POLE
- [Symbol] EX. FIRE HYDRANT
- [Symbol] EX. WATER VALVE
- [Symbol] EX. SEWER MANHOLE
- [Symbol] EX. WATER METER
- [Symbol] EX. ELECTRICAL CONNECTION
- [Symbol] EX. EXTERIOR LIGHT
- [Symbol] EX. LIGHT POLE
- [Symbol] EXISTING CONTOUR
- [Symbol] EXISTING SPOT GRADE

NC License# C-0208
SINCE 1959
Quible & Associates, P.C.
CONSTRUCTION SURVEYING
ENVIRONMENTAL SCIENCES SURVEYING
ENGINEERING/SURVEYING NOT OFFERED AT BLACK MOUNTAIN OFFICE
8446 CAROLINE HWY. SUITE B
90 CHURCH STREET, SUITE 11
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www.quibleandassociates.com

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NO.	DATE	REV. TOWN COMMENTS
1	12/05/19	

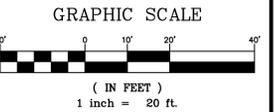
EXISTING CONDITIONS/DEMOLITION PLAN CANCER TREATMENT CENTER OUTER BANKS HOSPITAL

COMMISSION NO.	P17012.1
DESIGNED BY	CMS
DRAWN BY	JMH/CMS
CHECKED BY	MWS
ISSUE DATE	11/12/19

SHEET NO.
1
OF 6 SHEETS



NOTE:
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.



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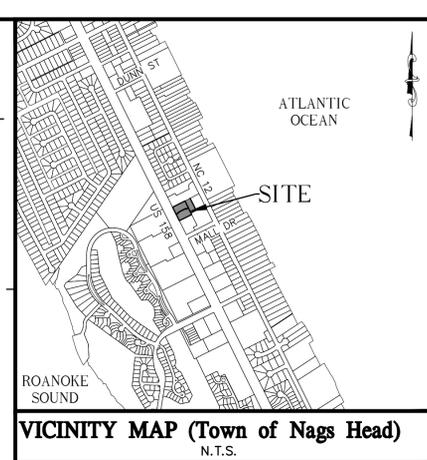
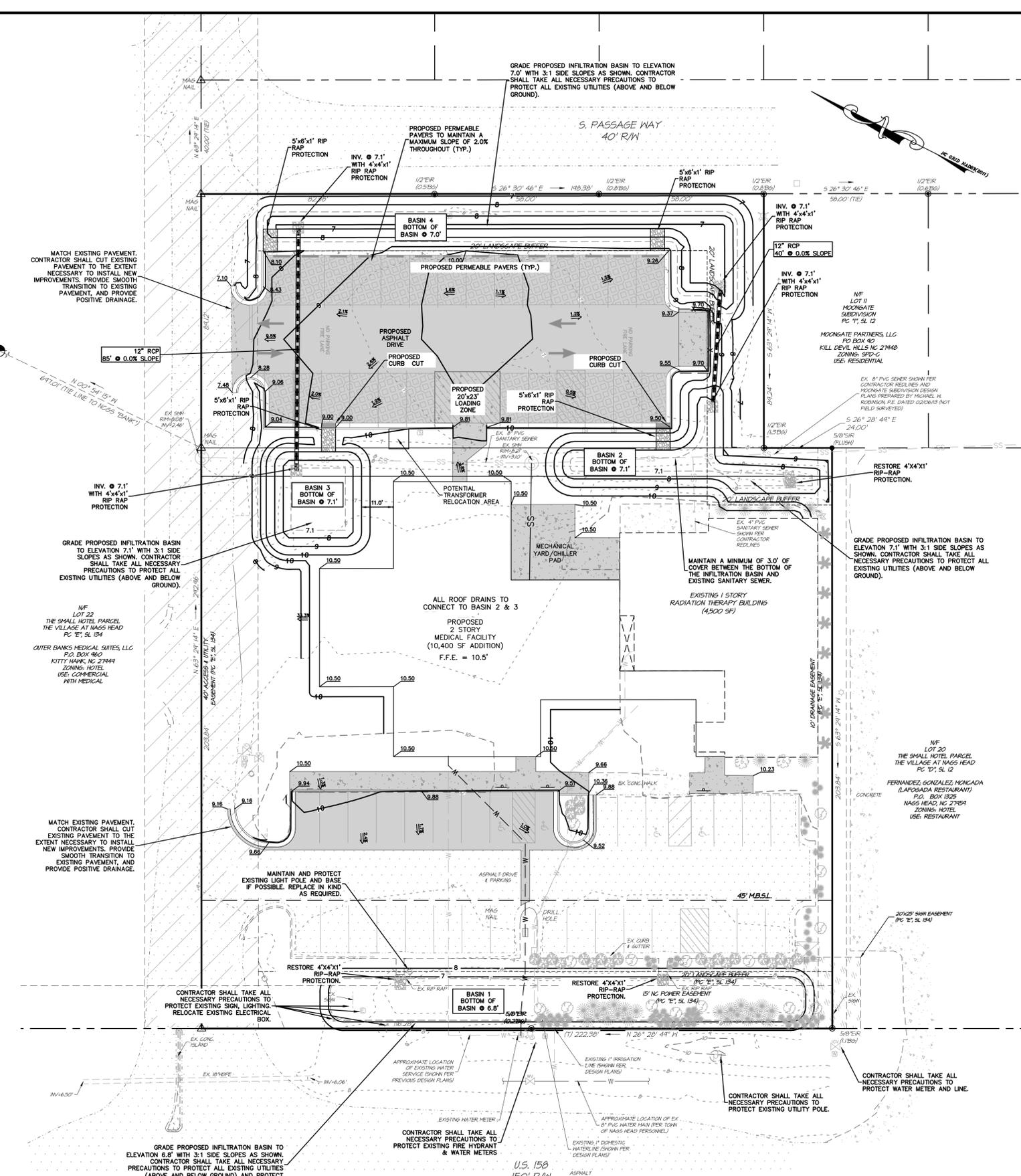
- PROPERTY OWNERS: MOONGATE PARTNERS, LLC. PO BOX 129 NAGS HEAD, NC 27959
DOUBLE L CORPORATION PO BOX 2606 ELIZABETH CITY, NC 27906
UNIVERSITY HEALTH SYSTEMS OF EASTERN CAROLINA C/O TM MCDONNELL PO BOX 6028 GREENVILLE, NC 27835
- PROPERTY IDENTIFICATION: 4928, 4926 & 4922 S. PASSAGE WAY 4927 & 4923 SOUTH CROATAN HIGHWAY PIN#: 0801-1313-8895; 0801-1313-8960; 0801-1313-8936 0801-1313-7759; 0801-1313-7809 PID#: 02839113; 02839114; 02839115 027839062; 027839063.
- PARCEL AREA: 63,021 SQ.FT. / 1.45 ACRES (AREAS BY COORDINATE METHOD)
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- FIELD SURVEY BY QUIBLE & ASSOCIATE, P.C. DATES: 06-22-2017, 09-10-2019, & 10-21-2019. (HORIZONTAL GROUND DISTANCES)
- VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2012)
- PROPERTY IS LOCATED IN F.I.R.M. ZONES "A" (EL. 9') PANEL 3730080100J, DATED 09/20/06. FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.
- PROJECT SCOPE: PERMITTING AND CONSTRUCTION OF A ±10,400 SQ.FT. ADDITION TO THE EXISTING CANCER CENTER WITH ASSOCIATED PARKING AND APPURTENANCES.
- SETBACKS SHOWN ARE PER TOWN OF NAGS HEAD AND DO NOT REFLECT ANY RESTRICTIVE COVENANTS THAT MAY EXIST.
- HANDICAP PARKING SPACES SHALL NOT EXCEED 2% GRADE.
- AREAS OF FILL SHALL BE EXCAVATED TO COMPACTED SUBGRADE AND BACKFILLED IN 6" LIFTS.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, APPLICABLE TOWN OF NAGS HEAD CODES AND ORDINANCES, AND NCDQR DIVISION OF ENERGY, MINERAL AND LAND RESOURCES REGULATIONS.
- THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.
- THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
- THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
- ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
- PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
- ALL PORTIONS OF ROOF DRAIN COLLECTION SYSTEM WITH LESS THAN 36" OF COVER IN TRAFFIC RATED CONDITIONS SHALL BE DUCTILE IRON PIPE.
- TEMPORARY CONSTRUCTION EASEMENT MUST BE OBTAINED PRIOR TO ANY WORK ON ADJACENT PROPERTIES.
- A STATE HIGH DENSITY STORMWATER PERMIT IS REQUIRED IN ADVANCE OF ANY ONSITE DISTURBANCE.

MATCH EXISTING PAVEMENT. CONTRACTOR SHALL CUT EXISTING PAVEMENT TO THE EXTENT NECESSARY TO INSTALL NEW IMPROVEMENTS. PROVIDE SMOOTH TRANSITION TO EXISTING PAVEMENT, AND PROVIDE POSITIVE DRAINAGE.

GRADE PROPOSED INFILTRATION BASIN TO ELEVATION 7.1' WITH 3:1 SIDE SLOPES AS SHOWN. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND).

MATCH EXISTING PAVEMENT. CONTRACTOR SHALL CUT EXISTING PAVEMENT TO THE EXTENT NECESSARY TO INSTALL NEW IMPROVEMENTS. PROVIDE SMOOTH TRANSITION TO EXISTING PAVEMENT, AND PROVIDE POSITIVE DRAINAGE.

GRADE PROPOSED INFILTRATION BASIN TO ELEVATION 6.8' WITH 3:1 SIDE SLOPES AS SHOWN. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND) AND PROTECT EXISTING PAVEMENT AND CURB & GUTTER.



LEGEND

●	EX. IRON ROD	▨	EXISTING ASPHALT PAVEMENT
○	EX. DRILL HOLE	▨	EXISTING CONCRETE
△	EX. MAG NAIL	▨	PROPOSED CONCRETE
□	EX. UTILITY POLE	▨	PROPOSED ASPHALT
⊕	EX. FIRE HYDRANT	▨	PROPOSED PERMEABLE PAVEMENT
⊖	EX. WATER VALVE	▨	PROPOSED RIP RAP
⊗	EX. SEWER MANHOLE	▨	EXISTING CONTOUR
⊙	EX. WATER METER	▨	EXISTING SPOT GRADE
⊕	EX. ELECTRICAL CONNECTION	▨	PROPOSED SPOT GRADE (TOP OF ASPHALT/FLOW LINE UNLESS OTHERWISE NOTED)
⊖	EX. EXTERIOR LIGHT	▨	PROPOSED TOP OF CONCRETE ELEV.
⊙	EX. LIGHT POLE	▨	PROPOSED FLOW DIRECTION AND SLOPE

QUIBLE & ASSOCIATES, P.C.
 CIVIL ENGINEERING & SURVEYING
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 8446 CAROLINA HWY. SUITE B
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 Email: info@quible.com
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REVISIONS

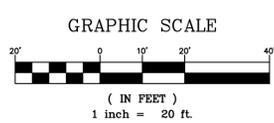
NO.	DATE	PER	TOWN COMMENTS
1	12/05/19		

GRADING & DRAINAGE PLAN
CANCER TREATMENT CENTER
OUTER BANKS HOSPITAL
 NORTH CAROLINA
 DARE COUNTY
 NAGS HEAD TOWNSHIP

COMMISSION NO. P17012.1
 DESIGNED BY CMS
 DRAWN BY JMH/CMS
 CHECKED BY MWS
 ISSUE DATE 11/12/19
 SHEET NO. 3 OF 6 SHEETS



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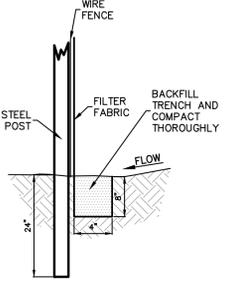


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SOIL EROSION & SEDIMENTATION CONTROL PLAN NOTES:

- AREA TO BE DISTURBED: ±44,827 SQ.FT. (±1.02 ACRES)
 - PERIMETER DIKES, BERMS, SWALES, DITCHES AND SLOPES SHALL BE STABILIZED IN 7 DAYS.
 - HIGH QUALITY WATER (HOW) ZONES SHALL BE STABILIZED IN 7 DAYS.
 - DOWNSLOPE SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED IN 7 DAYS. IF SLOPES ARE 10' OR LESS AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
 - DOWNSLOPE SLOPES 3:1 OR FLATTER AND LESS THAN 50' IN LENGTH SHALL BE STABILIZED IN 14 DAYS. SLOPES 3:1 OR FLATTER EXCEEDING 50' IN LENGTH SHALL BE STABILIZED IN 7 DAYS.
 - ALL OTHER DOWNSLOPE AREAS WITH SLOPES 4:1 OR FLATTER SHALL BE STABILIZED WITHIN 14 DAYS.
 - GROUND COVER SHALL BE PROVIDED ON CUT AND FOR FILL SLOPES WITHIN 21 CALENDAR DAYS AFTER COMPLETION OF ANY PHASE OF GRADING. GROUND COVER OVER OTHER AREAS SHALL BE PROVIDED WITHIN SHORTER OF 15 WORKING OR 90 CALENDAR DAYS (90 DAYS IN HOW ZONES) OF COMPLETION OF CONSTRUCTION OF DEVELOPMENT.
- IF LAND DISTURBING ACTIVITIES OCCUR OUTSIDE THE PERMANENT VEGETATION SEEDING DATES (APR. 1 - SEP.30) THEN TEMPORARY VEGETATION SEEDING SPECIFICATIONS SHALL BE FOLLOWED FOR PLANTING UNTIL THE NEXT APPROPRIATE PERMANENT SEEDING PERIOD, AT WHICH TIME PERMANENT VEGETATION SHALL BE ESTABLISHED ACCORDING TO PERMANENT VEGETATION SEEDING SPECIFICATIONS (SEE PERM. & TEMP. SEEDING SPECIFICATIONS).
- IF EXCESSIVE WIND EROSION OR STORMWATER RUNOFF EROSION DEVELOPS DURING TIME OF CONSTRUCTION ANY LOCATION ON THE PROJECT SITE, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IMMEDIATELY AS DIRECTED BY THE ENGINEER TO ADDRESS THE PROBLEM AREA AND PREVENT DAMAGE TO ADJACENT PROPERTIES.
- SOIL EROSION AND SEDIMENTATION CONTROLS TO BE INSPECTED, MAINTAINED AND REPAIRED AS NECESSARY UNTIL PERMANENT CONTROLS ARE ESTABLISHED.
 - A RAIN GAUGE MUST BE KEPT ON SITE.
 - DEDICATED DEMOLITION AND OTHER WASTE AREAS AND EARTHEN MATERIAL STOCKPILES MUST BE LOCATED AT LEAST 50 FEET FROM DRAINS OR STREAMS UNLESS NO ALTERNATIVE IS FEASIBLE.
 - ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN A HALF INCH (DURING A 24 HOUR PERIOD). IMMEDIATE CORRECTIVE ACTION MUST BE TAKEN FOR ANY DEVICE FAILURE.
 - INSPECT ALL OUTLETS WHERE RUNOFF LEAVES SITE AND EVALUATE EFFECT ON NEARBY STREAMS. TAKE CORRECTIVE ACTION IF NECESSARY.
 - MAINTAIN RECORDS OF INSPECTIONS AND CORRECTIVE ACTIONS.
 - EARTHWORK NOTE: OFFSITE BORROW MATERIAL SHALL COME FROM AN NCDNR LAND QUALITY SECTION APPROVED SITE. OFFSITE DISPOSAL OF EXCESS MATERIAL SHALL BE TO AN NCDNR LAND QUALITY SECTION APPROVED SITE.

NOTE: ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. CONTRACTOR SHALL INSPECT AND MAINTAIN ALL EROSION CONTROL DEVICES ON A WEEKLY BASIS AND AFTER EACH MAJOR STORM EVENT; FAILURE TO KEEP ORDER MAY RESULT IN ISSUANCE OF A STOP WORK ORDER.



SILT FENCE DETAIL
N.T.S.

PERMANENT VEGETATION

SEED MIXTURE	APPLICATION RATES/ACRE
REBEL II FESCUE	130 LBS.
COMMON BERMUDA 'SAHARA' (HULLED)	215 LBS.

TEMPORARY VEGETATION

SEED MIXTURE	APPLICATION RATES/ACRE
RYE GRASS	120 LBS.
GERMAN MILLET	40 LBS.

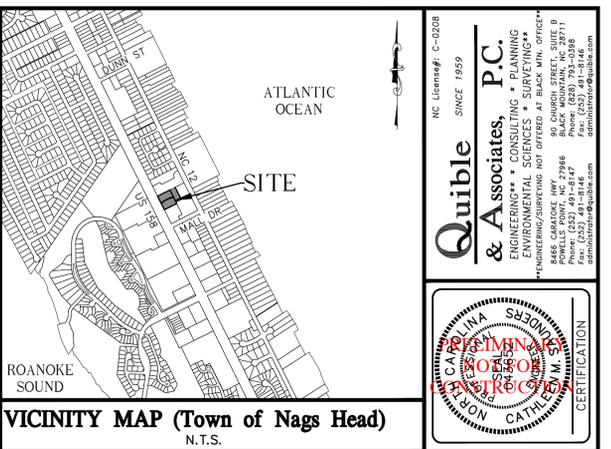
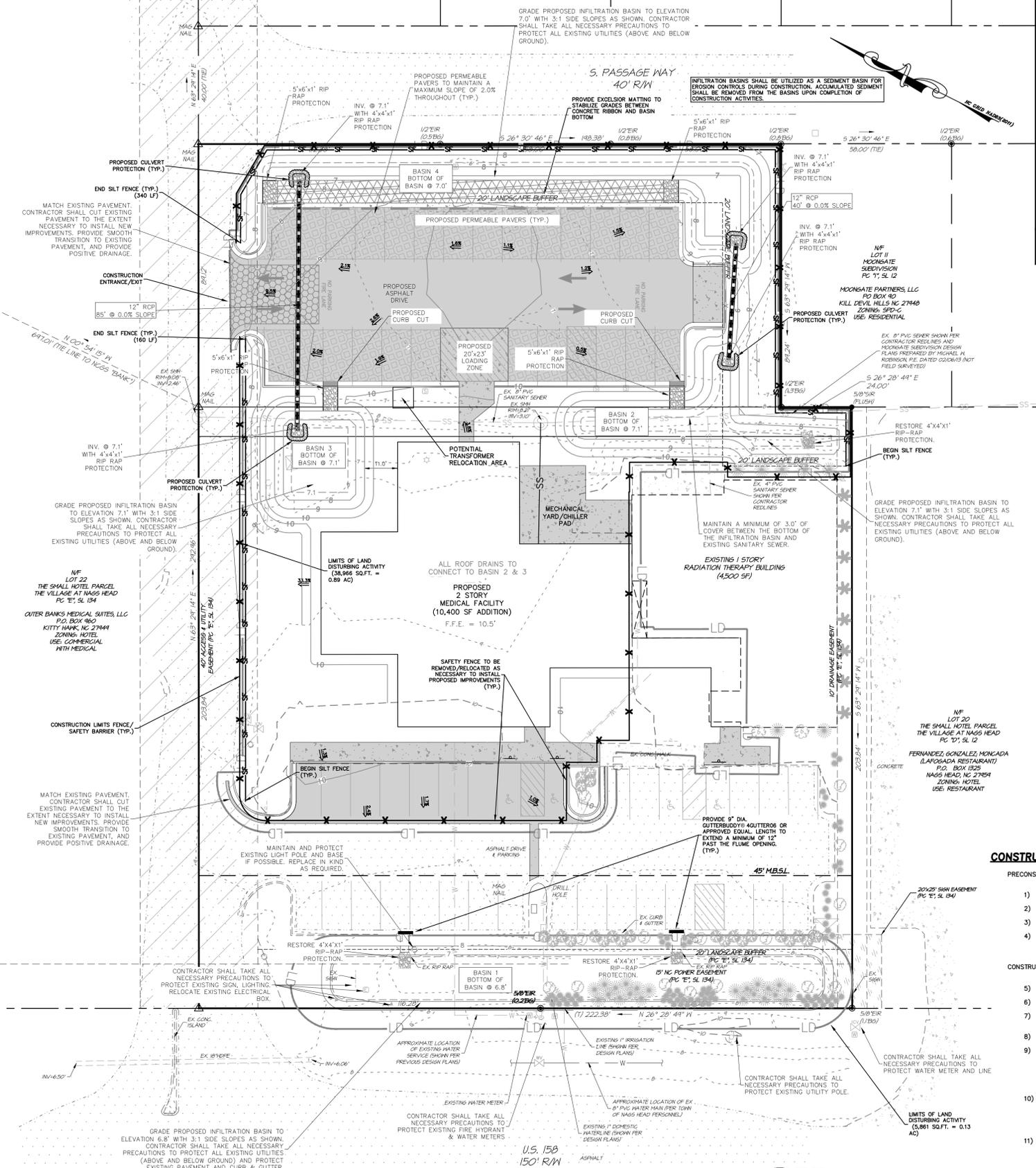
SOIL AMENDMENTS:
OBTAIN A SOIL TEST TO DETERMINE APPLICATION RATES AND FOLLOW RECOMMENDATIONS OF SOIL TESTS. WHEN A SOIL TEST IS NOT POSSIBLE, APPLY 3,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 STARTER FERTILIZER.

MULCHING:
APPLY 4,000 LB/ACRE STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL.

MAINTENANCE:
SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER. EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY AND, IF LEFT UNATTENDED, CAN ALLOW SERIOUS SOIL LOSS FROM AN OTHERWISE STABLE SURFACE. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED, THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLIES DEVELOP, THEY MUST BE FILLED IN, RE-SEED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD.

MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE. (COMPLETE VEGETATIVE COVER IS REQUIRED REGARDLESS OF COUNTY ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND FINAL PAYMENT WILL NOT BE AWARDED UNTIL COMPLETE ESTABLISHMENT OF VEGETATIVE COVER.)

WEAK OR DAMAGED SPOTS MUST BE RELIEM, FERTILIZED, MULCHED, AND RESEED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.



LEGEND

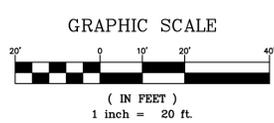
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○	EX. DRILL HOLE	▩	EXISTING CONCRETE
△	EX. MAG NAIL	▧	PROPOSED CONCRETE
⊕	EX. UTILITY POLE	▦	PROPOSED ASPHALT
⊗	EX. FIRE HYDRANT	▤	PROPOSED EXCELSIOR MATTING
⊙	EX. WATER VALVE	▥	EXISTING CONTOUR
⊚	EX. SEWER MANHOLE	▦	PROPOSED CONTOUR
⊛	EX. WATER METER	▧	PROPOSED FLOW DIRECTION AND SLOPE
⊜	EX. ELECTRICAL CONNECTION	▨	PROPOSED LIMITS OF DISTURBANCE
⊝	EX. EXTERIOR LIGHT	▩	PROPOSED CULVERT INLET PROTECTION
⊞	EX. LIGHT POLE	▧	PROPOSED FENCE
⊟		▦	PROPOSED SILT FENCE
⊠		▥	PROPOSED CONSTRUCTION LIMITS
⊡		▤	PROPOSED SAFETY BARRIER

CONSTRUCTION SEQUENCE:

- PRECONSTRUCTION:**
- OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
 - FLAG AND/OR ROUGH STAKE WORK LIMITS.
 - FLAG EXISTING VEGETATION TO REMAIN/PROTECT.
 - HOLD PRECONSTRUCTION CONFERENCE (OWNER, CONTRACTOR, ENGINEER, AND APPROPRIATE GOVERNMENT OFFICIALS) AT LEAST ONE WEEK PRIOR TO START OF CONSTRUCTION ACTIVITIES.
- CONSTRUCTION:**
- INSTALL SILT FENCING AT LOCATIONS SHOWN ON PLAN
 - COMPLETE CLEARING, GRUBBING AND DEMOLITION PROCEDURES.
 - GRADE SITE ACCORDING TO PLAN AND BEGIN CONSTRUCTION OF PROPOSED IMPROVEMENTS, INCLUDING UTILITY RECONNECTIONS.
 - INSTALL CONTRIBUTING STORM CONVEYANCES AND ASSOCIATED EROSION CONTROLS.
 - ALL EROSION & SEDIMENTATION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER HEAVY RAINFALL EVENT. NEEDED REPAIRS AND MAINTENANCE WILL BE MADE IMMEDIATELY. FURTHERMORE, IF ANY WIND OR STORMWATER RUNOFF EROSION DEVELOPS DURING THE CONSTRUCTION OF THE PROJECT, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO ADDRESS THE PROBLEM AREA.
 - ONCE THE SITE CONSTRUCTION IS COMPLETE AND DENURED SURFACES ARE FULLY STABILIZED; ALL STORMWATER CONVEYANCES, STRUCTURES AND PIPING SHALL BE CLEANED OF ALL SILT/DEBRIS WHICH MAY HAVE ACCUMULATED DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY DESIGN GRADES OF ALL STORMWATER CONVEYANCES AND RESTORE TO DESIGN SPECIFICATIONS AS NECESSARY.
 - UPON THE REMOVAL OF ACCUMULATED SEDIMENTS AND SITE STABILIZATION, ALL REMAINING EROSION CONTROLS MAY BE REMOVED FROM THE DEVELOPMENT. ALL DOWNSLOPE EROSION CONTROLS SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF ALL OTHER DEVELOPMENT CONSTRUCTION ACTIVITIES.



