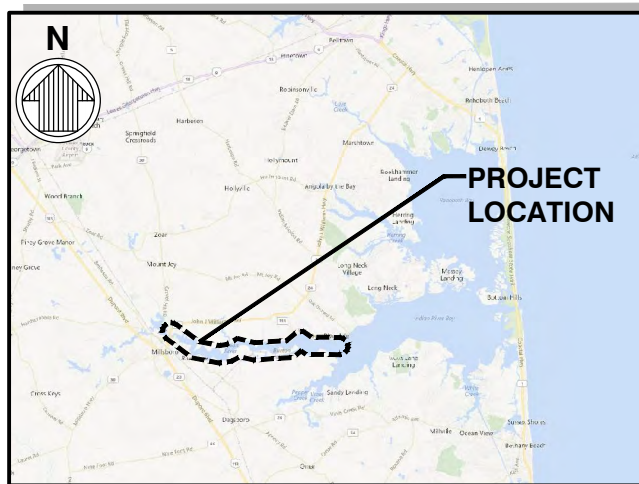


DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

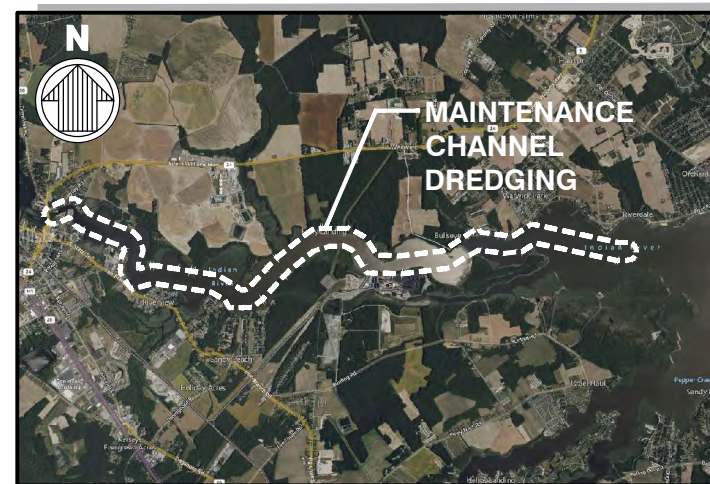
DOVER, DELAWARE

INDIAN RIVER CHANNEL MAINTENANCE DREDGING

PERMIT DRAWINGS



VICINITY MAP
NTS



LOCATION MAP
NTS

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE: AS SHOWN

COVER SHEET

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

SHEET 1 OF 30 DATE: 2025-01-27

File: \\mme.net\projects\BA10248 DNREC\MAT17007\10248-07 Indian R Dredging\20 CADD_Active\PermitSet\1024807P-2_PlotSet_1\27\2025 9:09 AM by CLARITY TASK 1_Saved: 1/27/2025 9:07 AM by PVOELKER

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23	CHANNEL TYPICAL SECTIONS
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25	PLAN - WETLAND RESTORATION SHT 1 OF 4
26	PLAN - WETLAND RESTORATION SHT 2 OF 4
27	PLAN - WETLAND RESTORATION SHT 3 OF 4
28	PLAN - WETLAND RESTORATION SHT 4 OF 4
29	DETAIL - TYPICAL CONTAINMENT DIKS
30	DETAIL - TYPICAL GEOTUBE

GENERAL NOTES

1. NOTES BELOW ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES.
2. VERTICAL DATUM IS REFERENCED TO MLW. HORIZONTAL DATUM IS THE NORTH AMERICAN DATUM OF 1983 (NAD 83), DELAWARE STATE PLANE COORDINATE SYSTEM.

TIDAL DATUM	
MEAN HIGHER HIGH WATER (MHHW)	2.7 FEET
MEAN HIGH WATER (MHW)	2.4 FEET
NORTH AMERICAN VERTICAL DATUM (NAVD)	1.7 FEET
MEAN LOW WATER (MLW)	0.0 FEET
MEAN LOWER LOW WATER (MLLW)	-0.2 FEET

3. THE SURVEY WAS OBTAINED FROM MORRIS & RITCHIE ASSOCIATES, INC. ON FEBRUARY AND MARCH 2024.
4. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE ENVIRONMENTAL PROTECTION STANDARDS, PERMITS, LAWS AND REGULATIONS. DISPOSAL OF DREDGED MATERIALS IN THE LITTLE RIVER IS NOT PERMITTED.
5. ALL SAFETY REGULATIONS ARE TO BE STRICTLY FOLLOWED.
6. CONTRACTOR SHALL TAKE ALL NECESSARY STEPS AND ACTIONS REQUIRED UNDER THE APPLICABLE SAFETY PRACTICES OF THE FOLLOWING REGULATORY AGENCIES INCLUDING, BUT NOT LIMITED TO: DELAWARE OFFICE OF OCCUPATIONAL HEALTH, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH).

ABBREVIATIONS

APPROX	—	APPROXIMATE
BL	—	BASELINE
CL	—	CENTERLINE
CF	—	CUBIC FEET
CY	—	CUBIC YARD
DMCF	—	DREDGE MATERIAL CONTAINMENT FACILITY
DNREC	—	DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
ELEV, EL	—	ELEVATION
MHW	—	MEAN HIGH WATER
MHHW	—	MEAN HIGHER HIGH WATER
MIN	—	MINIMUM
MLW	—	MEAN LOW WATER
MLLW	—	MEAN LOWER LOW WATER
MLLW	—	MEAN LOWER LOW WATER
N	—	NORTH
NAVD88	—	NORTH AMERICA VERTICAL DATUM OF 1988
NGVD	—	NORTH GEODETIC VERTICAL DATUM
NTS	—	NOT TO SCALE

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING
DATUM: MLW
SCALE: AS SHOWN

GENERAL NOTES

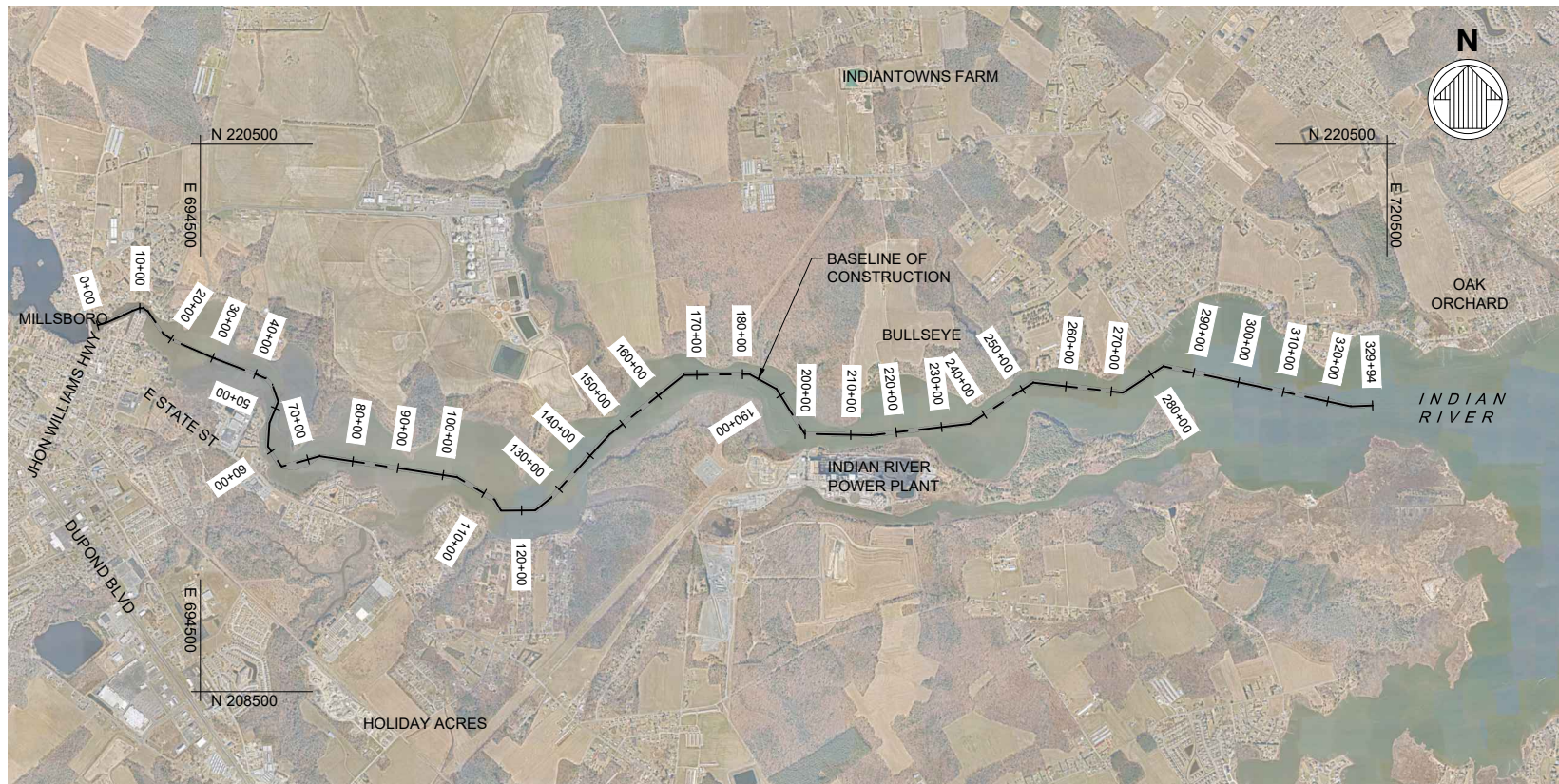
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

SHEET 2 OF 30 DATE: 2025-01-27

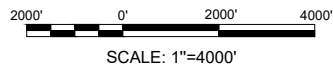
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PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - GENERAL ARRANGEMENT CHANNEL ALIGNMENT

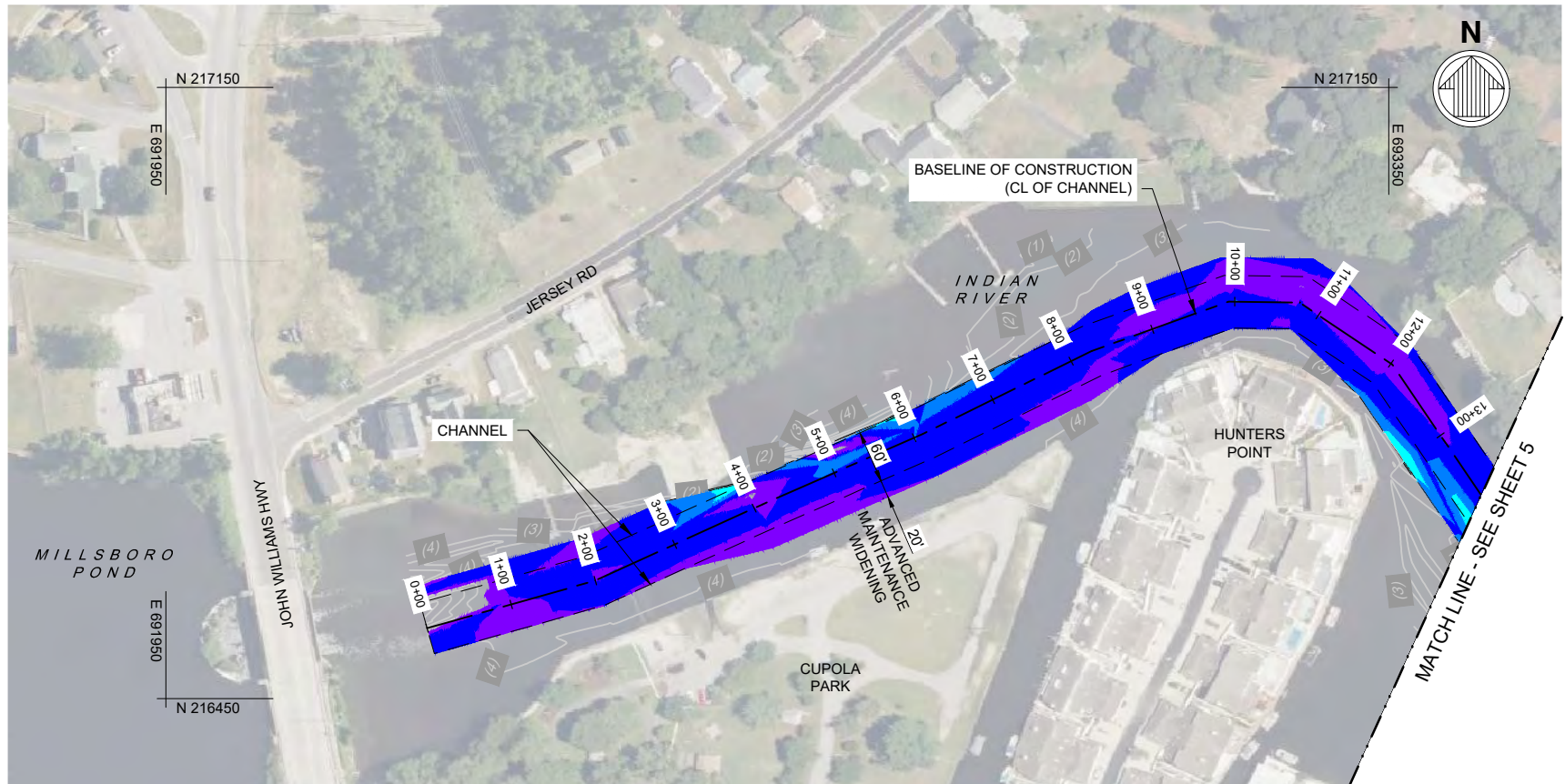
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

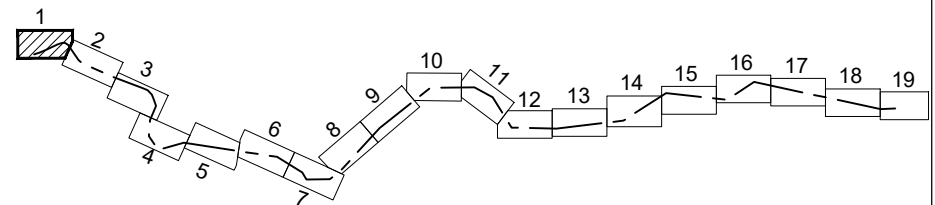
SHEET 3 OF 30 DATE: 2025-01-27

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DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Purple

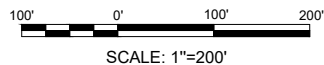


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 1 OF 19

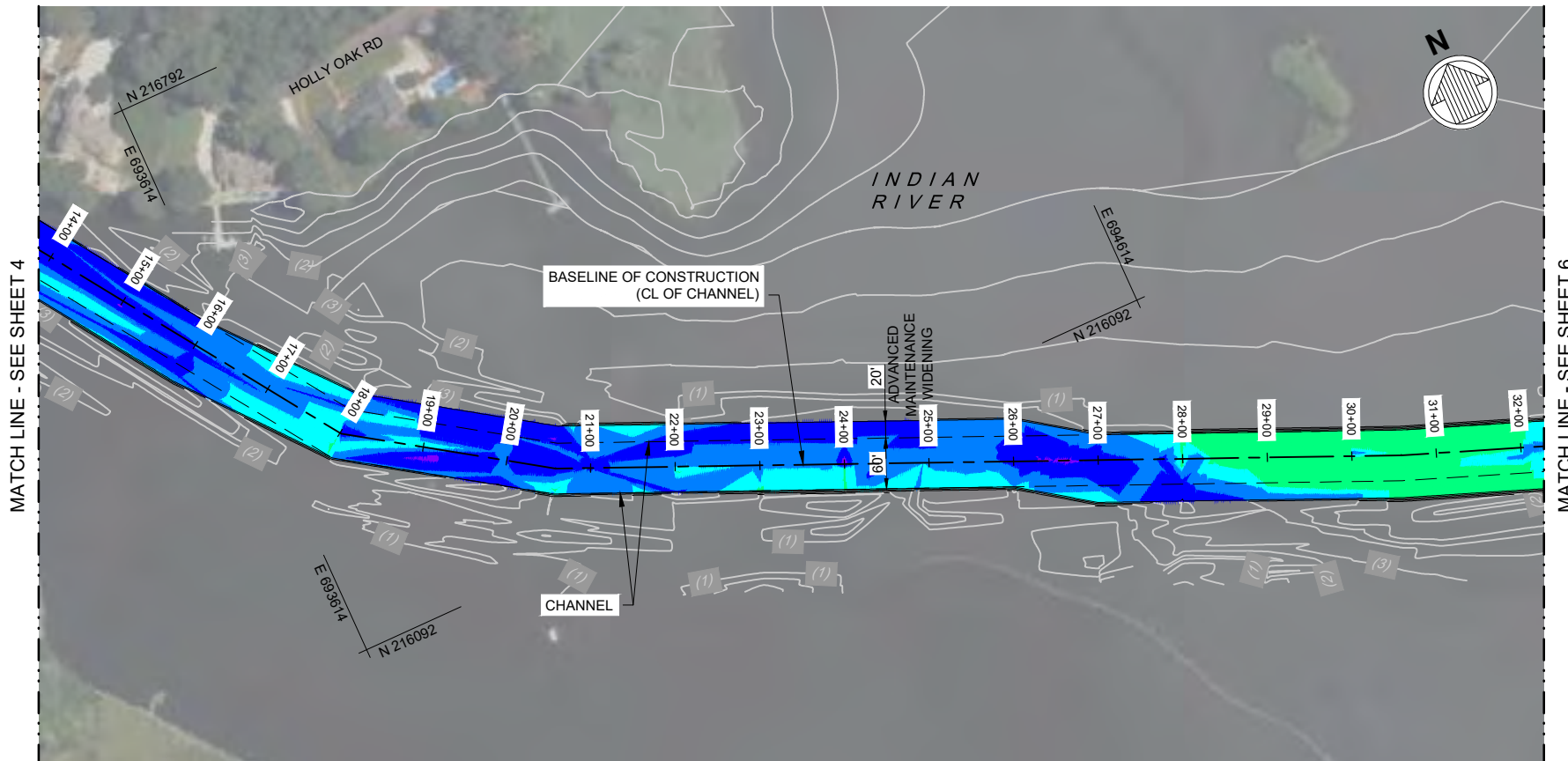
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

