

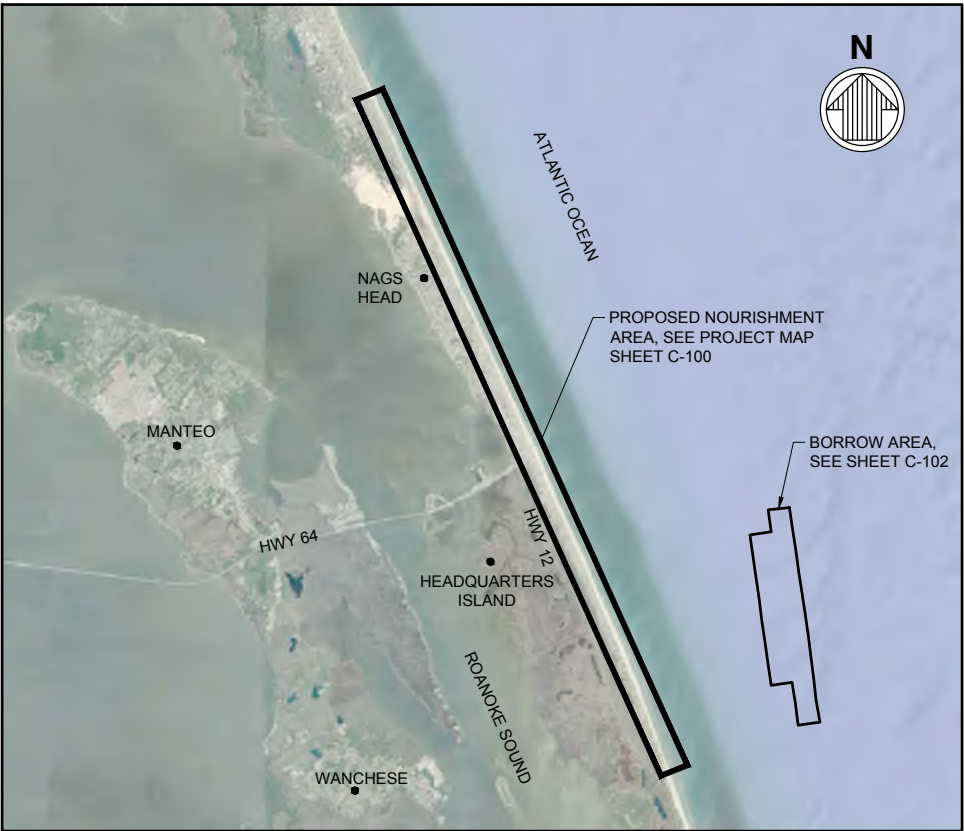
TOWN OF NAGS HEAD BEACH RENOURISHMENT PROJECT 2026

NAGS HEAD, NORTH CAROLINA



VICINITY MAP
SCALE: NTS

INDEX OF DRAWINGS		
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3	G-003	KEY PLAN
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28	C-300	TYPICAL SECTIONS
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30	C-302	SAND FENCING TYPICAL SECTIONS
31	C-501	SAND FENCE DETAILS



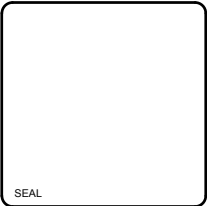
LOCATION PLAN
SCALE: NTS



Rev	Date	Description	Mark
1	2025-06-04	SAND FENCING UPDATE	BFG
0	2025-04-14	ISSUED FOR PERMIT	BFG

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT	COVER SHEET
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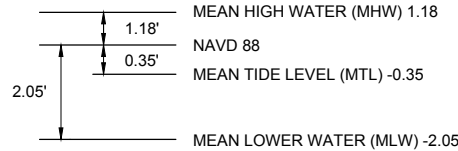
4700 FALLS OF NEUSE RD, SUITE 300 RALEIGH, NC 27609 NC FIRM NO. F-0105	Designed by: B. GRANT	Drawn by: VNM	Reviewed by: B. JOYNER	Submitted by: MOFFATT & NICHOL	Per scale: 1" = 10' (0 SHEET)
moftatt & nichol	Date: 2025-04-14	MAN Project No: 10979-16	Drawing code:	AS SHOWN	



Sheet Reference No. G-001	INDEX: 1 OF 32
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REVISION 1 -2025-06-04
ISSUED FOR PERMIT
ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION

1. THE NORTHING AND EASTING COORDINATES SHOWN ON THE DRAWINGS AND REFERENCED IN THE DESIGN REFER TO NORTH CAROLINA STATE PLANE NAD83 [NORTH AMERICAN DATUM 83 (FEET)].
2. ELEVATIONS SHOWN ON THE DRAWINGS REFERENCE NAVD88 (NORTH AMERICAN VERTICAL DATUM 1988).
3. ALL THE ELEVATIONS AND BATHYMETRY/TOPOGRAPHY SHOWN ON THE DRAWINGS REFERENCE NAVD88 AND WERE OBTAINED DURING A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED. THE INFORMATION SHOULD ONLY BE CONSIDERED AS INDICATING THE CONDITIONS AT THAT TIME.
4. THE BORROW SITE BATHYMETRY SHOWN ON THE DRAWINGS REFERENCE NAVD88 AND WERE OBTAINED DURING A MARCH 2025 SURVEY CONDUCTED BY MCKIM & CREED. THE INFORMATION SHOULD ONLY BE CONSIDERED AS INDICATING THE CONDITIONS AT THAT TIME.
5. THE MEAN HIGH WATER ELEVATION AND MEAN LOW WATER ELEVATION SHOWN ON THE BEACH FILL DRAWINGS AND BELOW ARE BASED ON NOAA TIDE STATION 8651370, DUCK, NC.



1. ALL SAND EXCAVATED FROM THE BORROW AREAS SHALL BE TRANSPORTED TO, AND DEPOSITED ON, THE BEACH BETWEEN THE LINES, GRADES, AND CROSS-SECTIONS SHOWN ON THE DRAWINGS.
2. BEACH FILL MATERIAL SHALL BE PLACED WITHIN THE LIMITS AND GRADE LINES SHOWN, AS PRACTICALLY AS POSSIBLE. TOLERANCE SHALL BE WITHIN +0.5 FOOT ABOVE FINISHED GRADE AS SHOWN.
3. THE PLACEMENT DESIGN (PLAN DIMENSIONS) MAY BE CHANGED BY THE OWNER TO ACCOUNT FOR CHANGED CONDITIONS AT THE TIME OF CONSTRUCTION. THE FINAL PLACEMENT DESIGN WILL STRIVE TO PROVIDE THE AVERAGE PLACEMENT DENSITY REFERENCED ON THE PLANS FOR EACH REACH. THIS MAY REQUIRE THE BERM WIDTH TO BE ALTERED FROM THOSE SHOWN ON THE PLANS.
4. THE BEACH FILL SHALL BE GRADED, PRIOR TO COMPLETION OF WORK, TO DISCOURAGE WATER PONDING.
5. EXISTING WALKWAYS SHALL REMAIN. ANY DAMAGE OCCURRING DURING CONSTRUCTION SHALL BE REPAIRED PRIOR TO DEMOBILIZATION. FILL SHALL BE PLACED COMPLETELY UNDERNEATH AND/OR AROUND THE WALKWAY STRUCTURES.
6. CONTOURS FOR THE BEACH FILL PLANS ARE SHOWN AT 2 FT (MINOR) AND 10 FT (MAJOR) INTERVALS AND ALSO INCLUDE THE BERM ELEVATION OF +6.0 NAVD88.
7. CONTOURS FOR THE BORROW SITE ARE SHOWN AS 2 FT (MINOR) AND 10 FT (MAJOR) INTERVALS.
8. BEACH FILL SLOPES CALLED OUT ON THE PLANS ARE HORIZONTAL : VERTICAL.
9. TEMPORARY SAND RAMPS SHALL BE PROVIDED OVER THE DREDGE PIPELINE FOR PEDESTRIAN AND EMERGENCY VEHICLE ACCESS. THE MAXIMUM DISTANCE BETWEEN THESE TEMPORARY SAND RAMPS SHALL BE 500 FEET. THESE TEMPORARY SAND RAMPS SHALL BE LEVELED ONCE THE PIPELINE HAS BEEN MOVED.
10. THE BEACH SHALL BE CLOSED TO THE PUBLIC WITHIN 250 FT IN BOTH THE UP STATION AND DOWN STATION DIRECTION FROM THE ACTIVE PIPELINE DISCHARGE LOCATION.
11. THE PIPELINE SHALL BE PLACED ALONG THE CONSTRUCTED BEACH AS CLOSE TO THE DUNE AS PRACTICAL TO MINIMIZE POTENTIAL SEA TURTLE IMPACTS.
12. CONSTRUCTION LIGHTING SHALL BE MINIMIZED AND FOCUSED ONLY ON THE ACTIVE CONSTRUCTION AREA. THE LIGHTS SHALL BE DIRECTED DOWN AND SHALL BE SHIELDED FROM PERIPHERAL VIEW IN ACCORDANCE WITH FWS GUIDANCE.
13. THE SAND PLACEMENT SHALL NOT COVER EXISTING ESTABLISHED GRASSES AND SHALL AVOID DISCHARGES DIRECTLY ONTO THE DUNE OR DUNE VEGETATION.
14. EACH MORNING, THE BEACH FILL OPERATIONS SHALL NOT ADVANCE BEYOND THE ACTIVE PLACEMENT AREA PRIOR TO A SEA TURTLE NEST SURVEY AND CONFIRMATION OF NO POTENTIAL NESTS FROM AN EXPERIENCED AND LICENSED MONITOR.
15. A TEMPORARY SHORE-PARALLEL SAND DIKE SHALL BE CONSTRUCTED AND MAINTAINED AS NECESSARY IN FRONT OF THE PIPELINE DISCHARGE TO DISCOURAGE SEDIMENT FROM RETURNING TO THE ATLANTIC OCEAN AND ASSIST WITH CONTROLLING TURBIDITY IMPACTS IN ACCORDANCE WITH STATE WATER QUALITY STANDARDS. THE TEMPORARY DIKE SHALL REMAIN WITHIN THE ACTIVE CONSTRUCTION AREA AND MAY ADVANCE ALONG THE SHORELINE CONSISTENT WITH THE PIPELINE DISCHARGE.

CY	CUBIC YARDS	NO.	NUMBER
FT	FEET OR FOOT	N/A	NOT APPLICABLE
FWS	US FISH & WILDLIFE SERVICE	TYP	TYPICAL
MHW	MEAN HIGH WATER	WP	WORK POINT
MLW	MEAN LOW WATER	BL	BASELINE
MTL	MEAN TIDE LEVEL	@	AT
NAD	NORTH AMERICAN DATUM	~	APPROXIMATELY
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988	Ø	DIAMETER
NGS	NATIONAL GEODETIC SURVEY		
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION		

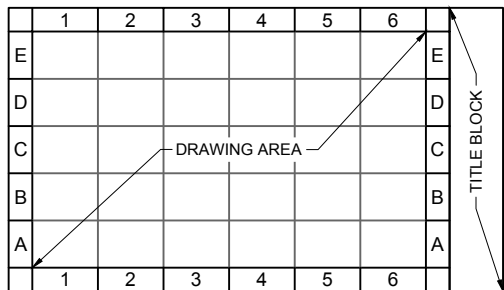
<u>EXISTING</u>		<u>PROPOSED</u>
	MEAN HIGH WATER LINE	
	MEAN LOW WATER LINE	
	MEAN TIDE LEVEL LINE	
	MAJOR CONTOUR	
	MINOR CONTOUR	
	FILL SLOPE LIMIT	
	FILL SLOPE BREAK	
	WORK POINT	WP-##
NAME	NGS STATION	
	SLOPE INDICATOR	

BEACH RENOURISHMENT FILL TABLE					
SHORELINE SEGMENT	STATIONS	AVERAGE DUNE CREST WIDTH (FT)	AVERAGE BERM WIDTH (FT)	AVERAGE PLACEMENT DENSITY (CY/LF)	ESTIMATED PLACEMENT VOLUME (CY)
REACH 1	496+00 TO 790+00	NA	70	29	829,000
REACH 2	790+00 TO 920+00	NA	70-90	37	484,000
REACH 3N	920+00 TP 975+00	NA	150	79	434,000
REACH 3S (BERM ONLY)	975+00 TO 991+00	NA	300	175	614,000
REACH 3S (DUNE & BERM)	991+00 TO 1010+00	40	300		
REACH 4	1010+00 TO 1025+00	40	430	200	300,000
REACH 5 (NPS TAPER)	1025+00 TO 1030+00	NA	NA	30	15,000
TOTAL					2,676,000
TOTAL + 25%					3,345,000

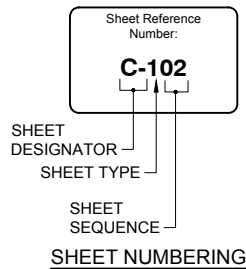
Diagram illustrating the components of a Sample View Title block:

- VIEW NUMBER**: Points to the top-left corner of the block.
- SAMPLE VIEW TITLE**: Points to the main title text.
- SHEET NUMBER VIEW REFERENCED TO**: Points to the bottom-left corner of the block.

