



DEPARTMENT OF
ENVIRONMENTAL PROGRAMS

Worcester County

GOVERNMENT CENTER
ONE WEST MARKET STREET, ROOM 1306
SNOW HILL, MARYLAND 21863
TEL: 410.632.1220 / FAX: 410.632.2012

LAND PRESERVATION PROGRAM
STORMWATER MANAGEMENT
SEDIMENT AND EROSION CONTROL
SHORELINE CONSTRUCTION
AGRICULTURAL PRESERVATION
ADVISORY BOARD

WELL & SEPTIC
WATER & SEWER PLANNING
PLUMBING & GAS
CRITICAL AREAS/FORESTRY
COMMUNITY HYGIENE

September 20, 2024

This notification is to advise you that the Department has received and is presently reviewing the following request for a shoreline construction project:

The Nest Inc– Request No. 2024-082 - Request to restore and enhance tidal wetlands within approximately 25 acres of low and high marsh by creating 2060 linear feet, with a maximum width of 3'x1' deep and 419 linear feet with a maximum width of 4' x 1' deep of first new order channels; clean out 104 linear feet of existing tidal ditch; fill 119 linear feet of existing ditch with approx. 35 cubic yard of excavated material and restore approx. 15,516 sq ft of tidal wetlands by thin layering approx. 663 cubic yds of excavated material to a max elevation of 1.5 ft NAVD88 in area of previous vegetated tidal marsh that have concerted to open soil and plant with tidal marsh vegetation. The purpose of project is to provide drainage of ponded water within the marsh that is leading to marsh inundation and fragmentation and to provide tidal exchange. This project is located at 12112 Bliss Happens Lane, Berlin, also known as Tax Map 33, Parcel 343, Lot B, Tenth Tax District of Worcester County, Maryland.

The Department in considering this application will make specific findings of fact with regard to the environmental impact, navigational impact, recreational potential, commercial benefit to Worcester County, impact of the proposed construction upon the surrounding neighborhood and upon property values therein, and any other pertinent issues. Approval from the Department does not guarantee approval from any other applicable regulatory agencies.

If you have an interest which may be adversely affected by the issuance of this permit, you are requested to notify this Department in writing within fifteen (15) calendar days which will end on October 5, 2024.

Sincerely,

Brandy Whitlock
Environmental Inspector

cc: Interested Parties
David Bradford, Deputy Director



WORCESTER COUNTY
SHORELINE CONSTRUCTION
APPLICATION

Request No.: 2024-082
Submission Date: 9-20-24

x Major Construction (\$300.00)

 Minor Construction (\$150.00)

Written Description of Proposed Improvement (include channelward distance): Restore and enhance tidal wetlands within approximately 25 acres of low and high marsh by creating 2,060 linear feet, with a maximum width of 3 feet by 1 foot deep, and 419 linear feet, with maximum width of 4 feet by 1 foot deep of new first order channels; clean out 104 linear feet of existing tidal ditch; fill 119 linear feet of existing ditch with approximately 35 cubic yards of excavated material; and restore approximately 15,516 square feet of tidal wetlands by thin-layering approximately 663 cubic yards of excavated material to a maximum elevation of 1.5 feet NAVD88 in areas of previously vegetated tidal marsh that have converted to open soil, and plant with tidal marsh vegetation. The purpose of the project is to provide drainage of ponded water within the marsh to is leading to marsh inundation and fragmentation and to provide tidal exchange.

Property Description:

Map: 0033 Parcel: 0343 Lot: B Section: - Block: - Tax District:
Street Address: 12112 BLISS HAPPENS LN BERLIN 21811-0000
Subdivision: 75T0
Dwelling on lot: y Dwelling under construction: Vacant: Commercial:

Owner: THE NEST INC Phone No. 443-336-3662
Mailing Address: 9344 LANGMAID ROAD NEWARK MD 21841
E-Mail Address: blackwaternest@aol.com

Contractor: TBD Phone No.:
Mailing Address:
E-Mail Address:

Recorded Adjacent Property Owner: SUN TRS FRONTIER LLC
Property Address: 27777 FRANKLIN RD STE 200 SOUTHFIELD MI 48034-0000
Tax Map: 0033 Parcel: 0094 Lot: - Section: - Block: -

Recorded Adjacent Property Owner: STUART THOMAS D & ANTOINETTE
Property Address: 11923 GRAYS CREEK DR BERLIN MD 21811-2500
Tax Map: 0033 Parcel: 0348 Lot: 12 Section: - Block: -

As the applicant, I attest that the information presented on this application, site plan and any written documentation attached hereto is known to be accurate. I understand that ~~the proposed shoreline improvement will be constructed to~~ meet or exceed minimum design standards adopted by the Department and that any deviation from these standards will require construction plans sealed by an engineer registered in the State of Maryland. I acknowledge that any falsification of information presented may result in revocation of this approval and of the subsequent Shoreline Construction Permit.