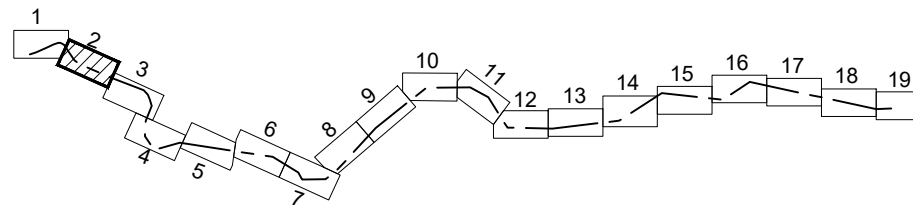
SHEET 4 OF 30 DATE: 2025-01-27

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DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Purple

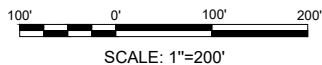


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 2 OF 19

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

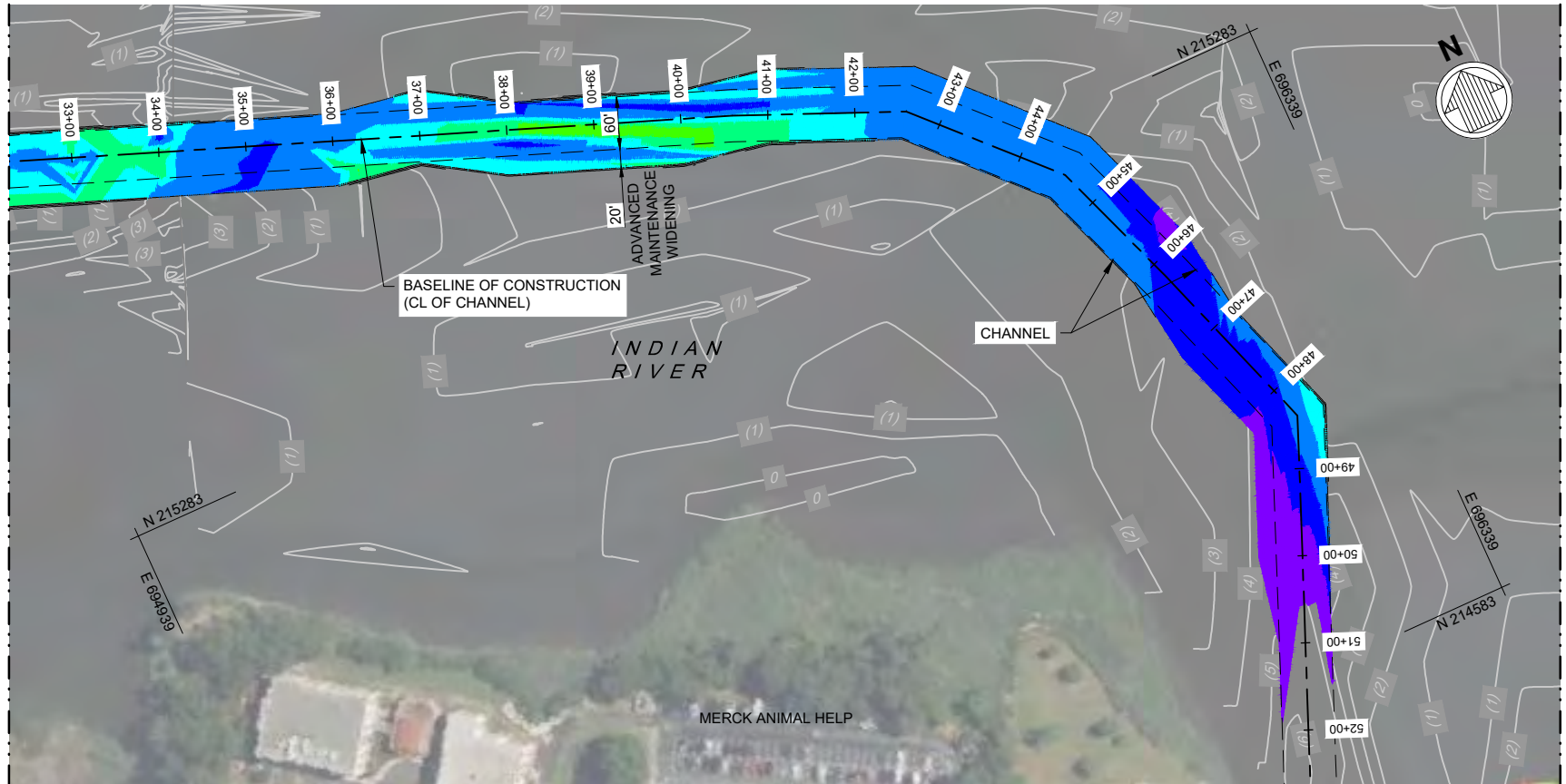
INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

SHEET 5 OF 30 DATE: 2025-01-27

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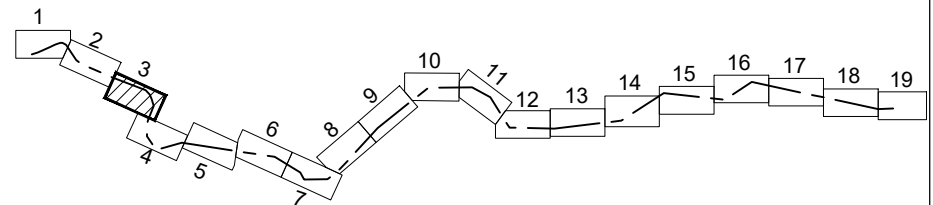
MATCH LINE - SEE SHEET 5



MATCH LINE - SEE SHEET 7

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Purple

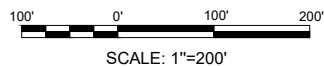


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 3 OF 19

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

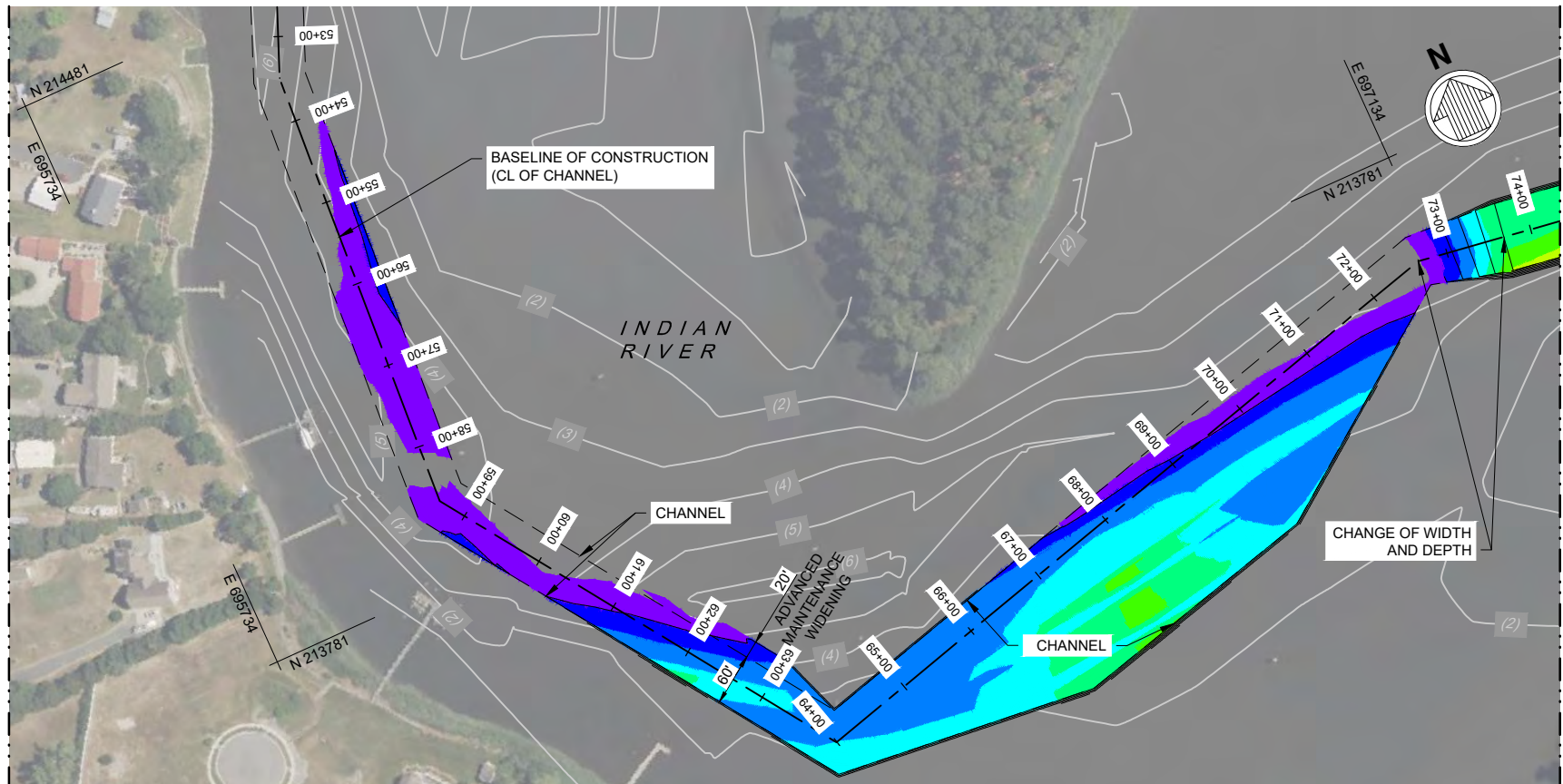
INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

SHEET 6 OF 30 DATE: 2025-01-27

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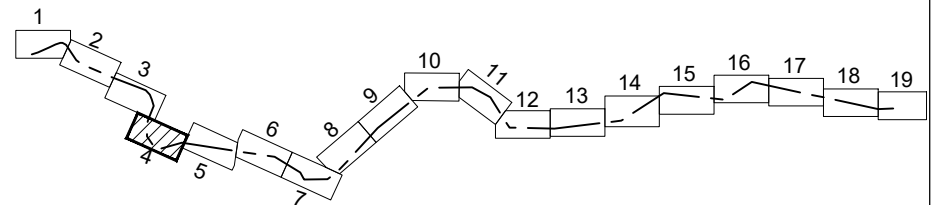
MATCH LINE - SEE SHEET 6



MATCH LINE - SEE SHEET 8

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Very Dark Blue
10	0.00	1.00	Purple

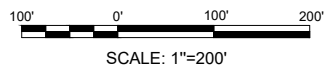


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 4 OF 19

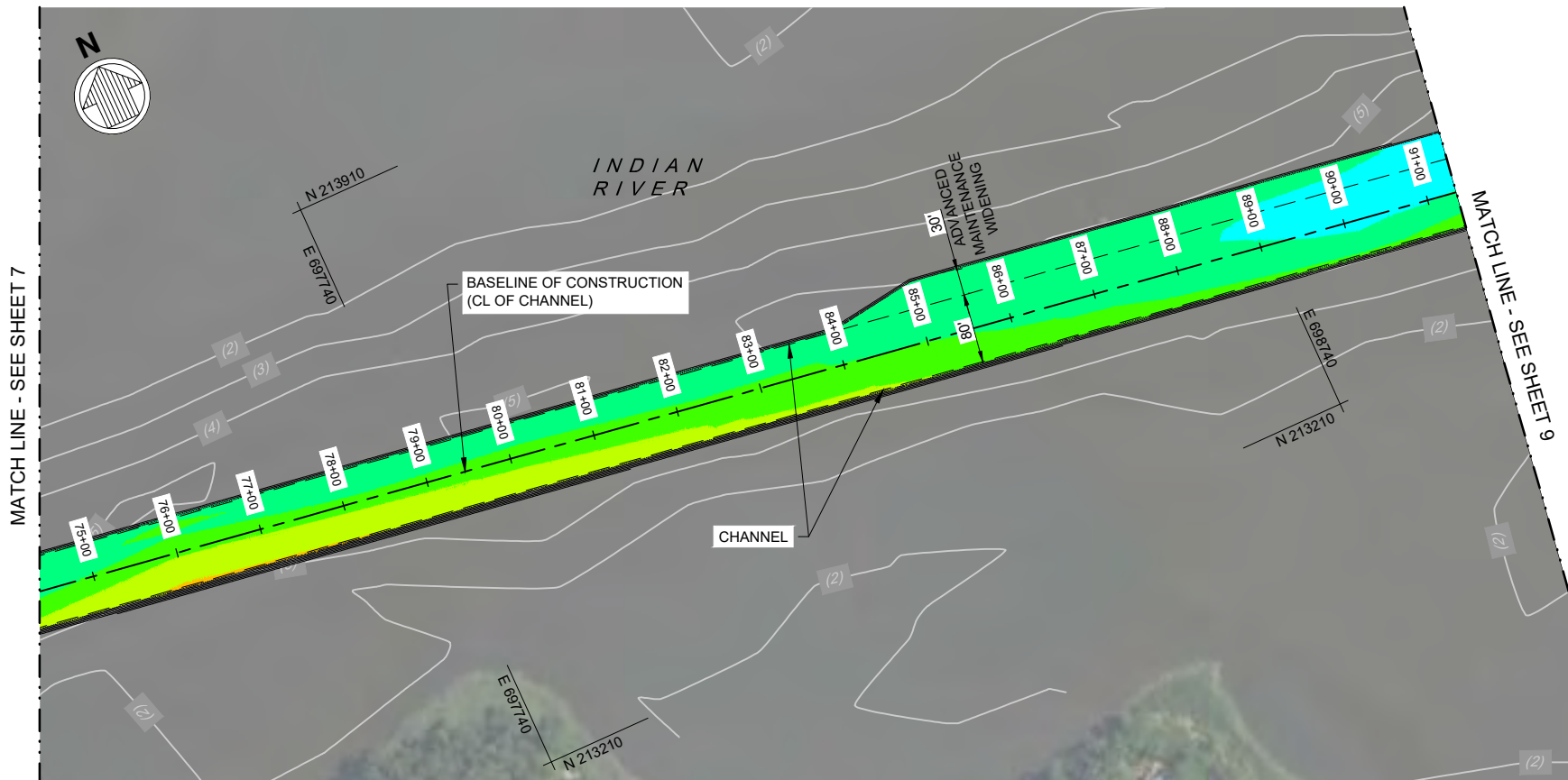
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

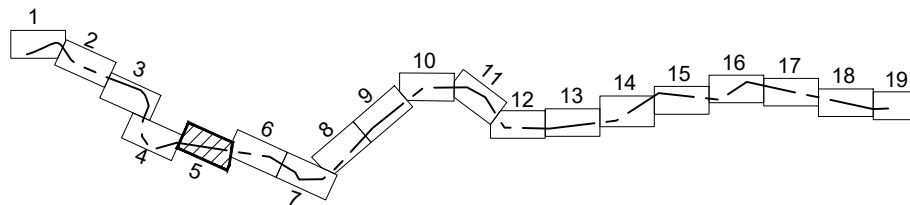
SHEET 7 OF 30 DATE: 2025-01-27

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DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Dark Blue