* VIEW NUMBER IS BASED ON THE (DACS) LOCATION OF THE LOWER-LEFT EXTENTS OF THE VIEW ON THE REFERENCED SHEET. WHEN REFERENCING DRAWING INFORMATION BETWEEN SHEETS, BOTH THE VIEW AND SHEET NUMBERS MUST BE QUOTED TOGETHER - EITHER IN A CALLOUT FORMAT AS SHOWN ABOVE OR IN THE FORM;
"VIEW NO./SHEET NO." (EG A1/CS-5001)

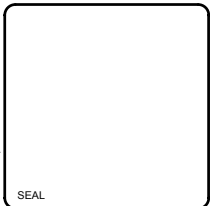


DRAWING AREA COORDINATE SYSTEM (DACS)

[illegible]TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT

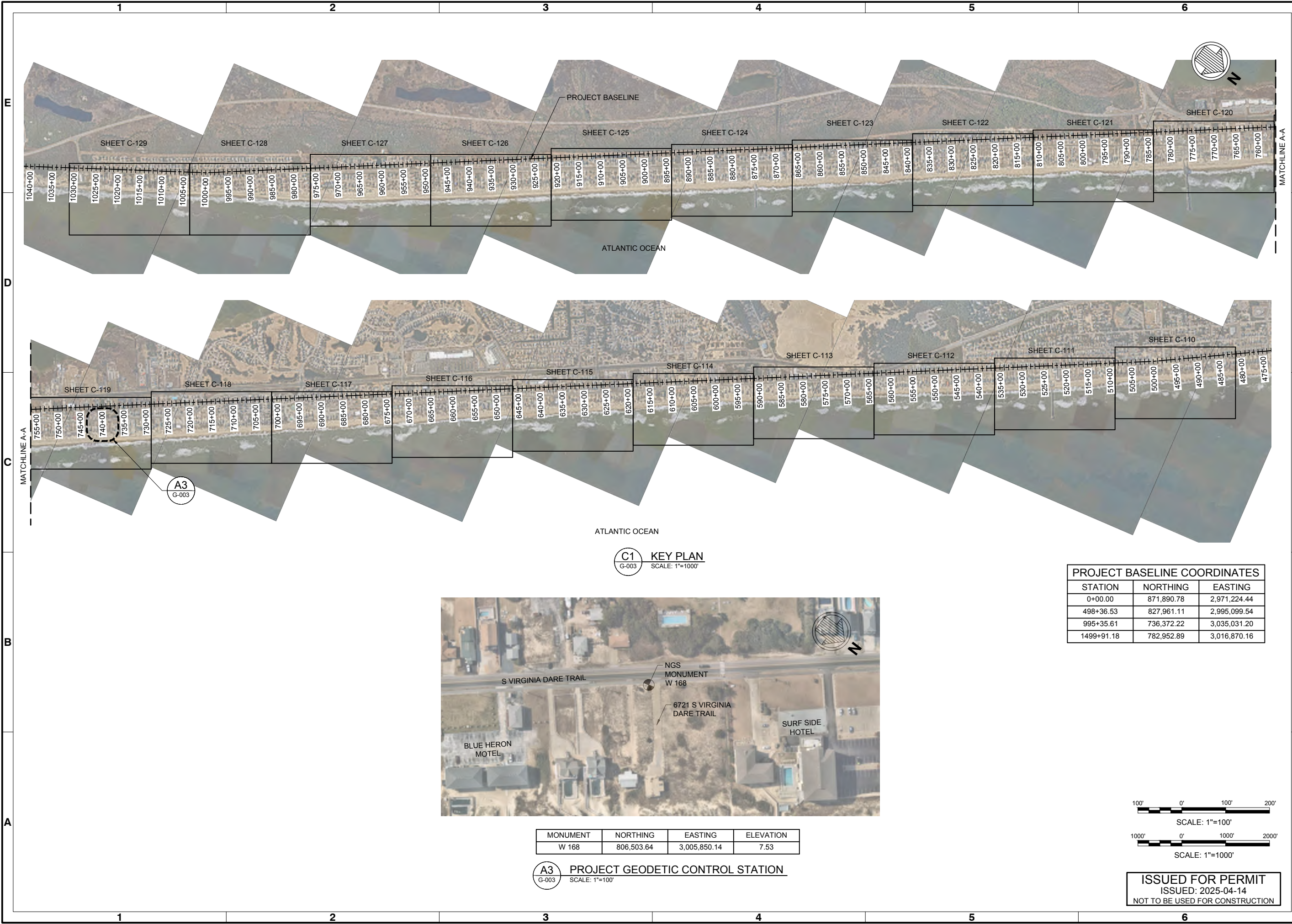
GENERAL NOTES

 moffatt & nichol	4700 FALLS OF NEISE RD, SUITE 300		Designed by:		Date:	Rev:
	919-781-4628		Drawn by:		2025-04-14	0
	NC FIRM NO. F-0105		Check by:		MAN Project No.	
			VNM	BPG	10779-16	
			Reviewed by:	B. JOYNER		Drawing code:
			Submitted by:			Drawing Scale: AS SHOWN
			MOFFATT & NICHOL		Plot scale: 1:1 (0 SHEET)	



Sheet
Reference No.
G-002
INDEX: 2 OF 32

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Rev.	Date	Description	Mark	Date	Appr.
0	2025-04-14	ISSUED FOR PERMIT			BFG

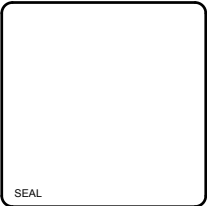
TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

KEY PLAN

Designed by:	B. GRANT	Date:	2025-04-14	Rev.	0
Drawn by:	VNM	MAN Project No.:	10979-16		
Reviewed by:	B. JOYNER	Drawing code:			
Submitted by:	MOFFATT & NICHOL	Drawing Scale:	AS SHOWN		
		Plot scale:	1"=10' (0 SHEET)		

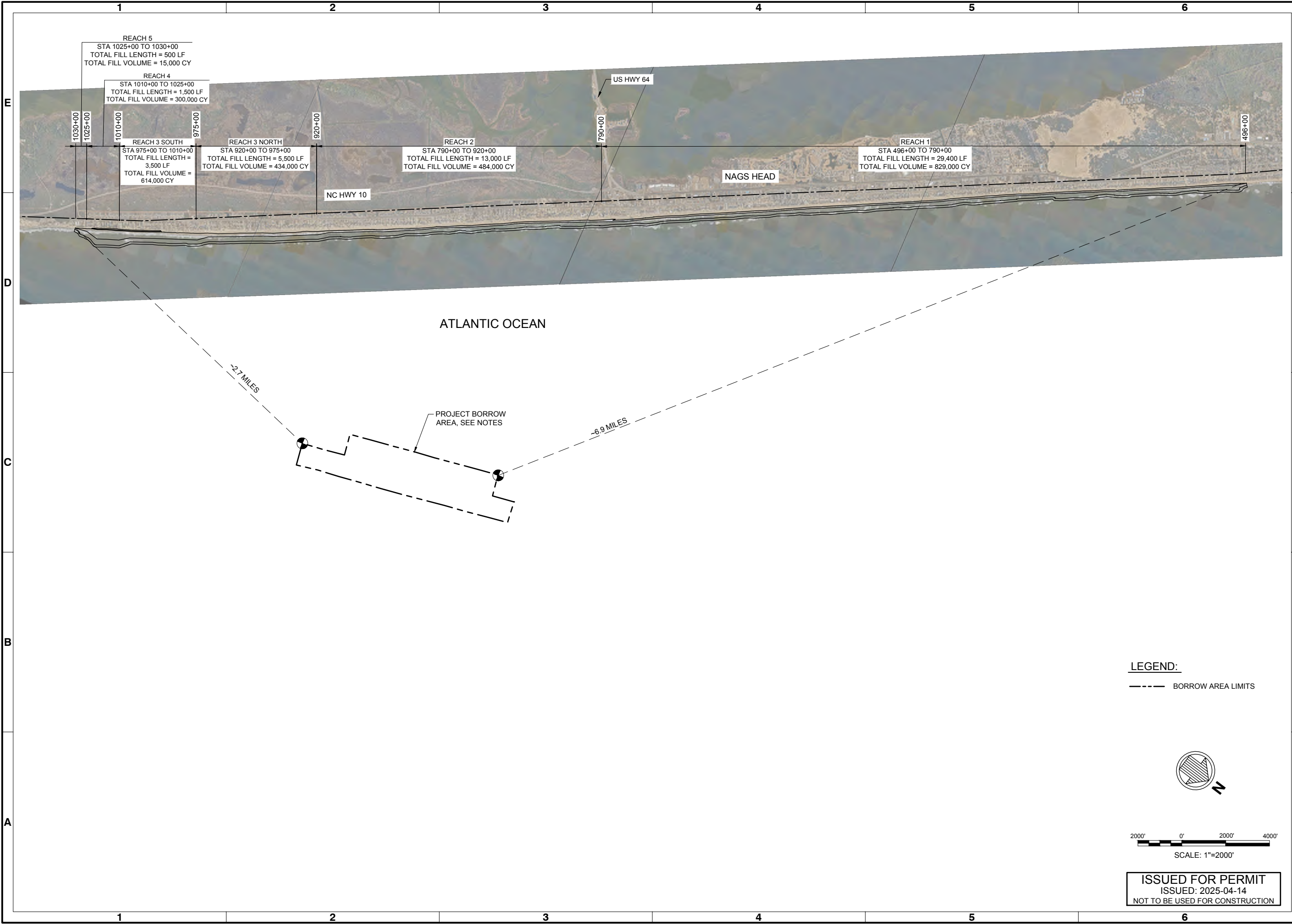
4700 FALLS OF NEUSE RD., SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

moffatt & nichol



Sheet Reference No.
G-003

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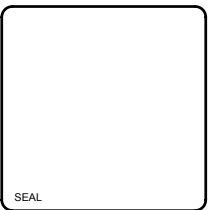
Mark	Description	Date	Appr.
0	ISSUED FOR PERMIT	2025-04-14	BFG

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

OVERALL PROJECT PLAN

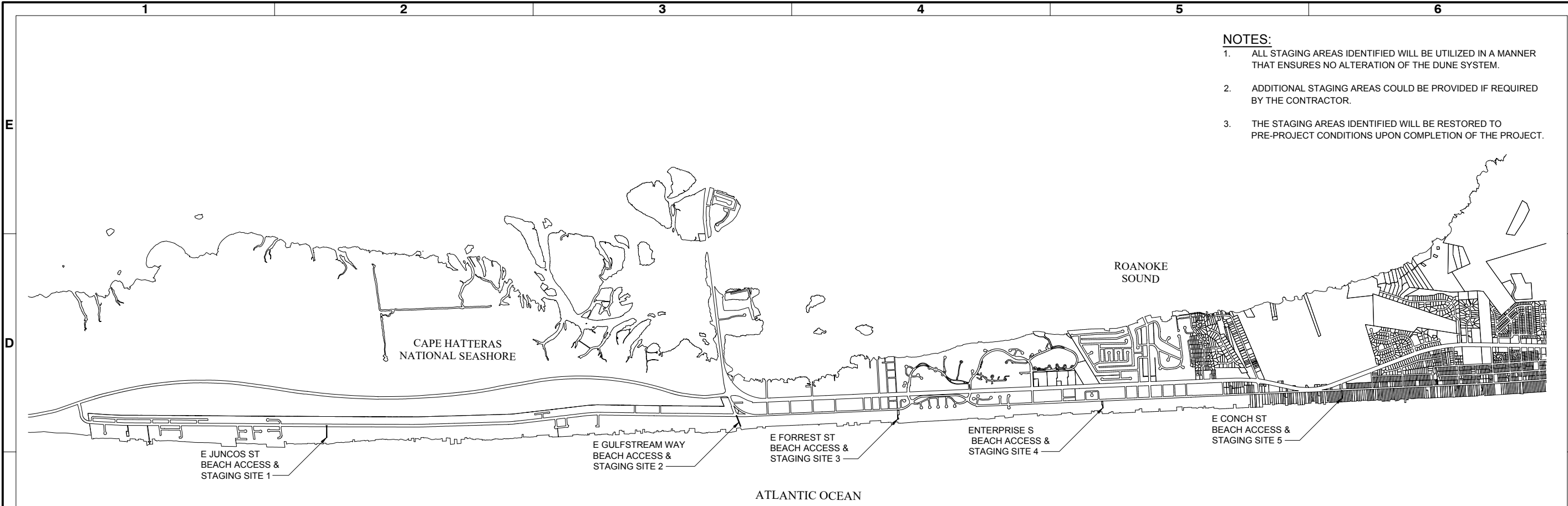
Designed by:	B. GRANT	Date:	2025-04-14	Rev.	0
Drawn by:	VNM	OWN Project No.:	10979-16		
Reviewed by:	B. JOYNER	Drawing code:			
Submitted by:	MOFFATT & NICHOL	Drawing Scale:	AS SHOWN		

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105



Sheet Reference No.
C-100

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STAGING AND ACCESS SITE PLAN
NOT TO SCALE

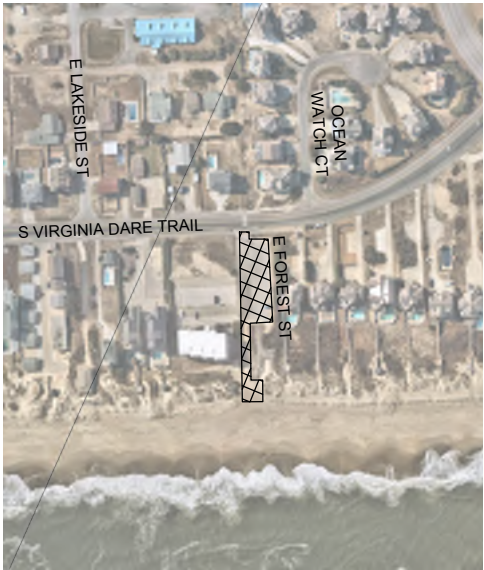
- NOTES:**
1. ALL STAGING AREAS IDENTIFIED WILL BE UTILIZED IN A MANNER THAT ENSURES NO ALTERATION OF THE DUNE SYSTEM.
 2. ADDITIONAL STAGING AREAS COULD BE PROVIDED IF REQUIRED BY THE CONTRACTOR.
 3. THE STAGING AREAS IDENTIFIED WILL BE RESTORED TO PRE-PROJECT CONDITIONS UPON COMPLETION OF THE PROJECT.