NOTE:
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.

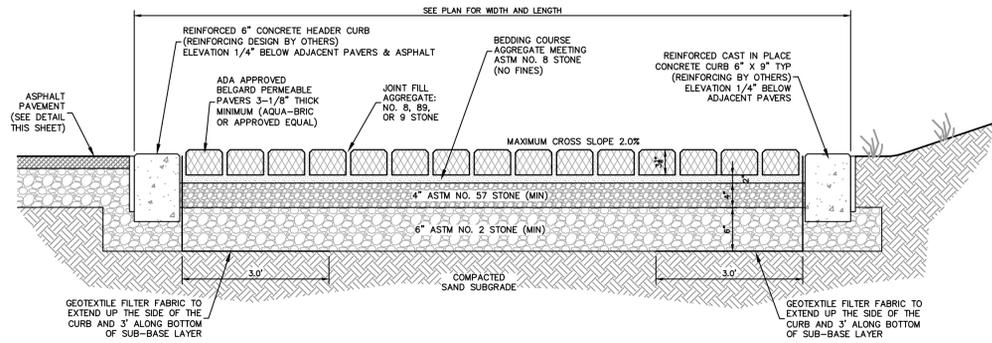


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Quible & Associates, P.C.
CONSTRUCTION SURVEYING
ENVIRONMENTAL SCIENCES SURVEYING
100 CHURCH STREET, SUITE B
NAGS HEAD, NC 27954
Phone: (252) 491-1427
Fax: (252) 491-1428
www.quibleandassociates.com

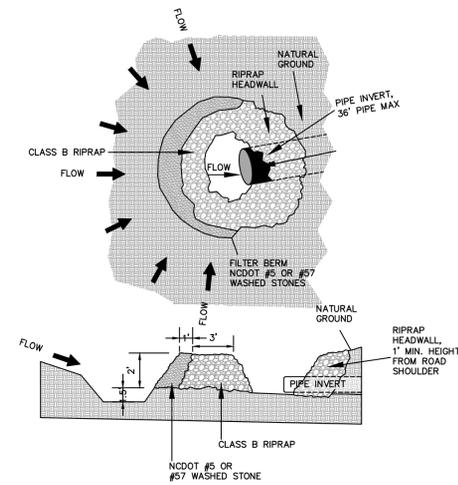
REVISIONS:

NO.	DATE	DESCRIPTION
1	12/02/19	PER TOWN COMMENTS

COMMISSION NO. P17012.1
DESIGNED BY CMS
DRAWN BY JMH/CMS
CHECKED BY MWS
ISSUE DATE 11/12/19
SHEET NO. 4 OF 6 SHEETS



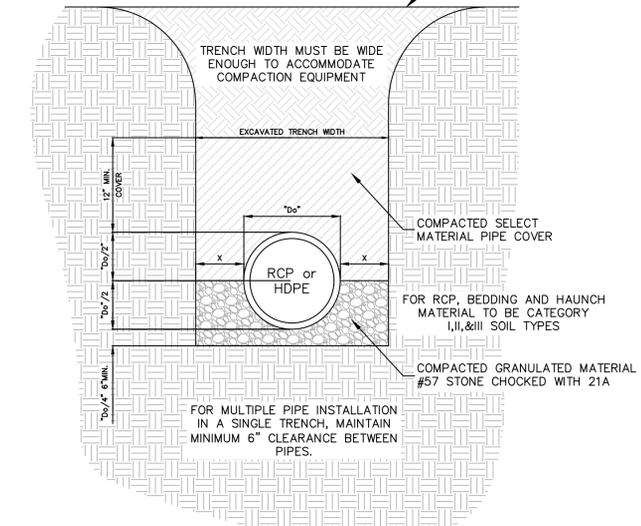
TYPICAL BELGARD® PERMEABLE PAVER INSTALLATION DETAIL
N.T.S.



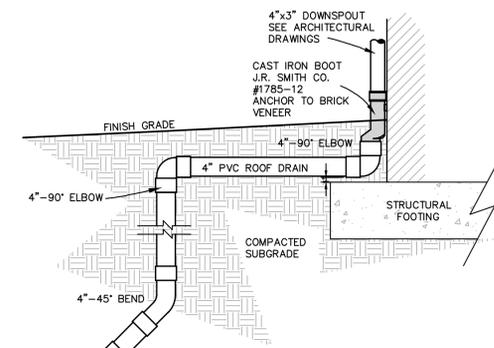
CULVERT INLET PROTECTION
N.T.S.

- HDPE NOTES:**
1. ALL PIPE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THESE SPECIFICATIONS OR AS MODIFIED BY THE OWNER.
 2. TRENCH BOX OR OTHER SHORING METHODS SHALL NOT DISTURB THE PIPE BEDDING AND BACKFILL MATERIAL AFTER THEIR COMPACTION.
 3. WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH INDICATED ON THE DRAWING OR AS DIRECTED BY THE OWNER AND REPLACE WITH BEDDING MATERIAL.
 4. BEDDING MATERIAL SHALL BE CRUSHED STONE OR WASHED #67 STONE, UNLESS OTHERWISE NOTE ON THE DRAWINGS OR REQUIRED BY THE OWNER. MINIMUM BEDDING THICKNESS SHALL BE 6-INCHES.
 5. BACKFILL MATERIAL SHALL CONFORM TO THE FOLLOWING:
 - A. INITIAL BACKFILL: AGGREGATE NO. 25, 26, 21A, OR 21 B; AS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE OWNER, SHALL BE INSTALLED AS INITIAL BACKFILL IN THE PIPE ZONE EXTENDING NOT LESS THAN 12-INCHES ABOVE THE CROWN OF PIPE. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM 02321, LATEST EDITION.
 - B. FINAL BACKFILL: FINAL BACKFILL MATERIALS SHALL BE THE SAME AS THE INITIAL BACKFILL UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR DIRECTED BY THE OWNER.
 6. MINIMUM COVER:
 - TRAFFIC APPLICATIONS - MINIMUM COVER SHALL BE 24", MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF FLEXIBLE PAVEMENT OR TO THE TOP OF RIGID PAVEMENT.
 - NON-TRAFFIC APPLICATIONS - MINIMUM COVER IN GRASS OR LANDSCAPE AREA IS 12-INCHES FROM THE TOP OF THE PIPE TO GROUND SURFACE.

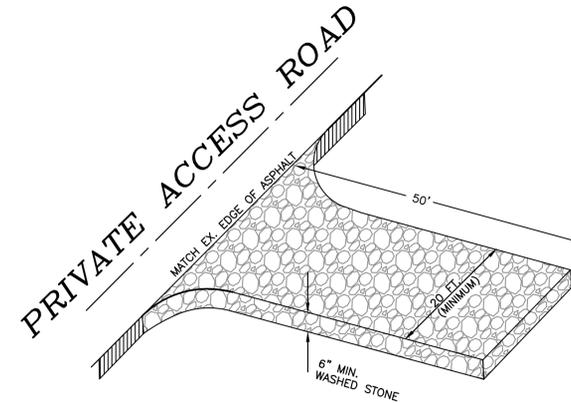
- NOTES:**
1. SELECT MATERIAL PIPE COVER SHALL BE 12" (MINIMUM) DEEP OVER TOP OF PIPE.
 2. SELECT MATERIAL BACKFILL SHALL BE CBR 20 COMPACTED TO 95% DENSITY. BACKFILL COMPACTED IN 12" LIFTS.
- TRENCH SHALL BE BACKFILLED WITH CLEAN SAND AND TOPPED WITH TOP SOIL. IF LOCATED IN PAVEMENT, PAVE PER PAVEMENT SPECIFICATIONS.



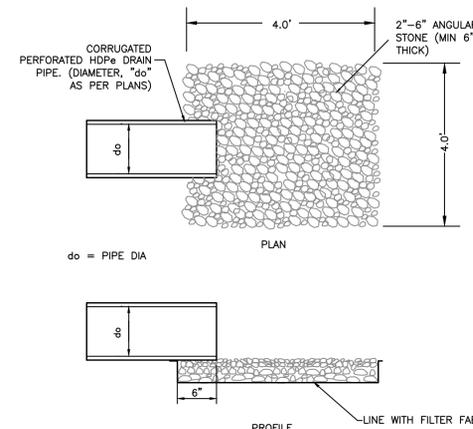
STORM PIPE TRENCH SECTION
N.T.S.



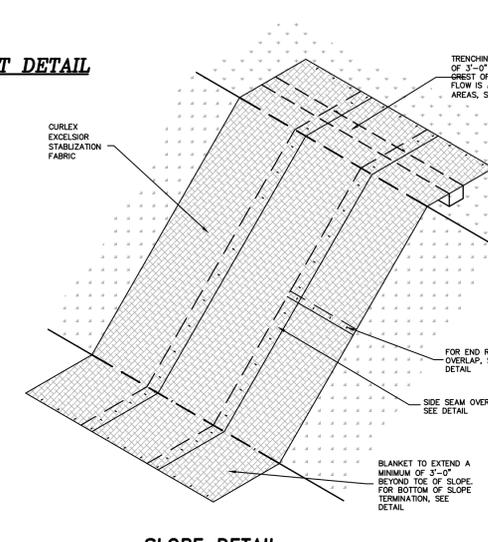
ELEVATION VIEW
CONNECT TO PVC ROOF DRAIN (SEE ARCHITECTURAL PLANS FOR CONTINUATION)



GRAVEL CONSTRUCTION ENTRANCE/EXIT DETAIL
N.T.S.



DRAIN PIPE OUTLET DETAIL
N.T.S.

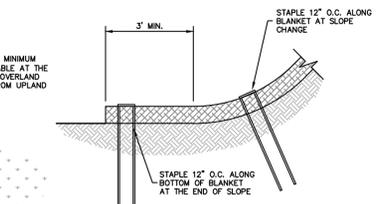


SLOPE DETAIL
N.T.S.

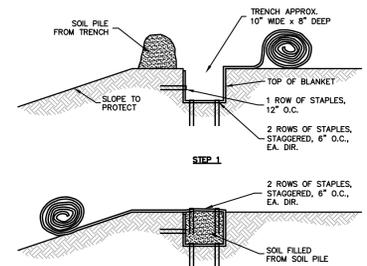
CURLEX® SLOPE APPLICATION DETAIL
AMERICAN EXCELSIOR COMPANY
ARLINGTON, TEXAS

END ROLL OVERLAP
N.T.S.

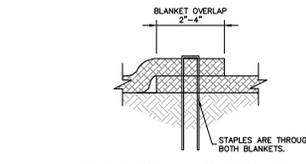
- NOTES:**
1. STAPLE PATTERNS ARE DEPENDENT ON SITE CONDITIONS. SEE CURLEX® STAPLE PATTERN GUIDE FOR DETAILS.



BOTTOM OF SLOPE TERMINATION
N.T.S.

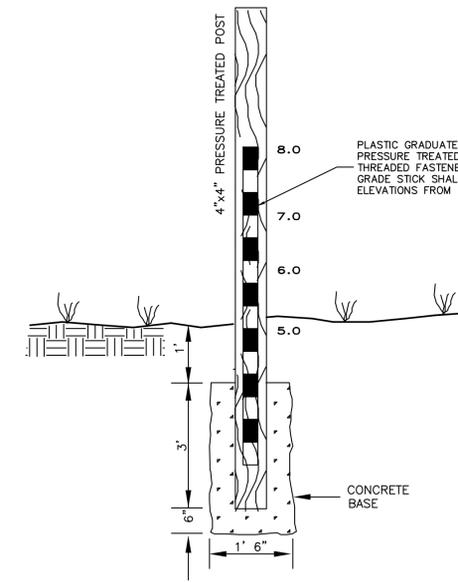


SLOPE TRENCHING METHOD "B"
N.T.S.

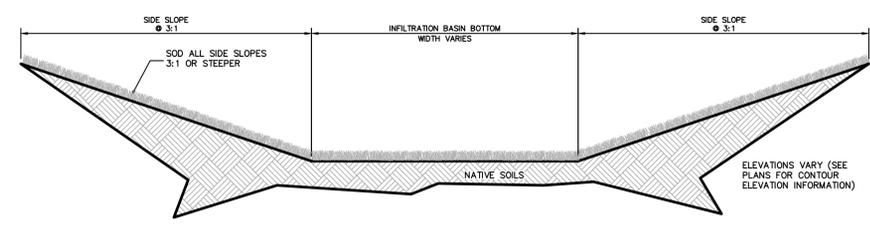


SIDE SEAM OVERLAP STAPLE DETAIL
N.T.S.

BASIN	BOTTOM ELEVATION	SEDIMENT SHALL BE REMOVED WHEN THE DEPTH REACHES:	TOP ELEVATION
1 (FRONT)	6.8'	7.3'	8.0'
2 (BLDG)	7.1'	7.6'	9.0'
3 (SIDE)	7.1'	7.6'	9.0'
4 (REAR)	7.0'	7.5'	8.5'



DEPTH BENCHMARK
N.T.S.



TYPICAL INFILTRATION BASIN CROSS-SECTION DETAIL
N.T.S.

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Quible & Associates, P.C.
CONSTRUCTION SURVEYING
ENVIRONMENTAL SCIENCE SURVEYING
90 CHURCH STREET, SUITE B
RANDOLPH, NORTH CAROLINA 28134
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Fax: (828) 793-0388
www.quibleandassociates.com

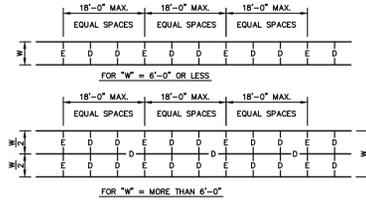
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CHECKED BY MWS
ISSUE DATE 11/12/19
SHEET NO. 5 OF 6 SHEETS

DRAINAGE & SECS DETAILS
CANCER TREATMENT CENTER
OUTER BANKS HOSPITAL
NAGS HEAD TOWNSHIP DARE COUNTY NORTH CAROLINA

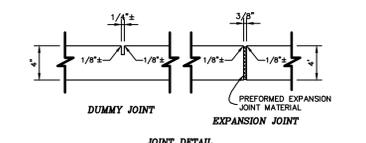
REVISIONS:
NO. DATE PER TOWN COMMENTS

1 12/05/19

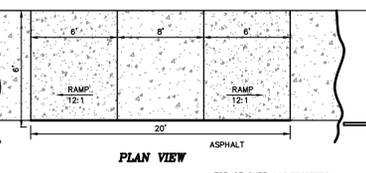
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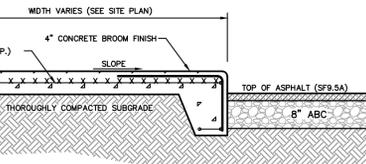
NOTES:
EXCEPT WHERE SHOWN IN THE PLAN, ALL NEW CONC. WALKS SHALL HAVE JOINTS SPACED AS SHOWN IN THESE DETAILS.
AN EXPANSION JOINT SHALL BE USED TO SEPARATE THE NEW CONC. WALK FROM OTHER NEW OR EXISTING CONCRETE CONSTRUCTION.



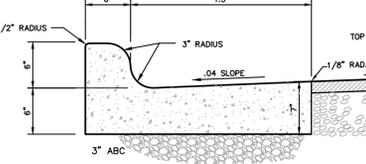
SIDEWALK JOINTS
N.T.S.



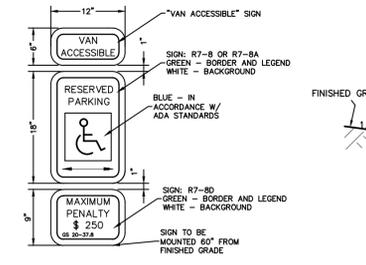
WHEELCHAIR RAMP
N.T.S.
1. USE ADJACENT TO ALL HANDICAPPED SPACES



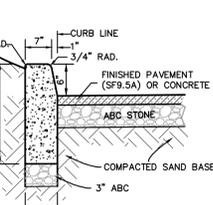
RAISED CURB SIDEWALK/ASPHALT SECTION
N.T.S.



CURB & GUTTER CROSS SECTION (1.5' GUTTER)
N.T.S.



ADA RESERVED PARKING SIGN DETAIL
N.T.S.

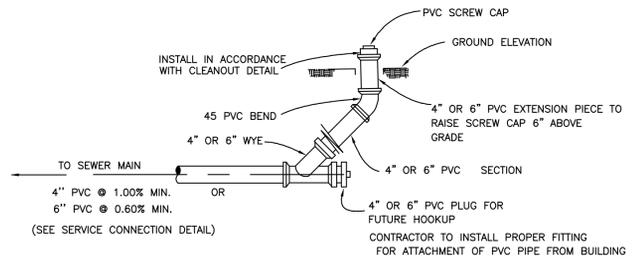


PARKWAY CURB
N.T.S.

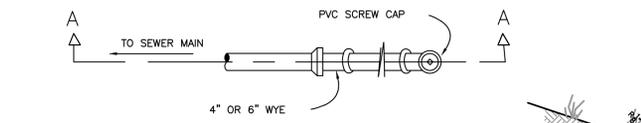
TYPICAL SPECIFICATIONS

SPECIFICATIONS FOR SIDEWALKS, CURBS, ALLEYS, CONCRETE PAVEMENT
ALL REINFORCING STEEL SHALL BE GRADE 60 (ASTM A615)
ALL WELDED WIRE FABRIC SHALL BE 6 x 6, W1.4 x W1.4 (ASTM A185)
A 1-1/2" CLEAR CONCRETE COVER SHALL BE MAINTAINED ON ALL REINFORCEMENT
ALL CONCRETE SHALL BE 3000 PSI FIBER MESH UNLESS OTHERWISE NOTED SPECIFICATIONS OF ASPHALT
ALL ABC STONE SHALL BE COMPACTED TO 100% OF STANDARD PROCTOR (ASTM D698)
ASPHALT SHALL BE 2" SF9.5A

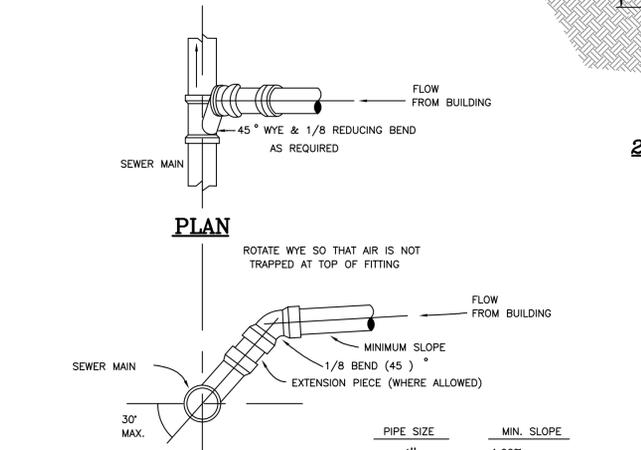
SPECIFICATIONS FOR SUBBASE
ALL SUBBASE SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR (ASTM D698)



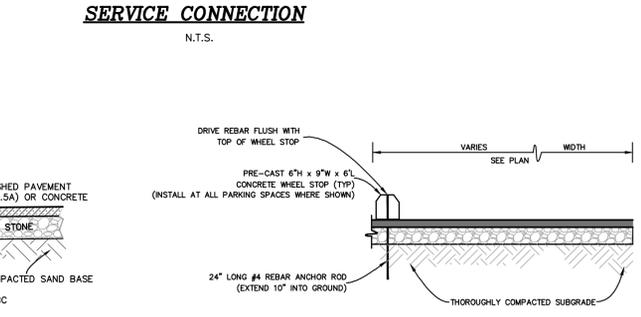
SECTION A



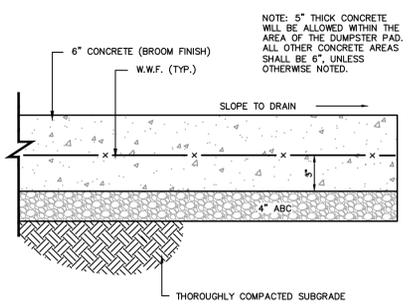
PLAN VIEW SINGLE SERVICE LATERAL CONNECTION
N.T.S.



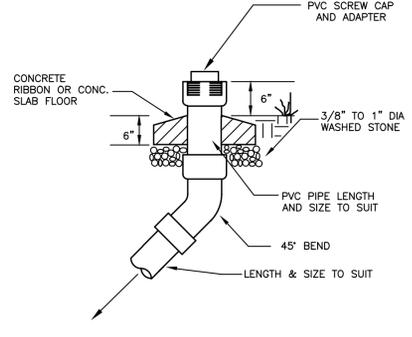
SERVICE CONNECTION
N.T.S.



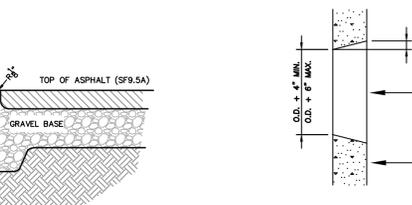
WHEEL STOP DETAIL
N.T.S.



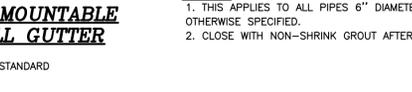
CONCRETE PAVEMENT SECTION
N.T.S.



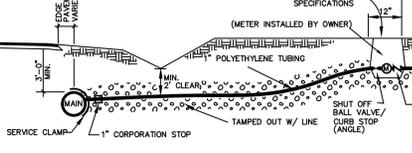
TYPICAL SEWER CLEAN-OUT
N.T.S.



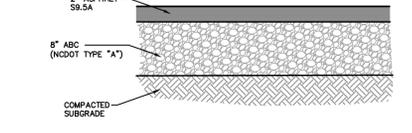
IN FIELD PIPE OPENINGS
N.T.S.



2' CONCRETE MOUNTABLE CURB & SPILL GUTTER
N.T.S. MODIFIED NCDOT STANDARD 846.01

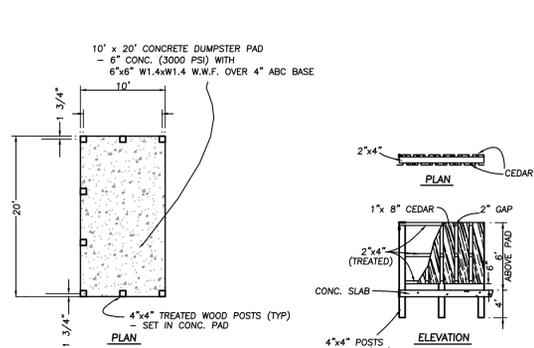


STANDARD 1" SERVICE LINE AND METER BOX INSTALLATION
N.T.S.