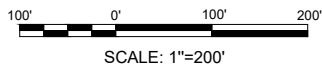


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT
SHEET 5 OF 19

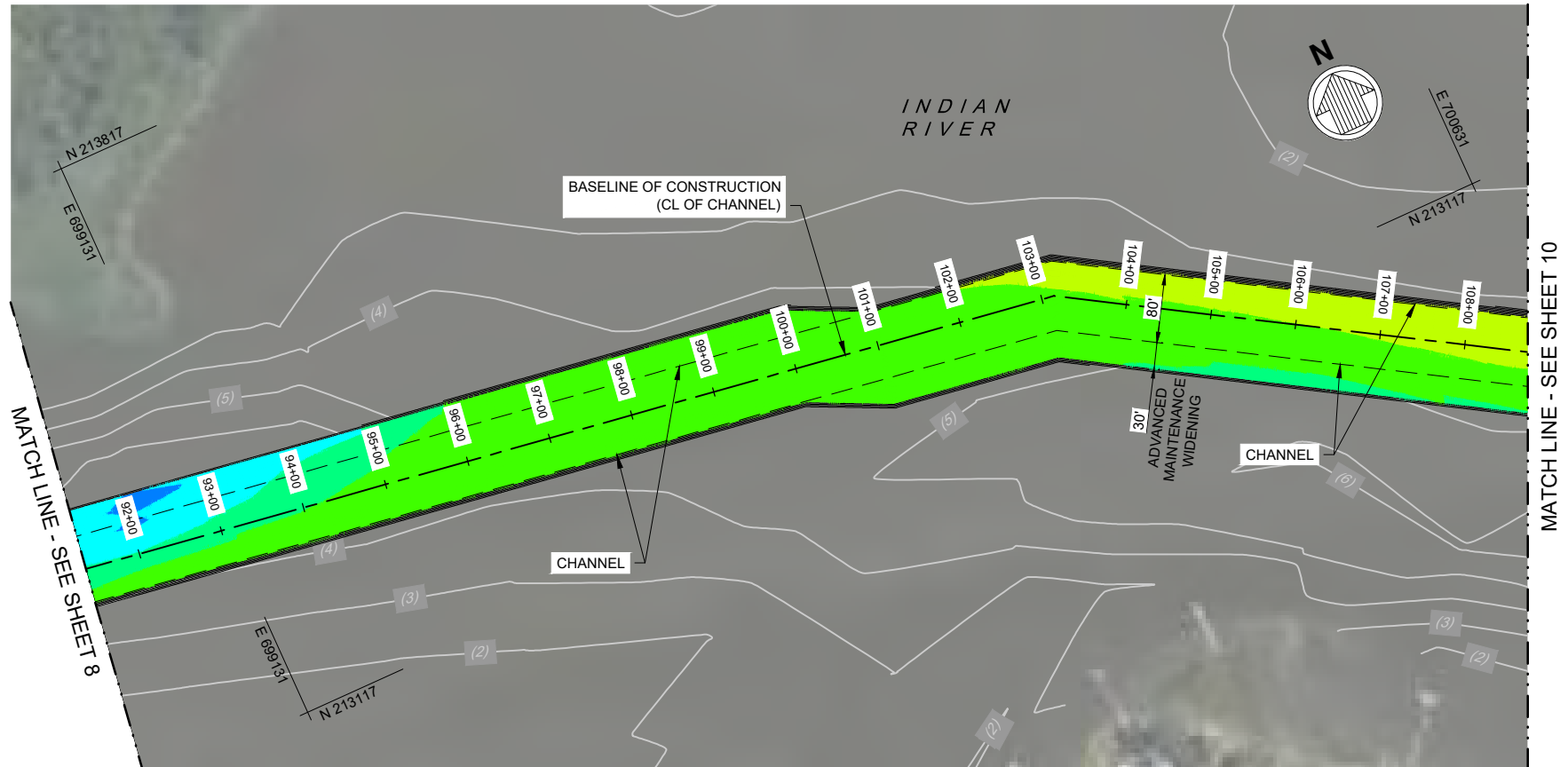
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

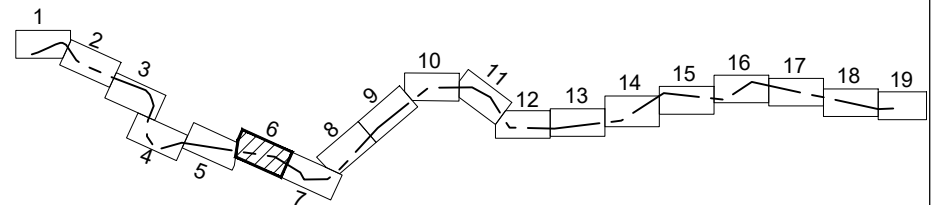
SHEET 8 OF 30 DATE: 2025-01-27

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DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Very Dark Blue
10	0.00	1.00	Purple

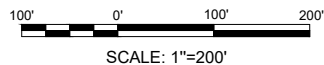


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



SCALE: 1"=200'

PLAN - CHANNEL ALIGNMENT SHEET 6 OF 19

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

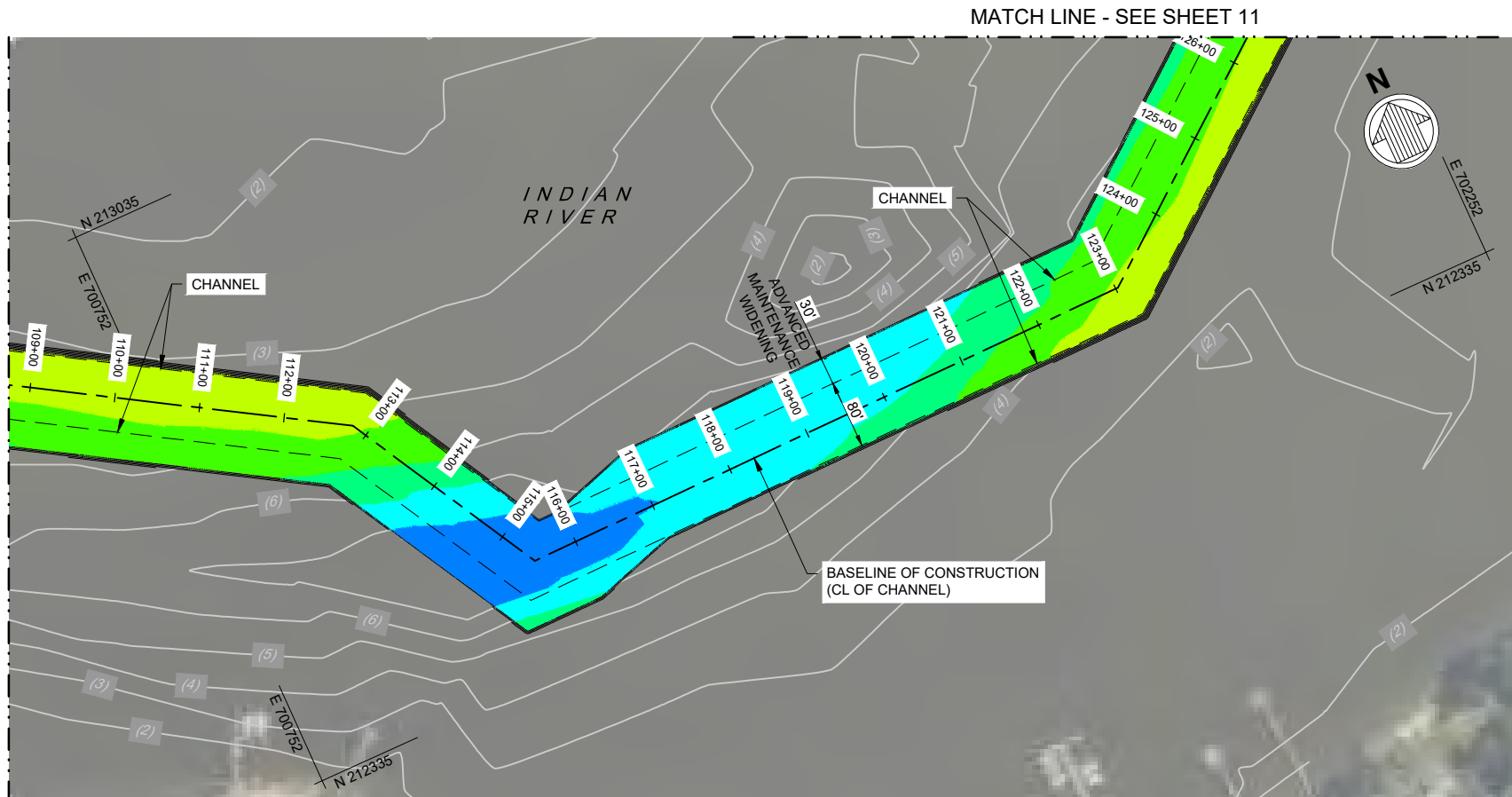
INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY: moffatt & nichol

SHEET 9 OF 30 DATE: 2025-01-27

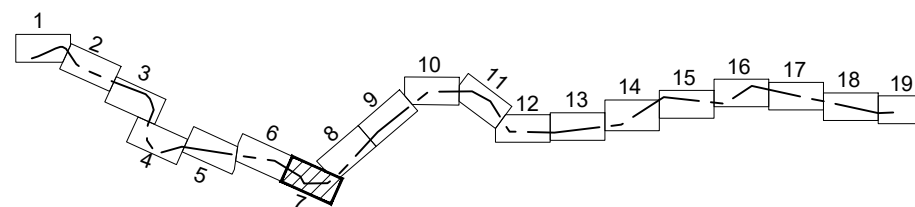
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MATCH LINE - SEE SHEET 9



DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Purple

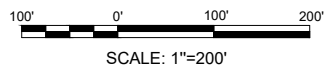


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 7 OF 19

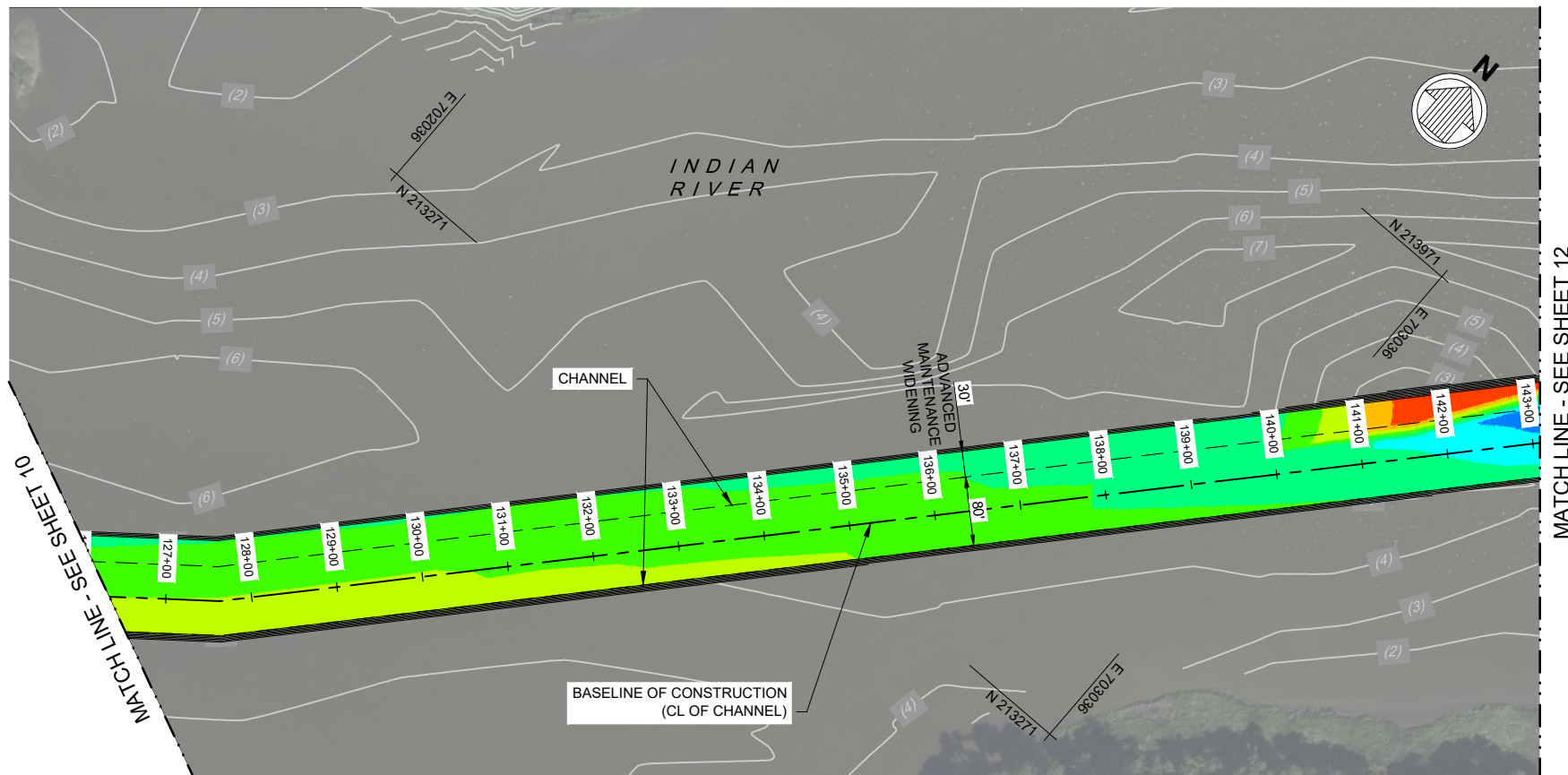
DELAWARE DEPARTMENT OF NATURAL RESOURCES
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INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

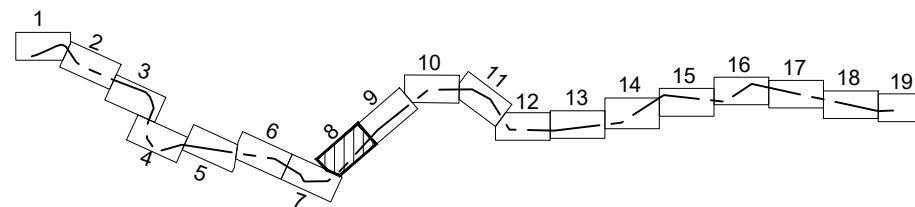
SHEET 10 OF 30 DATE: 2025-01-27

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DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Very Dark Blue
10	0.00	1.00	Purple

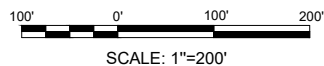


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



SCALE: 1"=200'

PLAN - CHANNEL ALIGNMENT SHEET 8 OF 19

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

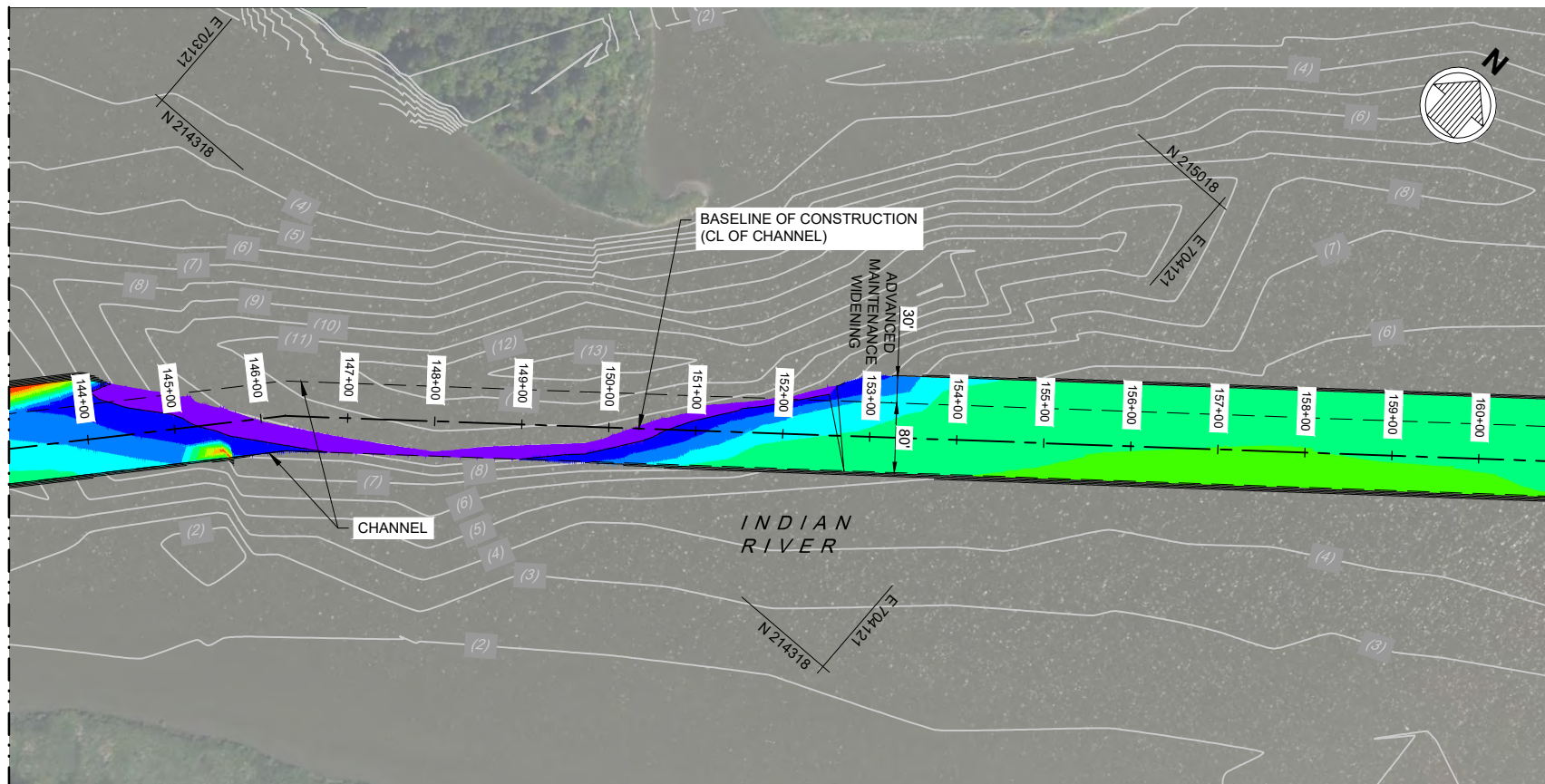
INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY: moffatt & nichol