BEACH ACCESS & STAGING SITE 1 - STA 936+00
NOT TO SCALE



BEACH ACCESS & STAGING SITE 2 - STA 783+00
NOT TO SCALE



BEACH ACCESS & STAGING SITE 3 - STA 722+00
NOT TO SCALE



BEACH ACCESS & STAGING SITE 4 - STA 645+00
NOT TO SCALE



BEACH ACCESS & STAGING SITE 5 - STA 555+00
NOT TO SCALE



ISSUED FOR PERMIT
ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION



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0	2025-04-14	ISSUED FOR PERMIT	BFG

TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT

PROJECT STAGING AND
ACCESS PLANS

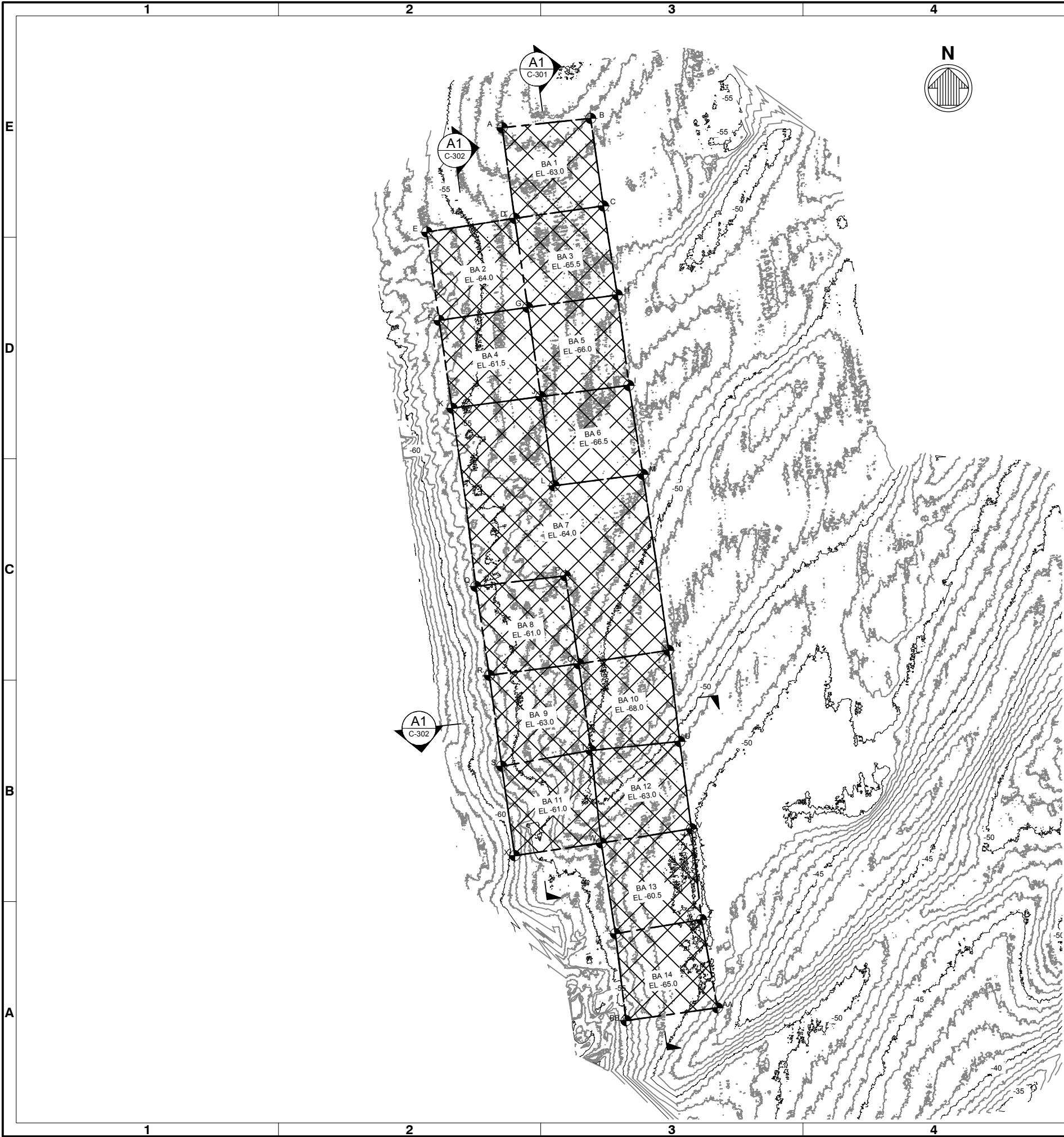
Designed by: B. GRANT	Date: 2025-04-14	Rev: 0
Dwn by: VNM	M&N Project No: 10979-16	
Reviewed by: B. JOYNER	Drawing code:	
Submitted by: MOFFATT & NICHOL	Drawing Scale: AS SHOWN	Per scale: 1"=10 SHEET

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105
RALPH GRANT, P.E.
1979-79-14236

moffatt & nichol

SEAL

Sheet
Reference No.
C-101
INDEX: 5 OF 32

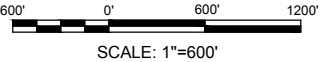


- NOTES:**
- BATHYMETRY CONTOURS SHOWN IN FEET REFERENCED TO NAVD88 ARE BASED ON MULTIBEAM SURVEYS PERFORMED BY MCKIM & CREED IN MARCH 2025 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS AT THE TIME OF THE SURVEY.
 - BORROW AREA COORDINATES ARE NORTH CAROLINA STATE PLANE, NAD 83 (FEET).
 - SIDE SLOPES ASSUMED TO BE 1V:3H ALONG THE OUTER BOUNDARY AND IN BETWEEN CELLS.

- LEGEND:**
- A PROPOSED BORROW AREA CONTROL POINT
 - PROPOSED DREDGE AREA

PROPOSED BORROW AREA COORDINATE TABLE		
POINT	NORTHING	EASTING
A	803,628.77	3,021,901.45
B	803,731.86	3,022,884.64
C	802,759.61	3,023,025.82
D	802,621.64	3,022,040.19
E	802,469.25	3,021,064.15
F	801,488.35	3,021,200.54
G	801,632.63	3,022,185.05
H	801,771.26	3,023,180.34
I	800,765.62	3,023,308.64
J	800,640.92	3,022,331.20
K	800,512.35	3,021,344.39
L	799,651.18	3,022,479.60
M	799,777.63	3,023,464.14
N	797,822.07	3,023,750.23
O	797,673.09	3,022,753.30
P	798,650.62	3,022,604.36
Q	798,532.94	3,021,608.80
R	797,545.59	3,021,758.21

BORROW AREA		
ZONE	ACRES	PERMITTED DREDGE EL
BA 1	22.8	-63.0
BA 2	22.7	-64.0
BA 3	23.0	-65.5
BA 4	22.7	-61.5
BA 5	23.0	-66.0
BA 6	22.7	-66.5
BA 7	92.0	-64.0
BA 8	22.9	-61.0
BA 9	23.0	-63.0
BA 10	22.8	-68.0
BA 11	23.2	-61.0
BA 12	23.2	-63.0
BA 13	23.1	-60.5
BA 14	22.5	-65.0
TOTAL	389.6	N/A



ISSUED FOR PERMIT
ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION



Mark	Date	Appr.
0	2025-04-14	BFG

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

BORROW AREA SITE PLAN

Rev.	Date	By	Description
0	2025-04-14	BFG	ISSUED FOR PERMIT

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

moffatt & nichol

Designed by: B. GRANT
Dwn by: VNM
Reviewed by: B. JOYNER
Submitted by: MOFFATT & NICHOL

Permit No.: 10979-16
Drawing code: AS SHOWN
Per scale: 1"=10 SHEET

Sheet Reference No.
C-102

INDEX: 6 OF 32

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NOTES:

1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.

LEGEND:

TYPE A SAND FENCE, SEE

A1
C-303



100' 0' 100' 20'

SCALE: 1"=100'

ISSUED FOR PERMIT
ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION

[illegible]

**TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT**

SITE PLAN - SHEET 2

Designed by B. GRANT	Date: 2025-04-14	Rev. 0
Drawn by: VMM	Issued by: BPG	MAN Project No. 10975-16
Reviewed by: B. JOYNER		
Submitted by:		Drawing code:
		Drawing Scale: AS SHOWN

M 4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
919-781-4626

SEAL

Sheet
Reference No.
C-111
INDEX: 9 OF 32



- NOTES:**
1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
 3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.



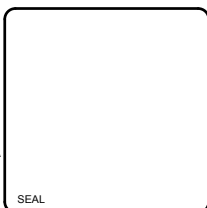
Mark	Description	Date	Appr.
0	ISSUED FOR PERMIT	2025-04-14	BFG

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 3

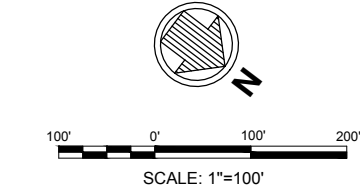
Designed by:	B. GRANT	Date:	2025-04-14	Rev.	0
Drawn by:	VNM	Qcd by:	BFG	M&N Project No.:	10979-16
Reviewed by:	B. JOYNER	Drawing code:			
Submitted by:	MOFFATT & NICHOL	Drawing Scale:	AS SHOWN	Per scale:	1" = 10' (SHEET)

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

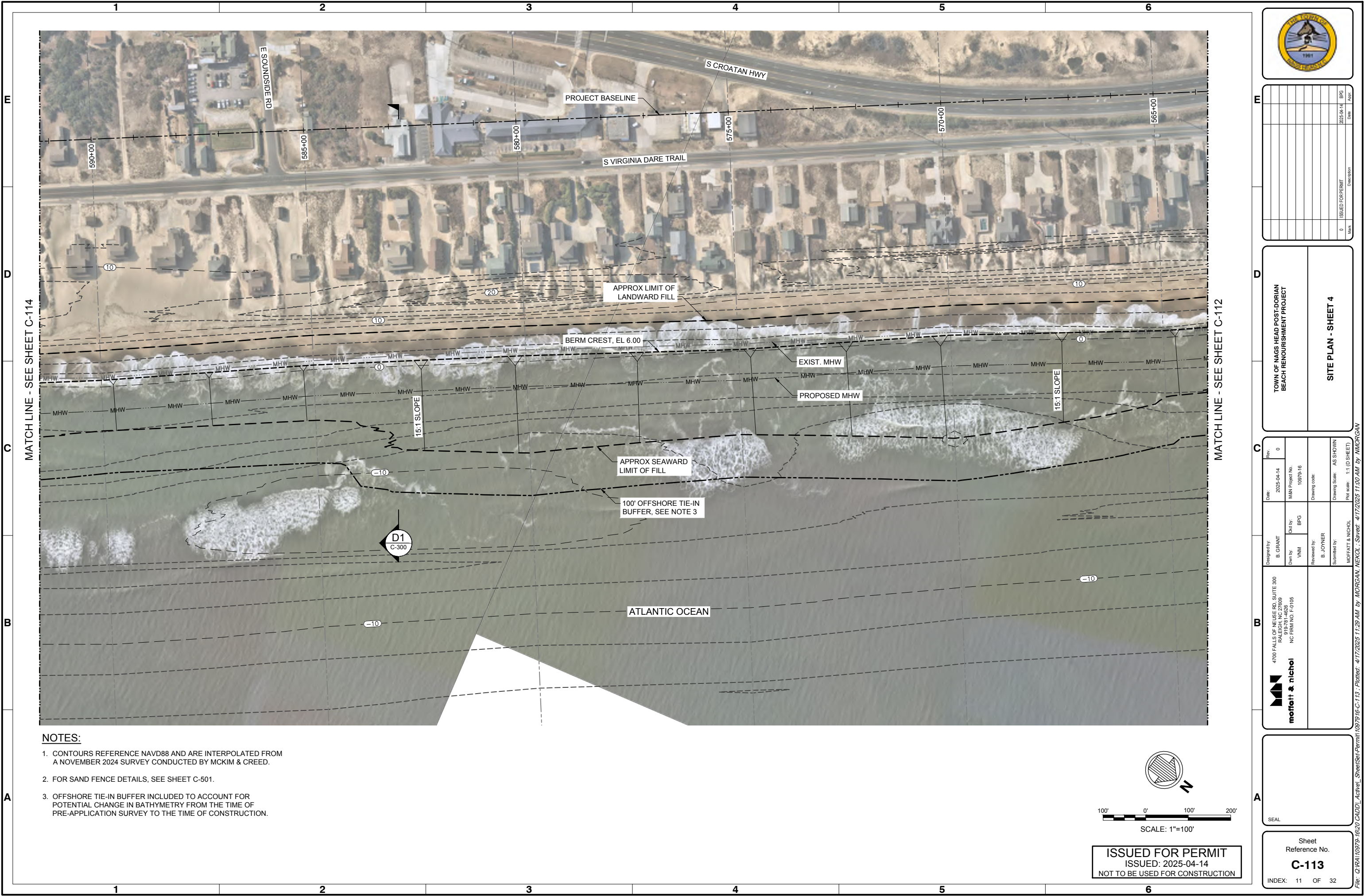


Sheet Reference No.
C-112

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ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION



- NOTES:
1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
 3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.