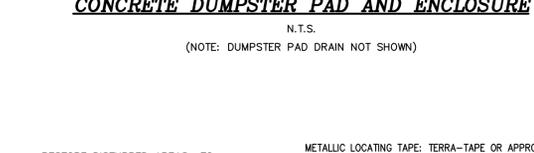


TYPICAL ASPHALT SECTION
N.T.S.

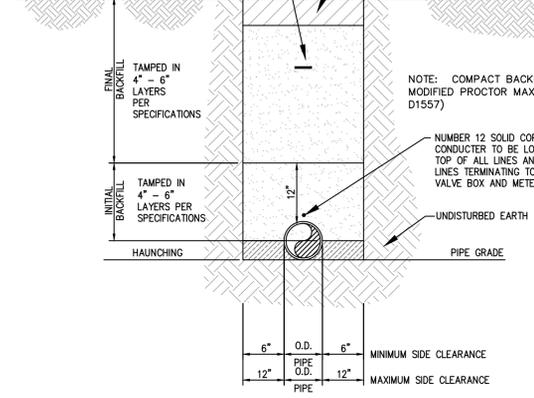
COMPACTION NOTES:
1. PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
2. COMPACT BACKFILL AND SUBGRADE TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) ALL BACKFILL MATERIAL SHALL BE SELECT BACKFILL UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
3. SELECT FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES (S.W., SP., SM., S.M., S.F., S.F.) HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.



DUMPSTER PAD ENCLOSURE
N.T.S.

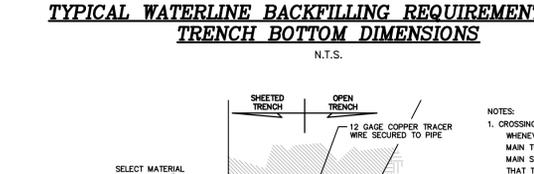


CONCRETE DUMPSTER PAD AND ENCLOSURE
N.T.S. (NOTE: DUMPSTER PAD DRAIN NOT SHOWN)



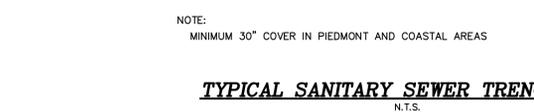
TYPICAL WATERLINE BACKFILLING REQUIREMENTS AND TRENCH BOTTOM DIMENSIONS
N.T.S.

NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" AND LARGER SHALL BE USED IN INITIAL BACKFILL AREA.
3. ALL BACKFILL MATERIAL SHALL BE SATISFACTORY SOIL MATERIALS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER. (SATISFACTORY SOIL FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES [SW, SP, SP-SM, SM] HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.)



STANDARD EXCAVATION
N.T.S.

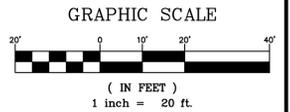
NOTE:
MINIMUM 30" COVER IN PIEDMONT AND COASTAL AREAS



TYPICAL SANITARY SEWER TRENCHING
N.T.S.



NOTE:
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8446 CAROLINA HWY. SUITE B
90 CHURCH STREET, SUITE 111
FARMINGTON, NC 27834
Phone: (252) 491-8446
Fax: (252) 491-8447
www.quible.com



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NO.	DATE	PER TOWN COMMENTS
1	12/05/19	

SITE & UTILITY DETAILS
CANCER TREATMENT CENTER
OUTER BANKS HOSPITAL
NORTH CAROLINA
DARE COUNTY
NAGS HEAD TOWNSHIP

COMMISSION NO. P17012.1
DESIGNED BY CMS
DRAWN BY JMH/CMS
CHECKED BY MWS
ISSUE DATE 11/12/19

SHEET NO. **6**
OF 6 SHEETS

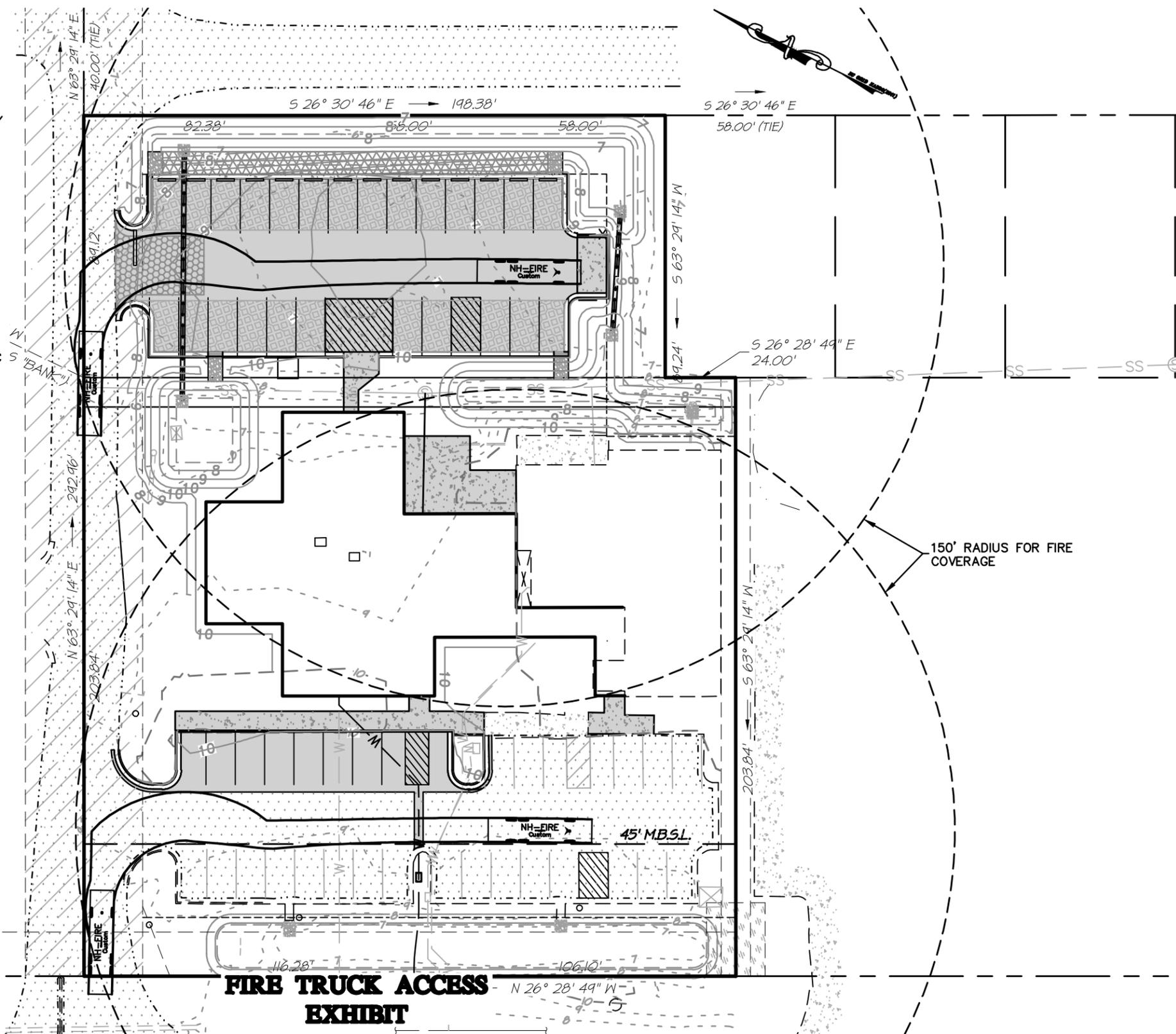
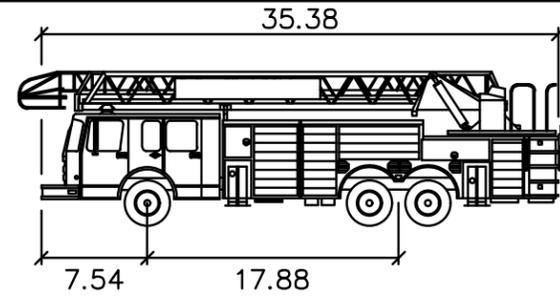
NOTES:

- PROPERTY OWNERS: MOONGATE PARTNERS, LLC.
PO BOX 129
NAGS HEAD, NC 27959

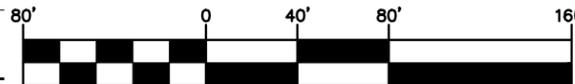
DOUBLE L CORPORATION
PO BOX 2606
ELIZABETH CITY, NC 27906

UNIVERSITY HEALTH SYSTEMS OF EASTERN CAROLINA

C/O TIM MCDONNELL
PO BOX 6028
GREENVILLE, NC 27835
- PROPERTY IDENTIFICATION: 4928, 4926 & 4922 S. PASSAGE WAY
4927 & 4923 SOUTH CROATAN HIGHWAY
PIN#: 0801-1313-8895;
0801-1313-8960; 0801-1313-8936
0801-13-13-7759;
0801-1313-7809
PID#: 02839113; 02839114; 02839115
027839062; 027839063;
- PARCEL AREA: 63,021 SQ.FT. / 1.45 ACRES
(AREAS BY COORDINATE METHOD)
- ZONING CLASSIFICATION: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) (HOTEL DISTRICT OVERLAY)
- PROPOSED REZONING FOR 4928, 4926 & 4922 S. PASSAGE WAY: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) FROM SF2 (SINGLE FAMILY) ZONING
- REFERENCES: D.B. 1939, PG. 480; P.C. E, SL. 134
- FIELD SURVEY BY QUIBLE & ASSOCIATE, P.C. DATES: 06-22-2017, 09-10-2019, & 10-21-2019.
(HORIZONTAL GROUND DISTANCES)
- VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2012)
- PROPERTY IS LOCATED IN F.I.R.M. ZONES "AE" (EL. 9')
PANEL 3730080100J, DATED 09/20/06
FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.



GRAPHIC SCALE



(IN FEET)
1 inch = 80' ft.

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Quible & Associates, P.C. SINCE 1959
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
ENG./SUR. NOT OFFERED AT BLACK MTN. OFFICE
8466 Caratoke Hwy, Powells Point, NC 27966
Phone: (252) 491-8147 Fax: (252) 491-8146
90 Church St., Ste. B, Black Mountain, NC 28711
Phone: (828) 793-0398 Fax: (252) 491-8146
administrator@quible.com

**PRELIMINARY
NOT FOR
CONSTRUCTION**

FIRE ROUTING EXHIBIT
**CANCER CENTER
OUTER BANKS HOSPITAL**
DARE COUNTY
TOWN OF NAGS HEAD
NORTH CAROLINA
0 40 80
GRAPHIC SCALE IN FEET 1"=40'

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PROJECT
P17012.1
DRAWN BY
CMS
CHECKED BY
CMS/MWS
DATE
12/04/19

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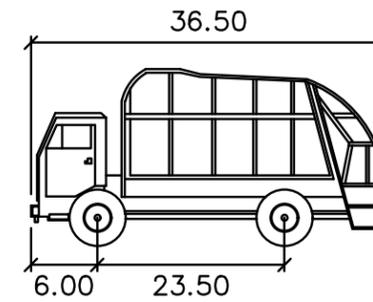
NOTES:

- PROPERTY OWNERS: MOONGATE PARTNERS, LLC.
PO BOX 129
NAGS HEAD, NC 27959

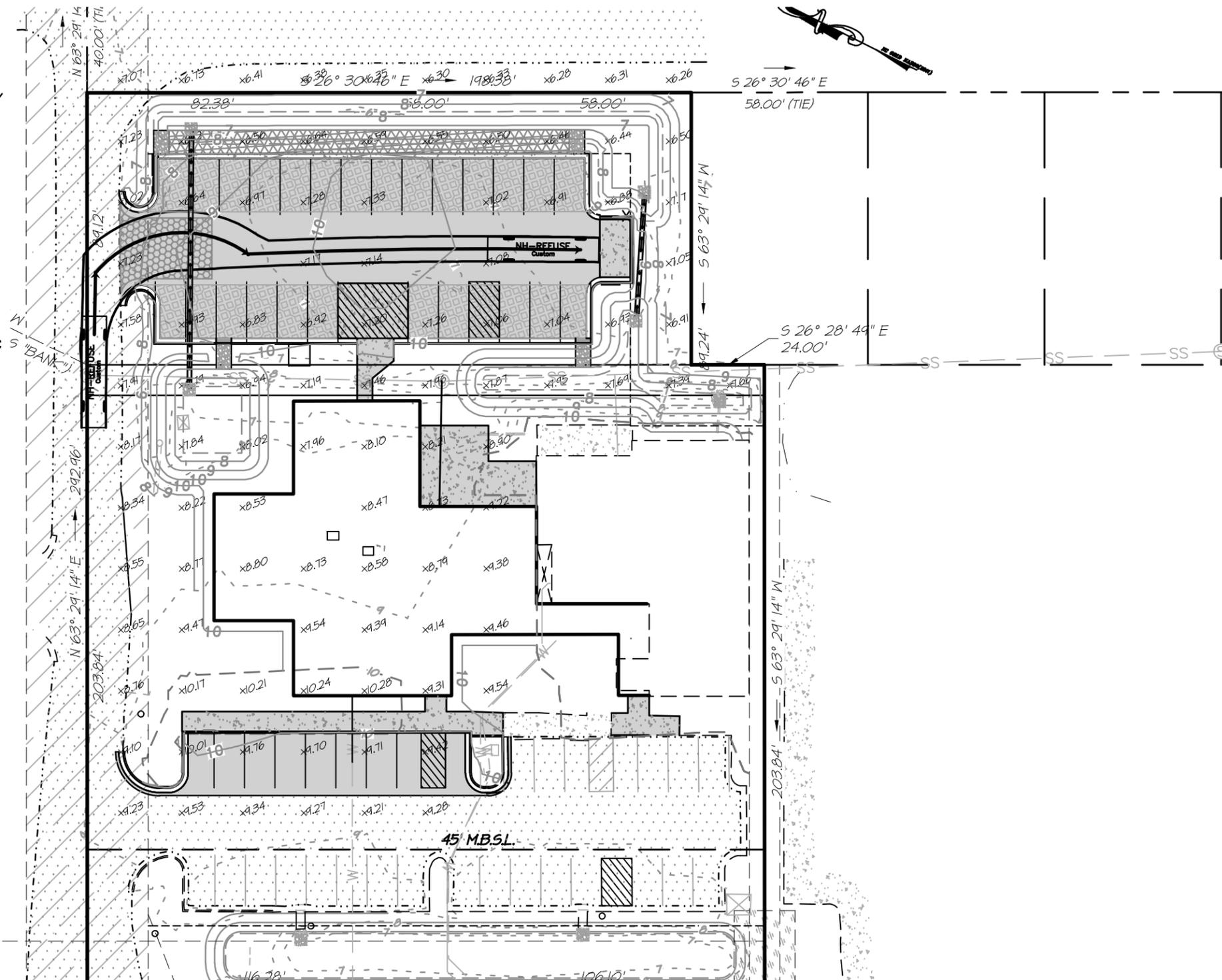
DOUBLE L CORPORATION
PO BOX 2606
ELIZABETH CITY, NC 27906

UNIVERSITY HEALTH SYSTEMS OF EASTERN CAROLINA

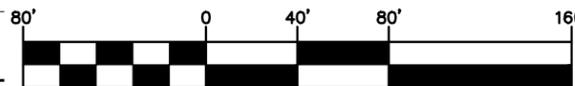
C/O TIM MCDONNELL
PO BOX 6028
GREENVILLE, NC 27835
- PROPERTY IDENTIFICATION: 4928, 4926 & 4922 S. PASSAGE WAY
4927 & 4923 SOUTH CROATAN HIGHWAY
PIN#: 0801-1313-8895;
0801-1313-8960; 0801-1313-8936
0801-13-13-7759;
0801-1313-7809
PID#: 02839113; 02839114; 02839115
027839062; 027839063;
- PARCEL AREA: 63,021 SQ.FT. / 1.45 ACRES
(AREAS BY COORDINATE METHOD)
- ZONING CLASSIFICATION: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) (HOTEL DISTRICT OVERLAY)
- PROPOSED REZONING FOR 4928, 4926 & 4922 S. PASSAGE WAY: SPD-C (SPECIAL PLANNED DEVELOPMENT-COMMUNITY DISTRICT) FROM SF2 (SINGLE FAMILY) ZONING
- REFERENCES: D.B. 1939, PG. 480; P.C. E, SL. 134
- FIELD SURVEY BY QUIBLE & ASSOCIATE, P.C. DATES: 06-22-2017, 09-10-2019, & 10-21-2019.
(HORIZONTAL GROUND DISTANCES)
- VERTICAL DATUM NAVD 1988 / HORIZONTAL DATUM NAVD 1983 (2012)
- PROPERTY IS LOCATED IN F.I.R.M. ZONES "AE" (EL. 9')
PANEL 3730080100J, DATED 09/20/06
FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.



NH REFUSE feet
 Width : 8.00
 Track : 8.00
 Lock to Lock Time : 6.0
 Steering Angle : 40.0



GRAPHIC SCALE



(IN FEET)
 1 inch = 80' ft.

**REFUSE TRUCK
 ACCESS EXHIBIT**

NC License#: C-0208
Quible SINCE 1959
& Associates, P.C.
 ENGINEERING** * CONSULTING * PLANNING
 ENVIRONMENTAL SCIENCES * SURVEYING**
 ENG./SUR. NOT OFFERED AT BLACK MTN. OFFICE
 8466 Carotake Hwy, Powells Point, NC 27966
 Phone: (252) 491-8147 Fax: (252) 491-8146
 90 Church St., Ste. B, Black Mountain, NC 28711
 Phone: (828) 793-0398 Fax: (252) 491-8146
 administrator@quible.com

**PRELIMINARY
 NOT FOR
 CONSTRUCTION**

REFUSE ROUTING EXHIBIT
**CANCER CENTER
 OUTER BANKS HOSPITAL**
 DARE COUNTY
 TOWN OF NAGS HEAD
 NORTH CAROLINA
 GRAPHIC SCALE IN FEET 1"=40

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PROJECT	P17012.1
DRAWN BY	CMS
CHECKED BY	CMS/MWS
DATE	11/14/19

Q:\2017\17012\Drawings\P17012.1-base.dwg 11/14/2019 2:56 PM Csaunders



A



B



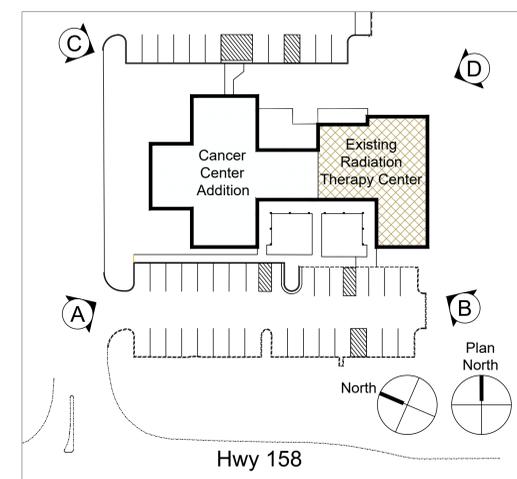
C



D

Exterior Sketch Images

Materials, colors, profiles, and details will match the existing Radiation Therapy Center



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 THE OUTER BANKS HOSPITAL
 4800 South Croatan Highway
 Nags Head, NC 27959
 252-489-9111

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 REGISTERED PROFESSIONAL ARCHITECTS
 50213
 SOUTH CAROLINA
 GREENVILLE, S.C.
PRELIMINARY DESIGN DOCUMENTS
 NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	BY	CHK	COL
0	12-06-2019	PRELIMINARY DRAWING - NOT FOR CONSTRUCTION			

REG PROJECT NO. 20190179
 CLIENT PROJECT NO. -
 PROJECT TITLE
OBH CANCER CENTER
 DRAWING TITLE
EXTERIOR IMAGES
 DRAWING NO.
A6.3

REV	DATE	DESCRIPTION
0	12-06-2019	PRELIMINARY DRAWING - NOT FOR CONSTRUCTION

REG PROJECT NO.	20190179
CLIENT PROJECT NO.	
PROJECT TITLE	OBH CANCER CENTER
DRAWING TITLE	BUILDING ELEVATIONS
DRAWING NO.	A6.1

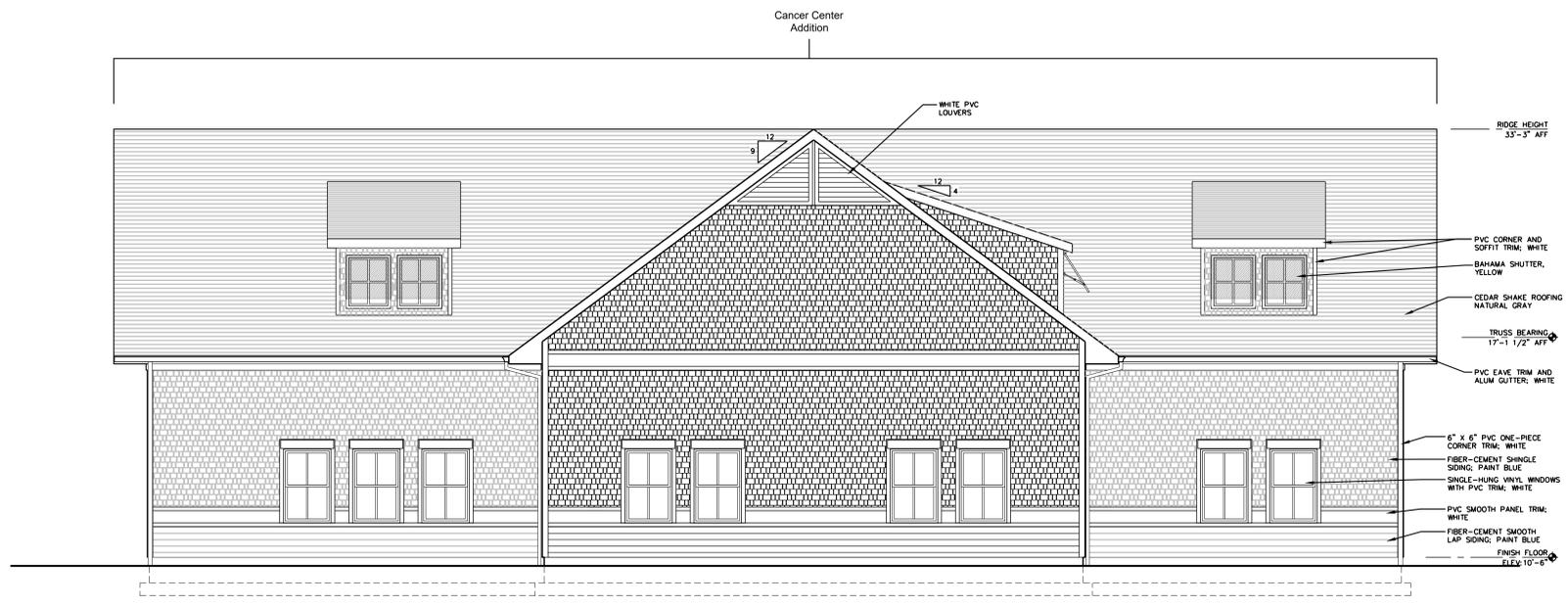


1 PLAN-SOUTH ELEVATION
 SCALE: 3/16" = 1'-0"

WALL AREA: 380 SF WINDOW AREA: 63 SF (17%)

WALL AREA: 610 SF WINDOW AREA: 84 SF (14%)