SHEET 11 OF 30 DATE: 2025-01-27

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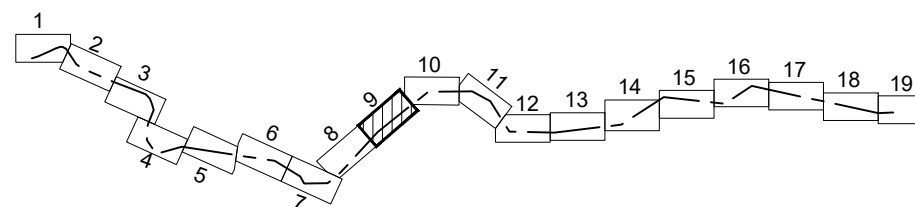
MATCH LINE - SEE SHEET 11



MATCH LINE - SEE SHEET 13

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Dark Green
10	0.00	1.00	Dark Blue

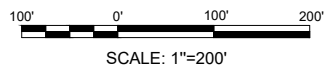


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 9 OF 19

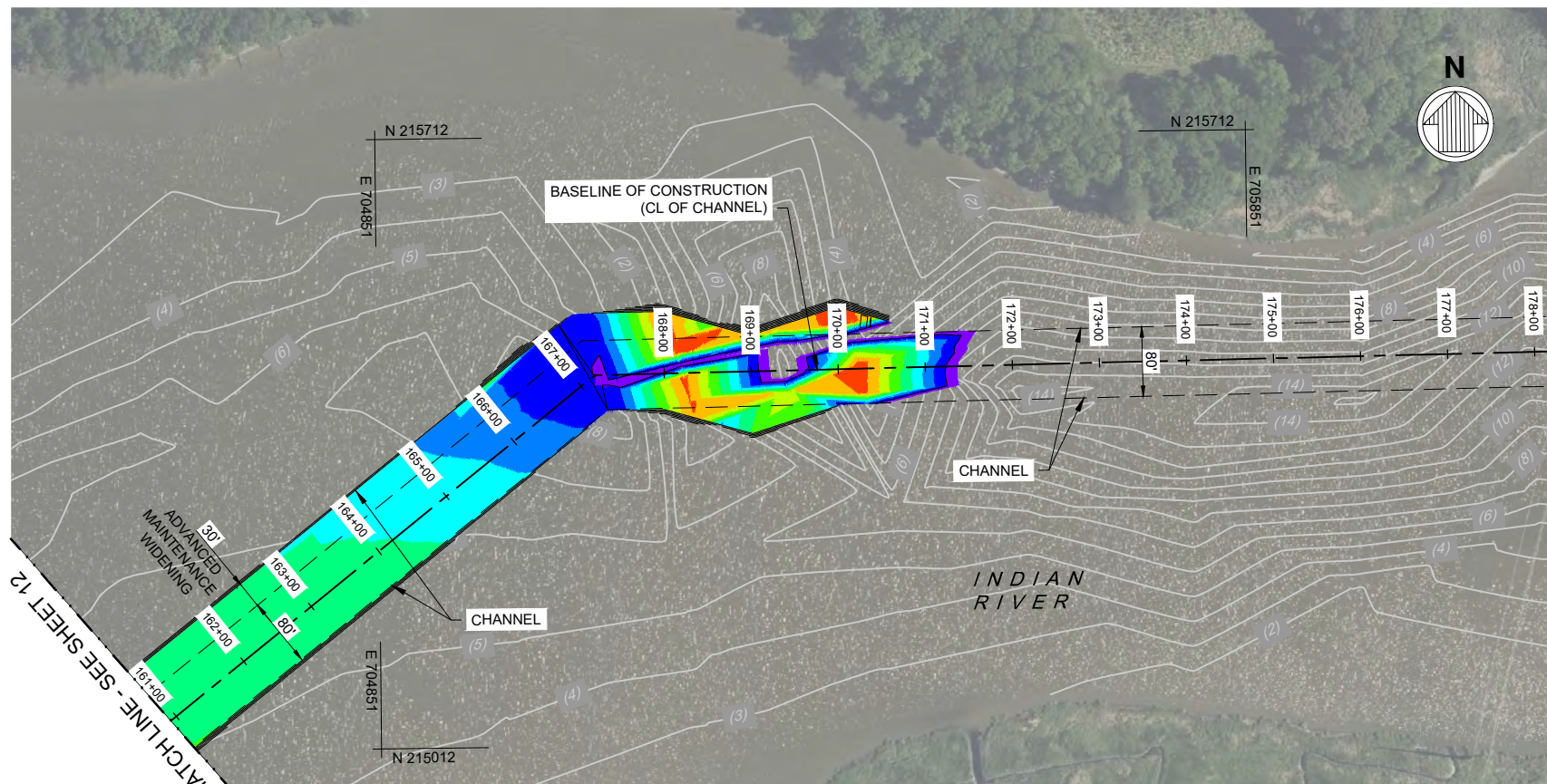
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

SHEET 12 OF 30 DATE: 2025-01-27

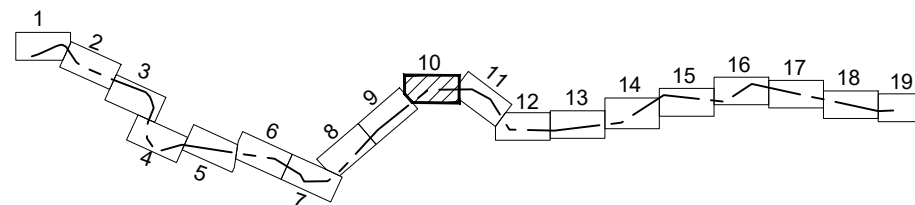
File: \\mme.net\projects\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD\Advel_Permi\Set1\024807P-13_Plot.dwg, Plotted: 1/27/2025 9:14 AM by CLARITY TASK 1; Saved: 1/27/2025 9:07 AM by PVOELKER



MATCH LINE - SEE SHEET 14

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Very Dark Blue
10	0.00	1.00	Purple

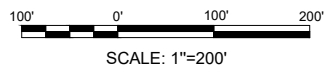


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 10 OF 19

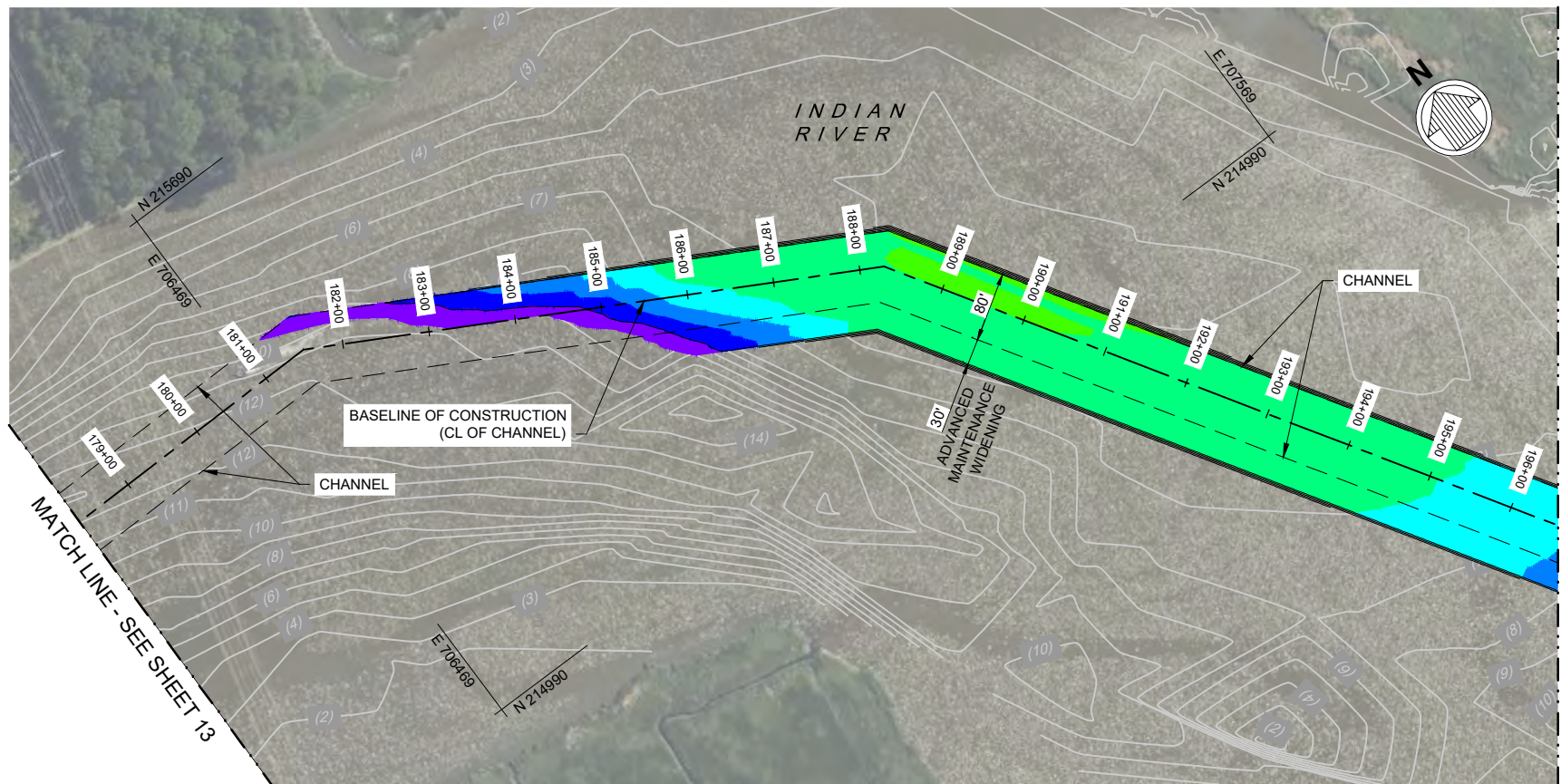
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY: moffatt & nichol

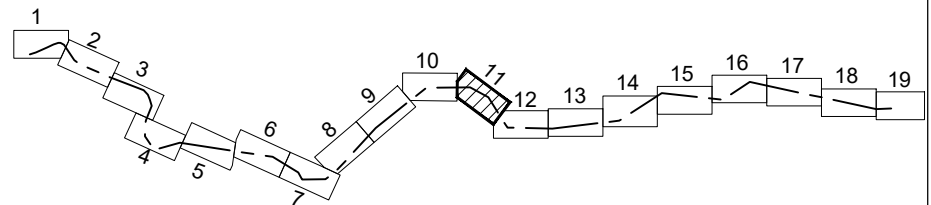
SHEET 13 OF 30 DATE: 2025-01-27

File: \\mme.net\projects\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD\Advel_PermiSet1024807P-14; Plotted: 1/27/2025 9:15 AM by CLARITY TASK 1; Saved: 1/27/2025 9:06 AM by PVOELKER



DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Cyan
8	2.00	3.00	Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Purple

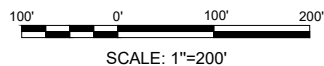


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 11 OF 19

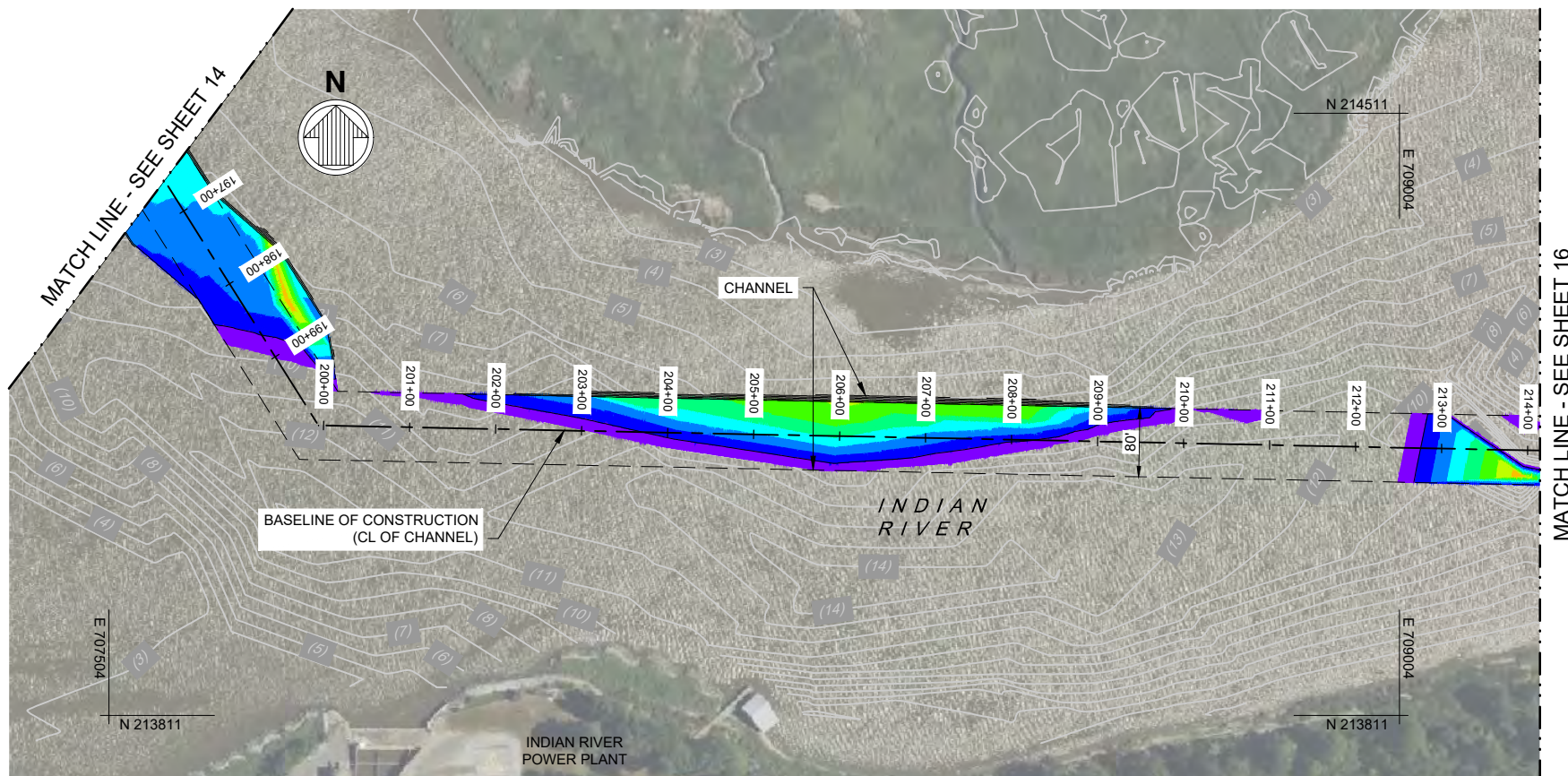
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY: moffatt & nichol

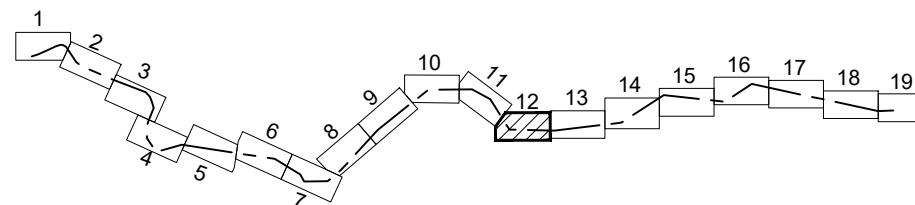
SHEET 14 OF 30 DATE: 2025-01-27

File: \\mme.net\projects\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD\Advel_PermiSet1024807P-15, Plotted: 1/27/2025 9:15 AM by CLARITY TASK 1; Saved: 1/27/2025 9:06 AM by PVOELKER



DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Purple

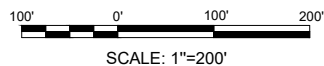


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT
SHEET 12 OF 19

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

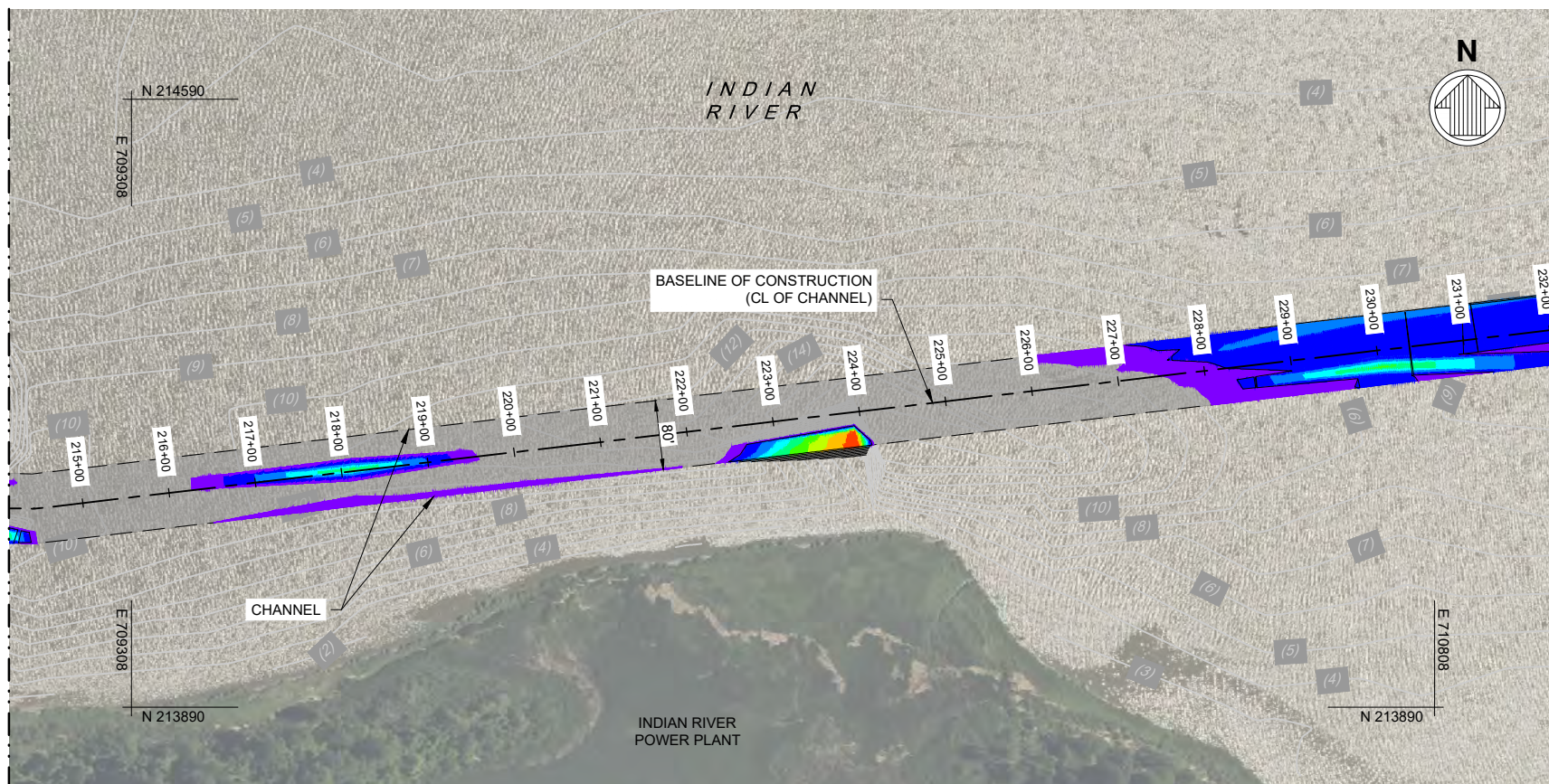
APPLICATION BY:  **moffatt & nichol**

SHEET 15 OF 30 DATE: 2025-01-27

File: \\mme.net\projects\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD\Advel_PermiSet1024807P-16_Plot1ed: 127/2025 9:09 AM by CLARITY TASK 1; Saved: 127/2025 9:06 AM by PVOELKER

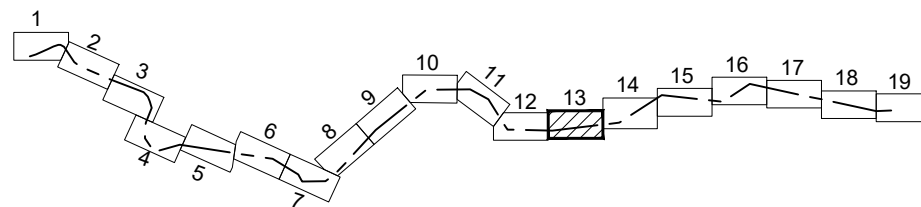
MATCH LINE - SEE SHEET 15

MATCH LINE - SEE SHEET 17



DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Very Dark Blue
10	0.00	1.00	Purple

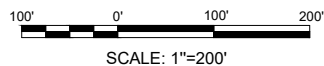


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 13 OF 19

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

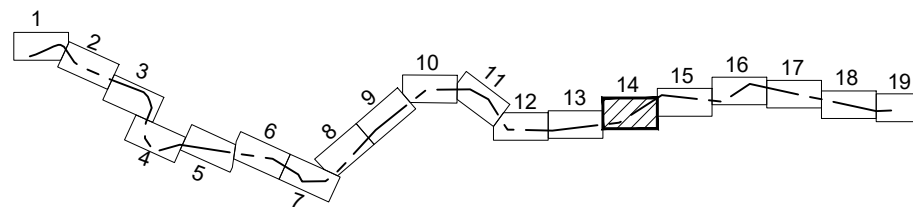
INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY: **moftatt & nichol**

SHEET 16 OF 30 DATE: 2025-01-27

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	
2	8.00	9.00	
3	7.00	8.00	
4	6.00	7.00	
5	5.00	6.00	

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	
7	3.00	4.00	
8	2.00	3.00	
9	1.00	2.00	
10	0.00	1.00	

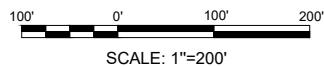


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 14 OF 19

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

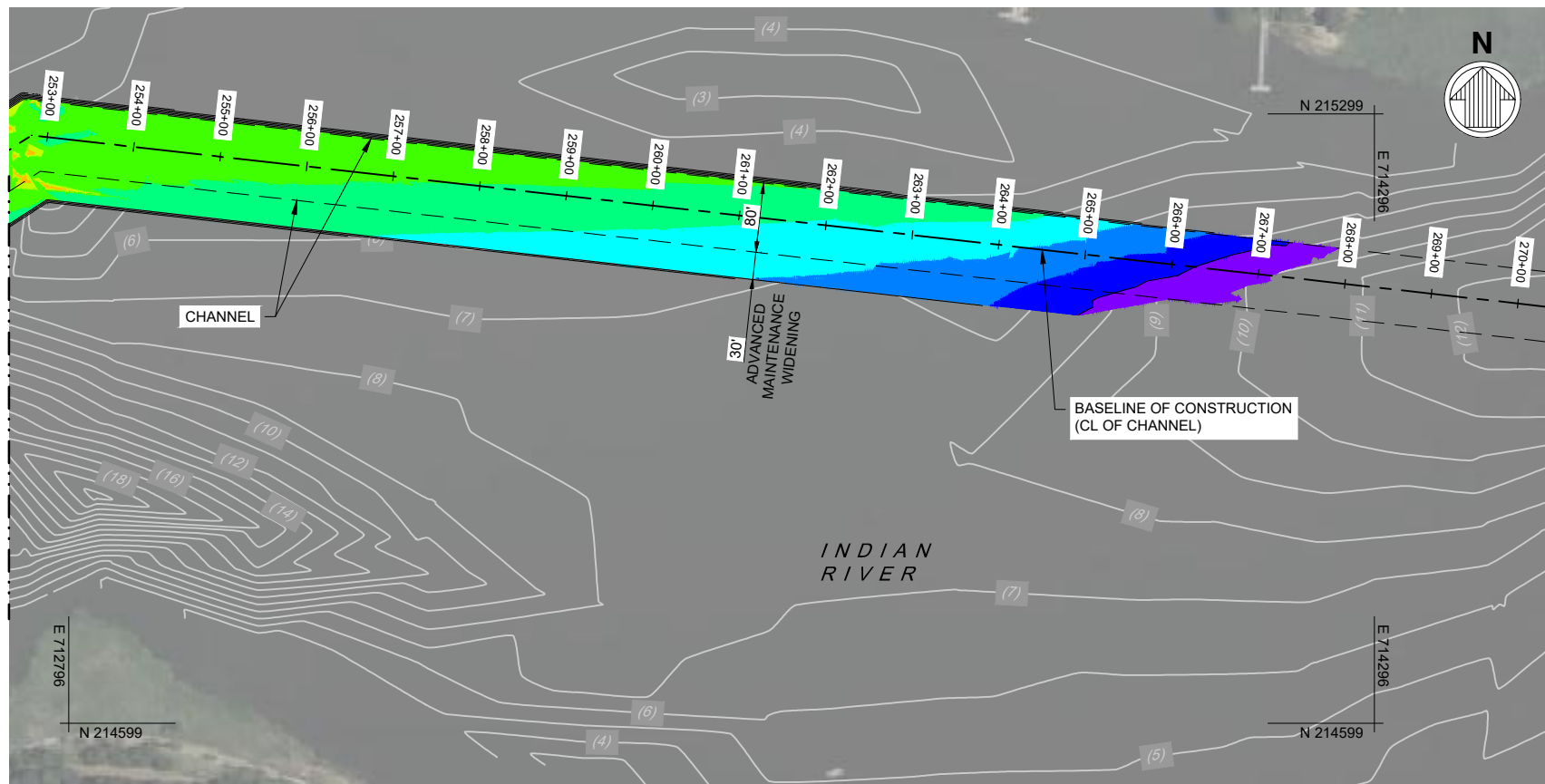
INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY: moffatt & nichol

SHEET 17 OF 30 DATE: 2025-01-27

File: \\mme.net\projects\BA10248 DNREC NAT1700\10248-07 Indian R Dredging\20 CADD\Advel_PermiSet\1024807P-18; Plotted: 1/27/2025 9:10 AM by CLARITY TASK 1; Saved: 1/27/2025 9:06 AM by PVOELKER

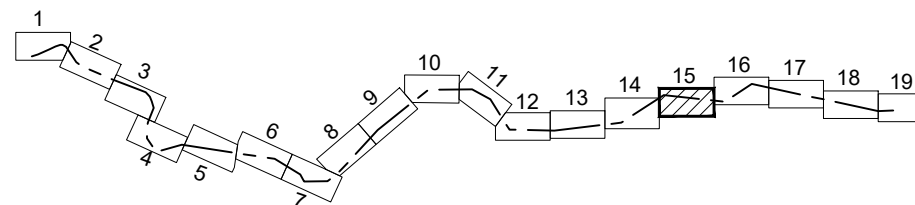
MATCH LINE - SEE SHEET 17



MATCH LINE - SEE SHEET 19

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Purple

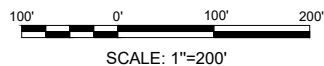


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 15 OF 19

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

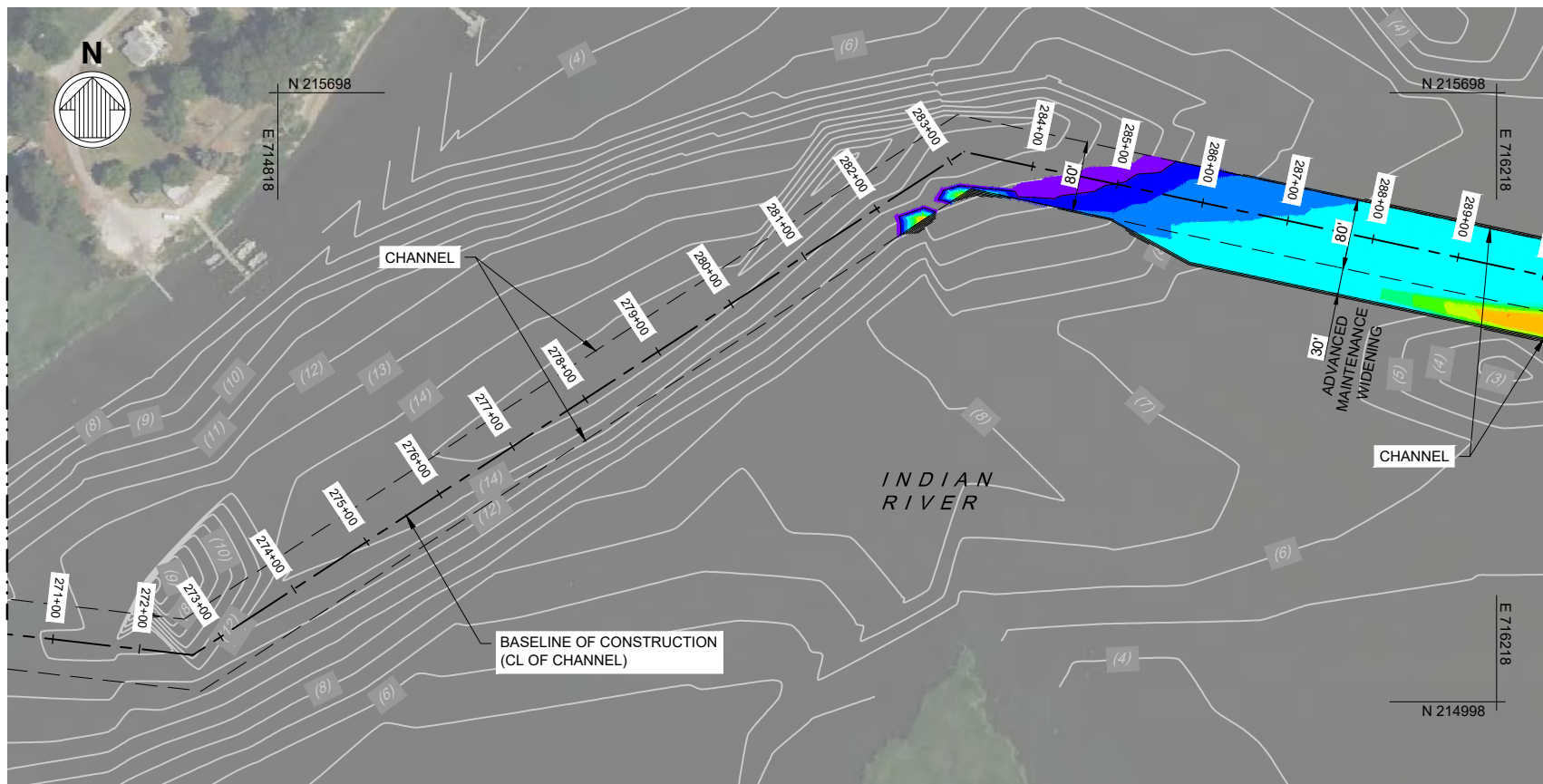
INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY: moffatt & nichol

SHEET 18 OF 30 DATE: 2025-01-27

File: \\mme.net\projects\BA10248 DNREC NAT1700\10248-07 Indian R Dredging\20 CADD\Advt_Permits\Set1024807P-19_Plot.dwg; Plotted: 1/27/2025 9:10 AM by CLARITY TASK 1; Saved: 1/27/2025 9:06 AM by PVOELKER