Rev.	Date	By	Appr.
0	2025-04-14	BFG	

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2025-04-14
NOT TO BE USED FOR CONSTRUCTION

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 4

Rev.	Date	By	Appr.
0	2025-04-14	BFG	

ISSUED FOR PERMIT
2025-04-14
NOT TO BE USED FOR CONSTRUCTION

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

moffatt & nichol

Designed by: B. GRANT
Drawn by: VNM
Reviewed by: B. JOYNER
Submitted by: MOFFATT & NICHOL

Date: 2025-04-14
M&N Project No: 10979-16
Drawing code:
Drawing Scale: AS SHOWN
Plot scale: 1"=100' (10 SHEET)

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Sheet Reference No.
C-113
INDEX: 11 OF 32

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[illegible]TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 5

C	Designed by: B. GRANT	Date: 2025-04-14	Rev. 0
Reviewed by: B. JOYNER		Drawing code:	
Submitted by:		Drawing Scale: AS SHOWN Plot scale: 1" (10 SHEET)	



4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
919.781.4626

moffatt & nichol

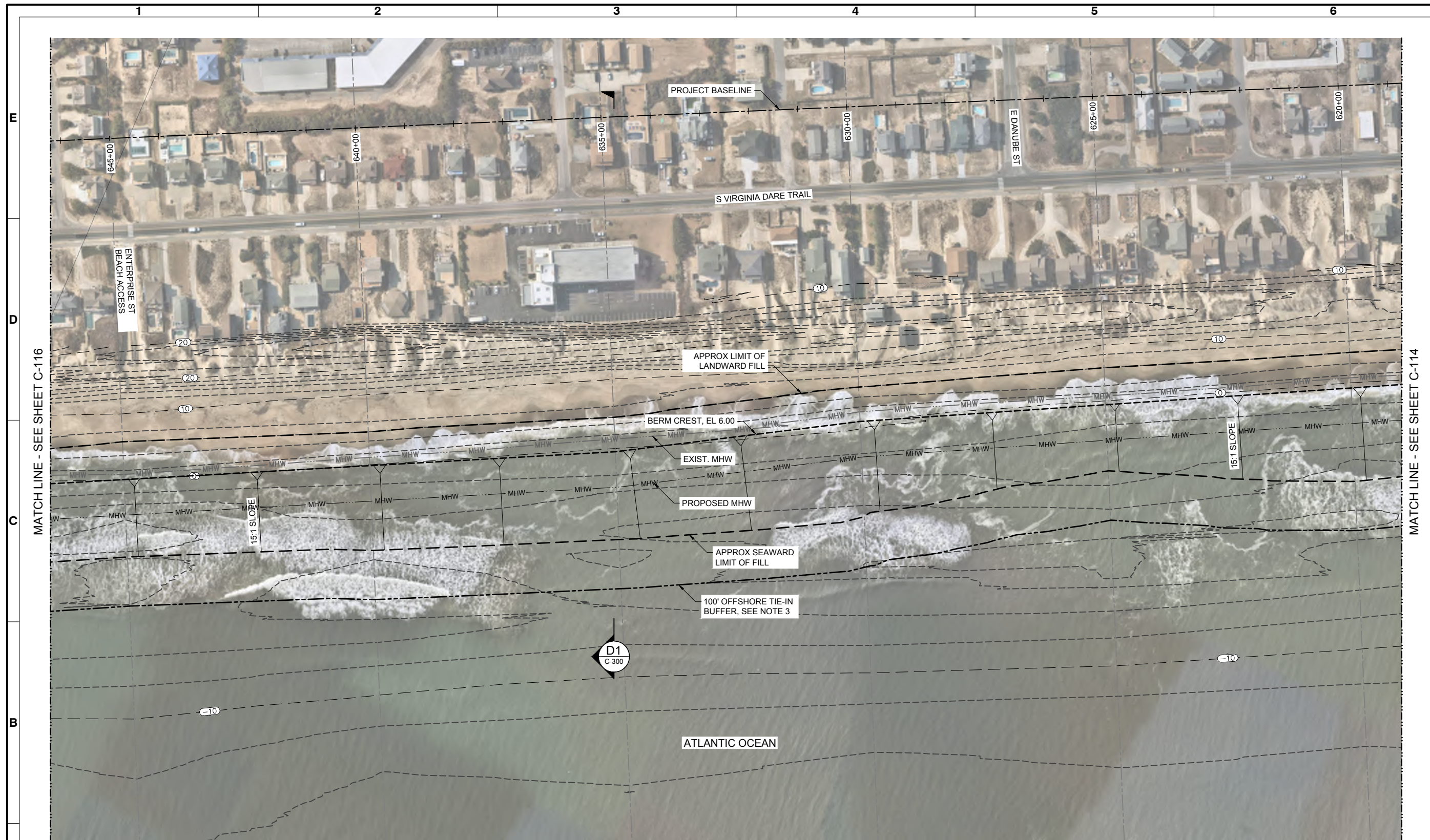
B. JOYNER	Drawing Scale: AS SHOWN
Submitted by: MOFFATT & NICHOL	Plot scale: 1:1 (D SHEET)

919-781-4626
NC FIRM NO. F-0105

SEAL

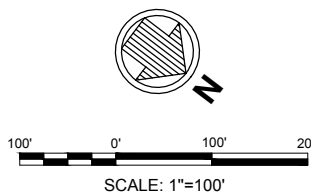
Sheet
Reference No.
C-114
INDEX: 12 OF 32

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NOTES:

1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.



ISSUED FOR PERMIT
ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION

[illegible]

**TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT**

SITE PLAN - SHEET 6

Date:	2025-04-14		Rev.
	0		
Designed by:	B. GRANT	Qcd by:	M&N Project No. 10979-16
Dwn by:	VNMH	BPG	
Reviewed by:			Drawing code:
B. JOYNER			
Submitted by:			Drawing Scale:
MOFFATT & NICHOL			AS SHOWN
			Plot scale: 1" = 10' (SHEET)

moftett & n/chol
4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
919-781-4626 NC FIRM NO. F-0105

SEAL

Sheet
Reference No.
C-115

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- NOTES:
1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
 3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.



Mark	Date	Description	Appr.
0	2025-04-14	ISSUED FOR PERMIT	BFG

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 7

Rev.	Date	Designed by	Drawn by	Reviewed by	Submitted by	Drawing Scale	Per Scale
0	2025-04-14	B. GRANT	VNM	B. JOYNER	MOFFATT & NICHOL	AS SHOWN	1"=100'

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

moffatt & nichol

MOFFATT & NICHOL

SEAL

Sheet Reference No.
C-116

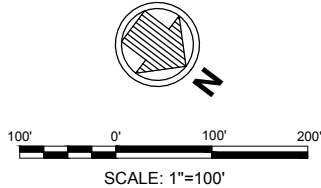
INDEX: 14 OF 32

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- NOTES:**
1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
 3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.

- LEGEND:**
- (A) TYPE A SAND FENCE, SEE A1 C-303
 - (C) TYPE C SAND FENCE, SEE C1 C-303



ISSUED FOR PERMIT
ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION



Mark	Description	Date	Appr.
0	ISSUED FOR PERMIT	2025-04-14	BFG

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 8

Rev.	Date:	Designed by:	Drawn by:	Reviewed by:	Submitted by:	Drawing Scale:	Per Scale:
0	2025-04-14	B. GRANT	BFG	VNM	B. JOYNER	AS SHOWN	1"=100' (10 SHEET)

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

moffatt & nichol

MOFFATT & NICHOL

SEAL

Sheet Reference No.
C-117

INDEX: 15 OF 32

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- NOTES:**
- CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 - FOR SAND FENCE DETAILS, SEE SHEET C-501.
 - OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.

- LEGEND:**
- (A) TYPE A SAND FENCE, SEE C-303
 - (C) TYPE C SAND FENCE, SEE C-303



Rev	Date	By	Appr
0	2025-04-14	BFG	

ISSUED FOR PERMIT
ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 9

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

moffatt & nichol

Designed by: B. GRANT
Dwn by: VNM
Reviewed by: B. JOYNER
Submitted by: MOFFATT & NICHOL

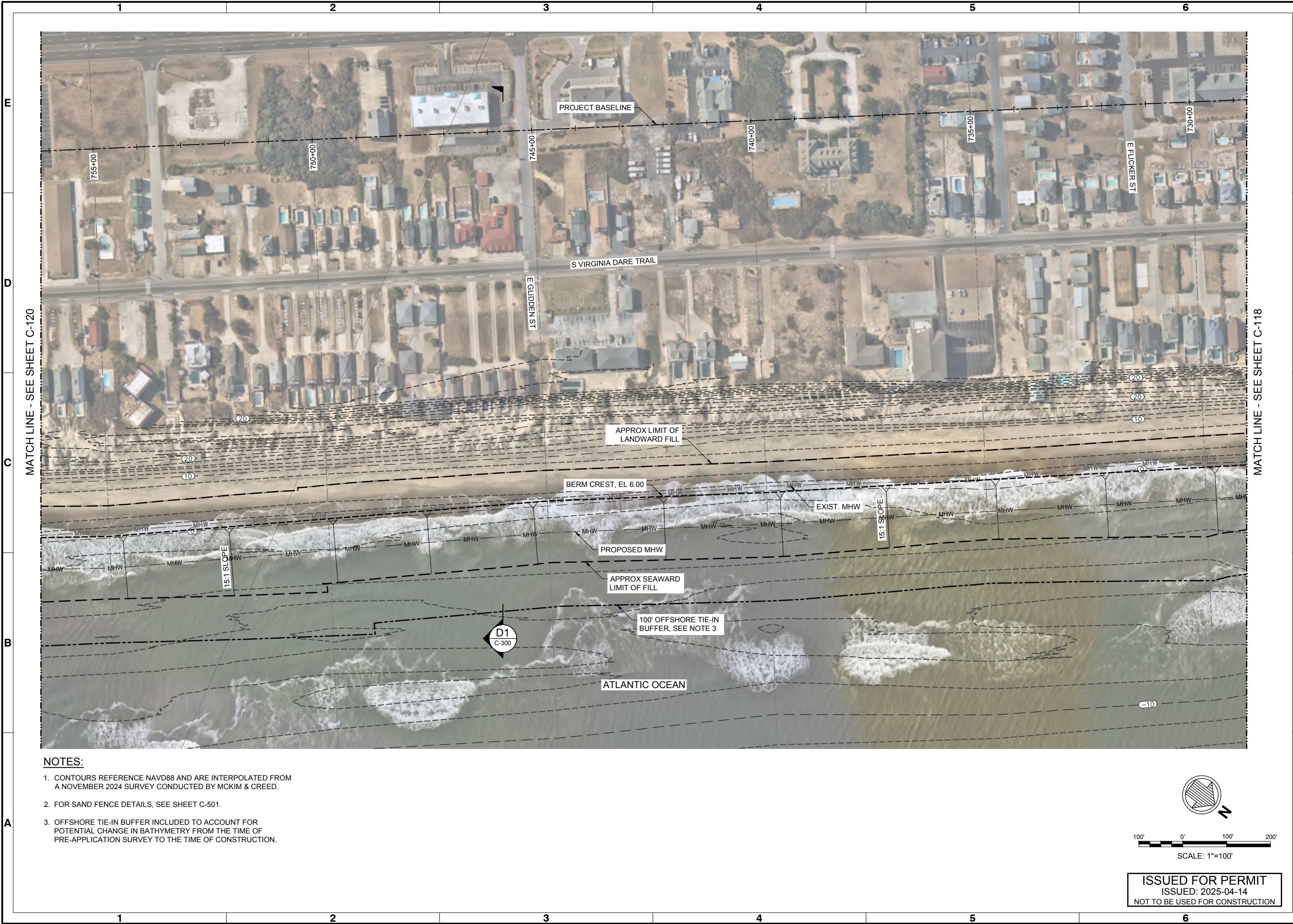
Date: 2025-04-14
M&N Project No: 10979-16
Drawing code:
Drawing Scale: AS SHOWN
Per scale: 1"=100' (10 SHEET)

SEAL

Sheet Reference No.
C-118

INDEX: 16 OF 32

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- NOTES:
1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
 3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.