WALL AREA: 414 SF WINDOW AREA: 105 SF (25%)



2 PLAN-WEST ELEVATION
 SCALE: 3/16" = 1'-0"

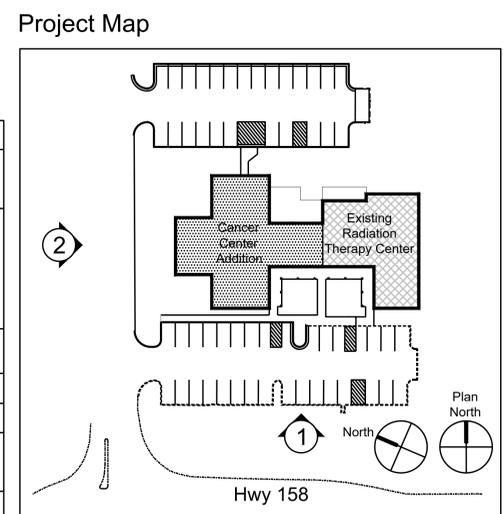
WALL AREA: 444 SF WINDOW AREA: 63 SF (14%)

WALL AREA: 610 SF WINDOW AREA: 84 SF (14%)

WALL AREA: 387 SF WINDOW AREA: 42 SF (12%)

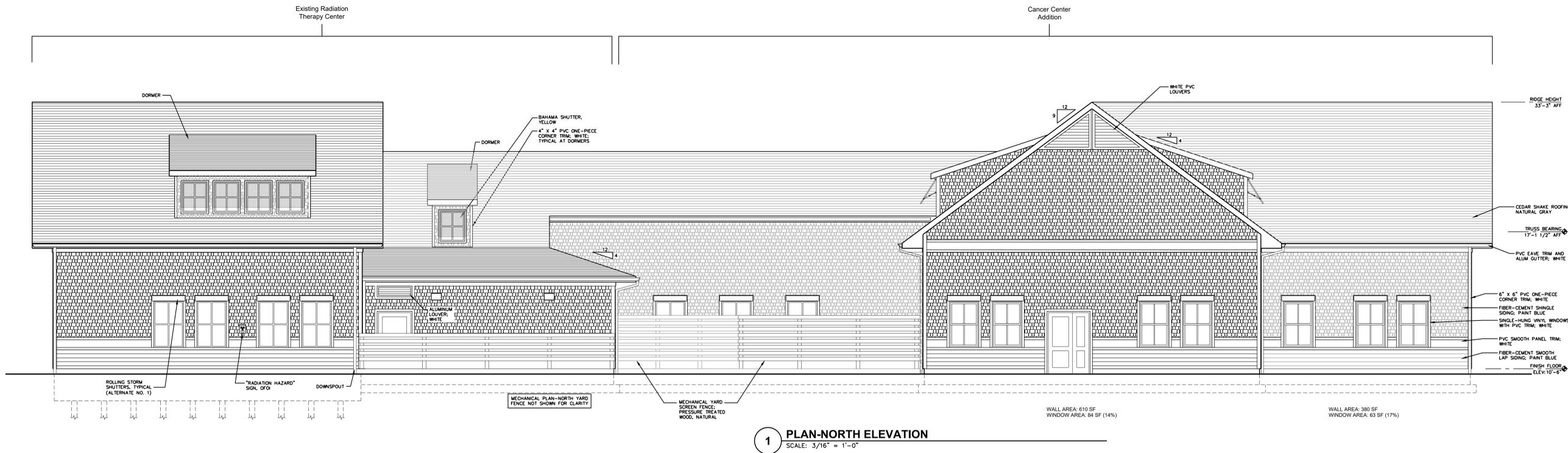
Town of Nags Head Architectural Style Points Schedule
 (applied to building addition only)

Design Element	Formula/Element Provided	Points Earned
Porches	1st Floor Porch - $p1/b1 \times 150 =$ $p1 = \text{perimeter of 1st floor with Porch} = 72'$ $b1 = \text{perimeter of 1st floor} = 379'$	28
Dormers	$n = \text{number of dormers} = 9 \quad 9 \times 5 = 45$ 1 - 17-foot wide shed dormer $(1 \times 10) + 5 = 15$ $45 + 15 = 60$ 25 point maximum score	25
Roofs	Compliant Form and Pitch (Minimum 6:12 pitch for commercial buildings)	25
Building Form	Combination Base Form	40
Siding Materials	Simulated Shingle Siding	12
Miscellaneous Details	Beauty Bands - 5 Porch Column Trim - 5 Windows (single-hung) - 20	30
	Total Points Earned	160

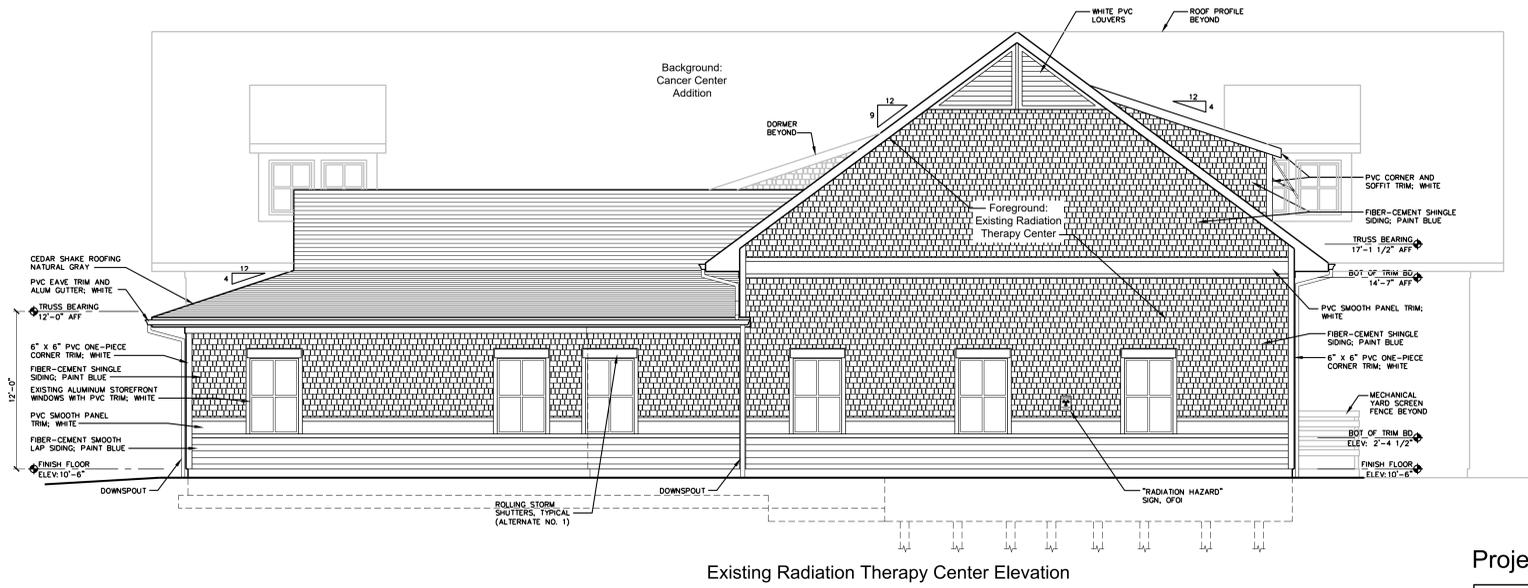


Exterior Appearance:
 Materials, colors, profiles, and details will match the existing Radiation Therapy Center

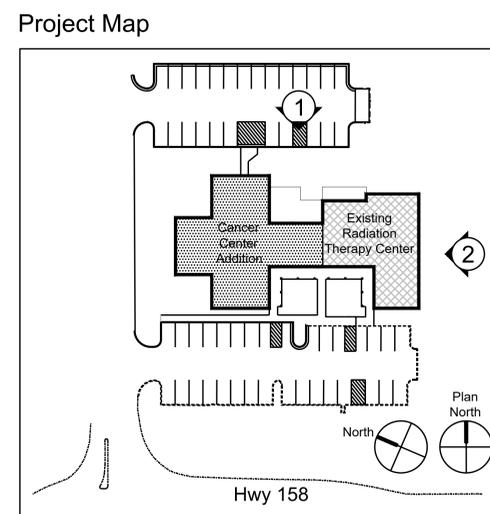
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1 PLAN-NORTH ELEVATION
SCALE: 3/16" = 1'-0"



2 PLAN-EAST ELEVATION
SCALE: 3/16" = 1'-0"



Exterior Appearance:
Materials, colors, profiles, and details will match the existing Radiation Therapy Center

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GREENVILLE, NC
PRELIMINARY DESIGN DOCUMENTS
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REV	DATE	DESCRIPTION	BY	CHK	COL
0	12-08-2019	PRELIMINARY DRAWING - NOT FOR CONSTRUCTION			

REG PROJECT NO. 20190179
CLIENT PROJECT NO.
PROJECT TITLE
OBH CANCER CENTER
DRAWING TITLE
BUILDING ELEVATIONS
DRAWING NO.
A6.2

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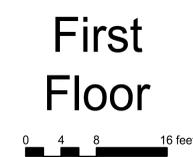
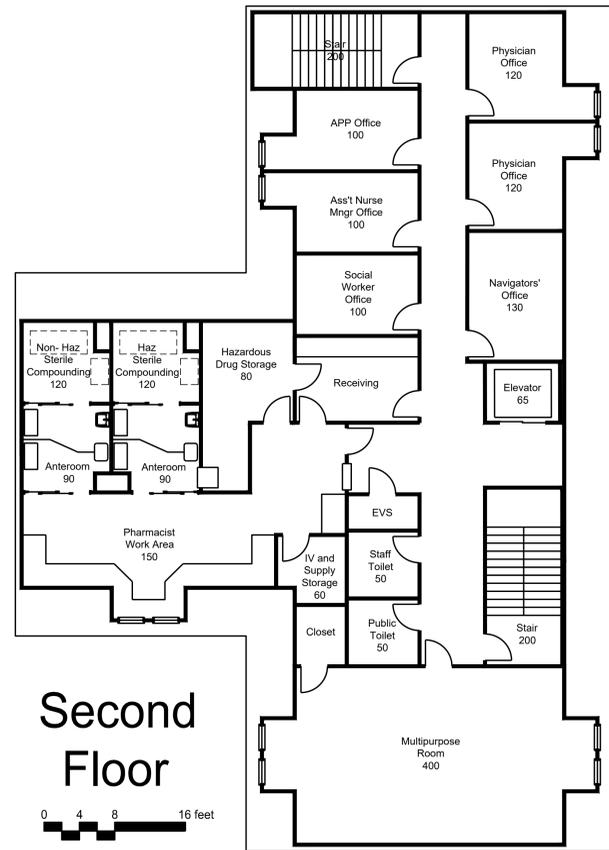
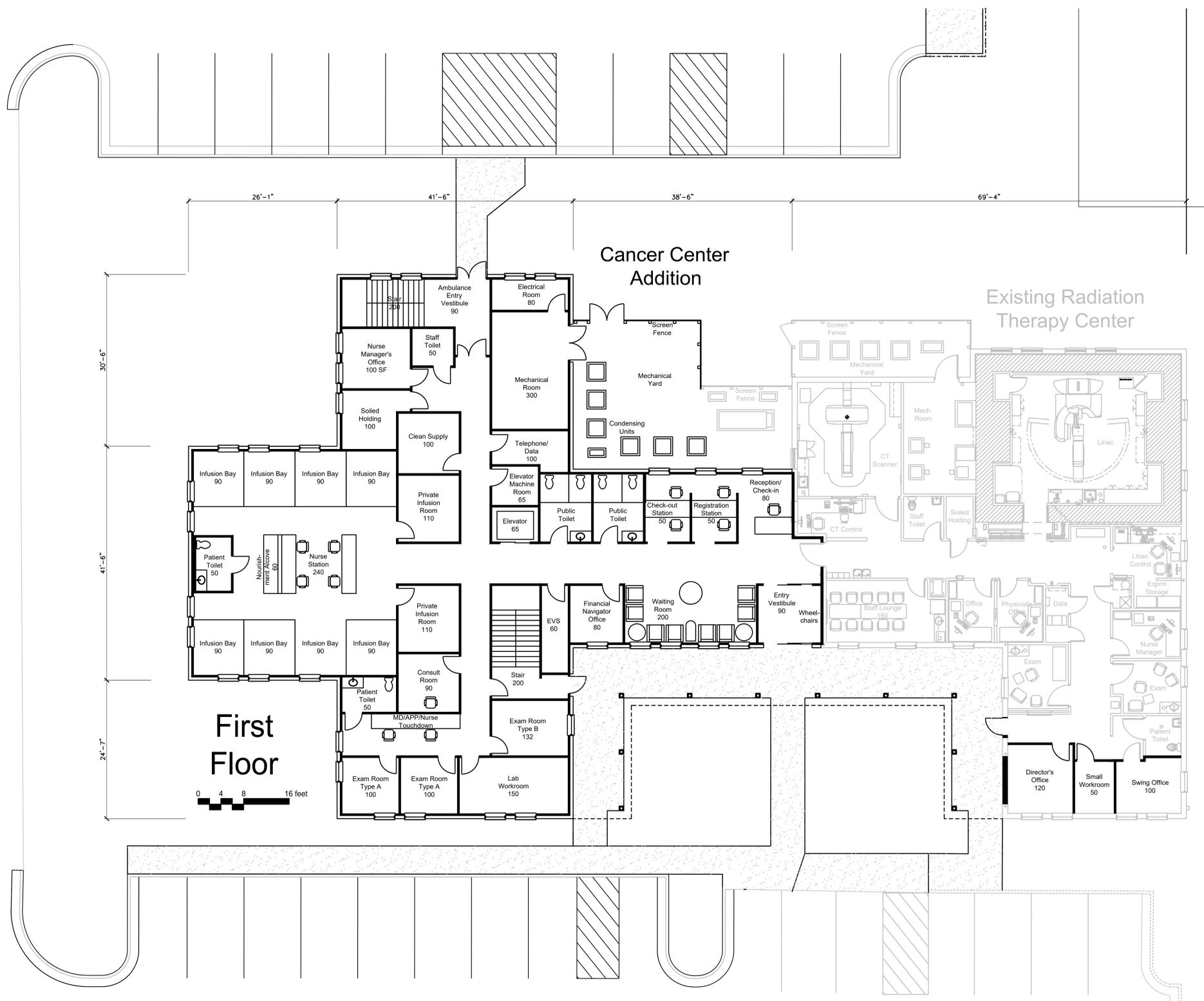
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 50213
 GREENVILLE, N.C.

PRELIMINARY DESIGN DOCUMENTS
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REV	DATE	DESCRIPTION
0	11-14-2019	PRELIMINARY DRAWING - NOT FOR CONSTRUCTION

REG PROJECT NO. 20190179
 CLIENT PROJECT NO. -
 PROJECT TITLE
OBH CANCER CENTER
 DRAWING TITLE
FLOOR PLANS: FIRST FLOOR AND SECOND FLOOR

DRAWING NO. **A2.1**



Building Area

Radiation Therapy:	4,500 SF
Addition First Floor:	6,414 SF
Addition Second Floor:	3,966 SF
Total:	14,880 SF

Allowable Area Calculation:

NCSBC Table 506.2, B occupancy, Type V-B Construction, Non-sprinklered: 9,000 SF allowable area

NCSBC 506.2.3: Area for Single-occupancy Multistory Buildings

$[9000 + (9000 \times 41\%)] \times 2 = 25,380 \text{ SF allowable area}$

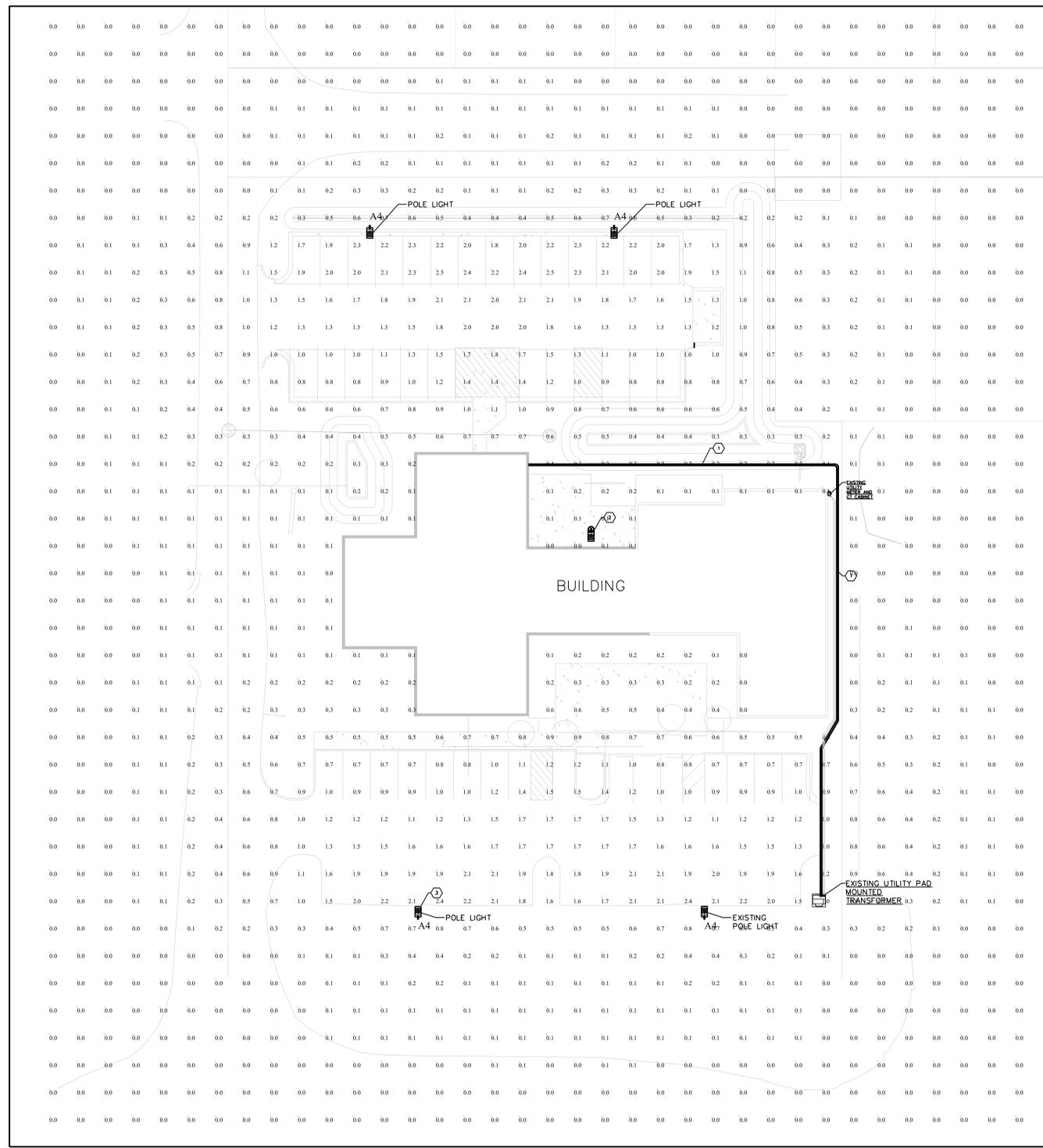
$A_t \quad NS \quad I_f \quad S_a \quad A_a$

NCSBC 506.3: Frontage Increase

$(427 / 647 - 0.25) \times 30 / 30 = 41\% \text{ increase}$

$F \quad P \quad W \quad I_r$

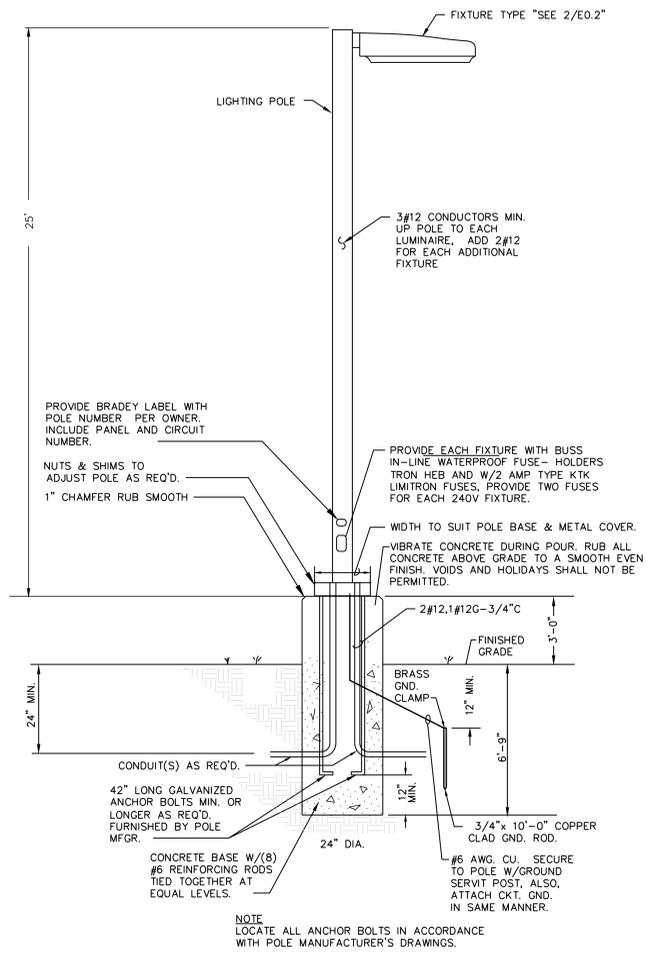
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1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'

Symbol	Qty	Label	Mounting Height	LLF	Lum. Lumens	Lum. Watts	Description
	4	A4	25' - 0" AFG	0.900	14931	136	VP-L-64L-136-3K7-4W

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Overall Area	Illuminance	Fc	0.37	2.5	0.0	N.A.	N.A.
Parking Area	Illuminance	Fc	1.53	2.5	0.7	2.19	3.57



2 AREA POLE LIGHT DETAIL
SCALE: N.T.S.

GENERAL NOTES:

- PLANS ARE GENERALLY DIAGRAMMATIC. NECESSARY OFFSETS IN CONDUITS, ETC., REQUIRED TO INSTALL EQUIPMENT SHALL BE PROVIDED WITH NO ADDITIONAL EXPENSE TO THE OWNER.
- PROVIDE ALL CUTTING AND REPAIRING OF SIDEWALKS, PAVEMENT, ETC. NECESSARY FOR THE INSTALLATION OF WORK. ANY CUTTING OF STRUCTURAL MEMBERS OR FINISHED WORK SHALL HAVE PRIOR APPROVAL OF ARCHITECT/ENGINEER.
- ALL JUNCTION BOX COVERS AND POLE BASES ARE TO BE LABELED TO IDENTIFY SYSTEM, BOXES CONTAINING POWER CIRCUITS ARE TO BE LABELED USING PANELBOARD DESIGNATION AND CIRCUIT NUMBER (I.E., "BMA-10"). OUTSIDE OF BOX COVER SHALL BE LABELED WITH BLACK PLASTIC LAMINOL TAGS WITH 1/4" HIGH WHITE LETTERS FASTENED WITH BRASS SCREWS. THIS LABELING SHALL BE PROVIDED BY THE CONTRACTOR.
- ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ALL UNDERGROUND ELBOWS SHALL BE SCHEDULE 40 PVC. ALL UNDERGROUND CONDUIT SHALL BE A MINIMUM OF 24" DEPTH TO TOP OF CONDUIT. ALL ABOVE GROUND CONDUIT SHALL BE ALL FLEX SHALL BE SEALTITE G.R.C.
- ALL SPLICES IN UNDERGROUND JUNCTION BOXES SHALL BE WATERPROOF.
- GROUNDING SHALL BE IN ACCORDANCE WITH NEC, ARTICLE 250. ALL CONDUITS AND LIGHT POLES SHALL HAVE A GREEN EQUIPMENT GROUNDING CONDUCTOR, #12 MINIMUM.
- ALL INGROUND HANDHOLE/PULLBOXES AND COVERS SHALL BE QUARTZITE, ANSI TIER 15 MINIMUM, UL LISTED, WITH COVERS MARKED ELECTRICAL OR DATA. ALL COVERS SHALL BE LOCKABLE AND REQUIRE A SPECIAL TOOL TO OPEN. ALL BOXES SHALL BE SET ON A MINIMUM 8" DEEP BED OF GRAVEL SPREAD 6" IN ALL DIRECTIONS AROUND HANDHOLE/PULLBOX.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO DIGGING. EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON ELECTRICAL SITE PLANS.
- IF REQUIRED, ALL EXISTING ASPHALT SHALL BE NEATLY SAW CUT.
- IF REQUIRED, ALL EXISTING ASPHALT AND CONCRETE SHALL BE PATCHED TO MATCH EXISTING. REPAINT ANY EXISTING PARKING LOT STRIPING DISTURBED BY TRENCHING.
- DO NOT TRENCH IN EXISTING TREE ROOT ZONES.
- KEEP PANELS, PULLBOXES, AND CONTACTORS CLOSED AND LOCKED AT ALL TIMES.