Scott Sta 8-21-23

DEPT. USE ONLY:

Notification Distribution Date: 9-20-24 Public Comment Deadline: 10-5-24 (15 calendar days)

Department Approval Date: Expiration:

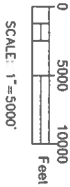
UNITED STATES FISH AND WILDLIFE SERVICE

SALT MARSH RESTORATIONS AT STARKS
BLISS HAPPENS LN

WORCESTER COUNTY, MD

GENERAL NOTES

1. THE US FISH AND WILDLIFE SERVICE, CHESAPEAKE BAY FIELD OFFICE, OR ITS DESIGNEE WILL BE THE POINT OF CONTACT FOR CONSTRUCTION LAYOUT AND RECONSTRUCTION MEETING.
2. CONSTRUCTION MUST BE SUPERVISED BY A MEMBER OF US FISH AND WILDLIFE SERVICE OR ITS DESIGNEE.
3. THREE WORKING DAYS PRIOR TO CONSTRUCTION BEGINS CONTACT MISS UTILITY AT 1-800-441-8355.
4. ALL EXCAVATION AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MARYLAND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S MARSH STANDARDS AS SET FORTH IN THE LATEST VERSION OF THE CODE OF MARYLAND REGULATIONS.
5. NO CHANGES SHALL BE MADE TO THE PLANS WITHOUT PRIOR APPROVAL FROM THE PERSON RESPONSIBLE FOR THE DESIGN.
6. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO STANDARDS AND SPECIFICATIONS IN THE DESIGN.
7. TO PREVENT THE SPREAD OF NOXIOUS AND INVASIVE PLANTS, EQUIPMENT (INCLUDING SHOES, TRACKS AND TIRES) SHALL BE REASONABLY CLEAN AND FREE OF SOIL AND PLANT MATERIALS PRIOR TO MOBILIZATION AND DEMOBILIZATION.
8. THE DRAWINGS ARE PREPARED COOPERATIVELY BY THE UNITED STATES FISH AND WILDLIFE SERVICE FOR THE NAMED LANDOWNERS, CONSTRUCTION FOUND NOT IN ACCORDANCE WITH THESE DRAWINGS AND SPECIFICATIONS SHALL VIOLATE THE COOPERATIVE AGREEMENT AND ALL DRAWINGS, SPECIFICATIONS, AND QUANTITIES ESTIMATE SHALL IMMEDIATELY BE RETURNED TO THE UNITED STATES FISH AND WILDLIFE SERVICE CHESAPEAKE BAY FIELD OFFICE.
9. BASED UPON THE PROPOSED DESIGN, THE BREAKDOWN BETWEEN THE LOW MARSH DRAINAGE IMPROVEMENTS AND THE HIGH MARSH NOURISHMENT IS 90.20% LOW MARSH AND 9.80% HIGH MARSH.



2

SHEET INDEX

SHEET #	SHEET TITLE
01	TITLE SHEET
02	EXISTING (EX.) CONDITIONS KEY A
03	PROPOSED (PR.) CONDITIONS KEY
04	PROPOSED CONDITIONS PLAN
05	DETAIL SHEET
06	PLANTING DETAIL SHEET
07	E&S DETAIL SHEET

EROSION AND SEDIMENT CONTROL CERTIFICATION

I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR EXCAVATION SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE EROSION AND SEDIMENT CONTROL PLAN, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION OF THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE TRAINED AND CERTIFIED IN THE EROSION AND SEDIMENT CONTROL FIELD. I HAVE REVIEWED THE EROSION AND SEDIMENT CONTROL PLAN AND HAVE DETERMINED THAT IT IS IN ACCORDANCE WITH THE APPLICABLE EROSION AND SEDIMENT CONTROL PLAN. I HAVE REVIEWED THE EROSION AND SEDIMENT CONTROL PLAN AND HAVE DETERMINED THAT IT IS IN ACCORDANCE WITH THE APPLICABLE EROSION AND SEDIMENT CONTROL PLAN. I HAVE REVIEWED THE EROSION AND SEDIMENT CONTROL PLAN AND HAVE DETERMINED THAT IT IS IN ACCORDANCE WITH THE APPLICABLE EROSION AND SEDIMENT CONTROL PLAN.