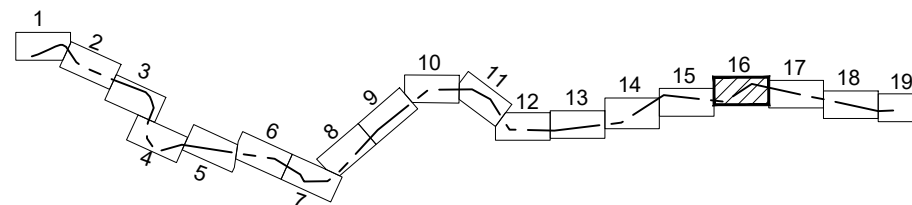
MATCH LINE - SEE SHEET 18



MATCH LINE - SEE SHEET 20

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Purple

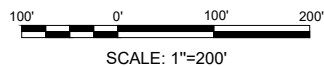


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 16 OF 19

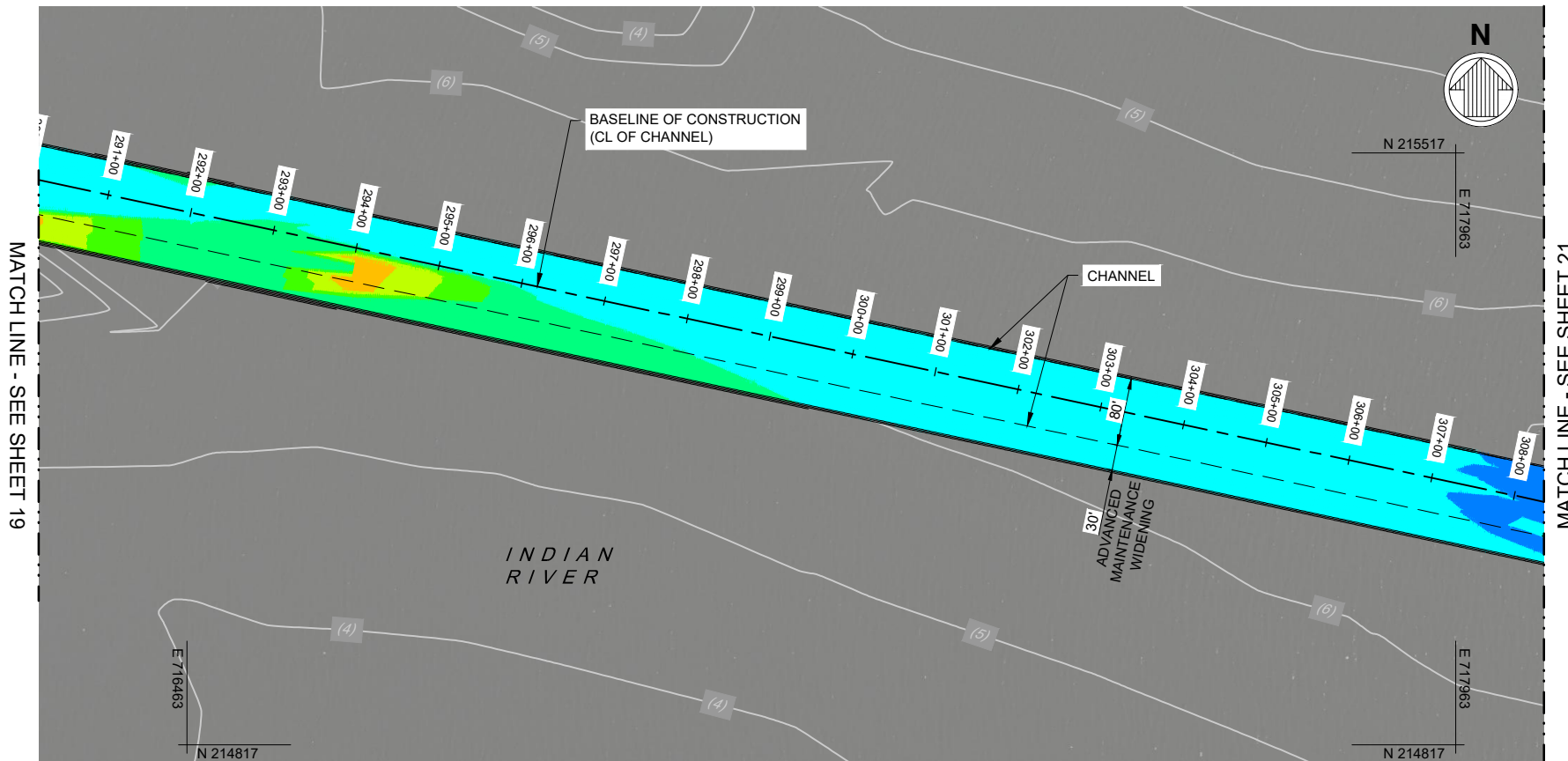
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY: **moftatt & nichol**

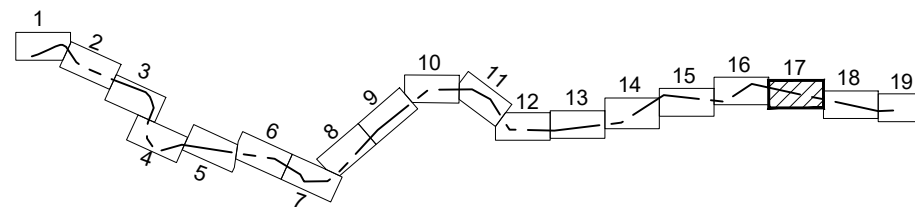
SHEET 19 OF 30 DATE: 2025-01-27

File: \\mme.net\projects\BA10248 DNREC NAT1700\10248-07 Indian R Dredging\20 CADD\Advel_PermiSet\1024807P-20_Plot.dwg, Plotted: 1/27/2025 9:11 AM by CLARITY TASK 1; Saved: 1/27/2025 9:06 AM by PVOELKER



DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Very Dark Blue
10	0.00	1.00	Purple

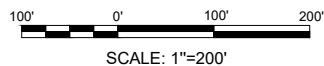


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 17 OF 19

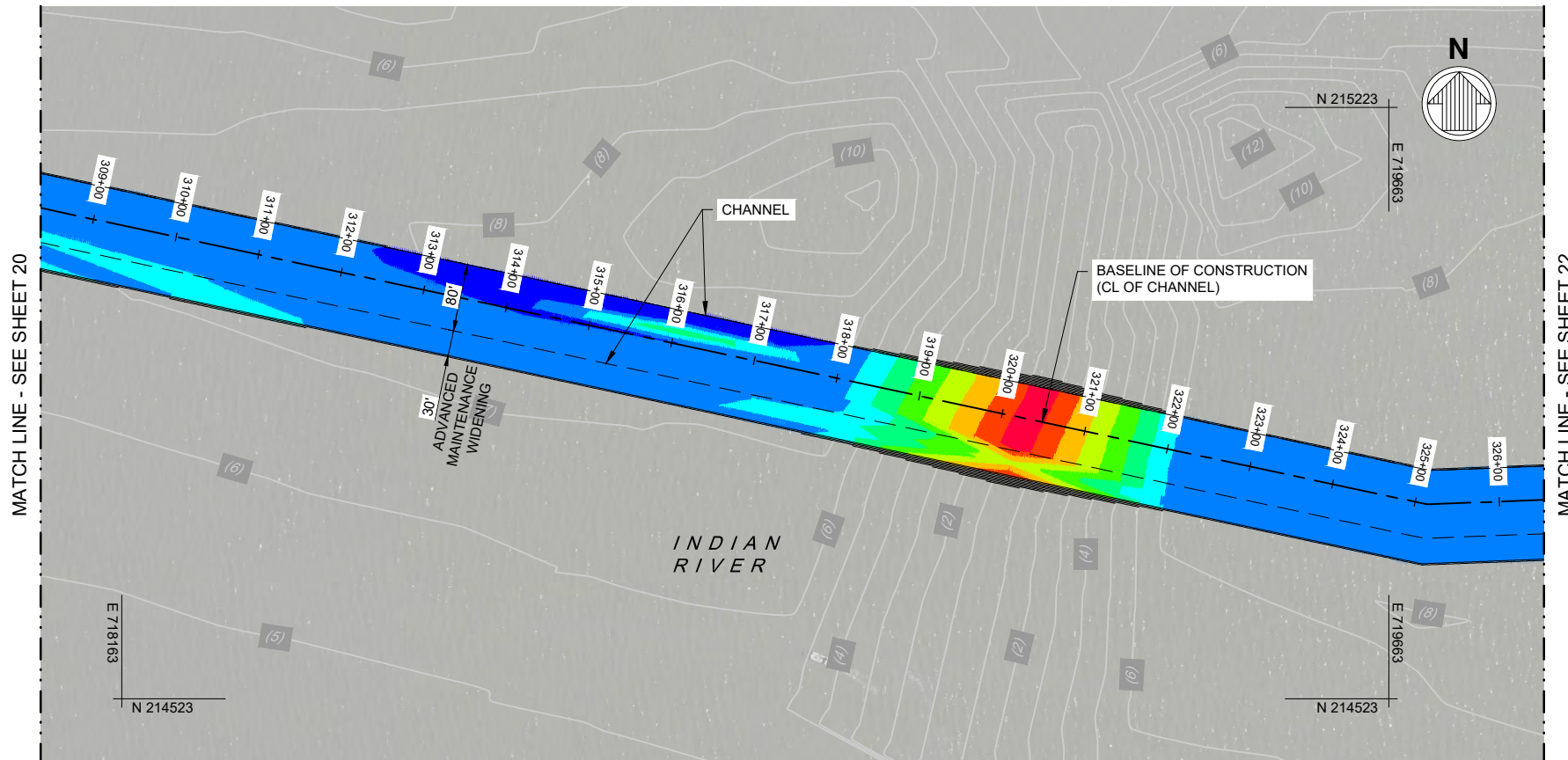
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY: moffatt & nichol

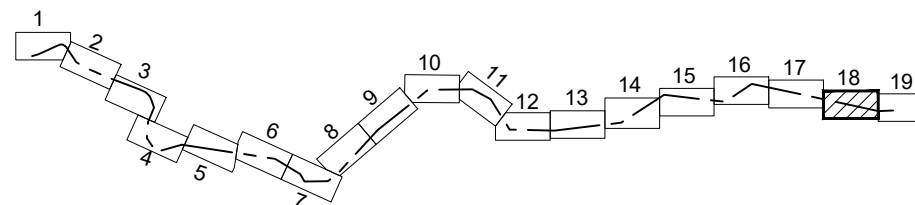
SHEET 20 OF 30 DATE: 2025-01-27

File: \\mme.net\projects\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD_Active\PermitSet1024807P-21; Plotted: 1/27/2025 9:11 AM by CLARITY TASK 1; Saved: 1/27/2025 9:06 AM by PVOELKER



DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Cyan
8	2.00	3.00	Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Purple

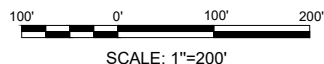


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT SHEET 18 OF 19

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

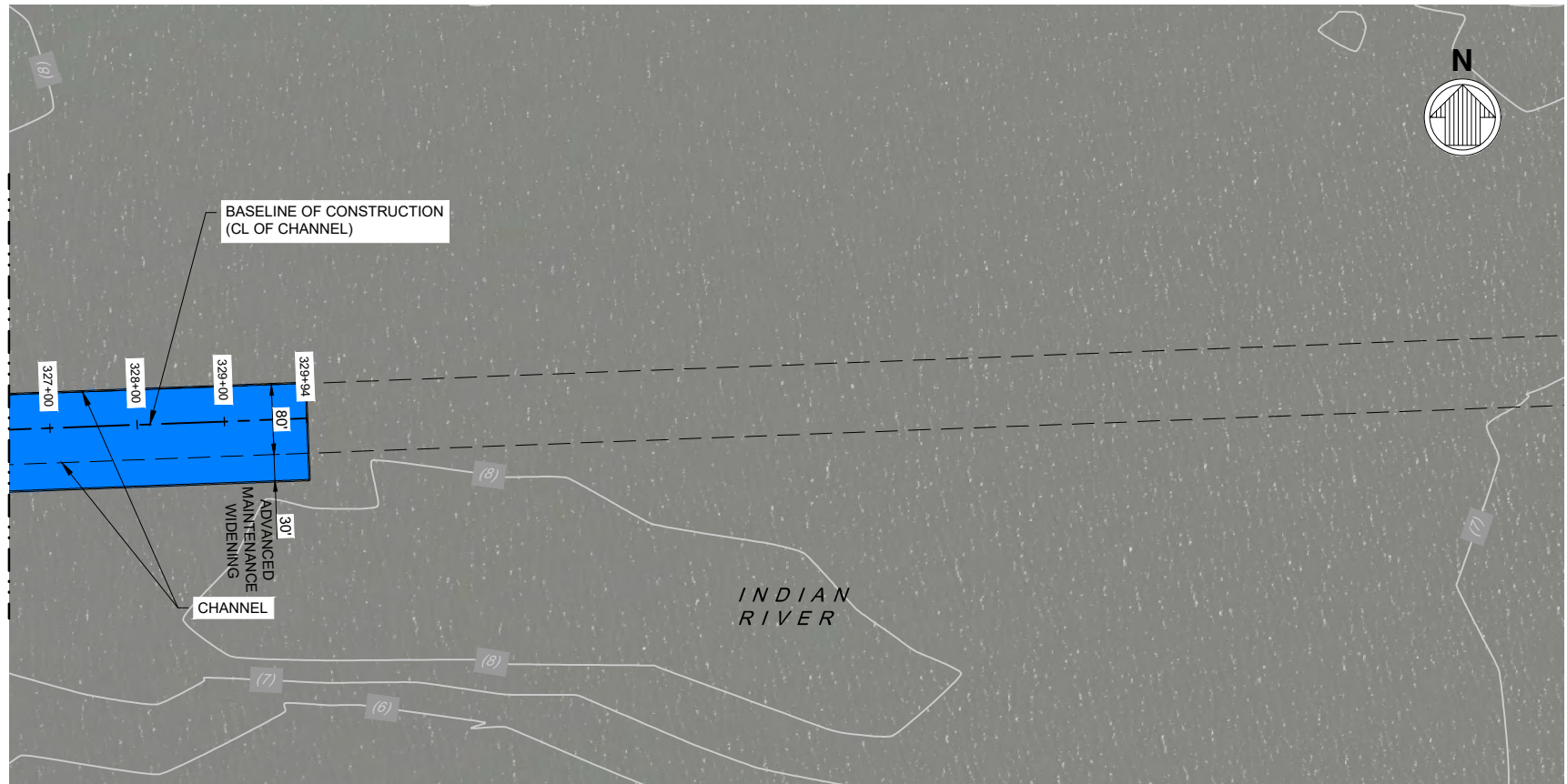
INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY: moffatt & nichol

SHEET 21 OF 30 DATE: 2025-01-27

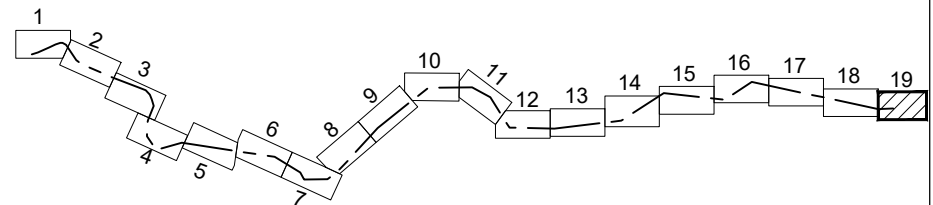
File: \\mme.net\projects\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD\Advel_PermiSet1024807P-22; Plotted: 1/27/2025 9:12 AM by CLARITY TASK 1; Saved: 1/27/2025 9:06 AM by PVOELKER

MATCH LINE - SEE SHEET 21



DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
1	9.00	10.00	Red
2	8.00	9.00	Orange
3	7.00	8.00	Yellow
4	6.00	7.00	Light Green
5	5.00	6.00	Green

DREDGING THICKNESS (FT)			
No.	MIN	MAX	COLOR
6	4.00	5.00	Light Blue
7	3.00	4.00	Blue
8	2.00	3.00	Dark Blue
9	1.00	2.00	Dark Blue
10	0.00	1.00	Purple

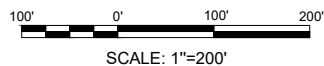


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - CHANNEL ALIGNMENT
SHEET 19 OF 19

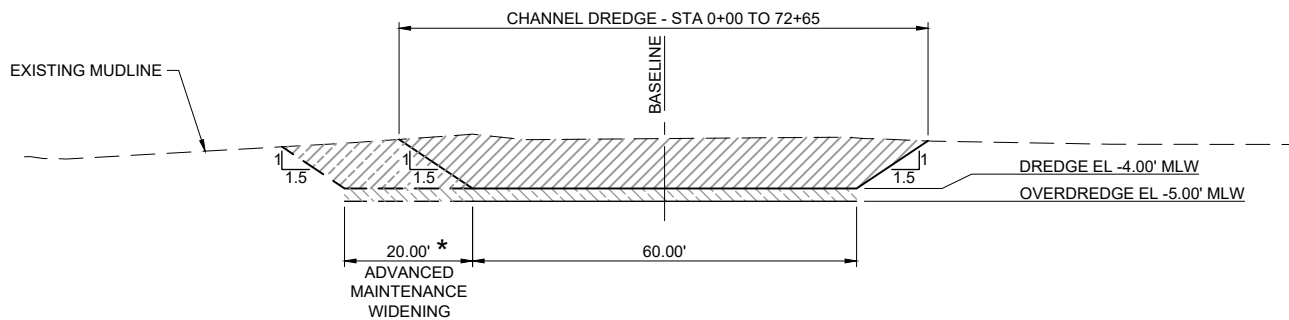
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