Mark	Description	Date	Appr.
0	ISSUED FOR PERMIT	2025-04-14	BFG

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 10

Rev.	Date	By	Appr.
0	2025-04-14	BFG	BFG

MAN Project No. 10979-16

Drawing code:

Drawing Scale: AS SHOWN

Per scale: 1"=100' (SHEET)

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

moffatt & nichol

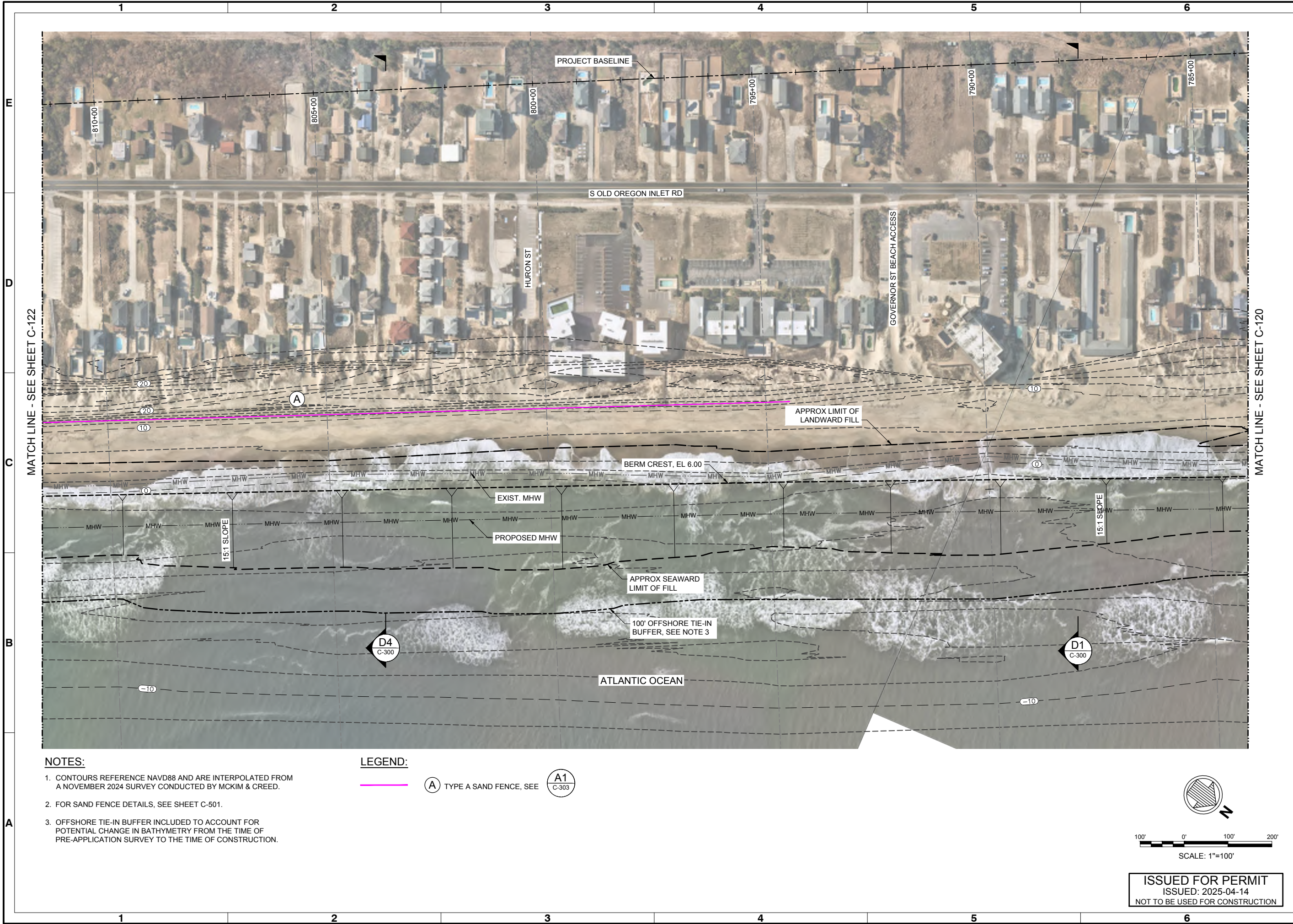
Designed by: B. GRANT
Drawn by: VNM
Reviewed by: B. JOYNER
Submitted by: MOFFATT & NICHOL

SEAL

Sheet Reference No.
C-119

INDEX: 17 OF 32





- NOTES:**
- CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 - FOR SAND FENCE DETAILS, SEE SHEET C-501.
 - OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.

- LEGEND:**
- TYPE A SAND FENCE, SEE A1 C-303

Rev	Date	By	Description
0	2025-04-14	BFG	ISSUED FOR PERMIT

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 12

Designed by	Date	Rev
B. GRANT	2025-04-14	0

Drawn by	Checked by	MAN Project No.
VNM	BFG	10979-16

Reviewed by	Drawing code
B. JOYNER	

Submitted by	Drawing Scale	Per Scale
MOFFATT & NICHOL	AS SHOWN	1" = 10' (SHEET)

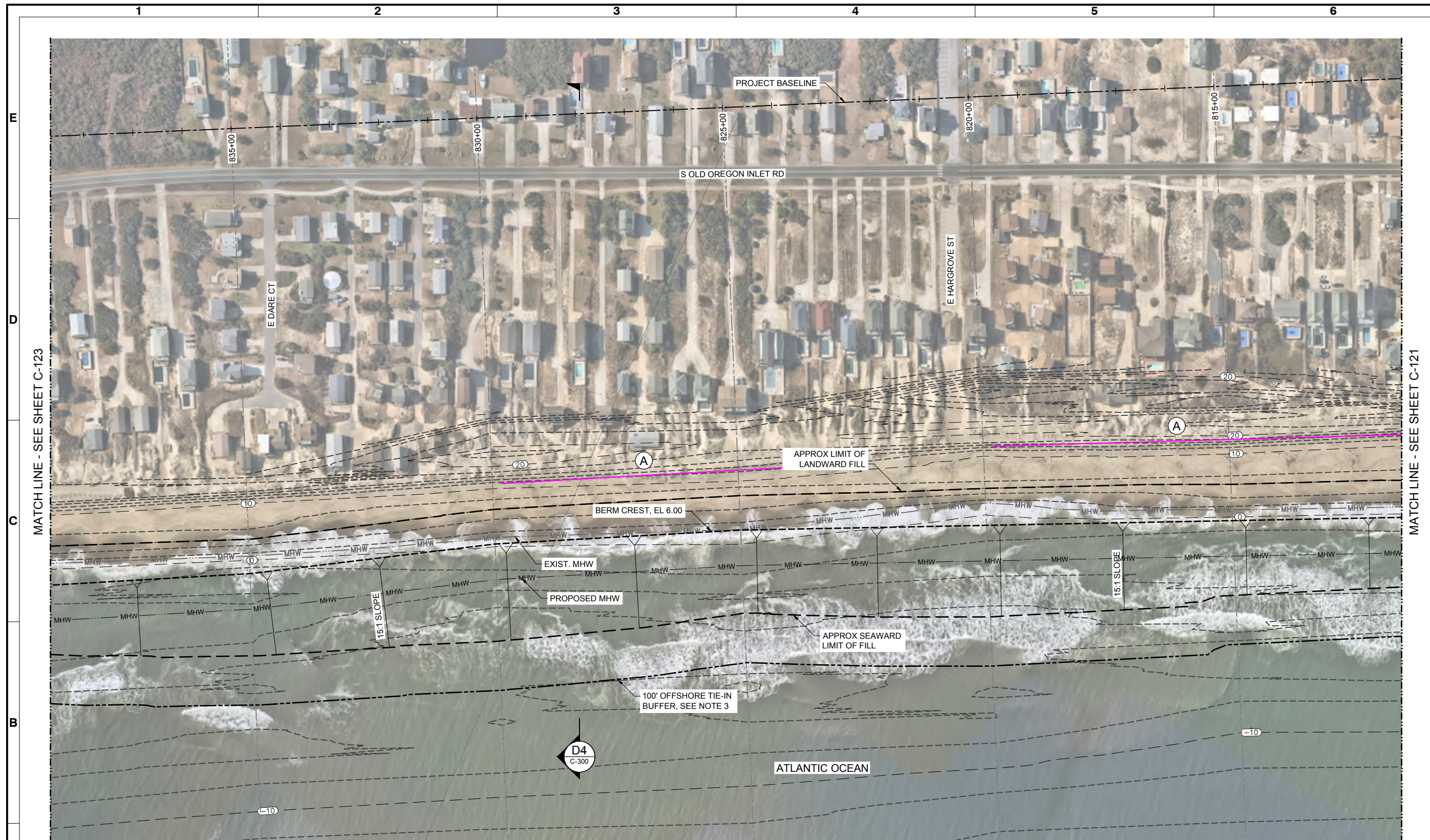
4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105
P. 919.721.4428

SEAL

Sheet Reference No.
C-121

INDEX: 19 OF 32

ISSUED FOR PERMIT
ISSUED: 2025-04-14
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NOTES:

1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.

LEGEND:

— (A) TYPE A SAND FENCE, SEE (A1 C-303)



100' 0' 100' 20'

SCALE: 1"=100'

ISSUED FOR PERMIT
ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION

[illegible]TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 13

Designed by B. GRANT	Date: 2025-04-14	Rev. 0
Drawn by: VMM	Issued by: BPG	MAN Project No. 10975-16
Reviewed by: B. JOYNER		
Submitted by:		Drawing code:
		Drawing Scale: AS SHOWN



4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
919-781-4626


4700

SEAL

Sheet
Reference No.
C-122
INDEX: 20 OF 32

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Rev	Date	Description	Mark	Appr
0	2025-04-14	ISSUED FOR PERMIT	BPG	

TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 14

Designed by: B. GRANT	Date: 2025-04-14	Rev: 0
Drawn by: VNM	MAN Project No: 10979-16	
Reviewed by: B. JOYNER	Drawing code:	
Submitted by: MOFFATT & NICHOL	Drawing Scale: AS SHOWN	Per scale: 1" = 10' (SHEET)

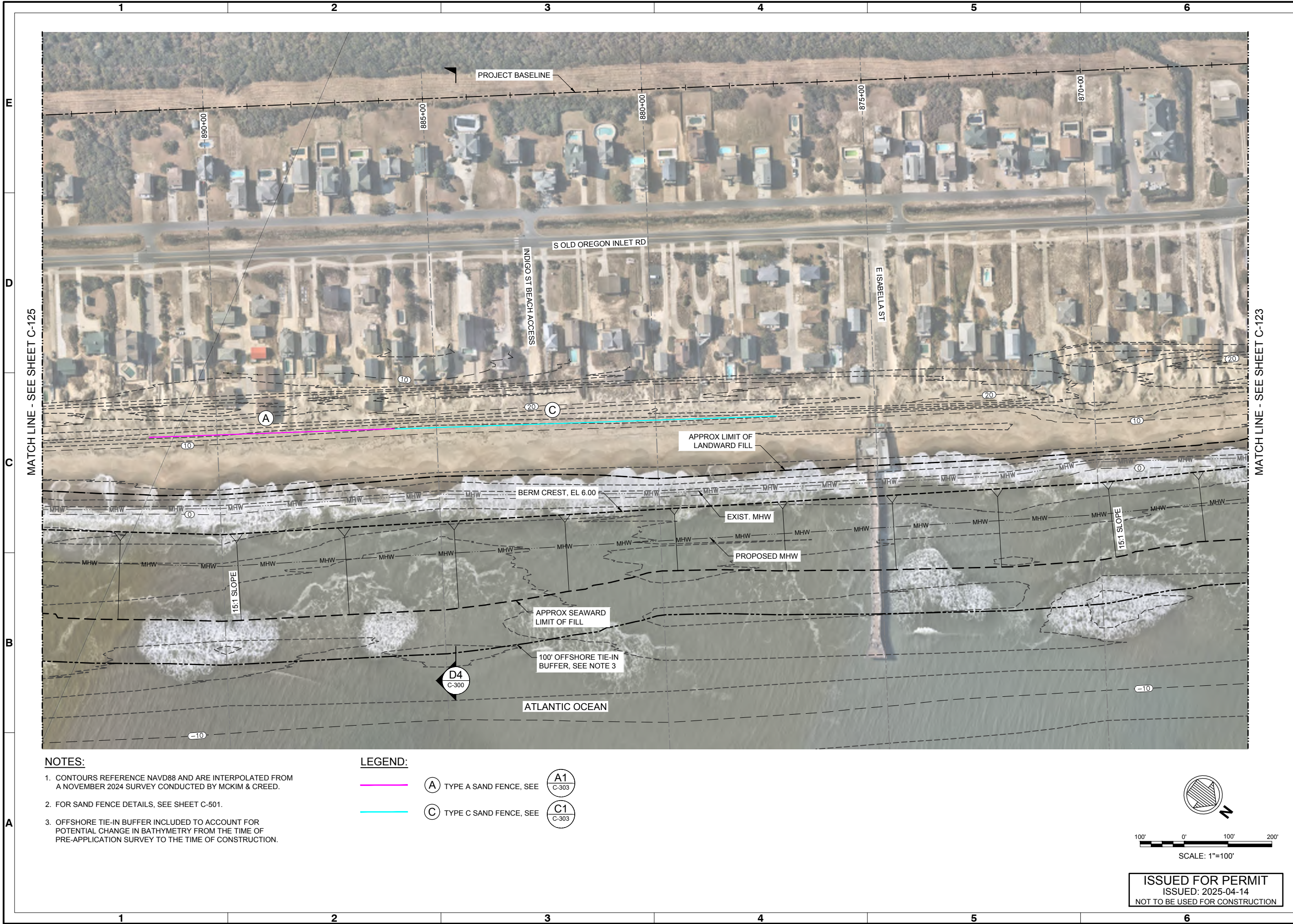
4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

moftatt & nichol

SEAL

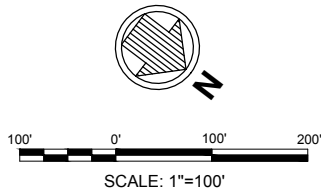
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Reference No.
C-123

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- NOTES:**
1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
 3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.