- NOTES KEYED TO PLAN:**
- REFER TO ELECTRICAL RISER
 - REMOVE AND RELOCATE EXISTING SITE LIGHT ASSEMBLY.
 - RELOCATED SITE LIGHT ASSEMBLY.

VIPER L STRIKE
LARGE VIPER LUMINAIRE

SPECIFICATIONS
Intended Use:
The Beacon Viper luminaire is available in two sizes with a wide choice of different LED wattage configurations and optical distributions designed to replace HID lighting up to 1000W MH or HPS. Luminaires are suitable for wet locations.

Construction:

- Manufactured with die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two piece silicone and masticular polyurethane foam gasket ensures a weather-proof seal around each individual optic.

Electrical:

- Luminaire accepts 100V through 277V, 50 Hz to 60 Hz (LVWV, 347V, or 480V) input.
- Power factor is ≥ .90 at full load.
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls.
- Component to component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 800 VAC, 15A or higher.
- Plug disconnects are certified by UL for use at 600 VAC, 15A or higher.
- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- Optional 7-pin ANSI C136.41 2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Ambient operating temperature -40°C to 40°C.
- Surge protection - 20kA.
- LifeGuard™ Circuit - protects luminaires from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fall off", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

BEACON STRIKE

PRODUCT IMAGE(S)

DIMENSIONS

MOUNTING OPTIONS

CERTIFICATIONS/LISTINGS
UL, ETL, DLC, BEAUCON, HUBBELL

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REV	DATE	DESCRIPTION	BY	CHK	APP
0	11-14-2019	PRELIMINARY DRAWING - NOT FOR CONSTRUCTION	CCM	DD	

REG. PROJECT NO. **20190179**

CLIENT PROJECT NO. -

PROJECT TITLE **OBH CANCER CENTER**

DRAWING TITLE **ELECTRICAL SITE PLAN**

DRAWING NO. **E0.2**

3 POLE LIGHT
SCALE: N.T.S.

Ben Cahoon
Mayor

Susie Walters
Mayor Pro Tem

Cliff Ogburn
Town Manager



Town of Nags Head

Post Office Box 99
Nags Head, NC 27959
Telephone 252-441-5508
Fax 252-441-0776
www.nagsheadnc.gov

M. Renée Cahoon
Commissioner

J. Webb Fuller
Commissioner

Michael Siers
Commissioner

Date: December 13, 2019

To: Kelly Wyatt, Deputy Planning Director

From: David Ryan, P.E.

RE: OB Hospital Cancer Center -Town Engineer Plan Review Comments

Internal Traffic Circulation Review

1. Vehicle pathing exhibits have been provided which depict the routing of emergency and sanitation vehicles. The internal traffic circulation approval is contingent on the Public Works/Fire Department approval for access of sanitation and emergency vehicle access.

Stormwater Management Review

1. A NCDEQ high-density stormwater management permit shall be acquired for this application and submitted to the Town upon issuance. **This shall be a condition of approval.**
2. The project shall be designed, constructed, operated and maintained in accordance with Article 11. Environmental Regulations of the Town of Nags Head Unified Development Ordinance. **This shall be a condition of approval.**
3. The submitted site development plan has been determined to be in accordance with Article 11. Environmental Regulations of the Unified Development Ordinance.



Agenda Item Summary Sheet

Item No: G-1
Meeting Date: February 5, 2020

Item Title: Update from Planning Director

Item Summary:

Attached please find a monthly update from Planning Director Michael Zehner.

Number of Attachments: 4

Specific Action Requested:

Provided for Board information and update.

Submitted By: Planning and Development

Date: January 30, 2019

Finance Officer Comment:

Signature: Amy Miller

Date: January 30, 2019

Town Attorney Comment:

Signature: John Leidy

Date: January 30, 2019

Town Manager Comment and/or Recommendation:

The report provided by the Planning and Development Director is intended to update the Board and public on items that you have prioritized, such as building permit review and turnaround time. Staff's intent is to provide you with the attached report as well as an opportunity for Board members to ask any questions or for clarifications on any of the items in the report. A verbal presentation is not planned to accompany the attached report. Ordinarily, unless there is a specific item to be heard under this agenda item, nothing takes place.

Staff would like to know if the Board would like to use this time on the agenda to ask any questions or for any clarifications on items usually found in the monthly report.

I will participate in the discussion as necessary.

Signature: Cliff Ogburn

A handwritten signature in black ink, appearing to read "Cliff Ogburn", is written over the printed name.

Date: January 30, 2019



MEMORANDUM

Town of Nags Head

Planning & Development Department

To: Board of Commissioners
Planning Board

From: Michael Zehner, Director of Planning & Development

Date: January 30, 2020

Subject: Planning and Development Director's Report

This memo provides an overview of selected Planning and Development Department activities, projects, and initiatives. Should the Board wish, Staff will be prepared to discuss any of this information in detail at the meeting on February 5, 2020.

Monthly Activity Report

Attached for the Board's review is the *Planning and Development Monthly Report for December 2019*. In addition to permitting, inspections, code enforcement, and Todd D. Krafft Septic Health Initiative activities, Staff was involved in the following meetings or activities of note during the month:

- December 4 - Board of Commissioners Meeting
- December 4 - OBX Field School Capstone Project Review
- December 5 - Dare County Updated Flood Maps Meeting
- December 12 - OBX Field School Capstone Presentation
- December 16 - NC State College of Design Coastal Resilient Design Project Presentation
- December 17 - Planning Board Meeting

Updated Flood Map; Update of Flood Damage Prevention Ordinance

As previously discussed, the Board of Commissioners and Planning Board will meet jointly at the Planning Board's meeting on February 18, 2020 to review and discuss an initial draft of the updated Flood Damage Prevention Ordinance (and updated fill provisions contained in the Stormwater, Fill, and Runoff Management Ordinance), to be considered in concert with the updated FEMA Flood Insurance Rate Map (F.I.R.M.) covering the Town. Staff anticipates distributing materials for this meeting to the boards on or before February 5, 2020.

Dowdy Park Programming

As previously noted, Staff anticipates making a presentation to the Board of Commissioners at the March 4, 2020 meeting to review the 2019 Dowdy Park Season and plans for the 2020 Season.

Regulation of Large Occupancy/Event Homes

As previously noted, the Planning Board at their January 21, 2020 meeting, discussed the regulation of large occupancy homes and/or homes regularly used for events. Please find attached a memo to the Board of Commissioners concerning the Planning Board's interest in further regulating events held at single-family homes.

Report on Planning and Development Department Permitting Processes

Please find attached an updated report for the 2nd Quarter of FY19-20 (October 2019 - December 2019). The priority task at this time is the rollout of Citizen Self Service for online trade permits, which is expected within the first week of March 2020.

Legacy Establishments/Structures

Given recent expressed interest in the future of the Blue Heron Motel at 6811 S. Virginia Dare Trail and the limitations imposed by Town Code requirements on the evolution of the current hotel use of the property, Staff intends to begin considering Code amendments that advance Comprehensive Plan policies valuing the preservation of legacy business, establishments, and structures. Staff anticipates at least an initial discussion of options at the Planning Board meeting on February 18, 2020.

Pending Applications and Discussions

As previously noted, there are three (3) recently submitted text amendments pending review by the Planning Board; the Planning Board initially reviewed these at the meeting on January 21, 2020 and will further consider the amendments and their recommendation to the Board of Commissioners at their meeting on February 18, 2020. These amendments are:

- Text amendments to the Unified Development Ordinance to allow outdoor kiosks in conjunction with/accessory to Retail Shopping Centers within the C-2, General Commercial Zoning District. Based upon discussion, the amendment will likely propose to allow reservations or ticket sales to be sold from an outdoor stand.
- Text amendments to the Unified Development Ordinance to allow temporary outdoor stand/farmers market in conjunction with/accessory to general retail uses. Based upon discussion, the amendment may propose or clarify allowances for outdoor sales in conjunction with general retail uses.
- Text amendments to the Unified Development Ordinance Amendment to allow beer and wine sales by the glass as a use in conjunction with/accessory to general retail uses.

In addition to these text amendments, the joint meeting with the Board of Commissioners and potential discussion of options pertaining to legacy establishments/structures, at the February meeting the Planning Board will consider a Major Site Plan to construct a dock at Oceans East Bait & Tackle (7405 S. Virginia Dare Trail) and discuss potential alternatives and improvements to the residential stormwater

regulations, a FY20-21 work plan for planning-related initiatives, and be presented with a housekeeping text amendment to clean up identified errors in the UDO.

Additional Updates

- Town Workforce Housing Study & Plan - Phase 1 Report presented to the Board of Commissioners for the February 5, 2020 meeting.
- Septic Health - Staff intends to prepare and present a draft project scope for the update of the Decentralized Wastewater Plan to the Commissioners within the next few months.
- Hazard Mitigation Plan - Final multi-jurisdictional Committee Meeting for the Plan was held on January 8, 2020, and final public meetings for Dare County held January 8, 2020 at the Fessenden Center in Buxton, and on January 9, 2020 at Jockey's Ridge State Park. The draft plan has been available for review and comment until January 30, 2020. Once final, the Plan will be forwarded to the State for review and approval, and then to FEMA for final review and approval, before returning to the County and towns for adoption.
- Grants - A request is pending under the Hazard Mitigation Grant Program (Tropical Storm Michael) to update the Town's Emergency Operations Plan. Staff is considering the submission of a Letter of Interest under the Hazard Mitigation Grant Program related to Hurricane Dorian, due January 31, 2020. Additionally, Staff is reviewing a grant opportunity from Wells Fargo and the National Fish & Wildlife Fund under their Resilient Communities program.
- UDO - Staff continues to develop Reference Manual materials. Publishing on the Municode platform is pending; Staff has received a response to previously issued comments. Staff assessing budget for printing hardcopies of UDO.
- Permitting - Staff has contacted representatives of the Outer Banks Home Builders Association to coordinate a schedule for a workshop/forum for the building community.

Upcoming Meetings and Other Dates

- Wednesday, February 5, 2020 - Board of Commissioners Meeting
- Thursday, February 6, 2020 - Munis MapLink Training
- Thursday, February 6, 2020 - Meeting with representatives of Coastal Villages and Fourth Street properties
- Wednesday, February 12, 2020 - 2020 Census Dare County Complete Count Committee Meeting
- Thursday, February 13, 2020 - Board of Adjustment Meeting
- Tuesday, February 18, 2020 - Planning Board Meeting
- Wednesday, February 26, 2020 - ECU Forum on Community Flooding

**TOWN OF NAGS HEAD PLANNING AND DEVELOPMENT
MONTHLY REPORT
DECEMBER 2019**

DATE SUBMITTED: January 7, 2020

	Dec-19	Dec-18	Nov-19	2019-2020 FISCAL YTD	2018-2019 FISCAL YTD	FISCAL YEAR INCREASE/ DECREASE
BUILDING PERMITS ISSUED - RESIDENTIAL						
New Single Family	0	1	1	3	12	(9)
New Single Family, 3000 sf or >	0	0	0	4	6	(2)
Duplex - New	0	0	0	0	0	0
Sub Total - New Residential	0	1	1	7	18	(11)
Miscellaneous (Total)	31	31	36	172	180	(8)
<i>Accessory Structure</i>	2	3	4	21	19	2
<i>Addition</i>	5	3	2	10	8	2
<i>Demolition</i>	0	0	2	2	2	0
<i>Move</i>	0	0	0	0	0	0
<i>Remodel</i>	8	8	9	41	44	(3)
<i>Repair</i>	16	17	19	98	107	(9)
Total Residential	31	32	37	179	198	(19)
BUILDING PERMITS ISSUED - COMMERCIAL						
Multi-Family - New	0	0	0	0	0	0
Motel/Hotel - New	0	0	0	0	0	0
Business/Govt/Other - New	0	0	0	0	2	(2)
Subtotal - New Commercial	0	0	0	0	2	(2)
Miscellaneous (Total)	7	6	5	39	48	(9)
<i>Accessory Structure</i>	1	1	1	7	13	(6)
<i>Addition</i>	0	0	0	0	0	0
<i>Demolition</i>	1	1	0	3	1	2
<i>Move</i>	0	0	0	0	0	0
<i>Remodel</i>	1	3	4	13	16	(3)
<i>Repair</i>	4	1	0	16	18	(2)
Total Commercial	7	6	5	39	50	(11)
Grand Total	38	38	42	218	248	(30)
SUB-CONTRACTOR PERMITS						
Electrical	33	31	28	222	236	(14)
Gas	2	4	0	11	14	(3)
Mechanical	18	24	24	162	171	(9)
Plumbing	13	13	5	41	48	(7)
Sprinkler	1	1	0	1	2	(1)
VALUE						
New Single Family	\$0	\$225,000	\$200,000	\$525,000	\$2,593,000	(\$2,068,000)
New Single Family, 3000 sf or >	\$0	\$0	\$0	\$3,082,561	\$3,950,460	(\$867,899)
Duplex - New	\$0	\$0	\$0	\$0	\$0	\$0
Misc (Total Residential)	\$875,075	\$818,338	\$1,122,444	\$4,618,747	\$4,094,233	\$524,514
Sub Total Residential	\$875,075	\$1,043,338	\$1,322,444	\$8,226,308	\$10,637,693	(\$2,411,385)
Multi-Family - New	\$0	\$0	\$0	\$0	\$0	\$0
Motel/Hotel - New	\$0	\$0	\$0	\$0	\$0	\$0
Business/Govt/Other - New	\$0	\$0	\$0	\$0	\$1,846,975	(\$1,846,975)
Misc (Total Commercial)	\$82,500	\$544,715	\$388,860	\$1,429,404	\$2,504,989	(\$1,075,585)
Sub Total Commercial	\$82,500	\$544,715	\$388,860	\$1,429,404	\$4,351,964	(\$2,922,560)
Grand Total	\$957,575	\$1,588,053	\$1,711,304	\$9,655,712	\$14,989,657	(\$5,333,945)

**TOWN OF NAGS HEAD PLANNING AND DEVELOPMENT
MONTHLY REPORT
DECEMBER 2019**

DATE SUBMITTED: January 7, 2020

	Dec-19	Dec-18	Nov-19	2019-2020 FISCAL YTD	2018-2019 FISCAL YTD	FISCAL YEAR INCREASE/ DECREASE
ZONING						
Zoning Permits	23	29	30	143	152	(9)
CAMA						
CAMA LPO Permits	5	3	3	17	15	2
CAMA LPO Exemptions	5	11	8	35	36	(1)
CODE COMPLIANCE						
CCO Inspections	36	32	45	489	511	(22)
Cases Investigated	15	15	19	238	275	(37)
Warnings	9	6	4	42	58	(16)
NOVs Issued	10	8	14	198	197	1
Civil Citations (#)	0	0	1	1	0	1
Civil Citations (\$)	\$0	\$0	\$0	\$0	\$0	\$0
SEPTIC HEALTH						
Tanks inspected	0	15	7	96	132	(36)
Tanks pumped	2	6	3	10	42	(32)
Water quality sites tested	0	0	0	112	115	(3)
Personnel Hours in Training/School	7	4	30	84	208	(124)



Michael D. Zehner, Director of Planning & Development

COMMENTS:



STAFF REPORT

Town of Nags Head

Planning & Development Department

To: Board of Commissioners
From: Kelly Wyatt, Deputy Director of Planning & Development, on behalf of the Planning Board
Date: January 28, 2020
Subject: Discussion of Event Home Regulations

At their December 17, 2019 meeting the Planning Board had a brief discussion about the use of single-family dwellings as “event homes,” noting that of particular concern is the ability for emergency responders to access these types of structures in the event of an emergency. Staff committed to providing additional information to the Board at their January 2020 meeting.

Attached is the report given to the Planning Board at their January meeting. Following discussion, the Planning Board was interested in perhaps pursuing a type of free registration process for weddings and similar private events within the Town, similar to the Town of Duck. Before proceeding with the development of regulations, the Planning Board wanted to receive direction and feedback from the Board of Commissioners on this issue.

Planning Staff will be available for questions and to continue the discussion of potential event home regulations at the Boards pleasure.



MEMORANDUM

Town of Nags Head

Planning & Development Department

To: Planning Board
From: Kelly Wyatt, Deputy Director of Planning & Development
Michael Zehner, Director of Planning & Development
Date: January 17, 2020
Subject: Discussion of Large Occupancy/Event Home Regulations

At the Planning Board's December 17, 2019 meeting, it was brought to the Board's attention by Planning Board member David Elder that the Town of Kill Devil Hills had requested that the North Carolina Code Officials look at State Building codes and review the definition of "Single-Family Dwellings" vs. large "Event" Homes/"mini hotels". Mr. Elder noted that of particular concern is the ability for emergency responders to access these types of structures. Staff noted they would continue to review the subject and provide information to the Board at their January 2020 meeting.

Within the Town of Nags Head "Large Residential Dwellings" are defined as a single-family dwelling or two-family dwelling (duplex) that has 3,500 or more square feet of enclosed habitable living space. The following regulations apply to "Large Residential Dwellings":

- Homes with greater than 3,500 square feet of enclosed habitable living space can only be constructed on lots 16,000 square feet or greater in area, with the exception of within the SPD-C, Village at Nags Head District.
- The maximum enclosed habitable living space for a large residential dwelling is 5,000 square feet, with the exception of dwellings located within the SED-80 District.
- Large residential dwellings shall meet a side yard setback of fourteen (14) feet. This side yard setback may be reduced to the required side setback for the district in which the home is located should the owner voluntarily elect to comply with the Nags Head Residential Design Guidelines, requiring a minimum amount of architectural design points be obtained.
- Large residential dwellings shall either preserve a minimum of 10% of the lots total area with existing natural vegetation – OR – plant a minimum of 15% of the lots total area. A minimum of 50% of the plantings must be locally adaptive evergreen trees species. Height and caliper specifications are required for both tree and shrub species.
- The maximum permitted wastewater capacity for large residential dwellings shall not exceed 1,080 gallons per day.
- Height of large residential dwellings is the same as the town standard of 35 feet with the ability to increase height to 42 feet with the use of a minimum 8:12 roof pitch.

In January 2019 the Town of Duck adopted an ordinance to establish standards for the scale of residential development. This amendment was in response to the North Carolina General Assembly's passage of Session Law 2015-86 in June 2015 which revoked the authority of local governments to limit the number and types of rooms in a residence. In contrast to our ordinance, the Town of Duck does permit homes larger than 5,000 of enclosed living space, however, the permissible area is tied to the area of the lot. A chart of maximum residence sizes for the Town of Duck is provided below.

Lot Size (sf)	Maximum home size (standard)	Maximum home size (large)
9,999 or less	3,500 sf	3,500 sf
10,000 – 14,999	4,000 sf	4,000 sf
15,000 – 19,999	5,000 sf	5,000 sf
20,000 – 24,999	5,500 sf	7,000 sf
25,000 – 29,999	6,500 sf	8,000 sf
30,000 or greater	7,000 sf	9,000 sf

Keep in mind that the Town of Nags Head prohibits homes with enclosed habitable space above 5,000 sf regardless of lot size (except in the SED-80 District). Additionally, the Town of Duck has increased setbacks based upon the total size of the lot, landscape preservation or planting requirements, as well as architectural requirements for large residential dwellings.

The Town of Duck does have a "Wedding Event Registration Policy". You can review this information at the following link: <https://www.townofduck.com/getting-married-in-duck/>. In short, this registration is for wedding-related gatherings with 50 or more attendees in a private residence in the Town of Duck. These events must be registered with the Town of Duck Department of Community Development at least thirty (30) days prior to the event date. The registration will provide information for notification of property owners, neighborhood associations, and public safety personnel and will also provide contact information for the responsible parties who could be contacted during the event if necessary.

The Town of Southern Shores defines a "Large Home Dwelling" as any residential structure exceeding the maximum size, maximum transient occupancy capacity or maximum septic capacity for such structures in the zoning district in which it is located. Large home dwellings are not a permitted use in any zoning district. Within the individual zoning districts, RS-1, RS-10 and R-1 Detached single-family dwelling and vacation cottages are a permitted use provided that such residential structure shall not be: (i) advertised to accommodate, designed for, constructed for or actually occupied by more than 14 overnight occupants when used as a vacation cottage; or (ii) have a maximum septic capacity sufficient to serve more than 14 overnight occupants. In addition, each zoning district restricts the maximum size of any single-family dwelling to 6,000 square feet of enclosed living space.

Of note, the Town of Southern Shores recently considered a zoning ordinance amendment which would impose regulations on the use of single-family dwellings for special events. A copy of the draft ordinance is included in this package; however, this ordinance was not adopted. It is noted that the purpose of the drafted revisions was to ensure that special events take into account and are managed such that the public health, safety or welfare of the citizens and visitors to the Town who attend those events or live in the vicinity of the events are taken into account. The draft ordinance required that a free of charge permit be sought for any event expected to have more seventy-five (75) attendees. Events held at authorized event facilities, events held at commercial facilities, events held or managed by the Town, and events within established institutional uses were exempt from the requirement to obtain a permit.

Some key takeaways of the proposed ordinance are below:

Limited Special Event (75 – 125 attendees)

- For a Limited Special Event (75 – 125 attendees) an application must be received 14 days in advance of the event.
- The applicant must provide the date, time and location of the event as well as the contact information for the person in control of the event.
- A certification by the applicant that they are aware of and intend for the event to comply with all requirements of the Town's Code of Ordinances with regard to zoning, nuisance, noise, lights and other relevant provisions.
- Sketch plan of the property and structures showing the expected location of attendees, points of ingress and egress to any structures and location of any hazardous materials such as fuel or gas.
- A certification that sufficient parking for the event has been provided via onsite parking or special offsite parking agreements.
- A certification that the contact person will at all times have on their person (i) the phone associated with the contact information; (ii) a copy of the special events permit issued; and (iii) a list of attendees that can be used to determine whether anyone is unaccounted for in an emergency.
- If the event is to be held on a property adjacent to NC 12 during the period between Memorial Day and Labor Day, the applicant must provide a traffic management plan showing how traffic to the site will be managed in such a way to avoid unreasonable additional congestion upon NC 12.
- For any special event at which food or drink will be served or that will occur over a more than four-hour period, a certification by the applicant that at least one temporary wastewater facility or portable toilet will be onsite.