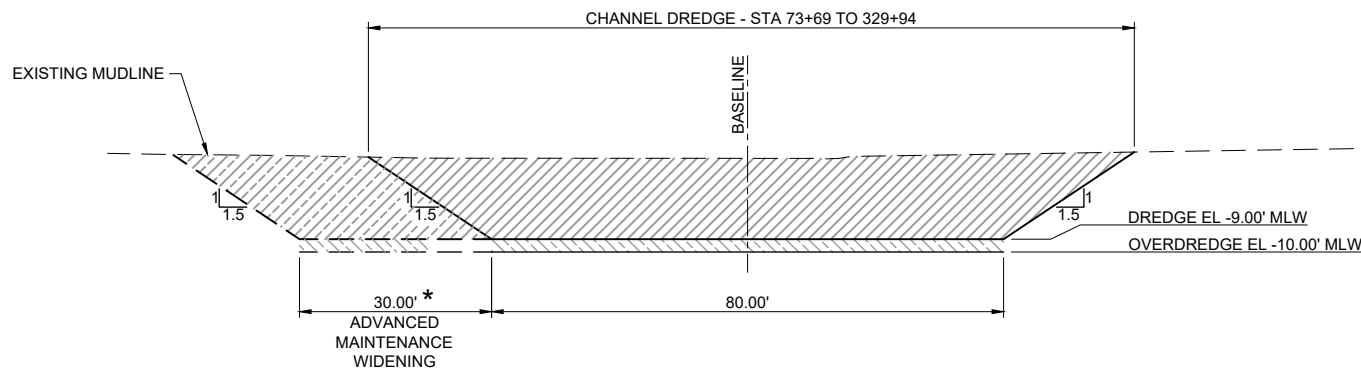
APPLICATION BY:  **moffatt & nichol**

SHEET 22 OF 30 DATE: 2025-01-27

File: Q:\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD_Active_PermitSet\1024807P-231 Plotted: 1/28/2025 11:44 AM by VOELKER, PAUL Saved: 1/28/2025 11:43 AM by PVOELKER



1 TYPICAL 60' WIDE SECTION - DREDGE -4.00 MLW STA 0+00 TO STA 64+00
SCALE: 1" = 30'



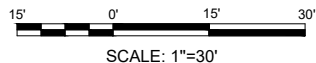
2 TYPICAL 80' WIDE SECTION - DREDGE -9.00 MLW STA 72+66 TO STA 329+94
SCALE: 1" = 30'

* - ADVANCED MAINTENANCE WIDENING LOCATIONS SHOWN ON PLANS. WIDENING AREA VARIES ON SIDE OF CHANNEL, SEE PLANS.

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



CHANNEL TYPICAL SECTIONS

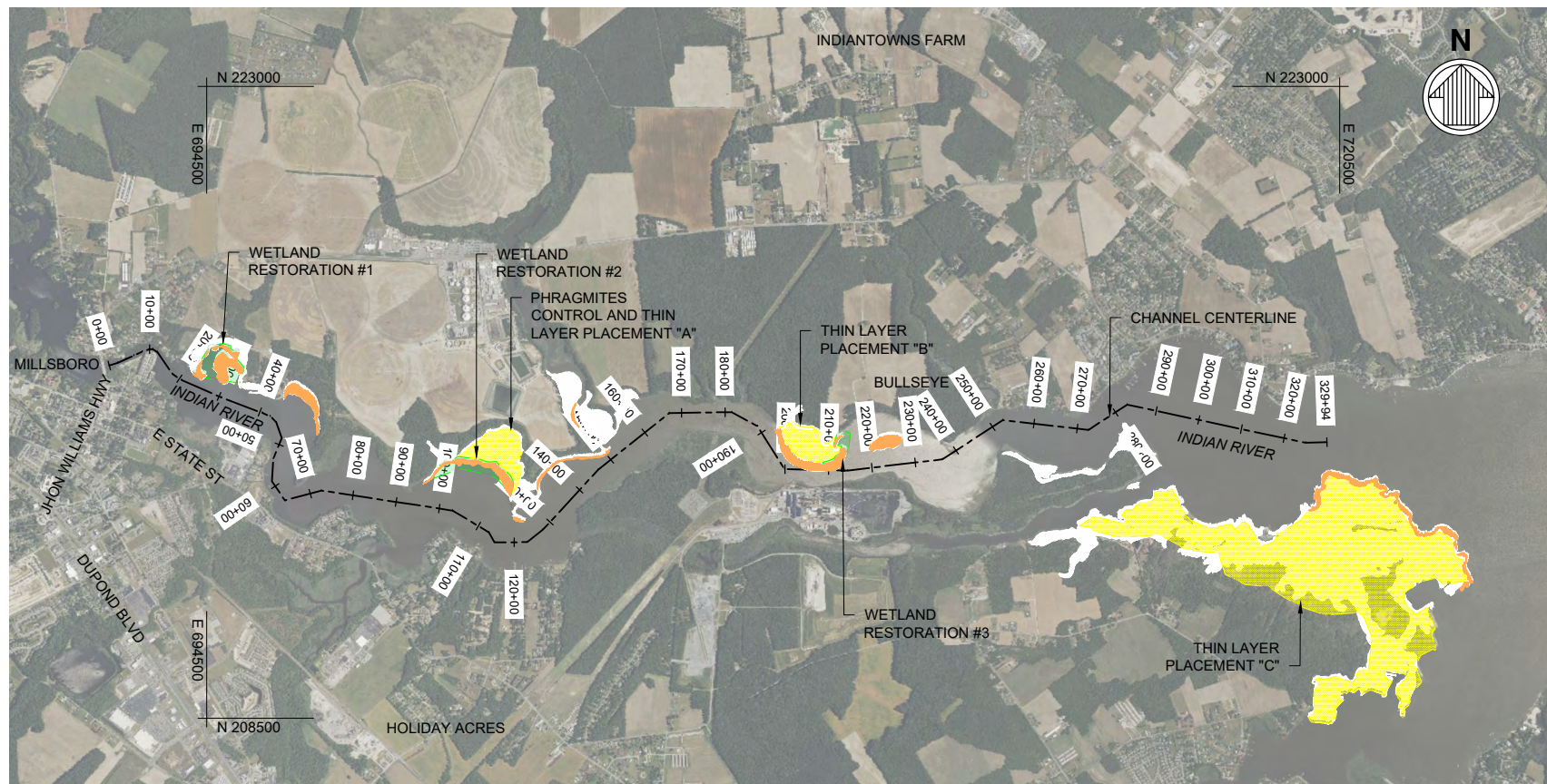
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

SHEET 23 OF 30 DATE: 2025-01-27

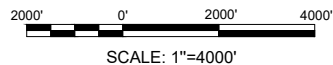
File: \\mre.net\projects\BA10248 DNREC NAT170071024807 Indian R Dredging\20 CADD\Advel_PermitSet1024807P-24; Plotted: 1/27/2025 9:12 AM by CLARITY TASK 1; Saved: 1/27/2025 9:07 AM by PVOELKER



PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - WETLAND RESTORATION GENERAL ARRANGEMENT

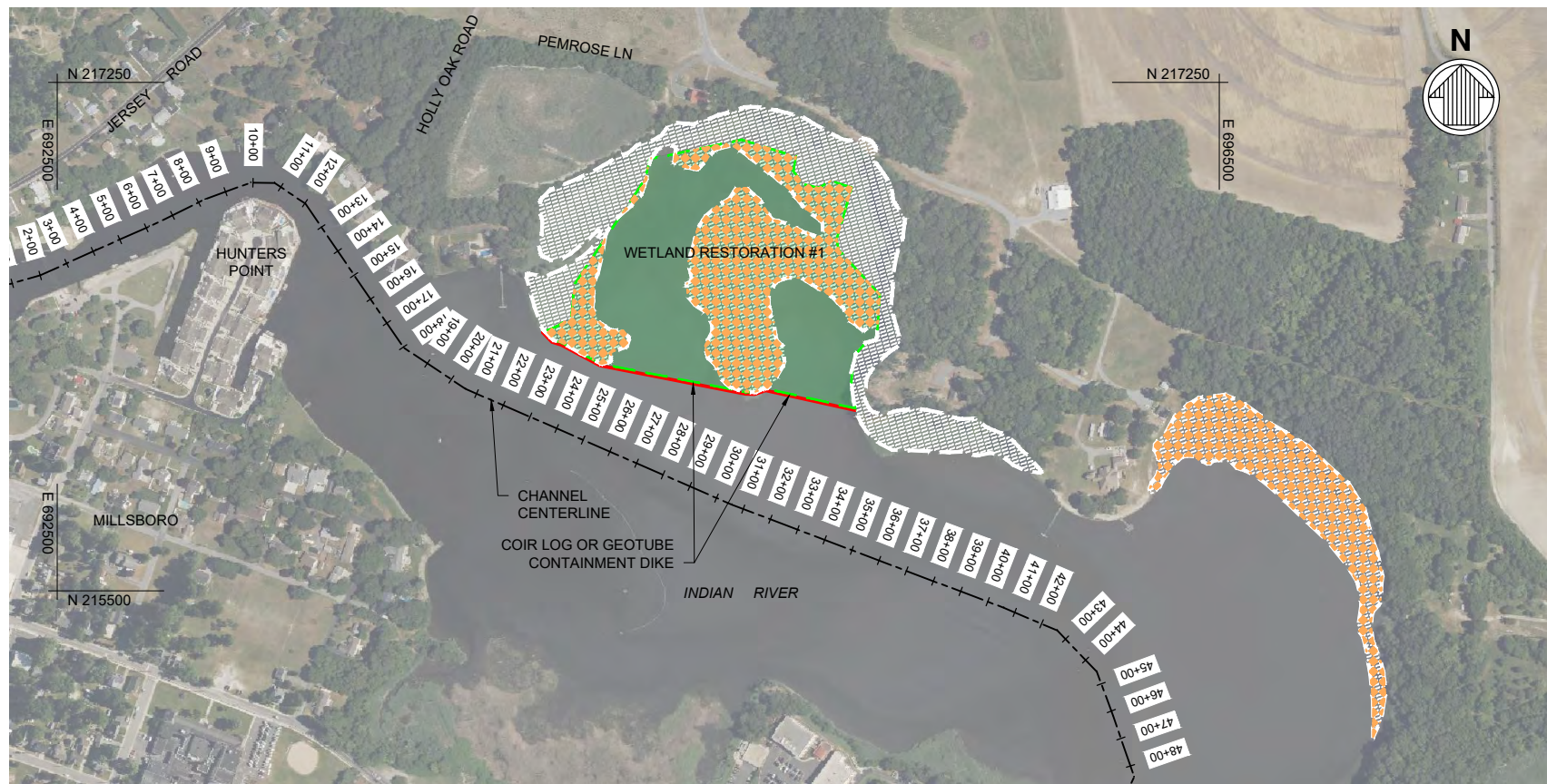
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

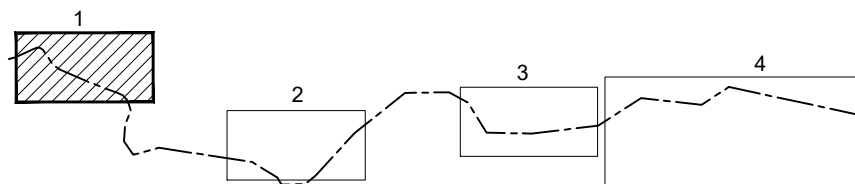
APPLICATION BY:  **moffatt & nichol**

SHEET 24 OF 30 DATE: 2025-01-27

File: \\mrn.net\projects\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD\Active\PermitSet1024807P-25; Plotted: 1/27/2025 9:13 AM by CLARITY TASK 1; Saved: 1/27/2025 9:07 AM by PVOELKER



-  - WETLAND EXTENTS IN YEAR 1988 - 20.22 ACRES
-  - WETLAND EROSION / LOSS SINCE 1988 - 11.82 ACRES
-  - PROPOSED WETLAND RESTORATION AREA USING DREDGED MATERIAL - 16.00 ACRES
-  - WETLAND EROSION / LOSS SINCE 1988 TO BE RESTORED - 7.24 ACRES

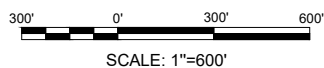


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



SCALE: 1"=600'

PLAN - WETLAND RESTORATION SHT 1 OF 4

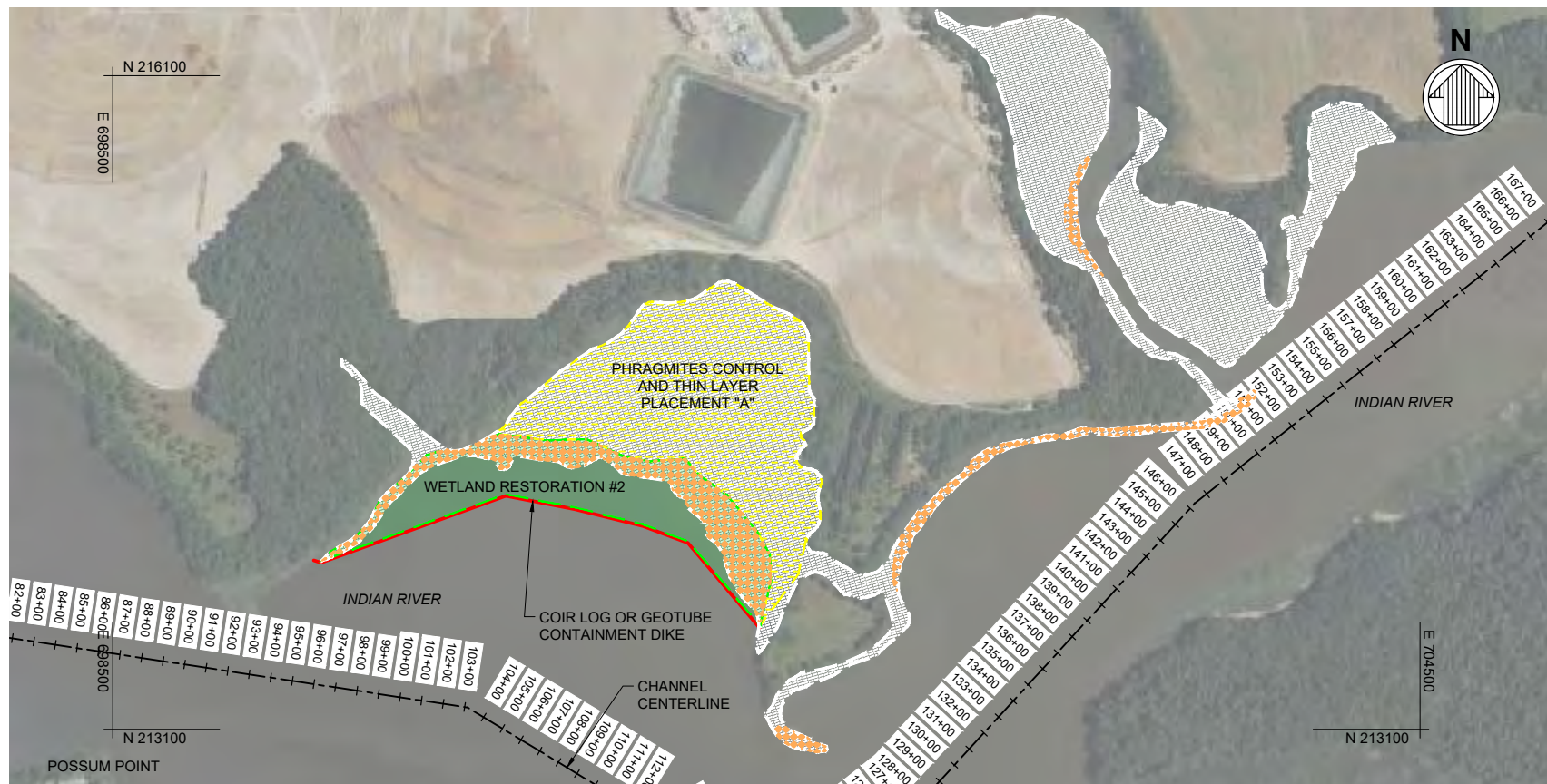
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

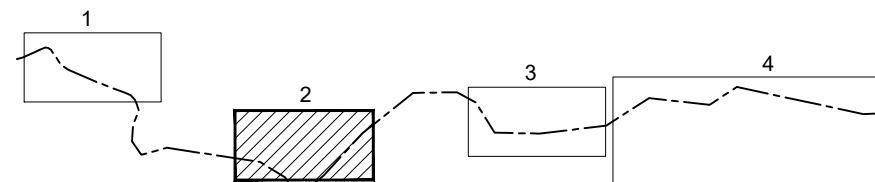
APPLICATION BY:  **moffatt & nichol**

SHEET 25 OF 30 DATE: 2025-01-27

File: \\mme.net\projects\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD_Active\PermitSet1024807P-26; Plotted: 1/27/2025 9:13 AM by CLARITY TASK 1; Saved: 1/27/2025 9:06 AM by PVOELKER