NAME _____ DATE _____

90% SUBMITTAL

MAY 16, 2024

1 2 3



U.S. FISH AND WILDLIFE SERVICE
CHESAPEAKE BAY FIELD OFFICE
PARTNERS FOR FISH AND WILDLIFE
PROGRAM
177 ADMIRAL COCHRANE DRIVE
ANNAPOLIS, MD 21401
TEL: (703) 501-0553



10245 OLD COULUMBA ROAD
COULUMBA, MD 21034
TEL: 301-382-9245
info@straughanenv.com



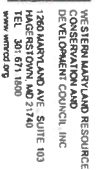
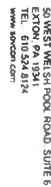
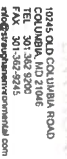
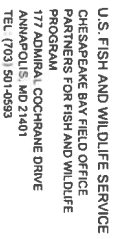
50 WEST WELSH POOL ROAD, SUITE 6
EXTON, PA 19341
TEL: 610-524-8124
www.sovereign.com



1290 MARYLAND AVE., SUITE 100
HAGERSTOWN, MD 21740
TEL: 301-811-1800
www.hinks.org

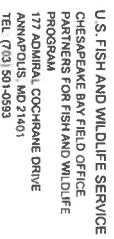
BY	NO	REVISIONS	DATE	SCALE	1" = 500'
LT	Δ	REVISED TABLES AND DETAILS ADDED PERMITTING QUANTITIES APPENDIX	12/6/23	DESIGNED BY	JOB/AM
LT	Δ	UPDATED DESIGN TO INCLUDE HUNLOCK ZONE AND ESC DESIGN	03/27/24	DRAWN BY	JOB/AM
LT	Δ	UPDATED HUNLOCK ZONE DETAIL AND NOTES, ADDED NW VETLAND LIMITS	05/16/24	CHECKED BY	LT
				DATE	05/16/24 SHEET NO 01 OF 07

SALT MARSH
STARKS E



SALT MARSH
STARKS
EXIST

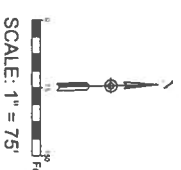


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LEGEND



NO.	REVISIONS	DATE
1	REVISED TABLES AND DETAILS ADDED PERMITTING QUANTITIES APPENDIX	12/01/23
2	REVISED DESIGN TO INCLUDE PALMADOCK ZONE AND EEC DESIGN	03/27/24
3	UPDATED HAWKDOCK ZONE DETAIL AND NOTES ADDED WMA WETLAND LIMITS	05/16/24



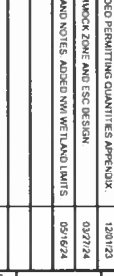
U.S. FISH AND WILDLIFE SERVICE
CHESAPEAKE BAY FIELD OFFICE
PARTNERS FOR FISH AND WILDLIFE
PROGRAM
177 ADMIRAL COCHRANE DRIVE
ANNAPOLIS, MD 21401
TEL: (703) 501-0593



10245 OLD COLUMBIA ROAD
COLUMBIA, MD 21046
TEL: (410) 301-2000
FAX: (410) 301-2015
info@straughanenvironmental.com



50 WEST WELSH POOL ROAD SUITE 6
EASTON, PA 18041
TEL: (610) 326-1000
www.sovereign.com



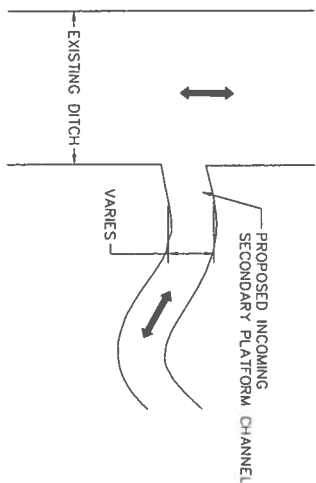
1260 MARYLAND AVE., SUITE 100
HAGERSTOWN, MD 21740
TEL: (410) 398-0800
www.wmrdc.org

SALT MARSH STARKS E
DESIGNED BY: JDB/HV
DRAWN BY: JDB/HV
CHECKED BY: LT
DATE: 05/16/24 SHEET NO. 04 OF 07
PROPOSE

CONSTRUCTION NOTES:

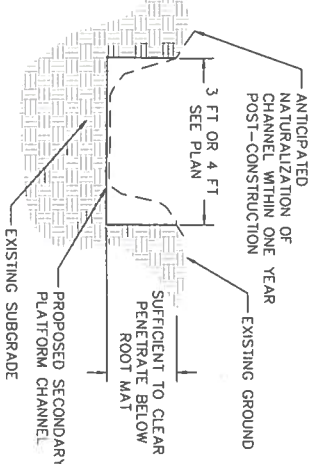
UPLANDS:

1. THE SELECTED CONTRACTOR WILL ACCESS THE SITE GENERALLY FOLLOWING THE FOOTPRINT SHOWN ON THE APPROVED PLANS.
2. MINOR VARIATION IS PERMITTED DUE TO MICROTOPOGRAPHY, MATTURE WOODY PLANT AND LARGE TREE AVOIDANCE, OR SIMILAR.
3. THE FINAL ACCESS CORRIDOR WILL BE FLAGGED IN THE FIELD AND VERIFIED BY THE USFWS PRIOR TO ANY DISTURBANCE.
4. MINOR GRADING AND THE USE OF MATTING IS PERMITTED FOR ACCESS CORRIDOR.
5. CLEARING OF HERBACEOUS AND SHRUB GROWTH IS PERMITTED FOR ACCESS CORRIDOR.
6. LOW SPOTS MAY BE FILLED WITH MUD/CLAY AND/OR SAND AND SOFT SPOTS CAN BE TEMPORARILY BRIDGED WITH LIGHT-WEIGHT MATTING TO BE LEFT IN PLACE.
7. AT THE COMPLETION OF THE WORK, ALL DISTURBANCES WILL BE RESTORED, INCLUDING BUT NOT LIMITED TO:
 - A. REVEGETATION WITH NATIVE GRASSES, HERBACEOUS PLANTS, AND WOODY PLANTS AS APPROPRIATE RELATIVE TO THE SURROUNDING HABITAT.
7. ACCESS CORRIDOR MAY REMAIN TO FACILITATE ACCESS FOR SUBSEQUENT ACTIVITIES SUCH AS MONITORING.
7. MARSHES/NON-TIDAL WETLANDS/WATERS:
1. THE SELECTED CONTRACTOR WILL ACCESS THE SITE GENERALLY FOLLOWING THE FOOTPRINT SHOWN ON THE APPROVED PLANS.
2. MINOR VARIATION IS PERMITTED DUE TO MICROTOPOGRAPHY, DITCH AVOIDANCE, AND LOW SOFT AREA AVOIDANCE.
3. THE FINAL ACCESS CORRIDOR WILL BE FLAGGED IN THE FIELD AND VERIFIED BY THE USFWS PRIOR TO ANY DISTURBANCE.
4. THE CONTRACTOR MAY USE MATTING.
5. NO MATERIAL IS TO BE BROUGHT ON-SITE FOR ACCESS CORRIDOR CONSTRUCTION.
6. THE CONTRACTOR IS TO WORK FROM THE CHANNELWARD EDGE OF THE ACCESS CORRIDOR BACK TO THE UPLANDS.
8. AS AN AREA IS COMPLETED AND THE ACCESS CORRIDOR IS NO LONGER REQUIRED, THE MATTING WILL BE REMOVED.
8. ONCE A MARSH CELL IS COMPLETED, NO FUNCTIONAL ELEMENTS OF THE ACCESS CORRIDOR WILL REMAIN IN THE MARSH CELL.



TYPICAL SECONDARY PLATFORM CHANNEL TERMINATION

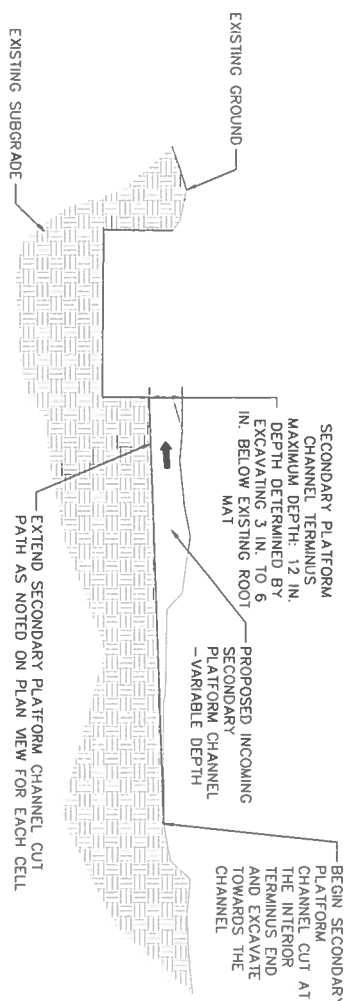
PLAN VIEW



TYPICAL SECONDARY PLATFORM CHANNEL TERMINATION
CROSS SECTION

SECONDARY PLATFORM CHANNEL TERMINATION NOTES:

1. CELL TERMINUS OF SECONDARY PLATFORM CHANNEL ELEVATION TO BE EQUAL OR HIGHER THAN CHANNEL CONFLUENCE END.
2. SLOPE WILL BE DETERMINED BY INDIVIDUAL CELL TOPOGRAPHY.
3. THE SQUARE CUT CHANNELS DEPICTED IN THE DETAIL REPRESENTS A CHANNEL CONFIGURATION WHICH IS REALISTIC AND EFFICIENT TO CONSTRUCT USING MOST EXCAVATION EQUIPMENT. HOWEVER, THE ANGULAR EDGES OF THE CHANNEL WILL NATURALLY SOFTEN TOWARDS A SHAPE MORE REPRESENTATIVE OF THE DASHED LINE. THE FINAL SPECIFIC CHANNEL SHAPE WILL BE DETERMINED BY THE HYDROLOGY PASSING IN THE CHANNEL.
4. ONE OF THE DESIGN GOALS IS TO REINTRODUCE A PROPER TIDAL FLUSH IN THE ENHANCED LOW MARSH AREAS. A SECONDARY BENEFIT AND TARGET OF THE MODIFIED CHANNELIZATION IS TO PROMOTE ACCESS OF FISH INTO AND OUT OF THE MARSH, UNLESS NOTED ELSEWHERE IN THESE PLANS, MUDDY/FLAT AREAS WILL NOT BE IMPACTED BY THE PROPOSED WORK.



TYPICAL SECONDARY PLATFORM CHANNEL TERMINATION
PROFILE VIEW

SECONDARY PLATFORM CHANNEL EXCAVATION AND REUSE OF MATERIAL:

1. SECONDARY PLATFORM CHANNEL PLACEMENT AND WIDTHS WERE DESIGNED BASED ON AVERAGE OF WATERLOGGED CELLS, TIDAL RANGES, TIDAL ELEVATIONS, AND CELL PLATFORM ELEVATIONS FOR THE PURPOSE OF IMPROVING MARSH PLATFORM TIDAL FLUSH.
2. CHANNEL CONFIGURATIONS ARE DEPICTED ON SHEET 3. DETAIL TYPICALS ARE PROVIDED ON SHEET 4.
3. PRIOR TO EXCAVATION:
 - A. THE PRIMARY ACCESS ROUTE(S) INTO THE MARSH WILL BE FINALIZED IN THE FIELD.
 - B. CENTERLINE OF SECONDARY PLATFORM CHANNELS WILL BE STAKED, AND IDENTIFIED IN THE FIELD RELATIVE TO THE ORDER NOTED ON THE PLANS.
 - C. THE ORDER OF CELL SECONDARY PLATFORM CHANNEL EXCAVATION WILL BE IDENTIFIED IN THE FIELD RELATIVE TO THE ORDER NOTED ON THE PLANS.
4. THE USFWS WILL APPROVE THE FINAL STAKE OUT AND MAKE ADJUSTMENTS AS NECESSARY BASED ON SITE CONDITIONS.
5. SECONDARY PLATFORM CHANNEL EXCAVATION WILL BEGIN AT THE INTERIOR TERMINUS OF THE SECONDARY PLATFORM CHANNEL AND WORK OUT TOWARD THE CHANNEL CONFLUENCE.
6. ALL EXCAVATION MUST EXTEND 3 TO 6 INCHES BELOW ANY LIVE ROOT MAT. PEAT LAYERS ARE NOT TO BE ASSUMED TO BE LIVE ROOT MATS.
7. THE INTERIOR TERMINUS END OF THE SECONDARY PLATFORM CHANNEL MUST BE AT LEAST 6 INCHES DEEP +/- 2 INCHES.
8. CHANNEL WIDTHS ARE DENOTED ON THE PLAN VIEW.
9. EXCAVATED MATERIAL WILL BE EITHER:
 - A. PLACED IN AN EXISTING DITCH IDENTIFIED TO BE FILLED; OR
 - B. USED FOR HUMMOCK CREATION (TYPICAL HEIGHT = 17 INCHES ABOVE MHW & MINIMUM ELEVATION = 1.8' NAVD88).
11. ANY EXISTING DITCH IDENTIFIED TO REMAIN AND IS PART OF A SECONDARY PLATFORM CHANNEL FLUSH CONFIGURATION IS TO BE INSPECTED AND CLEANED OUT AS NECESSARY TO NOT MORE THAN 3 INCHES BELOW THE MLW ELEVATION.
12. HISTORIC AND READILY OBSERVABLE (VIA AERIAL PHOTOGRAPHY) DITCHES HAVE BEEN DENOTED ON THE PLAN AS RED DASHED LINES. THE RED DASHED LINE DOES NOT INDICATE THE LEVEL OF FLOW/FUNCTION WITHIN THE DITCHES. CERTAIN DITCHES IDENTIFIED MAY BE FULLY FUNCTIONAL, PARTIALLY FUNCTIONAL, OR COMPLETELY DYSFUNCTIONAL. ALL THE DITCHES WERE FURTHER EVALUATED VIA ADDITIONAL AERIAL PHOTOGRAPHIC REVIEW AND/OR ON-SITE INSPECTIONS. IDENTIFIED DITCHES WERE EITHER LEFT UNDISTURBED, CLEANED OUT, OR PLUGGED.
13. DURING SECONDARY PLATFORM CHANNEL EXCAVATION, A SPOTTER WILL BE PRESENT WITH A MGD AND LASER LEVEL TO ASSIST THE OPERATOR WITH DITCH ELEVATIONS.
14. USFWS PERSONNEL WILL MONITOR CONSTRUCTION AND COLLECT AS-BUILT SURVEY DOCUMENTATION TO CONFIRM AND DOCUMENT FINAL DITCH CONFIGURATIONS.
15. POST-CONSTRUCTION, CERTAIN SECONDARY PLATFORM CHANNELS MAY NATURALLY FILL OR SCOUR WHILE REACHING A STABLE CONDITION. CHANNELS SHOULD BE MONITORED FOR SCOUR OR FILLING. SIGNIFICANT STORM EVENTS OR NUISANCE FLOODING EVENTS, MAY REQUIRE MAINTENANCE DURING YEAR 1 POST CONSTRUCTION.