- LEGEND:**
- **A** TYPE A SAND FENCE, SEE **A1 C-303**
 - **C** TYPE C SAND FENCE, SEE **C1 C-303**



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ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION



Rev	Date	Description	Mark	Appr
0	2025-04-14	ISSUED FOR PERMIT		BFG

**TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT**

SITE PLAN - SHEET 15

Designed by: B. GRANT	Date: 2025-04-14	Rev: 0
Drawn by: VNM	MAN Project No: 10979-16	
Reviewed by: B. JOYNER	Drawing code:	
Submitted by: MOFFATT & NICHOL	Drawing Scale: AS SHOWN	Per scale: 1" = 10' (SHEET)

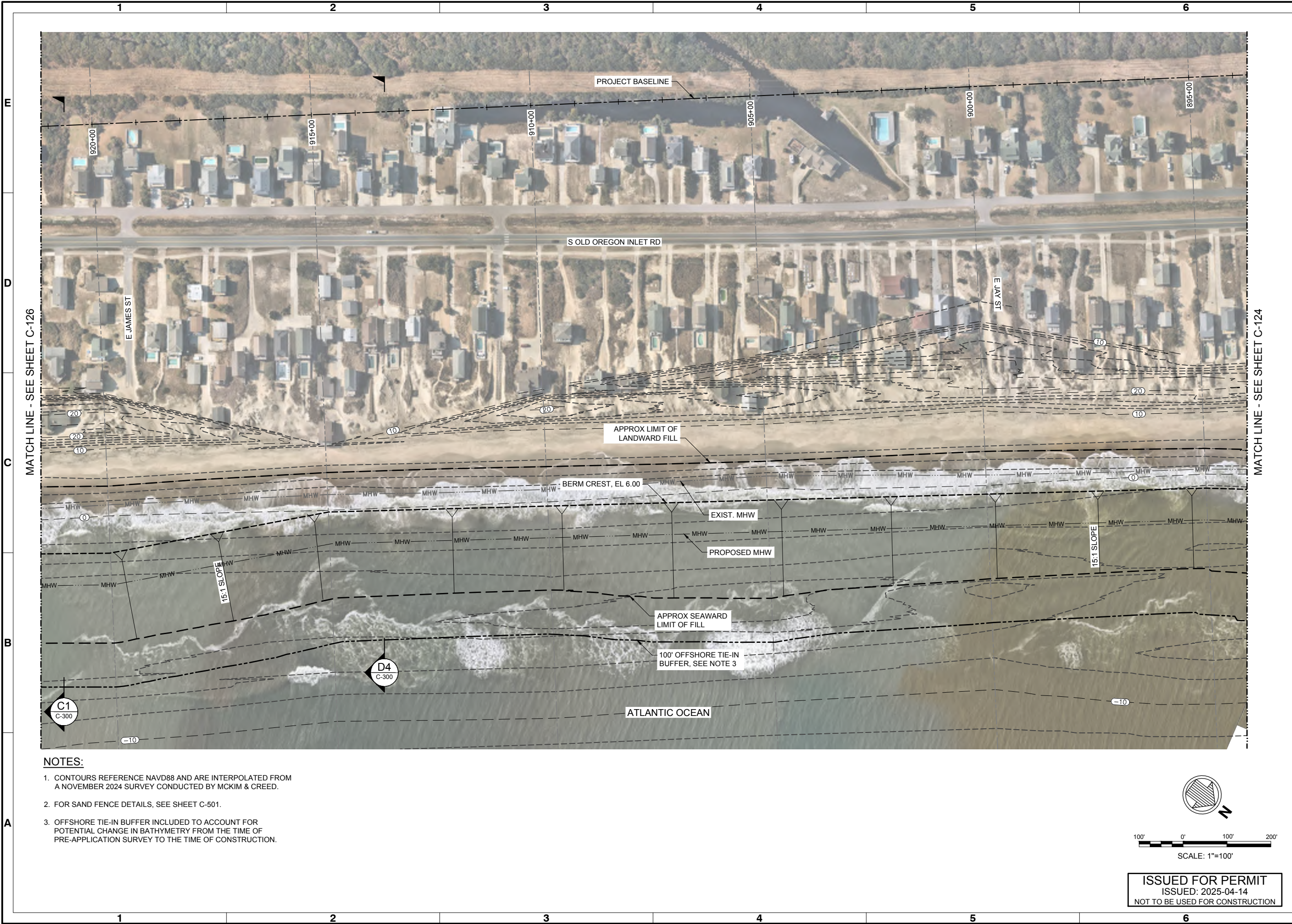
moftatt & nichol

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

SEAL

Sheet
Reference No.
C-124

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- NOTES:
1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
 3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.



Rev	Date	Description	Mark	Appr
0	2025-04-14	ISSUED FOR PERMIT		BFG

TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 16

Designed by: B. GRANT	Date: 2025-04-14	Rev: 0
Drawn by: VNM	MAN Project No: 10979-16	
Reviewed by: B. JOYNER	Drawing code:	
Submitted by: MOFFATT & NICHOL	Drawing Scale: AS SHOWN	Per Scale: 1" = 10' (10 SHEET)

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

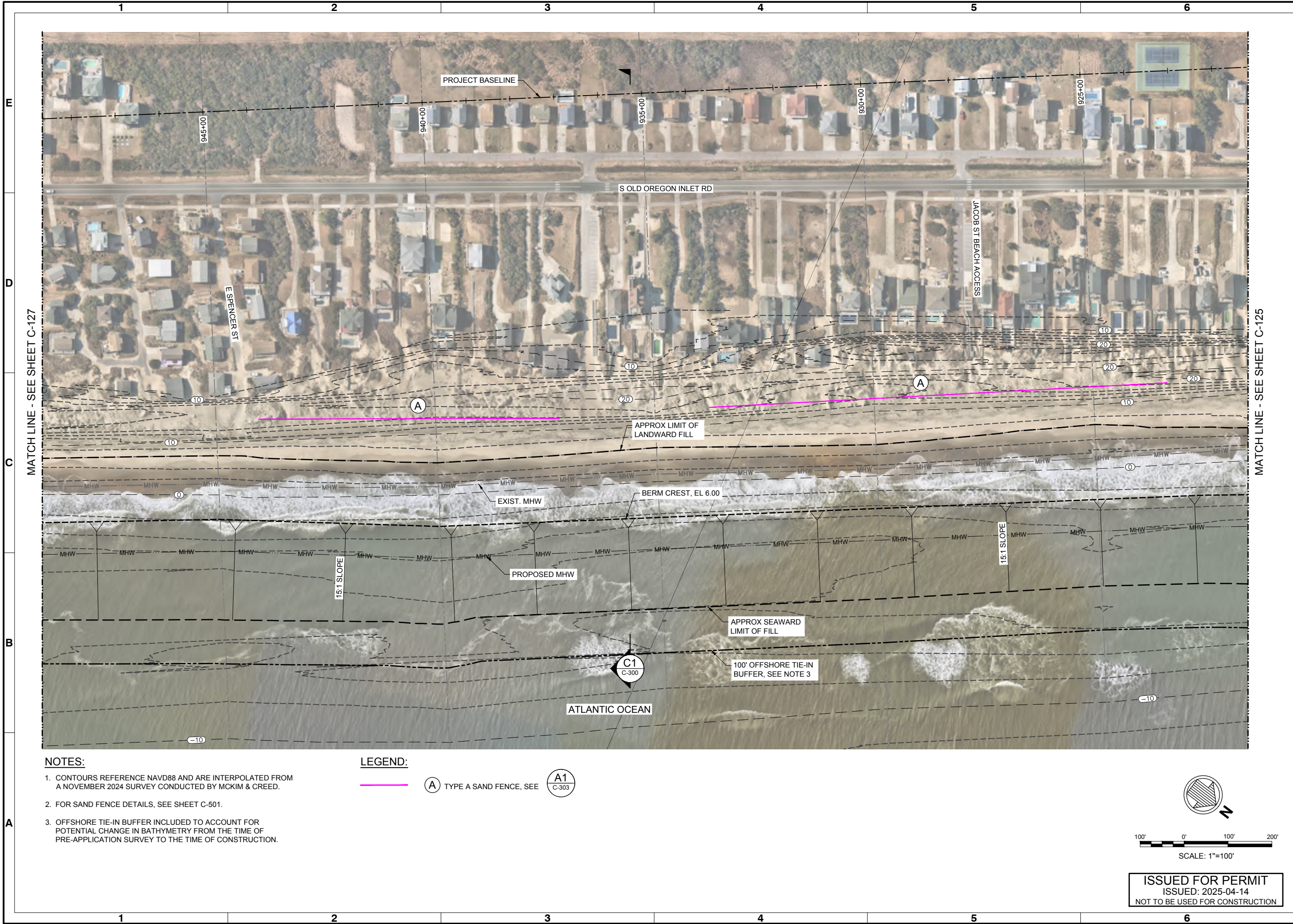
moffatt & nichol

SEAL

Sheet
Reference No.
C-125

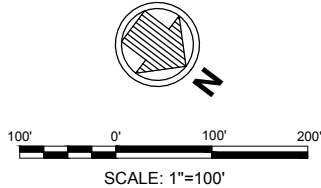
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- NOTES:**
- CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 - FOR SAND FENCE DETAILS, SEE SHEET C-501.
 - OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.

- LEGEND:**
- TYPE A SAND FENCE, SEE



ISSUED FOR PERMIT
ISSUED: 2025-04-14
NOT TO BE USED FOR CONSTRUCTION

Mark	Description	Date	Appr.
0	ISSUED FOR PERMIT	2025-04-14	BFG

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 17

Rev.	Date:	Desig. by:	Drawn by:	Reviewed by:	Submitted by:	Drawing Scale:	Per Scale:
0	2025-04-14	B. GRANT	VNM	B. JOYNER	MOFFATT & NICHOL	AS SHOWN	1"=10' (SHEET)