-  - WETLAND EXTENTS IN YEAR 1988 - 57.82 ACRES
-  - WETLAND EROSION / LOSS SINCE 1988 - 7.61 ACRES
-  - PROPOSED WETLAND RESTORATION AREA USING DREDGED MATERIAL - 13.19 ACRES
-  - WETLAND EROSION / LOSS SINCE 1988 TO BE RESTORED - 5.59 ACRES
-  - WETLAND THIN LAYER PLACEMENT AREA - 22.44 ACRES

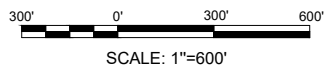


KEY PLAN

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - WETLAND RESTORATION SHT 2 OF 4

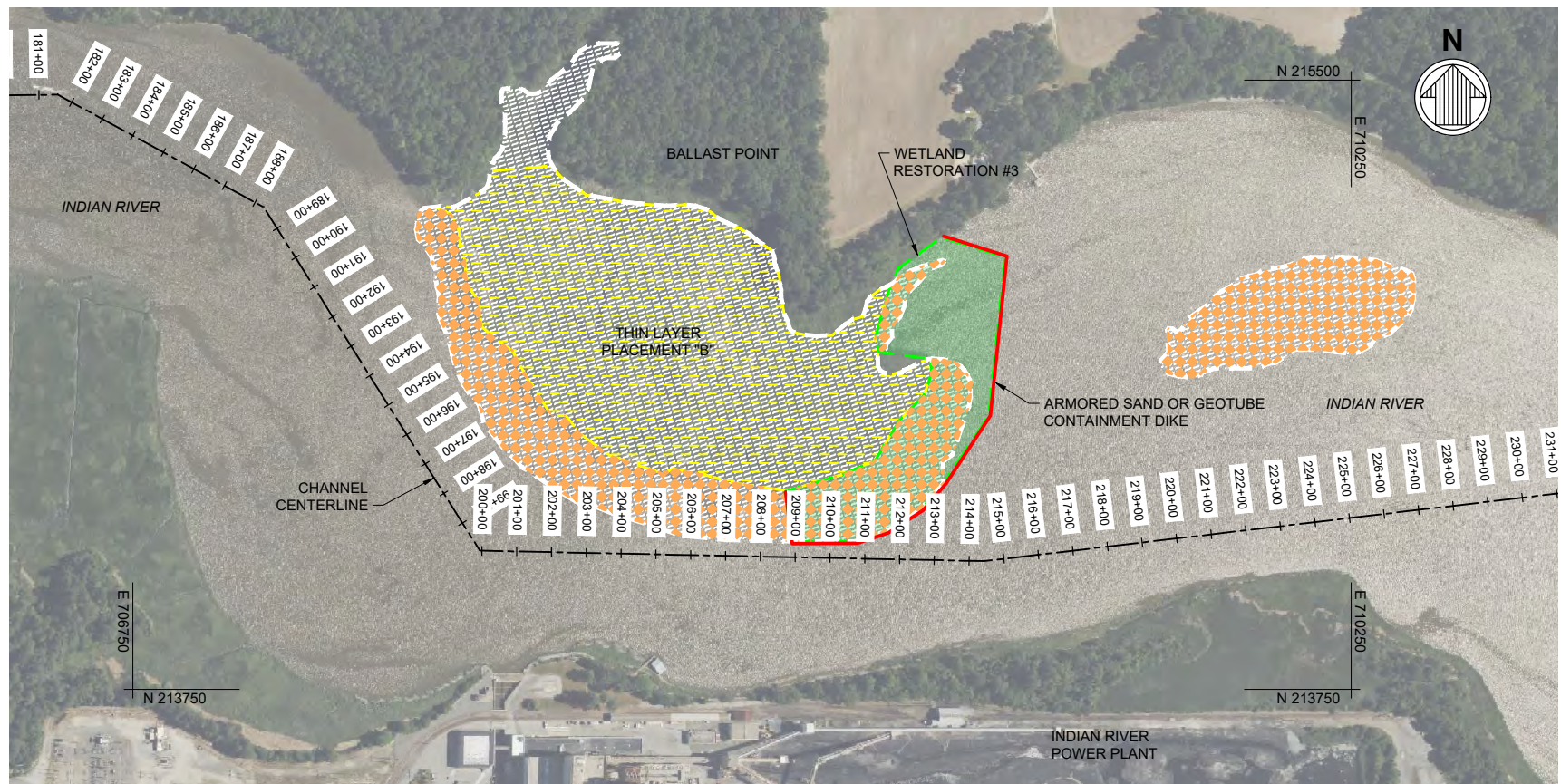
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

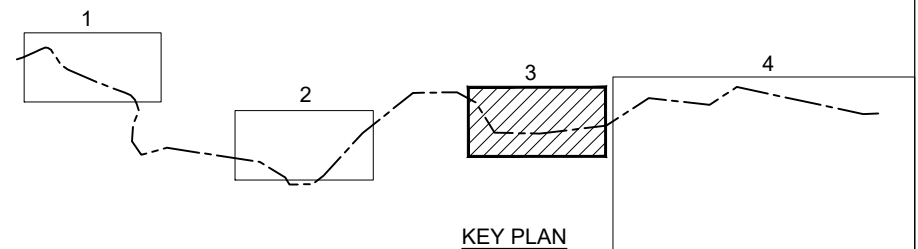
APPLICATION BY:  **moffatt & nichol**

SHEET 26 OF 30 DATE: 2025-01-27

File: \\mme.net\projects\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD_Active\PermitSet1024807P-27; Plotted: 1/27/2025 9:13 AM by CLARITY TASK 1; Saved: 1/27/2025 9:06 AM by PVOELKER



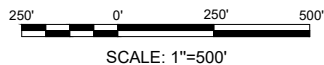
-  - WETLAND EXTENTS IN YEAR 1988 - 30.48 ACRES
-  - WETLAND EROSION / LOSS SINCE 1988 - 11.94 ACRES
-  - PROPOSED WETLAND RESTORATION AREA USING DREDGED MATERIAL - 5.54 ACRES
-  - WETLAND EROSION / LOSS SINCE 1988 TO BE RESTORED - 3.08 ACRES
-  - WETLAND THIN LAYER PLACEMENT AREA - 17.36 ACRES



PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - WETLAND RESTORATION SHT 3 OF 4

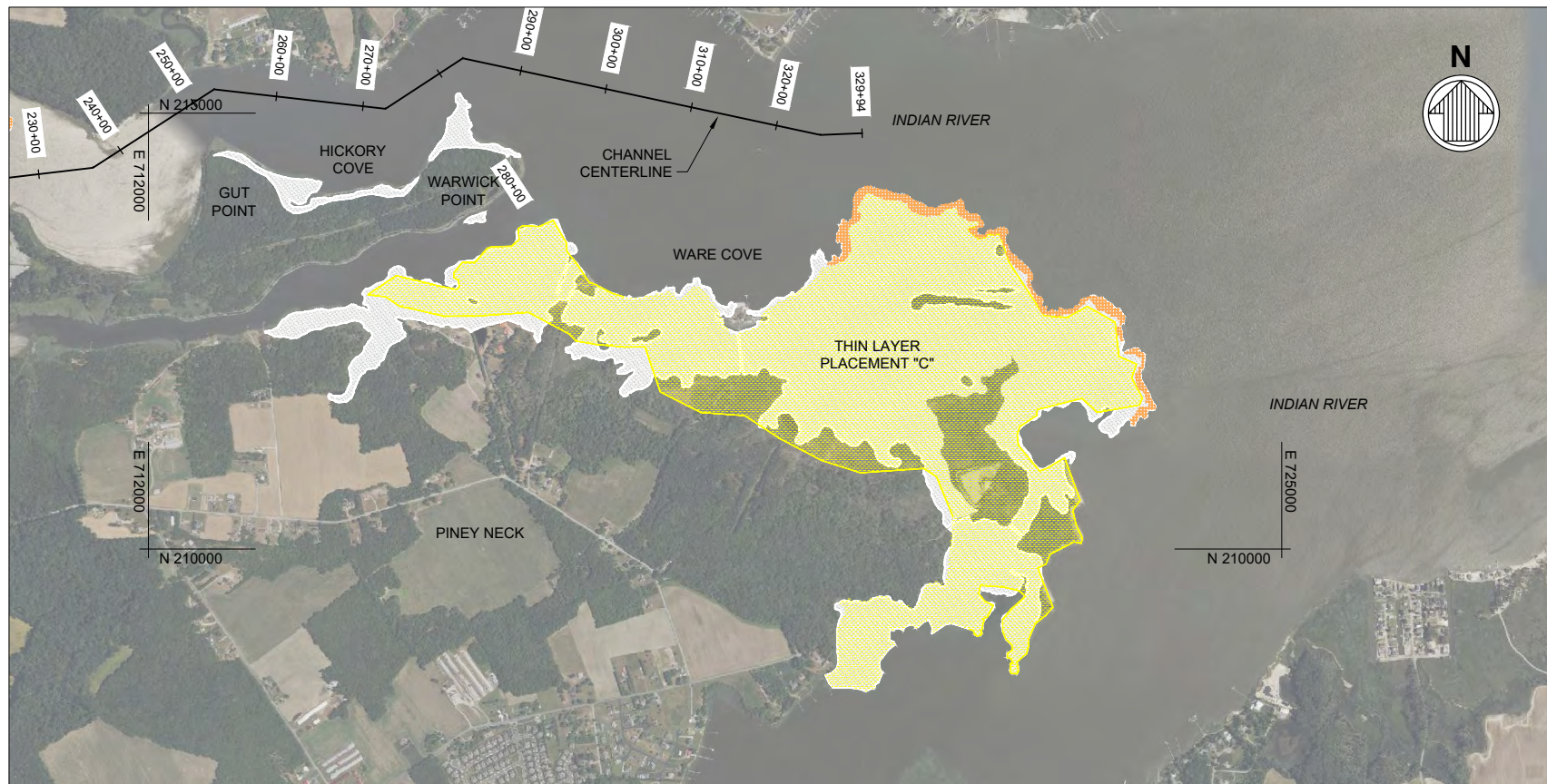
DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

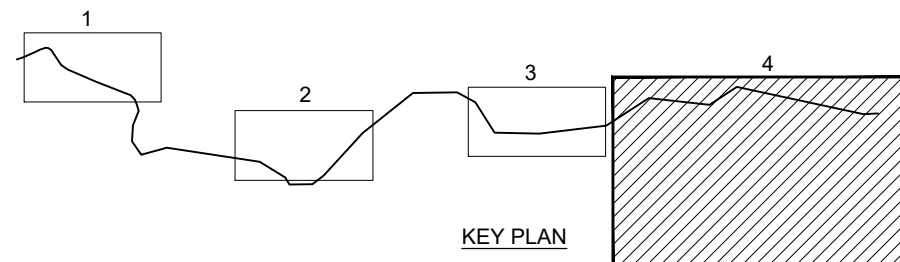
APPLICATION BY:  **moffatt & nichol**

SHEET 27 OF 30 DATE: 2025-01-27

File: \\mrn.net\projects\BA10248 DNREC NAT1700\10248-07 Indian R Dredging\20 CADD\Advel_PermiSet\1024807P-28; Plotted: 1/27/2025 9:13 AM by CLARITY TASK 1; Saved: 1/27/2025 9:07 AM by PVOELKER



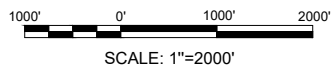
-  - WETLAND EXTENTS IN YEAR 1988 - 346.86 ACRES
-  - WETLAND EROSION / LOSS SINCE 1988 - 10.36 ACRES
-  - WETLAND THIN LAYER PLACEMENT AREA - 358.67 ACRES



PURPOSE: INDIAN RIVER MAINTENANCE DREDGING

DATUM: MLW

SCALE:



PLAN - WETLAND RESTORATION SHT 4 OF 4

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

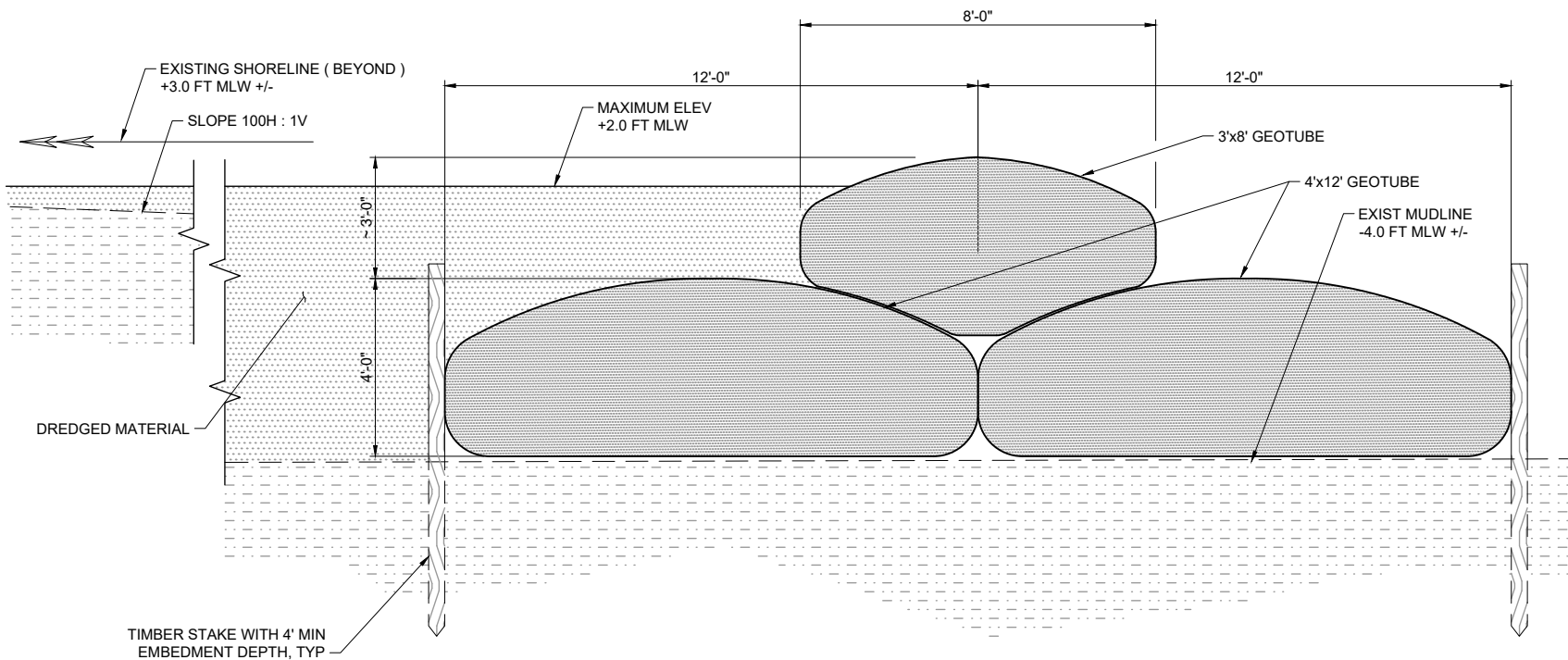
APPLICATION BY:  **moffatt & nichol**

SHEET 28 OF 30 DATE: 2025-01-27

Diagram illustrating the cross-section of a proposed armor stone structure. The structure is built on an existing bottom. The armor stone layer is 3 ft thick and has a 5:1 slope on both sides. The sand layer is 5 ft thick. The structure is built on an existing bottom. Labels include: DREDGED MATERIAL, MAX EL +2 FT MLW, SAND, EL +4 FT MLW, ARMOR STONE 3 FT THICK, 5, 1, and EXISTING BOTTOM.

SHEET 29 OF 30 DATE: 2025-01-27

File: Q:\BA10248 DNREC NAT1700710248-07 Indian R Dredging\20 CADD_Active_Permits\Set11024807P-301 Plotted: 1/27/2025 12:03 PM by VOELKER, PAUL Saved: 1/27/2025 12:02 PM by PVOELKER



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30

DETAIL - TYPICAL GEOTUBE CONTAINMENT DIKE
SCALE: NTS

PURPOSE: INDIAN RIVER MAINTENANCE DREDGING
DATUM: MLW
SCALE: NTS

DETAIL - TYPICAL GEOTUBE

DELAWARE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL DIVISION OF
WATERSHED STEWARDSHIP, SHORELINE AND
WATERWAY MANAGEMENT SECTION

INDIAN RIVER MAINTENANCE DREDGING

APPLICATION BY:  **moffatt & nichol**

SHEET 30 OF 30 DATE: 2025-01-27