Large Special Events (greater than 125 expected attendees)

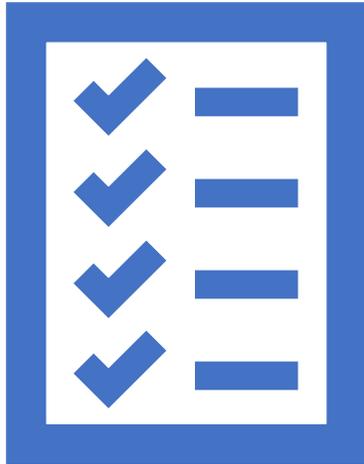
- For Large Special Events (greater than 125 expected attendees) an application must be received 30 days in advance of the event. In addition to the requirements for a Limited Special Event, the applicant for Large Special Event must certify that any exterior decks being used by attendees are structurally sound to support the potential use users of the deck or, must allow the Town's building inspector to inspect the decks to determine whether an engineer's certification is required.

- In is the discretion of the police chief or the fire chief or their designee, the applicant shall allow for an inspection of the exterior grounds of the property to determine potentially dangerous conditions on the property and to determine how best to access the property and structures in case of fire or emergency during the special event.
- A traffic management plan showing how traffic will be managed to avoid unreasonable congestion on any adjacent roadways.
- A certification that sufficient parking for the event has been provided onsite and/or offsite with the appropriate agreement in place and narrative and site plan showing all proposed parking supporting the event.
- A certification that the designated person to contact under the application will have access to first-aid supplies on-site in sufficient quantities to address minor injuries to at least 10% of the expected attendees.

At any special event, if alcohol is to be served or sold, the applicant shall obtain any necessary approvals from the Alcoholic Beverage Control Commission and must make such documentation available upon request and must certify on their application that the approvals, if any were required, have been obtained and will be complied with during the event. Additionally, if tents are to be used for any special event requiring a permit, the applicant shall obtain any necessary approvals required under the North Carolina Fire Code and must make such documentation available upon request on certify that it will be complied with during the event.

In summary, reviewing the allowances of other nearby towns, the Town of Nags Head currently has the most restrictive regulations on permissible living area for large residential dwellings, however, there may be some merit to discussing certain aspects of regulating special events within the Town. While the ordinance drafted by the Town of Southern Shores was very extensive, it may provide some discussion points for the Planning Board in moving forward with regulations if so desired.

Planning staff will be available at the January 21, 2020 Planning Board to discuss this item further.



Report on Planning and Development Department Permitting Processes

FY19-20 - 2nd Quarter

October 2019 - December 2019

February 5, 2019

Board of Commissioners Meeting

Report on Planning and Development Department Permitting Processes FY19-20, 2nd Q

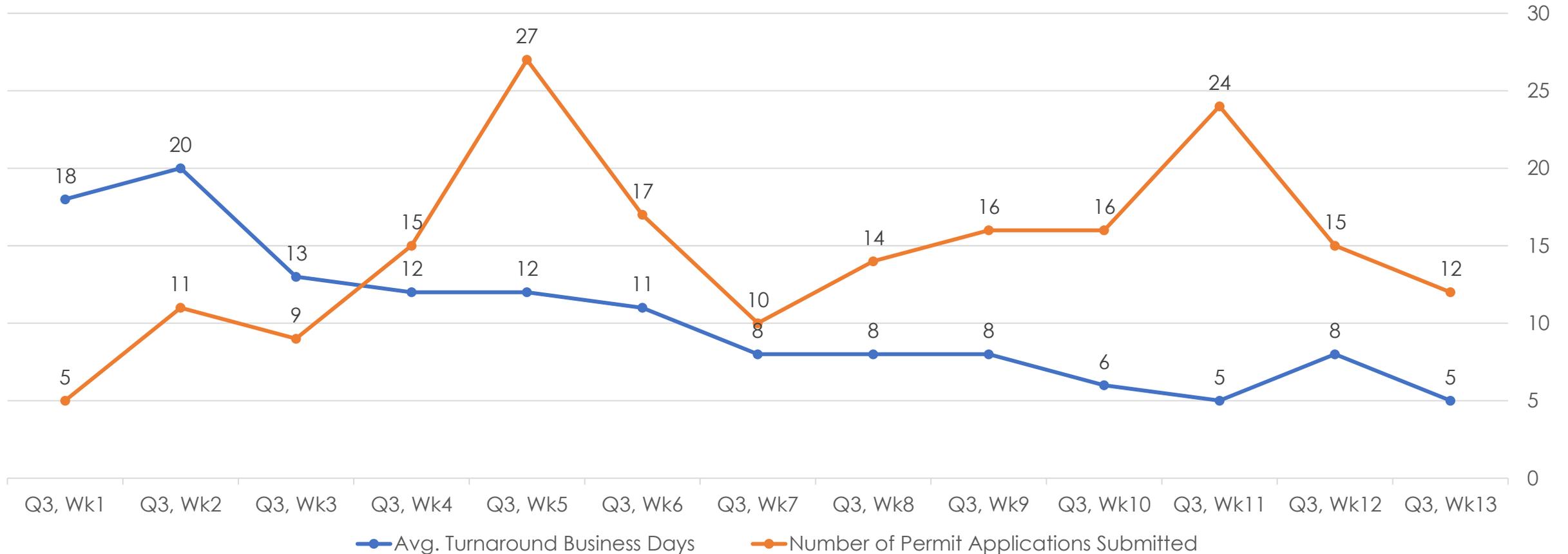
- Completed/Instituted – Since January 2019; items in **green** are new since December 2019
 - Bi-weekly Permit Tracking benchmarks reduced
 - Focus on internal and external communication improvements
 - Monthly Permitting, Inspections, and Enforcement Team Meeting
 - Fees increased consistent with adjacent communities and to offset cost of services
 - Coordination of zoning, E&S, and stormwater pre- and post-construction inspections
 - Require final zoning and stormwater inspections prior to final building inspections
 - Code Enforcement Officer received probationary building inspection certificate
 - Additional Munis Training for Staff - Nov. 7 & 8, 2019; addressed general use, inspection scheduling, report and form generation, and updating property owner information
 - Customer kiosk with computer installed in lobby
 - Publicly-accessible permits & inspections search portal added to Citizen Self Service: <https://selfservice.nagsheadnc.gov/MSS/citizens/PermitsInspections/Default.aspx>
 - Permitting staff met with Bill News, Chief Building Code Official for Currituck County, to review use of Munis, and specially online permitting modules.

Report on Planning and Development Department Permitting Processes FY19-20, 2nd Q

- Next Steps/Moving Forward
 - Document and improve permitting workflows
 - Create separate review processes for less complicated permits/work
 - Prepare Development Manual as part of UDO adoption
 - Plan workshops for Home Builders, Real Estate Association, residents, etc.
 - Rollout Citizen Self Service for online trade permits
 - Rollout Citizen Self Service for all building permits.
 - Facilitate and encourage use of customer kiosk
 - Establish single permit record database

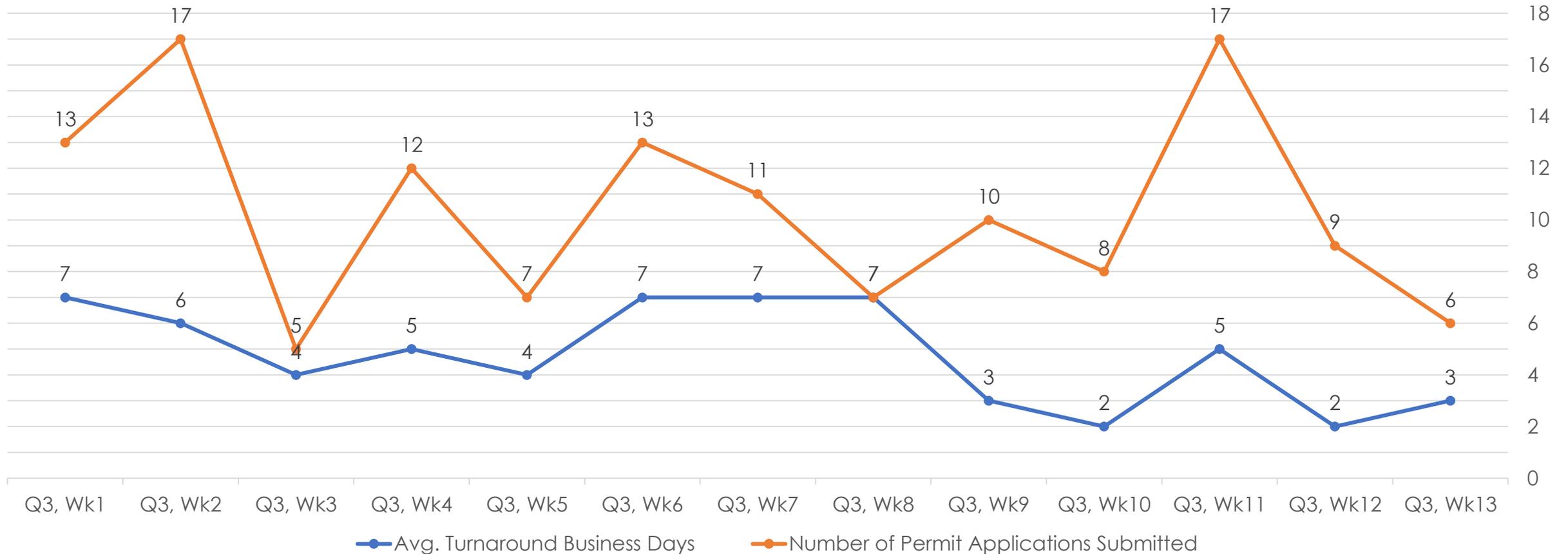
Report on Planning and Development Department Permitting Processes FY19-20, 2nd Q

FY18-19, 3rd Quarter - Permits Applied & Turnaround
191 Permit Applications Submitted; 8.89 Days Avg. Turnaround



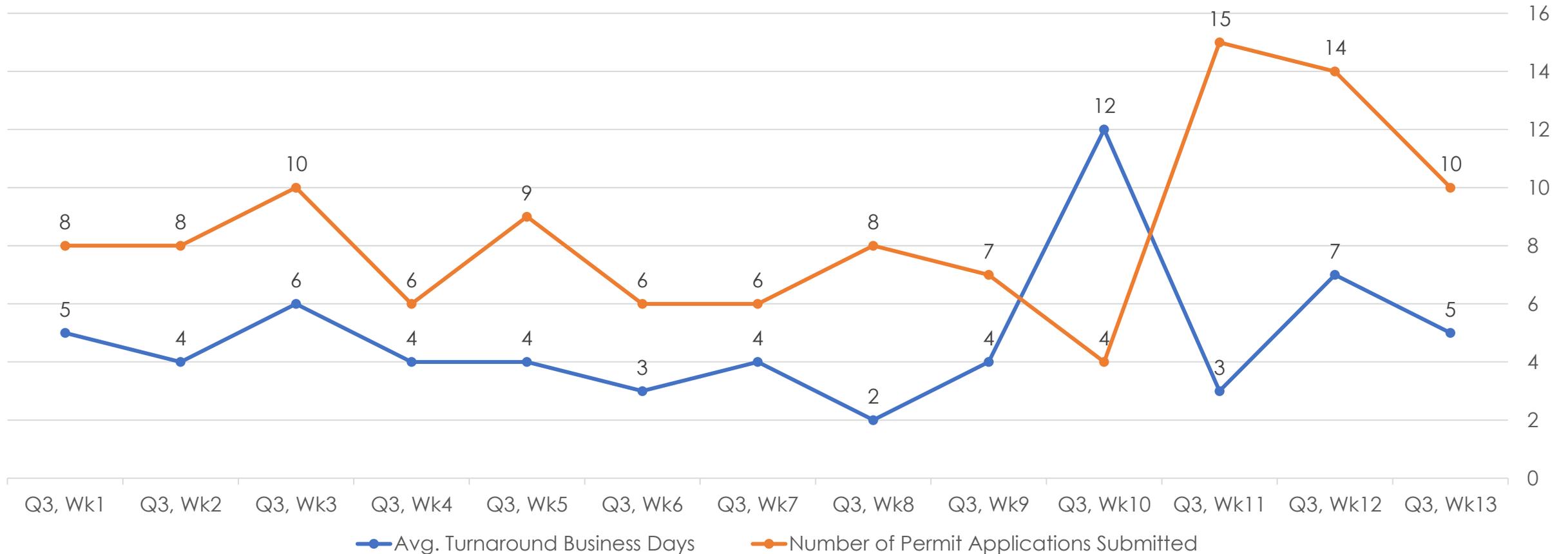
Report on Planning and Development Department Permitting Processes FY19-20, 2nd Q

FY18-19, 4th Quarter - Permits Applied & Turnaround
136 Permit Applications Submitted; 5.11 Days Avg. Turnaround



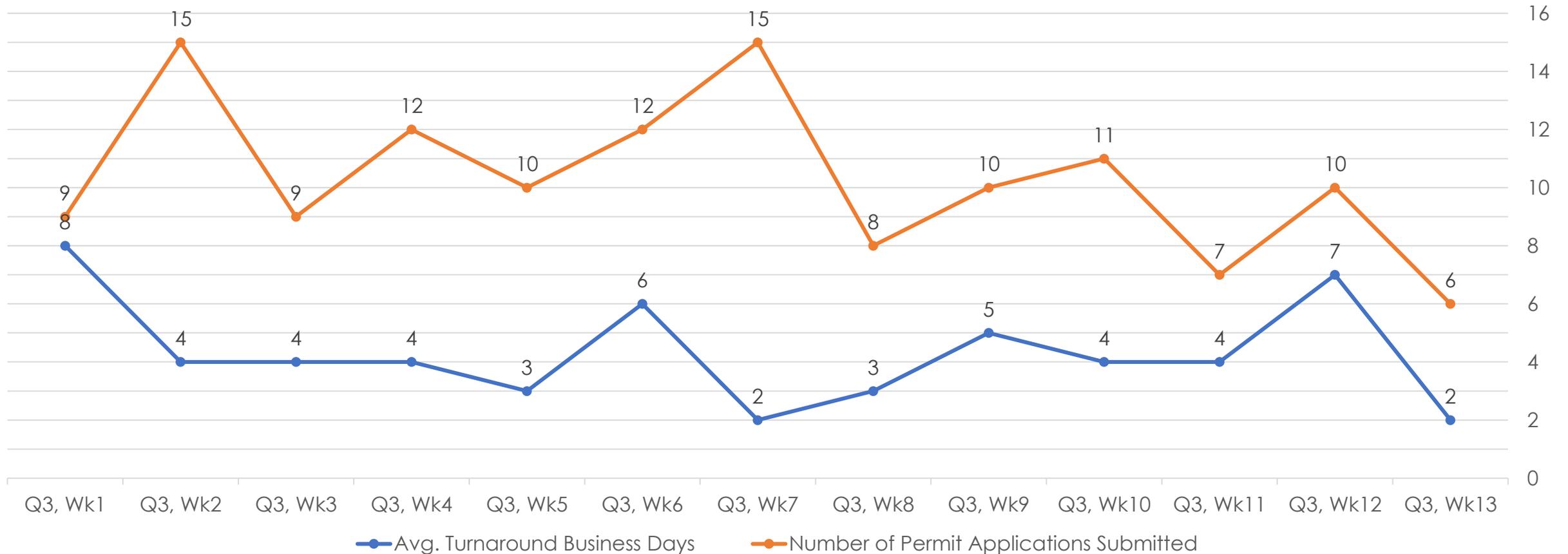
Report on Planning and Development Department Permitting Processes FY19-20, 2nd Q

FY19-20, 1st Quarter - Permits Applied & Turnaround
111 Permit Applications Submitted; 4.72 Days Avg. Turnaround



Report on Planning and Development Department Permitting Processes FY19-20, 2nd Q

FY19-20, 2nd Quarter - Permits Applied & Turnaround
134 Permit Applications Submitted; 4.23 Days Avg. Turnaround



Report on Planning and Development Department Permitting Processes FY19-20, 2nd Q

	FY18-19 3 rd Quarter	FY18-19 4 th Quarter	FY19-20 1 st Quarter	FY19-20 2 nd Quarter
Total Number of Permits	191	136	111	134
Avg. Turnaround	8.89 days	5.11 days	4.72 days	4.23 days
Residential Projects				
Total Number of Permits	164	102	91	116
Avg. Turnaround	8.68 days	4.97 days	4.21 days	4.16 days
Commercial Projects				
Total Number of Permits	27	34	20	18
Avg. Turnaround	10.25 days	5.38 days	6.90 days	3.83 days



Agenda Item Summary Sheet

Item No: **G-2**
Meeting Date: **February 5, 2020**

Item Title: Discussion of Workforce Housing

Item Summary:

Attached is a Report on Phase 1 - Inventory & Assessment; Establish Goals for the Town Workforce Housing Study & Plan. The Report presents the findings associated with the completed tasks under Phase 1.

Staff Recommendation

Staff recommends that the Board review and discuss the Report and findings. As noted in the Report, Staff encourages discussion on several questions, based upon the findings presented, that will inform the Board's decision to proceed to Phase 2.

Number of Attachments: 2

Specific Action Requested:

Consider findings and direction with respect to Phase 2 of the project.

Submitted By: Planning and Development

Date: January 29, 2020

Finance Officer Comment:

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

Signature: Cliff Ogburn

A handwritten signature in black ink, appearing to read "Cliff Ogburn".

Date: January 29, 2020



Town of Nags Head Planning & Development Department

Town Workforce Housing Study & Plan Report - Phase 1 - Inventory & Assessment; Establish Goals

Overview

The intent of this project is to identify and address the housing needs of the Town's seasonal employees, specifically Ocean Rescue staff. Annually, beginning in May and ending in August, Ocean Rescue has approximately 45 seasonal employees; approximately 75% of these employees are not local residents, and therefore require housing. The primary goals of this project are to 1) identify housing needs for the Town's seasonal workforce, 2) reduce the complications associated with staffing this essential service, and 3) determine the opportunities and feasibility of providing housing to meet the needs of the Town's seasonal workforce.

This Report is intended to present the findings associated with the completion of Phase 1 Tasks for the Town Workforce Housing Study & Plan. As noted in the previously reviewed and approved Project Scope, Phase 1 tasks included the following:

- Inventory Town-owned properties available or potentially available for development or reuse;
- Identification of and interviews with stakeholders;
- Determine current and projected housing needs and preferences;
- Perform preliminary *windshield* assessment of Town-owned properties for suitability and identify existing regulatory controls affecting use and development;
- Identify applicable policies, goals, and plans;
- Coordinate public input with regard to suitable sites; and
- Present findings to Board of Commissioners for acceptance/agreement before proceeding to Phase 2.

Tasks were completed by assigned Town Staff, as well as staff of DJG, Inc., the Town's on-call architectural consultant ("the Consultant").

Task Findings

Task: Inventory Town-owned properties available or potentially available for development or reuse

- Town Staff developed an inventory of Town-owned properties with information on current use, property area, the presence of buildings, and the zoning of the properties. This inventory identified 96 properties owned by the Town, or for which the Town has some ownership interest (i.e. the skate park at the YMCA and the Soundside Event Site).
- Based upon this inventory, Town Staff performed a preliminary assessment of site suitability for housing, assigning a score of 3 to sites deemed suitable, 2 to sites deemed marginal, and 1 to site deemed

unsuitable. Two properties received a 3, six properties received a 2, and the remaining 88 properties received a 1.

- Based upon this scoring, and review by Town Staff and the Consultant, the following properties were selected for further consideration, with scores noted:
 - Outer Banks Medical Center, 425 Health Center Drive - 3
 - Satterfield Playing Fields, 227 Satterfield Landing Road - 3
 - Town Hall, 5401 Croatan Highway - 2
 - Bonnett Street Beach Access, 2919 South Virginia Dare Trail - 2
 - Fire Station #16, 5314 Croatan Highway - 2
 - Epstein Beach Access, 5701 South Virginia Dare Trail - 2
 - Nags Head Ocean Rescue Station, 3719 Croatan Highway - 1

- The majority of properties owned by the Town were determined to be unsuitable based on their size (66 properties are less than 0.5 acres/21,780 sq. ft. in area) and/or existing use or conditions limiting development (parks, Public Works facilities, conservation land, and marsh conditions).

- Two properties that received a 2 were ultimately not selected for further consideration. These were the skate park property, given that the Town only has an interest in the property controlled by the YMCA, and the Public Works Debris Yard on Lark Avenue, given the use of the property.

- While only receiving a 1, the Nags Head Ocean Rescue Station was selected for further consideration given previously known interest by the Board of Commissioners.

Task: Identification of and interviews with stakeholders; and

Task: Determine current and projected housing needs and preferences

- The following individuals were identified as stakeholders and interviewed by the Consultant as part of Phase 1:
 - Cliff Ogburn, Town of Nags Head, Town Manager
 - Andy Garman, Town of Nags Head, Deputy Town Manager
 - Chad Motz, Town of Nags Head, Ocean Rescue Captain
 - Ken Savage, Town of Nags Head, Ocean Rescue Supervisor
 - Mike Norris, Town of Nags Head, Facilities Maintenance Superintendent
 - Four (4) former Town of Nags Head Ocean Rescue staff persons

- The interviewees were asked the following questions, with responses summarized:
 - Is there a minimum or maximum number of employees that you would want to occupy a location?

- All +/- 25 employees can be located on the same property if there is enough separation and living spaces are only shared amongst 3-6 people.
- Ideally, all employees would be housed in one location.
- Can a portion of the building be used for the program, or is a completely unoccupied facility required? Do you prefer one location or several for the work force housing?
 - Smaller groups of employees are preferred, so the option to have several different locations for housing isn't out of the question. Location and cost are important considerations. One location makes ride sharing easier.
 - An unoccupied facility preferred.
- Will the properties need access to public transportation, or are students/residents self-sufficient for mobility? Do you need access to amenities within walking distance? Is a group minibus or van available?
 - Some students do not have vehicles. Northern Nags Head is preferred since it is closer to the stores and work. Proximity to public transportation is not as important as proximity to the stores and to work.
 - Transportation has not been an issue in the past. Employees often car pool.
- What is an acceptable distance for an employee to walk from their vehicle to their residence?
 - On-site parking is preferred, but parking should be located no further than 1/4 of a mile from the premises. If parking is far away, employees would have to walk to their car and bring the car back to their residence to pick up the items they need to bring to work.
 - 1/4 mile maximum.
- Are there any general areas or blocks of Nags Head that you deem unsuitable? Are there areas that are preferred?
 - Housing should be as close to the beach and as close to the north part of Nags Head as possible.
 - Residential neighborhoods are not suitable for work force housing unless adequately dispersed. North Nags Head is preferred.

- Is a public “dormitory” style of facility preferred over a private “apartment” style?
 - Dormitory style facilities could work for some employees, but the more desirable option is small groups of people living together and sharing a living space.
 - Either could work, but we want to be sure that the staff are receiving an option equal or better than what they would find elsewhere. It is important that there is some privacy available in whatever option is selected.

- Should sleeping spaces accommodate all residents of one gender, or will occupancy be limited to 1-2 residents per room?
 - Individual rooms of 1-2 people are strongly preferred.
 - The goal would be to provide individual rooms of 1-2 people.

- Will residents need private kitchens, restrooms, showers and washer/dryers, or can those be shared facilities?
 - Facilities can be shared, but the number of people sharing them should be limited.

- Will you need any specialized rooms for research, physical training, large gatherings, large item storage, or other specialized areas?
 - A large gathering space would be very beneficial. Work-out facilities and storage spaces for equipment and bicycles would be ideal.
 - A multi-use gathering space, maintenance room, and outdoor storage would all be beneficial.

- Are instructors’ or supervisors’ quarters required?
 - Supervisors quarters are not required but might be beneficial.

- Are there any amenities that are preferred or discouraged, such as outside spaces, grill areas, etc.?
 - An outdoor gathering space and grill would be nice to have.
 - Outdoor storage, outdoor shower, and an outdoor gathering space are recommended. Grills, fire pits, and car washing in parking lot are discouraged.

- Are there any special accommodations needed for WFH employees that would be atypical of your average tenant?
 - Storage areas, outdoor shower, and study areas.