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

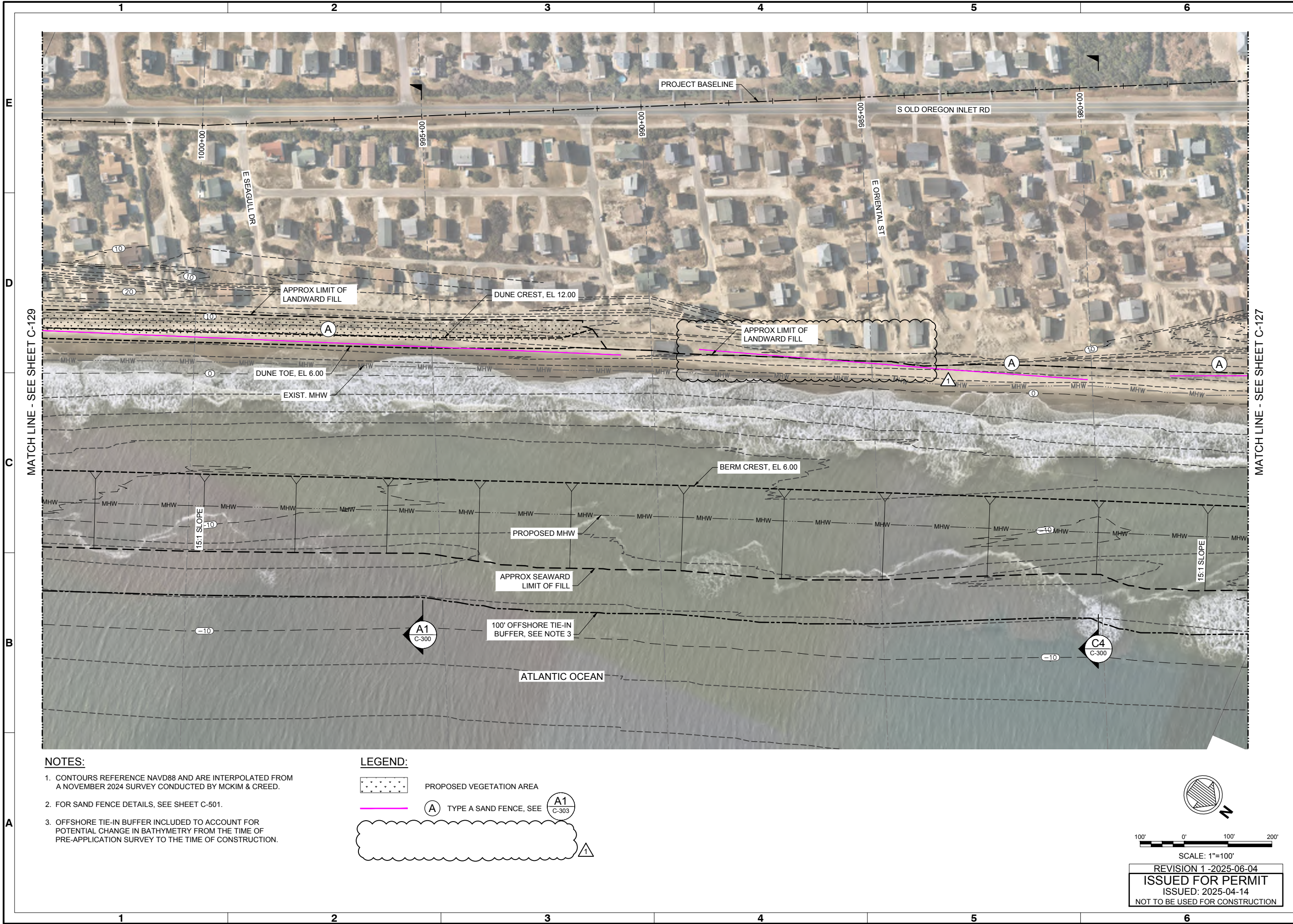
moffatt & nichol

MOFFATT & NICHOL

Sheet Reference No.
C-126

INDEX: 24 OF 32

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- NOTES:**
1. CONTOURS REFERENCE NAVD88 AND ARE INTERPOLATED FROM A NOVEMBER 2024 SURVEY CONDUCTED BY MCKIM & CREED.
 2. FOR SAND FENCE DETAILS, SEE SHEET C-501.
 3. OFFSHORE TIE-IN BUFFER INCLUDED TO ACCOUNT FOR POTENTIAL CHANGE IN BATHYMETRY FROM THE TIME OF PRE-APPLICATION SURVEY TO THE TIME OF CONSTRUCTION.

LEGEND:

PROPOSED VEGETATION AREA

TYPE A SAND FENCE, SEE A1 C-303

SCALE: 1"=100'

REVISION 1 -2025-06-04

ISSUED FOR PERMIT

ISSUED: 2025-04-14

NOT TO BE USED FOR CONSTRUCTION



Rev	Date	By	Description
1	2025-04-14	BFG	SAND FENCING UPDATE
0	2023-04-14	BFG	ISSUED FOR PERMIT

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

SITE PLAN - SHEET 19

Designed by	Drawn by	Reviewed by	Submitted by
B. GRANT	VNM	B. JOYNER	MOFFATT & NICHOL

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

moftatt & nichol

AS SHOWN
Per scale: 1"=10' (0 SHEET)

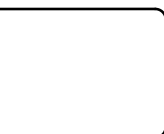
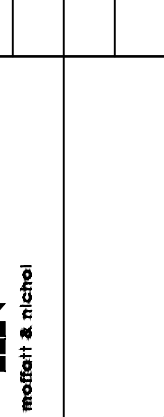
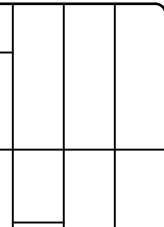
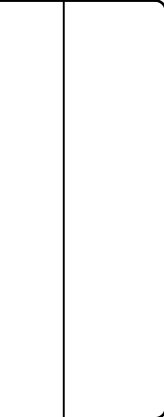
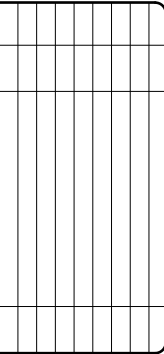
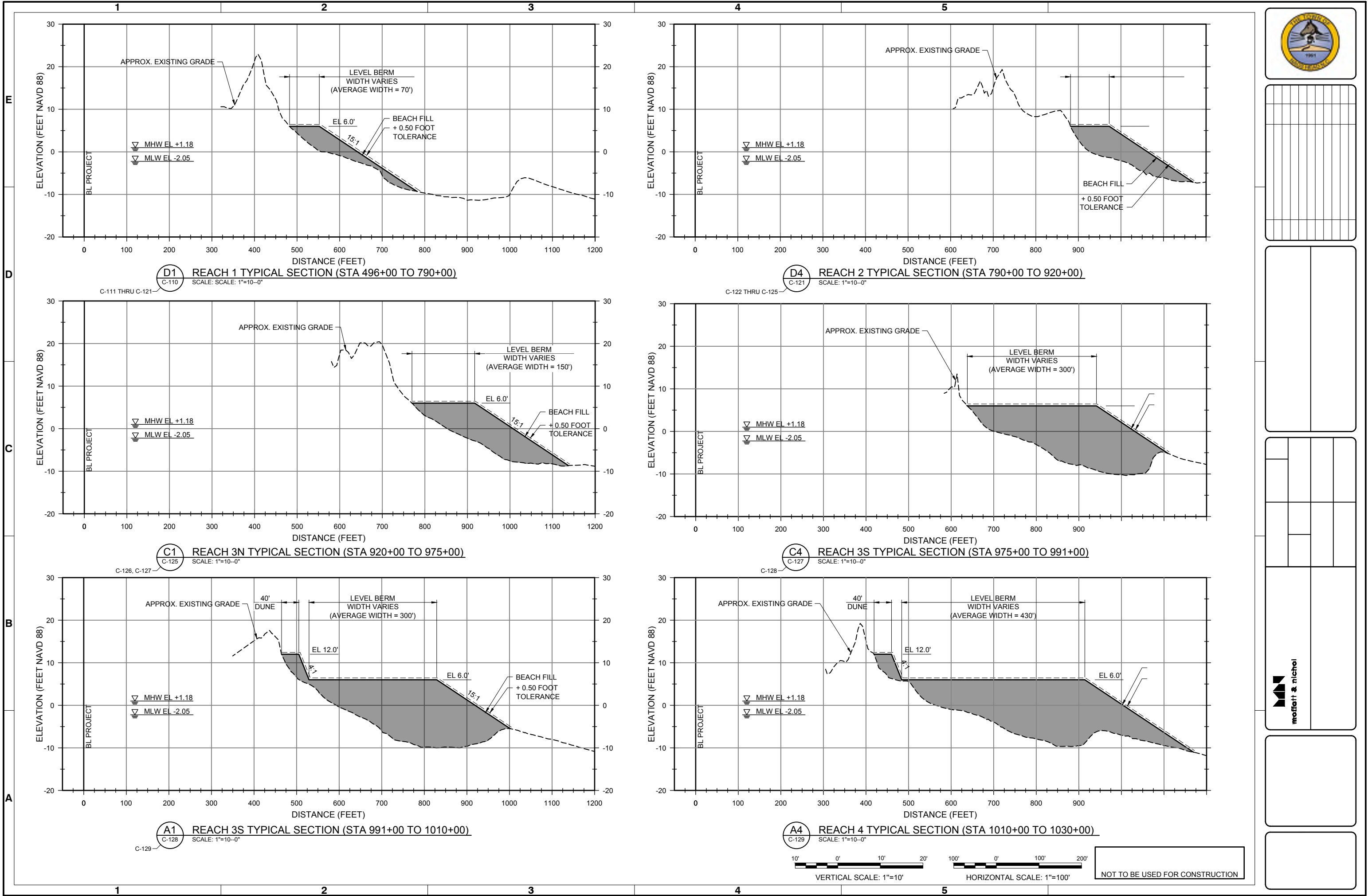
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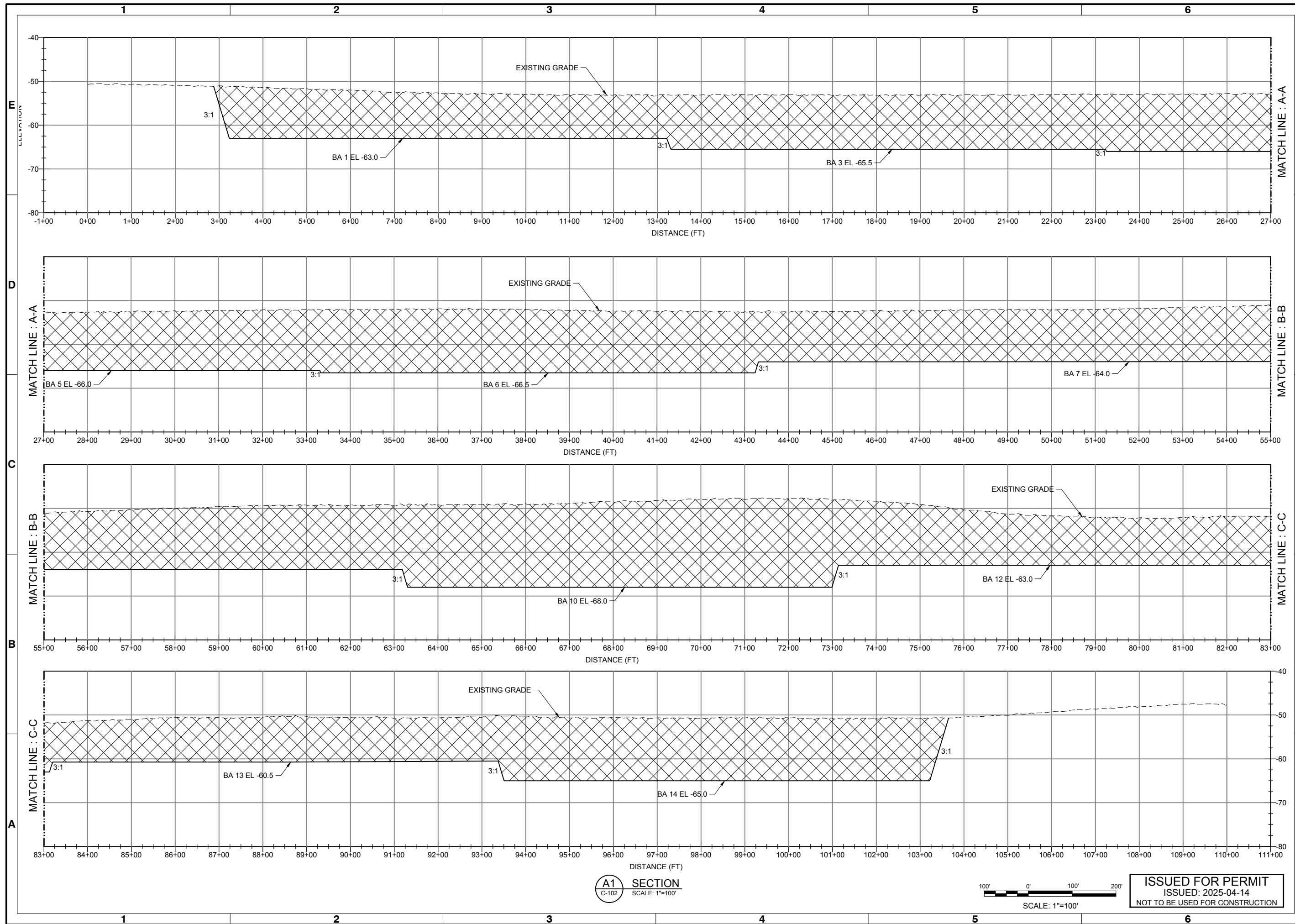
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C-128

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[illegible]TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT

**BORROW AREA SECTIONS
SHEET 1**

Designed by: B. GRANT	Date: 2025-04-14	Rev. 0
Dwn by: VNM	M&N Project No. 10979-16	
Reviewed by: B. JOYNER	Drawing code:	
Submitted by: MOFFATT & NICHOL	Drawing Scale: AS SHOWN Plot scale: 1" = 10 SHEET	