TYPICAL SECONDARY PLATFORM CHANNEL TERMINATION
CROSS SECTION



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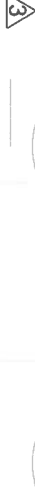
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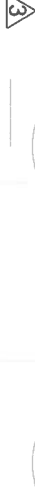
TYPICAL SECONDARY PLATFORM CHANNEL TERMINATION
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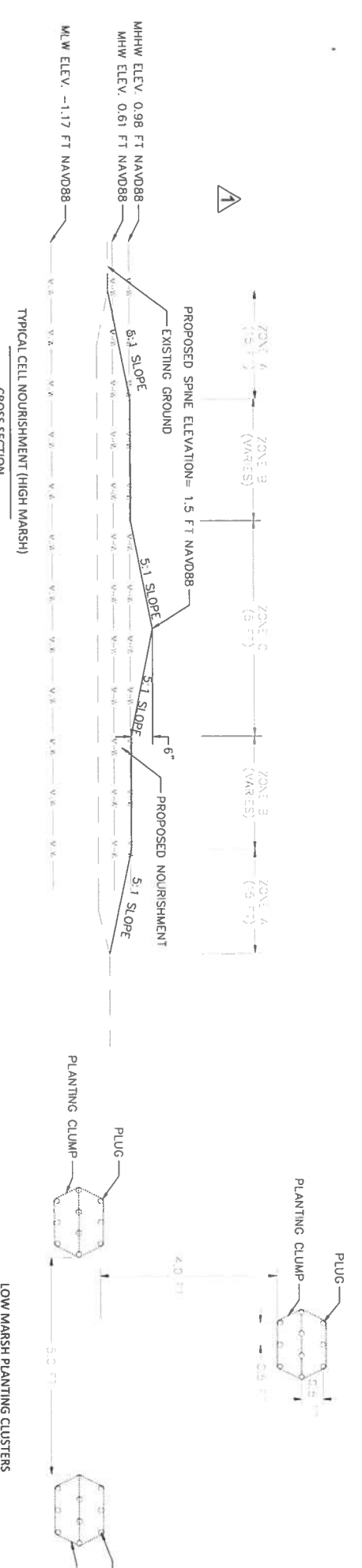