- No special accommodations will be required.
- Are there specific utility requirements that may be needed for tenants? Will wi-fi and closed-circuit tv's tied to other campuses be required?
 - Wi-fi and television are desired. Closed circuit TV is not required.
- Are all employees on the same general work schedule?
 - The life guards work 8:00 AM - 6:00 PM but they have different days off.
- What are the general habits of WFH? Are they loud, quiet, stay up late, get up early, etc.? Will sound-attenuated study facilities be required?
 - Everyone is different and every night is different so it would be ideal if people have options based on their preference.
 - They are generally up early and up late, with some variation.
- What are your lessons learned from living in other residences that we can apply to the prospective program?
 - Cost and location/proximity to work are very important. The ability to be close to other employees but still have separate private spaces is strongly preferred. Trash accumulates quickly.
 - Everything should be accessible, including pipes and drains. Laminate does not last. Carpet & wood flooring should be minimal. Hard surfaces are preferred. Outdoor seating would be useful.
- Primary takeaways from the interviews are as follows:
 - The work force housing employees are most concerned with the housing location, cost, and privacy. The ideal workforce housing scenario would incorporate all employees in the same location, but would also allow for some separation and privacy.
 - The selected property will ideally be located in northern Nags Head, close to the beach, and separated from residential neighborhoods.
 - A living arrangement that allows people to congregate but have their own private spaces is strongly preferred. A cottage-style living arrangement has been successful in the past.
 - The work force housing employees have a need or strong desire for outdoor showers, gathering spaces, study areas (if the living arrangement is not private), and storage areas. The selected property would ideally be able to accommodate an outdoor shower,

outdoor storage, an outdoor gathering space, an indoor multi-use gathering space, and a maintenance room.

- The number of people sharing facilities such as kitchens and bathrooms should be limited to 3-5 in order for upkeep to be manageable.
- It is important that we are presenting the staff with a housing option that is equal to or better than what they would find elsewhere. This includes cost, location, and living arrangement considerations.

Task: Perform preliminary windshield assessment of Town-owned properties for suitability and identify existing regulatory controls affecting use and development

- The Consultant conducted preliminary assessments of the seven (7) properties selected for further consideration; these assessments are attached, providing physical information on the properties, as well as perceived positives and negatives.
- Generally, the expectation is that only the Outer Banks Medical Center and Satterfield Playing Fields sites could accommodate development providing housing for all staff. However, in both cases building would be necessary, and at least with respect to the Satterfield Playing Fields, existing use and/or agreements may preclude such development.
- The size and use of the remaining sites (Town Hall, Bonnett Street Beach Access, Fire Station #16, Epstein Beach Access, and Nags Head Ocean Rescue Station) would preclude the housing of all workforce and/or the development of additional building area.
- Existing zoning precludes the development of multi-family, cottage court, or dormitory uses from all but two sites, the Bonnett Street Beach Access and Nags Head Ocean Rescue Station.

Task: Identify applicable policies, goals, and plans

- Generally, beyond the expressed goals of this project, existing policies, goals, and plans do not provide guidance with respect to the provision of housing for the Town's workforce. However, the Town certainly recognizes the importance of the Ocean Rescue Division and seasonal lifeguard staff, points that are echoed in the Comprehensive Plan, and the provision of housing may enhance the continued viability of the program.
- With respect to the seven (7) sites, policies within the Comprehensive Plan pertaining to the preservation of single-family neighborhoods and the defining attributes of certain Character Areas should inform decisions regarding the suitability of one or more of the sites given development potential. For example, while the Outer Banks Medical Center and Satterfield Playing Fields sites may have the most development potential based on area, any project at these locations should take into account the proximity of existing single-family neighborhoods.

Remaining Tasks and Next Steps

At this time, based on the findings developed to-date, Staff determined to delay any public input with regard to site suitability until further discussion with the Board of Commissioners. Given the sites considered, Staff felt that input and feedback from the Board was necessary before soliciting public input on these particular sites, primarily because the Board may perceive that one or more of the sites were not an option. Should the Board believe that this input is necessary before proceeding to Phase 2, Staff could coordinate public input prior to and report back at the Board's meeting on March.

Regardless, the remaining Task within Phase 1 involved presenting these findings to the Board of Commissioners for acceptance/agreement before proceeding to Phase 2. As a reminder Phase 2 involves Concept Development and Feasibility, and presumes that the Board would select up to two sites for which the feasibility for preferred housing would be investigated and preliminary fit tests developed, and further, that opportunities for partnerships in the development and/or use of housing would be identified and investigated. In considering how to proceed to Phase 2 and/or whether to proceed, Staff would suggest that the Board consider the following questions:

1. Have all Town-owned properties been sufficiently considered? Are there
2. Does the Board believe that at least one or two of the properties considered warrant further consideration?
3. Does the Board believe that one or more of the properties considered are not options and should not be considered?
4. Does the Board believe that development of housing on a singular property is possible or ideal, or should housing accommodated over multiple properties be a consideration?
5. Is the ideal property for workforce housing currently in the Town's inventory?
6. Do the considered sites present opportunities for additional uses that may increase viability or potentially offset costs to the Town?

**Town of Nags Head
Work Force Housing Study**

Potential Housing Locations

Outer Banks Medical Center



Site Statistics:

Address:	425 Health Center Drive
Zoning:	SED-80 (Special Environmental)
Lot Area:	3.38 Acres
Building Area:	4898 SF
Permitted Uses:	Dwelling, Large Residential (w/ Supplemental Regs) Dwelling, Single-Family (detached)
Conditional Uses:	Dormitory (w/ Supplemental Regulations)
Minimum Front Yard:	30'
Minimum Side Yard:	20'
Minimum Rear Yard:	20'
Approx. Buildable Area:	2.60 Acres
Existing Parking:	37 Spaces

Site Positives:

- Site is not in a residential area
- Site has adequate parking
- Site has an existing building for use

Site Negatives:

- Existing building will not house entire workforce
- Major building renovation required
- ADA upgrades required
- Rezoning required
- Property is in a special environmental zone intended to protect habitat
- Site is fairly remote from beach



Site Photograph

Town of Nags Head Work Force Housing Study

Potential Housing Locations



Satterfield Playing Fields

Site Statistics:

Address:	227 Satterfield Landing Road
Zoning:	R-2 Medium Density Residential
Lot Area:	13.26 Acres
Building Area:	None (Restroom/Ancillary Only)
Permitted Uses:	Cluster Housing (w/ Supplemental Regs) Dwelling, Large Residential (w/ Supplemental Regs) Dwelling, Single-Family (detached) Dwelling, Two-family (duplex)
Conditional Uses:	None Applicable to Housing
Minimum Front Yard:	30'
Minimum Side Yard:	10'
Minimum Rear Yard:	20% lot depth, not to exceed 30'
Approx. Buildable Area:	10.00 Acres
Existing Parking:	126 Spaces

Site Positives:

- Site can be adequately buffered from residential area
- Site has adequate parking
- Site has substantial open space & can accommodate 100% of WFH employees
- Cluster housing permitted
- Site is in close proximity to beach and is located in the northern area of Nags Head

Site Negatives:

- Playing Fields have an ongoing lease attached that is subject to grant funds
- No existing buildings available for use
- Stormwater management is required
- Loss of public amenity



Site Photograph

**Town of Nags Head
Work Force Housing Study
Potential Housing Locations**



Town Hall

Site Statistics:

Address:	5401 Croatan Highway
Zoning:	R-3 High Density Residential & SPD-C-I (Special Institutional)
Lot Area:	4.53 Acres
Building Area:	19,076 SF (main building) 23,460 SF (all buildings)
Permitted Uses (R-3):	Dwelling, Large Residential (w/ Supplemental Regs) Dwelling, Single-Family (detached) Dwelling, Two-family (duplex)
Permitted Use (SPD-C-I):	No residential permitted
Conditional Uses:	None applicable to Housing
Yard Requirements:	NA (Lot is developed)
Approx. Buildable Area:	NA (Lot is developed)
Existing Parking:	82 Spaces

Site Positives:

- Site is located in a highly visible area to regulate ongoing activities
- Site is in close proximity to beach

Site Negatives:

- Site zoning does not permit multifamily housing
- Site would not accommodate all work force housing employees
- Site is in the southern portion of Nags Head
- Site has very little available space
- Site parking appears fully utilized w/ little room available for additional parking
- Buildings on site have designated uses



Site Photograph



Location Map



Property Map

**Town of Nags Head
Work Force Housing Study
Potential Housing Locations**



Bonnett Street Beach Access

Site Statistics:

Address:	2919 South Virginia Dare Trail
Zoning:	CR (Commercial Residential)
Lot Area:	1.58 Acres (Bath House Parcel Only)
Building Area:	1,476 SF
Permitted Uses (R-3):	Dwelling, Large Residential (w/ Supplemental Regs) Dwelling, Single-Family (detached) Dwelling, Two-family (duplex)
Conditional Uses:	Cottage Courts (w/ Supplemental Regulations) Dwelling, Multi-family (w/ Supplemental Regulations)
Minimum Front Yard:	30'
Minimum Side Yard:	8'
Minimum Rear Yard:	25' or 20% lot depth, not to exceed 30'
Approx. Buildable Area:	1.28 Acres (Bath House parcel only)
Existing Parking:	70 Spaces

Site Positives:

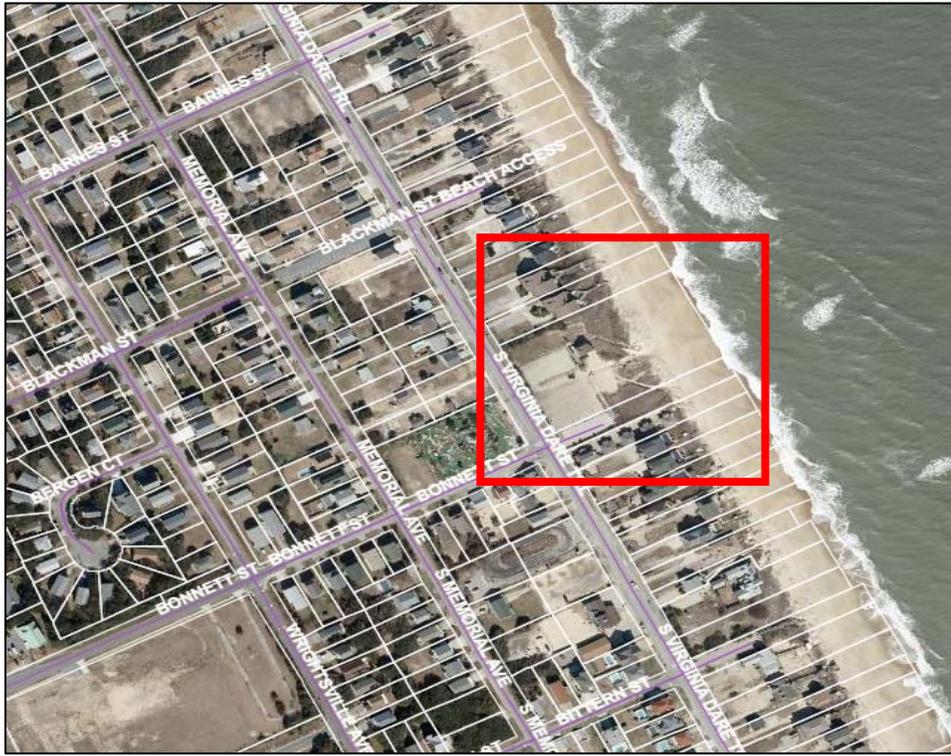
- Site is located in a highly visible area to regulate ongoing activities
- Site is in close proximity to beach and northern Nags Head
- Site has some available space for new construction
- Site may have some available parking

Site Negatives:

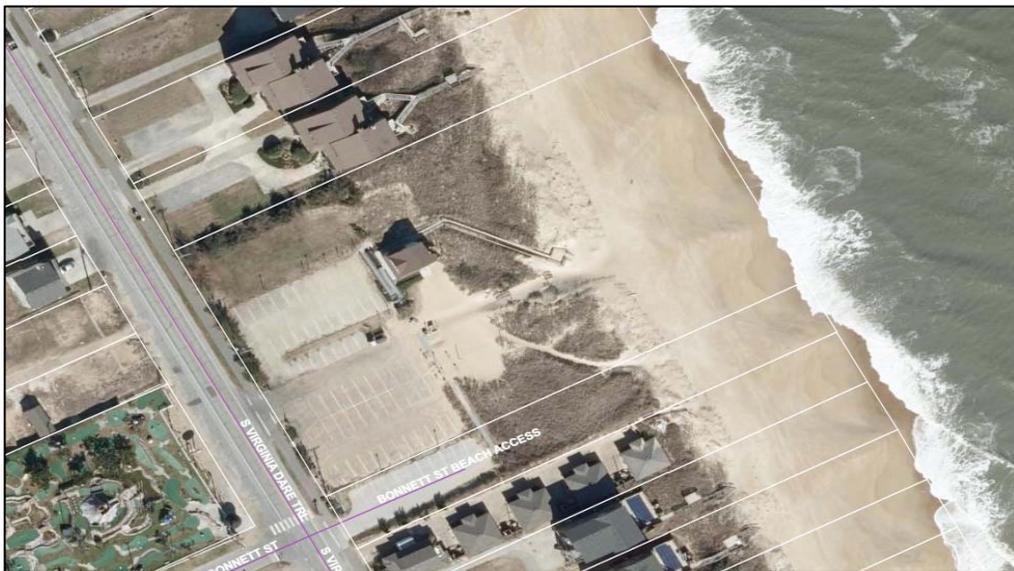
- Conditional Use Permit required for multi-family
- Site would likely not accommodate all work force housing employees
- Existing and future use limits suitability
- No existing buildings available for use.
- Site is frequented by the public



Site Photograph

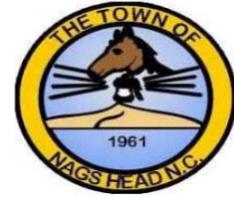


Location Map



Property Map

**Town of Nags Head
Work Force Housing Study
Potential Housing Locations**



Fire Station #16

Site Statistics:

Address:	5314 Croatan Highway
Zoning:	SPD-C / Comm 1 (Special Planned Dev. Commercial 1)
Lot Area:	1.50 Acres
Building Area:	13,170 SF
Permitted Uses:	No residential permitted
Conditional Uses:	None applicable to Housing
Yard Requirements:	NA (Lot is developed)
Approx. Buildable Area:	NA (Lot is developed)
Existing Parking:	25 Spaces

Site Positives:

- Site is located in a highly visible area to regulate ongoing activities
- Site is in close proximity to beach

Site Negatives:

- Site zoning does not permit multifamily housing
- Site would not accommodate all work force housing employees
- Site is in the southern portion of Nags Head
- Site has very little available space
- There may be a conflict among user groups
- Buildings on site have designated uses



Site Photograph



Location Map



Property Map

**Town of Nags Head
Work Force Housing Study
Potential Housing Locations**



Epstein Beach Access

Site Statistics:

Address:	5701 South Virginia Dare Trail
Zoning:	SPD-C / Recreation (Special Planned Development Rec)
Lot Area:	0.84 Acres
Building Area:	None (Restroom/Ancillary Only)
Permitted Use (SPD-C-I):	No residential permitted
Conditional Uses:	None applicable to Housing
Yard Requirements:	No standard / Property - dependent
Approx. Buildable Area:	No standard / Property - dependent
Existing Parking:	44 Spaces

Site Positives:

- Site is in close proximity to beach
- Site may have some available space for new construction
- Site may have some available parking

Site Negatives:

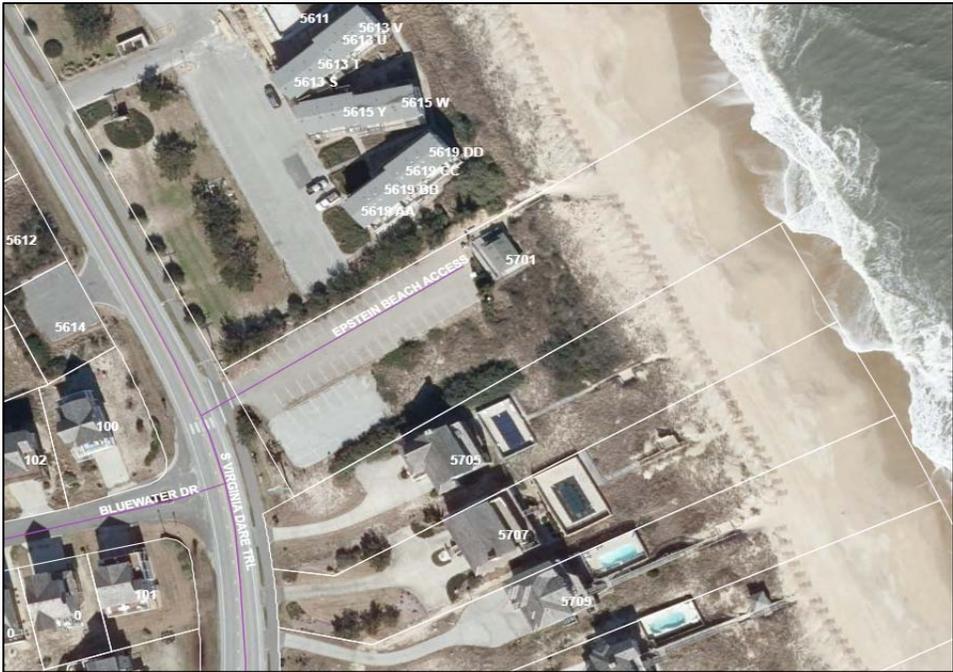
- Site zoning does not permit multifamily housing
- Site would accommodate only a few work force housing employees
- No existing buildings available for use.
- Site is frequented by the public
- Property is only 125' wide, limiting developable area
- Site is located in the southern portion of Nags Head



Site Photograph



Location Map



Property Map

Town of Nags Head Work Force Housing Study

Potential Housing Locations



Nags Head Ocean Rescue Station

Site Statistics:

Address:	3719 Croatan Highway
Zoning:	C-2 (General Commercial)
Lot Area:	0.15 Acres
Building Area:	1,885 SF
Permitted Uses:	Dwelling, Large Residential (w/ Supplemental Regs) Dwelling, Single-Family (detached) Dwelling, Two-family (duplex)
Conditional Uses:	Cottage Courts (w/ Supplemental Regulations) Dwelling, Multi-family (w/ Supplemental Regulations) Townhouse (w/ Supplemental Regulations) Dormitory (w/ Supplemental Regulations)
Minimum Front Yard:	30'
Minimum Side Yard:	8'
Minimum Rear Yard:	25' or 20% lot depth, not to exceed 30'
Approx. Buildable Area:	NA (Lot is developed w/ setback waivers)
Existing Parking:	3 Spaces

Site Positives:

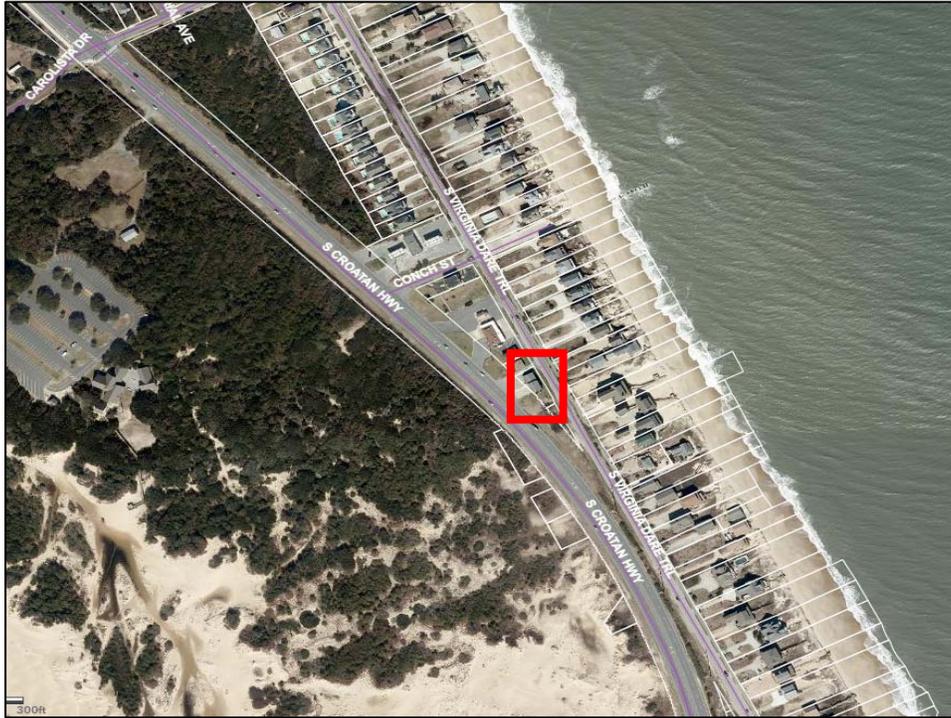
- Site is located in a highly visible area to regulate ongoing activities
- Site is in close proximity to beach and northern Nags Head
- Existing use is appropriate for WFH staff

Site Negatives:

- Site has no available space for new construction
- Site has no space for parking
- Conditional Use Permit required for multi-family
- Site accommodate very few work force housing employees
- Site configuration and size is restricting
- Existing building would require a structural assessment



Site Photograph



Location Map



Property Map



Agenda Item Summary Sheet

Item No: **H-1**
Meeting Date: **February 5, 2020**

Item Title: Committee Reports

Item Summary:

At the February 5th Board of Commissioners meeting, Board members will provide reports from meetings they have attended on behalf of the Town.

Number of Attachments: 0

Specific Action Requested:

Provided for Board update.

Submitted By: Administration

Date: January 29, 2020

Finance Officer Comment:

No unbudgeted fiscal impact.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

N/A

Signature: Cliff Ogburn

Date: January 29, 2020



Agenda Item Summary Sheet

Item No: **H-2**
Meeting Date: **February 5, 2020**

Item Title: Consideration of Audit Contract

Item Summary:

At the February 5th Board of Commissioners meeting, staff is requesting Board approval of recommended auditor for the FY 2020 audit for a minimum of three years with up to three additional years as a renewal option. Staff is recommending that Potter & Company from Mooresville, NC be obtained – additional details may be found in Finance Director Amy Miller's memo which is attached. Also attached is a spreadsheet of the proposals received in response to the Town's advertisement.

Number of Attachments: 2

Specific Action Requested:

Request Board review and consideration of Town Auditor.

Submitted By: Amy Miller, Finance Director

Date: January 29, 2020

Finance Officer Comment:

Recommendation to utilize Potter & Company from Mooresville, NC as the Town's auditor.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

I concur with staff's recommendation.

Signature: Cliff Ogburn

A handwritten signature in black ink, appearing to read "Cliff Ogburn".

Date: January 29, 2020



Administrative Services
Finance

Town of Nags Head

Post Office Box 99
Nags Head, North Carolina 27959
Telephone 252-441-5508
Fax 252-441-4680
www.nagsheadnc.gov

Amy Miller
Finance Director

MEMORANDUM

To: Cliff Ogburn, Town Manager

From: Amy Miller, Finance Director

RE: June 30, 2020 audit contract

Staff is recommending Potter & Company out of Mooresville, NC, to perform the annual fiscal year end 2020 audit for the Town for a minimum of three years, with up to three additional years as a renewal option. The partner assigned to this audit, Bob Taylor, has earned the *Certificate of Educational Achievement in Governmental Accounting and Auditing*. Bob will keep us informed on new regulations and will be available throughout the year to provide assistance as needed. Bob is also an instructor for the Local Government Commission. Potter & Company has committed to providing a successful and timely audit of the Town's CAFR, internal controls, and grants as required by the federal and state Single Audit Acts.