4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
919-781-4626

NC FIRM NO. F-0105

moftatt & nichol

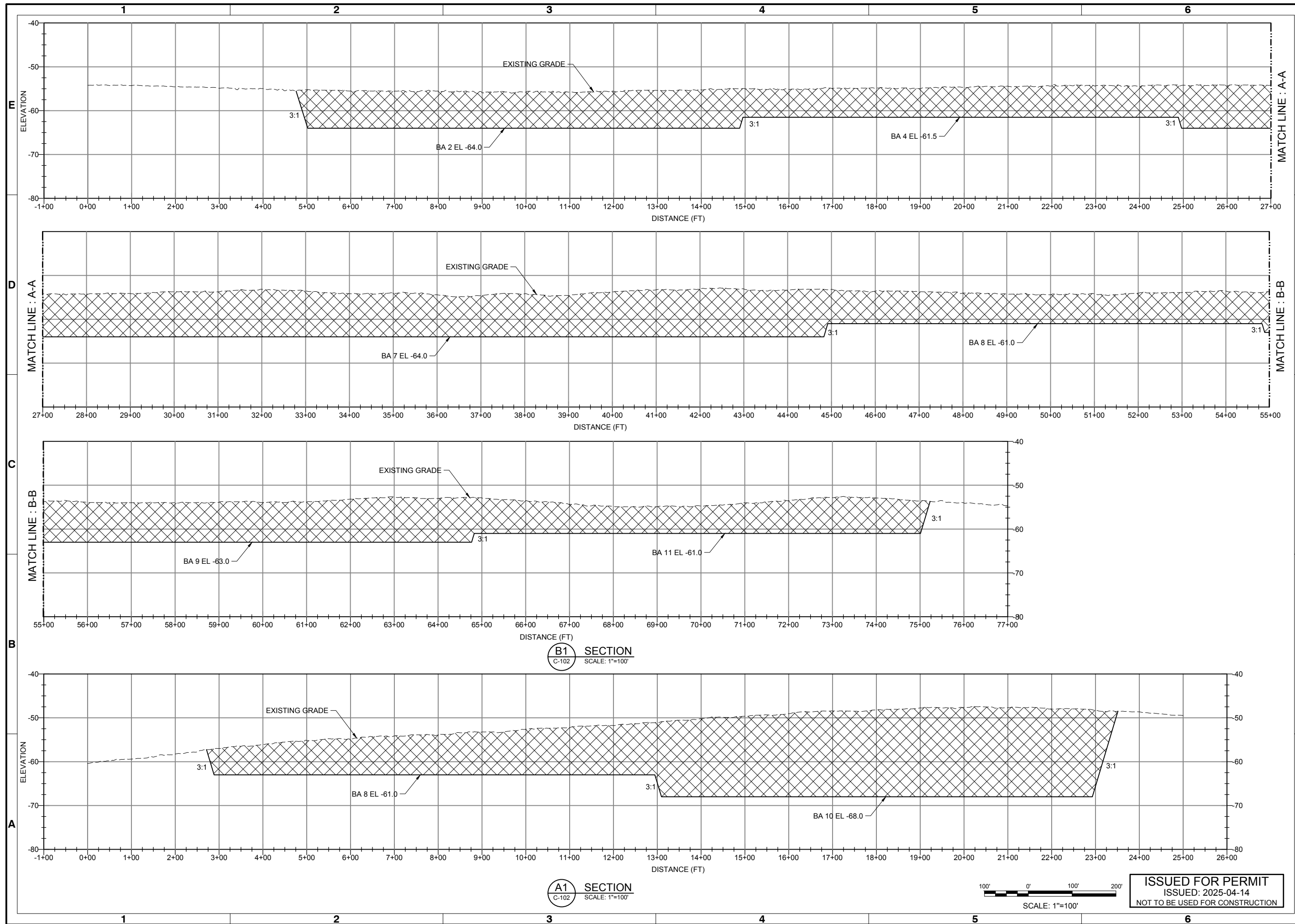
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Sheet
Reference No.

C-301

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DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

[illegible]

**TOWN OF NAGS HEAD POST-DORIAN
BEACH RENOURISHMENT PROJECT**

**BORROW AREA SECTIONS
SHEET 2**

Designed by: B. GRANT	Date: 2025-04-14	Rev. 0
Dwn by: VNM	Ord by: BPG	M&N Project No. 10979-16
Reviewed by: B. JOYNER		Drawing code:
Submitted by: MOFFATT & NICHOL		Drawing Scale: AS SHOWN Plot scale: 1" = 10 SHEET

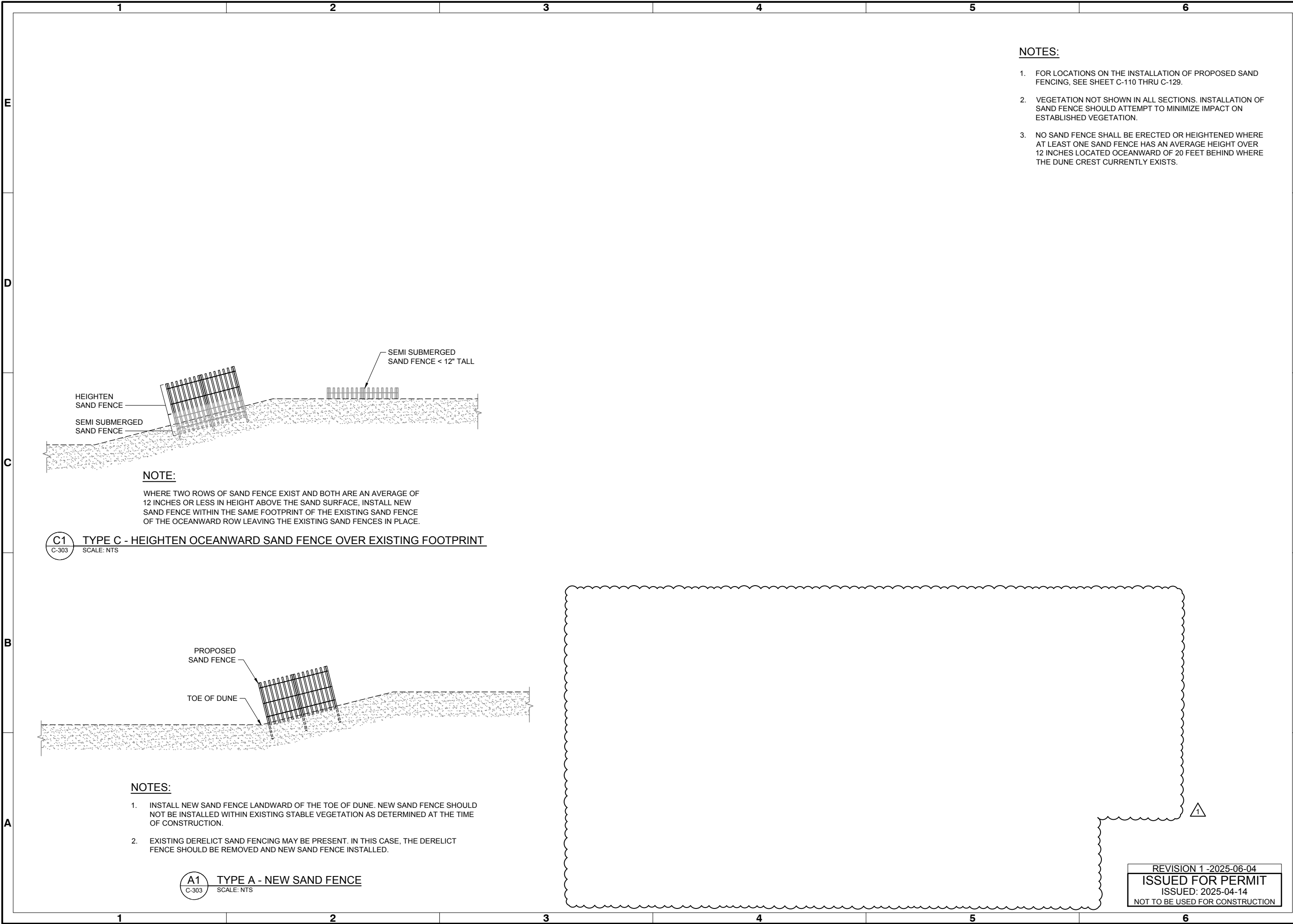
M
moftatt & nichol
4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
919-781-4626
NC FIRM NO. F-0105

SEAL

Sheet
Reference No.
C-302

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DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



NOTES:

- FOR LOCATIONS ON THE INSTALLATION OF PROPOSED SAND FENCING, SEE SHEET C-110 THRU C-129.
- VEGETATION NOT SHOWN IN ALL SECTIONS. INSTALLATION OF SAND FENCE SHOULD ATTEMPT TO MINIMIZE IMPACT ON ESTABLISHED VEGETATION.
- NO SAND FENCE SHALL BE ERECTED OR HEIGHTENED WHERE AT LEAST ONE SAND FENCE HAS AN AVERAGE HEIGHT OVER 12 INCHES LOCATED OCEANWARD OF 20 FEET BEHIND WHERE THE DUNE CREST CURRENTLY EXISTS.



Mark	Date	Description
1	2025-06-04	SAND FENCING UPDATE
0	2023-04-14	ISSUED FOR PERMIT

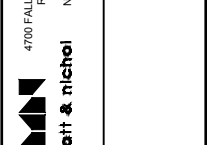
TOWN OF NAGS HEAD POST-DORIAN BEACH RENOURISHMENT PROJECT

SAND FENCING TYPICAL SECTIONS

Rev.	Date	By	Appr.
1	2025-04-14	B. GRANT	

Designed by: B. GRANT	Drawn by: VNM	Checked by: BFG	Reviewed by: B. JOYNER	Submitted by: MOFFATT & NICHOL
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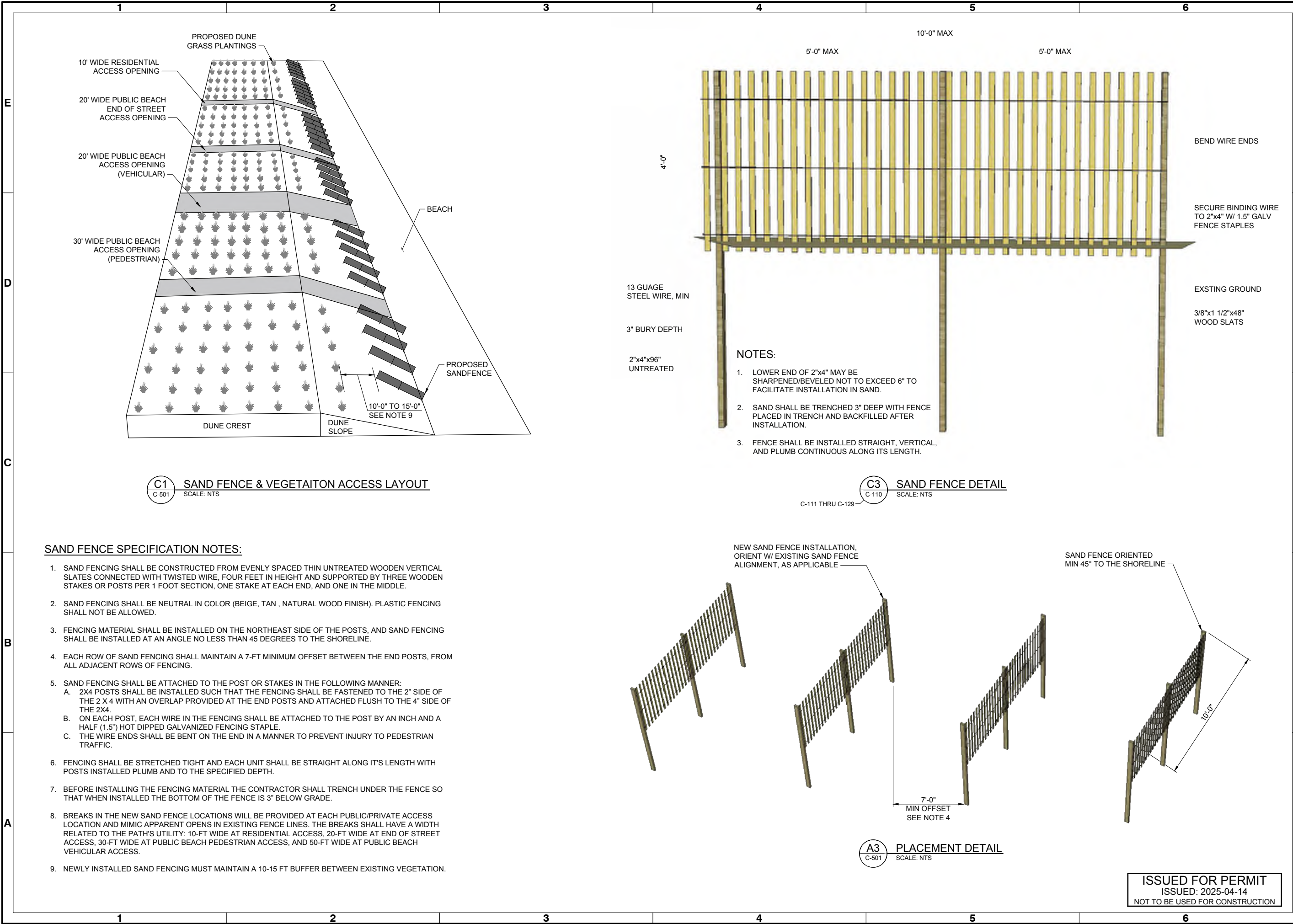
4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105



4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
NC FIRM NO. F-0105

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Reference No.
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Rev	Date	Description	Mark
0	2025-04-14	ISSUED FOR PERMIT	BFG

TOWN OF NAGS HEAD POST-DORIAN BEACH RENOVATION PROJECT	SAND FENCE DETAILS
--	--------------------

Designed by: B. GRANT	Drawn by: VNM	Reviewed by: B. JOYNER	Submitted by: MOFFATT & NICHOL
Date: 2025-04-14	M&N Project No: 10979-16	Drawing code:	Drawing Scale: AS SHOWN
Per scale: 1" = 10' (SHEET)			

4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
919.781.4420
NC FIRM NO. F-0105

moffatt & nichol



Sheet Reference No.
C-501
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