TYPICAL SECONDARY PLATFORM CHANNEL TERMINATION
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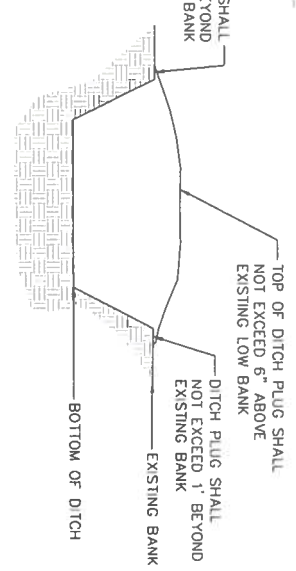
CELL NOURISHMENT AND FILL:

1. PLACE FILL MATERIALS PER DETAIL. SEE SECONDARY PLATFORM CHANNEL EXCAVATION NOTES FOR INSTALLATION.
2. CELLS RECEIVING FILL WILL TARGET ELEVATION 1.20 FT NAVD88 GRADED AT A 5:1 SLOPE. FINAL ELEVATION AFTER SETTLEMENT WILL BE 1.00 FT NAVD88.
3. SPINE IS TO PROVIDE POSITIVE SURFACE DRAINAGE OFF OF THE PLATFORM AND PROVIDE SECONDARY BENEFIT OF ADDITIONAL MICROHABITAT.
4. MARSH VEGETATION ELEVATION BASED UPON SURVEY OF EXISTING MARSH, DATED 4/29/22.

CELL NOURISHMENT PLANTING:

1. ZONE A REPRESENTS A .15 FT BAND AROUND THE OUTER EDGE OF THE NOURISHED PORTION OF THE CELL.
2. ZONE C REPRESENTS THE AREA WITHIN THE BASE OF THE TOE OF THE SPINE.
3. ZONE B REPRESENTS THE REMAINDER OF THE AREA.

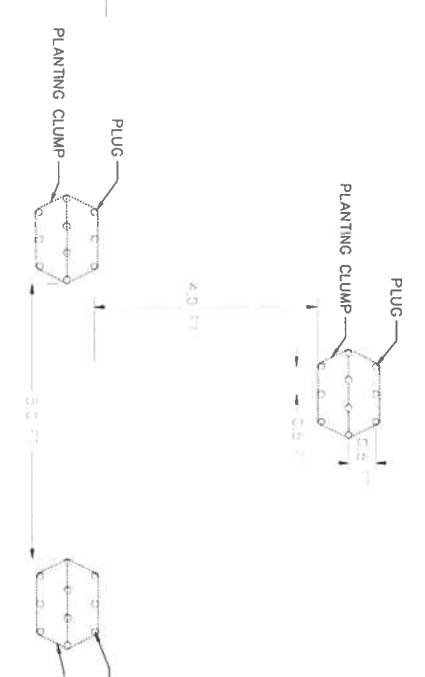
ABANDONED (FILL) DITCH CROSS SECTION



LOW MARSH PLANTING:

1. ALL PLANTS IN LOW MARSH CLUSTERS WILL BE SPARTINA ALTERNIFLORA.

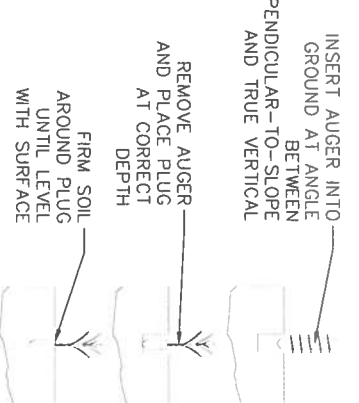
LOW MARSH PLANTING CLUSTERS PLAN VIEW



PLANTING NOTES:

1. INSTALL PLANTINGS PER DETAIL.
2. SINK AUGER INTO THE GROUND 2 INCHES DEEPER THAN PLUG ROOT LENGTH.
3. PROVIDED PLUG HOLE IS NOT INUNDATED, 1 TEASPOON OF SLOW RELEASE FERTILIZER MAY BE PLACED AT BOTTOM OF HOLE BEFORE PLUG PLACEMENT. PLANT SUPPLIER MAY RECOMMEND OR SUPPLY FERTILIZER.
4. PLUGS ARE TO BE PLANTED WITH TOP OF ROOT PLUG EVEN WITH OR SLIGHTLY BELOW SUBSTRATE SURFACE. IN SOFTER SEDIMENT OR IN SUBSTRATE SURFACE, NEVER EXTENDING ABOVE SUBSTRATE SURFACE.
5. LOW MARSH PLANT CLUSTERS ARE TO BE SPACED AS SHOWN IN THE DETAIL.
6. CELL NOURISHMENT PLUGS ARE TO BE PLANTED IN CLUSTERS OF FIVE AT CELLS WITH SECONDARY PLATFORM CHANNEL CREATION WILL BE PLANTED AS LOW MARSH AND CELLS WITH NOURISHMENT WILL BE PLANTED AS HIGH MARSH.
- 7.