In selecting an accounting firm, it is important to select the firm which will provide the very highest level of service. Potter & Company will utilize all their resources necessary to assure prompt and professional service. Their staffing permits allocation of necessary time and resources to ensure the Town of Nags Head will be a highly valued client to their firm. Their firm policy is to assign staff members who have previous experience on the engagement each year. The professionals assigned are expected to be on-site 85-95% of the time. Normally there will be two staff (one a manager level), in addition to the partner in charge, assigned to the audit. Their experience and familiarity with numerous governmental audits allow for a comprehensive and efficient audit with minimal distraction to staff.

One important aspect of the audit that sets Potter & Company apart is the amount of partner and manager involvement in all phases of the audit, including field work, as well as the staff and time commitment allocated to the engagement. Their position is that a large on-site commitment from the partner and manager in charge of the engagement increases the efficiency and understanding in the audit process. Potter & Company has built in 250 hours of audit time for our engagement. Of these hours, 96%, or 240 hours, will be performed by the partner and senior staff. One additional item to consider is their familiarity with the Outer Banks and challenges experienced by the local governments in this region.

Potter & Company's great degree of experience in governmental accounting allows them to understand the Town's needs and provide answers to unique situations. They audit several clients that receive the GFOA Certificate of Achievement for Excellence in Financial Reporting including Dare County (25 years), Cabarrus County (15 years), City of Monroe (22 years), and Town of Mooresville (18 years), to name a few. These examples demonstrate what a knowledgeable resource Potter & Company would be for the Town, as well as exemplify the value they place on long term relationships.

Town of Nags Head
FY 19/20 Audit Proposals

Company	Current			Associations	Total Hours	Sr. Staff/ Partner Hours	Sr. Staff/Partner Percent of hours	FY 19/20 Average		Hours		2020 Total Cost	2021 Total Cost	2022 Total Cost	2023 Total Cost	2024 Total Cost	2025 Total Cost
	Governmental Clients	References	Service Provided					Hourly Cost	Partner	Sr. Staff	Staff						
S Preston Douglas & Associates Lumberton, NC	City of Elizabeth City City of Lumberton	Evelyn Benton 252-337-6861	Audit Audit	None Noted	216.00	176.00	81%	\$ 129.63	88.00	88.00	40.00	\$ 28,000.00	\$ 28,500.00	\$ 28,880.00	\$ 28,920.00	\$ 28,920.00	\$ 28,950.00
Thompson, Price, Scott, Adams & Co Wilmington, NC	Johnston County City of Whiteville Hyde County	Chad McLamb, 919-989-5109	Single Audit Yellow Book Single Audit	None Noted	253.00	146.00	58%	\$ 105.73	40.00	106.00	107.00	\$ 26,750.00	\$ 26,750.00	\$ 26,750.00	\$ 26,750.00	\$ 26,750.00	\$ 26,750.00
Johnson, Mizelle, Straub & Murphy Kitty Hawk, NC	Town of Duck Dare Co. Tourism Board	Chris Layton, Town Manager 252-255-1234	Audit, GASB 34 Audit, GASB 34	None Noted	203.00	198.00	98%	\$ 145.32	63.00	135.00	5.00	\$ 29,500.00	\$ 29,500.00	\$ 30,500.00	\$ 32,000.00	\$ 33,500.00	\$ 35,000.00
Potter & Company Mooreville, NC office	Dare County Union County	David Clawson, Finance Director 252-475-5731	Financial & Compliance Audits, GASB 34, Assistance with CAFR Financial & Compliance Audits, GASB 34, Assistance with CAFR	Government Audit Quality Center Quality Center Highest Rating from United States General Accounting Office	250.00	240.00	96%	\$ 154.00	40.00	200.00	10.00	\$ 38,500.00	\$ 39,300.00	\$ 40,300.00	\$ 41,300.00	\$ 42,300.00	\$ 43,300.00
Rives & Associates Raleigh, NC	Town of Pittsboro Town of Kinston	Heather Meacham, Finance Director 919-542-4621	Single Audit, GASB 34 Single Audit, GASB 34	Government Audit Quality Center	208.00	162.00	78%	\$ 132.40	26.00	136.00	46.00	\$ 27,540.00				Not Quoted	

Agenda Item Summary Sheet



Item No: **J-1**
Meeting Date: **February 5, 2020**

Item Title: Beach Nourishment – Proposed Municipal Service District (MSD) Discussion

Item Summary:

The Town has recently completed its second beach nourishment project and is underway preparing for future shoreline management efforts. Staff is currently interviewing consultants to provide coastal engineering and surveying services to conduct annual shoreline monitoring and begin preliminary work towards the town's next project, which is anticipated in 2025. The Board of Commissioners held a workshop in November of 2019 to discuss beach nourishment, including how the town might work with Dare County and other towns to coordinate project activities and funding. Part of this discussion included anticipating the town's future costs, available revenue sources, and how the town should distribute its share of project expenses within the community. Currently, the town levies a town wide tax of 2.7 cents per \$100 of assessed value to fund a portion of its share of the project. The remainder of the funds are collected utilizing a municipal service district which includes properties east of NC 12 and SR 1243 within the previous project areas. These properties are currently taxed at 17.5 cents per \$100 of assessed value.

A municipal service district (MSD) is a defined area within a town where additional property tax is levied in order to provide projects or extra services that benefit the properties in that district. The town has established a number of benefits in conducting beach nourishment and shoreline management activities, including protection of properties on the oceanfront and directly adjacent to the ocean, protection of infrastructure such as roads, waterlines, sewage systems, electrical services, and beach accesses, and maintaining a recreational beach that is attractive and usable by the public, free of structures and debris. These benefits can be assigned to different parts of the community at different levels, with oceanfront properties having the greatest benefit. Properties adjacent to but not directly on the ocean also benefit from reduced flooding and impacts to infrastructure, as well as increased property values due to their proximity to a well-maintained recreational beach. The entire town also receives a series of benefits, but to a lesser extent than these other areas. The Board will discuss the merits of creating additional MSDs to fund future nourishment activities, which would be designed to create an equitable distribution of project costs to property owners based on the benefits they receive. Primarily what is being proposed are two additional MSDs, one north of Whalebone Junction to include all properties east of US 158, and one south of Whalebone Junction to include all properties in South Nags Head. It is conceived that these areas could be taxed at a nominal rate to pay for current planning activities, which would increase once a contract for construction is executed prior to the next project. Attached is a map showing the current and proposed MSD boundaries. Also included is a presentation describing the proposal and the process for creating an MSD. The first step would include the Board directing staff to prepare a report depicting the boundaries of the proposed MSD, a statement identifying the services to be provided, and plan for providing those services.

Number of Attachments: 1

Specific Action Requested: Discuss the proposed MSD. Direct staff to prepare the report at the Board's discretion.

Submitted By: Administration

Date: January 29, 2020

Finance Officer Comment:

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment: The attached materials reflect my comments on this matter.

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation: I will participate in the discussion as necessary.

Signature: Cliff Ogburn

A handwritten signature in black ink, appearing to read "Cliff Ogburn".

Date: January 29, 2020

BEACH NOURISHMENT PROPOSED MSD DISCUSSION

Town of Nags Head Board of Commissioners

February 2020

PROPOSED MSD DISCUSSION

Considerations:

- **The town is in the process of obtaining perpetual easements from 2/3 of oceanfront properties.**
- **The Town is in the process of hiring an engineer and surveyor to assist with future planning. These costs could be paid for either partially or wholly by new MSDs. Tax rates would likely be nominal initially based on anticipated project planning and design costs.**
- **New MSDs may be created at any time for future purposes provided contracts are let within a year. These may overlap with existing MSDs.**
- **Creating a new MSD west of NC 12 and SR 1243 would offset rising costs for future projects and better align tax rates with project benefits. This would require that oceanfront properties also be within the west MSD.**

PROPOSED MSD DISCUSSION

Review of process for creating/amending municipal service districts

What is an MSD? – A defined area within a city, town or village in which the unit's governing body levies an additional property tax in order to provide projects or extra services that benefit the properties in that district N.C.G.S. Ch. 160A, Article 23.

PROPOSED MSD DISCUSSION

Review of process for creating/amending municipal service districts

The town adopts new MSDs by ordinance.

A public hearing is required.

Prior to the public hearing, the town must prepare a report to include:

- A map of the district(s) and the proposed boundaries
- A statement identifying the services needed in the district. The statement must detail why the services needed in that district are greater than those needed in other parts of the town.
- A plan for providing services in the district.

PROPOSED MSD DISCUSSION

Review of process for creating/amending municipal service districts

- Notice of hearing is required stating the date, hour and place of the hearing and its subject. The notice shall include a map of the district and a statement that the report required for the public hearing is available for public review in the office of the town clerk.
- Published notice once at least one week prior to the hearing.
- Notice is also mailed at least four weeks before the date of the hearing to all owners of property in the proposed district.
- Owners may request exclusion from the district by submitting a written request to the Board no later than five days after the public hearing. Board may exclude the property after making a finding that it is not in need of the service.

PROPOSED MSD DISCUSSION

Review of process for creating/amending municipal service districts

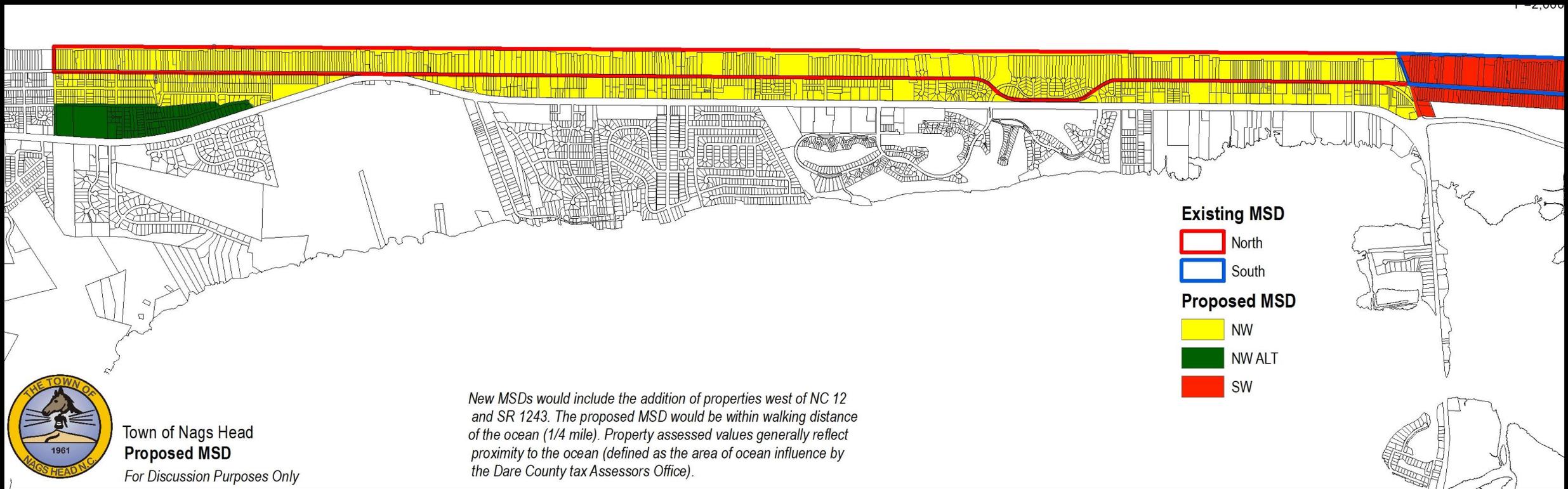
- Generally, the ordinance defining an MSD takes effect at the beginning of the next fiscal year after passage.
- Ordinance must be adopted by a majority vote of the board at two separate meetings.

PROPOSED MSD DISCUSSION

Review of process for creating/amending municipal service districts

Timeline

- Wed, Feb 5, 2020 BOC mtg – Board directs staff to prepare Report (map, statement, plan)
- Wed, Mar 4, 2020 BOC mtg – Report to the Board (map, statement, plan); made available for public inspection; Four (4) weeks before PH
- Notice of PH mailed to all prop owners in proposed district four (4) weeks before PH; notice of PH published at least one (1) week before PH
- Wed, May 6, 2020 BOC mtg – PH held – Adopt ordinance creating MSD at two meetings by majority vote
- Wed, Jun 3, 2020 BOC mtg – Adopt ordinance creating MSD – second reading



Existing MSD

- North
- South

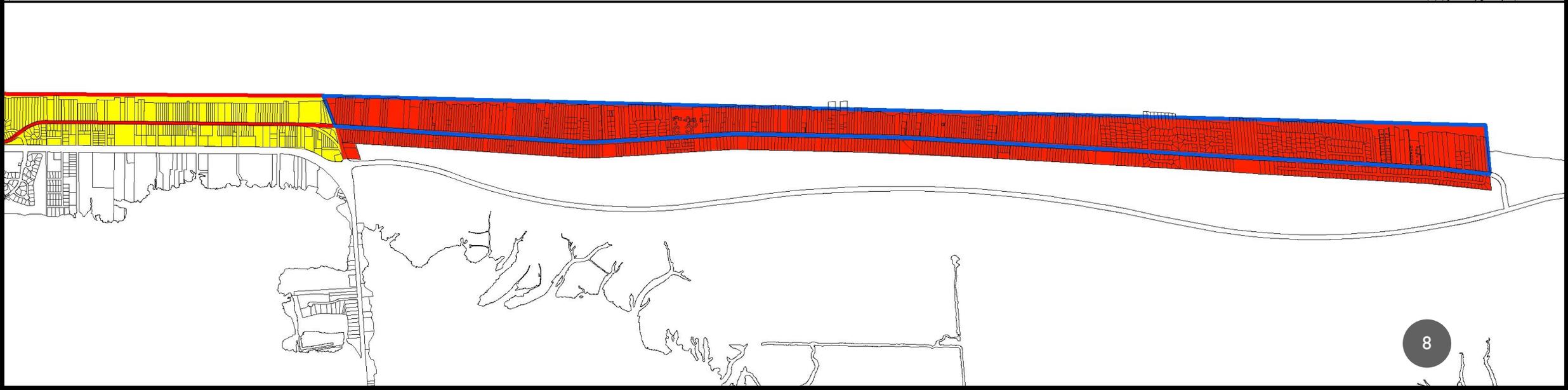
Proposed MSD

- NW
- NW ALT
- SW



Town of Nags Head
Proposed MSD
 For Discussion Purposes Only

New MSDs would include the addition of properties west of NC 12 and SR 1243. The proposed MSD would be within walking distance of the ocean (1/4 mile). Property assessed values generally reflect proximity to the ocean (defined as the area of ocean influence by the Dare County tax Assessors Office).





Agenda Item Summary Sheet

Item No: **J-2**
Meeting Date: **February 5, 2020**

Item Title: Town Manager Ogburn – Sanitation/Recycling

Item Summary: Due to changes in the recycling market, we have been notified from our contractor that our material is being incinerated at a plant in Portsmouth, Va. rather than being recycled. We have received a three-month approval from the NC Department of Environmental Quality and the Executive Director of the Albemarle Solid Waste Authority has agreed to allow us to temporarily divert our recycling materials to an incinerator. The state DEQ is working to provide a solution for communities in North Carolina to continue recycling and providing markets for recycling materials. However, those solutions will likely take time.

Consideration of changes to the contract - In the meantime, the Board will need to decide if it wants to amend our contract with Bay Disposal as they are currently in violation of the following section:

Disposition of Recyclable Materials

The CONTRACTOR shall be responsible for all recyclables collected in accordance with this CONTRACT. **No more than 10% by weight of all collected recyclable materials is to be land filled and/or incinerated without the express, written permission from the TOWN.**

We could either amend the contract, write the letter granting permission for 100% of the materials to be incinerated, or cancel the contract.

Consideration of changes to the winter sanitation/recycling schedule – Please see Attachment 1.

Consideration of ordinance to rescind Town Code Sec. 30-6(e) *Storage and removal of trash and recycling carts* - Please see Attachment 2.

Number of Attachments: 2

Specific Action Requested: Provided for Board discussion.

Submitted By: Administration

Date: January 29, 2020

Finance Officer Comment:

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment: I will participate in the discussion as necessary.

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

However, staff was made aware through communications on Thursday, January 30 with Matt James, Division of Environmental Assistance and Customer Service with the NC Department of Environmental Quality, that there is a company interested in pursuing a recycling facility in eastern NC. Mr. James assured staff that this is a reputable company with the capital to be able to make this investment work. However it's too early to know if this will come to fruition and even if it does we still don't know the cost of the tipping fees the company would charge. We would also need to contract with a hauler to deliver the material to the potential new site. The Board may want to delay taking any action on amending the sanitation/recycling schedule to allow for more time to consider this option if it becomes more realistic.

The Board would still need to amend the contract or grant written permission to divert the material to an incinerator to coincide with the 3 months that DEQ has permitted us to do so.

Signature: Cliff Ogburn

Date: January 29, 2020

Consideration of changes to winter sanitation/recycling schedule

In response to the changes in the recycling market, the Board may wish to consider reducing the towns winter sanitation schedule by eliminating a day of service and picking up all material one day a week. This would result in one trash truck picking up both trash and recycling at the same time on the same day and taking all the material to the land field. This would result in a slight savings of \$6,736.10 based on the calculations from information taken from driver’s daily log.

Savings from eliminating a day of service by picking up trash one day a week instead of two town wide and eliminating residential curbside recycling service from April-October.

<u>Blue Route</u> total driven miles in route per day for all trucks	= 264 miles
264 miles X 4.33 trips per week X 7 months	= 8001.84 total miles
8001.84 miles / 4 miles per gallon X \$2.50 per gallon	= \$5,001.15 fuel savings

<u>Green/Red Route</u> total driven miles in route per day for all trucks	= 232 miles
232 miles X 4.33 trips per week X 7 months	= 7031.92 miles
7031.92 / 4 miles per gallon X \$2.50 per gallon	= \$4,394.95 fuel savings

Estimated fuel savings for the 7 month period	= \$9,396.10
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Additional cost of 380 tons of recycling taken to landfill	(\$77 per ton at land field versus \$70 per ton at recycling)
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\$7 a ton X 380 tons	= +\$2,660
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Total Savings	= \$6,736.10
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Currently the sanitation/recycling schedule is as follows

	May - Sept	Oct – Apr
Blue Route	trash – Monday and Friday recycling – Monday and Friday	trash – Monday and Friday recycling - Monday
Green Route	trash – Tuesday recycling – Wednesday	trash - Tuesday recycling - Wednesday
Red Route	trash - Tuesday and Saturday recycling – Wednesday	trash - Tuesday recycling - Wednesday

If the Board would like to remove a day of service and combine trash with recycling to be picked up one day a week, staff would recommend the following schedule:

	May - Sept	Oct – Apr
Blue Route	trash – Monday and Friday recycling – Monday and Friday	trash and recycling – Monday
Green Route	trash – Tuesday recycling – Wednesday	trash and recycling - Tuesday
Red Route	trash - Tuesday and Saturday recycling – Wednesday	trash and recycling - Tuesday



**AN ORDINANCE AMENDING THE CODE OF ORDINANCES
OF THE TOWN OF NAGS HEAD, NORTH CAROLINA**

PART I. That **Chapter 30, Solid Waste Management, Article I. IN GENERAL** be amended as follows:

Sec. 30-6. - Preparation of refuse for collection.

(a) *Generally.* The refuse collection schedule will be established by the public works director and changed as conditions warrant from season to season. Bulk containers, trash carts, or recycling carts which are obstructed or not properly positioned when the truck passes will not be collected until the next regularly scheduled pickup date. Lids must be closed when in use.

(b) *Receptacles required.* All refuse shall be placed in approved receptacles.

(c) *Access to receptacles.* Routes for access and collection of residential refuse shall be improved and maintained for the safety of refuse collectors. Access routes shall not be obstructed. Service will not be provided when dogs or other animals interfere with collectors.

(d) *Large items/bulk pickup.*

(1) *Residential collection.* Large, bulky items such as stoves, refrigerators, water heaters, sofas, box springs, etc., which cannot normally be loaded into the back of a standard refuse truck, shall be picked up with equipment designed for large, bulky items. This service does not include the pickup of building materials, roofing, soil, rock, concrete, tree stumps, etc. Tree and shrubbery trimmings must originate from a lot upon which is located a single-family or two-family dwelling unit. Tree and shrubbery trimmings must be cut in lengths of not over eight feet in length. To receive pickup of large, bulky items, an individual must make an appointment with the town from October 1 through March 31.

(2) *Commercial collection.* Large, bulky items which cannot normally be loaded into the back of a standard refuse truck shall be picked up with equipment designed for large, bulky items. This service does not include construction materials, carpet, wood, more than 25 mattresses/box springs, stumps, logs, tree and shrubbery trimmings, etc. Each pickup shall be limited to a maximum of no more than 1,500 pounds per item. To receive pickup of large, bulky items, an individual must make an appointment with the town for pickup. Pickup periods are from November 1 through December 15, and from February 15 through March 31.

(e) *Storage and removal of trash and recycling carts.* Trash and recycling carts must be placed for pickup within the street right of way and within four feet of the improved portion of the street, but not on the improved portion of the street. Trash and recycling carts shall be placed for pickup no earlier than the day before the scheduled pickup time. Trash and recycling carts must be removed from the street right of way no later than the day of collection. The property owner shall be responsible for such placement and removal.

PART II. Effective Date.

This ordinance amendment shall be in full force and effect from and after the **5th** day of **February 2020**.

Benjamin Cahoon, Mayor
Town of Nags Head

ATTEST:

Carolyn F. Morris, Town Clerk

APPROVED AS TO FORM:

John Leidy, Town Attorney

Date adopted: _____

Motion to adopt by Commissioner _____

Motion seconded by Commissioner _____

Vote: _____ AYES _____ NAYS



Agenda Item Summary Sheet

Item No: **L-1**
Meeting Date: **February 5, 2020**

Item Title: Mayor Ben Cahoon – Consideration of dates for CIP/Budget Workshops

Item Summary: The schedule below is being proposed for upcoming CIP/Budget Workshops – for Board consideration at the February 5th Board of Commissioners meeting:

FY 2020-2021 CIP and Budget Workshops

Capital Improvement Program Workshop - If continuation is needed	Wed, March 25, 2020; 9 am Wed, April 8, 2020; 9 am
Presentation of Managers Recommended Budget	Wed, May 6, 2020; 9 am
Budget Workshop - If continuation is needed	Wed, May 13, 2020; 9 am Wed, May 27, 2020; 9 am
Public Hearing	Wed, June 3, 2020; 9 am
Budget Workshop - Will incorporate comments from Public Hearing	Wed, June 10, 2020; 9 am
Adoption of Budget (mid-month meeting)	Wed, June 17, 2020; 7 pm

Number of Attachments: 0

Specific Action Requested:

Provided for Board discussion.

Submitted By: Administration

Date: January 29, 2020

Finance Officer Comment:

No unbudgeted fiscal impact.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

I will participate in the discussion as necessary.

Signature: Cliff Ogburn

Date: January 29, 2020



Agenda Item Summary Sheet

Item No: **L-2**
Meeting Date: **February 5, 2020**

Item Title: Mayor Ben Cahoon – Discussion of “actionable” items from Envisioning Exercise – Future of Nags Head - from the Jan 23-24, 2020 Board Retreat

Item Summary:

One of the topics of discussion at last week’s Board of Commissioners Retreat concerned envisioning the future of Nags Head.

At the February 5th Board of Commissioners meeting, Mayor Cahoon will present a list of “actionable” items for discussion.

Number of Attachments: 0

Specific Action Requested:

Provided for Board discussion.

Submitted By: Administration

Date: January 29, 2020

Finance Officer Comment:

Insufficient information to determine fiscal impact.

Signature: Amy Miller

Date: January 29, 2020

Town Attorney Comment:

N/A

Signature: John Leidy

Date: January 29, 2020

Town Manager Comment and/or Recommendation:

I will participate in the discussion as necessary.

Signature: Cliff Ogburn

Date: January 29, 2020