TYPICAL PLUG PLANTING CROSS SECTION



CELL NOURISHMENT PLANTING PLAN (HIGH MARSH)			
ZONE	SCIENTIFIC NAME	COMMON NAME	BREAKDOWN
A	SPARTINA PATENS	SALTEADOW HAY	75%
	DISTICHLIS SPICATA	SEAGRASS	25%
B	SPARTINA PATENS	SALTEADOW HAY	75%
	DISTICHLIS SPICATA	SEAGRASS	25%
C	SPARTINA PATENS	SALTEADOW HAY	75%
	DISTICHLIS SPICATA	SEAGRASS	25%

U.S. FISH AND WILDLIFE SERVICE
CHESAPEAKE BAY FIELD OFFICE
PARTNERS FOR FISH AND WILDLIFE
PROGRAM
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ANNAPOLIS, MD 21401
TEL: (703) 501-0553

10725 G.D. COLEMAN ROAD
COLEMAN, MD 21036
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info@straughanconsulting.com

50 WEST WELSH POOL ROAD, SUITE 6
EDDYSBURG, PA 15801
TEL: (814) 241-1234
www.sovereign.com

1250 WASHINGTON AVE, SUITE 100
HAGERSTOWN, MD 21740
www.wmrcd.org

BY	NO	REVISIONS	DATE	SCALE	NTS
L1	1	REVISED TABLES AND DETAILS ADDED PERMUTING QUANTITIES APPENDIX	10/01/23		
L1	2	UPDATED DESIGN TO INCLUDE HUMMOCK ZONE AND EDC DESIGN	03/27/24		
L1	3	UPDATED HUMMOCK ZONE DETAIL AND NOTES ADDED (WV WETLAND) LIMITS	05/16/24		
		CHECKED BY: L1			

SALT MARSH PLANTS










Cell	Proposed Feature	Cut Volume (CY)
1	Secondary Platform Channel	18
1	Secondary Platform Channel	22
2	Secondary Platform Channel	14
3	Secondary Platform Channel	9
4	Secondary Platform Channel	15
4	Secondary Platform Channel	36
5	Secondary Platform Channel	18
7	Secondary Platform Channel	24
8	Secondary Platform Channel	62
8	Secondary Platform Channel	22
9	Secondary Platform Channel	33
11	Secondary Platform Channel	5
15	Secondary Platform Channel	13
15	Secondary Platform Channel	11
TOTAL Secondary Platform Channel		302

Cell	Proposed Feature	Fill Volume (CY)
12	Plug	35
TOTAL		35

Cell	Proposed Feature	Fill Volume (CY)
3B	Nourishment	197
3C	Nourishment	466
TOTAL		663

FOR INFORM
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FOR CONSTR

 U.S. FISH AND WILDLIFE SERVICE CHESAPEAKE BAY FIELD OFFICE PARTNERS FOR FISH AND WILDLIFE PROGRAM 177 ADMIRAL COCHRANE DRIVE ANNAPOLIS, MD 21401 TEL: (703) 501-0593	 10245 OLD COLUMBIA ROAD COLUMBIA, MD 21046 FAX: 301-362-2925 info@straughan-environmental.com	 SCIENCE-BASED SOLUTIONS 50 WEST WELSH POOL ROAD SUITE 6 EYON, PA 19341 TEL: 610-504-8724 www.sovereign.com	 WESTERN, MARINE AND RESOURCE CONSERVATION AND DEVELOPMENT COUNCIL, INC. 1290 MARYLAND AVE. SUITE 100 HAGERSTOWN, MD 21740 TEL: 301-671-1800 www.hines.org	BY NO LT  REVIEWED TABLES AND DETAILS ADDED PERMITTING QUANTITIES APPENDIX LT  UPDATED DESIGN TO INCLUDE HUMMOCK ZONE AND ESC DESIGN LT  UPDATED HUMMOCK ZONE DETAIL AND NOTES ADDED NWI WETLAND LIMITS	DATE 12/9/23 03/27/24 09/16/24	ADVERTISED DATE CONTRACT NO. XXX-XXX SCALE NTS DESIGNED BY JOEHIW DRAWN BY JOEHIW CHECKED BY LT DATE 09/16/24 SHEET NO. 01 OF 01	USFWS Bli PERMIT
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